

FEATURE ARTICLES

1930'S -1970'S

WURLITZERS



WURLITZER TABLE MODEL JUKEBOXES

In the late thirties, two of the jukebox manufacturers foresaw a need for a smaller jukebox for use in a small cafe or soda fountain, where there wasn't enough room to put, or enough revenue to support the cost of a full-size jukebox. Table model jukeboxes came in two waves — the first in the late thirties and early forties, and the second in the fifties, with models like the

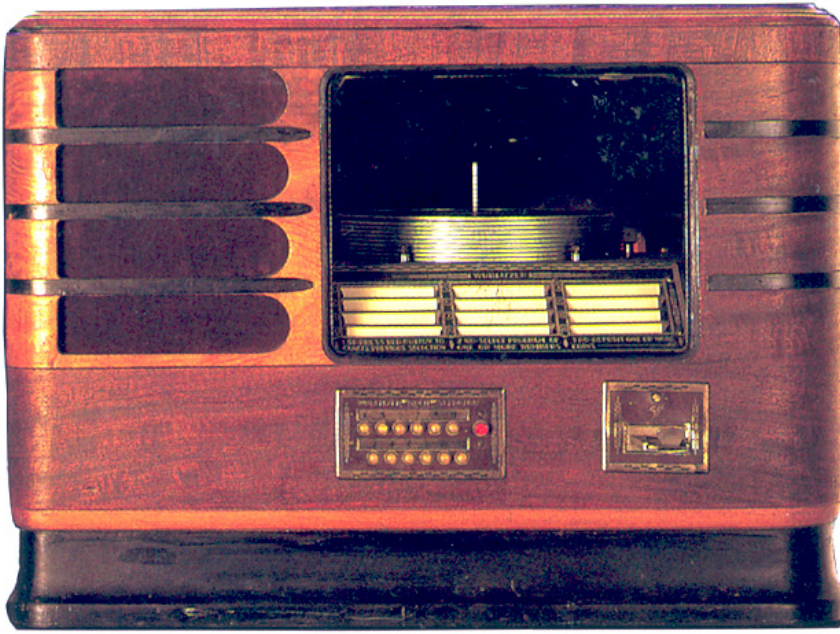
although they can be a headache for the restorer. One weak point is the aluminum trays that hold the records. Every time the records are set down after playing, there is a little wear, as the records above the played record are stationary, and are set down on the rotating record that was just played. The spacing between records is critical to insure

had some of the nicest cabinet woodworking in the industry, and quality was not skimped on the table models. The mechanism and sound system were basically unchanged from the 51.

The next model, introduced in 1940, was the 41. The plastics used were similar in shape to those of the 61, but four corner plastics were used, two on the upper corners, and another two, turned upside-down, were used on the lower corners. The cabinet was hinged in the center, and opened like a clamshell. This was the lightest jukebox (105 pounds) built in this era. The speaker was also the smallest (only 6 inches) but sound quality was still good.

The Wurlitzer 41, 51 and 61 only came with a nickel coin slot. The 50 came with a nickel and dime slot. The advertisements for the 61 stated that it could be equipped with either a nickel, dime or quarter slot, but probably very few if any were sold with anything but the nickel slot.

Also introduced in 1940 was the model 71. This is the biggest, heaviest, and most elaborate of the table models. The styling is very reminiscent of the 700 and 800 jukeboxes. For the first time, a full set of slug rejectors was included, and the 71 would accept nickles, dimes, and quarters. New to this model also was the keyboard-type selectors, like the full-



MODEL 51

Ristaucrat, and the Williams Music-Mite.

In the first wave, Wurlitzer and Rock-Ola were the only participants. Wurlitzer was the first to the market with a table model jukebox, and had the widest range of models (a total of five). The first was the model 51, introduced in 1937. This model had a wood cabinet and styling was reminiscent of the full sized jukeboxes of the mid thirties, such as the 412 and 616. Like the Rock-Ola, the model 51 had twelve selections.

Unlike the Rock-Ola, Wurlitzer designed a mechanism from the ground up (at least from the cabinet floor up). The method of storing the records and selecting the record to be played was totally different from their full-sized models. All twelve records were stacked on the turntable, and rotated together. When a selection was made, the turntable would raise to the proper position, and four vertical elevator posts with a roller at the top end would duck in and grab the bottom of the record tray above the one selected, and raise all the records above. When they are raised approximately an inch, the tonearm moves into the created space and plays the selected record. It is a compact mechanism, especially in the vertical direction (less than a foot), and allowed light, compact cabinets.

The mechanisms are reasonably reliable,

proper pickup of the upper records, and depends on the height of the vertical lip of the trays. Once this lip is worn, the vertical rods can be set to pick up the lower selections OK, but will miss on the upper selections. Replacing the trays with NOS or reproduction trays is the only solution.

The model 51 had a built-in 8" speaker and a small four tube, 7 watt amplifier. The sound quality on the Wurlitzer table model jukeboxes was quite good, although the small amplifier and speaker limited maximum volume. Weight was about 120 pounds. A companion model (50) used the table-model mechanism in a compact console cabinet. This model was roughly the shape of a regular sized jukebox of the thirties, but was only about two feet wide, and considerably lighter (at 165 pounds, about half that of the usual jukebox). A 10" speaker with a 12 watt amplifier was used in this "mid-sized" jukebox.

The second table model built by Wurlitzer was the model 61, introduced in August of 1938 and built through 1939. This model, especially in the shape of the plastics, reminds one of the 500 or 600. The colorful "Light-Up" look was coming into full swing now, and was successfully carried over into the table models. Wurlitzer



MODEL 50



MODEL 61

size Wurlitzers. A more powerful amplifier and an 8" speaker were used, with excellent sound quality the result. As in the console jukeboxes, the Paul Fuller influence is very strong. This is a very attractive jukebox, and very popular with the collectors.

The models 41 and 71 were carried over into 1941, when the 71 was replaced by the 81, and for a while the 81 and 41 were simultaneously produced. The 81 was continued into 1942, until production was curtailed because of the war. The 81 was basically the same as the 71, with some change in the appearance of the plastics. The 81, because of its rarity, commands a higher price than the 71, and is the most valuable table model jukebox. Wurlitzer also built console stands for the table model jukeboxes (without speakers, as they were already built in to the jukeboxes), and these are also prized by the collectors.



MODEL 71 AND 81



MODEL 41 WITH 410 STAND

1938 WURLITZER 61 COUNTER MODEL



Wurlitzer manufactured a line of counter model jukeboxes in the late thirties and early forties. Resemblance to the full sized models were noticeable in all of these. These were designed by Paul Fuller, who was just hitting his stride with the model 61.

The first, the model 50, resembled the wood cabinet models of 1937, like the 616 and 716. The model 61 looks very much like a baby 600, the 41 reminds me of the 700 and the 71 and 81 suggest the 800.

The model 61 had the highest production of all the Wurlitzer counter model jukeboxes, with 8260 being made.

The rationale for producing such a small jukebox was to open up locations that were either too small to produce the income needed for a full size machine, or that didn't have the space for a regular model. Wurlitzer advertising came up with the following suggestions:

"Ice Cream Parlors are Ideal Spots for Counter Model Music."

"Bus Terminals are Hot Prospects for Wurlitzer Counter Models."

"Lodge Rooms and Legion Posts Pay Big Music Profits."

"Beauty Parlors and Barber Shops are Good Counter Model Prospects."

"Drug Stores are Money Makers for

Wurlitzer Music Merchants."

And my favorite: "Milk Bars are all the Rage and all Need Wurlitzer Music."

Wurlitzer also suggested that the Counter Model would be a big profit producer in these locations, too: General Stores, Tourist Camps, Chinese Restaurants, Roadside Stands, Pool and Billiard Parlors, Swimming Pools, Golf Clubs, Fraternities and Sororities, Filling Stations, Summer Resort Hotels, Winter Resort Hotels, Social Clubs, Amusement Parks, Hotels, Gymnasiums, Country Clubs, Airports, Cigar Stores, YMCA's and YWCA's, Steam Boat Companies, and as a second phonograph on the bar in a large multi-room location.

Wurlitzer pretty well had the market covered, with a model for every possible location. The Counter Model would serve for previously marginal locations, the 600 for the corner bar or cafe, and the 500 for the fancier locations.

The Counter Model 61 was a surprisingly attractive jukebox, despite its small size. As usual, Wurlitzer spared no expense when it came to the cabinet work. The finish was described as "Quilted Maple and California Walnut with Ebony Finish Base".

As the Light-Up Era was under way, the 61 had lighted plastics just as on the

full size models. In fact, the corner plastics looked like they could have been 600 corner plastics cut down to size.

A large front window offered a good view of the mechanism playing the record, and the title board.

Below the window, there was an illuminated "Wurlitzer" emblem, the selector buttons, and the 5¢ coin slide (dimes and quarters could not be used). The speaker grille on the lower front has three chrome decorations placed horizontally. Finally, the cabinet is trimmed with three ribbed stainless steel bands.

The selector panel has twelve rectangular buttons plus a Cancel button. Although it's electrically operated internally, it's still basically a mechanical selection system. Before inserting their money, a patron should cancel out any unplayed selections, then punch in their own. Of course, this works on the "honor system", if someone else has put in money and made selections, canceling out their selection could cause hard feelings.

Once the money is inserted, the pushed-in selections will be played. If no buttons are pushed in, it will play the next record in order.

The operation of the mechanism is quite ingenious. Twelve records are placed on the turntable in special trays. As the selection system cycles, the turntable (and all the records) move up and down. When the selected record gets to the proper position, the cycling stops, arms reach in and lift all the record trays above the selected one.

Once the records are raised, space is created for the tone arm to move inward to the setdown point, where it sets down and plays the record.

It's an amazingly compact mechanism, and fairly well designed. Unlike Rock-Ola, which scaled down its full size mechanism to twelve plays, the Wurlitzer Counter Model mechanism has almost nothing in common with the 24 play version used in the full sized models.

With its turntable at the highest point (playing #12), the mechanism is only about 12" tall. Some imaginative engineering was required to design a completely functional selective mechanism into such a small space.

It is a little surprising that it was designed from the ground up when a relatively small number of Counter Model jukeboxes would ever be produced.

The design looks deceptively simple, but that impression quickly goes away when alignment and timing become necessary.

One flaw in the design is the record trays. As mentioned, the trays have a vertical lip that determines the spacing between trays. This spacing is quite critical as it determines the relative positioning between the upper trays and the lift mechanism. Whenever the trays set down, a stationary tray rubs against a rotating tray, and wears a slight amount of metal off the lip. An older set of trays is almost always worn. The lift arms can be perfectly aligned for the lower (higher number) selections, but miss on an upper (lower number) tray.

The power for the selection system (15 volts) is supplied by the amplifier power transformer. As the mechanism scans for selections, a circuit is completed that operates an electromagnet to trip the mechanism to stop and play the selection.

The tone arm is the standard "Bearclaw", but the cartridge is redesigned so the needle fits slightly further in and takes less height below the tone arm. As the records above the selected record are lifted, the space for the tone arm is somewhat minimal.

The sound system is scaled down along with the cabinet. The amplifier chassis is quite a bit smaller than the full

size models, and uses push-pull 41's for the output. The power is conservatively rated at 6 watts. An 8" field coil speaker is used. A three position tone switch provides low, medium, and high tone settings.

Other tubes include a 79 dual triode and an 80 rectifier. Although octal tubes were available at this date, these are all 4 and 6 pin tubes.

The counter models may be small, but the sound quality is surprisingly good.

The only competition to the Wurlitzer counter model was the Rock-Ola CM-39. The Rock-Ola version used an external speaker as there was no room in the cabinet with their larger mechanism. Wurlitzer made several digs at Rock-ola in their literature: "Requires less space...no extra wiring...no external speaker", "Gets better play because the speaker is where the speaker should be...in the phonograph", and "Combines unrivaled beauty, brilliant illumination, with built-in speaker, superior tone and top play appeal. Requires no auxiliary speaker, no cumbersome wiring".

Unfortunately, Wurlitzer was so proud of being able to put the speaker in the cabinet that they neglected to include a provision for connecting an external speaker.

In fact the only option was a remote wall box. Of course it was non-selective, and so was basically a coin box with a switch. A solenoid needed to be added to the coin counter in the 61. As the wiring to the wallbox carried 110 volts, it would have to conform to local electrical codes, and possibly would have to be armored.

One available wall box was the model "B". It was basically the "Simplex" wall box used on the earlier models. It came in either 5¢ or 10¢ operation.

Also available (but not pictured) were the Model 37, and the Model 38 which included the wall box and bar bracket.

The overall size of the model 61 was just a fraction of the full size models. The height was 22", the width 21 1/4", and the depth 18". The weight, at 115 lb., is also a fraction of a console jukebox, but unless you have a strong back, get a second person to help carry it.

The small size comes in handy for working on it. Even with my occasional

back problems, I can lift the mechanism out and carry it by myself.

Most aspects are not difficult to work on. The first thing to check is to make sure the trays are in good condition.

Alignment and timing aren't for the faint of heart. The timing of the selection system is pretty touchy.

Value is pretty good, considering its size - a restored 61 is listed at \$4600 in the AJ Price Guide. It's over-shadowed by the later counter models, but good nonetheless.

Several stands were manufactured that could be used with a model 61. Wurlitzer made a model 810 stand later. Also several independent companies made stands, both enclosed wood and metal pedestal style.

The counter models have a unique status in jukebox collecting. They may be small but still have great Paul Fuller styling and good tone quality. Besides that, they are downright cute.



Model B Wall Box



810 STAND (WITH MODEL 71)

1936-37 WURLITZER 312 & 316

Most of the pre-1937 jukeboxes looked like oversize console radios. There were some fine examples of cabinet woodwork in this era, but the brightly colored plastics and bright metal work were still in the future.

Wurlitzer was beginning its policy of a jukebox model for every location. There would be lower priced models for the lower income locations, conservatively styled models for the locations with more mature clientele, and ones with flashier cabinets for the neighborhood bars and honky-tonks.

Art Deco styling was very popular in the thirties. It had been applied to everything from toasters to automobiles, and it was only natural it would eventually be applied to jukeboxes. Seeburg used very strong Deco styling in its "C" and "D" models (the "bookend" Seeburgs). Wurlitzer countered with the 312, which has a very strong deco influence, as a running mate for the more conservatively styled 412.

Deco styling tended to have a number of characteristics. Among those were bright metal trim, pronounced wood graining, often at a slant, and angularity in the various shapes that come together. The 312 contains most of these features.

With colored plastics a year or two in the future, Wurlitzer went out full force to try to give color to the cabinet without the plastics. It was one of the few wood-cabinet jukeboxes to use a gloss paint finish. The way they combined the colors and natural wood grain sections is pretty unique.

It's only the sides that are painted. The flat side panel is painted a darker Hunter Green. The ribbed corner sections are painted a light Mint Green.

The rest of the cabinet used a variety of natural grained wood finishes. The top, and larger front section are a medium shade. The window frame and the insert surrounding the speaker, pushbuttons and coin slides are a lighter color. Finally, there are two small darker colored inserts to the sides and slightly above the speaker opening. there is also a darker



colored ring around the speaker opening.

The view through the window is very similar to the 412, with the record stack to the left. Playing a record is done in classic Wurlitzer Simplex fashion - the record tray swings out, the turntable raises from below the tray and brings the record up to the tonearm, to play it in sight of the patron.

The backdrop, like the 412, is a fan-shaped molded panel. It's illuminated by a light behind the mechanism. There are also two lights in the upper front of the inside of the cabinet (one red, one green), to illuminate the mechanism and the record playing.

The only other illumination in the cabinet is a small lamp behind the pushbutton selectors, to light up the numbers. The buttons are plastic, and also light up a little.

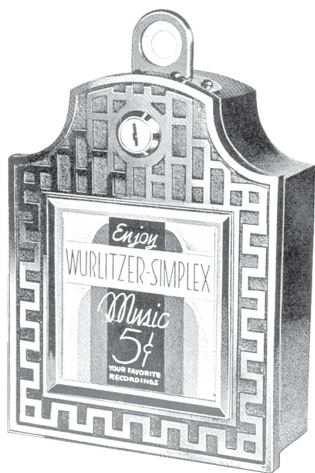
The lighter colored insert surrounds the coin slide assembly, selectors, and speakers

grille. There is a coin slide for nickels, dimes, and quarters. Standard play is one for a nickel, two for a dime, and five for a quarter.

The rotary selector has one pushbutton for each selection. There is also a center button to cancel out all selections. Thus it is possible for someone else to come along and cancel out your selections (or vice-versa). This feature must have caused hard feelings now and then.

Remote control was available with the Simplex Wall Coin Box. This was all it did - took your coins and played a selection, but it was strictly non-selectable, and played the next record in order if all the selections on the jukebox were canceled out.

For the 312 at least, the wiring to the Wall Coin Box came from the 110 volt house wiring, and care had to be taken to prevent shock hazard. Wurlitzer recommended using armored cable for the wiring. Later models used a trans-



SIMPLEX WALL COIN BOX

former to reduce the voltage to a safer level.

The speaker grille contains vertical, nickel-plated rods, with a grille cloth behind them. There is no lighting.

The insert panel on the front almost looks like a face, giving the 312 even more personality. The round selector and the rectangular coin slide panel make it look like it's winking.

Finally, the very bottom of the cabinet is painted black.

Where the later jukeboxes with the light-up plastics showed themselves off to best advantage in dimly lit surroundings, jukeboxes of the 312 era tend to look best in a more well-lit area. Much of the attractiveness of these "woodies" is in the wood graining. The veneers used were of high quality, and the cabinet work top notch. In the case of the 312, the nickel-plated trim in the speaker grille and the painted sides also show off to best advantage with brighter background lighting.

There were actually two versions of this model. 1936 saw the 12 selection 312 introduced. In 1937, they upped the number of selections to 16, and named it the 316. From the outside, the only way to tell them apart was to count the number of pushbuttons (with the two versions side by side, the height of the record stack would also give it away). The photo shown is actually of a 316. The 312 was carried into 1937 as a lower priced version.

There isn't much that can be said about the 12 play Simplex mechanism that hasn't been said in previous articles. With periodic lubrication, it was close to being bulletproof, even more so than the later 24 play mechanism.

The wood mechanism board uses as nice a veneer as the outside of the cabinet. The trays for the 312 are a stamped sheet steel and then nickel plated, brightening up the interior. The tone arm stand is also plated, while the tone arm is the tan colored

bear claw design. Tracking is pretty heavy, but unlike Seeburg, the design allows fairly easy conversion to a lighter tracking cartridge (such as the Astatic 51).

The Astatic 51-2 is supplied with a 2 mil sapphire needle, which works well with re-issue 78's, and is OK for original 78's. Victory Glass also sells a replacement 3 mil needle for this cartridge, for original 78's only.

The amplifier is a marvel of complexity. Rebuilding is not for the faint of heart. It has a complicated bias and bleeder network, and unusually high voltage filter capacitors (one 500 volt and one 600 volt).

The tube complement for the 661 amplifier is a 5Z3 rectifier, three 45's, and two 30's. The 5Z3 and 30's aren't bad, but the price for 45's has risen dramatically in the last few years, and even good used ones can be on the order of \$50.

Early models used the 660 amplifier, which had a type 1B5-25S tube in place of one of the 30's. The 1B5 has a pair of diodes in addition to the triode section, but the diodes are not used. In addition, the circuitry is somewhat different.

The amp drives a 12" field coil speaker. It's a good quality speaker, and puts out plenty of sound. In fact, the sound quality is surprisingly good - clear and mellow, with strong bass. The speaker mounts in an enclosure just behind the front grille - it mounts to the cabinet with rubber bushings.

As mentioned, updating the cartridge and lightening the tone arm is highly recommended on these. Record life will be vastly improved, especially for vinyl records (it's not recommended to play vinyl records with the original setup).

There were two options for the sound system. The first was a microphone kit. It consisted of a microphone (either hand-held or floor-standing), cabling, and a box that mounts in the cabinet. The box contained batteries and a transformer to operate the carbon element microphone. It also contained a relay to switch the audio from the tone arm to the microphone.

There was no provision to power the amplifier without a record playing. In order to use the mike, a record would have to be played, then interrupted. The floor microphones had a control box with a volume control (for the mike only) and a switch to operate the above-mentioned relay.

The second sound system option was the Auxiliary Speaker. The system included an adapter cable to connect the remote speaker in the internal speaker wiring. The remote speaker also has a field coil, which must be supplied from the built-in amplifier. The 312 amp has provision to supply one external speaker field coil.

The Auxiliary Speaker also has an L-Pad type of volume control, to allow adjustment of its volume separately from the main speaker. The volume control in the 312 cabinet affects both speakers.

The manual also shows a setup with a second amplifier to drive two Auxiliary Speakers. The diagram shows a special adapter cable with a fader that mounts by the second amp, to adjust the sound balance between the two Auxiliary Speakers. In addition, each remote speaker had its own volume control.

The 312 could be ordered for locations that didn't have the standard 110 volt 60 cycle power. A version was available for 110 volts DC, as well as 32 volts DC.

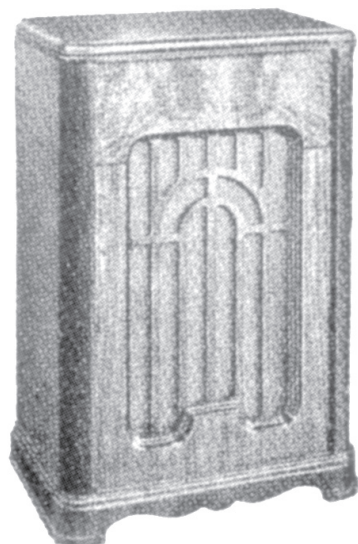
As mentioned, the 312 was carried into the 1937 model year, along with the updated 16 play 316. Many changes were made to the mechanism to accommodate the additional four records. The record trays were now die cast, rather than stamped. Many parts had to be re-designed to accommodate the extra distance the selector and turntable lift assemblies have to travel because of the taller record stack.

The 312 is definitely in the compact class - it measures 51" tall by 31" wide by 22 1/4" deep. Weight is not listed, but it is lower than average, probably under 300#. Mike and I easily loaded my 312 into the back of my Taurus wagon, with room to spare (try that with a Seeburg V).

The AJ Price Guide lists the 312 at only \$2100 top, and the rarer 316 at \$2550. The wood cabinet jukeboxes just never will be worth as much as the later light-up models.

Wurlitzer referred to the 312 as the "Modernistic". The Art Deco styling was always looked upon as being futuristic, but deco had just about run its course. With the advent of light-up plastics a couple years later, modern design of jukeboxes took a completely different course, and the 312 styling was left in a time warp. Enterprising individuals marketed kits in an attempt to update the styling, but the results weren't generally satisfactory.

Nevertheless, the 312 still has lots going for it. With unique styling, loads of personality, relative rarity, low prices, and good sound, it would be well worth considering if one comes along.

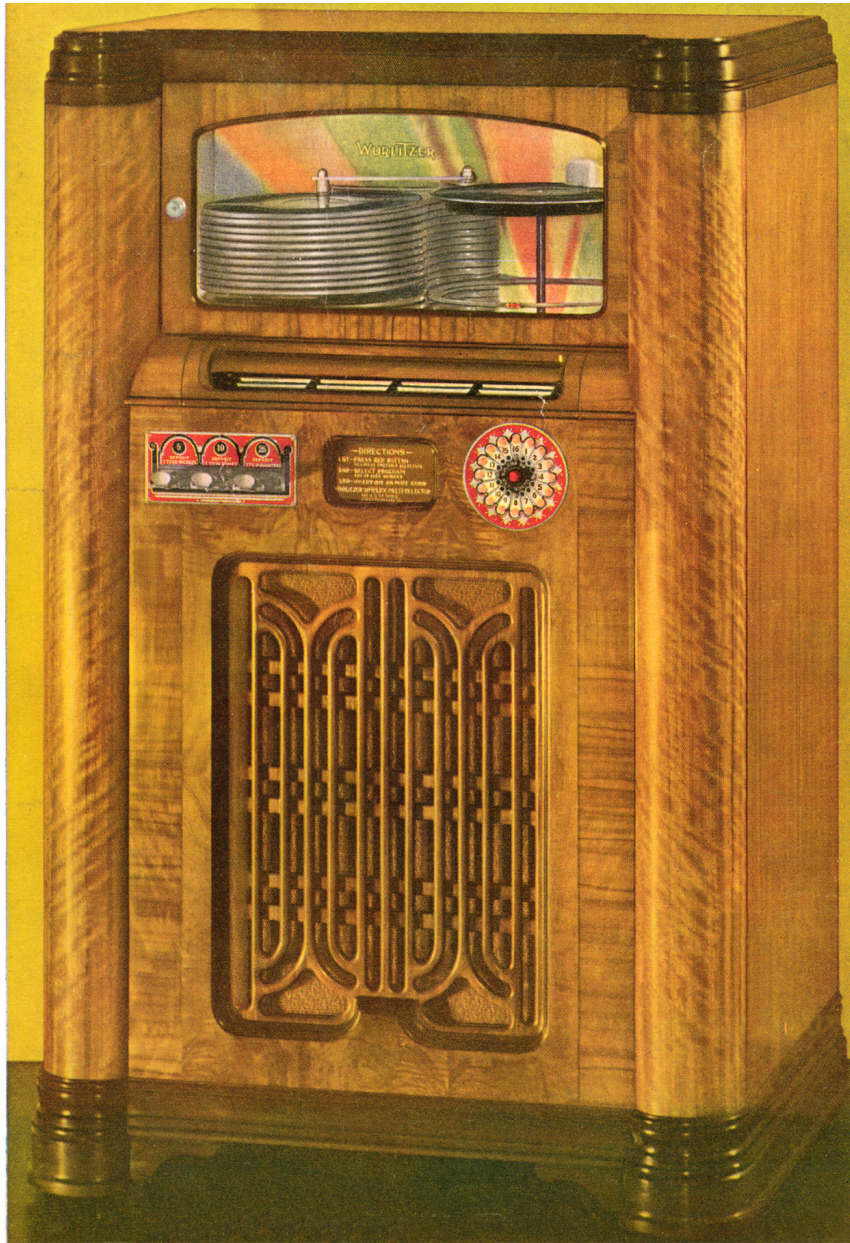


AUXILIARY SPEAKER



"MODERNIZED" WURLITZER 312

1936 WURLITZER 412



Jukeboxes of the early to mid 30's tended to be plain in styling, compared to the "light-up" machines of the late 30's and 40's. Many times I've heard the comment that they look more like console radios than jukeboxes.

Wurlitzer started out in the early thirties with a mechanism they had acquired from Homer Capehart, called the "Simplex". The earliest versions had only 10 selections, including the P-10 of 1934 and P-20 of 1935. That year also saw the introduction of three twelve play models, the P-12, P-30, and P-400.

There were four models produced for the 1936 model year - the 400 (a carry-over of the P-400), the 312, 412, and the ever-elusive model 35, all 12 play.

The 412 had a conservatively designed cabinet, and did look somewhat like an over-sized console radio. What really makes

the 412 stand out is the quality of the woodwork. Top quality veneers are used throughout. Stained, and with a medium to high gloss finish, the wood on these looks really nice.

The speaker grille has a scroll design, and is not lit. It needs to have a high gloss finish, just a little lighter than the rest of the cabinet. With fresh grille cloth, the grille area really shines (but, unlike the later light-up machines, needs moderate ambient lighting to show itself off to the best advantage).

Lighting for this model is minimal. There are two light bulbs at the upper front corners, and one in the rear below the mechanism board, that shines up on the back panel. This panel has a fan-like design made from some papier-mache like material. The interior can be brightened up by installing colored lights, and painting over the back panel with a shiny (chrome or

silver) paint that catches and reflects the lights better. If you use different color lights, the light from the front bulbs interacts with the light shining up from below, and creates some very pretty patterns.

The mechanism is visible through the front window. This is an important feature for those who feel that watching the record play is an important part of the "total juke-box experience".

All models through 1935 were nickel play only - there was only the one coin slide. Starting with the 1936 models, dime and quarter slides were added, with two selections for a dime and five for a quarter. In addition to the credits built up by coins inserted in the jukebox, the credit accumulator had a pair of electromagnets that could be actuated by a remote "Coin Box". This was like a mini wall box, and allowed remote play, but there was no way for the patron to select which record would play (with no buttons pushed on the front of the jukebox, it would play the next higher selection each time until #12 was played, then start over at 1).

The wiring to the Coin Box was connected directly to the 110 volt line. If the wiring was to be in the open, Wurlitzer suggested using armored cable.

Other accessories for the Wurlitzers of this era included a remote speaker kit and a microphone kit. The speaker could either be sold by itself, or mounted in an attractive floor-standing cabinet. The microphone kit included a box with batteries, the microphone, and a switch to change from music to the mike. It probably used a carbon mike - therefore it only needed batteries and a transformer, but no preamp. It must require the jukebox to be playing, as it doesn't show any relay or switch in the amplifier power lead.

The sound system, although not out of the ordinary, is capable of very good sound. The tube complement consists of two #30 tubes, followed by a #45 driving a pair of 45's as push-pull outputs. The rectifier is a 5Z3. The 45 outputs are capable of about 15 watts. The speaker is a 12" electrodynamic (field coil) unit. The sound is rich and mellow, very fitting for the 30's and 40's music. It will even sound good with your 50's rock and roll.

The circuitry in the amp is more complicated than usual, and can be a little difficult to repair. The amp uses one 500 and one 600 volt electrolytic, which aren't too easy to find. In addition, the #30 tubes have a fragile

filament and are easy to burn out. They are also prone to microphonics, and sometimes have to be selected for best performance (a microphonic #30 can actually cause acoustic feedback).

The original "bear-claw" tone arm and cartridge are basically the same as used through the 1015 (except for the change in shape). As stock, they are supposed to track at about 3 ounces (85 grams). The original 78's are hard enough to handle this tracking pressure, especially with a good needle. However, a lightweight tone arm conversion should be done, especially if vinyl 78's are to be played.

The design of the Wurlitzer tone arm makes it possible (and relatively easy) to do this conversion. Cartridge mounting brackets are available, and the Astatic 51 works well. The 51-2 is perfect for the repro records, and can also be used for the original 78's, but the 3-mil replacement needle is better.

These can be tracked at about 20 grams, but the design of the reject mechanism prevents it being reduced much below this.

Twenty grams is a vast improvement over the original.

There are a surprising number of 412's still in existence. This was one of the highest production models of the 30's - Frank Adams' Wurlitzer book places the production at 17,700. Tom DeCillis' research suggests that over 28,000 were actually built (with 16 data points). The survival rate seems to be above average, too. There are probably several reasons for this, one of them being that they were so well built.

The 416 seems to be quite a bit rarer. Adams' book suggests 1003 were built. DeCillis' research has only turned up one serial number, so he is unable to make an estimate.

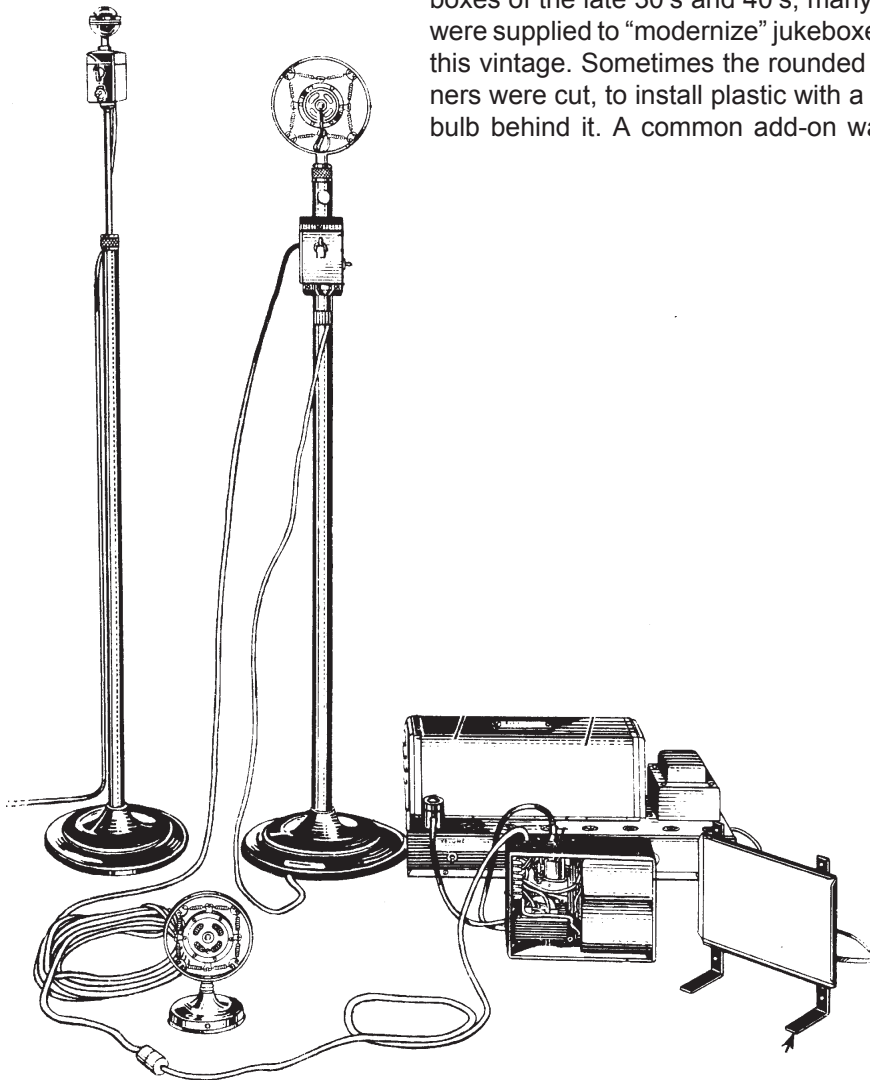
The 12 play Simplex mechanism has to be one of the most reliable mechanisms ever made. In my experience, they are a lot less touchy in adjustment than the later 24 play versions. With regular lubrication and use, these will just about keep running forever. The cabinets are very well constructed, too.

With the popularity of the light-up jukeboxes of the late 30's and 40's, many kits were supplied to "modernize" jukeboxes of this vintage. Sometimes the rounded corners were cut, to install plastic with a light bulb behind it. A common add-on was a

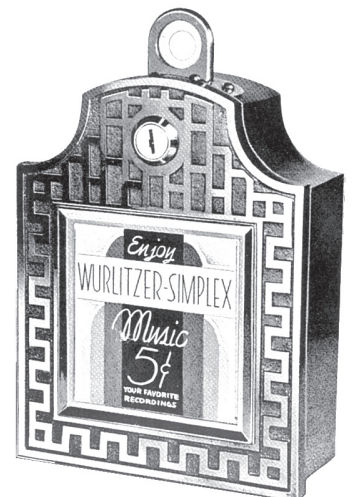
raised top that would install on top of the 412, with lit plastics around the sides and front. Light-up speaker grilles inserts were also available.

1937 saw the introduction of 16 selection models, including updated versions of the 312 and 412 (the 316 and 416), and new models the 616 and 716. Pictured is the 416 - the only visible difference between it and the 412 is the push button assembly and the taller record stack. The following year brought forth the 24 play model 24, and the "selections race" was on.

The 412 and 416 have a lot to recommend them - quiet good looks, quality woodwork, reliable mechanism, and pleasant sound. Reasonable price is another consideration - these are (and always will be) less money than any of the Fuller-designed Wurlitzers of the 40's. Disadvantages include the lack of eye-catching color, and the limited number of selections. But any collector wanting an early model to round out his collection can't go wrong with a 412 or 416.



MIKE KIT



WURLITZER SIMPLEX WALL COIN BOX

1937 WURLITZER 616 & 616A



616

1937 saw Wurlitzer producing several models. The first two were carry-over models - the 312 and 412 were continued into 1937, with the addition of four extra selections to become the 316 and 416.

A new compact table model was introduced in 1937 - the model 51. A console version, the 50, was also sold, which was the table model mechanism in a compact console cabinet. Both were 12 play.

Two full size models were new for 1937 - the 616 and 716. As can be surmised from the model numbers, these were the fancier (probably more expensive) models, with the 716 at the top of the price structure. This put the 616 in the upper middle class of the jukebox world.

The light-up era was just around the

corner. 1937 was actually the last model year without illuminated plastic panels (colored lucite tubes were used in the 616A's). Any color seen on the 1937's was in the form of different colors of veneer, or painted panels as on the 316 and 716. The interiors were often illuminated with colored light bulbs.

As usual for Wurlitzer, cabinet work was first class. A variety of veneers were used in each model to contrast the different areas of the cabinet. On the 616, the majority of the cabinet is a medium color veneer, while the inlaid stripes are dark veneer for contrast.

The 616 places the title strip board at the very upper front of the cabinet, above the window. People enjoy watching their records

play, so there is a good size window. The "Simplex" mechanism was well showcased, with the record stack prominently displayed, now with sixteen trays. The trays were thinner than the 12 play models, so the height of the record stack was only slightly taller.

The coin entry slides were on the left below the window. All three coin denominations were accepted - nickels (one play), dimes (two plays), and quarters (five plays). Each coin has its own slide - the coin is placed on the slide and it is pushed inward, to ratchet up the accumulator. As records are played, the accumulator ratchets down one position for every record played.

To the right are the selector buttons. This has sixteen pushbuttons in a circle, plus a cancel button in the center.

The speaker grille has a slightly Art Deco design, with a dark finished zig-zag design and plated metal rods placed horizontally.

The base is made from carved wood, and is finished dark brown.

One of the unique features of the 616 is an animation display in the rear of the inside of the cabinet. There was an automotive 6 volt lamp with a small color cylinder that rotated around it. This changing color display shown onto the inside of the upper back door.

The 16 play mechanism is a one year only design. In many ways it is a transitional mechanism, with some elements of the 12 play design, and some new features that were carried over into the 24 play mechanisms.

Some parts are sixteen play only. For example, the trays are cast like the later models (the 12 plays were stamped steel), but are pot metal instead of aluminum. These can't be bent to adjust their spacing like the aluminum trays - they will break. Instead they must be heated to bend.

The selection components and the turntable lift resemble the 12 play more, while the reject trip is more like the 24 play.

As the selector shaft turns, the selector arm raises from the higher number selections (near the bottom of the stack), up to number 1 at the top. Then it abruptly falls to #16. The 16 play mech doesn't use the dashpot like the 12 play mechs to cushion the fall - instead there's a rubber ring at the bottom. It helps, but it still makes a hard landing.

The selectors are strictly mechanical, with a circular arrangement of the sixteen buttons. The center button cancels out all

selections, for example if you're putting money into the machine and don't want some other selection playing. However, it could cause hard feelings if someone else had put money in and made that selection.

The sound system was upgraded slightly from the preceding year. The big change was the use of a 15" speaker in the 616. This has a 3200 ohm field coil, and is basically the same speaker carried over into models 24, 500, and 600 (it mounts on a speaker board so it doesn't have the base, however).

The "bear claw" tone arm was still used. This uses the old style moving vane magnetic cartridge, and requires quite high tracking. Cartridge conversions are much easier in the Wurlitzers of this era, compared to the other manufacturers. With a ceramic cartridge like the Astatic 51, and a little work on the reject trip, tracking can be reduced significantly.

The amplifier design was similar to the 412, but changed to accommodate the higher field coil resistance. A total of four #45 tubes were used, making this potentially a very expensive amplifier to rebuild.

Wurlitzer rated the amplifier at 18 watts output. Not stated is the distortion - 18 watts is pushing the 45's a little, and probably produces a few percent of distortion at this power level. At moderate power levels, the amplifier produces quite good sound, surprisingly smooth and mellow.

All the tubes in the amplifier are rapid heating, so no fast warmup circuit is needed as on the later models. It easily comes up to full power well before the record starts playing.

The coin system is designed for remote control. A remote coin box would have a switch to give credit in the jukebox. How-

ever, no control of what record played was possible - it would simply play the next record in line if no buttons were pressed. If any buttons were "left over" (pushed in but not played), they would play if credit was run up externally.

The Wurlitzer Simplex Wall Coin Box was one of the world's simplest devices. A nickel entered in the slot in the top would simply operate a switch as it fell into the coin box.

A big advance in safety was incorporated in the 616. The power for the external coin switch was supplied from the secondary of a transformer, so it was low voltage and isolated from the power line (in the 312's and 412's, they simply had a light bulb in series with the 110 volt line).

To connect an external speaker, an external speaker control would have to be added. This box had a variable control to divide the audio power between the internal and external speakers.

Wurlitzer also offered a microphone kit for their jukeboxes of this era.

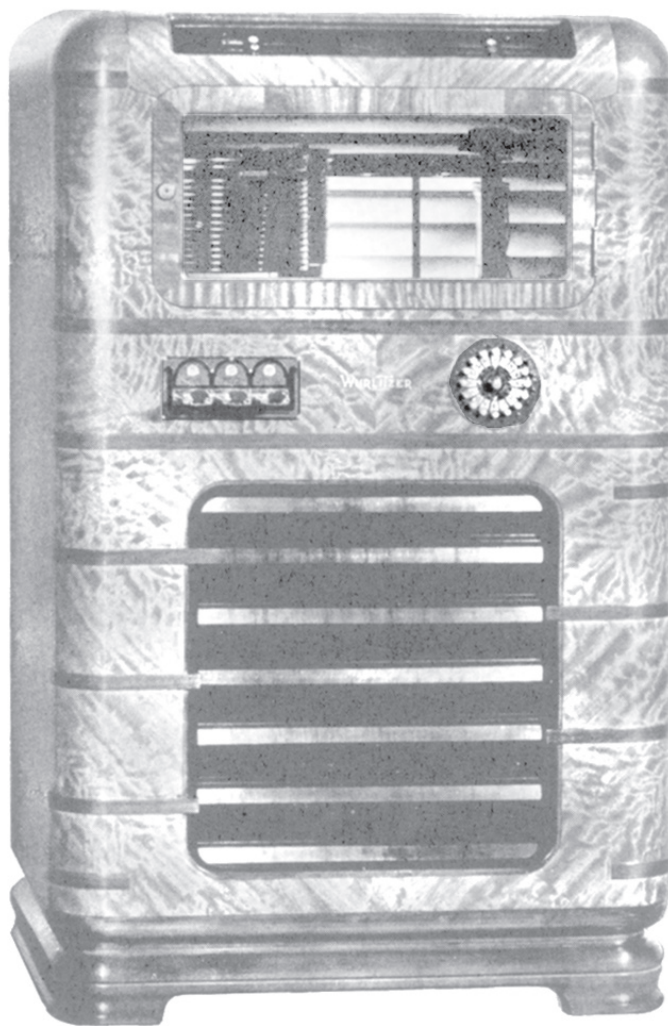
With the dawn of the light-up era just around the corner, Wurlitzer released a updated version of the 616 they called the 616A. The biggest visible change was in the speaker grille area. Lucite rods were placed in the grille horizontally, with light bulbs shining into their ends, showing different colors for the different rods.

In addition, several small companies offered kits to "light up" your 616. Some actually required cutting the corners to install illuminated plastics.

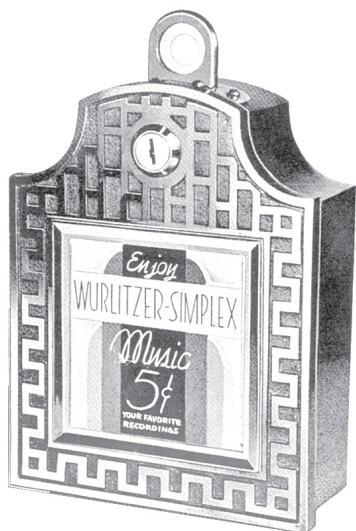
The 616 is considered a full sized machine, although not nearly as large as machines to follow. It measured 51 3/8" tall by 31 3/8" wide by 22" deep.

Production, as stated in Frank Adams Wurlitzer history book, was actually fairly high - 23,706 for the 616 and 16,000 for the 616A. Judging by the relative rarity of this model, I thought these numbers seemed high, but Tom Decillis' serial number research seems to bear them out.

The "woodies" from the thirties have always been overshadowed by the Paul Fuller

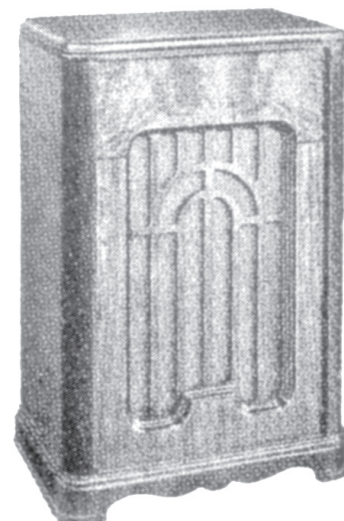


616A



WALL COIN BOX

light-up Wurlitzers to follow. The 616 isn't bright and colorful like one of them, but it has nice woodwork, good styling, and good sound, and is still a pretty machine.



REMOTE SPEAKER

1937 WURLITZER 716

All the early Wurlitzers used a mechanism known by the trade name "Simplex". The original Simplex design had been sold to Wurlitzer by Homer Capehart after his jukebox business had failed. The original versions included a 10 play (P-10) and a 12 play (P-12), followed by the 12-play series including the 312, 412, and 612.

In the mid 30's, Wurlitzer was doing very well with it's line of "Simplex" jukeboxes. But by 1936, it was obvious that the number of selections was going to have to be increased. In 1937, the mechanism was slightly modified to allow 16 records to be placed in the record stack. The following year would require a significantly redesigned mechanism to allow 24 selections in the model 24.

There were four models in 1937 - the 316, 416, 616, and 716. All but the 716 were based on their 12-play 1936 counterparts - the 312, 412, and 612. The 716 was a new cabinet, and probably the most deluxe of the four.

The 716 was the last model prior to the "light-up" Wurlitzers, starting with the model 24. The only lighting in the model 716 was the lights under the title board (which sits horizontally at the front of the mechanism board), and the animation assembly, which shines up on the inside of the upper back door. If anything, the front of the mechanism and the speaker grille could use a little more light.

The animation assembly is unique to this year. It mounts on the back of the mechanism and shines up onto the upper back door. It contains a small cylindrical plastic with different stripes of color, and holes punched in it. These holes provide bright spots that scan across the back panel, as you look inside the window. This color cylinder is rotated by a clock motor like those used in the 1015's, etc., and inside the cylinder is a large 6 volt light bulb, similar to those used in headlights of early cars.

The picture of the 716 in Frank Adams' Wurlitzer history book shows the rippled paper-mache back-drop, as used on the 412. However, the one I worked on

had the inside of the upper back door finished in a light wood grain. There was no sign of anything having been removed, and it appeared to be original.

There were several companies that marketed "light-up kits" for the Wurlitzers of this era. This was an attempt to update these pre light-up machines, to extend their useful life on the routes. A few of these light-up kits are illustrated in Frank Adams' Wurlitzer history book.

Accessories available for the Simplex Wurlitzers include a microphone kit, a remote speaker, and a remote control "Coin Box". This was the predecessor of the wallbox, and basically contained only a coin switch and a coin box. When a coin was inserted, the jukebox would play a record. Of course there was no way for the customer to select which record would play (it would depend on the last record played, as these play records in order if no buttons on the cabinet are pushed).

The sound system was little changed from the 1936 models. The amplifier still used push-pull 45's for the outputs, which probably put out 12-15 watts. The big change in the sound system was the use of a 15" speaker for the first time. This speaker had a 3200 ohm field coil, and was the same as used in the 500's and 600's. This is the first year for the red paint to be used on the amplifier and speaker.

These early amplifiers and difficult and expensive to work on. A total of four 45's are used, one for the driver, two for the outputs, and one for the bias rectifier. 45's are getting scarce, due to their use in many early radios, and as a result, very expensive. The #30 tubes are also a little scarce, but not as expensive, as they were not used in many radios of the era (they are a battery tube, and were generally only used in "farm radios" - battery radios built for non-electrified farms).

One of the things that make these early Wurlitzer amplifiers hard to work on is the complicated power supply circuitry. The 30's have a 2 volt 60 ma filament, and are powered by a complex bleeder-bias circuit. These also

use high voltage electrolytics (one 500 volt and one 600 volt) which are not easily available.

The electrical wiring in the cabinet is more complicated than the earlier models. The main junction box occupies the usual position. In front of it is another chassis that contains a transformer and several outlets. The transformer supplies 6 volts for the coin slide light and for the lamp in the animation assembly. It also supplies 24 volts AC to operate the magnet in the magazine switch. Instead of having the coin slides mechanically advance the credit wheel in the magazine switch, the operation of the coin slides activates a microswitch, which connects the 24 volt supply to the magnet in the magazine switch. This also allowed the magazine switch to be separated from the coin slide assembly - in the 716, it's mounted on the back of the mechanism. One of the outlets in the transformer box allows the remote coin switch to be connected.

This 24 volt supply is isolated from the 110 volt line, and provides a safety feature that isn't found on the earlier models, where the line to the switch in the remote Coin Box is connected directly to the power line.

The most unique feature of the 716 has to be the paint job on the exterior of the cabinet. The front of the cabinet is natural wood, but the corners of the cabinet are painted red. The sides have a two-tone effect of black and green in a geometric design. In contrast to the later light-up models, which look best in a darkened room, the 716 looks most attractive in a well lit room.

With a production of only 2600, the 716 is certainly one of the rarer models of Wurlitzers. It is not too large - 51 1/8" tall, 31 3/8" deep and 22 1/4" deep. It is also an attractive jukebox - for anyone looking for a pre light-up Wurlitzer to round out his collection, this would be a good choice (assuming you can find one).



1939 WURLITZER 500

Breath-taking color and brilliance! Beauty of Design never before seen in an automatic phonograph! New and Improved selectors! These are the distinguishing features of the Wurlitzer "Five Hundred" and "Six Hundred" Automatic Phonographs.

The Light-Up Jukebox Era was now in its second year. The genius of Paul Fuller had its first expression in the model 24 of 1938. Multi-color, back lighted plastics were now used in all of Wurlitzer's jukeboxes.

Late 1938 saw the introduction of the 1939 models 500 and 600. Wurlitzer continued a multi-tiered pricing structure, with a lower price model for the less fancy locations, and the more expensive model for the deluxe locations.

The lower price model for 1939 was the 600. It still carried over the rotary selector of the 24 (at least for part of the year. A keyboard model 600 was introduced later). The overall size was smaller than the 500.

The Deluxe model for 1939 was the 500. Styling was pretty similar to the 600, but the overall size was considerably larger. Of course, the more expensive model had to have other features to warrant the extra price. The new piano keyboard selector and moving lights were the two most obvious.

If you thought there was one model 500, you're quite mistaken. There were four versions, and some variations beyond that. The four main versions were the P-500, P-500A, G-500, and G-500A. The "A" refers to a different coin system, which will be covered later.

The Wurlitzer Model 500 is the only automatic phonograph cabinet with the spectacular, eye-arresting power of varicolored light in motion. The moving color illumination is available at the operators option in either the corner plastic panels or in the plastic panels of the grille.

This explains the "P" and "G" variations - P standing for pilaster, and G standing for grille. In the P version, the color cylinder is behind the corner plastics (pilasters).

When moving varicolored illumination is specified for the corner plastic panels, those panels are of white onyx translucent plastic — with grille panels in brilliant red mottled translucent panels. Varicolored lights are thrown on the silver grille cloth.

The P's had fixed lights shining on the

grille plastics, and a multi-colored fixed plastic sheet between the lights and the grille, to shine different colors on the grille, which would be reflected back to the viewer by the shiny grille cloth.

When the moving varicolored illumination is specified for the plastic grille panels, the panels are translucent white onyx plastic — with corner plastic panels of brilliant mottled red translucent plastic. Changing varicolored

come a much darker amber. They can be lightened somewhat with a good cleaning, but never to the original. Actually, the darker color gives the jukebox a much greater patina of age, although it cuts down on the effectiveness of the moving color display somewhat.

The red plastics have a marbled effect which is very attractive.

In front of the illuminated grille cloth, is cast metal trim with an elaborate scroll design. Surrounding the grille is burlled veneer.

New on the 500 was the keyboard selector. *An innovation in Multi-Selector design, the new piano type keyboard of the Wurlitzer "Five Hundred" has irresistible play appeal. Touch one of the white keys and a green light in the numeral above the key signals the record selected. To cancel selections simply press keys from underneath. Made of metal with a white porcelain enamel finish, the keys are indestructible - their width assures accurate selection.*

The brochure appears to have been based on pre-production 500's, which in the pictures, do seem to have white keys. The production 500's, as far as I know, all had nickel-plated keys. Another variation from the production models was the lack of the metal trim piece on the front panel under the illuminated "Wurlitzer" emblem.

This trim piece brings up another variation. As an "extra cost option" the model 500 had a "Record Playing" indicator in this trim piece. There was a piece of plastic that said "Selection Playing", and a small window with the number of the record that was playing. Behind the front panel was a disc with the numbers, that was

driven from the mechanism by a chain.

Wurlitzer spent as much care on the inside of the cabinet as the outside. The customer was able to look through a window at the brightly shining record trays and tone arm base, and see the tray swing out and the turntable bring the record up to the tone arm to play it. The back panel was ingenious - it had pleated cloth under a plastic sheet.

Another feature — optional with the operator — is the background for the record changer compartment. It is available in three colors — red, green or amber — all of the same design.

The plastic protected the silver cloth, and made it easy for the operator to change the color.

The front window had a red plastic panel



lights are also thrown on the silver grille cloth.

Either way, the 500 was a very dynamic, colorful jukebox. After the comparatively plain jukeboxes of the early to mid thirties, the bright colors and changing patterns must have served as a magnet for the patrons of the establishments where these were placed on location.

The "P" and "G" designations don't seem to have been used on the model number plates on these models - all I've seen just say 500 (or 500A). It's easy enough to determine which version it is by the position of the light color plastics.

The "white onyx" panels probably never were a real white, but more of a light amber or off-white color. With age, they tend to be-

above the glass. This was illuminated from behind by three incandescent lamps on the early versions, or by a tubular incandescent (Lumiline) on the later ones.

There were plated metal panels on the sides of the mechanism, which functioned as mirrors, *that multiply the movement — give greater depth — flashing action.*

Lumilines were also used inside the color cylinders. Since the 24" Lumiline wasn't long enough for the cylinders, a 7 1/2 watt light bulb was added above the Lumiline.

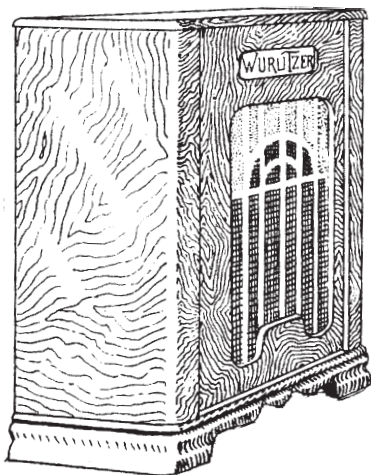
Wurlitzer cabinets used the finest quality veneers, metal trim, and plastics. If the cabinet has not been in a damp environment (resulting in veneer lifting), these are usually easy to refinish and make to look nice. Of course, dampness will also cause the metal trim to deteriorate, but they will usually respond to a buffing wheel, unless they are bad enough to require replating.

The plastics are thick and strong. Short of breakage, they will usually respond to cleaning and polishing. The only other problem is shrinkage (especially if it's sat with the sun shining on it). Then you may have a gap at the top or bottom of the pilasters plastics.

The 500 has a lot of light bulbs. The side grille lights can be replaced by removing the side grille plastics. The Plastics are held in by a latch at the top. When it is moved, the plastics slide up slightly, then the bottoms come outward and the plastics can be removed.

The pilaster lights are a little more difficult. They have to be replaced from inside. First a wood panel has to be removed from inside. If there is a color cylinder, it has to be removed. Access is a little awkward with the mechanism in place.

Coin Slide Numerals on both are brilliantly illuminated. Brilliantly lighted coin slide 5¢, 10¢, and 25¢ numerals on both models are protected by a bronze guard.



Model 37 Floor Speaker

People who try to jam or abuse the slides will be foiled by this special tamper-proof guard. These coin slides give almost 100% protection against slugs.

This brings us back to the "A" option. The standard (and by far most common) configuration was the regular (non-A) version with the coin slides driving a mechanical accumulator on the same assembly.

The 500A's had the coin slides, but the coins dropped through a chute to a coin switch assembly with five "butterfly" switches. The nickels activate only one switch, the dimes two, and the quarters all five.

The coin switches would then activate a magazine switch on the back of the mechanism. The 500A had a 24 VAC transformer to supply the voltage for the coil.

Wallboxes were not available at the time the 500 was built, but a remote coin switch was. Since the 500A already had



Model 38 Wall Speaker

the transformer and magazine switch, connecting the coin switch was easy. For the 500, a transformer would have to be added, and a solenoid added to the accumulator.

A "Fader" adapter was available for connecting a remote speaker. This functions much like the front-rear speaker fader found in older cars.

Three remote speaker models were available - the model 36 corner speaker, the 37 auxiliary (floor) speaker, and the 38 illuminated wall speaker.

A remote volume control kit (model 26) was offered. Finally, microphone kits, one with a carbon mike, and the other with a crystal microphone.

The sound system used the model 854 amplifier. It used push-pull 6L6's in the outputs, and was basically the same amplifier used in the 24's and 600's, with the exception of the tone control circuitry. While the 24's and 600's had a three-position tone switch in the amplifier, the 500 had the tone control switches in the volume

control box. Separate five-position bass and treble controls gave the operator much more control over the sound. The speaker was a 15" with a 3200 ohm field coil. It had a base so that it mounted from the floor of the jukebox.

According to the specifications, the 500 was available for 115 volt AC, at 60, 50, 40, or 25 cycles. It was also available for 115 volts DC. The parts book also lists parts for a 32 volt DC version.

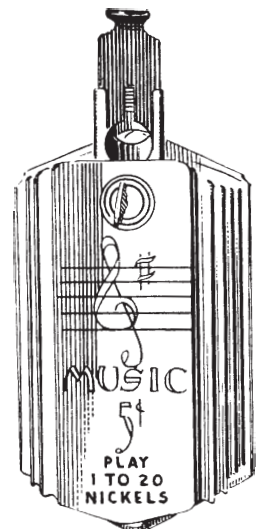
As I mentioned, these are a large machine. It is 58 5/8" high, by 35" wide, and 28 1/4" deep. It weighs all of 410 pounds.

Frank Adams printed estimate of 1500 for production was evidently a typographical error. Tom DeCillis research puts it at 13867, but a serial number on a machine at Jukebox City is above his range, which would put the production at a little over 15000.

The AJ Price Guide lists the 500 at \$5300 (retail) for a fully restored machine. This is a lot of jukebox for the money.

The 500 is an impressive, almost imposing machine. The sheer size makes its presence known. It is also a very attractive jukebox, with fine wood work, colorful plastics, and rich sound.

Text in italics is from an original Wurlitzer brochure



Coin Switch

1939 WURLITZER 600

In 1937, Wurlitzer introduced the model 24, the first 24 selection jukebox. It was a big step in the evolution of the jukebox, as 24 was a large number of selections at the time.

The following year, Wurlitzer followed up with the model 600. In many ways the 600 was similar to the 24. It had the same rotary selector in the center of the front of the jukebox, and the coin entry slides at the top right. Both had a front window that you could look through to see the operation of the mechanism.

A major change was taking place in the jukebox world. It was the dawn of the light-up era. Suddenly jukeboxes, which had previously looked like giant console radios, burst forth with illuminated, colorful plastic panels.

Plastics at this time were fairly new technology, and the jukebox manufacturers were quick to take advantage of this. Wurlitzer had a secret weapon, in the person of Paul Fuller. He immediately grasped the possibilities of this new medium and applied it to his designs.

Suddenly, jukeboxes which had formerly been pieces of furniture, became a colorful focal point of attention. In your cafe or dimly lit tavern, these colors would draw the patrons toward the jukebox to do what they were supposed to do - put their money into it.

The model 24 had been Wurlitzer's first light-up model. The 600 followed in this tradition and improved upon it, making it even more colorful and attention-grabbing. The plastics used in the 600 were thicker and more durable than those used on the 24. The side plastics and the piece above the window were red. Different colors were available for the grille area - red, amber or green, with the backdrop behind the mechanism the same color. Amber seems to be the most common.

The lighting was totally incandescent (a total of 207 1/2 watts). This was before the fluorescent lamp came into use. Most bulbs were the standard 15 watt and 7 1/2 watt screw-in bulbs. The one above the door was a tubular incandescent (trade name "Lumiline").

Most years Wurlitzer had two (some-

times more) models, to give a range of prices for different locations. The 600 was the smaller, less expensive model this year. It was introduced in August of 1938, and carried into 1939. The more expensive (also larger and heavier) model introduced at the same time was

the 500. The 500 also had one feature not found in the 600 - animation. Depending on the version, the 500 had rotating color cylinders in the side pilasters or the grille area.

The 24 play mechanism introduced on the 24 had been carried over into the



600, with minor changes (the positioning of the rotary selector is slightly different). The 500 used a different mechanism, that had a keyboard instead of the rotary selector.

Late in the production the model 600K was introduced, which used a mechanism like the 500's, with the keyboard selector. The place for the rotary selector was still there - but it was used instead as a "Record-Playing" indicator.

An "A" version of the 600 and 600K was also made. The only difference was in the coin mechanism, which used "Butterfly Switches" to activate the coin accumulator, instead of the usual mechanical unit. The "A" version would have a coin return cup, while the standard version would not (if the coin didn't work, you could get it back from the coin slide).

The coin slides are mounted at the top right of the cabinet, instead of in front, like most models. This is a safer position for them - they are less likely to be damaged there.

The front window allows viewing the record playing. It has a red plastic at the top which has the Lumiline behind it. The title board is at the bottom of the window.

The sound system used the same amplifier (#851) as the model 24, which had been Wurlitzer's first amplifier to use the 6L6 beam power pentode as push-pull output tubes. This amplifier was rated at 20 watts. With the 15" field coil speaker, these had strong, mellow tone. There was a three position tone control.

The speaker was a little unusual in that it had a built-on stand and mounted from the floor of the jukebox. The resistance of the speaker field was 3200 ohms.

Wurlitzer supplied auxiliary equipment to go with the 600. Three types of remote speakers were offered. The first was the model 36 Corner Speaker.

Also available were the model 37 Floor Speaker, and the model 38 Wall Speaker. Both had 12" permanent magnet speakers.

Wurlitzer also made an adapter box for connecting the remote speakers. It had a cable that plugged into the speaker outlet on the amplifier, then both the internal and the external speakers

plugged into this box. Adapter cables for plugging in more than one remote speaker were also available.

The selectable wallbox was still in the future. Wurlitzer made a "Coin Box", which accepted a nickels, and played one song for each nickel. But the patron had no control over which song played.

These were made to be mounted on a wall. Wurlitzer also supplied bar mounting brackets (in which case they were called a "Bar Box").

Microphone kits were also available. They came in two types - one with a crystal microphone, and one with a carbon microphone. The kit included the pre-amp, cables, and microphone with a floor stand.

The 600 was the "compact" jukebox for 1938. It stood 53 7/8" tall, 30 7/8" wide, and 24 1/8" deep. Weight was about average, at 336#.

The standard version was made for 115 volt 60 cycle current. Wurlitzer also stated versions were available for 50 cycle, 40 cycle, 25 cycle, and DC. In addition to the 115 volt versions, Wurlitzer also made one for 32 volt DC.

Values are moderate for the 600. The three price guides agree on a minimum value of about \$1000, but disagree somewhat on the maximum, with values for a mint 600 ranging from \$4000 to 6500. The AJ Price Guide puts it at \$4800.

I have a soft spot in my heart for the 600. It was my first jukebox.

Back in the late 60's (the Stone Age days of Jukebox collecting), St Vincent de Paul had a facility on the shore of Lake Union in Seattle. This was before they discovered the value of antiques, and you could find some pretty interesting stuff at bargain prices.

I was a college student at the time. I didn't have much money, but enjoyed going there to see what I could find. Occasionally I could find something that I could fix up and turn a little bit of profit.

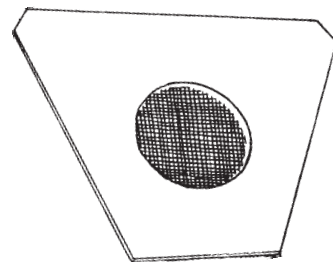
Someone must have been clearing out a warehouse, as jukeboxes of this era (usually 600's) were showing up from time to time. They were usually complete except for the coin slide assembly, which was often missing.

Prices were usually around \$18 at St Vincent's. Goodwill also got a few, but

they usually wanted about \$25, which I thought was a little high (at the time).

Finally I broke down and purchased a 600 for \$18 at St. Vincent's. I don't remember how I got it home. I must have borrowed someone's truck.

It was a pretty good original. I can't remember for sure - there may have been one cracked plastic, but the cabinet finish was good. I wired up a toggle switch to start and stop the mechanism (as there was no coin gear). I installed a ceramic cartridge and modified the volume control to get good sound. I can still remember how much I enjoyed looking at the warm colors in a dimly lit room, and how much I liked the mellow sound that came forth.



Model 36
Corner Speaker

1940 WURLITZER 700

Wurlitzer's the winner for 1940 with the Most Beautiful Phonographs Ever Built.

So spoke the brochure for the 1940 Wurlitzers. This was one case where the advertising hype was close to the truth.

Featuring Glamour Lighting, the ultimate in eye appeal.

In 1940, the Golden Age of Jukeboxes was in full swing. This was officially the Light-Up era, with all the manufacturers offering models with multi-colored illuminated plastics.

Paul Fuller was undoubtedly the king of the light-up jukeboxes. His designs of the late thirties and forties were in a class by themselves. Starting with the model 24 of 1938, and continuing with the models 500 and 600 of 1939 and the 700 and 800 of 1940, it seemed as though his designs just got better and better.

The key to the light-up era was the imaginative use of plastic. Paul Fuller made full use of all the latest technology. The plastics industry was producing increasingly attractive and colorful materials. They were also capable of molding larger and larger panels.

The plastic that really made this era was a type that went under various trade names such as "Catalin". This was usually thick, translucent, and often had a marbled effect. Lit up from behind, it became very beautiful, almost hypnotic to look at.

These plastics also had a wide range of colors. Wurlitzer most commonly used ivory, red, and green. Other manufacturers went further, and even had blues and purples.

The thickness (1/4" in some cases) made the plastic much less vulnerable than the thinner plastic used in the model 24. This plastic is quite durable - its greatest enemy (other than the patron's foot) is heat. Oversize light bulbs will darken (and in extreme cases, deform) the panels. Exposure to the sun can fade the color. The long time exposure to the heat will also cause the panels to shrink, so that gaps show up around their edges. But it isn't uncommon to find 40's jukeboxes with plastic that looks good after cleaning and a little polishing.

The pilasters were originally ivory. *On the Model 700 pilasters of rich Italian Onyx may be illuminated either by using bulbs of varying color to attain a rich blending of shades - or - by bulbs of a single color to match the predomi-*

nating note in the location's decoration scheme. Earlier models had options as far as plastic



colors. On the 700, it could be changed at any time simply by changing the light bulbs.

Of course, this is somewhat dependent on the original light color of the plastic. Age, and nicotine, turn the ivory to an amber. This darker color becomes a patina, giving the machines more of an old-time look.

On either side of the cabinet — sweeping back from the top of the pilaster — plastic panels glow with an exquisite green — put the finishing touch to another Wurlitzer triumph in Glamour lighting. In addition, red panels divide the pilasters and continue below the green panel, and on the sides above the front window.

But the lighting effects didn't end there. *On both models coin escutcheon plates, selectors, keyboards, and program holders are illuminated to add to the brilliance of these instruments.*

The grille on the 700 was especially attractive. The sides of the grille were flanked by

vertical, multi-colored, fluted plastics. Light shone inward to the grille, and through the elaborate metal scroll-work in the grille, which also contained circular, colored plastic circles that looked like red or green bubbles or balloons. In a dimly lit room, these are an awe-inspiring collage of light and color.

The colored plastic circles in the grille point out that one should never take the factory brochures as the gospel truth. One brochure shows the 700 with no colored plastic pieces in the grille.

Colorful plastics are only a part of the story. First class cabinet work was also a Wurlitzer trademark. The cabinet used "Figure Matched Walnut Veneers" and a "Hardwood Scuff-Proof Base". Wurlitzer cabinet construction was always the best. The cabinets were steel-reinforced, for better structural rigidity. This quality of construction meant that these models would retain their attractiveness.

Die-cast nickel plated metal pieces were also used on the sides of the cabinet, as well as the center of the panel above the front window. Bright metal is found in the selector keys, the coin slides and coin escutcheon plate. The numbers above the keys are illuminated, and change color when the key is depressed.

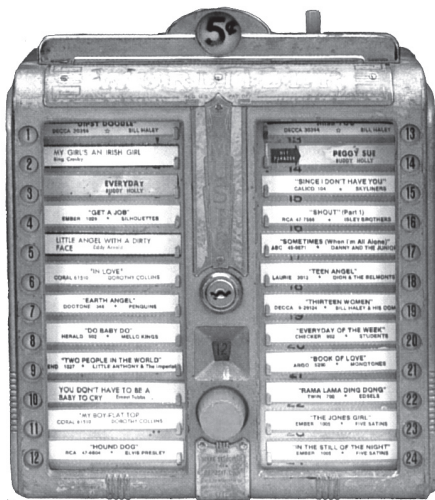
The Wurlitzer 24 play mechanism is quite photogenic, and the large front window shows it off very well. All the visible metal parts are plated or polished aluminum, and shine in the generous amount of light falling on them. The customer gets his full money's worth seeing the record play while he's listening to the tune.

Speaking of listening to the tune, The customer really got his money's worth here. The Wurlitzers of the 40's all have a rich, mellow sound with plenty of bass and a clarity of the sound. The model 700 uses a model 700 amp, with a 15" speaker with a 5200 ohm field coil. This isn't the extra heavy-duty speaker as was used on the 800 and 850, but still sounds awfully good.

The 1940 Wurlitzers introduced a new tone arm. Instead of the "Bear-claw" tone-arm previously used, they now used the one referred to as the "Lollipop" style. *The simplified Pick-Up is sealed at the factory and requires no adjustments on the part of the Music Merchant.* It tracked lighter than the Bear-claw, but still heavy by later standards. Record life can definitely be improved by a light-weight tone arm conversion (a necessity if re-issue 78's are being played).

The model 700 amplifier is similar to the 501 and 503 amps used through the 1015 and 1080. The main difference is that a resistance-coupled phase inverter is used rather than the transformer. The volume control is "Ear Compensated", to provide the same tone balance at all volume control settings.

The mechanism is little changed from the 500, and would serve Wurlitzer through the 1100. Wurlitzer was "King of the Hill" with 24



Model 100 Wallbox

selections - both Seeburg and Rock-Ola had only 20. This was a transformation of the original Simplex mechanism, and had time-proven reliability.

Of course, these originally played 10" 78 RPM records. Most of the 700's were taken off service before the advent of the 45, so it is relatively uncommon to find one converted to 45.

From the factory, the 700 had mechanical selectors. These had the disadvantage of "selection-stealing", where someone else could come along and cancel out your selection. The basic configuration had no provision for external selectors.

The coin gear was improved in 1940. The coins were inserted through a set of coin slides, go through individual slug rejectors, then into the "Moto-Drive", which was new this year. The Moto-Drive is usually referred to as the "Grinder", for the meat grinder sound it makes. The coins are routed through passages in the Moto-Drive by a rubber wheel. There are five contact fingers, all five are actuated by quarters, two by dimes, and one by nickels. These fingers operate switches which in turn operate the magazine switch on the mechanism. This elaborate coin system results in fool-proof operation.

As with all mechanical selector systems, the selections should be made before the coins are deposited.

Wurlitzer marketed a wide variety of remote options. In order to operate the model 700 with a wall box, the first item necessary was the Model 130 Adapter. This consisted of the solenoid drum and the terminal box. In addition, a Kit No. 13 was required, which contained all the parts needed specifically by the 700. This allowed the connection of up to ten model 100 wallboxes by means of the "Multi-Wire" system (a 30 conductor cable).

Much easier to install was the "Two-Wire" system. In addition to the above equipment, a model 145 Impulse Stepper was required. Either model 120 Wall Boxes or model 111 Bar Boxes could be connected to the stepper using two conductor cable. The wall boxes also had to be plugged into a wall outlet to provide power for operation.

Top of the line was the "Wireless System". In place of the model 145, a model 135 Step-Receiver was used. The model 115 Wall Box, 107 Bar Box, or 140 Stroller could be installed. The only connections needed were to plug the wall boxes into a wall outlet, and the signal was broadcast back to the jukebox over the power line.

Once the model 130 Adapter was installed in the 700, then the mechanical keyboard selector could be removed and the model 75 Electric Selector installed. A Kit No. 32 was also required for the 700.

Other optional equipment for the 700 included a model 26 Remote Volume Control and a model 78 Microphone. The model 306 Music Transmitter broadcast the audio signal to the model 350 Wireless Speaker, which had a receiver and amplifier built in.

A wide range of auxilliary speakers was also available. Most came with a single speaker adapter. Multiple speaker adapters were also available.

Most remote gear for the pre-war Wurlitzers is rare, and can be quite expensive in some cases (especially the Bar Boxes).

Strangely, Seeburg also attempted to market remote control equipment for Wurlitzers. This was probably not a very successful endeavor.

Wurlitzer covered the entire size spectrum in 1940, from the tiny model 41 table model, to the larger model 71 table model, to the average size model 700, clear up to the immense 800. These four models covered the entire customer base. The table models were perfect for the small soda fountain, where space was at a premium, and the income would not support a full size model. The 700 would fit right into the corner bar or cafe, while the 800 would find its way into a larger or fancier establishment, or

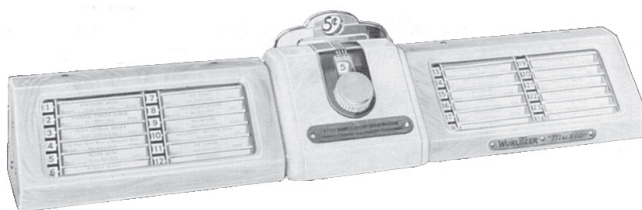


Model 39A Remote Speaker

work should be left to the experts). Many people in the jukebox field (including myself) got their start working on the 24 selection Wurlitzers.

Prices seem to have leveled on the 40's Wurlitzers. The 700 tops out at \$6400 in the new AJ price guide.

While investment may no longer be a prime reason to buy a Paul Fuller Wurlitzer, beauty is. This is a very special era in jukebox design. One of these in nice condition stands out like a jewel in any collection.



Model 111 Bar Box

dance hall.

Although not Wurlitzer's biggest machine, the 700 was anything but small. It measured 56 1/2" tall by 32" wide by 25 1/2" deep, and weighed 357 pounds.

Wurlitzer promoted their "HI-SPEED" service setup this year. For the operator, everything necessary was available from the front. The upper door opened wide and included the colored plastics above the window, for easy access changing records or the needle. Once the upper door is open, a lever releases the lower door, which opens to allow access to the coin box and mechanism.

Most of the design is uncomplicated, and not difficult to work on (although major mechanism

1941 WURLITZER 750

Look and see! You'll agree! Wurlitzer has done it again. Broken with tradition...out-stepping competition in styling its new Victory Model 750.

It was 1941. It was becoming obvious that we would soon be drawn into the war. As it introduced its 1941 models, Wurlitzer referred to them all as "Victory Models".

1941 saw one of the widest lineups of jukeboxes ever marketed by a manufacturer in one year. There was a jukebox for every location and price range.

For the locations with limited space, or where the number of plays did not justify a full size machine, there were two table models. The 41 was the smallest and lightest jukebox ever made. A little fancier was the model 81.

The 780 (Colonial, also referred to as the "Wagon Wheel") was a less flashy machine, with Early American styling, for a more conservative location. The 850 (Peacock) was the super fancy DeLuxe model, for the best locations.

In the middle of this price structure was the 750. It was designed for the middle of the road locations - the taverns, restaurants, and Honky Tonks that made up a large part of the social life of middle America.

Note its novel and beautiful cabinet.

The 750 was an attractive, brightly lit jukebox with enough flash to grab the attention of the patrons. It was designed in the middle of the Paul Fuller era, with multi-colored plastics and fine veneers on the cabinet.

Although it was not the highest priced model, no expense was spared in using the highest quality materials.

The 750 was one of the first jukeboxes to be styled using a circular, rather than rectangular, motif. The rounded top, of course, is also used in the 850 Peacock, but the 750 went one step further, with a front door that is oval in shape.

Never before have costly veneers and glowing plastics been so richly and capably combined to arrest attention.

The 750 cabinet used "Myrtle Burl and Figure Matched Walnut Veneers". To provide protection from shoes, it had a "Hardwood Scuff-proof Base". The cabinet was steel-reinforced, for strength and rigidity.

Here's a glorious new version of Glamour Lighting. Brilliant plastic pilasters!

Paul Fuller's trademark was the colorful,

window above the keyboard is semi-circular in shape, and allows the patron to see the mechanism in operation. Below the keyboard is a V-shaped decorative casting, with the Wurlitzer name in illuminated plastic at the top. Below this is a set of three coin slide assemblies. Below the coin slides is blue illuminated plastic, with a pair of bubble tubes on the sides of the V that curve upward and outward. The bubble tubes, whose first usage was on the model 800 of the preceding year, provided a degree of animation, since there was no moving colors on the 750.

Illuminated basketweave grille!

The speaker grille at the bottom was an interesting design. The fan shaped design is somewhat reminiscent of a Peacock tail. The basketweave design at the upper corners is a plastic material.

It is also available with Electric Keyboard Selector at slight additional cost.

The standard 750 had mechanical selectors like most jukeboxes built up to this time. The big disadvantage to this system was that it operated by the "Honor System". Someone else could come by and cancel your selection and substitute one of their own. This was referred to as "Selection Stealing". The 750E (along with the 780E and all 850's) had electrical selectors. Once a selection was made, it was stored internally in a solenoid drum, and could not be canceled out.

Rigid, Ruggedized Coin Slides.

The 750 has illuminated coin slides in the center of the door, to accept nickels, dimes, and quarters. These guard against trash being inserted into the coin system. The disadvantage is they are somewhat vulnerable (for example going through a tight doorway).

Slugproof Magnetic Coin Selector.

From the coin slides, the coins go through chutes to the slug rejectors, one for each coin. These slug rejectors are adjustable to provide leveling.

These provide excellent protection against slugs, which can be ejected through a coin return chute.

Foolproof Moto-Drive Coin Switch.

This was the second year for the Moto-Drive, which is usually referred to as the "Grinder". A motor-driven assembly moves the coins through to operate the coin switches.

Minimum Power Magazine Switch.

The coin switches in the Moto-Drive operate a magnet coil in the Magazine Switch, mounted on the front of the mechanism. The magnet coil operates a ratchet to step up an



brightly illuminated plastics. The 750 had large areas of plastic, placed on the sides and curving up and over the top. The plastic lit up in shades of red, green, and amber.

Lighting was still all incandescent. Total wattage for the lighting was 245.

Blue plastic panels on the coin slide unit. And, again, animated tubes of gay dancing champagne bubble illumination to command attention and inspire play.

The front door is uniquely shaped - oval, with the keyboard selector in the center. The

accumulator wheel. A mechanical ratchet steps down the accumulator every time a record is played.

Time-Tested Wurlitzer Record Changer - Famous for dependability and service-free operation, the Wurlitzer Record Changer is recognized as the best engineered mechanism of its kind in the automatic phonograph industry.

The 24 play mechanism had its roots in the original Simplex mechanism of the thirties. Starting with the model 24, it's number of selections had been increased to 24. It was refined and, provided it was maintained and lubricated periodically, would probably run forever.

The mechanism was fun to watch in operation. Anyone playing a record on a Wurlitzer Console of the era could see the shiny stack of records, watch the mechanism bring the selected record tray out, and the turntable rise and bring the record up to the tone arm to play.

Watching the record play is half the fun of an old jukebox!

Simplified Pick-Up Extends Record, Needle Life.

The magnetic pickup design was simplified this year. The tracking, however, was still high (about three ounces). Periodic needle changes were still required.

Improved Tone Through "Inverse Feedback".

The model 501 amplifier uses negative feedback to improve sound quality and frequency response. The amplifier has separate bass and treble controls, uses push-pull 6L6's for about 20 watts output, and is connected to a 15" Electro-dynamic (field-coil type) speaker.

Other than a change from the type 5Z3 to the 5U4 rectifier tube, this amplifier is identical to the one used through the 1015 and 1080.

There is also provision in the amplifier for connecting auxiliary speakers, a microphone, or a remote volume control. Auxiliary equipment is required for the above.

Speakers Rubber-Mounted To Absorb Vibration - On all Victory Models normal speaker vibration is prevented from reaching cabinet by vibration-absorbing "Rubber-In-Shear" mounts. This application to speaker suspension of the same principle as automotive "Floating Power" - a Wurlitzer innovation - eliminates tone distortions due to cabinet vibration.

Isolating the speaker from the cabinet in this fashion also prevents acoustic feedback, the coupling of the sound from the speaker back to the pickup, which can cause a rumbling or howling sound.

Floating Power referred to rubber motor mounts, which isolate the motor vibrations from the chassis in cars.

Money-Saving Service Accessibility.

The front door opens wide to provide access to the front of the mechanism. The speaker door tilts forward to give access to the coin box. The back door comes off in two sections to give lots of room to work from the rear.

The front doors tend to sag a little with age. When this happens, the coin slides can hit the top of the coin chutes, breaking them off. Reproductions of the die cast chute parts are available now.

It is also available with Electric Keyboard Selector at slight extra cost.

The 750 was sold in two versions, the base model with mechanical selectors, and the 750E, with the electric selectors. Evidently the E version outsold the regular 750 over two to one, the 750 selling 6411, and the 750E about 12,000. Strangely, it seems like I've worked on more 750's than 750E's. I think I remember reading once that, at one point in time, the resale on 750E's was lower than the 750, since the operators had more problems with the electric selector system.

Like the DeLuxe Model 850 and the Colonial Model 780, it can be adapted for wired and wireless Remote Control Equipment.

The 750E came with a terminal box for connecting the 30 wire wallboxes (can you imagine installing ten or more wallboxes with 30 connections each?)

A remote control optional setup can be added to the model 750. It consists of a terminal box and the add-on solenoid bank that mount to the rear and below the mechanism motor.

In addition, an electric selector upgrade was sold to install on a 750. It was necessary to have the remote control upgrade already installed.

Its ultra-smart oval styling combining colorful plastics with beautiful cabinet woods and artistic polished metal trim is distinctly new in the industry.

The metal trim used on the 750 is nickel-plated. Although this statement is mostly marketing hype, there is the element of truth, as the 750 is one of the prettiest jukeboxes of the era (or any era, for that matter).

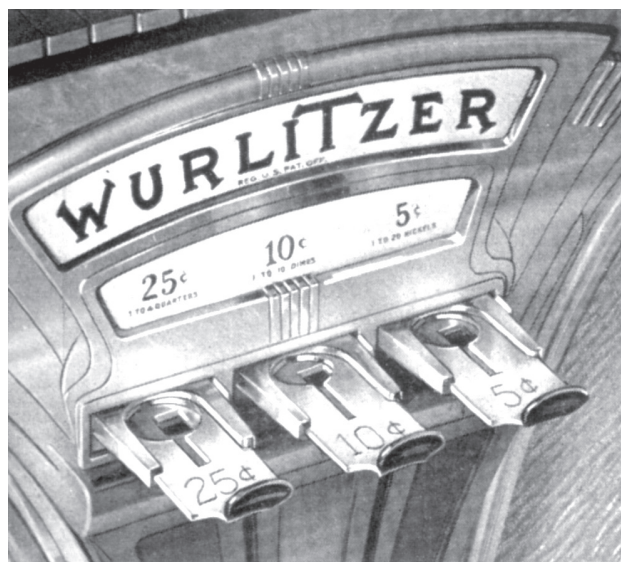
The 750 is moderate in size and shape. Its dimensions are 55 3/4" high by 32" wide by 26" deep. Its weight is less than average at 308 pounds.

Present day valuation according to the various price

guides is from about \$3000 to \$9,000, depending to condition.

See and hear this vividly beautiful Victory Model 750 at your Wurlitzer Distributor's. You'll readily realize it is destined to win new locations and greater profits for you during 1941.

**Text in italics is from the original 1941 Wurlitzer brochure.*



RIGID, RUGGED COIN SLIDES. All Wurlitzer Victory Console Models have 24 records and rugged 5, 10 and 25c coin slides that guard against trash.

Counter Model 81 has 12 records and 5, 10 and 25c drop type coin slots.

Models 850-750-780 and 81 have illuminated coin entry.

1941 WURLITZER 780

Another Wurlitzer first! A new Wurlitzer phonograph that meets the demand for an instrument of conservative design in the hard-to-get high-class location field - the Colonial Model 780.

Generally, Wurlitzer had two models in a given year - one flashier for the neighborhood cafes and bars, and one more conservative model for the fancier locations and cocktail lounges.

1941 was a banner year for Wurlitzer. Five jukebox models were offered that year - models 41 and 81 table models, the 750 console, the 780, and the magnificent 850. All models that year were referred to as Victory Models in their advertising.

The 780 was the most conservative model of the year. Wurlitzer referred to the 780 as the "Colonial". The cabinet styling was very much influenced by furniture styles of colonial America. *Governor Winthrop cabinet top! Pewter-finished hardware! Spinning-wheel grille with patchwork background! Butterfly peg construction!*

There you have it straight from the horse's mouth (i.e., the factory brochure). This model has always been referred to by collectors as the "Wagon Wheel". In reality it should be called the "Spinning Wheel". However, I don't think this revelation will actually have much effect - the 780 will probably continue to be known as the Wagon Wheel.

Here is authentic American beauty in an instrument that will open to Wurlitzer Music Merchants the doors of the finest hotels, private clubs, night clubs, and other hard-to-get locations, as well as thousands of restaurants, cocktail lounges, and similar places of distinctive character.

The 780 was the only Wurlitzer jukebox



this year that didn't show the Paul Fuller influence. The areas of light-up colored glass were minimal - the upper side corners and below the keyboard.

The influence of early-American furniture styling was much in evidence. *Custom-built Authentic Early American Reproduction - Selected Maple Veneers.* The quality of construction was high as usual, with top grade veneers and metal reinforcement for the cabinet.

The hardware (hinges, for example) on the cabinet were ornate, and styled after early American furniture hardware, and finished in pewter.

It was quite a contrast to the bright, colorful Paul Fuller designs of the other models in the lineup. It was an obvious attempt to broaden their market - to get their machines in the conservative locations where the other models would be felt to be too gaudy. Wurlitzer felt that the 780 would gain them many new locations "previously aloof to other phonographs because of its dignified and restrained design."

Like the other models, the mechanism was fully visible through a large front window. The title board was placed inside at the bottom of the window, with the keyboard selector below.

The speaker grille is an interesting de-

sign, with the wagon, I mean spinning wheel in the center. The grille cloth behind it is illuminated. In keeping with the Early American motif, it's styled to look like a patchwork quilt.

The coin gear is centered in the front of the cabinet. Three coin slides are used, one for each coin denomination, with a light-up panel above them and pewter-finished metal around them.

Separate slug rejectors are used for each size coin. The various coins all funnel into the "Moto-Drive" coin switch assembly. This is usually referred to as the "Grinder", for the sound the motor makes.

Wurlitzer made two distinct versions of the 780. The standard version used the keyboard with mechanical selectors. The coin switches in the grinder operated a count-up coil on the magazine switch, located on the front of the mechanism. If a quarter was deposited, five records would be played, depending on which pushbuttons were pushed down. If no pushbuttons were depressed, the mechanism would "count down" - that is play the next lower selection.

The mechanical selectors had the disadvantage that someone could come along, lift the key you'd selected, and push another key of their own choice. This was referred to as "selection stealing". It must have led to a few harsh words from time to time.

The deluxe version was the 780E, the "E" referring to Electrical Selectors. In this model, the mechanical keyboard was replaced with an identical looking keyboard, but this time the keys operated electrical switches.

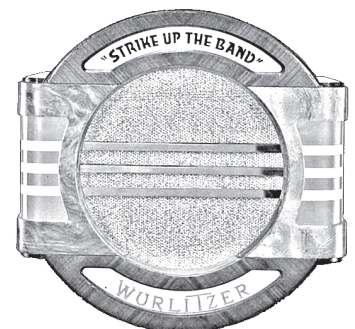
The installation was quite a bit more complicated than the standard mechanical system. A pin bank had to be mounted under the mechanism, and driven by a chain and sprocket arrangement from a cross shaft that was geared to the main selector shaft. The cable from the pin bank goes to a terminal box, which has a set of terminals for connecting wallboxes, a power transformer and a relay. A cable from the terminal box plugs into the Coin Switch socket in the junction box. The coin switch (motodrive) plugs into the terminal box.

There is also a chassis with relays that mounts on the pushbutton switch panel.

The sequence of operation is more complicated than later models. There's an additional mechanical counter in the chassis by the



MODEL 160 SPEAKER



MODEL 39A SPEAKER



MODEL 100 MULTI-WIRE WALLBOX

pushbuttons, that is ratcheted up when coins are deposited. Each time a selection is made, this counter is ratcheted down one position, and the magazine switch on the mechanism is ratcheted up one position. Theoretically, the selections made and played should remain in synchronism, but it is possible for them to get out of sync, for example if two people select the same song, it will play that song, then play another song that no one selected.

The 780E was all set to wire up a wallbox, using 30 wire cable. A kit was made to upgrade the standard 780 for wallboxes. This consisted of a pin bank and terminal box, and other miscellaneous items to connect them up.

The sound system was identical with the model 750, and the same as the 850 other than the heavier speaker used in that model. The model 501 amplifier was used, along with the "Lollipop" tone arm and a Magnavox speaker.

The mechanism was the time proven 24 play version of the Simplex mechanism used from the first Wurlitzer jukeboxes. With peri-

odic lubrication, it was long-lived. A Play Counter was mounted to the right of the record tray stack, behind the turntable.

A wide variety of remote equipment was available for the 780.

Starting with the wallboxes, there were three ways to connect up the wallboxes to the jukebox.

The model 100 wallbox could be connected to the jukebox using 30 wire cable. No adapter kit was required to connect to a 780E.

It was a little more complicated to connect to a 780. A Kit #130 adapter would have to be installed, which included the pin bank and terminal box.

A two wire system was also used, for connecting models 125, 120, 111, 112, 580, or 430 wallboxes. The last two were selective speakers. The two wire wallboxes required the Model 145 Impulse Stepper, which connected with a 27 wire cable to the terminal box in a 780E, or to the 130 adapter in a 780.

A "wireless" system used the power line to transmit the signal from the wallbox to the jukebox. The Model 135 Step Receiver would



MODEL 111 BAR BOX

have to be used. The 135 would connect directly to the terminal box in a 780E, and again would require the 130 adapter in a 780.

With the wireless system, Models 115 or 123 wallboxes would be used. The Model 108 Bar Box was also wireless.

The 140B and 140C Strollers were wireless both directions. A Model 306 Music Transmitter installed in the jukebox would transmit the audio signal over the power lines. The difference between the two is that the 140B is nickel only.

Finally, Wurlitzer supplied the Model 421 Wireless Speaker. This looked like the 430, but less selectors.

Wired speakers were available in a wide variety. The 420 looked the same as the 421. The 425 was designed to mount in a corner.

The 39A was a popular speaker in the era. The 1941 Remote Control and Auxiliary Equipment brochure shows it with "Music By" in the top section instead of "Strike Up The Band".

The model 36 was a plain jane speaker designed to mount in a corner. Model 240 was an outdoors horn-type speaker.

According to Vincent Lynch in "American Jukeboxes - The Classic Years", the Model 160 speaker came with a maple finish and



MODEL 120 DUAL WIRE WALLBOX
MODEL 115 WIRELESS WALLBOX

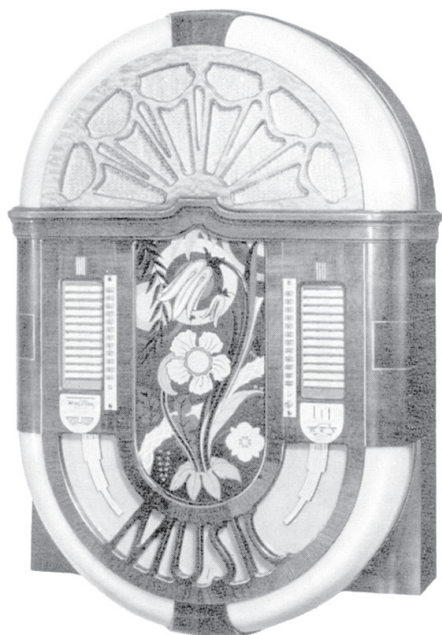
was designed to complement the 780.

To connect wired remote speakers, various remote speaker adapter kits were supplied, depending on how many speakers were connected.

The 780 was a fairly good-sized machine, at 61" tall by 37 3/4" wide by 25 1/4" deep. It wasn't as heavy as you'd expect, at 317 pounds. This is undoubtedly for the mechanical selector version - the electric selector components probably added another 25 pounds.

The 780 is an interesting contrast for Wurlitzer from the bright, colorful Paul Fuller designs. It was moderately successful, with 3500 780's and 8000 780E's produced. Not as popular as the Fuller machines, it still stands on its own as an attractive example of 40's jukebox design.

Thanks to Gerry Parson for his help preparing this article.



MODEL 580 DELUXE SELECTIVE
SPEAKER



MODEL 250 SPEAKER

1940 WURLITZER 800

The Golden Age of Jukeboxes had truly arrived. The model 24 a couple of years earlier had officially ushered in the Light-Up Era. The following year, the models 500 and 600 were beginning to show the genius of Paul Fuller. 1940 left no doubt, with the introduction of the model 800.

Wurlitzer's policy of having a range of models for different locations was in full force in 1940. There were a total of four models available in 1940, two table models and two consoles.

The model 41 was the smallest automatic phonograph built up to that time, and was perfect for the corner soda fountain. It weighed only 105 pounds, and held twelve records.

A fancier counter model was the model 71. This also played twelve records, but was larger and had a more ornate cabinet. It would fit right in to a small cafe.

The lower priced console was the model 700, with 24 selections. This was a medium sized jukebox with very attractive styling, and was popular for all but the fanciest locations.

Pulling out all the stops, Wurlitzer introduced the top-of-the-line 800. This model had everything: size, color, animation, mechanism visibility, quality cabinet construction, great sound and good looks.

In keeping with the automotive philosophy of "Bigger Is Better", the model 800 was one of the largest jukeboxes to date. An 800 is 61" high, by 37" wide by 27 3/4" deep. Definitely in the Cadillac class was the weight, coming in at 428 pounds.

And talk about color! *GLORIOUS GLAMOUR LIGHTING. Look at the Model 800 as pictured here. It's ablaze with a gorgeous parade of colors that arrests everyone's attention.*

Paul Fuller had taken the use of illuminated plastics to a new level. The 800 has vast areas of plastic, illuminated by a vast number of light bulbs. The pilasters are ivory in color, with a red band about 2/3 of the way up. This narrow section extends back from the pilaster, and curves upward into a point.

There is a green section of plastic behind the upper pilaster section, on the side of the

cabinet. The upper front has two red sections with a narrower ivory section in the center.

All this area of plastic took a lot of illumi-



nation. Fluorescent lights hadn't found their way into jukeboxes yet, so lighting was done by using large numbers of small incandescent lamps - over twenty in the 800. There are six in each pilaster - it must have kept the operators busy replacing light bulbs, especially since the whole pilaster assemblies have to be taken out to replace these bulbs.

Continuous moving rainbow illumination in the pilasters! The pilasters have rotating color cylinders inside, with what is usually referred to as the "Tiger Stripe" pattern. In addition, there is a fixed color sheet (also striped) between the rotating cylinder and the outer pilaster plastics. The interaction of the fixed and rotating stripes creates a very unique and distinctive pattern.

Moving rainbow illumination in pilasters in Model 800 is controlled by a motor driven color cylinder. No waiting for illumination

movement to start. This is a dig at competing brands (Rock-Ola mainly) that used color cylinders that are operated by heat from the light bulbs. These usually take a few minutes to get up to speed.

Color cylinder motors also have the advantage of constant speed. The heat-driven color cylinders also get balky with age, and may or may not turn. Also, it is probably impossible to make a heat-driven color cylinder the size of those in the 800.

Dancing Bubble illumination in the grille! The 800 is the first jukebox to have bubble tubes. There are three of them, located in the center of the speaker grille, in a plastic column. On the sides of the center column are "kick-proof" cast metal grille sections, with circular red plastic disks on the outside edges.

The moving design in the pilasters and the bubbles both provide animation for the patron. The movement provides a focal point for the customer's attention, to draw him or her to the jukebox, hopefully to deposit some money in the coin slides. The bubble tubes were new, and must have been pretty fascinating to watch back then (even now, for that matter).

Another form of animation to draw the customer's attention was the action of the mechanism in operation. There is something almost magical being able to watch the mechanism choose the record, bring it out to the playing position, and see the record turning as the music is coming out the speaker. Part of the Paul Fuller legacy was the visibility of the mechanism, and, with its highly polished record trays, the Wurlitzer mechanism really shined. And it was well set off by the shiny foil in the sides and rear of the record playing compartment.

Wurlitzer cabinet construction was always top notch. *Wurlitzer builds, in its own factory, cabinets of finest workmanship using hard wood lumber and matching veneers - reinforced with steel, coated inside and out with durable, protective finish. All exterior finish is hand rubbed to a rich, piano luster.*

The Wurlitzer cabinets just seemed to be more expensively built than the other brands. Where the trend was toward painted finishes, Wurlitzer stayed with quality veneers and a highly polished finish.

Coin escutcheon plates, selectors, key-boards, and program holders are illuminated to add to the brilliance of these instru-

ments. A interesting touch was that the numbers above the keyboard were illuminated, and change color from white to red when the key is depressed.

The sound was unbelievably good in the 800. It used a heavy duty speaker with a gigantic field coil assembly. The amplifier had six tubes instead of the usual five. The tone arm was their new "Lollipop" style, with the round head, *an improved and simplified Pick-Up that results in longer record and needle life plus a notable improvement in tone. The simplified Pick-Up is sealed at the factory and requires no adjustments on the part of the Music Merchant.*

The volume control circuit included loudness compensation. *Wurlitzer's conveniently location key-type compensated volume control produces the same tone balance regardless of volume setting.*

Wurlitzer now provides selective tone control of both the bass and treble ranges. Instead of the tone switches with their limited choice of tone settings, the new amplifier has separate potentiometer controls for both bass and treble, to give any setting you want. This new amplifier also has negative feedback for smoother response. With the big speaker, bass response is strong and clear, and the overall sound is full and rich.

The amplifier has provision for one permanent magnet external speaker. To connect, a remote speaker adapter would have to be used. This adapter has a "fader" control, to balance the output between the two speakers.

A popular Wurlitzer remote speaker of the era was the "Strike Up The Band" speaker, model 39A, which has a 12" permanent magnet speaker. There were several other designs available, too.

Three wallboxes were available for remote control, the models 100, 310, and 320. These were all 24 selection wallboxes,



Model 320 Wallbox

for nickel operation only. All three had a dial to make your selection, then depositing a nickel would write in the selection.

However, in standard configuration, the 800 has no provision for accepting wallboxes. The 800 has mechanical selectors, and has no "pin bank" to register the remote selections. In order to connect a wallbox, a "kit" from Wurlitzer would have to be installed. This would include a solenoid drum (pin bank) assembly, the chain and sprockets to connect it to the selector assembly, and the terminal box to power it and the wallboxes, and to connect the wires to the wallbox.

The same solenoid drum could also be used in combination with an electrical selector system that was supplied as a kit by Wurlitzer, to convert from mechanical to electrical selectors. The kit (model 75) included the complete pushbutton assembly. A kit 32 would also be required, which included installation equipment for the 700 or 800.

Wurlitzer's the winner with Improved Coin Mechanism Including Wurlitzer's MOTO-DRIVE COIN SWITCH.

The coin system for the 800 was amazingly complex. First, the coins would be entered into the *Illuminated Coin Entry Slides*. From there, they go into the *Improved Magnetic Coin Selector*. This is a bank of three slug rejectors, one for each coin (nickels, dimes, and quarters).

Next comes *The Miracle of Moto-Drive*. *The heart of Wurlitzer's Moto-Drive Coin Switch consist of three Coin Contact Plates - one for each denomination.*

Coin drops on motor driven wheel which forcibly rolls it against and over the contact fingers. The contact fingers operate switches, which are connected to the *Perfected Magazine Switch*., which mounts on the mechanism. A coil ratchets up a wheel, which operates a microswitch to start the mechanism motor.

In addition, a mechanical linkage from the coin slides to the Moto-Drive triggers the motor to start turning

whenever a coin is fed in through a coin slide.

It's a complicated system, but reliable and gave good protection from slugs.

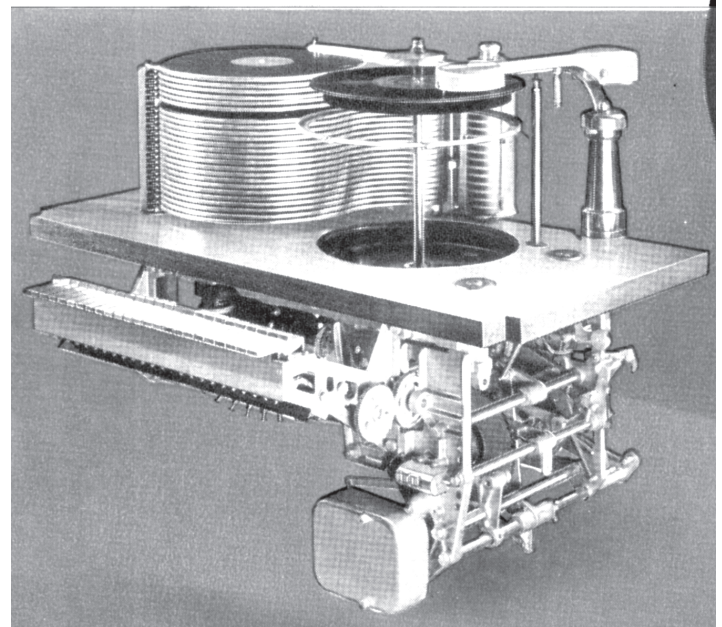
New High Speed Service Setup. The model 800 has been made convenient and accessible for the serviceman. The upper door opens wide to make changing records easy. The lower door opens to give access to the coin box and the mechanism for maintenance.

The 24 play mechanism is time proven and reliable. The 800 is moderate in difficulty to restore. Parts can be expensive. The 800 lists in the AJ Price Guide at \$9500 peak for a restored example, and should hold their value.

See these new Wurlitzers in action! Compare their smart styling - costly veneers - beautiful polished metal grilles - magnificent illuminated plastic surfaces - with any phonograph you have ever seen and you'll say "The 1940 Wurlitzers are the most beautiful phonographs ever built."

(Text in italics is from original Wurlitzer brochure.)

Below: The Finest Record Changer Made —Time-tested and recognized by the entire industry as the finest, most reliable mechanism of its kind, Wurlitzer's Record Changer enjoys an enviable reputation for dependable operation and freedom from servicing. Here, as everywhere Wurlitzer cuts no corners, spares no expense to build quality instruments.



1941 WURLITZER 850 "PEACOCK"

Never before have the Music Merchants of America praised any new phonograph so warmly and so enthusiastically as they have Wurlitzer's Victory Model 850.

1941 was really a good year for Wurlitzer. They were on a roll. They had an extremely talented designer named Paul Fuller who was churning out more and more beautiful and extravagant designs each year. 1941 saw no less than five Wurlitzer models offered: the 750, 780, and (according to the brochure) two table model versions - the 41 and 81. As if this wasn't a broad enough spectrum, Wurlitzer also offered the crowning glory of their 1941 product line, the model 850 "Peacock".

Wurlitzer tended to try to cover all bases with their line of jukeboxes. The model 750 was their entry for the typical locations - the restaurants and bars that lacked pretension and were accessible to the average Americans. The 750 was a very pretty jukebox, and would have served the Wurlitzer line well even if the 850 had not been produced.

The model 780 "Colonial" was designed for the more "conservative" locations, like cocktail lounges, where the customers were more "mature", and the Early American styling would not be so out of place.

The table model jukeboxes were marketed for the locations, such as lunch counters, where there was either no space for a full sized jukebox, or not enough income to warrant the cost of a standard model.

Note the use of the word "Victory". War clouds were gathering, and all Wurlitzer models in 1941 were "Victory Models" (not to be confused with the real Wurlitzer Victory to come a year later).

They hailed Polaroid Illumination, "A knockout in eye appeal!"

Paul Fuller pulled out all the styling stops when he designed the model 850. Every known technique of beautifying a jukebox was applied to the 850 styling (and a couple of new ones).

Paul Fuller was a genius when it comes

to incorporating new techniques into his designs. A new technology at that time was Polaroid (TM). Using this new technology, he created a picture display in the center of the jukebox with an ever changing display of colors. The panel shows a picture of two peacocks, sitting on a branch with two flow-

gears to drive the rotating assemblies with the polaroid sheets. Later versions use a chain drive and sprockets.

There are two layers of polaroid material on the picture panel. In the center is a pattern of a material called a "retarder". The full-spectrum light going into the retarder is polarized in one direction. Somehow, the retarder changes the orientation of the different colors differently. There is another sheet of polaroid plastic in front of the retarder, which picks out the color that is oriented in the same direction.

The retarder layer is built up of many small pieces of celluloid, of different sizes and layers. The layering effect would account for the different colors for each segment of the picture.

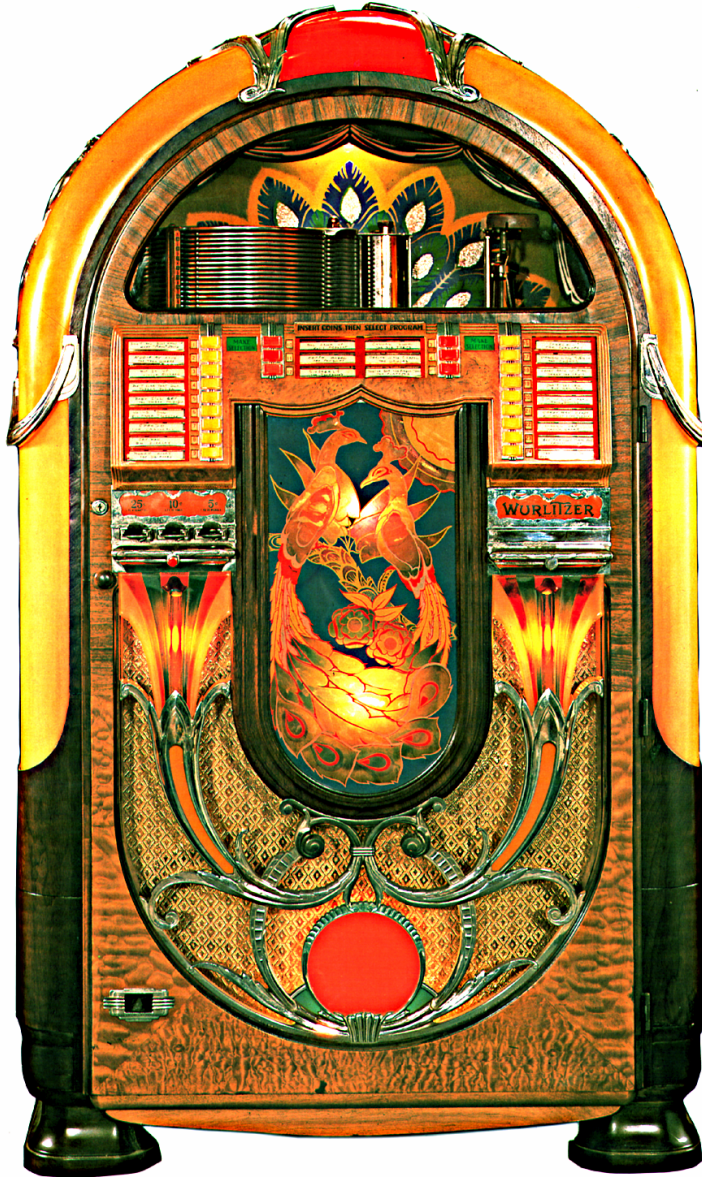
There are a lot of segments in the picture. The tails are divided into many small areas, with the spots prominently displayed. The peacocks themselves, the flowers, and what I assume is a representation of the sun in the upper right corner, all are divided into many colors.

The effect is mesmerizing now. Think what it must have been like in 1941. An ever changing display of colors like this would have been like a magnet, drawing attention to the jukebox. And that's the name of the game - getting people's attention so that they will be inspired to part with their money.

Aside from the polaroid display, there was still an awful lot going on to attract the customer. The front of the machine contained an arch of creme-colored plastic, illuminated by scads of

light bulbs. Areas of the plastic were painted green and red inside, so they lit up these colors with the power on. One of the features of the 40's Wurlitzers was a "Manual-Automatic" switch. In the manual position, the lights stayed on all the time. In the automatic position, the lights (other than the program lights, which were always on) stayed off until someone made a selection. This would save power, and it might also encourage the patron to play the jukebox just to see it light up. Personally, I think a fully lit jukebox would draw more patrons.

A large front window allowed a view of the record being played. The back panel



ers, with their tails intertwined. The picture is broken into many small segments, each one continuously changing colors, as it goes through the rainbow, and each segment a different color at any time.

Behind the panel is a polarized light source, with two rotating polaroid sheets with three light bulbs behind each one. The two sheets rotate in synchronism, projecting a light on the rear of the picture with rotating polarization.

There seem to have been mid-year changes in the design of the polarized light source. Early versions (as shown in the brochure) have a vertical shaft with bevel

has a design of Peacock feathers. Elaborate scroll-work nickel-plated castings were used between the sections of plastic and in the speaker grille. The metal scroll-work in the speaker grille seems to grow into a representation of a flower on each side of the Peacock panel, with a bubble tube in each one.

The 850 is a large jukebox. It is 39 inches wide, 65 1/2 inches tall, and 26 1/2 inches deep. It weighs 410 pounds - definitely not a lightweight.

They acclaimed Wurlitzer's Eye-Line Electric Selector, "A natural for eliminating lost plays!"

Another unique feature of the 850 was the illuminated pushbuttons. Each pushbutton had a small light bulb behind it, and when a selection was made, the light went off. This saved the customer from wasting their money making a selection that had already been made.

It may have saved the customers money, but as a result must have cost the operators money (they would be happy to get two nickels for one play of a record). As a result, the Peacock is the only jukebox to carry this feature.

The 850 is the first Wurlitzer to have electrical selectors as standard equipment (it was optional on the 750E and 780E). The buttons are arranged with nine buttons in the two outer rows, and three each in the center two.

The early Wurlitzer Electric Selector has a complicated action. There are three slug rejectors, one for each denomination coin. The coins feed into the "Motodrive" (grinder). This triggers a mechanical coin counter in the Terminal Box. When a selection is made, the coin counter is decremented, and the magazine switch on the mechanism is incremented. The magazine switch determines how many records are played. Thus, if two patrons selected the same song, it would play once, and a song that nobody selected would be played later.

The Terminal Box has a set of terminals for connecting remote wall boxes. It takes a wire for each selection, plus two or three for the common, power, and control. This would make it a major job to wire up wallboxes. Compare this to Seeburg with their three-wire or wireless remotes.

They stood for minutes on end hearing it play, watching its brilliant changing parade of light and color, paying it endless compliments, predicting it would shatter all records for earning power.

The 850 uses the model 501 amplifier, which is conservatively rated at about 18 watts. The speaker is an extra heavy duty

15 inch Electrodynamic (field-coil type) speaker. The magnet assembly is considerably larger than on speakers used on most other models. As a result, the sound is rich and full - it defines the classic 40's jukebox sound.

The "changing parade of light and color" is indeed hypnotizing. It is easy to stand for "minutes on end" watching the polaroid display (I can remember doing it the first time I saw one of these). In 1941, the "Light-Up" jukebox was a relatively recent development - they had only been around for about three or four years. In this short period of time, they had gone from the wood cabinets of the 416 to the fantastically showy machine the 850 is.

Of course, the bottom line is money. The whole idea of making an attractive jukebox is drawing people to it to put their money into it. However, the phrase "shatter all records"

may not have been the best choice of words.

Production for the 850 is on the order of 10,000. In addition, a variation of the 850 was built - the 850A. with an estimated production of 456. The main difference between the two was the picture in the polaroid display - instead of the Peacocks, Tulips were used. The picture on the upper back door was also changed.

Second to the model 950, the Peacock is the most valuable Wurlitzer today. It's easy to see why.

To a man they agreed, "It's a winner! Just what we need to sew up every top location in our territory!"

With its attention-getting good looks, the 850 would be a natural for the best (money-making) locations.

I'm sure women would agree too, the Wurlitzer 850 is a winner.

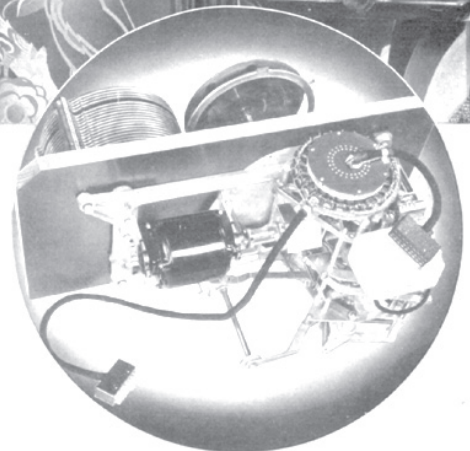


EYE-LINE PUSH BUTTON ELECTRIC SELECTOR ON MODEL 850 GUARANTEES PATRON EVERY PLAY SELECTED

Wurlitzer's Electric Selector offers patrons absolute protection for the selections they make. No lost plays. No substitute plays. This cheat-proof Electric Selector assures the patron one play for every nickel—two plays for every dime—five plays for every quarter.

Each push button on Wurlitzer's new Eye-Line Selector is brilliantly illuminated and directly opposite the program slip. The necessity of referring to a number in order to make a selection is entirely eliminated.

When a record is selected the button light goes out remains out until that record is played. Patrons can readily see what records have already been selected.



Chassis of Wurlitzer Electric Selector showing simple construction and ready accessibility for quick service

They cannot change them either at the phonograph or from any Wall or Bar Box. They must deposit a coin to make additional selections.

Wurlitzer's Eye-Line Electric Selector is furnished as standard, built-in equipment on the Victory Model 850.

1942 WURLITZER 950



The Wurlitzer 950 (also referred to as the Victory Model 950) has always been the ultimate jukebox. Value-wise, appearance-wise, there has never been another jukebox that has captured the mystique and aura of the 950.

"Mechanically the equal of any Wurlitzer ever built, the eye compelling beauty of this vivid Victory Model 950 exceeds by far in the brilliance of its Fluorescent Illumination the most superb Wurlitzers of the past."

Paul Fuller was at the peak of his career. In the three or four years leading up to the 950, some of the world's most fantastic jukeboxes had been built, including the 850 with its continuously moving Polaroid display, brightly illuminated plastics and bubble tubes

The war was gearing up on both fronts. 1942 would be a short production year for jukeboxes as well as cars. "Awake to the nation's National Defense needs. Wurlitzer willingly cooperates with the government by voluntarily limiting its new phonograph production for 1942 to one magnificent unit – the Victory Model 950."

The advent of the war resulted in a short production run, making the 950 one of the rarest jukeboxes of the era. Not only that, but war-time material shortages prevented the use of metal trim on the outside of the cabinet. "The cabinet of costly veneers with mirror glass insets on the sides and richly carved pilaster cornice caps is a masterpiece of wood craftsmanship, eye winning even when not illuminated."

Much of the 950 design was an evolution of the 850 style. Continued was the arch-shape of the top of the cabinet, the semi-circular front window providing a view of the mechanism operating, plastics around the arch and sides, and a wildly decorative speaker grille area.

Where the 850 had plated metal castings at the top, the 950 had carved wood trim pieces dividing the sections of plastic. The panel at the very top was red plastic. The side arch plastics now had a silk-screened design on them, with the "Pipes of Pan" theme.

The side pilasters are very reminiscent of

the 1015's, with the pilaster plastic curved into three sections, and two bubble tubes used ("Gay bubbles of liquid light dance up twin tubes between the pilasters"). The animation is also similar to the 1015, with a rotating color cylinder surrounding the fluorescent lamp, providing a constantly changing display of color. "Each pilaster carries a different color combination in a never ending parade of color harmony."

The pilasters are capped by a carved-wood top piece on each side (no metal here, either).

All jukeboxes up to this point had used incandescent light bulbs or the tubular incandescent (Lumiline) lamps. Fluorescent lamps would come into common use after the war,

The fluorescent lamp was a great advance in jukebox design. Earlier models had used up to four incandescent lamps in the same space one fluorescent lamp fit. The reduction in wattage meant less heat build-up, resulting in less warping of the plastic. The fluorescent lamps also had a much longer life. This was important for the operator, as he would have to spend much less time replacing light bulbs on the route.

The outer grille panels have a Gazelle design, and are also illuminated by the color cylinders, so their colors are changing as well.

The center speaker grille is a brightly lit colorful design with carved wood outlining its various sections.

The cabinet finish is "Figured and straight grain selected, matched Walnut veneers –Burl and Acacia Walnut front – Hardwood scuff-proof base".

All 950's had electric selectors. The system was very similar to the 850, with a counter to keep track of the coin credit, and a magazine switch that kept track of how many selections had been made (and thus how many records the mechanism would have to play). It was an imperfect system – if two people made the same selection, it would only play once, and there would be a left-over credit on the magazine switch, which resulted in a record playing that no one had selected.

There was also a safety circuit, so that as the mechanism coasted to a stop after all credits had been removed from the magazine switch, a solenoid actuates and cancels out remaining selected pins, if any. Wurlitzer referred to this as the "Full Cancel Feature".

For some reason, Wurlitzer was a little slow in adapting the override switch, which eliminated the above problems and simplified the circuitry considerably (the override switch closes a contact whenever any pins are selected in the pin bank). It would finally be incorporated in the 1015.

The light-up pushbuttons of the 850 turned out to be a one-model feature, and weren't continued on the 950.

The use of the pushbutton switches provided much more flexibility in the placement of the selector buttons, as compared to the keyboard used on the earlier models. Another advantage is that the title strip can be placed next to the button, making it quicker and easier for the patron to make a selection.

Wartime restrictions also affected the interior, as some of the interior parts that are normally metal were now made from wood.

All three coins (nickels, dimes and quarters) are accepted

The 24 selection mechanism was little changed from the 850, other than the addition of the solenoid-cancel system mentioned above. As on the 850, the solenoid pin bank mounted on the front of the mechanism, where it looked much more integrated into the design rather than "added on", as on the earlier models.

The 24 play mechanism was quite reliable and there was little need for change.

The sound system was also unchanged from the previous year. The "Lollipop" tone arm was still used - "the Wurlitzer's factory sealed magnetic Pick-Up extends record and needle wear, improves tone, requires no adjustments". This probably would have sounded better if they'd said it extends record and needle life.

The model 501 amplifier was unchanged. This amplifier uses a 5Z3 rectifier, two 6L6G output tubes, a 6J5 and a 6SC7 voltage amplifiers. The circuit uses Inverse (negative) Feedback for improved sound.

A 15" Magnavox speaker was used, to give rich, mellow sound.

Accessories for the 950 were plentiful. Wurlitzer had several wall speakers available going into 1942. New for 1942 were the Model 420 Organ Speaker and the 430 Selective Organ Speaker (illustrated).

The model 420 was a little less elaborate than the 430 pictured, and did not have the selector assembly in the center. "Wood veneer construction with a background of sparkling decorative fabrics flanked by colorfully lighted heavy glass pipe organ pilasters give this speaker exceptional eye arresting power." The 420 used a 12" permanent magnet speaker,

and had a volume control.

It was also available as the 421 Wireless Organ Speaker, or 425 for corner mounting. For the 421, the audio broadcast over the power line is picked up and amplified by a receiver/amplifier in the speaker.

The 430 used a Dual-Wire selector unit built into the front. It operated off of nickels, dimes or quarters. It only requires two wires to the jukebox, as the power for the selection system was supplied by the 120 volt power coming into the speaker. Of course, the use of the Dual-Wire system would require a stepper in the jukebox.

The ultimate speaker-selector was the model 580 Deluxe Selective Speaker. The 580 was elaborately designed, with illuminated arch plastics both top and bottom, a panel design in the center reminiscent of the 850A, and twelve title strips and pushbuttons on each side. It measures 49 5/8" high by 33" wide. It also uses the Dual-Wire system to connect the selectors to the jukebox. The 580 also uses a 12" PM speaker, and accepts all three coins.

All external speakers required a remote speaker accessory box in the jukebox. This contained a fader control to adjust the volume between the built-in and the remote speaker.

The 125 wallbox (illustrated) is also Dual-Wire and accepts nickels, dimes and quarters. It measures 12 1/2" tall by 10 1/4" wide by 5" deep.

It was also available as the 123 wireless wallbox. This model sends the selection back to the jukebox through the power line. The jukebox would require a wireless receiver as well as the stepper.

Wurlitzer also marketed the 112, a Selective Bar Box. This was also Dual-Wire and accepted all three coins.

Finally, the 108 was the wireless Bar Box. Its appearance was the same as the 112.

In addition to the above, microphone and remote volume control kits were available.

The 950 measures 61 3/4" tall by 36 9/16" wide by 15 7/8" deep, and weighs 369 pounds, making it slightly above average in weight, but nothing like the 800 and 850 heavyweights.

Service accessibility is good on the 950. The front door opens wide, to the inside edge of the side pilasters. This gives access to the mechanism from both the front and rear, making



MODEL 580 DELUXE SELECTIVE SPEAKER

maintenance and repair easy. As the mechanism was used for such a long period of time, expertise is easily available.

Production topped out at about 4000 units. This was considerably down from other models of the era. The federal government was in the process of taking over control of all manufacturing, and jukeboxes were non-essential. Wurlitzer turned to wartime production and wouldn't resume jukebox production until after armistice (they did keep their finger in the pie by making the Victory cabinet to upgrade earlier models).

The Always Jukin' Price Guide lists the 950 at \$24,000 maximum (retail) for a Grade 1 machine. This puts it out of range for many of us, without taking out a loan on our house. But that doesn't stop us from wanting one.

(Text in quotes is from the original brochure)



MODEL 125 WALLBOX



MODEL 112 BAR BOX



MODEL 430 REMOTE SPEAKER-SELECTOR

MY FIRST JUKEBOX

Spring, 1980. I got the urge to “collect”. But what on this green Earth would I collect? It had to be music-related, neat looking, and kinda old. RADIOS!!!! for sure. I started checking the want ads and soon bought a nice 1938 Zenith console, mint, \$100 bucks. Sally (My wife) thought it was great. I wheeled and dealt like a demon: Grunow Teledial, more black dial Zeniths, cathedrals, tombstones, art deco - all kinds of stuff, fast and easy. I even joined the local Old Radio Club and got to know Art Corbus, radio King of the Northwest. Sally liked some of it, but began to cast a jaundiced eye on me as I brought home more and more junk.

Then it happened. June 1980. While feverishly reading the want ads, I saw this: “1940’s Wurlitzer juke box - works - 621-8479.” This was the first jukebox I’d seen and it reached up off the paper and grabbed me like a pit bull. Obviously I called and went to see, look and buy.

I didn’t know a thing about jukeboxes. The place was a dump - this made the Wurlitzer look even better. I fell in love. One look was all it took. I figured it was probably worth \$10,000 restored, but it needed work. It had neat multi-colored plastics, a great chrome record stack, a turntable that arose like magic to engage the record and then the tone arm. Even some musicians on the plastic. Hardwood, chrome, color, glass, plastic, WOW!!!

The model number was damaged and I could only make out the last 2 numbers (50) and part of the first. I said “How much?”, he said “\$6,000” (actually he said “6”). I said “I’ll have to go get my wife. He said “Fine.” I went home and told Sally the deal. I wanted to offer him \$4,000. She said “I’d like to see it.” I said “OK” and away we went.

When she saw the machine I noticed she wasn’t as enthusiastic as I was - she looked at it for 10 seconds and went back to the car. I soon followed and asked her:

Mike: Well, what do you think? (ecstatic)

Sally: You’re drooling. (chilly)

Mike: Oh, sorry, but isn’t it outa this world? (enthusiastic)

Sally: It should be. (cool)

Mike: What do you mean? (bursting)

Sally: It’s a piece of junk. (cold)

Mike: Come on now, be serious. (hoping)

Sally: I’ve never been more serious. (icy)

Mike: Well, I like it. (defensive)

Sally: Maybe you better check it out first. (logically)

Mike: Yeah, I suppose so. (reluctant)

Well, it almost killed me but I told the



guy I’d have to get back to him in a couple days. He said fine. Then I tried to check it out but I didn’t really do much. I was going to buy it no matter what. I just wanted Sally to agree. No way. She said it was junk at any price. She said look around, learn a little, get some advice, price other machines. She figured the thing would still be available. I asked one guy about it. He was intrigued by the model number and said if the missing number was an 8 (850) or 9 (950) it was worth considering as they were valuable and I could always get my money back.

That was all I needed. I was pretty sure it was a 950, but even an 850 would be OK. I decided to buy it. I’d offer \$4000, hopefully he’d come down to \$5000. If not, I’d pay the 6. Sally thought I must have hit my head recently and never OK’ed the deal. But domestic harmony being more important to her than money, she never really declared war.

So I called the guy back. Yes, he still

had it. I drove back to his place to cut the deal. I offered him 4, he said no. He had paid almost 7 and had the invoice to prove it. He showed me the receipt and sure enough, he’d bought it at a thrift shop in 1978 for \$689. I looked at the paper and couldn’t believe it. He never was talking thousands, only hundreds. I recovered quickly, upped my offer from 4 to \$450 and he came down to \$500 bucks but said that was as low as he’d go. I said well, er, ah, um, gee, gosh, that’s an awful lot, I don’t know, ad infinitum, and finally said OK. I gave him \$500 bucks and hauled that baby home. I was cruisin’. I figured Sally would now love the box too.

I was wrong. She was nice, but firm. Basically her point was “Junk is junk.” Well, I knew after I got it all fixed and cleaned she’d feel differently. So then I started checking it out. It had a few problems I hadn’t noticed:

1. It smelled like 600 animals lived in it.
2. It sounded terrible.
3. It only played #14, Tiny Bubbles.
4. All the chrome was rusty.
5. Some upper plastic was broken and taped.
6. The turntable spindle was warped and the speed was off.
7. The coin deal wouldn’t accept money.
8. The casters were shot and it weighed 60,000 pounds.

None of this dampened my enthusiasm. I figured I could restore it and still not approach the \$4000-\$6000 I would have paid for it.

My next move was to find out if it was an 850 or a 950. After a few inquiries at antique and second-hand stores, I ended up at Har’s Electronics. I had met Harold in the Radio Club and he had some Wurlitzer pictures. It wasn’t an 850, 950, 750, or 1050. It was a 1250.

Then I asked him what it was worth. Boy, was he reluctant to break my heart. The upshot of the whole story is, Sally was right. If I saw that same machine today, I’d pay no more than \$100 and that’s only because I’ve never seen a jukebox I didn’t like.

The story has a happy ending though. We named it Wally and Sally likes him now. It did kind of slow me up for a while. I’ve made better buys but never in such a fever as that first one. But, the original excitement was worth it.

1942 WURLITZER VICTORY

As the war clouds were gathering in the early 40's, patriotic themes were very common in merchandising. Wurlitzer joined in this trend by applying the "Victory" name to several models.

In 1941, Wurlitzer applied the Victory name to 2 of the 3 full-sized models. The 750 was referred to as the Victory Model 750 in the advertising. The 780 was called the "Colonial Model 780, while the 850 was also called a Victory Model.

In 1942, the rare 950 was called the Victory Model 950. But these are not the models that most people think of as the Victory. The real Wurlitzer Victory was the model marketed from 1942 to 1945.

As WWII gained momentum, and the US became very much involved, the federal government started placing restrictions on civilian production, and the materials that could be used in this production. Metals, plastics and rubber were soon placed on the restricted list.

Most manufacturing businesses were pressed into service manufacturing materials and devices for the war effort. Wurlitzer was not ignored, and found itself busy with wartime production. Unable to manufacture a complete machine, and desiring to keep their distributor network supplied somehow, Wurlitzer opted to manufacture cabinets for the distributors to re-cabinet the obsolete machines on their routes or in their warehouses.

New cabinets and light-up kits had become a moderate-sized business in the late 30's and early 40's. Almost all of it came from companies other than the jukebox manufacturers themselves. A few complete cabinets were offered, but usually the kit consisted of plastic panels and lights to brighten up your 412 or 616 (in some cases, people actually "Seeburgized" their Wurlitzer by giving it the airbrush painted finish used on the late 30's Seeburgs). With the advent of WWII, the light-up kits were probably difficult to manufacture, as they usually contained large molded plastic panels and metal castings.

The cabinet that Wurlitzer came up with had no metal or plastic in it. It was a tall, angular (some might even say ungainly) wooden case with glass panels on the sides and top. The glass panels had a painted design and silvering on the inside. As the cabinet was marketed over a relatively long period of time (from 1942 until 1945), there were different designs on the glass. The most common is the version with the court entertainers, male on the left, and female on the right. This is the version that is being reproduced. The ad reprinted on page 61 of the AMR Wurlitzer book has the picture of the Victory mirror-imaged.

Contrasting with the middle-ages musical theme of the glass panels is the glass circles on the side of the speaker grille, which appear to be the "eyes" of the tail of a peacock. This

particular styling theme seems to have been carried over from the 850.

The cabinet (or should I say cabinets) were designed to accommodate the mechanisms from the models 24, 500, 600 (two versions, rotary or keyboard selector), 700 and 800. I



1942-45 WURLITZER UNIVERSAL CABINET: 78 rpm. During the War Jukeboxes were not produced. These huge cabinets were made to "modernize" older Wurlitzers. Since metal & plastic were not available, the "Victory" models were all glass & wood. They were big enough so that the guts from nearly any older model could be put in them - voila - a new box! Wurlitzer designated these jukeboxes as "Model 42". (From the ALWAYS JUKIN' GUIDE TO COLLECTIBLE JUKEBOXES)

can't remember seeing a Victory with a 700 or 800 mechanism, but it is possible.

The only metal parts to be found were those taken from the converted jukebox. This included the mechanism, sound system, coin gear, and power junction box. Items such as coin chutes that had to be made to fit the new cabinet were made of wood. The bezels that surround the coin slides and glass nameplate were made of a molded wood product.

The Victory cabinets had to be made to fit the original mechanisms and coin gear, and had to be different for each model converted. Added to this was the tendency for this model to have variations for each model mechanism, so there are a lot of different Victory's in existence. I've heard someone say that there are no two identical Victory's, but that is probably stretching the point.

The Victory cabinets were shipped from the factory to the distributors, who did the conversion. The work was probably done at the

distributor's service department, although it possibly could have been done on location. Since the jukeboxes being converted were still relatively new models, not much reconditioning would be needed for the mechanism and sound system, mainly lubrication and periodic maintenance. A certain amount of adaptation would be necessary, as the coin gear was not mounted in the same place (for the 24 and 600, the coin slides were at the top of the cabinet). All the Victories had the coin slides on the left center, so new chutes and linkages would have to be used. A bell-crank arrangement (made of wood, of course) had to be added to convert the vertical motion of the count-down linkage to horizontal motion, as the mechanical accumulator was now mounted to the side rather than above this linkage.

If any 700 or 800's were converted, the installation would have been a little easier, as these used the motodrive with a magazine switch mounted right on the mechanism, so no linkages were necessary. In all cases, they used whatever parts they could salvage from the original jukebox, then made additional parts from wood wherever they could. The wide variation of configurations for the Victory sometimes makes it difficult to tell what is original or authentic.

This jukebox model has one bad habit. The front door opens from the top, and the first time you open it, you expect it to be hinged at the bottom. Instead, the door falls off, and can fall on the floor if you don't have a good grip on it.

The Victory model served two purposes for the Wurlitzer factory. It kept Wurlitzer's presence in the jukebox market alive, and it provided work for the cabinet-making division. For the distributor, it provided a new machine (at least new-looking) to put on location. Ads from Wurlitzer stressed that the modern cabinet would stimulate plays and increase profits, which would be true for a while, until patrons got used to the new design. Ads also stated that the machine produced better sound quality, which is a little hard to believe, as the sound system was unchanged.

Working on a Victory is almost the same as working on the earlier models, with the exception of the modifications to the coin mechanisms. The large cabinet offers plenty of room to work inside, which is pleasant.

The styling on the Victory is unusual enough that not everyone finds them attractive. This is reflected in the values, which are lower than the other Wurlitzers of the era (but still higher than the models that they were converted from). It is an interesting model, both from a styling and historical point of view, and will continue to attract attention wherever displayed.

1946-47 WURLITZER 1015

During the Paul Fuller era, Wurlitzer produced a steady stream of attractive, colorful jukeboxes that are very popular with collectors. Among these, the model 1015 is probably the most important historically. Manufactured in 1946 and 1947, it has the highest production of any jukebox ever made (about 56,000), and has the highest recognition level by the general public.

Like the automobile industry (and many other consumer industries as well), production in the jukebox industry was curtailed in 1942 to make room for wartime production. Wurlitzer was producing the model 950 (called the "Victory model 950" in the ads), and as a result of the conversion to military production, the 950 is one of the rarest and the most valuable jukebox in existence.

At the end of the war, most manufacturers rushed to begin civilian production again. The 1946 automobiles were essentially 1942 models with a mild face-lift. The jukeboxes introduced in 1946 were also pre-war internals with a mild re-styling. Wurlitzer had a noticeable styling continuity between the 950 and 1015, while Seeburg and Rock-Ola had a more pronounced re-style, but they were all still using the same old running gear.

The most notable cabinet change from the 950 to 1015 was the addition of bright metal trim on the front of the cabinet. The 950 had all wood trim, due to wartime restrictions on the use of metals. The 1015 dropped the "Pipes of Pan" drawings and added bubble tubes in the arch.

Wurlitzer had been using the "same old running gear" since 1934, but there were some important improvements between the 950 and 1015. The most significant was the upgrading of the selector system. On the prewar models, there were two mechanical counters used. One kept track of the coin credits (how many selections you can make at the keyboard), and the other (the magazine switch on the mechanism) kept track of the play credit (the number of records the mechanism would play). When a coin is inserted, the coin credit counter is advanced according to the coin denomination, and the "Make Selection" window lights. Making a selection causes the following sequence of events: the appropriate pin in the pin bank is released, the coin credit counter is moved down one position, the magazine switch is advanced one position, and the mechanism starts and plays the record. At the end of the record, the magazine switch is dec-cremented one

position as the record tray returns to the stack. If no other plays are left on the magazine switch, the mechanism stops just about the time the tray reaches the rest position in the stack.

This system has a couple of faults, the

credit counter was used (now mounted inside the motodrive). The action was the same making a selection, except for not having the magazine switch to increment. An "Override Switch" was mounted on the pin bank, so that if any pins were released, its electrical contacts would close and start the mechanism motor. A second switch (the "Cutoff Switch") was mounted below the pin bank, and was wired in parallel with the override switch.

When a record is selected, a pin is released, and the override switch closes, starting the mechanism motor. Before the pin is pushed back to its unselected position, the cutoff switch closes to keep the mechanism running through the playing cycle. After the record rejects, the cutoff switch opens, just as the tray starts returning to the stack. If no other pins are released, then both switches are open and the mechanism coasts to a stop. If another record has been selected, the override switch is closed and keeps the mechanism running to play another record. There is absolutely no possibility of the jukebox playing a record that no one has selected, or not playing a record that someone has selected.

Wurlitzer did not pave any ground with this system, as it was adopted by the other manufacturers just before the war. In reality, this was an obvious step in the evolution of the jukebox. The period of time from 1940 to 1946 was a time of rapid change in the selector systems of jukeboxes, going from mechanical to add-on electrical to fully integrated electrical selectors. Concurrently, Wurlitzer had improved its remote selector gear to where it was simply a plug-in job to connect to the jukebox.

The sound system used in the 1015 was identical to that used in the prewar models. That is not bad, as there is certainly no fault to be found with their sound quality. In fact, these give a rich, full sound lacking in more recent sound systems. As this was a few years before the advent of automatic volume control, the amplifier was fairly simple in circuitry, but well designed and of heavy duty construction. It supplied about 18 watts to a 15" field coil type speaker. These days, 18 watts doesn't sound like much power, but a tube-type amplifier driving a relatively efficient speaker gives a lot of sound per watt.

The biggest drawback to the sound system in the 1015's was the old-style heavy-weight tone arm with the old-fashioned magnetic pickup, and a tracking force of 3 ounces (about 85 grams). This wasn't so bad for the



most apparent being the difficulty of keeping the number of pins released equal to the number of credits in the magazine switch. Usually what happens is that if two people select the same record, then there are more credits in the magazine switch than the number of pins released. After all the selected records have been played, there is still credit on the magazine switch, and a record would play that no one has selected.

There must also be a small possibility that there can still be a pin released when the magazine switch runs out of credit, as the 950 included a solenoid to cancel out any remaining released pins when the magazine switch turns off, as the tray is returning.

The 1015 solved these problems in a simple and elegant manner. The magazine switch was dispensed with, and only a coin

older, harder shellac 78's, but when the records began to get softer with the advent of vinyl, 3 ounces was too much. The other manufacturers had begun to lighten tonearms and were using crystal cartridges in 1946. Both Wurlitzer-supplied and after-market kits were soon available, the most common being the Jacobs and the Wurlitzer Kit 87.

After the Zenith Cobra tonearm was adapted into the 1100, Wurlitzer Kit 102 was supplied for the 1015's which included the Cobra tonearm, upper stabilizer bar, pre-amp, and muting switch. Now, tracking force was measured in grams rather than ounces. Although still not light by modern standards, it was a big improvement over the original, and was necessary when the 45 RPM conversion kits were offered.

The Simplex mechanism introduced in 1934 was very reliable, provided it was periodically lubricated. The mechanism above the board was attractive to look at and invited people to watch the record playing. It had served Wurlitzer well for over 10 years, but its days were numbered. Wurlitzer didn't bother to see the handwriting on the wall, that the days of the 20 or 24 play jukebox were about to come to an end. It was only a couple of years until the 100 play Seeburg Select-O-Matic would be introduced, and Wurlitzer's glory days would come to a sudden end. The Simplex mechanism wasn't easily adaptable to a greater number of selections, and their attempts to do so in the 1250's through the 1650's were interim solutions, and not successful.

Since it was in production for so long, there were many changes made. Two notable examples are the change from 5 to 3 lights in the arch, and the change from nickel-plated to polished aluminum trim. During the long production run, they probably had to make new casting forms, as the metal cabinet trim off a late version will not fit easily on an early cabinet, and vice-versa. I found this out the hard way many years ago, as I had a customer with several 1015's who was forever trying to pick out the best pieces of trim from all of them every time we fixed up a box.

A number of after-market conversions and replacement parts became available for the 1015. The most famous (notorious?) conversion was the "Ambassador". This kit replaced the plastics and metal trim in an attempt to disguise the 1015 cabinet. Most have been converted back to 1015's, as the value is higher in the original form. Another common change was the replacement of the troublesome bubble tubes with plastic "twisties", which were probably available from WICO and other sources. Conversion to 45 RPM and the above-mentioned tonearm conversions were also common.

There are several reasons why the 1015

was so successful. One major reason, of course, was the pent-up demand due to the curtailing of production during the war. The same situation was present in the automotive world - they could sell just about anything they could produce.

Another major reason, of course, is styling. Among the elements of styling that helped to make it popular are woodwork, color, and animation. Wurlitzer consistently had the finest cabinet work and veneers, and a large amount of hand work went into



1015 with Ambassador Kit

each cabinet.

The Paul Fuller look was still very popular, and the warm colors (reds and ambers) predominated. The extensive use of lit-up plastics, nickel-plated brightwork, and the richly finished wood created an overall look of beauty and quality.

Animation is one area the 1015 will never be equalled. The side pilasters contained rotating color cylinders that continuously changed from red to amber to green to violet. Eight bubble tubes were used, 2 in each pilaster and two in each side of the arch. This gives the effect of bubbles running continuously up the side to the top of the jukebox. Finally, having the record play visibly is another kind of animation. Wurlitzer provided a "stage" for the mechanism, with curtains and a backdrop, to display it to best advantage. There is something fascinating about making a selection, watching the record tray swing out, the turntable rise to bring

the record up to the tonearm, and seeing the record being played as you listen to the music.

Finally the 1015 was successful because Wurlitzer had an extensive advertising campaign. This was the first time that a jukebox manufacturer had advertised to the general public, instead of only to the distributors in the trade magazines.

The reasons that an item is popular as a collectors item are not always the same as the reasons it was popular when new. In the case of the 1015, however, it is more a case of all of the above reasons and more. The usual reason for something becoming popular as a collectible is memories, or nostalgia. After the war, the millions of returning servicemen played the 1015. Even into the 50's many 1015's were playing rock and roll in the teen hangouts. The media (magazines, TV, and movies) never did forget the 1015. The 1015 is unique in that it always has been popular, and thus its image has been embedded in the minds of many age groups.

As in the automotive world where there is a small industry building reproductions of the classics, the 1015 has also been reproduced. The first was the nostalgia model 1050, of 1973-74, built by Wurlitzer. Although not a replica, it was designed to capture the mood of the era, and owes much of its appearance to the 1015. There are two 1015 replicas being built today, both using modern mechanisms and electronics. These are very close to the original in appearance, and offer the classic look with the reliability of a new mechanism. Both 45 RPM and Compact Disk versions are offered.

There probably never will be another model jukebox that would have the same mass appeal that the 1015 has. The only other model I can think of to have near the mass recognition is the early 50's Seeburg Select-O-Matic jukeboxes that were made popular on "Happy Days".

Many years ago, a friend had a 1946 Harley for sale. The first time I saw it, my immediate reaction was "Now that's what a motorcycle should look like". I think the same is true for the Wurlitzer 1015, and accounts for much of its popularity. To a large segment of the population, the 1015 is what a jukebox should look like. And that, to me, says it all.

THE MOST IMPORTANT RULE OF JUKEBOX COLLECTING

by Mike Baute

While we were in Chicago, some guy called & left a message: "I've got a nice 1015 I'd like to sell." Following the most important rule of Jukebox Collecting, CALL IMMEDIATELY, I call him immediately Monday morning (I waited until about 7:45am). He answered & said yes he had a 1015 but he "don't know what it's worth & I really hate to sell it & maybe I'll fix it up & maybe my buddy will buy it & I sure don't know what it's worth & I'd sure hate to sell it too cheap & blah blah blah," ad infinitum ad nauseam.

I had a hunch this was gonna be a loser but the most important rule of Jukebox Collecting is NEVER EVER GIVE UP ON A LEAD, so I persevered. The most important rule of Jukebox Collecting is GET THE SELLER TO ESTABLISH A PRICE. So I asked him how much for the 1015. He hemmed & hawed & gave me the impression he was having wisdom teeth removed without anesthesia all because I asked him how much he wanted.

I changed the subject & asked him to tell me about the 1015's condition. It sounded pretty good. He said "I bought it in the 50's & it's been in my house ever since. Still plays good, selects good, has coin gear, plays 45's, everything works except one bubble tube is broken & 2 plastics are shrunk." Since it is a 1015 I am interested but I never forget the most important rule of Jukebox Collecting: ALMOST NOTHING A PRIVATE SELLER TELLS YOU ON THE PHONE IS ACCURATE.

Here it got a little sticky. It was obvious I was the first person he had talked to. He was nervous as a herd of cats. He would not quote a price. The most important rule of Jukebox Collecting is DON'T GIVE OUT PRICES FREE ON THE PHONE. I said "Do you want me to come over & give you a Paid Appraisal? It'll cost \$100." He lives in Tacoma, about 45 minutes from my office. I figured I could do the appraisal & be back in my office in less than 3 hours. One hundred dollars is a little more than usual but that's because of Tacoma's aroma (abominable is an understatement). Well this offer seemed to jar him off the pot because he immediately said "Uh, well, er, I'd like to get about \$5000 for it."

I thought 'now we're getting somewhere!' So this guy knew he had a valuable jukebox & even had it priced in the ballpark. This is the most important rule of Jukebox Collecting: FIND OUT IF THE SELLER HAS A REALISTIC PRICE IN MIND. This guy did but he was still kinda iffy. The most important rule of Jukebox Collecting is GO SEE IT IMMEDIATELY (don't wait for somebody else to beat you to it or for the seller to have a losing battle with remorse.) So I said I can come over tomorrow & look at it & I'll buy it if it's as

you say. I told him \$5000 was not impossible but I had to see the 1015 before I would commit to a price. The most important rule of Jukebox Collecting: DON'T COMMIT BEFORE INSPECTING.

He got edgy again & started treading water. Seems 'tomorrow' would not be convenient for him. I said 'how about Wednesday?'



A Shaky Deal

We agreed that I'd call him Wednesday morning & come over about 10am. The most important rule of Jukebox Collecting: AVOID RUSH HOUR TRAFFIC. He sorta agreed & then started rambling about the jukebox & how he hated to sell it & on & on. Then he said something that made my blood run cold: he said he was gonna go to John's (Jukebox City) on Tuesday & try to buy some parts for the 1015.

Now the cat was out of the bag. This guy knew John & was no babe in the woods. At this point I began to seriously doubt that I would get this 1015 at any price. I could have pushed him & went to his place immediately but I could tell he just wasn't quite ready to sell & he wasn't going to sell until he talked with John. I knew John would buy it, so I could only hope that John would be out or the guy would not follow through. Regardless, I had to call John because the most important rule of Jukebox Collecting is DON'T GET INTO A BIDDING WAR WITH YOUR PALS (OR ANYBODY ELSE).

I called John & told him about the deal & the \$5000 & that I was gonna see it on Wednesday & that the guy said he 'was

gonna contact you.' John called back in a little while & said Yep, the guy called & was coming over to Jukebox City.

The next day John called & said the guy really twisted his arm & made him follow him back to Tacoma & sold him the 1015 for well under \$5000. John scores again!!

I went over to Jukebox City (only a few blocks from the AJ Office) and looked at the 1015. It is a good, original 1015. Well worth the \$5000 I might have paid & certainly worth the considerably less than \$5000 John did pay. I'm a good sport but not when this sorta thing happens. I couldn't be mad at John because he really hadn't done anything- the guy came to him. But I was furious with the seller because he had set up a date for me to see the jukebox on Wednesday & he had sold it to somebody else in the meantime. The more I thought about it the madder I got. But what can you do in a deal like that?? The most important rule of Jukebox Collecting is FORGET IT. But I'm not really built that way. The next best thing is to get even.

Wednesday morning, just like we had agreed, I called the guy. I reminded him of our 'date' to see the 1015. I said I was bringing \$5,000 with me because I really wanted the jukebox. I explained that I'd be there in about an hour.

The silence was deafening. Finally, in this very weak little voice, he admitted the 'Jukebox is Sold.' He could barely choke out the words because he realized he had done what he had most feared he would do- he had sold it too cheap!! I acted like I didn't understand or believe that it was sold & said 'OK, I'll give you \$6,000, I'm not kidding around about this, I really want that 1015!!' I heard a long mournful sigh & could visualize the stricken look on his face: again, he could barely utter the word- "Sorry, it's already sold."

For the coup de grace I again acted like I didn't believe it was sold & said, "MY FINAL OFFER IS \$7500 CASH & I CAN BE THERE IN 45 MINUTES, WHADDA YOU SAY?" He took so long to answer this time that I was afraid he'd had a heart attack & even I didn't want that much revenge. Finally he just said 'Sorry' & hung up. I felt much better. The rat thinks he let it go for about half of what he could have gotten.

I really wasn't too heartbroken. Since I never sell jukeboxes, I figure this guy saved me \$5,000. I doubt I'd get to it within 10 years. Now I will follow the most important rule of Jukebox Collecting: DON'T CRY OVER UNPURCHASED JUKEBOXES.

1949 WURLITZER 1080C

The postwar boom was on. The bubble was yet to burst. The 1015 had been built for two years, and had set the highest production for a single model - about 56,000.

The production of the 1015 ran over the years 1946 and 1947. For the first year, it was the only model being produced (they were selling all they could - they didn't need to worry about a companion model right away).

By 1947, they had returned to their prewar policy of having multiple models running side by side. The 1015 was a flashy machine, so they must have felt a need for a more conservative model for the locations where the 1015 would have seemed out of place.

Wurlitzer introduced the model 1080 in 1947. Nicknamed the "Colonial", it was especially designed for fancier locations. Classic was the theme for styling. From the curvy shape of the cabinet, to the Lyre-shaped plastic in the speaker grille, to the Colonial American theme in the rear panel inside, the 1080 reeked of nostalgia long before nostalgia became such big business.

For 1948, the 1015 was discontinued, and replaced by the complicated and very fancy 1100. The 1100 kept the same old 24 play mechanism, but changed just about everything else. The sound system was totally redesigned, with the new Cobra cartridge, supplied by Zenith Radio Corporation.

The 1080 was continued for 1948 as a companion model to the 1100, and now called the 1080A. Little was changed, other than the sound system, which was borrowed from the new 1100.

The 1100 was continued over into 1949. But the bomb had dropped, and the new 100 selection Seeburgs were out. Wurlitzer worked feverishly to bring out a new model, meanwhile continuing production of the 1100 unchanged.

The 1080 was also continued, and became yet another version, the 1080C. This is one of the rarest of all Wurlitzers - most of us have never seen one in person.

The 1080C was restyled extensively on the outside. The basic cabinet remained the same, but the grille and plastics were changed.

Gone was the lyre-shaped insert in the speaker grille. The "Star Emblem" was moved downward, to the lower part of the door below the speaker grille. Placed vertically in the center of the grille was now a rotating color cylinder, with a rippled clear plastic cover. The grille cloth is beige, with the design in blue.

The outer plastics underwent a radical change in their design. The Early American theme was dropped in favor of a surrealistic view of musical themes.

The symbolism of course represents the music coming from the jukebox speaker. Vari-

been changed, and still has the Colonial America theme.

The same fine cabinetry is found on the 1080C as on the 1080's, and other Wurlitzer models of the forties. The majority of the cabinet has top quality veneers, with natural finish, while the edges of the door, around the side and upper plastics, and the base are a darker colored finish.

Electrically (other than the sound system and grille lights), the 1080C is much the same as the 1080 and 1080A. The selector circuitry and power wiring are much the same as the 1015. The 1080C still uses 24 separate pushbuttons for the selectors - not the wild complexity of the Encore Selector Unit found in the companion 1100.

The model 506 amplifier (used in the 1100 and 1080A and C) was designed to be much more versatile than the 503 found in the 1080. The volume control could be removed, and connected up with shielded cable at a remote location. In addition, it was the first amplifier to have terminals for remote speakers.

A terminal strip on the amplifier has connections for a 3.5 ohm speaker, an 8 ohm speaker, and 500 ohm outputs for one, two, or three 500 ohm speakers in parallel. In addition, a speaker fader switch allows all the power to be sent to the internal speaker (Phono Only), 75% to the internal and 25% to the external speakers (A setting), 50-50 (B setting), or 25-75 (C setting).

If the external speaker power requirement is too much for the built-in amplifier, an Auxiliary Amplifier Model 227 can be added. The 506 amplifier has a line output jack for connecting the 227.

Wurlitzer marketed an impressive line of remote speakers: the 4002 Multi-Colored Wall or Ceiling Speaker, the 4004-A Musical Note Speaker, 4005-A Round Walnut Speaker, 4006 Round Mirror Speaker, 4007 Oval Deluxe Speaker, and 4009 Recessed Wall or Ceiling Speaker. Finally, they sold the incredibly elaborate Model 4008 Super Deluxe Wall or Ceiling Speaker.

The cobra cartridge was a step forward from the old "Lollipop" tonearm. Tracking pressure was sharply reduced (from 3 ounces to 2/3 ounce - about 19 grams), and record life improved (according to Wurlitzer), from 420 to over 1500 plays.

Another safety feature - the cartridge socket was spring loaded. According to Wurlitzer, *The "floating filament" (stylus) is housed in a retractable cartridge. Your ser*



ous musical instruments are shown, including a saxophone, another wood wind, possibly an oboe, and a piano keyboard. Intertwined in the instruments are various scroll designs, which almost look as though they're playing the instruments. The musical staff is in the background, and there are various musical notes here and there.

At the very top, there is a representation of a music stand with sheet music, with more musical notes in front of it. There also appears to be a wreath in front of the music stand, the symbolism of which escapes me.

The first appearance of the surrealistic musical instruments on the front plastics of a jukebox had been on the wartime Victory model, then on the inside back panels in the 1015 and 1100. The theme would be repeated in later models, such as the 1500 and 1600 series.

Oddly, the scene at the rear of the record changing compartment appears not to have

vice man can accidentally drop the pickup on the record, or scrape it clear across the surface. No damage to record or stylus. Any pressure on the tone arm rocks the cartridge upwards...raises the "floating filament" point off the record...leaves only a smooth plastic shoulder in contact that will not harm a record.

The 1080C, by itself, was not set up to accept remote wallboxes. The minimum setup was to install the Model 218 terminal Box, for the "Multi-Wire" system (about 27 wires to connect). This would be used in conjunction with the model 3031 Wall Box. The 3031 is the least expensive wall box, and operates off of nickels only.

The next step up is the two or three wire system. This system requires a Model 219 stepper in the jukebox. The 3020 wall box can be connected as a three-wire system, deriving its power from the jukebox, or as a two-wire system, with a line cord connecting from the wall box to a 110 volt outlet.

The top-of-the-line system is wireless. At the jukebox end, a Model 216 Receiver has to be added to the 219 stepper. The 3020 wallbox can be made wireless by adding the Model 215 Plug-In Transmitter (the 3020 still had to be plugged in to a wall outlet. The signal was transmitted through the power line, not through the air).

The most exotic system was the Model 2140 Bar Boxes. These tiny units would display all 24 selections, four at a time, in their version of the Encore selector. A group of Bar Boxes connect to a single Model 212 Master Unit, which is hidden

behind the bar, and has a built-in wireless transmitter. These are very rare and desirable today.



The 1080C is a contradictory machine. Whereas the 1080 and 1080A were designed to be a more conservative companion to the flashier models 1015 and 1100, the 1080C gives up much of its conservative styling to the attention-grabbing graphics on its plastic panels and the turning color cylinder.

The restyling might not appeal to everyone, but it certainly transforms the somewhat staid 1080 into a jukebox that won't be ignored.

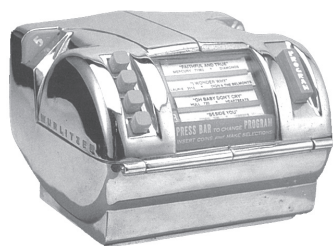
By 1949, the Paul Fuller era was drawing to a close, the post-war seller's market was ending, Seeburg had introduced its 100 selection jukebox, and Wurlitzer's sales were dropping rapidly. Exact production figures for the 1080C are unavailable, but an educated guess puts it at two or three hundred (serial numbers are interspersed with 1080A's. Total 1080A and 1080C production is about 1100).

The rarity makes the 1080C especially interesting. Even if you decide you really want one, the odds are you're going to have to do some real searching to find one.

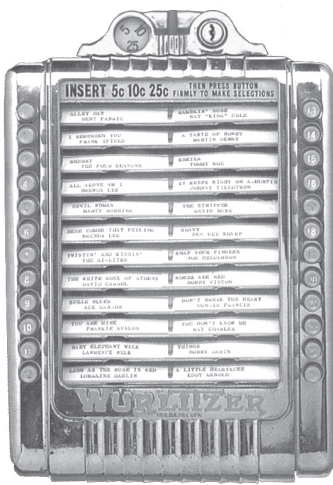
Dimensions are 58 5/8" high by 33 3/8" wide by 25" deep. The weight for a 1080A is 343 pounds - the 1080C should be within a few pounds of this.

The Always Jukin' Price Guide lists all three 1080 versions at \$8000 max (retail). There isn't enough information available to know if the 1080C commands a premium due to its rarity.

Regardless of value, those few that own a 1080C have a truly rare and unique jukebox for their collection.



MODEL 2140 BAR BOX



MODEL 3020 WALLBOX



MODEL 4007 OVAL DELUXE SPEAKER



MODEL 4008 SUPER DELUXE SPEAKER

1948/49 WURLITZER 1100

Many times I've talked about the influence that automobile styling has had on jukeboxes. This time I'm going to have to change my style a little, and talk about a jukebox that was influenced by aircraft bomber styling. "Panoramic SKY-TOP Record Changer Window", along with "built like a bomber's nose", were the words that Wurlitzer used to describe the front window of the new model 1100. World War II was still very much on people's minds.

The Wurlitzer 1100, produced in 1948 and 1949, was sort of the last gasp for the golden age of jukeboxes. It was also Paul Fuller's last design. Unlit, the 1100 isn't all that colorful, but once the power is turned on, especially in a darkened room, it is one of the most colorful jukeboxes ever built. The extra large front window exposes the mechanism to full view. There is a colorful backdrop with a musical instrument motif, and an arch made of red and amber plastic, that is illuminated by 6 volt automotive lamps. The front window was made out of clear plastic, which allowed it to be formed with curvature in both directions (complex curvature was more difficult and expensive for glass). This gave a great view of the interior of the cabinet, but unfortunately was easy to scratch.

The lower part of the cabinet used clear plastic pilasters with an embossed pattern of small diamond-shaped sections. Unlit, these don't grab your attention, but when the power is turned on, they really come to life. The rotating color cylinders give an ever-changing pattern of light and color through the embossed sections of the pilasters, and also reflect off the center section of the speaker grille. The metal trim on the cabinet was nickel plated.

One of the more ingenious features of the 1100 is the "Encore" selector assembly. There are only eight selector buttons, and only eight selections are visible at a time. Pressing the center button results in an almost instantaneous change in the displayed program (the title strips that are visible at a given time).

The model 1100 contained a redesigned sound system, which used the Zenith "Cobra" cartridge and tone arm. Evidently the engineers at Zenith had a sense of humor, as the shape of the tone arm was somewhat like the head of the cobra. Even two little eyes were painted near the front of the tone arm. The cobra tracked at 2/3 ounce (approximately 18 grams). This is a vast improvement over the 3 ounces (87 grams) of the previous models. Other advantages include a spring loaded cartridge socket, which protects the needle from abuse. Wurlitzer claimed that the Cobra cartridge was good for 1500-2500 plays, up considerably from the 50-300 plays for the old style tone arms. At the time of its introduction, the cobra really was an improvement over its competition.

Concurrently produced with the 1100 was the 1080A. It was identical with the 1080 of 1947, but had the updated sound system with the Cobra tone arm.

Once the Cobra sound system was designed into the 1100, Wurlitzer soon made available a conversion kit to install in the earlier models,

which included the Cobra tonearm, a preamp which was powered from the older style amplifier, and a stabilizer bar for the top of the turntable shaft (the cobra is more sensitive to turntable vibration than the old cartridge).

Wurlitzer ran an extensive ad campaign in some of the major magazines, such as Life. This is in direct contrast to the usual practice of jukebox manufacturers only advertising in the trade journals.

If you buy an 1100, the first thing that you



should do is to convert it to a 4-point caster system. The three-point caster system is possibly Wurlitzer's worst idea of all time - they are difficult (and possibly even dangerous) to move around. One possible way to convert to a 4-point system is to make spacers from blocks of wood, and use Seeburg caster sockets. Put a block in both of the rear corners using glue and wood screws. The difference in the ease of moving an 1100 around with this modification is amazing. I'd like to see someone market a kit, which would contain a caster tower that is identical to the one in the rear, and two single-wheel casters. Then the new tower could be mounted in one rear corner, and the original one moved to the other rear corner.

The brochure for the 1100 shows two single-wheel casters spaced about 6" apart in back. All the 1100's I've seen have one 2-wheel caster in the rear center.

The 1100 would have to be rated "above average" in terms of restoration difficulty. Refinishing the front door is a very difficult job. One of the more annoying aspects of the 1100 is that, where the brochures describe the ease of servicing this model, just about every aspect of working on it is more difficult than the 1015. For

example, removing the mechanism on a 1015 or earlier model required disconnecting a couple cables, removing the 4 bolts, and sliding it out. On the 1100, you must remove the bolts from below, back the levelers off until they are not raising the mechanism (one must be removed); it's best (but not absolutely necessary) to pull the wires to the dome lights through, and a very good idea to put some thin cardboard beside the mechanism as you pull it out - otherwise the metal shields will scrape the gold foil on the sides of the cabinet. The sound system and "Encore" selector are also more difficult to rebuild than the earlier models. This isn't really the machine for a novice restorer.

When working on an 1100, with the front door open, and the speaker pivoted out, these are front-heavy and can tilt forward. Prop something under the edge of the front door to be safe.

According to Frank Adam's Wurlitzer book, the production on the 1100 was 16,200. This is less than a third of the production of the 1015. It must have been a real shock to Wurlitzer when the demand for jukeboxes dropped off so drastically from that of 1946-47. There are two factors involved: first, the demand for jukeboxes was much higher right after the war, since there had been no production for several years. Thus, the production of the 1015 was higher than they should have expected on a continuing basis. The second, and most decisive blow to Wurlitzer, was the introduction of the 100 play Seeburg M100A. All of a sudden, there was a competing jukebox with new, modern styling and four times as many selections, that made Wurlitzer's offering, as pretty as it was, seem very outdated. This would send Wurlitzer into a mad scramble to produce a competitive jukebox, which resulted in the interim 1250-1650's. A truly competitive model was not offered until Wurlitzer introduced the 104 selection model 1700.

At one time, the 1100 seemed to be fairly plentiful, and didn't get nearly the prices that the 1015's received. Strangely, 1015's still seem to be turning up, but the supply of original 1100's has nearly gone dry, at least here in the Northwest. Whereas the prices of the 1015's have somewhat leveled, the 1100's keep creeping up, and someday will probably approach those of the 1015's.

Condition makes a large difference in the appearance of the 1100, more than most models. Keep this in mind if you are looking at an "as-is" 1100 - it may not turn you on the way it sits, but when restored it's going to look several times better. Replated, refinished, and with new plastics, these really are a beautiful jukebox.

MY ALMOST LATEST JUKEBOX FIND

by Mike Baute

It was early March. It was Seattle. It was cold & gray. The phone rang. It was a phone. It was cold & gray. She asked: 'How much is an 850 worth?' Lots said I. 'It's original, in good shape & works well' she stated. Lots & lots said I. 'It plays 78's & has working coin gear' she explained. Lots & lots & lots said I. 'Do you want to buy it?' she asked. Yup said I. She wasn't cold or gray. Nor was I.

We chatted. She explained that they had had it since the mid 70's. They bought it from a Port Angeles guy who had it in Harold's (Dr. Know It All) shop being 'fixed.' Harold had solved its electro/mechanical needs. He lubed & adjusted the mech, fixed the amp & installed a light-weight cartridge. It had been in their front room ever since. It hadn't needed much cosmetic work. It got a minor 'selector' tune-up in the mid 80's. Since then it had been working just fine.

I thought: am I finally going to get an 850? In almost 20 years of collecting I have never been offered or even seen an 850 in the Northwest. Sometimes I lose track of how many & what model Jukeboxes I have in the warehouse, but I knew for certain that I did not have an 850. I thought: can I afford it? Probably not.

We chatted some more. I could tell this was a very sharp lady. She asked all the right questions & listened to my replies. She even got me to give her a 'Price Range' which I won't usually do on the phone. I said 'from your description I would think you could reasonably ask 15 to 20 thousand dollars & have room to negotiate.' I also said I felt that such an asking price was a 'Top Dollar' price & not to be too disappointed if lesser offers were made. She understood.

I asked her where & when I could see the 850. She said anytime in Centralia (2 hours from Seattle). I asked her if she had offered the 850 to anyone else or if she had any ads out on it. She said no. Then she said the blood curdling words: she had called John at **Jukebox City** & talked to him about it. She & her husband had bought a Mint 412 from John some years ago.

My spirits fell. No way would I get this 850—I never beat John to any decent find. For every one Jukebox I buy he buys & sells 50. He is younger, faster, knows the market better & is 10 times more visible. So I concluded the chat: 'I am interested. Sally & I will come to Centralia & take a look. We will come on a Sunday & can't get away until the last Sunday in March. Is that OK?' She said fine, Bye.

I like Centralia. It is a great little

Logging Town. The fast food purveyors have ringed its Freeway exits but the town is still pretty 'early 20th century.' But I do not want to drive there to hear those familiar words "We just sold it to a real Tall Guy who has a Jukebox Store in Seattle"—I have heard those words too often!!!

So I called John. I figured he will know all about the 850. Since I have been off the phone 3 minutes he probably just drove up to her house & bought it. I can still call him though, because he has a car phone. It would be absolutely typical if I called him just as he was loading the 850 into his van.

But he was at his store. Yes, she had called him just before she called me but 'she was cagey & didn't say much.' So John & I chatted. I asked him if he was interested in the 850. I admit, that is a stupid question since he is very much 'In The Business.' He indicated that this 850 was not burning a hole in his desire pockets. I got the feeling there was not going to be a race to Centralia. All in all, he made me feel like if I didn't drag my feet I might get this Jukebox. He was not exactly disinterested but it did not seem to be high on his priority list. I can understand this as he has a lot going on & Jukeboxes are only one part of his empire. I thought maybe I do have a chance. I told him I would go take a look at it & I might buy it, but I didn't know when. He said fine, have a ball.

Then I told Sally all about the 850 call. She really likes the 850 & she likes Centralia & she likes to drive so she was ready, willing & able to take the ride to see it anytime I was. I said 'lets plan on the last Sunday of this month—about 3 weeks hence.' Then I called Laurie, the 850 owner & asked if that Sunday was OK. She said yes.

I was really suffering from 'buyer's anxiety'. How could I possibly wait 3 weeks to see an 850? Well I couldn't. But I had to—we were finishing the Guide & getting ready for the Chicago Show & it was AJ production time so I just could not get away. Each day I knew somebody else got the 850 but I had no way to check. I couldn't do anything but wait & bleed.

About a week later I got a call from John. He asked if I had done anything about the 850. I said no, not yet. He said he had some free time & he could go with me to look at it. He knows I hate to drive that far alone & I also know very little about 850's. I thought that was really nice of him. John is excellent company. He is a great yarn spinner & tells the best Jukin'/Junkin' stories of anyone I know. But I had already promised Sally that we would make it a 'Sunday Junket' so I couldn't accept. The call also sort of awakened me to the reality that the 850 was not going to be ignored for very

long.

It was a very long 3 weeks but the end of March finally arrived. On Sunday, March 31st, Sally & I hopped in the car & headed for Centralia.

It was a nice day, a nice drive, a nice town, & a nice 850. Laurie & John (the 850 owners) are nice people. We had a nice visit & nice cookies & nice coffee & they have a nice farm. Everything was so nicey nicey I was worried about a hypoglycemic attack. Seriously, we liked them.

John said the 850 had been working fine until that very day. When he cranked it up that morning, in anticipation of our inspection, it had the annoying problem of turntable droppage: i.e. as soon as the tonearm engaged the record, the turntable (and record) dropped like a rock to the floor—at least a foot from the tonearm. This made playing a record very difficult!! I could hold the turntable up from the back. I did this & it did play & sound came out of the speaker. My upward pressure was anything but steady hence the sound was erratic but I could sense it was OK (and I wanted to believe!!). Everything else seemed to work. It was complete, original (except for cartridge), had shrunk plastics but not too bad, & was a very solid, sound, nice 850.

I said 'I like it, it is a very nice 850, how much do you want for it?' One thing I really like about Laurie & John is they know how to do business. They did not beat around the bush: '\$13,000' was the immediate reply.

I rubbed my chin & muttered 'yes, I see, well, er, um, that's not unreasonable, I do like it, that is a lot of money, er, um, well' — when I got over the shock (although I shouldn't have been shocked— it's just that I did not pay that much for my first home (\$12,500 in 1964)) I said Sally & I will talk it over & I'll call you tonight & let you know what we want to do. They said 'OK.' We stayed & chatted about other things for another hour & at noon we took our leave.

Sally & I didn't talk about the Jukebox. Downtown Centralia has a large Antique Mall & we stopped there a few minutes after we left the 850 behind. It was amazing how everything in the Antique Mall seemed really cheap!!! Like the man said, everything is relative!!!

This is a nice mall. It has lots of little self-service booths full of stuff & a central checkout area. We separated & looked around for a while. I didn't see anything I had to have. When we hooked up again, Sally asked if I saw the Bing Crosby Junior Juke with my name on it. I said no, she told me where it was & I checked it out. It was amazing: mint, in the original box, & marked

'Mike's.'

It was priced at \$375. I had seen a very nice one at Jukebox City just 2 days before for \$895. The one at Jukebox City played & looked sharp. This one has a bad hum & surely needs a new needle & a tune-up but still, it had my name on it, looked new & was in the original box!!!! So I figured it was a sign. I couldn't afford \$13,000 for an 850 but I could afford \$375 for this guy!

Of course there is no way I will just automatically pay 'sticker price.' I asked the lady at the checkstand if the owner was around so I could make an offer on the Bingster Box. She said 'No, but if your offer is over \$50 I will call the owner.' I said my offer is \$225. She called: the owner said he had over \$600 into the little doozy & had to get at least \$300 out of it. I said OK & bought it for \$300 + 8.2% sales tax.

Now we head back for Seattle & I am pretty happy. I got a mint 'Jukebox' & saved \$12,700!! How can you beat that? I always look for 'signs' & the writing on the box was an obvious sign. I was supposed to have the Bing Box. I had yet to see any signs that I was supposed to have the 850.

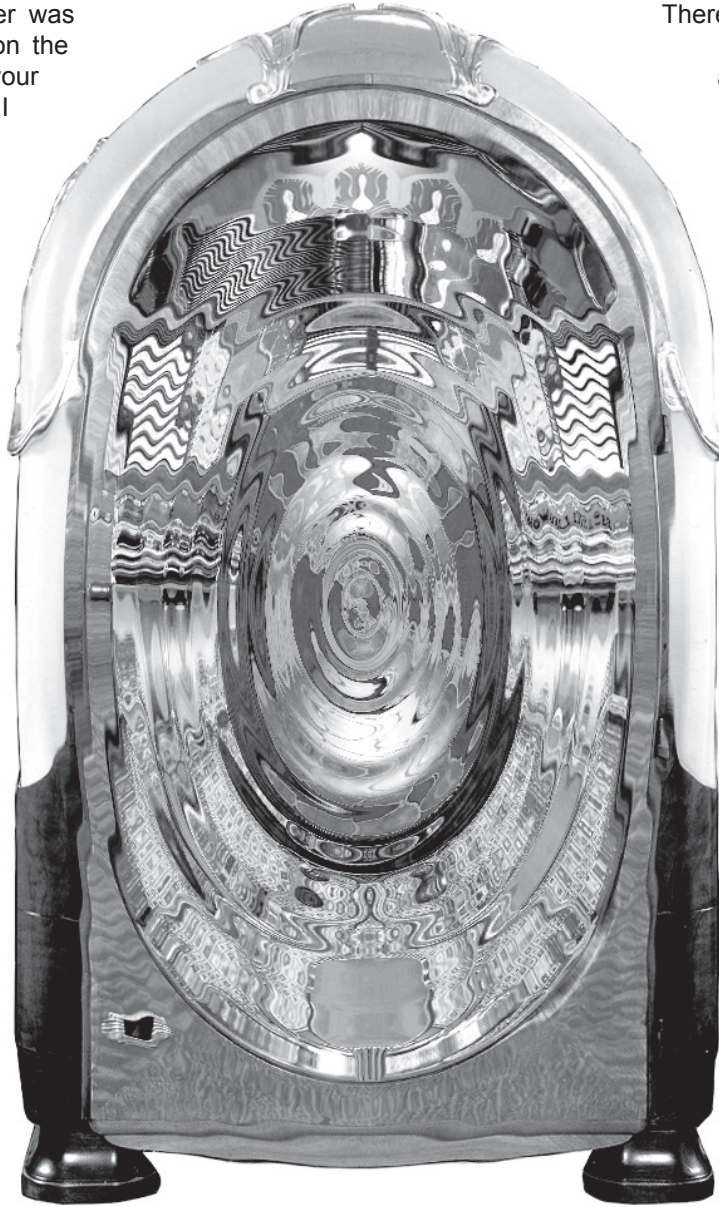
We talked on the way home & both agreed: \$13,000 is a lot of money. The 850 is also a lot of Jukebox. We were both pretty wishy/washy about the deal. We agreed that we would probably never see another 850 in this area at that price. We also agreed that we could probably live without an 850. In fact, Sally & I pretty well agreed on everything: yes—we'd like to have it, yes—it is a lot of money, yes—it is a pretty good deal, yes—we deserve it, yes—yes—yes. If only a sign would appear. But that did not happen. We needed LEADERSHIP!! Finally I said 'Why don't we offer \$10,000? What do you think about that?' Sally thought that was OK. If we could get it for \$10,000 it would be a 'Good Deal.' \$13,000 was just an 'OK Deal.'

We got home about 5 pm. At 7 I called Laurie & made the \$10,000 offer. She said she would talk it over with hubby & get back to me. She didn't say when. After I made the offer I was exhausted. It is amazing how stress can tire you out. So I went to bed. Sally has a lot more energy than me so she stayed up. I heard the phone ring about 9. I figured it was Laurie. Sally did not wake me up so I assumed Laurie had said no & that was that. I wasn't sure if I was happy or sad but I slept like a baby.

The next morning, Monday, April

first, Sally said Laurie had called & said 'No' to our offer & had not countered. Now I was sick. I could not believe how bad I felt. When I made the offer I didn't feel really strong about getting the 850 but now that I had been turned down I wanted it almost desperately. I was so unhappy I considered calling Laurie & upping my offer to \$12,000 but since she didn't counter I felt she was holding out for the whole works.

I was miserable all day. I couldn't
con-



centrate. I was cold & unfriendly on the phone. I didn't even take any interest in the checks that arrived in the mail which usually cheers me up considerably. I was depressed & getting depressed. And still no signs. I don't think I have ever had a deal that was so hard on me. I usually know exactly what to do & how to negotiate & how much to offer etc. but this was out of my league. I could not bring myself to go over \$10,000 and I just could not let go of the 850. Always before when I will not pay what an owner wants & the deal sours, I can walk away with no

afterthoughts. Not this time. I wanted an 850 & had to settle for a Bing Crosby Junior Juke!!!! Just not the same thing at all.

Sally & I ride to work together. We do not work together. She is not in the Jukebox Publishing business. Our phones are connected so when necessary she can answer ours. She did not have to put up with me all day until it was time to go home. I was miserable. She says when I am miserable I make everyone around me miserable. I wanted that 850 but I knew I would not get it.

There was going to be a lot of misery!!

So I decided to call Laurie as soon as we got home. I would pay the \$13,000. I could live with that. But I had to clear it with Sally. This would not be easy because when I had suggested the \$10,000 offer I had said that 10,000 would be as high as we would go. Now I had to convince her to pay the full amount—this would not be fun. And what made the problem even worse was Laurie had probably called Jukebox City & sold it to John. Woe is me!!!

Sally was pretty much a 'no sale' on the \$13,000 idea. She said \$10,000 was a good deal & \$13,000 was just more than she was comfortable with. She suggested that I 'Cool my Jets' & wait a few days. I said I understand but if I wait someone else will buy it. She said 'Maybe that is the sign you are looking for.' This shut me up. How could I argue with her when she could use my own words to prove me wrong?

When we got home I went right into my nap mode. When depressed I sleep a lot. I could see I was going to get a lot of sleep for probably at least a month or who knew how long before I got over the almost 850.

I woke up about 8:30 pm. Before I moved from the living room couch to the bedroom bed I went downstairs to get some old Nickel a Tune mags for work.

There in the Jukebox Room was the 850. When Laurie had called Sunday night she had said OK on the offer. They delivered it Monday about noon. Sally met them in Seattle & they followed her to our house. They needed the \$10,000 immediately to buy a collectible motorcycle. So Sally & Laurie thought it would be a great April Fools Day stunt to do this to me. I have to admit, they got me good!! **Mike**

1950 WURLITZER 1250

Wurlitzer had been producing 24 selection machines for over a decade. After WWII, the writing must have been on the wall that the number of selections would have to increase. The obvious direction for Wurlitzer was to follow AMI's lead, stick to the basic design they had, and double the number of selections by playing both sides of the record.

Design work was probably in progress when Seeburg introduced the M100A in late 1948. It must have been a shock to Wurlitzer to see Seeburg introduce a 100 selection machine before their 48 selection model was ready.

The 1250 was introduced as a 1950 model (the brochure refers to it as the Twelve Fifty). The Golden Age of Jukeboxes was on its way out, but elements of the Golden Age still remained in its styling.

Warm colors still prevailed. The natural wood grain finish on the sides is a warm medium shade of walnut. Reds and ambers and browns are prevalent in the background mural, the pushbuttons, and the plastic panels in the speaker grille.

Mechanism visibility was a feature if the Golden Age. "For the first time the visible record changer, long one of Wurlitzer's greatest crowd pulling features, is completely visible. It is housed in a spectacular cylindrical compartment made of translucent golden hue plastic, molded with prismatic bands that catch the light and shine with myriad reflections." The mechanism was showcased with visibility from the front and sides. Wurlitzer figured that the "lower part of the jukebox is often obstructed by chairs and tables", so they "concentrated the greatest play appeal at the top so everyone in the room can see it".

The grille is still pretty eye-catching. Chrome pilasters surround illuminated plastic panels with a somewhat surrealistic design. The grille cloth is illuminated behind a metal mesh.

The title board assembly is conveniently located just below the dome. It has six columns of eight selections each. Each column can have a classification heading above it if desired (popular, folk, western, etc.)

Lighting is provided by two 24" fluorescent tubes and six incandescent lamps.

The 48 play mechanism still has the 24 record trays like the earlier models, and looks like it could just be a modification to play both sides of the records, but actually has very little

in common. In fact, the 1250 mechanism was pretty well designed from the ground up - no parts will interchange. The trays (the main similarity) are stamped instead of cast. Two tone arms are used - one above and one below - to play both sides of the record.

For the first time, Wurlitzer had a separate motor for the turntable drive. This had a great advantage in versatility - it was designed to be able to play all speeds by simply changing the idler wheel. Now you had your choice of 33, 45, or 78, and you were set for whichever speed became popular.

Versatility was also evident with the 10" tray size. You could play 10" 33's or 78's, or with adapters, 7" 45's.

Changing from 78 to 45 required a kit that cost under \$10, and required 30 minutes to install. If you were on 45, Wurlitzer claimed that "48 top tunes can be offered by placing two seven inch records in a tray".

The 1250 gave Wurlitzer several chances to "put a good face on things". The first was having only 48 selections when their main competition (Seeburg) had

100. "The Adapta-Speed Record Changer in the Wurlitzer Twelve Fifty is designed to play both sides of 24 records - 48 selections in all, the number which operators agree is sufficient to satisfy the most exacting patrons. Additional records induce selection delay - entail needless expense for records - increase service costs".

Wurlitzer also took a dig at Seeburg's ability to play 12" records in the M100A. "The Adapta-Speed Record Changer was deliberately designed so that it will not play twelve inch records. This eliminates the use of these records that cut down your profits since they take nearly twice the time to play".

Each tone arm held a Zenith Cobra cartridge. Tracking was about 12 grams. This may sound heavy, but the M100A tracked at 22. Wurlitzer claimed that you could get 200 plays on a record, and still have 95% fidelity.

The model 510 amplifier has 6L6 outputs, like most jukebox amplifiers of the era. There is no option for Automatic Volume Control. A fader switch balances the power between the internal and external speakers. 500 ohm terminals are supplied for the external speakers, which have to have a matching transformer built in.

If more power for external speakers is needed,



the model 227 Auxiliary Amplifier can be installed on the floor of the 1250.

Volume can be controlled remotely by means of Kit 133, which contains the volume control box, reject switch, and a relay to go in the jukebox. The volume control can be removed from the amplifier and mounted in the remote box (it connects to a terminal strip in the amplifier or remote box).

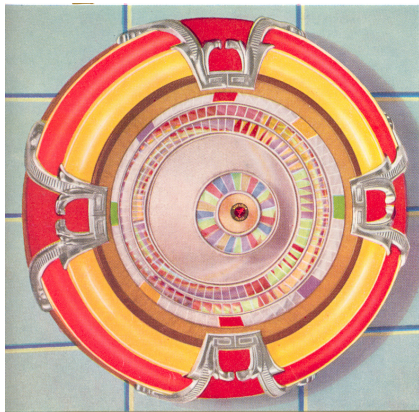
It is also possible to control the volume of the auxiliary amp with the Kit 113.

The coin system accepts nickels, dimes, and quarters. The coin gear sits behind the left hand pilaster. There is a release inside, above the pilaster, which allows it to pivot outward, allowing access to the slug rejector and coin register mechanism.

The selection system shows its 78 RPM heritage. There is a separate pushbutton for each selection, with a single title strip for each record side. This has the advantage of having the title strip next to the button, for ease of selecting. In addition, only one button has to be pushed to make a selection.

Interestingly, 1 is the opposite side of 2, etc., so they could easily have gone to double title strips.

Unlike the Seeburgs, the Wurlitzer coin gear



"banks" coins. This means that if you put additional coins in, it will accumulate credit.

The coin register gear can be set up for nickel play (two for a dime, and five or six for a quarter), or dime play (three for a quarter).

The 1250 had a large selection of remote gear available. An interesting facet of the design of the 1250 was the ability to use the 24 play remote selection gear. If a 24 play wallbox is connected to a 1250, only the "A" side of each record is available.

This allowed existing remote gear (originally installed to work with a 1015, 1017, 1080, or 1100) to be used with the 1250. The same gear was also shown as still being available in the



2140

or a 2-wire hookup if it was supplied with 110 volts. It was also designed to be wireless, if a model 215 Transmitter was installed. In this case, it would have to be plugged into a 110 volt outlet. The jukebox would require the model 216 receiver to be added to the 219 stepper. All wireless transmission was over the power line (I know this sounds like a contradiction, but it's the way it works).

The 3045 was nickel-only (like the 3025), but included the wireless transmitter.

The cutest wallbox (also 24 selection) was the model 2140 Bar Box (usually referred to as the Frog Box). Up to six Bar Boxes could connect to the model 212 Master Unit, which would mount under the bar, and transmit to the jukebox. It would operate with nickels and dimes.

The 3020 and 3025 were modified for 48 selection operation, and became the 4820 and 4825. The big change was in the title assembly - in a shutter-like arrangement, the title board would change from one set of 24 title strips to another. The three-wire connection would become a four-wire system with the addition of a wire connected to a switch that would indicate which set of title strips was showing. The stepper would use this fourth wire to switch from the "A" to the "B" side of the record.

In addition, kits were available to convert the 3020, 3025, and 3045 to 48 selection operation.

The fact that the new 48 selection jukebox didn't obsolete installed remote equipment would have been a good selling point to the operator who was thinking of upgrading the jukebox.

An equally wide array of remote speakers were available, according to the brochure. These were also hold-overs from the Golden Age, and were some of the most impressive speakers ever built.

The 4008 Super Deluxe Wall or Ceiling Speaker was the most lavish. This was 32" in diameter, and 16 7/16" deep. It had a 15" speaker, illuminated plastics, and a rotating mirror square assembly.

The 4006-A Round Mirror Speaker had a mirrored front and 8" speaker.

The 4007 Oval Deluxe Speaker had mirrors and moving colors.

The 4005-A Round Walnut Speaker is lower priced, and has musical notes and stars on the front.

The 4009 is a Recessed Wall or Ceiling Speaker.

Finally, the model 4000 is an all metal Silver Star Wall or Ceiling Speaker.

The 1250 is large and heavy. It is 59 3/8" tall by 36 1/2" wide by 27 7/8" deep. It weighs 380 pounds. Not in the class of the 1500 series, but certainly no lightweight.

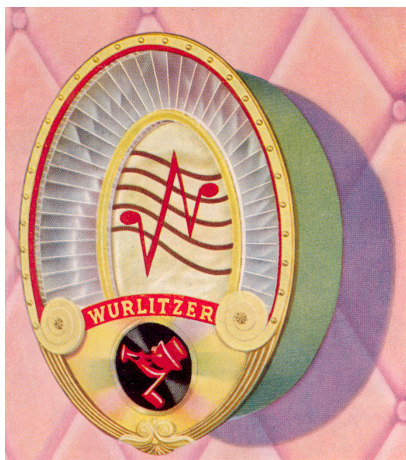
The accursed three point caster system makes it seem heavier, each time you try to move it.

Top value for a 1250 (retail) is about \$3100, according to the AJ Price Guide. This value can depend a lot on condition. If the chrome is rusty and the plastic not in good condition, the aesthetic appeal and value can drop rapidly.

The 48 selection mechanism turned out to be an interim measure for Wurlitzer - the 104 selection carousel mechanism introduced with the 1700 would put them back in the race again.

The main problem with the 1250 is a somewhat touchy mechanism, which can be difficult to work on.

In good condition, the 1250 is an attractive machine, with an interesting place in jukebox history.



4007

1250 brochure.

The lowest cost unit was the 3031 multi-wire wallbox. It was nickel only, and the selection would be made by rotating a dial. It requires the model 218 Terminal Box in the jukebox.

Next up was the model 3025 wallbox, also 24 selection. This would accept nickels only, and had a nickel-plated finish. It was designed for 3-wire installation only (a model 219 stepper would be used for all wallboxes other than the 3031).

The 3020 wallbox was similar in appearance to the 3025, but would also accept dimes and quarters. It could be used with a 3-wire hookup,



4820 (3020, 3025, 2045, and 4825 are similar in appearance)



4006-A



3031

1951/52 WURLITZER 1400/1450

There were three principle models in the 48 play series of transitional models for Wurlitzer - the 1250, the 1400 series, and the 1600 series.

The 1400 series consisted of two models, the 1400 and the 1450. Within each of these models, there are variations.

The main difference between the 1400 and the 1450 is the cabinet finish. The 1400 has a Walnut finish, while the 1450 cabinet sides are covered with "Texileather" - a vinyl covering that could be ordered in several colors (mahogany, blonde, blue, or brown). The cabinet finish is the only difference between the 1400 and 1450 - the other variations can occur on either model.

The 1400/1450 was originally introduced for the 1951 model year, and was the only model running that year. The first year models had an elaborate scroll-work grille and a Salvatore Dali-like musical instrument keyboard for a backdrop.

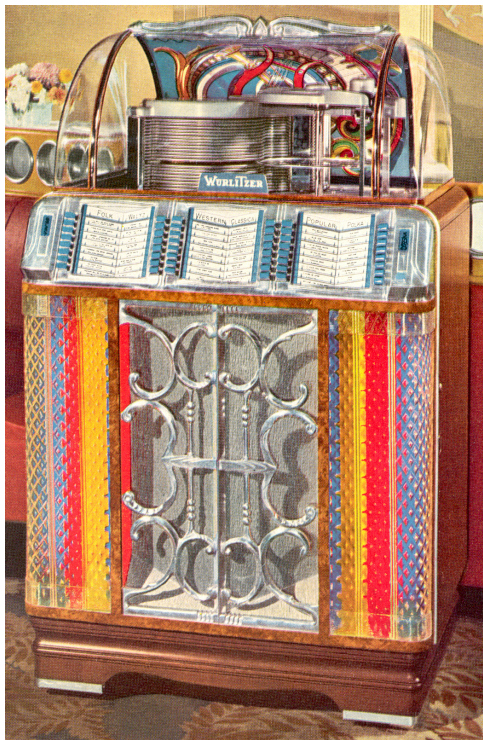
These models were carried over into 1952, when the 1500 series 104 selection models were also introduced. A noticeable change in appearance was obtained by replacing the grille with a simpler design consisting of vertical bars that curve outward at the bottom. The example I worked on had this grille, and the same backdrop as the early 1450's.

There may have made a third variation on these. The 1500 brochure shows a 1400 on the back page, and it has the second grille, but a different backdrop. The picture isn't clear enough to tell exactly what is on the mural, but it appears it might be a tropical beach scene, with palm trees and a small sailing boat (or something similar).

The mechanism on these was obviously a hurry-up attempt to get something into production that would be at least somewhat competitive with the 100 play Seeburg mechanism. Like the 40's Wurlitzers, it still used a vertical stack that held 24 records. The number of selections was instantaneously doubled, by adding a second tone arm that would play the bottom side of the record, and adding a reversible turntable motor. Of course, the selection system was much more complex, as it had to be able to pick from 48 selections, and had to have

additional mechanics to select the proper tone arm to play and set the direction of the TT motor.

These Wurlitzers were designed to be used as either 33, 45 or 78 machines. The 1400/1450 had an easy changeover from one speed to another - the idler wheel had to be removed and a new one snapped in, an adapter snapped onto the turntable shaft (for 45's), and two tabs had to be moved in the rear of the mechanism. Wurlitzer claimed that it could be done in 30



Wurlitzer 1400

seconds ("Click Click Snap"). Perhaps, if you practiced at it. Of course, all the records would have to be replaced, with adapter trays inserted under the records if 45's are being installed. For 33 RPM, only 10" records could be played.

The 48 play mechanism is above-average in difficulty for maintenance and repair. Added to this is a poorly written manual, which has resulted in quite a few people tearing their hair out.

Starting with the 1250, Wurlitzer combined the functions of a junction box and the amplifier all in one chassis. Thus, the power supply and all the interconnections for the selector circuitry and mechanism are put in the same chassis as the amplifier circuits, making it much more complex looking.

The amplifier design is somewhat more complicated than an amplifier of the 40's, but still doesn't have automatic volume control. An optional AVC unit that plugged into the top of the chassis was evidently available, but I've never seen one.

Typically for the era, a pair of 6L6's are used for the output tubes, driving a 15" field coil type speaker. The limiting factor is the use of cobra cartridges, which only have a frequency response of about 8 khz. Unfortunately, the design makes it very difficult to upgrade to a better cartridge. Tracking pressure is 12 grams, a little heavy for some of the modern 45's. The design makes it difficult to reduce this significantly.

Above each group of eight selections in the title board was a place to put a musical classification, such as Popular, Classical, Folk, Western, Polka and Waltz. According to the brochure for this model, "In a location patronized by teenagers you can go heavy on the hit tunes of the day such as 16 Pops, 16 Waltzes, 8 Polkas, and 8 Westerns." When I was a teenager a few years later, we sure didn't spend any time listening to Waltzes and Polkas!

The one I worked on didn't have classifications, but had "Wurlitzer Music" in each pair of title strip sections.

There is a pushbutton for each record side, so only one button has to be pressed to make a selection. Wurlitzer advertised this as a positive selling point, as if it was too complicated for most people to figure out how to press a combination of two buttons.

The two sides of the record are adjacent on the title board now - while the 1250 has #25 as the opposite side of #1, the 1450 has #2 and #1 opposite sides. The brochure makes a misstatement: "All new Wurlitzer selectors play the top and bottom of each record in sequence". This isn't true - they play all the odd selections in order (47 down to 1) then the even selections (2 to 48). They may have been referring to the



PLAY TOP AND BOTTOM IN SEQUENCE

opposite sides being adjacent on the title board, but they didn't say it right.

For some reason, Wurlitzer still used single title strips, although they could have gone to the double title strips like Seeburg was using.

The physical dimensions of the 1400 series is about average for the era - 34 1/4" wide by 57 1/8" high by 27 5/8" deep. Weight is slightly above average at 350#.

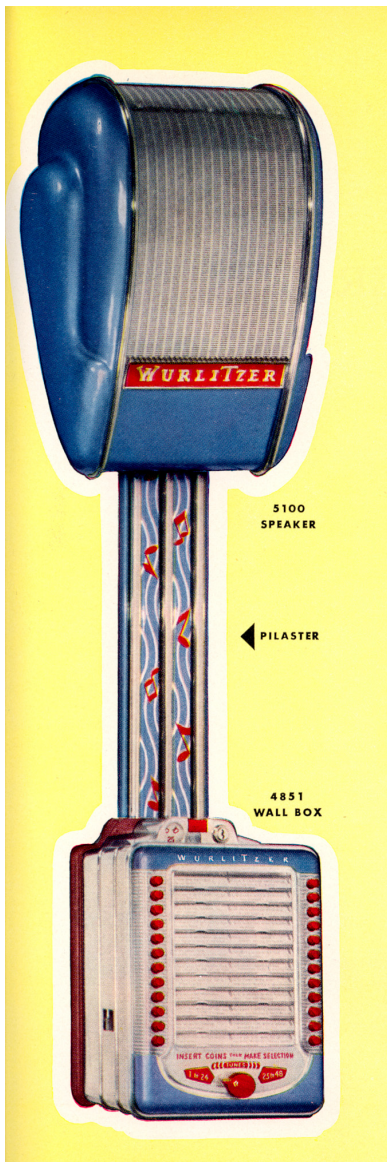
The 1400/1450 still used the infamous three-point caster system. It took them until the 1600 and 1500A to realize their mistake, and go back to four casters.

Accessories galore were available for this model, including both an 8" (5100) and a 12" wall speaker (5110), a recessed wall or ceiling speaker (4009), outdoor speaker (241), wall box (4851), stepper (248), and a wall plaque that could be used to make a combination of the wall speaker and wall box (see picture).

As was the fashion for the era, mechanism visibility is first rate for the 1400 and 1450. A large three piece plexiglass dome was used, with a mural on the inside of the back. This gave



Wurlitzer 1450



4851 Wallbox & 5100 Speaker
with the Wurlitzer Adjustable
Wall Plaque

full view of the record being brought out from the stack and played. Lighting for the mechanism was produced by fluorescent lights under the board, which shone through louvered metal grilles, to prevent the light from shining back at the patrons.

The plastic pilasters have a diamond pattern embossed. The fluorescent lights have a multi-colored plastic sheet around them, but there is

no animation. If the observer moves, the light shining through the pattern in the pilasters gives an illusion of animation.

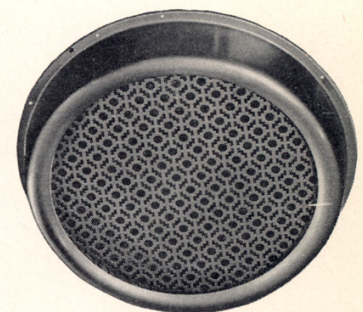
The above-average difficulty of mechanism repair and maintenance makes it difficult to recommend the 1400/1450 as a "starter" jukebox. But they are colorful jukeboxes, attractive, reasonably priced, and certainly interesting from a historical viewpoint.

RECESSED WALL OR CEILING SPEAKER-MODEL 4009

An attractive utility speaker which enables you to install a permanent sound system in locations as construction progresses or is easily and conveniently installed in any wall or ceiling.

SIZE: 14" diameter, recess depth 2 1/2".

SPEAKER: 12" permanent magnet with 8 Ohm voice coil.



WURLITZER 1500

1949 was the year of the great shakeup in the jukebox industry. Until this year, Wurlitzer had been king in the jukebox world. But at the end of 1948, Wurlitzer was still producing jukeboxes with only 24 selections (and Rock-Ola with only 20). AMI was building a model with 40 selections, but as it played both sides of the record, it also held only 20 records. As the "B" sides of most records of the era were usually not worth listening to, the 40 selections on an AMI was not much better than 20 on the Seeburg or Rock-Ola.

Seeburg, which had been producing a mechanism with only 20 selections, totally devastated the competition by introducing a jukebox with 100 selections. This sent both Wurlitzer and Rock-Ola into a mad scramble to market a jukebox that would be competitive with the 100 play Seeburg Selectomatic. By 1950, Wurlitzer had introduced its 48 selection 1250, and Rock-Ola its 50 selection "Rocket". These still weren't especially competitive, as they still only had half as many selections as the Seeburg. Rather, I think that their function was not to match the Seeburg in selections as much as to keep Wurlitzer and Rock-Ola in the running until they could prepare a new design that would be truly competitive.

Rock-Ola only kept the Rocket design for two models, then went to a ferris wheel design for the record magazine that held 60 records (120 selections), and later up to 100 records. The problem was that, previous to 1949, both Wurlitzer and Rock-Ola had used a vertical stack with trays that pivoted out, and this design was limited to the number of records that it would hold without becoming too large physically. Actually, the 1250 didn't hold any more records than the 1100, but achieved its increase in selections by playing both sides of the record. The Rocket went from 20 to 25 trays, and played both sides to get its 50 selections.

In order to play both sides, the 1250 used two tone arms, one above and one below the record (the Rocket used one tone arm with two cartridges, one on the top side, and one on the bottom side of the tone arm). This complicated the design of the mechanism of the 1250, as the proper tone arm had to be used, depending on the side of the record being played, and the turntable motor had to be reversible to turn the record in the opposite direction to play the bottom side of the record.

This basic mechanism, with some improvements, was continued through several models, including the 1400, 1450, 1600



1500

and 1650.

Once the 1250 was being produced, Wurlitzer must have gone to work designing a mechanism that would match Seeburg's 100 selections. When they did come up with a design, they decided to go one better than Seeburg (or should I say four better?), and the 1500 was the result, with 104 selections. Wurlitzer advertised it as the first mechanism to play more than 100 selections - it must have just beat the 120 play AMI and Rock-Ola models to market. Wurlitzer still was sticking with the vertical stack arrangement for holding the records, but it was impossible to increase the height of the

stack to hold 52 records, so they put in a second stack on the right side of the turntable.

If anyone thought the 1250 was complicated, they must have really been amazed when the 1500 was released in 1952. There was just about two of everything in this mechanism, two stacks, two tone arms, and a two-section turntable motor. Like the 1250, to play the bottom side of the record, the turntable motor has to turn in the reverse direction, so by energizing one section it turns clockwise, and by energizing the other section it turns CCW.

The two record stacks are placed on op-

WURLITZER 1550A



Model 1550A

1550A

posite sides of the turntable shaft, and both swing inward to place the record in the center when the turntable shaft raises.

Having the two stacks complicates the selector circuitry, but not as much as the dual-speed feature. This is very tricky in operation: the turntable is stepped so that it goes higher for a 45 than for a 78, engages a different size drive wheel to change the speed, and operates a complicated system of levers to change the setdown point of the two tone arms, change the reject point, and even adjust the gain of the amplifier to compensate for the lower output on the 45 RPM records.

Needless to say, this complex a system made for real headaches for the serviceman. There are lots of adjustments to make, and the reliability was not too good, even when new. I can remember talking to one of the technicians at Northwest Sales here in Seattle many years ago, when they were the Wurlitzer distributor, and he said that they gave problems when they were on the routes. They didn't like them because of the weight, also.

Speaking of weight, heavy is one of the two words that best sum up the 1500 series (the other word being big). These weigh in at right about 470 pounds, according to the

brochure. Packed for shipment (crated), it weighed 540 pounds! This is at least 100 pounds heavier than most other full size jukeboxes of the era. I used to own a 1550A, and the side of my old house was settling along the side where I had the 1550A. I've always blamed that jukebox for the settling of the house. On the other hand, my 1550A was almost totally impervious to jarring. I could bump, pound on, or rock it, and it would never skip a groove.

To compound the weight problem, the 1500 and 1550 both use the three caster system Wurlitzer started with the 1100. On a level floor, they are not too bad to move, but if there is any unevenness, it can be a problem. The 1500A and 1550A went back to the four caster system, much to everyone's relief.

Dimensions of the 1500 are 59 3/8" high by 38 1/8" wide by 27 7/8" deep.

The 1500 and 1550 were produced in 1952, while the updated 1500A and 1550A were made in 1953. The 1500 and 1500A had a wood finish (polished walnut), while the 1550 and 1550A had vinyl on the sides (Wurlitzer called it "Texileather", and it came in blue, blonde, or mahogany).

Many changes were made between 1952 and 53, the most noticeable was the dome. The 52's had a plexiglass dome with sides that curved inward, while the 53's had a glass dome with flat glass on the sides. A less noticeable, but still important improvement, was the addition of the release button on the pushbutton selector panel. On the 1500 and 1550's, once you pressed a letter or number, there was no way to change your mind. If you pressed A by mistake, when you really wanted a B selection, you were out of luck. Another improvement on the 53's is the addition of Automatic Volume Control in the amplifier.

The 1500's were built in the peak of the mechanism-visibility cycle, and are extremely open and visible. I've always been fascinated watching these play records, and selecting the proper tone arm and speed.

The 1500 is an impressive machine. It is large, well-illuminated, and, as Mike says, really looks like a jukebox. With the heavy duty 15" field coil type speaker, in that large cabinet, it really puts out the bass. The speaker grille is very attractive, and the big "W" in front of it is the perfect touch. The pilasters have an abstract musical instrument-keyboard motif, and although there is no animation, are brightly lit and attractive. It is an imposing jukebox, and if you can live with the weight, is well worth including in your collection.

1954 WURLITZER 1650A

Wurlitzer was doing very well in 1947. Sales of the 1015 were still going strong, thanks to the pent-up demand caused by the interrupted production of the war years.

By 1948, the demand had begun to be filled. Sales of the 1100 were dramatically down.

The bottom really fell out when Seeburg introduced the M100A for the 1949 model year. Now Wurlitzer was trying to compete with the 100 selection Seeburg, with a machine that had only 24 plays.

Wurlitzer may have had a development program under way, but it suddenly became imperative to bring to market a more competitive jukebox model.

The model that did come out a year later (for the 1950 model year) was the 1250. It now played both sides of 24 records, to give 48 plays total. It still wasn't totally competitive, but at least it wasn't a factor of four to one.

Wurlitzer put up a brave front in their advertisements, for example this from a 1250 brochure: *Wurlitzer asked the operators - they told us that 75% of their income comes from eight or ten selections on a phonograph. Their answers were unanimous - "48 tunes on 24 records is enough!" Additional records get little play, entail needless expense, slow up selection, increase service costs.* Little

did they know that in six years they would be marketing a 200 selection machine.

Wurlitzer made do with 48 selections with the 1400 series of 1951 and 1952. Also for the 1952 model year, Wurlitzer became competitive in the number of selections, at last, when they brought out the 104 play model 1500. For 1953, the 1500 was upgraded to the 1500A, and the 1600/1650 debuted, to take the place of the 1400 series.

Thus, Wurlitzer had two price levels - the lower priced 48 selection machine, and the more expensive 104 selection model.

The production run of the heavy, complicated 1500 series came to an abrupt end after only two years. For the 1954 model year, a brand new 104 play mechanism was introduced for the 1700 model. This mechanism, with 104, and later 200 and 100 play versions,

would serve Wurlitzer for about a decade and a half.

But Wurlitzer wasn't finished with the 48 play mechanism yet. The 1600/1650 of 1953 was restyled, becoming the 1600A/1650A, running as the lower priced companion to the new 1700.

The styling changes between the 1600/1650 and the "A" versions was largely in the speaker grill. The vertical wood bars of the non-A version were replaced by chromed metal bars. The side pilasters were also redesigned, to a red-white and blue design with surrealistic floating musical instruments and notes. The ad writers said it better: *The Rigidized metal grille is protected by three chrome bars and flanked by pebbled Plexiglas pilasters with colorful musical decoration. The base is black Textileather, scuff-proof, stain-proof, impervi-*



ous to detergent floor-washing solutions.

The 1650A and the 1700 had similarly shaped cabinets, with a rounded glass dome, and a slanted title-board. In the 1700, the selector buttons were in a separate panel below. In the 1650A, the buttons were on the title-board, along side the title strips.

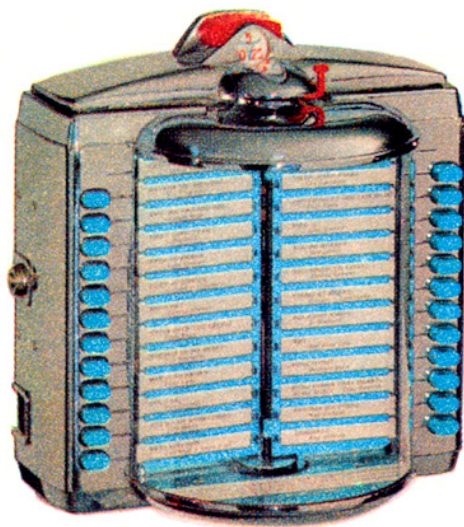
In both cases, the mechanism was fully exposed to view. Wurlitzer referred to the high visibility glass dome as the "Astradome". The record stack, holding 24 records, is in full view, along with the two tone arms. When a record is selected, the proper tray swings out, the record is lifted to the top, the two tone arms swing in to the set down position, and, depending on whether an odd or even numbered side is selected, the proper tone arm sets down on the record.

With the record player in full view, Wurlitzer took pains to make it attractive. According to the brochure: *There is a new iridescent red metal record changer background...a new anodized aluminum frame on the Astradome with matching aluminum trim...new grey chassis shelf harmonizing with the grey Hammerloid finish on the record stack cover and an eye-arresting new valance carrying the name Wurlitzer with surrounding decorations of a musical motif.*

This mechanism, with its vertical stack of 24 records, looks like Wurlitzer took its 24 play Simplex record changer of the forties, and modified it to play both sides of the record. In reality, other than the similarity in design of the record stack, there is little in common.

Being able to play both sides of the records adds another level of complexity to the mechanism. There is some cleverness in the design, however.

With the vertical record stack, the only way to play the bottom side of the record is to have a tone arm playing from the underside of the record. Whereas Rock-Ola had used a tone arm with cartridges on both the top and bottom, Wurlitzer decided to use a second tone arm. The lower tone arm has a spring to pull the tone arm upwards against the lower side of the record when even number selections are



5206 Wallbox

played.

Of course, the turntable supporting the lower side of the record must be small, to allow the lower tone arm to play the underneath side of the record.

In addition, the direction of rotation of the record must be reversed to play the lower side. This is taken care of by a special turntable motor that is basically two motors in one, using one armature. The direction of rotation depends on which motor coil is supplied power.

There are several variations in the 1600 series. The preceding year (1953) saw the 1600 and 1650. For 1954, there are four versions, the 1600A, 1600AF, 1650A, and 1650AF.

The "A", of course, signifies the 2nd year, with the re-styled cabinet. The "F", available only in 1954, denoted "High Fidelity". The differences between the various 1600's and 1650's, however, is a little more subtle.

The mechanism, as introduced in the 1250's, had trays able to hold 10" records, and were able to play 78 RPM records. By changing the idler wheel, and changing the set down settings, they could play the 7" 45 RPM records (which had to be set in adapter plates). 33 1/3 RPM idler wheels were also available, for playing the 10" LP's.

The 1600's still had the same mechanism, with the 10" trays. The various 1650's, however, had smaller trays that were able to hold only the 7" size records. Thus, the 1650 of 1953 was the first Wurlitzer to play only 7" 45's. The pictures of the trays illustrate the differences. The distance from the pivot point to the center of the record hole is the same, so the 1650 tray is about 1 1/2" shorter overall.

With the introduction of the 1700 in 1954, one would think that the older mechanism would have been discontinued. But the 1600A's and 1650A's were kept on one more year, as a lower cost companion machine, for the smaller locations.

The High Fidelity option involved adding a 5" tweeter to the speaker system (the woofer for these is a 12" field coil speaker). The amplifier (a #526HF, instead of a 526 for the non-HF version) had minor changes to improve the frequency response. Both amplifiers had automatic volume control,

These sound good, although the 12" speaker is worked pretty hard on heavy bass notes. The cobra cartridge is satisfactory for mono records, but has trouble tracking on stereo records with large separation.

The 48 play mechanism is above average in difficulty of repair. There are a lot of adjustments, and it can be difficult to get to run smoothly. In good shape, and properly adjusted, they are reliable. However, a beginner should shy away from one that needs mechanical work (they can be a frustrating experience).

The 1650AF is a reasonably sized machine, at 53 1/2" tall by 29 3/8 wide by 26 7/8" deep. The weight is moderate at 315 pounds. Wurlitzer thankfully had given up on the three caster system a year before, so the 1650AF is easy to move around.

The 1650AF is less expensive than the later Wurlitzers, but more than the 1250 through the 1500 series. The AJ price guide list one in #1 condition at up to \$3700.

Options include a 48 selection wallbox, the 5206. This wallbox requires four wires to connect, instead of the usual three. Two wall speakers were available, the 5100, with an 8"



1600 With Alternate Grill Styling

speaker, and the deluxe model 5110, which has a 12" speaker.

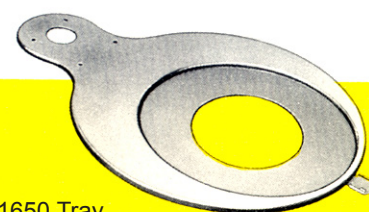
The 1650AF (and the other members of the 1600 series) is a good looking, reasonably priced jukebox. One that needs work should be reserved for the mechanically inclined, but a good working one could be a good buy for a new collector, or a good looking addition for an experienced collector.



5100 Speaker

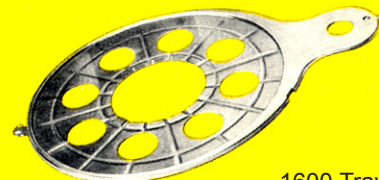


5110 Speaker



1650 Tray

Both the Models 1600AF and 1600-A playing 78 RPM records can be adapted to play 45 RPM records by changing the idler wheel and using 7-inch metal spacer discs.



1600 Tray

1954 WURLITZER 1700

The introduction of the Seeburg M100A in 1949 completely changed the playing field. Previous to this, Wurlitzer had been King of the Hill, with a series of very attractive and popular 24 play Paul Fuller designed models. Now, with Seeburg marketing a newly designed 100 selection model, Wurlitzer's gravy days were over.

Wurlitzer must have thought that the market for 24 play machines would continue forever. They had been caught napping, and didn't have a mechanism comparable to the Seeburg Select-O-Matic under development.

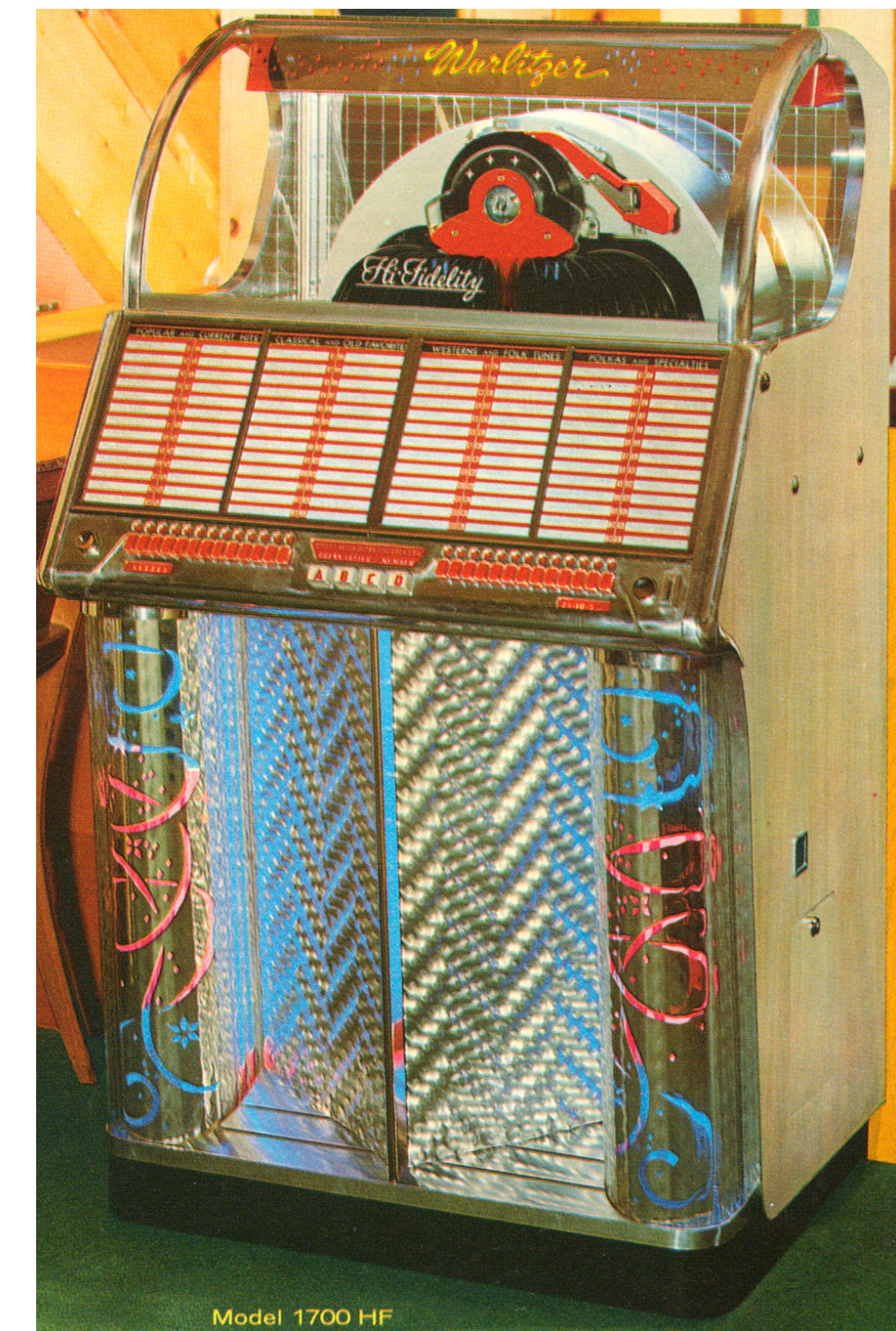
By 1950, they had the model 1250 on the market. This was obviously a hurry-up attempt to be at least semi-competitive to Seeburg, but still had only 48 selections. The first impression is that they took their old 24 play mechanism and designed it to play both sides of the record (of course, it's a lot more complicated than that).

This 48 play mechanism was improved over the next four years, with the models 1400, 1450, 1600 and 1650 being produced. Also produced during this period were the models 1500 and 1550 of 1952, and the 1500A and 1550A of 1953. The 1500 series would actually compete with Seeburg in the number of selections (actually edging them out with 104), but were incredibly heavy (470 pounds for the 1500), overly complicated, and prone to breakdowns.

All the models up to the 1600 were still able to play 78 RPM records - the 1650 being the first Wurlitzer to play only 45's. Between 1949 and 1953, two things must have become obvious to Wurlitzer, that 78's were a dead issue, and that a totally new mechanism would be needed to successfully compete with Seeburg (and the other manufacturers that had 100 and 120 selection jukeboxes by now). Thus, they must have been busy at work developing the new mechanism that was first used on the model 1700 of 1954.

The new mechanism was a complete break with the past. Up to now, all Wurlitzers had stored the records in a vertical stack, on a tray that swung out to the play position. In the new mechanism, the records were stored vertically, in a circular carousel that rotated to bring the records around to the proper position when they were to be played.

An advantage of the carousel record magazine is that it is free to rotate when the mechanism is not playing, making it easy to replace records. It also allowed a considerably lighter mechanism than the 104 play



Model 1700 HF

one used in the 1500 series. By comparison, the 1700 was a real lightweight, at only 308 pounds.

Another first for this new mechanism was that it was the first Wurlitzer that could play both sides of the record without having to have two tone arms. Their method of doing this is a little ingenious. The turntable is in the center, above the carousel. There are two arms in the mech, one on each side, to push the record up to the turntable. If it is pushed up from the left, one side of the

record will face the needle; pushed up from the right, the other side will be played.

Once the record is pushed up, the mechanism clamps the record to the turntable, and the tone arm is lowered to the record. As the record is being played vertically, the tone arm has to be balanced vertically, with a spring pushing the tone arm against the record.

The record playing assembly is all contained in an arch that mounts over the carousel. The turntable at the front is con-

nected to a flywheel at the rear, which is belt driven from the turntable motor. The operation of the record clamp and tone arm is controlled by a flexible steel cable that extends down into the mechanism proper.

Under the steel platform, a second motor controls the operation of the carousel and the mechanism. It is reversible - one direction of rotation turns the carousel to bring the selected record to the proper position to be played (an arm at the bottom of the mechanism picks up the selected pins in the pin bank below). Once this arm hits a selected pin, switches are activated that reverse the motor and start the mechanism cycling to bring the record up and play it.

The chassis at the bottom of the mechanism containing the pin bank also contains other circuitry, and functions as a junction box for the electronic circuitry of the mechanism.

This mechanism is fairly easy on records. In addition, since the records are stored vertically, they don't tend to gather dust so much.

An important feature of 50's jukeboxes was mechanism visibility. As the brochure for this model states, "People will pay just to watch its fascinating action." This may have been a slight exaggeration, but watching the mechanism in ac-

tion and seeing the record play is certainly a good part of the "Total Jukebox Experience". The 1700 mechanism had the advantage of being easy to "beautify". Putting trim panels on the sides of the carousel, and around the arch hides all the mechanism details. The arch, tone arm, and record guide assembly (in front of the turntable) are all colorfully painted.

While the mechanism design may have been revolutionary, the cabinet design was evolutionary, in many ways resembling a 1500A that had lost weight. A large convex glass dome offers almost unlimited visibility of the mechanism. The perforated metal speaker grille points outward at the center. On the sides of the grille are plastic pilasters with colorful inserts. The sides of the cabinet are dark walnut on the 1700, and limed oak on the 1700F.

The 1700F (referred to in the brochure as the 1700HF) was the high fidelity version. Other differences between these two models were the addition of a 6" tweeter and some modifications to the amplifier in the 1700F. Canadian built examples were called 1700HF.

Wurlitzer continued using the Zenith Cobra cartridge. Although not high fidelity by modern standards, the cobra performed well on the mono records of the era. Other than the cobra circuitry, the amplifier design was fairly standard, including automatic

volume control and push pull 6L6 outputs, capable of approximately 25 watts of audio. Constant voltage (high impedance) output was available for remote speakers, with a fader control that would balance output between the internal and external speakers.

The 1700 and 1700F were the last Wurlitzers to use the 15" field coil type speaker. All future Wurlitzers used multiple 12" permanent magnet speakers.

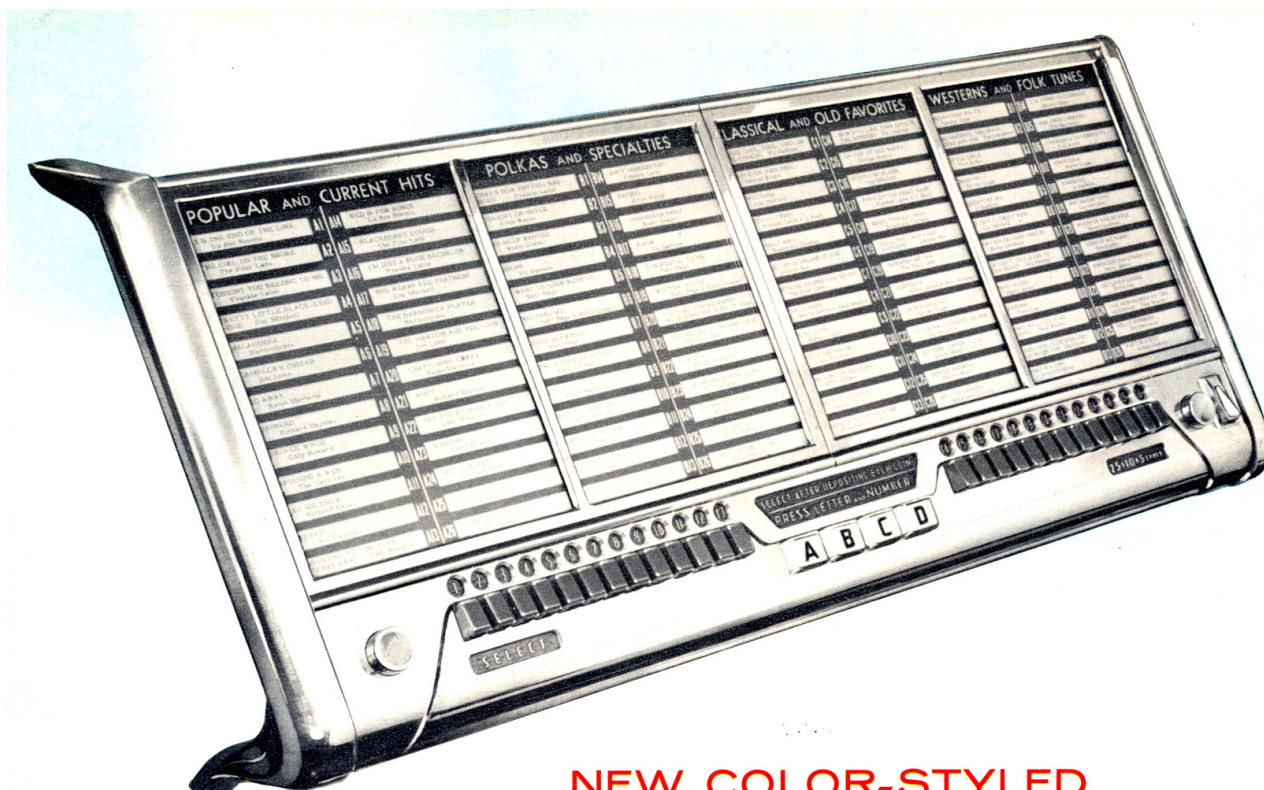
A holdover for the 1700 was the use of single title strips (the last year). Adding to the confusion is that A14 is the opposite side of A1, etc.

Accessories for the 1700 included the model 5205 3-wire wallbox, an optional stepper, and the model 5100 8" and the 5110 12" enclosed speakers.

Production of the 1700 is estimated at about 12,700. Wurlitzer never would regain the production figures of the 1015.

The 104 selection mechanism would be used through 1961. In 1956, it was expanded to 200 selections, and used through the model 3300 of 1969. In 1959, a 100 selection version was also released.

Thus, the carousel mechanism served Wurlitzer well, almost to the end of their American production. Wurlitzer was coming into its own again in styling, and produced some very attractive jukeboxes during the 50's and 60's.



**NEW COLOR-STYLED,
EASY-VISION SELECTOR PANEL MAKES TUNE
PICKING ERROR-PROOF — PROGRAMMING SIMPLE**

1955 WURLITZER 1800

Here is front page news for every phonograph operator and location owner the world over. It's the distinguished, new, 104-selection, all 45 RPM Wurlitzer model 1800.

The introduction of the 100 play Seeburg Select-O-Matic left Wurlitzer at a competitive disadvantage for several years. The number of selections on the jukebox became a selling point, much as the horsepower ratings of the cars was in the horsepower race of the 50's.

The 48 selection models that Wurlitzer marketed (the 1250, 1400, and 1600 series) were interim models, and were unable to stem Seeburg's strong sales in the early 50's. Wurlitzer did get ahead (in the number of selections) with the 104 play 1500 series, but these were too big and heavy, and not well liked by the operators.

Wurlitzer's first breakthrough came with the 104 selection model 1700 of 1954 (the number 104 must have been chosen to "one-up" Seeburg with its 100). Instead of trying to adapt the earlier 24 play mechanism to a larger number of selections, the 1700 used a mechanism that was designed from the ground up. Not having to accommodate 78 records resulted in a lighter, less complicated mechanism.

The 1800 built upon the 1700 with a cabinet restyle that resulted in one of the nicest 50's machines.

This fine Wurlitzer Phonograph features the interest-intriguing, play-promoting Carousel Record Changer. Utilizing one tone arm, one Cobra Stylus and one turntable direction, it plays vertically both sides of 52 seven-inch records.

While previously all Wurlitzers had placed record horizontally in trays that swung out, they now set the records vertically in a carousel-style magazine. By raising the record from opposite sides of the carousel, the opposite side of the record could be played with the same needle. They no longer needed two tone arms and cartridges to play both sides.

The new mechanism was still a little heavier than the 100 play Seeburg, but it was an order of magnitude lighter than the ponderously heavy 1500/1550 mechanism, and required less maintenance.

Semi-circular arch casting houses turntable motor, serves as a mount for tone arm and actuating mechanism.

The 1700 and 1800 were the only models to have the round arch. On all the later models, the arch was squared off.

Arms in the lower part of the mechanism push the records up to the play position, where they are clamped by the turntable assembly, and played in the vertical position.

It's a super-simple changer, easily removed and able to stand unsupported on its base for service.

I'd have trouble describing this mechanism as being "super-simple".

It's colorful appearance and amazing action proved the greatest play stimulators ever introduced on an automatic phonograph.

Being interested in mechanical devices, I

bone white. The chassis shelf of simulated white leather with tooled gold trim features the Wurlitzer crest emblazoned in full color.

This about says it all. There was as much effort put into the interior appearance as to the exterior. It takes a lot of care to make a record-playing mechanism look as attractive as this.

Contrasting to the other models of this era, the front glass is flat. A nice touch was to make the side glass panels curve into the top of the dome.

The rigidized curved metal grille with sparkling twin pilasters of airfoil design completes a cabinet ensemble so different, so newsworthy, that it will be the talk of the industry for years to come.

The 1800 has one of the prettiest grilles ever put on a jukebox. The lighted pilasters were moved inboard, and shined on the grille from both sides. "Airfoil design" means the cross section of the pilasters is somewhat like that of an airplane wing.

Wurlitzer's new, chrome finished Program Selector is smartly styled for easy vision and quick, error-proof selection.

Wurlitzer had delayed the inevitable long enough, and finally adopted the double title strips that had been pioneered by Seeburg way back in 1949. Now they were following industry practice with the two sides of the record being A1-A2, etc., rather than A1-A14. The double title strips also made it easier for the operators when changing records.

Big Wurlitzer news in Remote Control Equipment:

Accessories for the 1800 included a wallbox and three remote speakers. The wallbox was the model 5207, an updated version of the 5205 that was used with the 1500 and 1700 series.

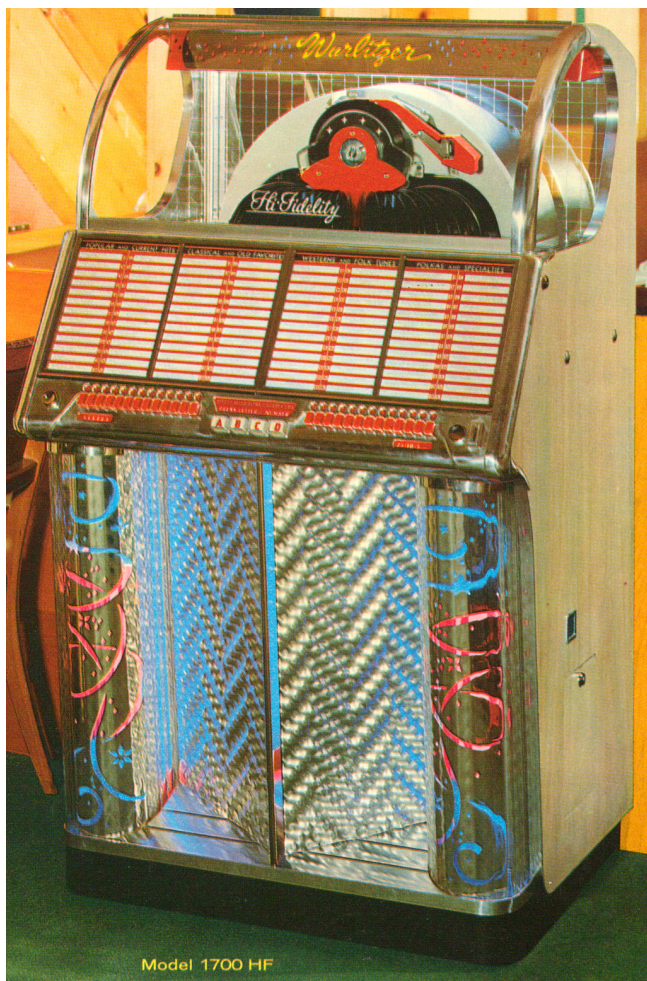
The main difference between the 5205 and 5207 was a new title page assembly to accommodate the change from single to double title strips. This was made more difficult since there are thirteen buttons on each side. Their solution had to be a compromise. Each side of the title strip holder had six double title strips and one single. The "odd man out" record had one side on the left and the other side on the right, halfway down the page.

Wurlitzer claimed that this selection with the single title strips was a "hit tune", surrounded by a color border for emphasis. Having these four records (one per letter) with single title strips must have driven the operators crazy.

The three wall speakers were the 5115 corner speaker with four 5" speakers, the 5116 corner speaker with one 8" coaxial, and the 5117 wall speaker with one 12" coaxial speaker.

Although not mentioned in the brochures, a remote volume control kit was also offered. This included the volume control assembly and a relay box that plugged into the amplifier.

The Wurlitzer 1800 brings you true fidelity



was always intrigued by the operation of the various jukebox mechanisms. Having the mechanism operation visible certainly has always drawn me to a jukebox.

By the 1700, Wurlitzer had completed its transition from the 40's style machines to the 50's styling set by Seeburg.

Cabinets are available in a gorgeous array of fresh, new sky colors for 1955 - Dawn Mist, Horizon Blue, Sunset Red, and Midnight Black.

It's always nice to have a theme - "sky" colors. Dawn Mist is by far the most common - I don't remember if I've ever seen the other colors (at least, from the factory). Black is pretty, and is a legitimate color to paint this model.

The Carousel Record Changer is completely visible through a full width clear view window, slanted to eliminate reflections and attractively framed with chrome plated steel molding. The changer compartment itself is a gorgeous blaze of color and light. Background is quilted red plastic with a sunburst of stainless steel moldings. The changer cover is in matching red. The Carousel arch and tone arm are in Pearlescent

sound - the finest High Fidelity music ever offered on any coin-operated phonograph. Although it has three 12-inch woofers and a treble tweeter to hit those high notes, the Model 1800 proves that true Hi-Fi is more than the number of speakers. It is the perfect balance between pickup, amplifier, baffle and speaker capacity. The 1800 has this balance plus more cone area than any other juke box.

The sound system was upgraded from the 1700. The amplifier had a larger output transformer, and incorporated the changes made in the High Fidelity amp used in the 1700F. The biggest change was in the speaker system. The 15" field coil speaker was finally abandoned, in favor of three 12" permanent magnet woofers and one tweeter. This was a strong sound system, with plenty of bass.

Wurlitzer claimed that by placing the outer 12" speakers behind the pilasters, the sound was diffused over a 180 degree range. The center 12" speaker was a midrange, while the two outer ones were bass speakers.

Automatic Volume Control was standard by now. The Zenith Cobra Cartridge was still being used (as it would for a few more years).

Production of the 1800 was over 17,000, making it the top produced Wurlitzer model of the 50's. Comparing this to 26,000 for the Seeburg HF100R of the same year, and over 37,000 for the M100C, it's easy to see that Wurlitzer was never able to recapture it's success of the 40's.

The 1800 is one of the more valuable machines of the 50's, pricing in at about \$5500 retail for a grade 1 machine in the AJ price guide. It's an average machine in terms of difficulty of restoration, and large areas of chrome can drive the cost of restoration up if it needs replating.

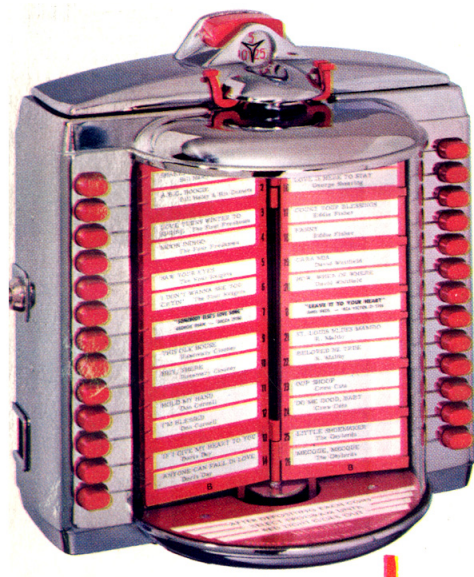
It's also an average machine in terms of size and weight - 55 1/4" high by 27 3/8" deep by 32 1/2" wide, and weighs 309#.

Alive with eye appeal from its gracefully formed glass dome to its sculptured ebonized base - this tuneful beauty literally sparkles with what it takes to turn music into money.

It's definitely above average in looks. The large areas of chrome, wide open visibility of the mechanism, and the bright metal of the speaker grille with colors from the pilasters reflecting off them, all combine to produce a machine that's bright, colorful, and attractive, with a look of quality about it.

The bottom line then was the amount of money the jukebox took in. The bottom line now is that the appearance makes it one of the more desirable jukeboxes models today.

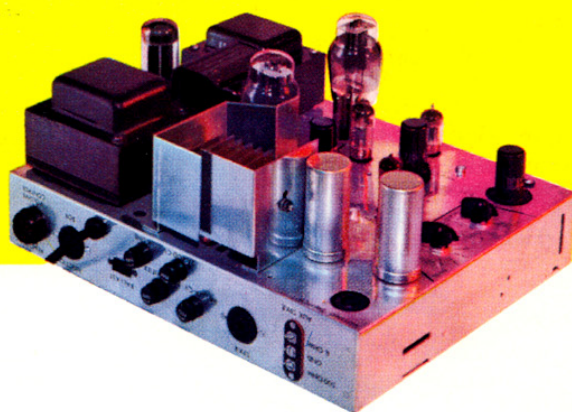
Text in italics is drawn from Wurlitzer brochures.



5207 WALLBOX

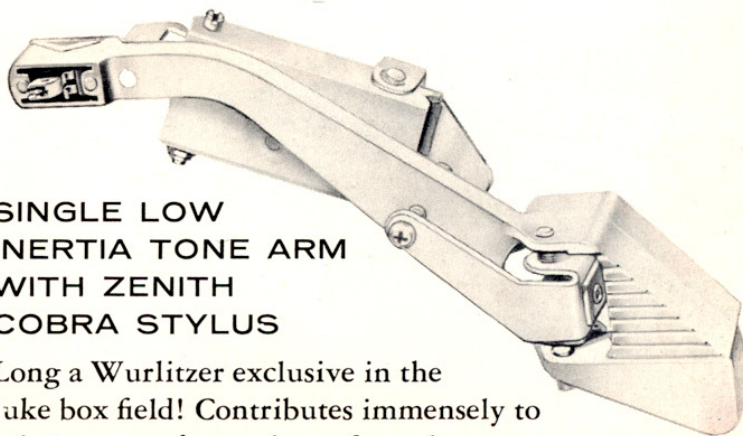


THE TRUEST HIGH FIDELITY EVER ACHIEVED ON ANY AUTOMATIC PHONOGRAPH



DYNATONE AMPLIFIER FEATURES GREATER OUTPUT TRANSFORMER

Wurlitzer's great Dynatone Amplifier now not only incorporates the highest fidelity output and built-in volume level control, but a new transformer with higher than ever output — more power for auxiliary speakers.



SINGLE LOW INERTIA TONE ARM WITH ZENITH COBRA STYLUS

Long a Wurlitzer exclusive in the juke box field! Contributes immensely to minimum surface noise and maximum tonal brilliance. Gives you at least 1,000 more plays per record without impaired fidelity, plus many thousand more plays per stylus.

1955/56 WURLITZER 1900 CENTENNIAL

In celebration of 100 years of musical leadership, Wurlitzer introduces the breath-taking new Wurlitzer Centennial Model 1900.

1956 was a big year for Wurlitzer. A 100 year anniversary is reason to celebrate for any company, and Wurlitzer played it up big. They designed a special medallion which they applied to the 1900's. They also published a book celebrating their history and their product line (unfortunately, jukeboxes were not given a big coverage in this book).

Alive with engineering innovations, the Centennial takes a long, style-wise step into the future.

Many aspects of the styling were evolutionary (the side profile and the speaker grille, for example, are very similar to the 1800). But for the most part, the cabinet was all new.

Other engineering innovations included a redesigned amplifier now using printed circuitry, a restyled arch assembly, and new selector circuitry. Basically, the 104 selection 1800 mechanism was little changed. The 200 selection mechanism used in the 2000 was probably introduced a little later.

The daringly designed, chrome-trimmed dome houses the most dramatically fashioned, exquisitely colored record changer compartment ever introduced...puts it on view through a spectacular one-piece panoramic Super-Vu window that extends clear down over the program holder.

Automotive styling was still influencing the jukebox world. Like the American cars of the mid 50's, chrome and glass abounds on the 1900. The dome glass has a pronounced mid 50's windshield look (the side windows even look a little like wing windows). There is much chrome - the selector button casting, the upper and lower dome frame, and the trim around the pilasters. Even the plastic in the pilasters has a chrome look. The sides of the dome glass frame are polished aluminum.

Mechanism visibility was still very much in vogue in 1956, and the large dome and side glasses in the 1900 gave an almost unobstructed view of the mechanism, which

is illuminated from above by a fluorescent lamp shining through a louvered panel.

Having the dome extend downward over the title board assembly was a new feature, and one that would continue for many years.

The "Super-Vu" window, when open, of-

also repeated in cast metal on the sides of the cabinet.

The all-chromed selector panel with its gleaming Lucite-capped buttons is a masterpiece of superb styling.

The expanses of chrome give the 1900 a rich, expensive look. The buttons with their separate, clear cap, are an attractive feature.

The same fine functional designing marks the rich, rigidized metal grille.

The speaker grille is made of three perforated aluminum panels, with a three dimensional pattern formed in. Most of these seem to have suffered damage from someone's foot (evidently not rigidized enough), and are difficult to straighten. Reproductions are available now, and this makes a world of difference in the appearance.

It is flanked by double strength glass pilasters of Swedish Modern design that cast a colorful pink and turquoise glow on the gleaming metal.

The pilasters are glass, with a silvered plastic insert which has a pattern of holes designed to look like stars. The sides of the pilasters pointing towards the speaker grille are multi-colored, to project a pattern of colors onto the speaker grille.

A gracefully contoured stainless steel kickplate completes the Centennial's stunningly distinctive new front styling.

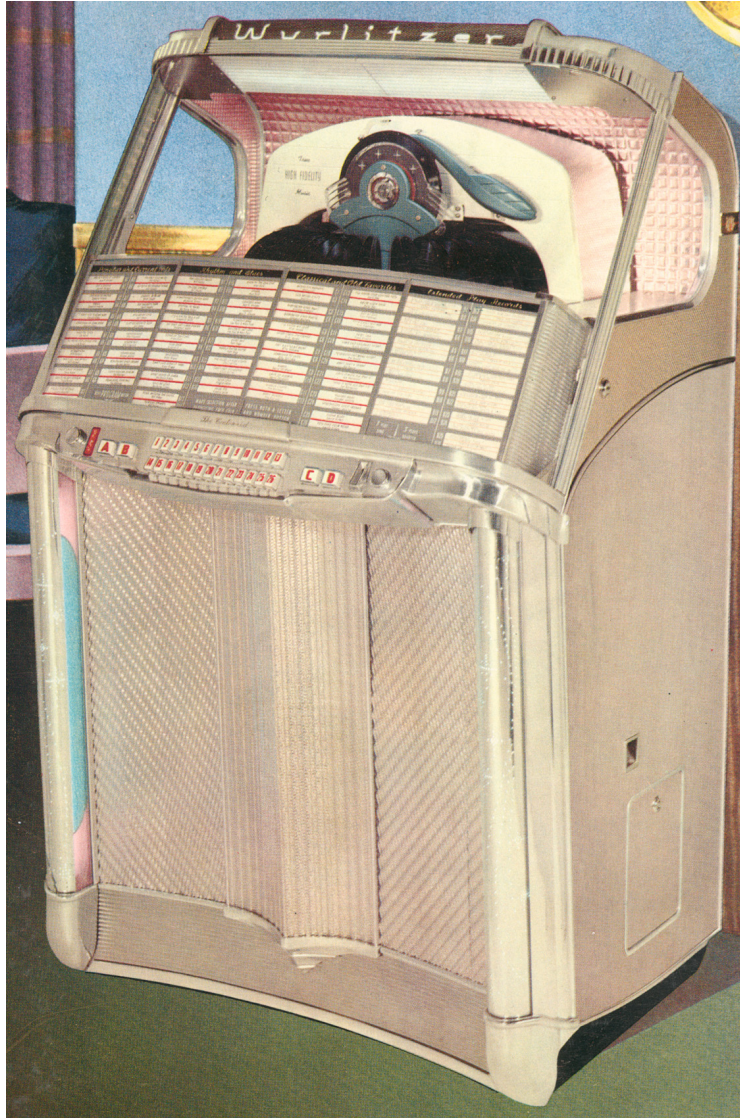
Maybe they should have continued the kickplate higher, to prevent damage to the grille.

Side cabinetry offers another Wurlitzer exclusive. A luxurious combination of finest American hardwoods and embossed metallized DuPont Mylar. Highly favored today by automotive stylists for interior car trim. Mylar combines brilliant beauty with amazing wear.

This has the square, or waffle pattern, and is used both outside and over the arch (in silver), and on the inside of the sides of the cabinet (in gold). It is now available as a reproduction.

The mid 50's saw the beginning of the use of a wide variety of plastics in car interiors.

Four cabinet finishes were offered - Per-



fers good accessibility to the upper part of the mechanism for maintenance. The top of upper back door curves forward to give even more access to the mechanism.

Unfortunately, the corners of the dome are sharp and can be hazardous.

New chassis shelf of warp-proof masonite has stain resistant surface in off-white with gold trim and features the Wurlitzer Centennial Medallion signifying one hundred years of musical achievement.

The wide open view of the mechanism necessitated this trim panel on both sides of the mechanism. Wurlitzer did a nice job of styling here.

The medallion (a decal on the shelf) was

sian Turquoise, Glacier White, Chinese Black, and Desert Haze. Desert Haze seems to be the most common.

From its inception, Wurlitzer's Dynatone Sound System has produced the truest high fidelity ever achieved on any automatic phonograph.

For the first time, the amplifier used a printed circuit board for the preamp. A pair of 6L6 output tubes provides about 25 watts of audio. Automatic volume control was standard equipment.

The 1900 has a fairly impressive speaker system. There are three 12" woofers and two 4" tweeters. The 12" speakers are chosen to be different, so that resonances will be "staggered" (occurring at different frequencies). This gives a more uniform bass response. The bass on these is impressive. They can really crank it out.

The weak point of the sound system is the cobra cartridge. The cobra was a good cartridge when introduced, and still works well with mono records, but doesn't do so well with stereo. Unfortunately, the shape of the tone arm makes it very difficult to upgrade to a different cartridge. Cartridge replacement would also require amplifier modifications.

Entire mechanism may be removed from cabinet, inserted into depression in divider bar on rear of phonograph and any necessary adjustments made while still energized.

A person accepts a certain amount of hyperbole in these factory brochures, but this makes absolutely no sense to me. If

they're talking about the divider bar between the upper and lower back door, it's only about an inch thick. The "depression" in it is just a slot for the upper door to fit into.

Specifications:

Height - 55 5/8", depth - 27 7/8", width - 33 11/16", weight - 323 pounds.

Wurlitzer Remote Control Equipment:

The Wurlitzer 5207 wall box was offered, the same as used on the 1800. It's the same as the 5205 used on the 1700's, except for the modification of the title strip holder for the double title strips. Since they had thirteen selections per side, one record (the 7's and 8's for each letter) had to be split up into a pair of single title strips. The stepper was optional on the 1900.

Two corner speakers (the 5115 and the 5116) and one wall speaker (the 5117) were offered. The amplifier provides both Constant Voltage (CV) and 8 ohm outputs, so just about any speaker can be connected.

The cabinet abounds with sparkling chrome trim-castings, each styled with infinite smartness.

I love this line. I wish I had infinite smartness.

Altogether, the Wurlitzer Centennial is a bold new concept of eye and ear appeal destined to hit equally new highs in location preference.

The 1900 is definitely a very attractive machine. However, the handwriting was on the wall that they needed a model with more selections, and the 2000 was released soon, somewhat overshadowing the 1900. But

the 1900 can stand on its own. There is a look of quality about it, and styling is top-notch.

(Text in italics is from original Wurlitzer brochure.)

WURLITZER MODEL 1900 SPECIFICATIONS

DIMENSIONS:

Height — 55 5/8" Depth — 27 7/8"
Width — 33 11/16" Weight — 323 lbs.
Packed for shipment - 393 lbs. approx.

COIN EQUIPMENT:

Single coin entry 5-10-25c. Three-in-one magnetic slug rejector. New simplified coin register mechanism. On-off automatic coin return.

RECORD CHANGER:

Provides 104 selections from 52 seven-inch 45 RPM records. Play-meter included.

SOUND SYSTEM:

Includes pre-amp automatic level control, and volume, dual tone and fader controls.

tone arm:

Single, low pressure tone arm with Zenith Cobra Cartridge. Plays both record sides.

WATTAGE:

Complete phonograph, 300. Standby, 135 watts.

LIGHTING:

Four 20-watt fluorescents.

NUMBER OF SELECTIONS:

104

TYPE OF RECORD PLAYED:

Seven-inch 45 RPM.

CABINET FINISH:

Persian Turquoise	Chinese Black
Glacier White	Desert Haze

REMOTE:

104-selection wall box, Model 5207, available. Any Wurlitzer 3- or 4-wire or 48-selection wall box is usable with adapter.

AUXILIARY SPEAKERS:

Will use any present Wurlitzer Speaker.

TUBE COMPLEMENT:

1 type 5U4GA (or 5U4GB)	
1 type 12AU7A	1 type 6AU6
2 type 12AX7	1 type 6AN8
2 type 6L6GB	



1900 Speaker Placement

1956 WURLITZER 2000

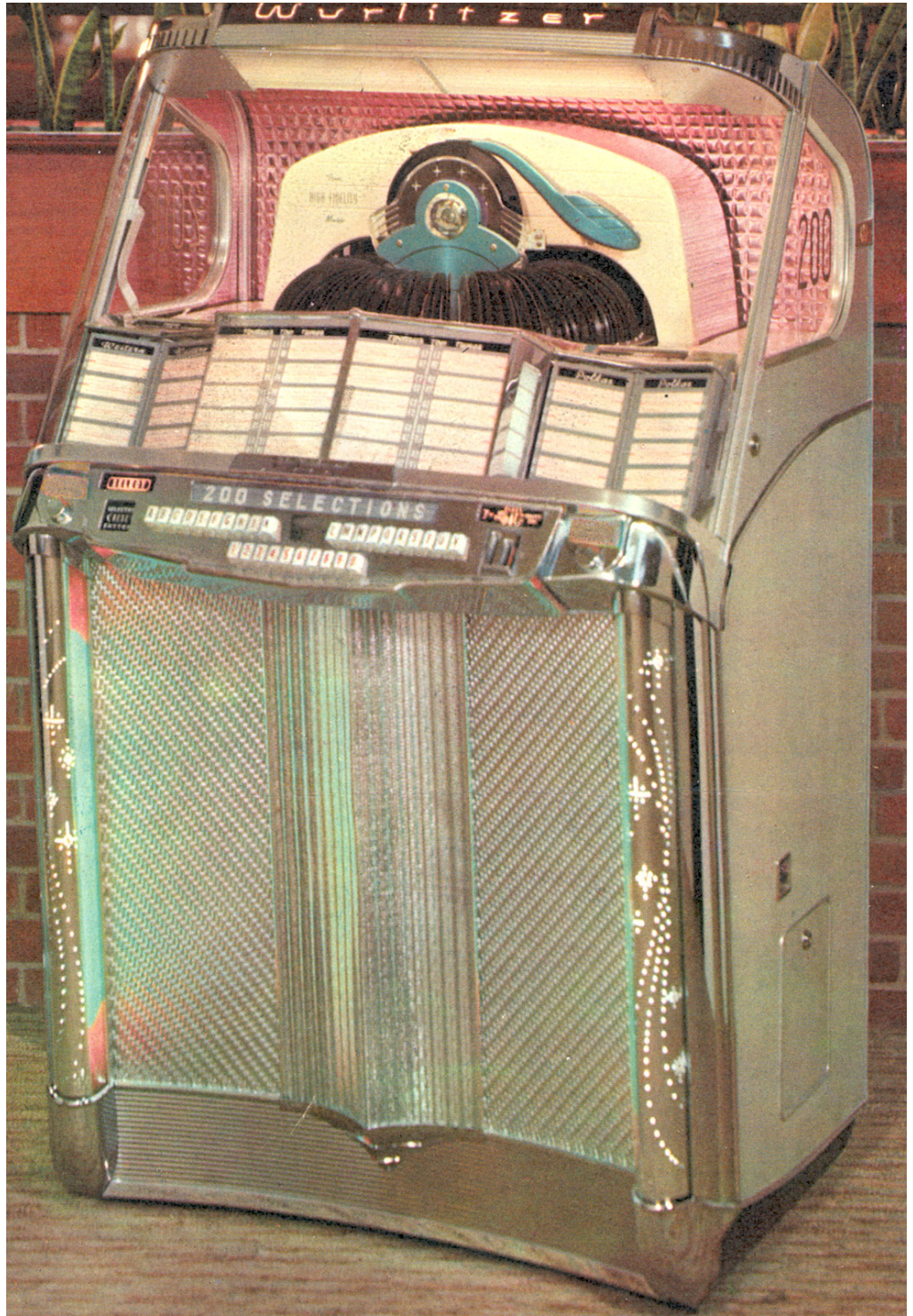
1956 was an important year for Wurlitzer. The company was celebrating its centennial anniversary of the founding of the Wurlitzer Company. The flagship model of the jukebox production was the Wurlitzer model 1900, an attractive model, but with only 104 selections.

The introduction of the Seeburg V200 caught Wurlitzer short of selections again. As Detroit was gearing up for the horsepower race of the era, the jukebox manufacturers were engaging in a "selection race" - Seeburg had gone from 20 to 100 to 200 in about 8 years. However, Wurlitzer was in a little better shape this time - the mechanism didn't have to be designed from the ground up.

When Seeburg introduced the M100A in 1949, Wurlitzer (and the other jukebox manufacturers) were really caught with their pants down. Wurlitzer rushed to bring a competitive jukebox to market, and the 1250 was the result. The dual-tonearm 1250 mechanism shared the stack arrangement of the 24 play models, but almost everything else had been redesigned. Even so, it only had 48 selections, about half the Seeburg. The double stack 1500 series of 1952-3, equalized Wurlitzer and Seeburg in the selection race, but these were overly heavy and complicated, and not well liked by the operators.

However, the single stack mechanism of the 1250 through 1650, and the double stack of the 1500 series, were transitional mechanisms, meant only to serve until a completely new mechanism was designed. The carousel mechanism was introduced in 1954 for the model 1700, and was a complete departure from the earlier models. Like Seeburg with their M100B, it was Wurlitzer's first mechanism designed exclusively to play the 7" 45 records. The records could be pushed up from either side of the carousel, and thus either side could be played from a single tone arm, a big simplification over the earlier models. This basic mechanism would serve Wurlitzer for many years.

The 1900 thus was basically the same internally as the 1700, with some changes in the coin accumulator and sound system. With a little trim, the Carousel mechanism could be made to be very attractive visually, a positive point in an era of high visibility of mechanisms. But just as the 1900 was introduced, Seeburg stepped up the selection race with the V200 and Wurlitzer again had to play catch-up. It was not a problem the time, as the carousel mechanism was easily adaptable to changing the number of selections.



As the number of selections was raised to 200, two major changes had to be made to the mechanism. First, the carousel itself had to be modified to store 100 records, which necessitated closer spacing of the records (increasing the size of the carousel would have been impractical, if not impossible). This closer spacing necessitated a change in the end of the arms that push the records into the playing position. When the arms begin to raise, two small plastic tips (officially called "guide tips", but usually referred to as "duckbills") opened up to slide

against the sides of the separators to provide positive contact with the record and prevent any possibility of missing the record. The guide tips were a good solution, but have proved a little troublesome in later years.

The second change was to increase the size of the selector drum to contain 200 selections. As Wurlitzer was still using individual coils for each selection, the physical size had to be increased proportionately. Wurlitzer's solution was to mount the selector drum vertically behind the mechanism,

under the horizontal platform. A right-angle drive using zero-backlash bevel gears was used. Having the selector drum in the rear restricted access to the mechanism and made service difficult, so this design was only used for the 2000. Compared to the Seeburg, this mechanism was somewhat large and heavy. Later models returned the selector drum to its previous location under the mechanism, and redesigned the selection system to reduce the physical size.

Other changes were also made. Half-dollar play was made an option. On jukeboxes so equipped, a separate coin slot, chute, and slug rejector were added to handle the half-dollars. The "Playrak" coin register was non-accumulative. A stepper was made standard equipment. The sound system was unchanged from the 1900, with three 12" woofers and two 4" tweeters, but still using the cobra cartridge. Two 12" speakers are of one type, and the third is different, to give a smoother frequency response through what Wurlitzer refers to as "purposely varied resonances". These have a strong sound system and will satisfy the bass-hungry among us.

The cabinets were available in four colors: Persian Turquoise, Glacier White, Chinese Black, and Desert Haze. Desert Haze seems to be the most common.

Of course the selector panel had to be changed to accommodate the larger number of selections. "200 Selections" was proudly proclaimed in the center of this panel. But the biggest appearance change is in the title board. The area taken by the title board is of course proportional to the number of selections on the jukebox, and with 200 selections, much of the visibility of the mechanism would have been obscured. Seeburg's solution to this problem was the selector drum. Wurlitzer designed a readerboard that was only about 8" tall by using a center section that had only 20 title strips and pages on each side (named the "roto-page" books) that displayed only 10 title strips each. Thus only 40 title strips (80 selections) were visible at any time, and visibility of the mech was unimpaired. These page assemblies are one of the main reasons for the popularity of this model, but had reliability problems and many were replaced by a WICO stationary board that was much taller and obscured visibility of the mechanism. The value of a 2000 can vary significantly depending on the presence or absence of functioning page assemblies. Rebuilding them can be a difficult job, but is well worth the effort to see the roto-pages in operation. If they are missing, reproduction title board assemblies are now available.

Many other reproduction parts are available for the 2000, including pilasters, inserts, instruction glasses, valence, dome, and the decorative shelf assemblies. This model appears to have been designed with a "cost is no object" philosophy that seems a little out of place with the relatively low productions involved in the jukebox industry. For example, a total of six fluorescent lights, five speakers, three section grille, two illuminated pilasters and the valence on the top, and of course the roto-pages. The automotive influence was very noticeable, with the dashboard-like selector panel, wrap-around windshield, and speaker grille that looks like it could be used on the front end of a car.

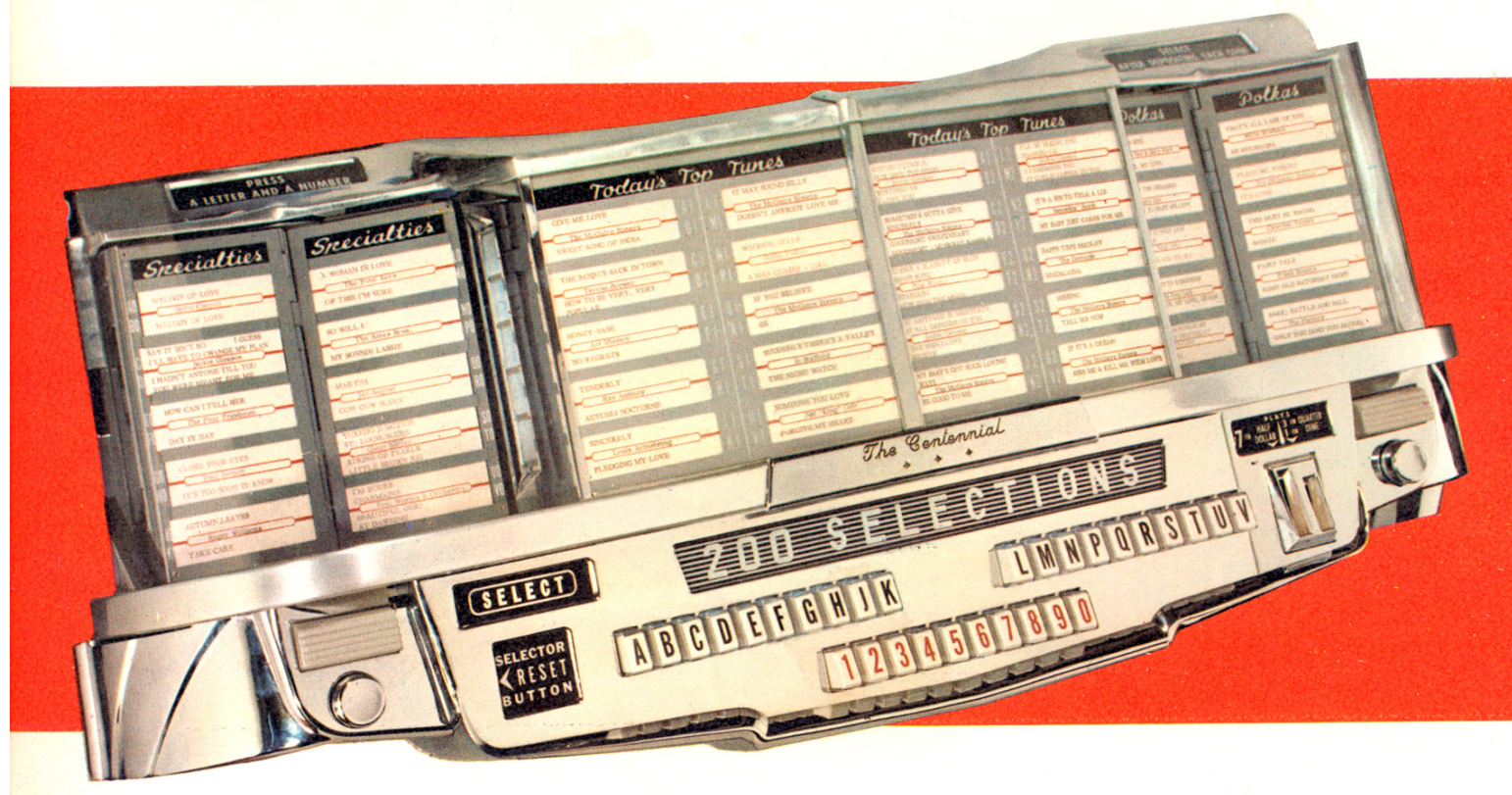
At 55 5/8" tall by 33 11/16" wide by 27 7/8" deep, the 200 is average in size. It's a little above average in weight, at about 375 pounds.

It's also above average in value - the AJ Price Guide lists it at \$6900 retail maximum. As mentioned, the lack of the original title board page assembly reduces the value considerably.

All in all the 2000 is a classy machine, a little more conservatively styled than the V200, very high in quality of construction, and definitely high on the scale of collectibility.

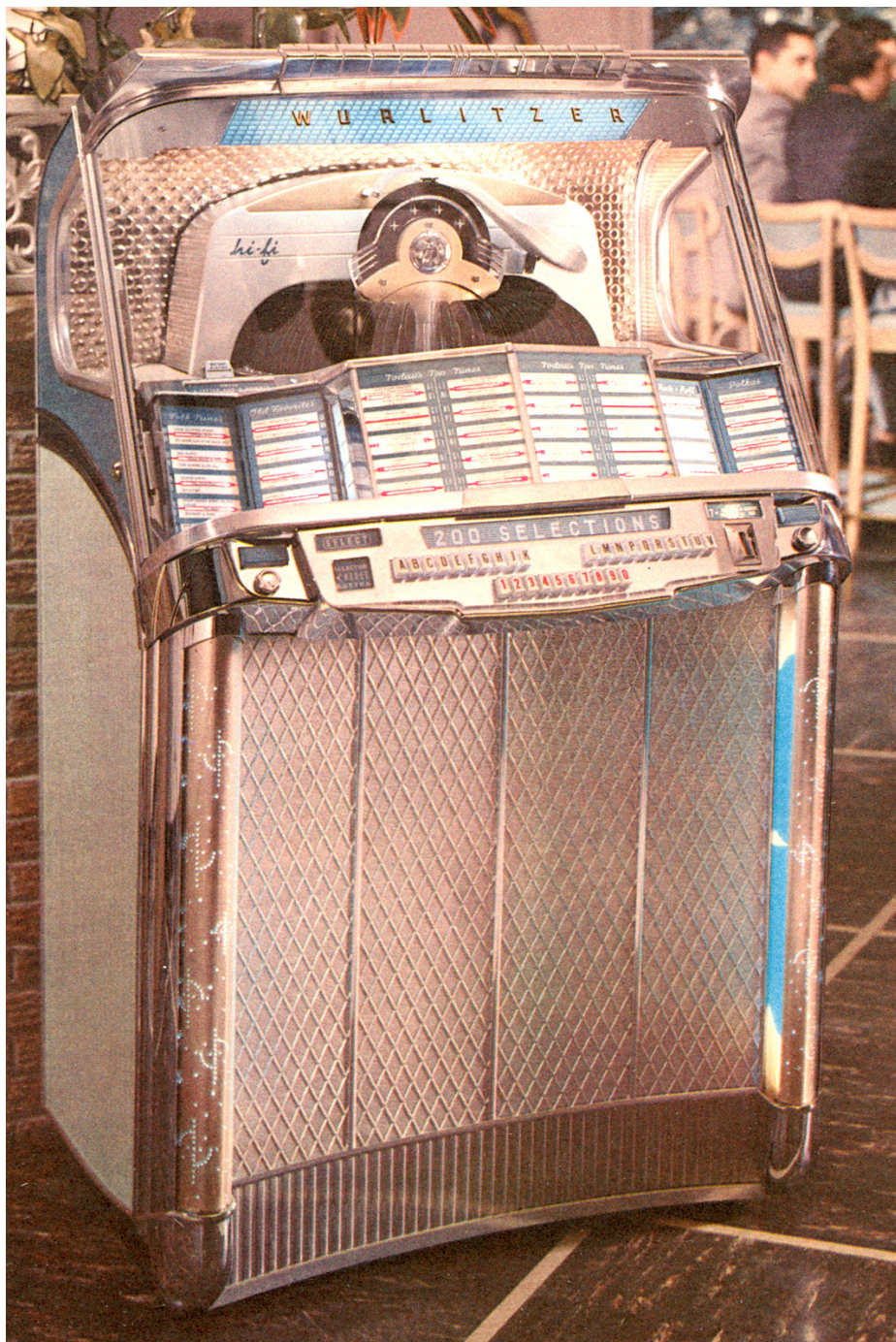
Dramatic innovations in

PROGRAM VIEWING AND SELECTION



2000 Titleboard

1957 WURLITZER 2100



It seems that in the middle 50's, when the manufacturers went to 200 selections, they all did it in a big way. Seeburg brought out the V200, Wurlitzer the 2000, AMI the G200, and Rock-Ola the 1455, all elaborate machines.

Mechanism visibility was still very much in vogue at this time. AMI was the only company that was able to display all 100 double title strips at once, and still show the mechanism off, thanks to the tall cabinet. The other three companies went to different forms of moving title displays, to keep the size of the display small in order not to block visibility of the mechanism.

Seeburg and Rock-Ola both went to a rotating drum to hold the title strips, the former to a

cylindrical drum and the latter to a 5-sided one.

In the 2000 and 2100, Wurlitzer went to an even more complicated system. Twenty title strips were fixed in place in the center above the pushbutton panel. On each side was a "roto-page" assembly, with ten title strips displayed. It operated much like a book - press the button and a page would move to the left, displaying a new group of title strips. After three pages are moved, the fourth push of the button moves the three pages to the right, to show the original set of selections. Thus forty title strips are held in each page assembly.

Since each vertical column only has five title strips, it's a fairly low title board assembly, leaving a good view of the mechanism.

The mechanism is showcased behind a dome glass that looks like it was supplied by General Motors. Wurlitzer is spelled out near the top of the glass. Gone is the light-up valance used on the top of the 2000 - a chrome casting is used in that location in the 2100.

The interior is bright and sparkly. A light shines down from the top through an egg-crate grille. The back panel behind the mechanism is a gold foil with circular patterns.

A total of six fluorescent lamps are used in the 2100. 20 watt lamps are used in the two pilasters and the top of the cabinet. There is a 14 watt 15" tube in the center of the title board display, and a 4 watt tube on each side, shining outward onto the page displays.

The mechanism itself is attractive to look at. The tone arm had been restyled with the 1900, and has much more curvy lines than the original. The record plays vertically, behind a transparent plastic shield. The records are held in a carousel arrangement that rotates when a selection is made. Depending on which side of the record is being played, the carousel stops with the record on either the left or right side, which is then pushed up to the playing position by an arm.

With 100 records in the carousel, the spacing between records is much smaller. This necessitated redesigning the upper ends of the arms, by adding "Guide Tips", which are spring loaded plastic tips, commonly referred to as "duckbills".

The arch behind the record playing position had also been redesigned with the 1900, and was more oval shaped than the round arch of the 1700 and 1800.

The trim panels on the sides of the carousel are patterned and add to the good looks of the record playing compartment.

Like Detroit's "warmovers", Wurlitzer had also based the 2100 on the 2000. Most of the external changes were in trim and color.

As mentioned above, the glass valance had been replaced with a chrome casting. The grille was also redesigned - it no longer had the raised center portion, but was divided into four sections with a patterned metal grille. As before, colored light shone down from above and in from the side pilasters.

The brochure describes the sides as "Color-styled Dino-weld side panels". The upper section is green in color, while the lower sides are a light wood grain color.

The selector panel located in the front center had twenty letter buttons (A through V with I and O left out), and ten number buttons from 1 through 0.

The selector system on the 2000 had been a one year only design. It had mounted the selector assembly (pin bank) vertically at the rear of the mechanism, with a separate selec-

tor coil for each selection. The 2100 went back to mounting the selector assembly horizontally at the bottom of the mechanism. This was the first use of the motor driven selection system that would stay with all 200 selection models through the 3300.

An odd feature of the 2000, 2100, and 2150, is that the opposite side of A1 is B1. This results in a somewhat confusing placement of records in the carousel. All later models had A1 opposite A2, with a much more logical placement of records in the carousel.

The 2100 is designed for all four coins - nickels through half dollars. The coin register mechanism is called the "Playrak". It is non-accumulative, giving one play for a dime, three for a quarter, and usually seven for a half dollar (it is adjustable by moving levers). In order to give one play for two nickels, the slug rejector has a "nickel flipper", which allows alternate nickels to go through the coin switch. In any non-accumulative system, selections have to be made before another coin is deposited.

The basic mechanism design dates back to the 1700. In the meantime the number of selections had increased, and the selection system totally redesigned, and the shape of the arch and tone arm changed.

It turned out to be a fairly reliable mechanism (more so than the 1250 through 1650), and served the company well through the 3300. The height of the mechanism probably had to do more with its replacement at that time than age or reliability - it was getting harder to fit it into the lower console-styled cabinets. Ironically, its reliability turned out to be better than the replacement mechanism.

Wurlitzer continued using the Cobra cartridge (manufactured by Zenith). As stereo records were not on the market yet, it was perfectly satisfactory.

The amplifier used push-pull 6L6 output tubes (pretty much standard for the era). These supplied more than 20 watts (RMS) of audio. A printed circuit board was used for the preamp section.

Both 8 ohm and CV outputs were supplied on the rear of the amplifier. An interesting

feature was the speaker fader switch, which could be set to send all the audio to the built-in speaker, or less to the built-in and more to the external speakers in several steps.

The cabinet speakers consisted of three 12" woofers and a 4" tweeter. Bass response is strong, with plenty of "thump".

The brochure states that models 5115 and 5116 remote speakers were available. They also state that you could use any "present" Wurlitzer speaker. That means that any older Wurlitzer remote speaker still on location could be connected to the 2100.

The 5115 was unique in that it used four 5" speakers. They claimed response from 55 to 11000 cps (probably a little optimistic on their part). It's price was \$39.50.

The 5116 was a little more expensive, at \$52.50. It contained an 8" coaxial speaker, and had a claimed frequency response from 50 to 13000 cps. Both models came with a matching (CV) transformer and volume control switch.

Like Seeburgs, Wurlitzer also made the stepper standard equipment with the 2100. It was built into the junction box that mounts on the floor.

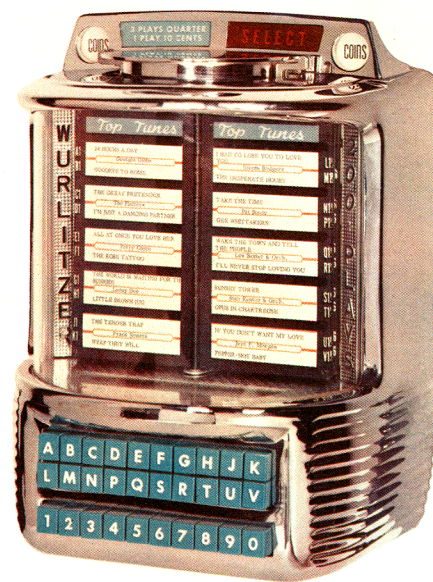
The model 5210 wallbox would be used. This would be connected to the stepper with a three wire cable.

The 5210 wallbox is unique in that it has two coin entry slots. It's also unique for Wurlitzer wallboxes with the A1/B1 pairing on the title strips.

The dimensions for the 5210 were 14 7/32" tall by 11" wide by 7 31/32" deep. It weighed in at 28 pounds.

Half dollar play wasn't available for the wallboxes yet. The 5210 works off nickels, dimes, and quarters.

The "Roto-Page" display on the 2100 turned out to be somewhat troublesome, and many were replaced by the operators with a fixed full size title board (often supplied by WICO). Unfortunately this blocks much of the view of the mechanism and detracts a lot from the attractiveness and value of the machine. Reproductions of the page assemblies are available now. Although expensive, they easily add their



MODEL 5210 WALLBOX

cost to the value of the 2100.

Aside from the complication of the page assemblies, the 2100 is typical for difficulty of repair. Some aspects of the mechanism and selectors can be above average in difficulty, but for the most part it's a pretty serviceable machine. Removing the two rear doors gives good access to the interior.

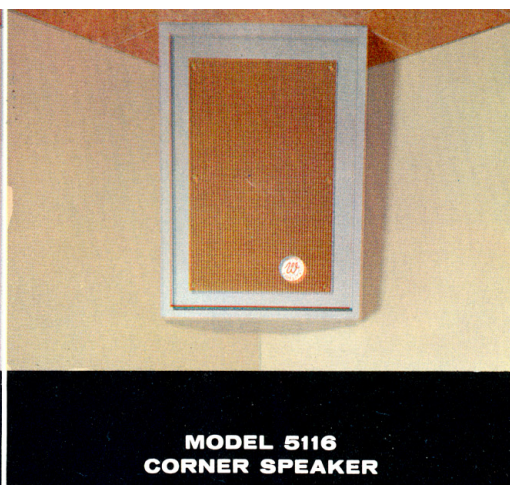
The 2100 is a good sized machine - 55 3/8" tall by 33 5/8" wide by 27 7/8" deep, and weighs in at 355 pounds (next to the V200, however, it looks like a compact).

It's also one of the most valuable machines of the 50's. The AJ Price Guide lists a Grade 1 restored example at \$7200. This price of course assumes the complete page assembly is present and working properly. Missing pages can reduce value by as much as half.

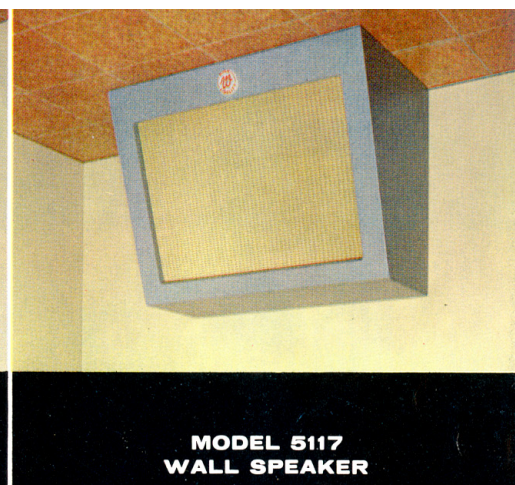
These are spectacular machines. Good looks, great display of the mechanism, lots of colors, rich, powerful sound, and an ingenious title board display make these very desirable.



MODEL 5115
CORNER SPEAKER



MODEL 5116
CORNER SPEAKER



MODEL 5117
WALL SPEAKER

1957 WURLITZER 2150

One of the most unique designs to come from the jukebox manufacturers in the 50's was the Wurlitzer 2150 (and the mildly restyled 2250 of 1958). Wurlitzer effectively turned the usual arrangement "upside down", putting the pushbuttons at the very top of the cabinet, and the title board below.

The 200 selection mechanism had been introduced a year earlier, for the 1956 model year, with the model 2000. This was an extremely fancy model, with lots of chrome and glass, and motor driven title board assemblies that changed the displayed selections like turning the pages of a book (for which reason they're called the page assemblies). The pushbuttons and title board assembly were in the usual position in this model.

The 2000 must have been expensive to build. The page assemblies were complex (and delicate). There were a total of six fluorescent lights in the cabinet. The selector system, which was unique to the 2000, mounted the selector drum at the lower rear of the mechanism, and required a selector coil for each of the 200 selections.

The 2000 was carried over into 1957 as the model 2100, with few changes on the exterior. Inside, the selector system was redesigned, with the selector assembly at the bottom of the mechanism, and a motor-driven design to simplify and make it less expensive to build. This selector system design would carry them clear through to the 3300 model.

The 104 selection models had also been carried along, first as the 1900 in 1956, and the 2104 in 1957, as the lower priced offering. The simpler title board, and less complicated selector system helped to keep the cost down, although the cabinet still must have been expensive to build.

For some reason which seems obscure to us now, Wurlitzer decided to market a second 200 selection model. Perhaps they felt that the 2100 was a little too expensive to build, and they needed a model to fill in a

slightly lower price range. It appears to be an early attempt at niche marketing, but it remains unclear what niche they were aiming at.

The brochure makes it pretty clear that price was a primary consideration. *Build a phonograph which from cabinetry to coin system and from tone to trouble-free opera-*

puts the minimum 2150 production at 13,151, while the 2100 minimum production is only 3237. Surprisingly, the 2104 shows only 5077 - maybe people were so impressed with 200 selections, they didn't want to settle for 104 any more.

New Sweepline styling. That's how the brochure described the cabinet. It definitely was distinctive. The profile shows that the front of the cabinet is one sweeping curved line. Going against the current trend of having the dome glass curving back over the top of the mechanism, the glass stayed almost vertical, with the top of the cabinet extending out towards the customer.

New Visionline program selection. This refers to the selector buttons being at eye level. Up to this point, the standard arrangement had been placing the selectors at waist level, and the title strips above it. The only other jukebox I can think of previous to the 2150 was the Packard, with its selector assembly (essentially a modified wallbox) placed at the top of the cabinet.

New two-tone blonde and mahogany side cabinetry highlighted by a colorful metal Wurlitzer medallion. The 2150 used an interesting two-tone scheme on the side of the cabinet, with the majority of the wood panel blonde, and a darker stripe at the front and top, arcing around the medallion in the upper front corner. A metal trim

piece divided the wood panel from the side glass, which also had a darker color pattern on its bottom portion.

New full-formed glass dome with "fired-in" shadow accentuated "200" visible from all angles. The dome was large enough to allow a full size title board and still have good visibility of the mechanism. The dome and side glasses allowed 270 degrees visibility of the mechanism. The title board itself was zig-zagged to allow ten columns of title



tion is unmistakably Wurlitzer — but build it to deliver at a price that will make it profitable to operate in any location.

Just eliminating the pager assembly must have saved quite a bit of money. These are quite a complex arrangement, and couldn't have been cheap to build. A new, full size title board assembly was designed for the 2150.

The strategy must have paid off. Going by reported serial numbers, Tom DeCillis

strips across the width of the cabinet. The dome glass extends downward further, so the title board is set low to still allow good visibility of the mechanism. With the dome glass raised, the title board tilts out to allow easy removal of its sections for title strip replacement.

And new, too, is its rigidized gold metal grill, gleaming gold and aqua record changer compartment and the high-styled stainless-steel "pedestals" on which this eye-riveting Wurlitzer regally stands. The grille was inset with diamond pattern metal on the sides, and colored light shining down from above.

The mechanism compartment is very attractively finished, with waffle-patterned foil in the rear and top of the cabinet, and on the sides and top of the upper arch of the mechanism. The stylish tone arm and plastic shield in front of the turntable highlight the gold paint on the top of the arch and below the shield. A fluorescent light in the top of the cabinet makes sure the mechanism is well illuminated.

The records are out in plain sight, giving the patron a good view of the carousel rotating, bringing his choice of records to the proper position to be lifted into the playing position by the record lift arm. We then get to watch the record being played as we listen to it.

The numbers of the record are printed on the circumference of the carousel. As the lift arm brings the record up, a "Record Playing" indicator rises to point to the number of the record that is playing.

One odd feature of the 2150 is the arrangement of the records in the carousel. The 2000, 2100, and 2150 were the only 200 play Wurlitzers to have the records numbered with B1 the flip side of A1, D1 the flip side of C1, etc. This results in a rather confusing arrangement of the records on the carousel. Numbering around starting with A1, the order is A1/B1, A3/B3, A5/B5, A7/B7, A9/B9, C2/D2, C4/D4, etc. Halfway around the carousel you'll find A2/B2, A4/B4, A6/B6, A8/B8,



A0/B0, C1/D1, etc. To find a particular selection in the carousel takes a little bit of hunting.

Starting with the 2200/2250, Wurlitzer made A2 the flip side of A1, making the ordering of records on the carousel a much more logical A1/A2, A3/A4, etc.

The wallbox for the 2150 was the 5210. This wallbox had an unusual feature in that there were two coin entry slots, one on each side. This must have been to make it easier for customers sitting on either side of a booth to put in money. It would take nickels, dimes, or quarters.

The title strip holders were labeled A1/B1 to go along with the jukebox. If a location later on replaced the jukebox with a newer model, new decals could be put on the title strip holders to reflect the A1/A2 arrangement.

The 5250 wallbox was released the following year. It differed mainly in the numbering of the title strips, having only one coin entry, and taking half-dollars as well as nickels, dimes, and quarters.

According to the service manual and brochure, the 2150 had the stepper as standard equipment, so all were "wallbox-ready". The Wurlitzer Configuration Chart shows it as having the 258 stepper as an option. My experience is that the stepper is part of the junction box, and is standard equipment.

Optional equipment included the Kit 147 remote volume control, and models 5115 and 5117 remote speakers. These were less distinctively styled than remote speakers of previous years.

The sound system in the 2150 used the model 532 amplifier. The cartridge was the Zenith Cobra cartridge. Three 12" speakers were used. Unlike the 2100 and 2104, no treble speaker was used. The combination of the 532 amplifier and the three 12"

speakers gives lots of sound and strong bass response.

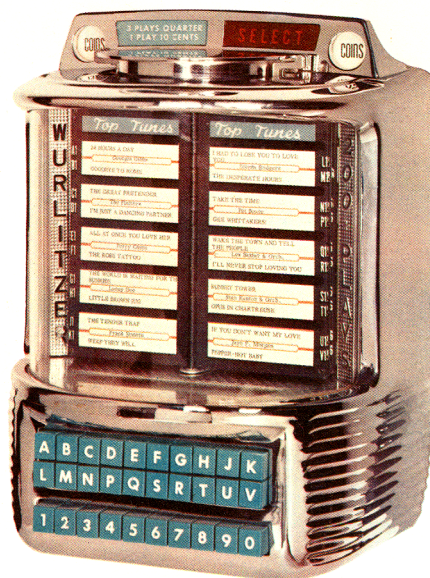
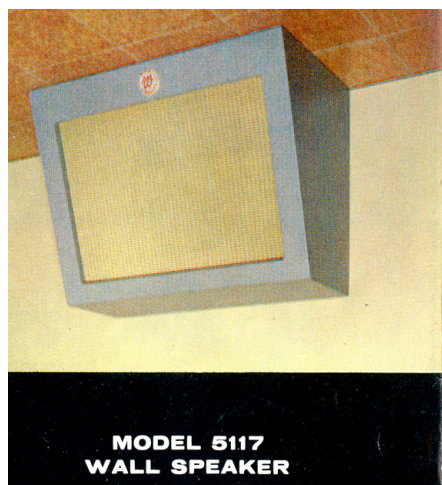
Coin gear in the 2150 included the *Playrak Coin Registration* unit, and a *Single Entry All-Coin Slug Rejector*. For the first time, half-dollars could be used in a Wurlitzer. Standard pricing would be one for a dime or two nickels, three for a quarter, and seven for a half-dollar. A switch on the Playrak allows nickel-play pricing, with two for a dime, and six or seven for a quarter (no half-dollars).

The 2150 features *Money Saving Service Accessibility*. The large cabinet allows plenty of space for working. The back door is in two sections, and allows easy access when removed. All components can be removed quickly. The carousel mechanism was reliable, and needed relatively little maintenance. The selector system can be a little difficult to troubleshoot. Other than that, these are fairly low in the difficulty scale.

The 2150 is medium-heavy, weighing in at 340 pounds. It's big - 56 3/4" tall by 27 1/2" deep by 34 1/16" wide. It's an imposing machine - tall, with the pushbuttons right "in your face".

At the time, it was an unfamiliar arrangement - looking down to the title board, then up to the pushbuttons to make your selection. Later on it would become a more common layout with the console jukeboxes. When it was built, the 2150 was an experiment in styling that didn't go very far. It's a unique design, and a good choice for anyone looking for something a little out of the ordinary.

Text in italics is from original brochure.



MODEL 5210 WALLBOX

1958 WURLITZER 2200

The new Wurlitzer Console model 2200. Most fascinating Phonograph ever built.

After its difficult times in the early fifties trying to compete with the 100 play Seeburg Select-O-Matic, Wurlitzer had made a strong recovery. The 104 selection carousel mechanism introduced with the 1700 was quite competitive and reliable, and the cabinet styling had become quite attractive in the mid fifties.

Probably the high point was the models 2000 and 2100. These were Detroit flash at its best, with all the gimmicky options - motor driven pages in the title boards being the power windows and seats of the jukebox world.

They must have been expensive to build. In addition to the complexity of the title board assembly, the extensive use of chrome and curved glass would certainly add to the cost.

With this in mind, I think Wurlitzer must have wanted to simplify the design a little. Motor driven gizmos were out. The dome, although still large, took on a more gradual curve.

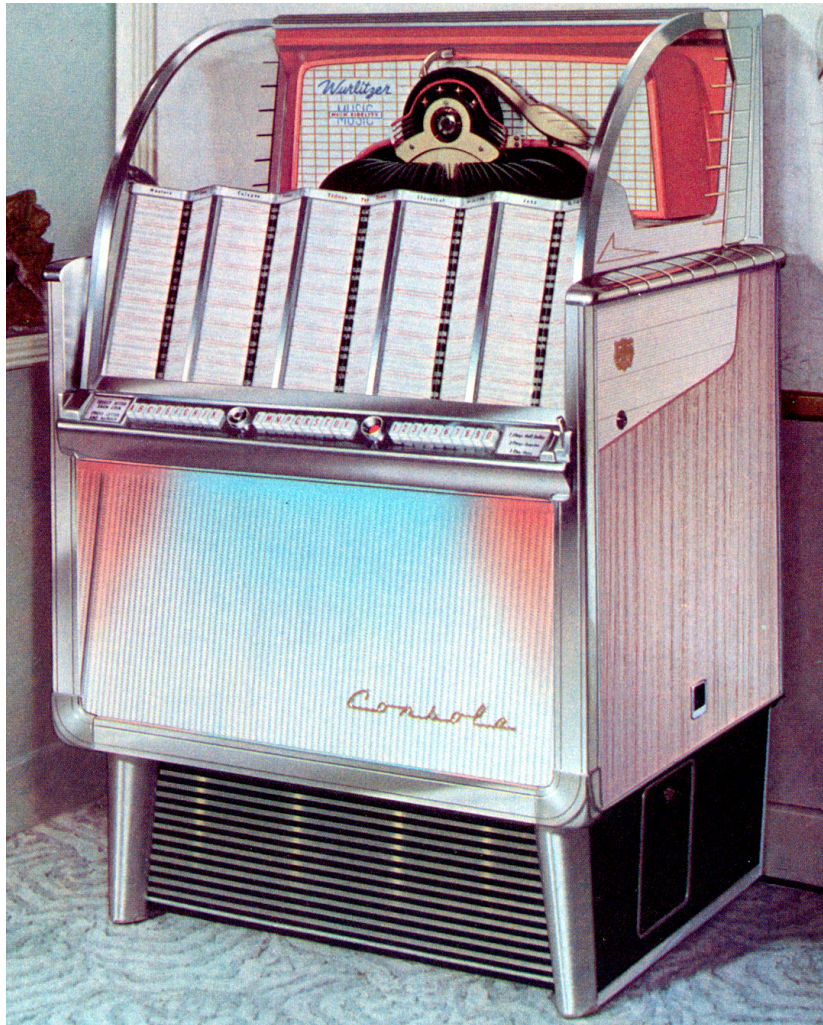
As part of its refreshing console styling, this pace-setting Wurlitzer introduces a new super-size, all-glass dome, a fresh, regally styled record changer compartment indirectly lighted by the introduction of another innovation - a translucent chassis shelf.

I've tried my best to figure why they refer to this as a "Console". Part of the problem is that the term Console has taken on a much different meaning, now referring to the 60's and 70's totally enclosed machines. The 2200 is very unlike these, still offering a very open feeling with the mechanism right out there in the open, and much light and color.

Not only does this lower, lovelier 200-selection console break the design barrier that has long fostered the monotony of similarity in the phonograph business - it also introduces a dynamic new sound system. Three 12-inch woofers - a regular cone, a coaxial cone, and a curvilinear cone - plus a

4-inch tweeter. Mechanical and electrical crossovers connect the bass speakers to the tweeter.

This line has to be a classic in the world of advertising hype. I doubt if anyone really looks at the Wurlitzer 2000, or the Seeburg V200, as being monotonous phonographs. It basically falls in the class of trying to put a good face on things.



The Wurlitzer 2200 suffers from the 1958 syndrome. In the auto world, the 1958 Chevy is overshadowed by the 1955-57 models. The same is true of the Thunderbirds. The 1958 4-seat T-Bird for many years was almost totally ignored by the collectors, who much preferred the classic two-seat models. The 2200 followed the 2000 and 2100 of 1956-57, which are very desirable models among the jukebox collectors.

It's not that the 2200 is a bad looking machine. There are a number of quite attractive styling features. The extra large dome extends downward over the full-size title board. The dome is large enough to still allow

a wide open view of the mechanism. The record carousel, the tone arm, and record-playing assembly are right there in sight.

Pink seems to be a predominant color. The mechanism shroud is pink on the sides and the top, and the plastic guard in front of the record is a nice touch, being transparent with a pinkish tint (as far as I can remember, it's the only colored plastic guard).

An interesting touch is the plastic panels on the sides of the carousel. They are beige in color, and are translucent enough that they light up, by the light from the fluorescent shining up from below. Unfortunately, they are somewhat fragile.

The side view is good looking. *Combining blonde mahogany and white with gold trim, it is emblazoned with the Wurlitzer crest in full color. A pleasing contrast is achieved by a satin-black base with a bright stainless steel trim.*

The brochure refers to "Dino-weld side panels". I'm not sure what that means.

The black lower section actually sets off the wood grain on the sides. Liberal use of chrome and stainless trim help in this regard, too.

The front view is somewhat out of the ordinary. As stated in the AJ Price Guide, "This jukebox stands alone in styling - nothing before or after the 2200 series really resembles it."

Equally eye-arresting are its color washed silver metal main grille and its stainless

steel base grille with perforated bars for finer sound emission, and four tiny light beams that give it a footlighted effect.

The speaker grille is divided into two sections. The upper section is more conventional, and has the silver colored metal mesh surrounded by chrome, with "Console" script in the lower right. The fluorescent light shines downward through a multi-colored diffuser, reflecting off the grille. Below is a section that is black with silver striping. The upper grille overhangs slightly, with a series of small light bulbs shining downward through clear plastic.

The pushbuttons, above the grille, are



Model 2250

lower than usual, so that the tall title board above them does not block off view of the mechanism.

One feature I like about the cabinet is the chrome "shoulders" on the sides. They are convenient to lean on while I'm scanning the title board.

The speaker system is a little out of the ordinary. There are three 12" speakers, two behind the center grille section, and one behind the bottom section (along with the 4"

tweeter). The three 12" speakers are all different. One is a standard bass speaker, one (referred to as a coaxial) is similar, but has a "whizzer cone". The third has the "curvilinear" (also referred to as an exponential) cone.

The three woofers all have different resonances, and tend to spread out the resonance peaks, and smooth out the bass response. These also have a somewhat complicated crossover network.

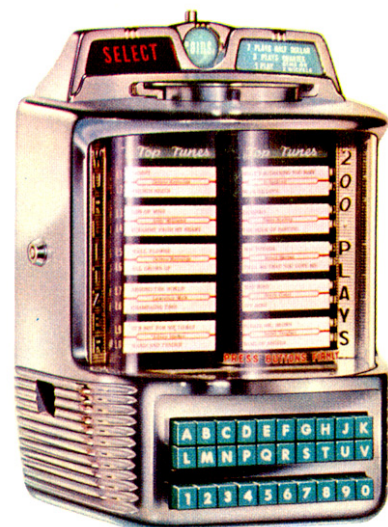
The amplifier is pretty similar to the ones used in the 2000 and 2100, and uses 6L6 output tubes and a printed circuit board. Automatic volume control is standard. These have strong bass and plenty of power.

The cobra is the weak point in the sound system. They sounded good on the mono records of the era, but are not so good on stereo. Modern replacements are supposed to be stereo compatible, but only to a limited degree. Unfortunately, there is no easy conversion.

The coin system accepts nickels, dimes, quarters, and half-dollars. It uses the "Playrak" coin register mechanism, which does not accumulate credit.

Maintenance is fairly easy on these. The cabinet is roomy inside, the Playrak and slug rejector, and amplifier are easily removed for service.

Accessories include the 5250 200 selection wallbox, which also has 50¢ operation.



5250 WALLBOX

The 2200 comes equipped with a stepper as standard. Models 5115 and 5119 remote speakers were available, as well as a remote volume control kit.

Dimensions are 53 17/32" tall (did they really need this much accuracy), by 35 15/16" wide by 27 15/16" deep. It's a little heavy, at 346 pounds.

The Always Jukin' price guide lists a 2200 at about \$2000 top, still an affordable buy.

Other models available in 1958 were the 104 selection version, the 2204, and the somewhat unusually styled 200 selection 2250, with the pushbuttons at the very top.

The brochures are aimed at the operators, and always have the "bottom line" in mind. *All in all it offers the broadest appeal in coin-phonograph history - an instrument that will turn console-size measurements into king-size returns for you.*

The 2200 may not stand out if it's dirty or in poor condition. Cleaned up, one in nice condition is quite attractive. The mechanism is colorful and brightly lit, and colors shine down on the speaker grille, making this a nice looking jukebox for someone's rec room.



Model 2204

Wurlitzer now makes available its revolutionary Console in a 104-selection model. Like the Model 2200, it, too, features the high earning power of 50c play. Its "lo-boy" styling permits it to be placed in areas where greater height would be prohibitive. Complementing its dramatic silhouette, the side view is attractively modern. Combining blonde mahogany and white with gold trim, it is emblazoned with the Wurlitzer crest in full color. A pleasing contrast is achieved by a satin-black base with a bright stainless steel trim. Judged from any angle on its beauty or by any trained musical ear on its tone, the Wurlitzer Model 2204 has what it takes to be the top earner in its class.

1958 WURLITZER 2250



Featuring brilliant new cabinet crafting, rich color-styling and a scintillating array of time-proven mechanical features, the 200-selection Wurlitzer Model 2250 is the finest standard phonograph ever offered.

This was the way Wurlitzer chose to describe the 2250 in their brochure. The 2250 was certainly one of the most unique of their offerings.

There were two such machines built - the 2150 (of 1957), and the 2250. Wurlitzer did a major rearrangement of the cabinet in these two models, placing the pushbuttons at the very top, almost at eye level.

These were tall machines, standing about 56" high. The added height gave plenty of space for a full sized title board, and plenty of mechanism visibility, to boot.

The 2150 and the 2250 are Wurlitzer's

"mystery machines". No one seems to know what Wurlitzer was thinking when they brought out these machines. Compared to the 2200, there really isn't that much difference between the two machines other than styling.

Wurlitzer (and the other manufacturers) tended to have different machines for different locations. Some locations would have lower earnings, so the operators would tend to put the lower cost models at these locations, usually machines with a lower number of selections.

The brochure implies that the 2250 was the lower priced model, referring to it as the "standard phonograph". But the 2250 was available with 200 selections only, while the companion 2200 was available with either 200, or with 104 for the 2204. The 2250

couldn't have been any cheaper to produce than the 2200, as the mechanism and electronics were identical.

The answer probably goes back to the previous year, when the 2150 was produced alongside the 2100. In this case, the 2100 with its title page assemblies was undoubtedly more expensive to produce, and the 2150 was designed to be a 200 selection model at a slightly lower price.

There probably wasn't a price advantage in 1958, but as long as they had the tooling, they may have felt it was worth their time to continue the design for at least one more year. One more year turned out to be it - this unusual arrangement was only produced for two models years.

The price advantage probably evaporated in 1958, since the expensive page arrangement was discontinued for the 2200. So Wurlitzer had the unique position of having two machines with different styling but with identical components.

The other distinction the manufacturers made was to have a conservatively styled model for the fancier locations, and a flashier model for the taverns and cafes. This distinction doesn't seem to work either, as I can't say either the 2200 or 2250 were more conservatively styled, only different.

The truly distinguishing feature of the 2250 was the placement of the selector buttons at the top front of the cabinet. On the 2250, the buttons are white with red letters and numbers. Like the Seeburg, letters go from A to V, and the numbers from 1 to 0. Unlike the Seeburg, the opposite side of A1 is A2, instead of A1/B1.

Between the button sections are placed a "Make Selection" light, and a release button.

The record player is showcased below the button panel. With the tall cabinet, the mechanism is placed high with the mech trim panel almost to the top of the title board. Side glass and a large dome glass give a good view of the mechanism.

The record changer compartment combines blue and pebbled gold in complementing colors. This is a very attractive showcase for the mechanism. Especially nice looking are the trim panels. These are plastic and are somewhat illuminated by the built-in fluorescent lamps. Unfortunately, they are breakable and it can be a little difficult to find a 2250 with good trim panels.

There are two 30" fluorescent lamps in the 2250, one behind the title board, and one at the very top.

The title board is placed behind the lower dome glass. The title strips are "Vee'd" to place ten columns in the width of the jukebox. All 200 selections are displayed with

almost no loss in mechanism visibility.

The title board tilts outward for easy title strip replacement, or it can be removed from the cabinet. The placement of the carousel makes record replacement especially easy.

The dome glass is concave (where the 2150 had been convex). On the left it says "200 Selections", while on the right it states "High Fidelity Music".

The speaker grille is inset from the front of the sides. *The silver metal grille is gorgeously framed with golden hued Mylar — the miracle plastic.* The fluorescent lamp behind the title board shines down on the grille through a colored plastic sheet.

The finish on the side of the cabinet is also attractive. According to the brochure, *Side cabinetry combines beautiful limed oak grain with contrasting white flared panels, highlighted by the famous Wurlitzer crest.* The manual refers to the finish as *Color-Styled Dino-weld side panels.*

As mentioned, the 2250 is identical to the 2200 electrically and mechanically. The amplifier is identical (model 532), using a pair of 6L6's for the outputs. This probably produced an output on the order of 24 watts.

The tone arm and cartridge were unchanged. The Cobra cartridge had been around since the model 1100, and soon, with the advent of stereo the following year, its days were numbered. Sometimes the Cobra can sound good, but often the tone quality is not up to standards of the era. The manual recommends tracking at 10-12 grams, which is high. With careful balancing of the tone arm, it can be reduced a little.

The mechanism was the time proven carousel design introduced in the 1700.

Going to 200 selections complicated the design a little, and the "Guide Tips" (usually referred to as "Duckbills") can be a source of problems. Contacts in the switch assemblies can also give problems, otherwise the mechanism is quite reliable.

Both the 2200 and 2250 use three 12" speakers. However, the 2250 doesn't have the 4" tweeter which is found in the 2200. These three speakers pack a pretty good punch. The three speakers are described in the manual as two low frequency PM speakers and one PM Apex Cone speaker (I'm not sure what Apex means. It may be the "curvilinear" cone, which would accentuate the mids and higher frequencies).

The selector system is unchanged from the design introduced with the 2100. Rather than having a coil for each selection, as they did through the 2000, a motor is used to rotate a plate to the proper position to punch in the selection. The wiring is substantially reduced, with only ten number coils and twenty letter coils needed.

The coin system takes all four coins, nickels, dimes, quarters, and half dollars. Normal operation is dime play, so the slug rejector has to use the "nickel diverter", which sends alternate nickels through the coin switch.

A remote control receiver (stepper) was standard equipment in the 2250 (probably the last time). Future models would make the stepper optional.

The model 5250 wallbox was available for the 2250. This also took all four coins. The 5210 wallbox from 1956 or 1957 could also be connected to the 2250 - the main difference was that the 5210 did not accept 50¢ coins. Also, the 5250 dispensed with the dual coin entry of the 5210.

Dual pricing was still in the future, so both the 2250 and the 5250 were single pricing only. 33-45 operation was also in the future - the 2250 was 45 RPM only.

A remote volume control kit was available.

Remote speaker operation was provided for. The built-in amplifier had both CV (Constant Voltage) and 8 ohm outputs. A fader control could balance the outputs between the built-in and remote speakers. With the fader control at "Phono only", all the amplifier power goes to the cabinet speaker. The "A" position puts 15 watts to the cabinet speaker and 8 to the CV line. For the "B" position, it's 8 for the cabinet and 16 for the CV. The "C" position gives 3 internal and 21 CV, and "D" is 1 and 23.

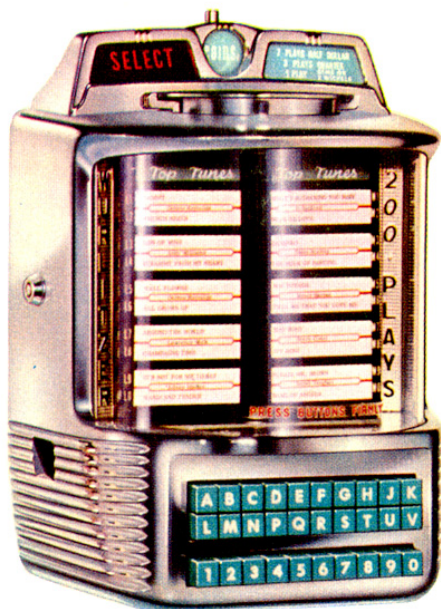
Two remote speaker models were mentioned in the brochure - the 5115 corner speaker, and the 5119 wall speaker. The 5115 was pictured in the 1800 brochure, but I could find no picture of the 5119. The golden age of remote speaker design seems to have ended, and the design of other speakers pictured with the 1800 (5116 and 5117) was more like PA speakers of the era. Both speakers had built-in transformers for connection to the CV terminals in the amplifier.

If more power is needed for external speakers, an auxiliary amplifier kit was available. Kit 231 included model 229 amplifier, connecting cables, and volume control.

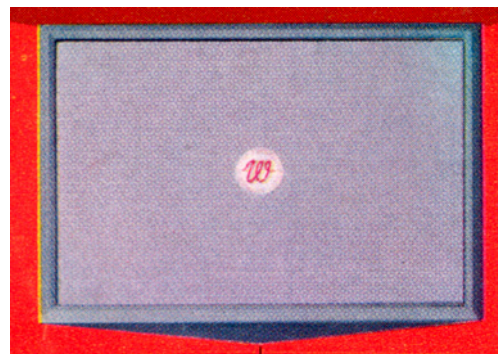
The 2250 is a larger than average machine, especially in height. The dimensions are 56 1/8" tall by 34 1/16" wide by 27 1/2" deep. It's weight is typical for a full sized jukebox at 336 pounds. Interestingly, the shorter 2200 weighs ten pounds more.

Difficulty of repair is about average for a jukebox of the era. The selector system can be a little difficult to troubleshoot. The mechanism remained unchanged for many years, so experience on any Wurlitzer from the 1700 through the 3300 is directly applicable.

The 2250 is an interesting model in that the stylists were allowed to come up with a unique design. This is not a style that will appeal to everyone, but in its own way it's attractive. Value is moderate, topping out at \$2300 in the AJ Price Guide. This makes it fairly affordable, and it has the requisite Silver Age characteristics (lots of glass and chrome, and wide open mechanism visibility). If you like the styling, it would be a nice machine to pick up.



5250 WALLBOX



5115 CORNER SPEAKER

1959 WURLITZER 2300

Funny how all of a sudden you start to notice a particular model of jukebox.

Often, you come in contact with a particularly good example of that model and all of a sudden, you realize how attractive it really is.

In my case, it was a series of little events. The first was a 2300 that we had for sale at Jukebox City. A customer was looking at jukeboxes one day, and we had a 2200 ready to go, and a very dirty 2300 that I hadn't started on yet. He bought the 2200, but ended up regretting it later when he saw the 2300 in finished condition (it had already been sold, unfortunately). It turned out to be very nice looking, much more so than any of us would have expected, judging by its previous appearance.

Seeing this 2300 in this condition made me realize that it was a more attractive model than I had thought before.

My curiosity was recently piqued by an Always Jukin' reader that wrote (in the March issue) that he had a 2300 with the big W on the left side of the grille instead of the right. He mentioned that everyone he had talked to had only seen it on the right side, and all the pictures I could find also show it on the right. Then I remembered that John had recently purchased a 2300 at JBC (as yet not reconditioned) and, sure enough, it too is a left-sider. No one else has written to tell us about his backwards 2300, but I'm sure there are a few more out there. At least we know for sure that there were two made this way.

This is an illustration of the difficulty of saying if a jukebox is correctly restored. There are even more problems in this respect with a jukebox with a large production, such as the 1015, where there were a large number of changes made during its production. On the other hand, these little idiosyncrasies make jukebox collecting even more interesting.

By 1959, the Silver Age of Jukeboxes was nearing its end. It was still a few years off until the "Console Age" would hit with full force, but the signs of the beginning of the transition were evident. This is best illustrated by the diminishing mechanism visibility.

Wurlitzer introduced 6 versions in the 2300 series for 1959. There were the 100 play (2310), 104 play (2304), and the 200 play versions (2300). Each of these were available with a mono or stereo (the stereo versions had an "S" after the number). Mechanism visibility varied in inverse proportion with the number of selections - the



200 selection version had the biggest title board and thus the least visibility.

1959 was the first year that stereophonic sound was offered by Wurlitzer. The tone arm was changed to accommodate the Sonotone 2T cartridge, and a new dual channel amplifier was designed. They were not able to put all the circuitry on one chassis, so they used a separate power supply, which mounted in the lower left corner of the cabinet, looking from the rear. It's probably a good thing, as the amplifier would have been awfully heavy if it all had been put in one chassis. The speaker system is a little unusual, as the two channels use dissimilar

speakers. Channel A uses a heavy duty 12" extended range speaker, and Channel B uses a 12" medium range and a 7" tweeter. The same speakers are used in the mono versions, with the two speaker systems connected in parallel. These have a strong sound system - you can get a lot of sound if you crank it up, and plenty of bass. But be careful replacing the needle in the stereo cartridge, as it is possible to bend the clip so that it no longer holds the needle tight. I've seen replacement 2T's that the clip was not made of spring steel, and it was impossible to put the needle in without springing the clip. The stereo needle was made with 1 mil



tips on both sides of the needle, with the two sides of the needle marked "1" and "2", so the operator could just turn the needle over and use the other tip when the first side wore out.

Marketing both a 100 play and a 104 play jukebox together seems a little confusing. The 2310 was the first 100 play Wurlitzer, and there would be another couple years overlap before the 104 play models were discontinued. The odd thing is that the brochure for this year shows 200 play (the 5252) and 104 play (the 5207) wallboxes, but no 100 play wallboxes to go with the new 2310. A theory that has been advanced to me is that the 100 play Wurlitzer was introduced to work with the 100 play Seeburg wallboxes that were already on location, in an attempt to take over locations from Seeburg. The other possibility is that Wurlitzer finally realized that 104 was an odd, inconvenient number of selections to have on a jukebox, and decided to begin a phasing out in favor of 100 plays. A 100 play wallbox (the 5202) was shown in the brochure for the 2410, so it may have been a mid-year addition. The 5202 was the same as a 5252, with one row of buttons left out, so Wurlitzer probably realized some savings with interchangeability of parts.

No jukebox is perfect, and I can find three faults with the 2300 series. First, and most

glaring, is the lid support. The lever that the lid support rod attaches to is so short that it puts undue stress on the hinge, upper valence casting, and rod support that attaches on the side of the cabinet. If the upper valence casting is broken in the area of the hinge, you're really out of luck. A replacement casting is the only answer. Next, the lever arm that extends from the lid has to be straightened, and finally, reinforcement for the rod support is usually necessary. The lid should be supported as near to the vertical position as possible, to put the least strain on the support rod. It is important to warn customers to be careful releasing the support to lower the lid, and to never move the jukebox with the lid raised.

The other faults both have to do with the sound system. A Wurlitzer ad for this model (for the mono version) states "Dynatone Sound System with plated wiring circuit and Zenith Pickup combine to produce superb High Fidelity tone". This all sounds good, but in reality the Zenith Cobra cartridge had limited high frequency response, and their plated wiring (printed circuit board) was of mediocre quality. It still escapes me why Wurlitzer offered the Cobra cartridge this long. As I've said before, the Cobra was a good cartridge in the late 40's, but by 1959, it was well behind the times. The other problem is that the printed circuit board is

fragile. If you are not very careful when replacing components on the board, you will most likely end up with some traces coming loose from the board.

I guess I could add one more minor criticism: the "cheese-grater" speaker grille that was used on so many models in this era. They look nice until someone puts a dent in them with their foot. They can be very difficult to straighten - sometimes you have to take the grille off the machine and straighten out each little section individually. Also, if you're not careful cleaning these grilles, they can become "finger-graters".

This aside, I can find very few faults with these jukeboxes. They have excellent sound, good reliability, and good looks. I've tried to figure out what makes these attractive. I think that it might be refinement in styling. It is smooth looking with no gaudiness, and has good colors. The upper valence is very colorful and attractive. The light wood grain finish on the sides works well, and the gold W sets off the speaker grille well (no matter which side they put it on).

The 2300 is still an affordable machine - the AJ price guide puts it at \$2750 maximum retail. Its dimensions are 51 1/2" tall by 34" wide by 27 7/8" deep.

All in all, the 2300 is one of Wurlitzer's nicer efforts.

1960 WURLITZER 2400 SERIES



MODEL 2400S
200 Selections

Wurlitzer had dropped the ball in the early 50's. It took a while, but they rebounded beautifully and produced some very nice machines in the mid and late fifties.

One of the most attractive was the 2400 of 1960. It was obviously a re-style of the 2300 of the preceding year, but as in the automotive world, once in a while a "warm-over" is highly successful in its own right.

One of the prettiest features is the dome glass. The glass is flat and angles upward, except at the rear, where it curves and becomes vertical. This area is colored red and is brightly illuminated, and contains the words "Wurlitzer Hi-Fi Stereo" (or "Wurlitzer Hi-Fi Music" for the monophonic versions). In the center is a large gold-colored "W".

Just below this panel is a gold backdrop with ribs radiating outward. Below that is a blue panel with a quilted design. A scintillating sunburst graces the back of the record changer

compartment and surrounds the eye-catching action of the Wurlitzer Carousel mechanism.

The tone arm and record playing portion of the mechanism is visible behind the title board. The size of the title board determines the amount of mechanism visibility – the 100 and 104 play models have smaller title boards and thus greater mechanism visibility than the 200 play model pictured.

Just below the dome glass on the sloped panel is the pushbutton selector assembly. Triangular buttons are used, and the number and arrangement of the buttons is of course dependent on the number of selections.

The grille is also pretty. The styling was enhanced by adding a V-shaped trim piece, and a medallion in the center. *The crisp styling of the chrome-painted steel grille features a see-deep Wurlitzer crest set into a high styled gold star.*

The grille is silver colored metal, with color shining down through the diffuser, but I've also

seen a 2400 with a blue grille, which is very attractive.

The cabinet is finished in attractive wood grain of contrasting light and dark shades. The wrap-around kickplate of stainless steel retains its attractive appearance indefinitely.

There were three versions of the 2400 series available. In addition, each version could be supplied with a mono or a stereo sound system, so a total of six variations were possible.

The lowest price models were the 2404 (mono) and 2404S (stereo). These had a 104 selection capability, which was rapidly becoming obsolete (it would only be sold one more year). Probably the only reason to market a 104 play jukebox was to make use of the established base of 104 play wallboxes. Thus, in a location with 104 play wallboxes wanting to replace their older model jukebox, the 2404 would be more economical. Replacing with any other model would also require replacing all the wallboxes.

The 1960 price from the distributor for the 2404S was \$1045.

Next in line was the 2410 and 2410S. This was the second year for the 100 play version, marketed for the smaller locations that didn't need a 200 selection machine. It was slightly more expensive (at \$1095) than the 2404S, for the stereo version. However, the price includes the stepper (which the 2404S didn't), explaining the difference in price.

Again, the motivation for producing the 100 selection machine, was to take advantage of the huge installed base of Seeburg 100 play wallboxes.

Wurlitzer must have realized that there was no future for the 104 selection models, and was in the process of changing over to 100 for the lower priced versions (104 is a pretty unhandy number, anyway).

Finally, the top of the line was the 2400 and 2400S. The list price for the 2400S was \$1295 (probably the mono 2400 was a little less). The price included the stepper, which seemed to be more or less standard equipment for the ones sold in this country.

The appearance for all three models was pretty much the same. The only difference was in the title board and in the number and arrangement of pushbuttons.

The 100 selection model had two sets of ten pushbuttons, while the 104 selection model had thirteen number buttons on the left and on the right, and four letter buttons in the center. The 200 selection 2400 had three banks of ten buttons, two for letters and one for numbers.

The 2400 used the motor driven selector assembly pioneered in the 2100, while the 2404 and 2410 used driver solenoid assemblies to select the individual pin to punch.

All models had 50 cent play as an option. Standard single pricing operation used the "Playrak" coin register unit. A dual pricing setup was optional.

by HAROLD HAGEN



5250/5252 WALLBOX

The mechanism was little changed from its introduction in the 1700. The shape of the arch and tone arm had been streamlined, and the selection system redesigned.

45 RPM play was standard. 33-45 operation was still a couple years off.

The sound systems were little changed from the 2300. The mono version still used the Zenith Cobra cartridge (the last year for this cartridge). Mono would be produced one more year, but a stereo ceramic cartridge was used in the 2500, with the two channels connected in parallel.

The stereo versions used the Sonotone 8T ceramic turnover cartridge. Versions supplied for jukeboxes had a needle with two .7 mil tips. These are moderately easy to convert to a more modern cartridge such as the Pfanstiehl P132D, but the lighter weight necessitates removing some of the lead from the counterweight. Unfortunately the Cobra is a difficult conversion for the mono models.

The stereo amplifier had two chassis, a power supply which mounted in the lower left (looking from the rear), and the main chassis which was on the right. This was the second year for the stereo amp – the 2400S went to silicon rectifiers so the 5U4 was no longer used in the power

supply.

6973 output tubes were used, two in each channel.

Two 12" dissimilar speakers were used, with a 7" tweeter in one channel. The tweeter was connected (with a series capacitor) to the 12" speaker they referred to as the "heavy duty" speaker, while the other 12" was referred to as the "mid range", and connected to the other channel output by itself.

In the mono version, all three speakers were connected in parallel.

Both 8 ohm and CV (Constant Voltage) outputs were available for external speakers.

Several external speakers were available, starting with the Model 5125 "Stereo Extender". This contains a 6X9 oval speaker, and measures 12" high by 14" wide by 8" deep. These were sold in pairs.

The next model was the 5123 wall Speaker. This contains a 12" full range speaker with a coaxial 3 1/2" tweeter. It measures 26" wide by 20" high by 11" deep.

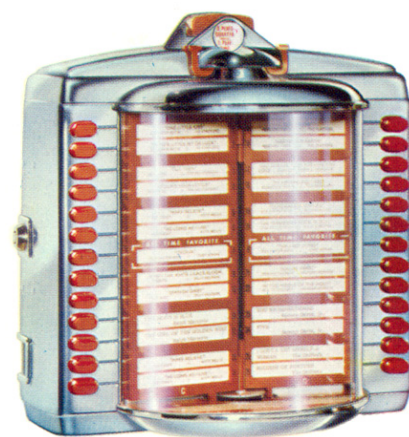
The Wurlitzer corner speaker contains an 8" wide range speaker in a specially engineered tone chamber, and measures 18" wide by 22" high by 13 3/4" deep.

The Wurlitzer Console Floor Speaker model 5122 contains the same speaker complement as used in the 2400 cabinet. It measures 33" wide by 32" high by 15" deep.

The Wurlitzer Stereo Directional Speaker model 5126 could be mounted on the wall or in a corner. It contains a 6X9" speaker, and was sold in pairs. It measures 22 1/23" high by 9 1/4" wide by 8" deep.

Wallboxes were available for all models. The 2404 and 2404S (equipped with a stepper) used the 5207 wallbox, which dated back to the 1500 series. It accepted nickels, dimes, and quarters.

The 2410 and 2410S used the model 5202 (dual pricing) or 5200 (single pricing) wall box. The appearance was the same, and similar to the 5250 illustrated, but with the top row of buttons deleted and replaced by a chrome



5207 WALLBOX

panel. These accepted half dollars as well.

Finally, the models 5250 (single pricing) and 5252 (dual pricing) were available for the 2400 and 2400S. These also accepted nickels, dimes, quarters and half dollars.

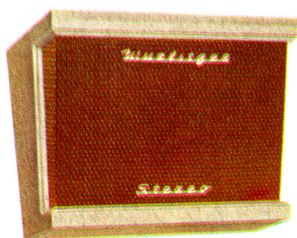
All versions of the 2400 series had the same dimensions – 51 1/2" tall by 34" wide by 27 7/8" deep. The weight varied as far as model and options, with the mono 2404 the lightest at 314#, the 2404S at 317#, the 2410 at 316#, the 2410S at 330#, the 2400 at 333#, and the 2400S at 343#.

The Always Jukin' price guide lists the 2400/2404/2410 at \$2600 maximum retail. Probably the Cobra would detract from the price a little.

There's still enough of the fifties look to make these desirable. There is some mechanism visibility, good colors, and a nice bright cheery look about them, as well as good sound.



5122 CONSOLE FLOOR SPEAKER



5123 WALL SPEAKER



5125 STEREO EXTENDER



5126 STEREO DIRECTIONAL SPEAKER

1962 WURLITZER 2600

In 1962, Wurlitzer offered two models to the operators - the 200 selection 2600, and the 100 selection 2610. The 104 selection version, which had been around since the 1952 model 1500, was finally dropped. Wurlitzer would stay with these two capacities until 1970 when a 160 play version would be added.

Heading into the sixties, jukeboxes were taking an inevitable path towards console styling. Seeburg made the transition suddenly, when they released the LPC1 in 1963. Wurlitzer went about it in a much more gradual fashion, with evolutionary rather than revolutionary styling changes.

The evolutionary policy was quite evident in the restyling of the 2500 into the 2600. The most obvious change was in the elimination of all curves. The dome glass on the 2500 curved outward toward the patron, while the dome glass on the 2600 was flat.

Retained from the 2500 was the outward flare of the dome area on the sides, and the vertical pane of glass below the dome with the Wurlitzer name painted on the glass.

The panoramic title board assembly, with the side panels tilted up at the sides, was also continued for the 2600 (the side panels have title strips for the 2600, but not for the 2610). The record playing part of the mechanism was visible above the title board. You didn't get to see much of the carousel, but at least you could see the record playing.

As the console era approached, this view of the mechanism would continue to diminish, until it had completely disappeared (total lack of mechanism visibility is one of the primary console jukebox characteristics).

But as the mechanism view was decreasing, another feature was developing. Wurlitzer re-



5250 WALLBOX

ferred to it as the "Eye-arresting dome display panel".

At the top rear of the cabinet, Wurlitzer added a panel which served a variety of functions (most of all, to attract customer attention).

The top row said "Wurlitzer Features". Below this was a space for five double title strips. At the bottom of the panel was another strip that could say one of several things. For the versions with the Top Tunes feature, it would say "Ten Top Tunes for a Half Dollar". Other strips illustrated in the brochure were "The Best in Music on 33 and 45", and "Music of the Week". It was also possible to "Personalize" the jukebox by putting a strip in with the name of the establishment.

The Top Tunes feature (optional) was actuated by a button at the right end of the selector panel. For 50¢ (half-dollars only), ten pre-set selections would be played. This would give you a real bargain at 5¢ a play, but you didn't have any choice of the music. The five title strips in the Dome Display Panel would then show the ten selections that would be played.

Without the Top Tunes option, the title strips would display featured selections. If the operator wanted to take the time, he could put new selections in these positions.

Finally, to the right, the Dome Display Panel added a new feature for Wurlitzer - a record jacket. Seeburg had had this feature for a couple of years, in the AQ and AY models. The manufacturers were relying on the power of suggestion to get people to put more of their hard earned money in the jukebox.

Working our way downwards, below the dome glass is the selection panel in the usual place. This chrome plated panel had white triangular buttons in an unusual arrangement, with alternate buttons higher than the others.

For the 200 play 2600, there were three groups of buttons, with A-K on the left, 1-0 in the center, and L-V on the right. There were also two other buttons - one which said "Select", placed between the first and second group, and one that said "Release", between the second and third groups. The Select button, of course,

didn't push in, but lit up to indicate when you could make a selection. The Release button allowed you to release the first button pushed if it was in error or if you changed your mind.

For the 100 selection 2610, there were two groups of buttons, with the select and Release buttons in between. For both models, the Top Tunes button (if equipped) would be to the right of the buttons. Finally, the coin entry slot and the coin return button were placed on the far right of this panel.

The chrome panel just below the pushbuttons had an illuminated emblem in the center with a coat of arms.

The speaker grille design was simplified, compared to the 2500. The embossed metal mesh grille had vertical stripes on the sides, and a diamond shaped emblem in the center, with a big "W" in the center.

The sides of the cabinet had a dark wood grained finish.

Wurlitzer had several new features for 1962. Already mentioned were the Dome Display Panel, and the Top Tunes feature. Also added as a standard feature was the 33-45 RPM intermix capability.

Seeburg had the intermix capability since the Q of 1960. Since the Seeburg turntable was direct gear drive, the only way to change speed was by slowing the motor down. This required their autospeed unit, which was basically an oscillator-amplifier to provide a lower frequency voltage to the motor.

The Wurlitzer system was a little easier to implement. There were two gears driving two pulleys and belts. If a 33 record was sensed, a solenoid would move the assembly to disengage the 45 gear and engage the 33 gear.

Possibly to put a good light on their being two years behind Seeburg, Wurlitzer stated in their brochure "Positive mechanical action is entirely free of dependence upon electronic tubes". Actually, only the 1960 Q used tubes in the Autospeed - the 1961 and later Seeburg Autospeeds were transistorized.

A "Combination Monophonic-Stereophonic Amplifier" was used in the 2600. In reality, it was a stereo amplifier with a mono-stereo switch to connect the two channels in mono configuration. 1962 was the first year that Wurlitzer didn't have separate amplifiers for mono or stereo.

The Sonotone 8T stereo cartridge was used in the stereo models 2300 to 2600. This cartridge has the large metal flip-over needle. Exact replacements are difficult to find. If it's replaced with a more modern ceramic cartridge, removal of some lead in the counterweight is usually necessary as the replacement



5125 STEREO EXTENDER

cartridge will be lighter.

The model 543 amplifier uses a pair of 6973 output tubes in each channel. The amplifier has plenty of "punch". It has automatic volume control, of course, and separate bass and treble controls for each channel.

An interesting feature is the non-symmetry of the two channels. Two 12" speakers are used - one heavy duty and one midrange. Not only that, but one is 16 ohms, and the other is 8. In addition, a 3 1/2" tweeter is used on one channel.

The coin system uses the "Playrak" coin register assembly. If the top tunes is not present, it can be set up for one play for 10¢ (two nickels or a dime), three for a quarter, and seven for a half dollar. If top tunes is present, then the half dollar gives you the top ten (pre-selected) tunes.

The top tunes option used the "Automatic Programming Kit". For the 200 play 2600, the model 162A or C kit would be used. For the 100 play 2610, kit 162B or D was used.

Both models could be used with wallboxes if the optional stepper was installed. For the 2600 the stepper used was the model 261. It mounts off to the left side of the junction box on the floor of the cabinet.

For the 2610, it was the 259A. This mounts on the bottom of the square selector assembly at the bottom of the mechanism.

Both steppers supply power for four wallboxes. If additional wallboxes are used, a 222 booster transformer must be used for each additional four wallboxes. More than one booster can be used.

For the 200 selection 2600, the model 5250 wallbox was supplied. This model accepts all coins including half dollars. The top tunes feature wasn't available from the wallbox, so the half dollars would give seven standard selections. Dual (album) pricing wasn't an option yet.

For the 100 selection 2610, the model 5200 wall box would be used. This is identical in appearance to the 5250, except that it only has two rows of pushbuttons.

A Remote Loudness Control (kit 196) was available. A small gear motor would be installed in the amplifier to turn the volume control. The remote control is a beige rectangular box with a knob to operate the motor, and a pushbutton to reject the record.

A total of five remote speakers were offered. The first is the Wurlitzer Console Floor Speaker model 5122. It's a rectangular cabinet with short legs. This speaker is unique in that it has the identical three speaker complement as the jukebox (which implies that both channels would connect to this speaker). The chromed steel wrap-around grille makes it look almost like the bottom half of a 2300.

The next model is the 5123 Wall Speaker. This uses one 12" and one 3 1/2" speaker.

Third is the 5124 Corner Speaker. This uses one 8" speaker

The 5125 Stereo Extender uses a semi-circular cabinet with a 6 X 9 speaker.

Finally, the 5126 Stereo Directional Speaker has a column shaped cabinet 22" tall, also with a 6 X 9 speaker.

The 2600 and 2610 are pretty typical in size and weight. Both are 54" high by 34 1/4" wide by 27 7/8" deep. The 2600 weighs in at 340 pounds, while the 2610 is ten pounds lighter.

Ease of repair is moderate. Selector system problems can have you going around in circles - otherwise the design isn't complex.

The 2600 is an interesting machine. The angular lines give it a definite early sixties look. The carousel mechanism was time proven and reliable. The sound is good, and the appearance attractive, especially lit up. Finally, the large record capacity of the 2600 (100 records) is a plus for the avid record collector.



5126 STEREO DIRECTIONAL SPEAKER



5122 CONSOLE FLOOR SPEAKER

1963 WURLITZER 2700 & 2710

The jukebox industry, like automobiles, tended to design their products in cycles. There tended to be a major redesign every three or four years, with "facelifts" in between.

The 2600 of 1962 had been a major redesign. It followed a trend in the sixties of squared-off designs and reduced mechanism visibility. The curved, panoramic display glass of the 2500 was replaced with a flat dome glass and much more angular lines.

The 2700 of 1963 saw a facelift of the 2600. Although Seeburg had jumped head-first into the Console Era with the LPC, Wurlitzer was in the middle of a styling cycle and it would be a couple more years until Console styling was also embraced by Wurlitzer.

Two versions of the 2700 series were offered - the 2700, which contained 100 records for 200 selections, and the 2710, which contained 50 records for 100 selections. The old 104 selection system had been retired after the 2504, but it probably was only kept around that long to take advantage of the installed base of 104 play wallboxes. The 100 play Wurlitzers (starting with the 2310) were probably introduced to take advantage of the installed base of 100 play Seeburg wallboxes (in an attempt to "steal" locations).

Although the cabinets were pretty much the same, having two versions continued Wurlitzer's practice of having a less expensive machine for the lower income locations, and a more expensive, higher capacity version for the better locations. With fewer records, the 2710 would take less of the operator's time stocking and updating the selection of records in the jukebox.

The basic layout of the cabinet (which had originated with the Seeburg AQ of 1960) consisted of a sloped dome glass with title strips underneath, and a panel at the upper rear, above the dome glass, containing space for an album cover and five title strips for the "Ten Top Tunes".

The upper display panel could be personalized in several ways. It could be used for location personalization, by placing the name of the establishment in place of the "Wurlitzer" strip at the top. Also, *The transparent, backlighted letters can glow in limitless color combinations — thanks to the availability of special color strips, or the use of*



28" colored fluorescent tubes.

I'm sure there actually was a limit to the number of color combinations. Colored fluorescent tubes would probably be difficult to find now.

The main function of the upper rear panel is to draw attention to the jukebox, and to the added features of the jukebox, such as the top tunes. Of course, the ultimate goal is to convince the patrons to spend their money in the jukebox.

The dome glass slants downward toward the patron, making it easy to read the title strips (one of my complaints of the Console Style jukeboxes is the horizontal title board, which requires bending over to read). On the 200 selection 2700, the title strips take up the majority of the space of the dome glass. The top area has a three dimensional design with a window you can look downward through to see the record playing. The mechanism visibility is quite limited, but at least you can see a little of the record playing.

On the 2700, the rest of the area of the dome glass is taken up with title strips. But on the 2710, with half as many title strips, the lower part of the glass has a unique silk-screened design, with a

treble clef at the left, "Musical Fun For Everyone" to its right, and a relief projection of the globe with the continents in color at the right.

Changing title strips is quick and easy. *Raise*



5125 WALL BOX



5126 STEREO
DIRECTIONAL
SPEAKER

the dome, the program frame and holders move up with the lid. Pull in on two spring-loaded slide bars, and the entire rear-hinged program unit drops in a vertical position. In addition, the carousel rotates freely for easy replacement of records.

A new selector panel was used on the 2700, with piano type selector keys, much more convenient to use than the zig-zag arrangement of the 2400 to 2600 series. For the 2700, there were 20 letter keys (all in a row, not broken up into two sets of 10 keys like the previous models). The 2710 had only ten letter buttons, placed to the right in the same position as the L through V buttons of the 2700, and the chrome panel taking the place of the other ten buttons.

The right end of the selector panel has the instruction glass and coin entry in the standard position. This was the first year for the "Golden Bar" — *Top Ten Tunes Feature now operated by a Golden Selector Bar*. The Ten Top Tunes feature had been introduced with the 2600, but it had been a white button. The Golden Bar would continue to be a Wurlitzer selling point for many years to come.

Normally, a half dollar gives seven selections. With the Golden Bar, you get ten (but of course you don't have a choice in the selections played). The tunes played are the odd-numbered E's and F's in the 2710, and the odd-numbered J's and K's in the 2700.

The Golden Bar works only with half dollars. If a half-dollar is inserted, the Golden Bar lights up. However, if a standard selection is made first, then the Golden Bar is de-activated, and the remainder of the seven selections can be made with the pushbuttons.

Below the Selector Panel is the *Wurlitzer Promotional Panel*. The illuminated panel has "Wurlitzer Stereo" written in black letters on a white background. This panel has inside release levers and tilts forward for easier replacement of the fluorescent lamp.

This same fluorescent shines downward on the speaker grille through a multi-colored plastic panel. The grille itself is a rather attractive design with a chrome "W" in the center. The shiny metal reflects the multiple colors and creates a colorful display.

The sides of the Model 2700 are Oriental Walnut wood-grained Dinoweld panels framed with stainless steel strips that serve as protective rails. Each side features a back-lighted, see deep Wurlitzer crest medallion encased in

a raised chrome-finished ring. Unfortunately, the protective rails on the front of the sides seem to be somewhat prone to bending.

The Wurlitzer mechanism was pretty well time-proven by now. Since its introduction in the 1700 of 1954, the main changes were the increase in capacity to 200 selections, and the changes in the selection system. 33 RPM capability was also included in the 2700.

The mechanism was tall, compared to the other manufacturers. It worked fine in the older style jukeboxes, which were taller than they were wide, but would be more difficult to fit into the lower, wider console machines Wurlitzer would be producing in about three years.

The sound system changed little from the 2600. Push-pull 6973 tubes were used for the outputs. Uniquely to Wurlitzer, they used dissimilar speakers for the two channels. One channel had a heavy-duty (bass) 12" speaker, and the other channel a mid-range 12" speaker. Also one 3 1/2" tweeter was used, connected to the same channel as the bass speaker. To further confuse things, one 12" speaker is 16 ohms, the other 8 ohms, and the tweeter 3.5 ohms.

Even with all this weirdness, Wurlitzers of this era produce good sound, with plenty of bass.

This was the second year with only the stereo amplifier available. However, there was a stereo-mono switch on the amplifier that connected the two inputs together to produce mono sound if desired.

Remote Volume Control was available. As was standard practice by now, the volume control stayed in the jukebox, with a motor controlled by a switch in the remote volume control box, to turn the volume up or down. The remote volume box also had a reject switch to cancel the song playing.

The model 5250 Wall Box was still pretty much the same as the first 200 selection wall box introduced in 1956. There was mild restyling, especially in the area of the coin entry. The 5250 accepts nickels, dimes, quarters, and half dollars. It stands 15 5/16" tall by 11" wide by 8" deep, and weighs 20 1/4 pounds (but feels heavier).

The 100 selection model 5200 Wall Box had basically the same appearance as the 5250, but only had two rows of pushbuttons.

As was common practice in 1963, the remote control receiver (stepper) was optional equipment. The model 261 stepper adds on to

the junction box on the jukebox floor (the 2710 uses the 259B stepper, which fits on the bottom of the selector unit of the mechanism).

A unique item was the Half-Dollar Single Coin Wall Box, model 5010. This worked in conjunction with the Ten Top Tunes system in the jukebox, to provide the patron with ten pre-selected tunes for a half dollar. Shown in the picture with the 5010 is the bar bracket, with the Wurlitzer crest facing away from the customer.

A variety of remote speakers were available. First was the 5123 Wall Speaker. *Has 12" full range fidelity speaker, including 3 1/2" coaxial tweeter, with baffle to enhance bass resonance.* It's 26" wide by 20" high by 11" deep.

Second was the 5125 Stereo Extender. New wraparound grille in antique bronze finish features brass-plated zinc "W" and script "Stereo". A 6X9" speaker is used. Dimensions are 12" high by 14" wide by 8" deep. Sold in pairs.

The third type shown in the brochure is the 5126 Stereo Directional Speaker. May be mounted on wall or in corner, horizontally or vertically. Dimensions are 22 1/2" high by 9 1/4" wide by 8" deep. This also uses a 6X9" speaker and was also sold in pairs.

The 2700 series is of typical size and weight for the pre-console era jukeboxes. They stand 54 7/8" tall by 32 1/4" wide by 27 5/8" deep. Weight is 332 pounds for the 2700 and slightly less (317) for the 2710. As the brochure states, *Size-wise, it's just right. Big enough to command attention. Small enough not to demand too much floor space.*

Value is still pretty affordable for this era Wurlitzer. The AJ Price Guide lists it at from \$150 for a parts machine up to \$2100 for a very good example. As a side note, the pre-Console era styling of the 2700 commands higher prices than the true Console-styled Seeburg LPC1 of the same year.

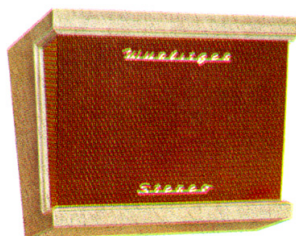
The 2700 is moderate in terms of difficulty of repair. The selector system can have you going around in circles; other than that, if you've worked on any Wurlitzer from 1700 up, you can work on a 2700.

The 2700 series has a lot of nice styling touches - the rear display panel, the selector panel, the front "Promotional Panel", the illuminated "see deep" medallions on the side, and of course the big "W" mounted in a gold panel in the speaker grille. All in all, a pretty attractive machine.

(Text in italics is from factory brochure.)



5010 HALF DOLLAR WALL BOX



5123 WALL SPEAKER



5125 STEREO EXTENDER

1965 WURLITZER 2900



By 1965, the Console era was in full swing. Seeburg again had been the leader, with the completely restyled LPC1 of 1963. Wurlitzer didn't design a jukebox with such a radical departure in styling - their changes were more evolutionary in nature.

The 2900 of 1965 was a rather pleasing evolution of the styling of the jukeboxes they produced in the early sixties. Wurlitzer was still a couple years away from their complete changeover to the Console. In this transitional era, they produced some pretty attractive models.

The 2900 was a nice restyling of the 2800. For the first time since the 2500, a convex curved glass dome was used instead of flat glass. The dome area turned out to be one of the nicest features of the 2900.

At the very top of the rear panel (above the dome) is the personalization area. The picture shows "Wurlitzer" in this spot. Wurlitzer

offered a service where they would make up a plastic strip to go here, with the name of the establishment, or whatever the owner desired (within reason, of course). A choice of typefaces or scripts was available. A choice of drawings was offered to put at each end of the script, in place of the stars (if no artwork was specified, the stars would be used).

The basic charge was only \$1.50. Additional charges of \$1 would be added for more than 24 letters and spaces, or to process the owner's artwork.

The dome area was the most impressive. The title board was in its usual horizontal location under the dome. The vertical area behind the title board was especially attractive. A wood-grained plastic panel has three insert areas. The upper center insert has "Stereo" in large letters, surrounded by "Hit" and "Music".

Bucking the trend for less mechanism vis-

ibility, the view of the record being played was actually larger than the preceding year. In a couple of years however the transition to console styling would be complete and visibility would disappear.

The copy writers got carried away. "Eye appeal is buy appeal and here it is at work. Each record selected rises from its holder like a mighty Wurlitzer Pipe Organ rising from the orchestra pits of the world's great play houses. Framed in a shimmering silver proscenium arch, it plays before a gleaming gold background with real theatrical flair. Arch is topped by stereo display panel."

The insert on the left has two options - either a full-size record jacket or a panel with five small "little LP" covers.

The insert on the right provides the coin instructions and the pricing options. There were a variety of these available, depending on the options such as LP pricing and "Golden Bar".

A short horizontal panel in front of the dome holds the selector buttons, a reset button, the coin entry and coin return button, and the Golden Bar, if present.

The dome has one of the best support mechanisms ever put on a jukebox, a big change from the support on the 2300 of a few years earlier. Powerful springs on each side support the dome positively in the open position, and still make it easy to open and close the dome. There is a detent at the fully open position, so that there's no chance of the dome coming down on its own. And since the dome is supported on both sides, there's no chance of damaging the dome if the jukebox is moved with the dome open.

The convenience factor is high also. With the dome open, the title board can be hinged down, making it very easy to replace title strips as the records are being replaced. The title board can be easily removed from the box if desired.

Another attractive feature is the illuminated "Wurlitzer" panel in front under the title board. The shadow effect under the letters is an interesting effect.

The grille looks like a giant checkerboard. Two have vertical stripes and a star, the other two have horizontal stripes. It's illuminated from above, of course.

The side cabinet finish is described as "chrome accented Kashmir walnut vinyl sides and back-lighted see-deep emblems." The wood graining is carried over to the front surrounding the speaker grille and the vertical area under the dome.

A less common option is the 2900A and 2910A. This is a blonde wood grain version, and has a very striking appearance. According to the brochure, "New beauty for those

who prefer blondes. The 100-selection Wurlitzer model 2910-A - swings with the Jet-Set and enraptures the teens."

The two versions available were the 200 selection 2900 and the 100 selection 2910. Exterior differences were few - less pushbuttons for the 2910, and less area of the title board used for title strips.

Internally, the 100 selection model used a different carousel to hold the records, and a different selection system. The 200 selection models used the same motor driven system that was pioneered in the 2100. The 100 selection versions went to a solenoid-actuated system to discriminate between the individual numbers within a letter group. Thankfully, the 104 play system had been dropped a few years earlier.

The basic mechanism design dates back to the 1954 model 1700. The main changes in the meantime were the selection system, the cartridge used, and the shape of the tone arm and arch. Internally, the biggest change was changing to an AC motor for the main mechanism motor.

The turntable drive system was also changed, mainly to accommodate a speed change mechanism for the 33 RPM LP records.

The selection system had been "bulked up" quite a bit since the 50's. The first option was dual pricing. The LP Album Package plays one side of an album for a quarter, or both sides plus one single for 50¢.

The second option was the Golden Bar, which allowed a preset selection of 7 to 10 singles for a half-dollar or two quarters.

A new solid state amplifier was introduced for the 2900. This was a step forward as it

allowed the amplifier to be continuously energized (for paging use with the optional #190 Mike Kit) without generating a lot of heat. These are a fairly reliable amp, requiring less maintenance than a tube type amp. As to whether the sound quality is as good as a tube amp is arguable. Nevertheless, it still sounds good.

The amplifier (model 546) provides both low impedance and CV outputs on a terminal strip. Various power taps are available for the low impedance outputs.

Two dissimilar speakers are used in the cabinet. Oddly, one is 8 ohms and the other is 16. One is designed for deep bass, the other midrange. They also have a 6" tweeter connected on the channel with the low bass speaker.

A motor driven remote volume control kit (169B) was offered by Wurlitzer.

New for 1965 was the model 5220 200 selection Remote Speaker Wallbox. This was Wurlitzer's answer to the Seeburg Consolette, with a pair of speakers in the top of the cabinet. Dimensions of the 5220 were 18" tall by 11 1/2" wide by 8" deep, and weight was 37#. The Golden Bar and dual pricing options were also available in the wallbox.

According to the brochure, "Two 3" by 5" speakers, top mounted at ear level, take advantage of the resonant chamber within the case for remarkable bass response and true high fidelity that provides the finest personalized stereophonic music in the industry."

The 100 selection 5225 was also available.

There were six variations on the 5220. The 5220 and 5225 have all the options. The "-B"

versions have no Golden Bar option. The "-A" versions are the stripped-down models, with no speakers or Golden Bar. The 5220-A and 5225-A are 15 1/8" tall and weigh 34#.

In order to use the wallbox, the model 261 stepper would have to be installed in the 2900. The 2910 would require the 259A stepper.

To keep people honest, Wurlitzer offered the "Cashrak", to keep track of the money deposited in the jukebox and wallboxes.

The Wurlitzer 2900 was a reasonably sized machine, but still not a lightweight. It was 51" tall by 33 3/4" wide by 27" deep, and weighed in at 350#. The 2910 was slightly lighter, at 335#. The brochure states these weights are without stepper.

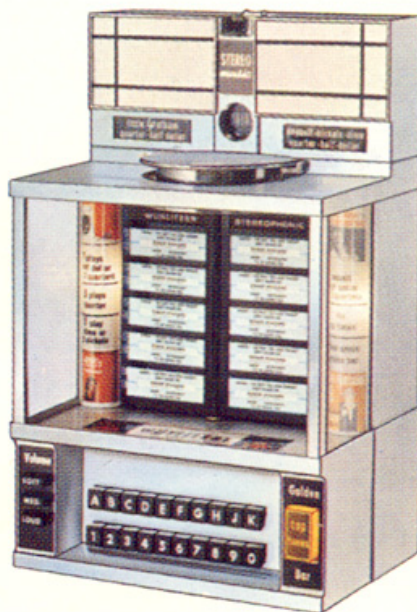
An interesting feature of the brochures not directly related to the jukeboxes was the targeting of the brochures for different audiences. Different brochures were printed, with white models in some and black models in others.

The 2900 lists at up to \$2000 in the AJ Price Guide. The guide doesn't distinguish between a 2900 and a 2910, but the 200 play version probably has a slightly higher resale value.

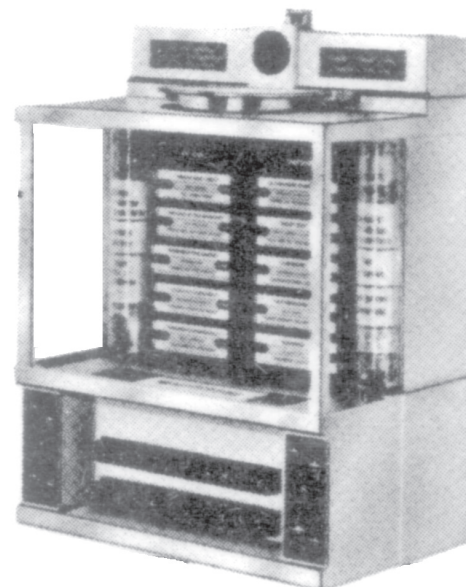
The 2900 is a pretty attractive jukebox. In a dimly lit room, the dome area comes alive - it's brightly lit with vibrant colors. The "Wurlitzer" panel in front and the emblems on the side are nice visual touches. It's still a nice size - not as wide as the consoles to follow. Affordable, with good sound, good looks, and a full 200 selection capacity, the 2900 makes a great rec-room box. With its rarity and striking looks, the blonde 2900A or 2910A would be a great find.



5220 REMOTE SPEAKER WALLBOX



Model 5225
100 Selections



5225-A WALLBOX

1966 WURLITZER 3000



During the sixties, the jukebox styling moved constantly in the direction of console styling. Compared to the flashy styling of the silver age machines of the previous decade, the consoles were much more subdued in their styling, becoming more like pieces of furniture.

Wurlitzer also was heading in the direction of console styling, but not as suddenly as Seeburg. For the 1966 model year, Wurlitzer introduced one of their more handsome efforts, the 3000.

Actually, two versions were built that year. The 3000 was the full-sized 200 play

version, while the 3010 was the less expensive 100 play version. Thankfully, the 104 play option had been retired a few years earlier, and it would be a few years until a 160 selection version was introduced.

Of course, the 200 selection version would be used in more profitable locations, where the higher initial price and higher cost of filling with records would could be recovered with a higher cash intake.

Wurlitzer marketed the 3000 as the "Discotheque" model (it seems everybody had to get on the bandwagon - Seeburg mar-

keted the APFEA1 that year, which was also referred to as the Discotheque). Unlike the APFEA1, the 3000 comes with no "Discotheque" script - instead it bills itself as the "Stereo Music Center".

Wurlitzer supplied a "PROMO-PAK" for the Discotheque package, including the 8 foot high fluorescent wall posters, napkins, table tents, and window signs, "to transform any dance floor into a 'go-go' spot".

The brochure shows Posters, one saying "Frolic through the Frug to our Discotheque music", one saying "Dance the Ska or the Cha-Cha to our Discotheque music", and one saying "Dance to the Rhythmic Moods of Wurlitzer Discotheque. Music selected by Arthur Murray Studios" (I can just picture Arthur Murray doing the Frug).

According to the brochure, "This special Discotheque Phonograph with two matching speakers, creates the boom beat and fun sound of this modern music."

Although it may not be immediately obvious, the 3000 is a restyle of the 2900. In fact, the 3000 manual is just a supplement to the 2900 manual - both are required to work on a 3000.

At the very top of the cabinet to the rear is a panel that contains a tweeter in each end - this puts the treble output at ear level to enhance the stereo separation. The section between the speakers is available for "Personalization". For a small fee, Wurlitzer supplied plastic strips with the name of the establishment (or whatever was desired).

The title board area was very reminiscent of the design pioneered by the Seeburg LPC. The title board laid flat under a concave glass that curved upwards toward the rear. Behind the title board was a panel with areas that could be configured for the location.

The lower center of this panel has a window that allow visibility of the turntable and tone arm, so you can view the record being played. In an age of diminishing mechanism visibility, the 3000 bucked the trend and actually increased the visibility over the 2700 and 2800. However, it was a last gasp - it would disappear totally the next year.

To the sides of the mechanism window were areas where an instruction panel could be placed. If there was an instruction panel, then the little LP pic-

tures could be placed above it.

Alternatively, a standard size record jacket could be placed at the side. Then it would extend to the top of the panel, and there would be no room for the little LP pictures.

The area above the mechanism window usually said "Stereo Music Center". Alternatively, if the Discotheque package was purchased, it would say "Discotheque".

The selector push buttons and coin entry were in the usual place, on the horizontal panel in front of the dome.

The front of the 3000 "features a crystal glass emblazoned with the name Wurlitzer, which moves outward on a piano hinge for easy service". Good thing, the front fluorescent lamp would be almost impossible to get at otherwise.

"A perforated metal grille screen, protected by highly polished stainless steel bars, offers a striking contrast, which adds much to its beauty". The grille is a standout, and contributes a lot to the attractiveness of this model.

At the very bottom, "The London Gray kickplate of embossed vinyl is impervious to floor abrasives".

The side panels "are Panelyte with a magnificent mar-resistant melamine finish of deep rosewood grain".

One of the characteristics of jukeboxes of this era is durability of the cabinet. The 3000 would be just about impervious to abuse by the customer.

Mechanically, the 3000 was little changed from previous years. The carousel mechanism had been introduced with the model 1700, and had been a reliable performer.

The biggest change in the mechanism over this time was the design of the selector system. It had started out as individual pin coils, and changed to a motor-driven assembly in the 200 selection model, and a solenoid-actuated assembly in the 100 play version.

The new model 546 solid-state amplifier had been introduced a year earlier. With minor changes, it became the 546B for the 3000. A Sonotone cartridge was used. The speaker system contained a pair of dissimilar 12" speakers below. Strangely, the manual also shows a 6" high frequency speaker below, in addition to the two tweeters at the top.

The model 5220 wallbox had also been introduced a year earlier. Wurlitzer described it as the "Most Beautiful and Versatile Remote Speaker Wallbox on the Market". It of course was Wurlitzer's answer to

the Seeburg Consolette, which had been introduced in 1963 (it's strange that Wurlitzer didn't also come up with a catchy name).

There were actually four versions - the 5220, 200 selections with speakers, the 5220-A without speakers, the 5225, 100 selections with speakers, and the 5225-A without speakers.

The ones with speakers had "Two 3x5 speakers at ear level that utilize resonant chamber within unit for remarkable bass response and true hi-fi stereo sound".

To the sides of the title board, "Illuminated pilasters display miniature album covers and price per play information".

The 5220 offers half-dollar play for little LP's and top tunes selection from the Golden Bar.

The 261B stepper would be required in the 3000, and the 259B in the 3010.

Other options include a Remote Volume Control Kit model 169A. The kit includes a remote control box to control volume and reject, and a motor-drive assembly to mount in the amplifier.

A P.A. Microphone Kit model 190 transforms the 3000 into a paging system. A "push to talk" switch mutes the music while using the microphone for public address.

The "Golden Bar" (Top Tunes) was also an option. For 50¢ you could hear ten pre-selected tunes. It was a bargain, but you had no choice in what was played. Of course, the Golden Bar option would have to be present in the jukebox in order for it to work from a wallbox.

Finally, the "Cashrak" electronically registers all coins and accumulates totals.

The manuals and brochures make no mention of what remote speakers were available. By this time, they were probably bookshelf style.

The 3000 is a big machine, standing 53 1/2" tall, 35 1/8" wide and 27" deep. The accent is still on the vertical, being about 50% taller than it is wide - this could be due to the fact that the carousel mechanism, in use since the 1700, was so tall. A new mechanism introduced in the 3400 three years later was considerably shorter vertically, and more suited to the lower, wider console era cabinet dimensions.

Service was easy for the operator. Raising the spring-loaded dome allows easy access to the magazine (carousel), which can be rotated with ease to allow easy replacement of any record. Once the dome is raised, the title board can be pivoted downward for fast replacement of title strips.

Repairs are about average difficulty for

this model. Tracing out a non-functioning selector system can be frustrating, otherwise there is nothing hard to work on.

Weight-wise, the 3000 is pretty heavy, at 378 pounds. The 3010 is slightly less heavy, weighing in at 363 lb.

With its bold styling, the 3000 is a little above average in value for the era. According to the AJ Price Guide, a Grade 2 (very nice) 3000 can bring up to \$2000 (retail). These have good sound, are good looking, and are a good choice for the collector whose tastes are moving into the later era of jukeboxes.



5220 REMOTE SPEAKER WALLBOX

1968 WURLITZER 3200 "AMERICANA II"



In the late sixties and early seventies, Wurlitzer produced a series of their famous Americana jukeboxes. The first was the original Americana, model 3100, of 1967.

1968 saw the release of the model 3200 "Americana II". This was a mild restyling of the 3100.

The most easily identifiable feature of the Americanas was present in the 3200. According to the brochure, the "Focal point of the Americana II is the back-lighted translucent panoramic panel. Interchangeable color photographs of outdoor scenes glow with living realism."

Thus, even in the confines of the corner bar, the outdoors can come to you. Two scenes are listed in the parts book, a mountain scene (illustrated), and a riverboat scene.

The size of the mural was increased over the 3100. The picture was still located in the center of the back panel, with the treble speakers on the sides, but the size of the

speakers was reduced so the mural could take up a larger space.

The Americana II followed the classic Console Jukebox shape, with a back panel and the title board placed horizontally under glass on the top of the cabinet. The glass had a slight upward tilt toward the back, to provide a small slanted panel toward the rear under the glass. This had coin instructions on the sides, and in the center it said "Solid State Stereo". This could be replaced with a "Personalization" strip, with the name of the location, for example.

The title board has space for all 100 title strips (200 selections). For the 100 selection version (3210), the size of the board is the same but the title strips only take up half the space. The remaining space is taken by drawings with musical themes.

The selector buttons are placed on the horizontal panel just in front of the dome. Oval red plastic buttons are used, with the numbers and letters on a separate strip, just behind the

buttons (illuminated, of course).

The front of the cabinet houses a handsome speaker grille, with vertical bars across the width, and a blue background. The illuminated panel above the speaker grille is divided into two sections, the upper blue and the lower white. The white section has "AMERICANA II" and "Wurlitzer" written on it, with the crown design above Wurlitzer.

The sides of the cabinet are finished in a dark wood grain. "Solid panels in smartly grained Macassar Ebony Formica provide a rich finish that is damage resistant."

Damage resistance seems to be a theme for the Americana II. According to the brochure, "...it is literally built like a truck. The dome is as solid as a rock. The back is the strongest ever put on a phonograph. Every part subject to wear is produced from space age materials to meet the rigid specifications of Wurlitzer engineering."

Everything about this machine is built to take abuse. Someone would have to attack the cabinet with some serious weapons to do any major damage.

The mechanism wasn't totally bullet-proof, but was close to it. It had been introduced with the model 1700 of 1954, so it had been around almost a decade and a half. Reliability had never been a problem, but it was nearing the end of its life, mainly due to its height, and the difficulty of installing it in the increasingly low console cabinets. A new, lower mechanism was probably in the works, and would debut in the 3400. Unfortunately, it turned out to be less reliable.

The mechanism had started out as a 104 selection model in the 1700. During its run, it had been increased in capacity to 200, then scaled back to 100 (the 104 play version had finally been retired in 1962).

Both the 100 and 200 selections versions were available in the 3200 series, the 3200 being the 200 play version, and the 3210 held 100 selections.

The standard coin configuration for the 3200 is the Playrak coin accumulator unit. The playrak is not accumulative, although it can be set up so that two quarters give the same credit as a half dollar (for example, three for a quarter and seven for two quarters or a half dollar).

An LP Programmer Unit was optional on the 3200 or 3210, to give premium pricing for the "little LP's". The turntable automatically selects the proper speed (33 or 45) depending on the size of the hole in the record.

A dollar bill acceptor was optional equipment. It would mount in the upper back panel, just to the left of the right hand speaker (apparently reducing the size of the mural).

The selection system differs between the

by HAROLD HAGEN

two models. The 200 play model uses a motor-driven unit in the selector assembly, while the 100 play model uses a solenoid-actuated unit.

The "Golden Bar" (Top Tunes) allowed a group of up to ten songs to be played. Actuators for 6, 7, 8 or 9 songs were also available. This was a bargain for 50 cents, but of course you had no choice of which songs would be played.

The Cobra cartridge used on the earlier monophonic models had been retired finally a few years earlier, and replaced by a stereo ceramic cartridge.

The 3200 uses the model 548 amplifier. A solid state stereo system had been in use for a few years (mono was no longer available). This is a fairly early design, with germanium output transistors and an interstage transformer driving them. Other than these transistors being a little difficult to find, the amplifier isn't overly hard to work on (much easier than the early 70's models), and is fairly rugged in operation. Sound quality is good. These have a nice bassy sound.

The built-in speaker system consists of a pair of 12" woofers and a pair of 3 X 5" high-frequency speakers in the lower speaker grille. The two 12" speakers have dissimilar characteristics – one is 8 ohms and one is 16, and have different frequency characteristics.

The upper speakers are 6" in diameter, and function as mid-ranges.

Both CV (Constant Voltage) and low impedance outputs are available for external speakers. A terminal strip allows adjustment of power to the internal speakers.

Wurlitzer supplied the model 5133 Wall Speaker. The styling was similar to home stereo "bookshelf" speakers. These use a 6 1/2" speaker and have a 12 watt power handling capacity. They measure 16 1/2" tall by 8.6" wide by 8" deep, and weigh 9 pounds.

An unusual unit was the "Satellite" remote selector-speaker. At first glance, it looks like a complete jukebox (styling is very similar to the 3200). As a concept, it's very similar to the speaker-selectors of the early forties. It contains the title board, selector buttons, lighted front panel, and the same speaker system as in the jukebox, with response from 50 to 16000 hertz. A five position switch functions as a volume control.

The selector system functions much as a wallbox, so a stepper is required in the master jukebox. The Satellite's size is a little smaller than the Americana, at 39" tall by 40" wide and 17" deep, and weighed 166 pounds. It was available in 100 or 200 selection versions.

The Satellite would be a natural for a location with a second room.

An optional display panel (shown in this picture) could be added to the upper back of the Satellite, to look even more like its companion jukebox. Instead of the mural, this panel contains five record jackets.

A remote volume control (model 169-A) was available. This required a motor-driven unit to be installed in the amplifier.

The 5220 was the standard wallbox for the 3200. This is the 200 selection version, and includes speakers and the Golden Bar. The 5220-B deletes the Golden Bar feature. The 5220-A deletes the Golden Bar and the built-in speakers.

Use of the 5220 required the 261B stepper in the 3200.

The 5225 was the 100 selection wallbox for the 3210. Its appearance was much the same, but with one fewer rows of pushbuttons. The same options applied as on the 5220. The 3210 would require the 262 stepper installed.

Wurlitzer manufactured a Public Address Mike Kit. This plugged into the amplifier and



SATELLITE REMOTE
SPEAKER-SELECTOR

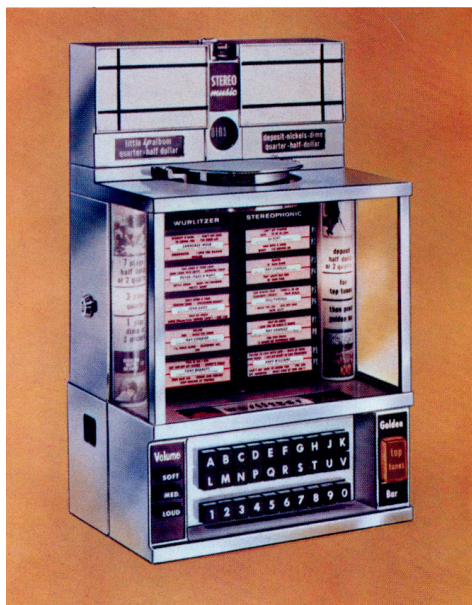
allowed paging or "making announcements such as birthday greetings, last call for drinks, or for singing bartenders or conducting public sing-alongs", according to the brochure.

The 3200 is in the Buick class as far as size and weight. It measures 49" tall by 40 1/4" wide by 24 5/8" deep. The weight is a hefty 378 pounds (the 3210 is ten pounds lighter).

These have not found their market niche yet, as the value in the AJ Price Guide is on the order of \$1000.

Difficulty of repair is moderate. These have no digital or computer circuitry, so they will be easier to keep running down the road. As mentioned, the output transistors are getting a little scarce, but otherwise the sound system is easy to maintain. The usual problem is bad electrolytic capacitors.

This gives you a lot of jukebox for the money. Attractive, good sounding, easy on records, and not too difficult to maintain. The outdoor scene brightens up the exterior. Forgive me for saying this, but the Americana II is a real piece of Americana.



5220 WALLBOX

1970 WURLITZER 3400 "STATESMAN"



Wurlitzer took a clue from the other manufacturers starting in 1967 giving their jukebox models a name as well as a number. Starting with the 3100, the Americana name was affixed to several models. For 1970, the Statesman name was used, followed by the Zodiac, Superstar, and yet another Americana.

The Statesman was a pleasant evolution of the Console-styling paradigm. Still present were the predominant features of console styling—a boxy lower section, a flat horizontal title board on top of the box, and a vertical back panel with the high frequency speakers, coin entry and instruction panels.

The Statesman carried over one of the Americana's most famous features — the mural. This was on the upper part of the back panel, and ran the full width. The brochure states "The backlighting dome panel of the new Wurlitzer Statesman highlights a majestic and life-like reproduction of the Grand Teton mountain range in Wyoming. The breathtaking scene gradually changes from bright sunlight to

darkness with the moon reflection cast on the water and snow-capped peaks."

The animation is relatively slow — going to night to day then back to night in the space of a few minutes (but much faster than real life).

Previous models had been very angular with sharp corners. The Statesman made a pleasing update of the design by rounding off the corners a little.

The mural occupies the upper half of the back panel. The pushbuttons are placed in the center, extending most of the width (optional Top Tunes buttons are placed to the right).

The lower section of the back panel has a grille for the treble speakers taking up the left 2/3 of the width. In the lower center it says "Music for Millions".

To the right of the high frequency speakers, the various instruction glasses and coin entry are placed. If so equipped, a dollar bill acceptor would be in this area too.

The dome finish is described as "embossed leather patterned finish in rich Moroccan Brown. Dome sides are emblazoned with colorful, jewel-like Wurlitzer crests."

The front of the cabinet has an illuminated section with "Statesman by Wurlitzer". Below that is the main speaker grille, divided up into three areas. "The three sectioned horizontal grille is of rich burgundy metal with a sparkling star design. Each section is framed by bright anodized aluminum."

According to the brochure, "The lower sides of the Wurlitzer Statesman cabinet are richly grained Spanish Pecan finished Parkwood. This is bonded to a sturdy three-quarter inch panel. The protective kickplate at the phonograph base is vinyl-framed with an anodized aluminum extrusion in the same matching color."

The cabinet is solidly (and heavily) built. $\frac{3}{4}$ " particle board is used in the cabinet construction, which always adds to the weight, as does the "truss-like steel base".

Three versions of the 3400 series were marketed. The 3400 is the 200 selection version, holding 100 records. New for 1970 was a 160 selection version, the 3460. This would be designed to be compatible with other manufacturer's 160 play wallboxes.

Finally the 3410 was 100 selections.

All models used the "Playrak" coin register mechanism. This had separate levers for the different coins to set the number of plays for each. Credits did not accumulate, however, so selections would have to be made after each coin was deposited.

The Playrak for the 3400 was a little more complicated, as it had to keep track of credit for two other optional features — album play and Top Tunes.

Album play was for 33 RPM, 7" LP's. These records had a small hole, so the mechanism could determine the proper speed to set the turntable.

For the 200 play 3400, LP selections could be placed in the "A" section, or in the "A" and "B" sections. Thus either five or ten records (ten or twenty selections) could be set for LP pricing.

Oddly, the 160 selection 3460 allowed all the 1's, or the 1's and 2's to be album play, for either ten or twenty records (twenty or forty selections). The 3460 had to do it by number, as it used the numbering scheme like the Rock-Olas and Seeburgs, where A1 and B1 were the opposite side of the same record.

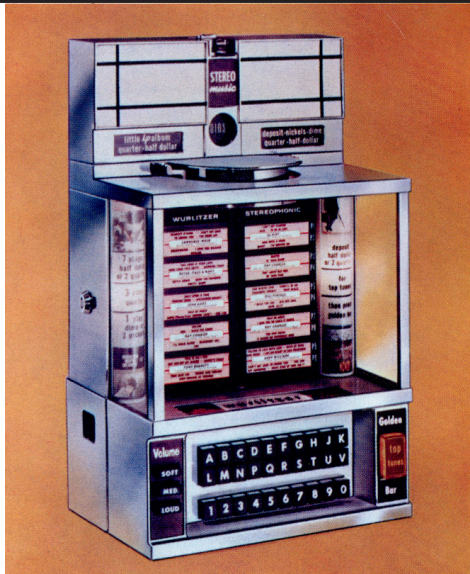
The 100 selection 3410 used the same numbering scheme as the 3400 (A1 and A2 are opposite sides of the same record), so it used the same letters (A, or A and B) for the LP selections.

A pair of switches on the pushbutton switch assembly allowed the two ranges of selections to change from single to LP pricing.

The "Top Tunes" (also called the "Golden Bar") allowed automatic programming of a preset range of selections. Again, the selections programmed differed with the model.

In a new twist, there were two programmed

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MODEL 5220 REMOTE SPEAKER WALLBOX

selection buttons, a Gold Button and a Red Button. The number of selections you could get for two quarters or a half dollar was settable at either 6, 8, or 10.

For the 3400, the Gold Button selected odd E's and odd F's, where the Red button selected odd J's and K's. If it was set for six selections, then you got the 1's, 3's, and 5's. Eight selections would also get you the 7's, and ten would additionally play the 9's.

For the 3460, the Gold Button would get you A7, C7, E7, G7, J7, and L7, and optionally N7, Q7, S7, and U7. The Red Button would select the same letters in the 8's.

The Top Tunes option wasn't available for the 3410.

A brand new mechanism was introduced with the 3400. The old mechanism had certainly been reliable enough, but it was too tall for the lower console era cabinets.

The new "Wurlamatic" mechanism placed the carousel at the left, and the turntable at the right on a horizontal plate. A gripper arm lifted the record from the carousel and placed it on the turntable. The vertical height was considerably reduced, but it was wider.

There were some innovative features, for example there was no direct contact to the selection pins. Instead a rotating electromagnet used magnetism to set the selected pins.

Unfortunately, it wasn't as reliable as the former mechanism, and can be a little difficult to work on.

The tone arm is on the far right of the mechanism, and tracks fairly lightly. An Astatic ceramic stereo cartridge is used. The amplifier is little changed from the previous years, but is totally solid state, and uses germanium output transistors with a driver transformer. It's outdated technology

now, but gave reasonably good results, and can be easier to work on than the later amplifiers.

Two 12" speakers are used for the bass frequencies. Breaking with earlier designs, both speakers are the same.

There are both 6" mid-range speakers and 3X5" high frequency speakers in the upper back panel.

A total of 80 watts (music power) is available from the amplifier. A maximum of 40 watts can go to the built-in speaker system. The remainder is available for external speakers.

Wallboxes were available in either 200 selections (5220) or 100 selections (5225). Appearance was the same except for the top row of buttons missing in the 5225. Versions without the speakers or Golden Bar were also available.

No 160 play wallboxes were made by Wurlitzer. Evidently the 3460 was made exclusively to use OP (other people's) wallboxes.

The model 265 stepper would be used with either the 100 or 200 play models, and the 266 for the 3460.

Four wallboxes could be powered by the stepper. Additional wallboxes would require a booster transformer.

Bar mounting brackets and mounting plates were made for mounting the wallbox on the counter or wall.

An unusual option for the era was the Satellite II Selector Speaker. The concept harkens back to the remote speaker-selectors of the early forties - a cabinet that resembles the full size jukebox (except for smaller size), and contains the title board, pushbutton selectors, and a full speaker system. The selection system is

basically the same as a wallbox, so it requires the stepper in the jukebox. It would normally be placed in a separate room from the master jukebox, and possibly fool people into thinking there are two jukeboxes. It came in 200 selections only.

Other remote speakers included the model 5125B Extender, the model 5126 Directional, and the model 5133 Wall Speaker.

Other options included a Remote Volume Control Kit (169B), a Microphone Kit (198D), and an Income Computer (207).

The 3400 is a large, heavy machine. It measures 53 1/2" tall by 24" deep by 40 7/8" wide. The 3400 is the heaviest, at 372 lb. The 3410 and 3460 are slightly less, at 369 lb. These weights don't include a stepper.

The Satellite II is as wide, but less tall and deep, measuring 48 7/8" tall by 40" wide by 16 13/16" deep. It weighs 180 lb.

Maintenance can be a little difficult in this model. The new mechanism can be difficult to work on. In addition, access is not especially good. There is a removable panel from the rear, but in the front there isn't a removable door like other models. Instead, the center panel in the speaker grille is removable, giving limited access to the front underside of the mechanism.

The 3400 can be euphemistically referred to as "affordable". A thousand could probably buy a pretty decent one.

The 3400 does have a several things going for it. The styling is subdued but pleasant. The mural is an attractive feature. It has good sound and is easy on records. It makes a nice rec-room jukebox for playing your favorite records.



SATELLITE II REMOTE SPEAKER/SELECTOR

1974 WURLITZER 3800 AMERICANA

It's sad to be writing about the end of the line for Wurlitzer. After forty years of producing many of the world's favorite jukeboxes, Wurlitzer halted all American production of jukeboxes in 1974.

During the late sixties and early seventies, Wurlitzer produced a series of machines carrying the Americana name - so much that the names Americana and Wurlitzer had become almost synonymous. Early Americanas had a mural that typified some American scene.

The model 3800 was introduced in the fall of 1973, was a re-style of the 3700. The cabinet was completely closed, with no mechanism visibility. The mural common to the early Americans was not used on either of these models.

The 3700 had introduced a completely new cabinet shape. It was a complete departure from the squared-off designs of the preceding years. The sweeping profile of the front door curved away from the patrons. Near the top was the row of pushbuttons. Unlike the 3700, which had the buttons in a straight row, they were staggered in the 3800. The optional digital selection playing indicator is located just above the pushbuttons.

To the right of the pushbuttons is the coin instruction glass and coin slot. Below that is a rectangular area with the "Make Selection" indicators, the "Golden Bar" pushbuttons, and space for the optional dollar bill acceptor. Finally, there is a large "Americana" script on the lower left area of the upper section. This area also contains the tweeters behind the grille.

Dividing the door, near the center, is the title board. This protrudes from the door, with the top horizontal. Wurlitzer's "Louvre-Controlled Lighting" prevents glare from the lighting. The title board appears dark until you're within a couple feet of the jukebox.

The speaker grille is in the lower front. Chrome trim outlines the grille, as well as the upper panels.

Dark wood grain is used on the sides of the cabinet. The color combination for the front is called "Plum Bold and Lavender Smooth". Here the earlier models tended to use blues, the 3800 definitely is in the purple class.

Three different versions were available for the 3800 series - 100 selections (3810), 160 selections (3860), and 200 selections (3800). An interesting fact is that the 100 and 200 sizes were available in the old mechanism, but the 160 was new (starting with the 3400).

A totally new "Wurlamatic" mechanism had been introduced with the model 3400 a few years earlier. The previous mechanism had been introduced with the model 1700 of 1954. The old mechanism had been quite reliable, but was too tall for the new console cabinet designs.

The new mechanism placed everything on a horizontal platform, with the carousel on the left, the gripper mechanism in the center, and the turntable on the right. The height of the mechanism was reduced considerably, but it was wide and fairly heavy. It was also complex, and a much less sophisticated (or compact) design than the ROWE/AMI mechanism of the era. The physical shape was much more suited to the console



cabinets, which tended to be low and wide.

There were ingenious aspects to the design. Like the ROWE, the Wurlitzer mechanism would play both sides of a record in sequence if they were both selected. The carousel was easy to access, making record replacement an easy task. Each record slot has its popularity meter, making it easy for the operator to keep track of which records are playing well, and which ones need replacement. A clever device resets the popularity meters. The magnet is manually moved in toward the carousel, and as it is rotated, the magnet attracts levers on the popularity meters, and sets each one back to zero.

A Run-Load-Scan switch is placed on the inside of the side wall of the cabinet. As the front door is closed, the switch is automatically pushed back to the Run position, so there's no chance of going off and leaving the phono in the non-running condition.

The turntable automatically plays both 33 and 45 records. The different speed records can be intermixed anywhere in the carousel, but normally they would be synchronized with the pricing options.

In the brochure, Wurlitzer makes a big point about playing the record flat - "in the true turntable method" - "the way it was designed to be played by professional recorders and researchers". Nothing is said about their having played the record vertically for a decade and a half in their older style mechanism.

The sound system consisted of a solid state amplifier and four speakers (two 12" woofers and two 6" tweeters). The woofers are placed in the front below the door, and the tweeters are built into the door.

The amplifier is rated at 40 watts (music power) per channel. Music power is a non-continuous rating - the RMS output would be somewhat less. This amplifier used a direct coupled output stage, instead of the transformer coupling used through the 3600. It probably gives better fidelity, but can be very difficult to repair.

The outputs from the amplifier can be selected on a terminal board accessible through a door in the rear. One set of terminals allows selection of the power level for the built-in speakers. Another set supplies the CV (Constant Voltage) output for remote speakers.

The press release in Billboard magazine mentioned showing the 3800 with a quadraphonic sound system. There is no mention of this in the manual, and all I've seen have the standard stereo amplifier.

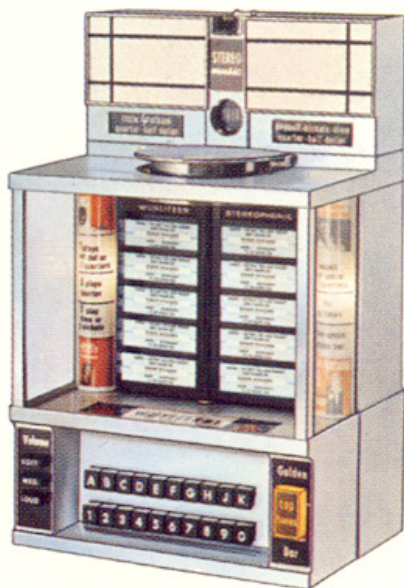
The 3800 contained a versatile pricing system. At its heart was the re-designed, and "miniaturized" BOAC (Bonus Accumulator) pricing unit. It's reduction in size was accomplished through the use of LSI (Large Scale Integration). A plug-in card set the pricing levels and bonus levels. For example (with the standard supplied card), for typical 2/25¢ pricing, the phono might give you two for 25¢, five for 50¢, eight for 75¢, and twelve for a dollar. Thus if you put in four quarters in a row, the first one would give you two plays, the second and third three each, and the fourth four. For selections programmed for LP's, it might be programmed to give one for a quarter, two for 50¢, three for 75¢, and four for a dollar.

The "Golden Bar" was an option on all models. This took a set of 6, 8, or 10 pre-selected singles, and for 50¢ and a single push of the button, you could hear all these records.

In the 3800, there were actually two buttons and sets of records. The arrangement of the pre-set programs and the LP's was a little complicated and interdependent. Program 1 would include E1, E3, E5, F1, F3, and F5. If you were generous setting this up, it might also include E7 & F7, and possibly even E9 & F9. Program 2 would have J1, J3, J5, K1, K3, and K5 (and possible J7, K7, J9, & K9).

From 10 to 100 selections could be set up for LP pricing. The A's and B's could be done separately, but the C's and D's, E's and F's, G's and H's, and J's and K's had to be done in pairs. If you had the Golden Bar option, you wouldn't want to place LP's in the E's, F's, J's, or K's.

Other than the BOAC, the selection system wasn't too high tech. It used some solid state components instead of relays, but Wurlitzer never got into the computerized selection systems, making them easier to maintain.



Model 5225
100 Selections
MODEL 5225 WALLBOX

Accessories included a pair of remote speakers, the model 5127 "Rectangular", and the model 5128 "Wedge". Styling had become a thing of the past for speakers, as both of these were pretty bland looking. The rectangular speaker looked pretty much like the millions of bookshelf speakers sold with inexpensive home stereos.

There were a couple of interesting technical features. The first (one that really makes you want to go out and buy one) is that the speaker cabinets were made of "acoustical fibreboard". This reduced the weight of the speakers by half. It was supposed to be strong - Wurlitzer claimed that "a 300 pound man can stand on the smallest Wurlitzer speaker without collapsing it". It also was light - the 5127 weighed only 7 1/2 pounds for a 18" by 10 3/4" by 9" speaker.

Wurlitzer also claimed that "a patented principle of polarization of sound completely neutralizes the unwanted noise or background sound common to speakers of similar price. In very much the same manner as total darkness is achieved by placing two pieces of polarized glass at right angles, noise silence is achieved by criss-crossing polarized sound within the speaker enclosures. The enclosures are air tight units with walls of criss-crossed flutings and provide a structure in which the speaker delivers its fullest potential. The speaker is an 8" permanent magnet with cloth suspended whizzer cone."

Fact or fiction? You be the judge. In all fairness, these may be better than the description makes them sound.

A set of terminals on the rear allowed selection of the power level these speakers would draw from the CV line.

Four wallboxes were available - two each of 100 and 200 selection capacity. The 200 selection versions were the 5220L (with speakers and Golden Bar) and the 5220AL (without). The 100 selection versions were the 5225L (with), and the 5225AL (without). The 5225's looked like the 5220's, but had only two rows of pushbuttons.

Of course, to use the wallboxes, the jukebox had to be equipped with a stepper. For the 100 and 200 selection models, the same stepper (model 270) was used. This kit included the stepper, cabling, and a terminal board to connect the wallbox cables to.

For the 160 play model, the model 271 stepper kit would be used. At first glance, this was pretty strange, as Wurlitzer didn't offer a 160 play wallbox. This brings one to the conclusion that the only reason Wurlitzer offered a 160 play model was for the purpose of "location stealing", where they could take over a location previously "owned" by a competing brand. For example, if the location previously had an installation with a Seeburg jukebox and wallboxes, then the installed wallboxes could be connected to the new Wurlitzer jukebox.

In addition, both the 100 and 200 play models had A2 on the opposite side of A1. The 160 play version had B1 on the opposite side of A1, the same as both the Seeburg and Rock-Ola 160 play machines.

Other options included the Kit 219B Remote Volume Control, Kit 220A Microphone (Paging), Kit 235 Dollar Bill Validator, Kit 242 or Kit 243 Income Computer (the former with printout).

Also optional was the digital selection indica-

tor, and a "Break-In Alarm". If anyone tries to pry open the coin box door, a freon powered horn sounds off.

Service accessibility is good. The front door opens wide, allowing easy access to the components. The mechanism tilts up to a 45 degree angle, giving access to the under side. The mechanism sits low, so unless you have a jukebox lift, you'll be laying on the floor. The main electronic components are in the upper back of the cabinet, and are hinged to tilt down for service inside the chassis.

The 3800 is not microprocessor controlled, which makes it easier for the service person. However, the circuitry is complicated, and tracing out problems can be a serviceman's nightmare. The manual gives fairly good sequential diagrams, which helps.

The big problem would be the BOAC. It's generally not field serviceable, and a bad unit would probably have to be replaced. The LSI chip is specially designed for the unit, and a replacement would have to come from Wurlitzer stock.

From an operator's point of view, these were easy to take care of on the routes. Routine maintenance was low, and changing records and title strips is easy.

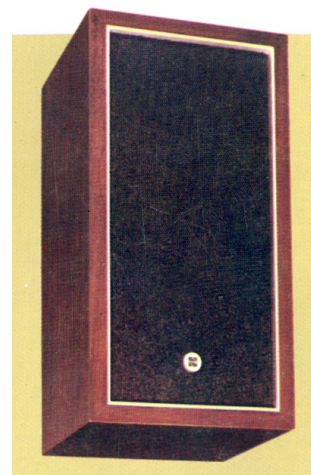
These are big, heavy machines. Dimensions are 52 1/4" tall by 27 3/4" deep by 40" wide. Weight is about 385 pounds.

Inflation has not hit the 3800 yet. The AJ Price Guide lists these at \$750 for a grade 2. This is may be a little conservative, but you still could pick up a nice one for a thousand or less.

The 3800 is also a pretty rare machine - the production was only 1396.

One can theorize why Wurlitzer discontinued American production. Changing public tastes undoubtedly contributed. Wurlitzer had high hopes for the 1050 to reverse their fortunes - this didn't pan out. The mechanism used the last few years of production possibly wasn't as reliable as the previous design. All these factors probably contributed to Wurlitzer's demise.

The Wurlitzer jukebox lived on in models produced by Wurlitzer of Germany. The 3800 mechanism, somewhat modified, was used. The One More Time replica of the 1015 still lives, and is still one of the most popular of the replicas.



MODEL 5133 REMOTE SPEAKER