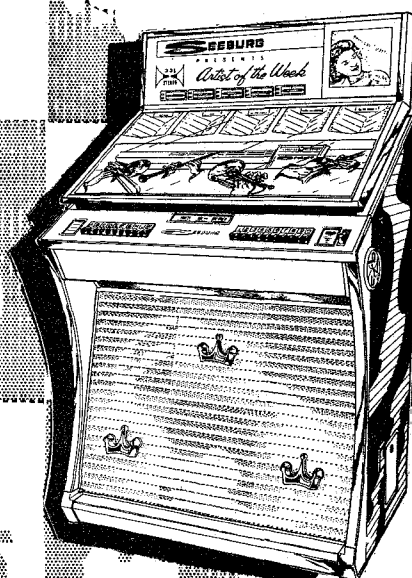


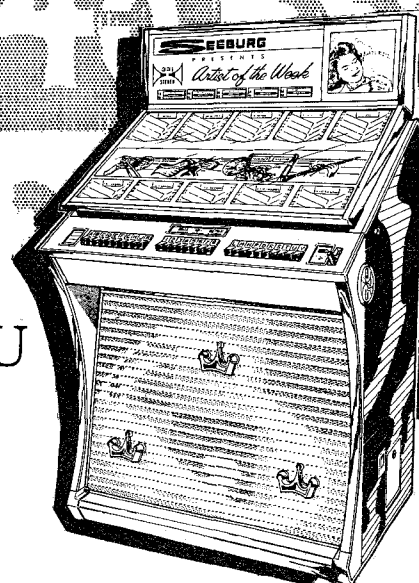


# PHONOGRAPH Installation Manual

33 $\frac{1}{3}$  45



AY 100U



AY 160U

THE SEEBURG CORPORATION  
CHICAGO 22, ILLINOIS U. S. A.

Part Number 486512

## INSTALLATION AND OPERATION

### DESCRIPTION

The Select-O-Matic AY100U and AY160U Models are coin-operated phonographs for selective playing of 45 rpm. and 33-1/3 rpm., 7-inch monaural and stereophonic records. The two models differ in the record capacity and the resultant title strip arrangement and in the selector key panel. The AY100U Model is for 100 selections; the AY160U Model is for 160 selections. Both models are equipped for stereophonic sound reproduction but monaural records may also be used.

System design incorporates assemblies which may be arranged to provide the services required. Thus the option of Half-dollar coin equipment is indicated by an "H" suffix in the model identification. An "R" suffix means 3-wire remote control selection facilities.

The "U" suffix denotes that all phonographs are equipped with the Type USPU1, Universal Pricing Unit. This device is the ultimate in accumulative credit units. It is designed to allow for extreme flexibility in setting-up pricing combinations.

### INSTALLATION AND OPERATION

#### Damage Caused By Shipping

Examine the instrument immediately after unpacking. If any damage is found, notify the transportation representative.

#### Cabinet Lid Support

The Cabinet Lid Support Rod is permanently attached to the Cabinet Lid. A notch in the Support Rod hooks into a Latch Plate and locks when the weight of the raised lid bears on it.

**CAUTION:** Be certain that the support rod is fully engaged in the slot before the lid is lowered. Do not move the cabinet while the lid is resting on the support.

To unhook the Support Rod from the Latch Plate, lift the lid and press the Support Rod toward the back of the Cabinet.

#### Unblocking

Before placing this Phonograph in operation, it is necessary to remove or loosen shipping hardware. Carefully follow instructions on the tags and remove blocks and shipping supports accordingly.

**CAUTION:** Do not attempt mechanism operation by manually turning the flywheel; this may damage the mechanism. Use the service switch.

**NOTE:** Do not put packing blocks, instruction cards, or any other material on the air intake screen in the floor of the cabinet, as this will obstruct ventilation and cause overheating. Overheating will warp records and shorten the life of the equipment. Store blocking material for future use.

#### Tubes and Plugs

This instrument is shipped with tubes and plugs installed. See that they are firmly seated in the sockets before inserting the line cord.

#### Voltage Rating

Before connecting the line cord make certain that the voltage and frequency agree with the markings of voltage and frequency on the Phonograph Nameplate.

#### Placing the Select-O-Matic

To obtain best performance and long service from this equipment, it should be placed on a firm, reasonably level floor, away from excessive moisture and heat.

**WARNING:** To prevent warping records, place phonograph where the records will not at any time be exposed to direct sunlight or any other radiant heat. Do not reduce ventilation by obstructing the vent screens.

A space of at least two inches must be allowed between the back of the cabinet and the wall, to assure adequate ventilation.

#### Service Switch Operation

The Service and Manual Credit Switch Assembly is mounted on the left hand side of the cabinet directly behind the Tormat Electrical Selector as shown in Figure 1. It can be removed

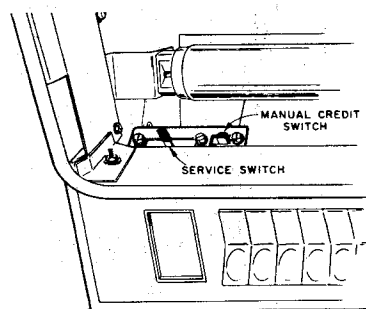


Figure 1. Service Switch

by loosening two wing nuts holding its bracket to the cabinet wall.

When the switch lever is moved to the "SCAN" position (to the left, against the spring return) and is permitted to return to center position, the record playing mechanism will scan past selections previously set up and come to rest at the right hand end of the base.

With the Mechanism scanning and the Service Switch in center position, the Mechanism may be stopped at any point of travel by pushing the Manual Credit Switch twice to the right against the spring return.

The Service Switch must be set to the right of center position for normal operation of the phonograph.

#### Manual Credit Switch

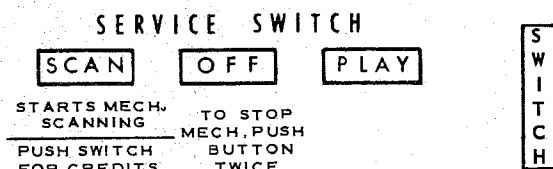


Figure 2. Service Switch Operating Instruction Plate.

With the Service Switch held in "SCAN" position, a credit is obtained when the Manual Credit Switch is pushed to the right, and a selection may be made after the Service Switch is returned to "PLAY" position.

#### Loading Records

To obtain optimum performance it is necessary that only new or nearly new records be used. Use only standard 7-inch commercial records.

Push up the Main Switch (on upper right hand side of rear door) to the "ON" position. Scan the carriage to the right hand end of its base, as described in Service Switch Operation.

Starting at the left end of the magazine, insert one record in each record space. The top row of selections on the indicator panel refers to the left side of the records and the bottom row to the right side of the records.

In the AY160U models, A1, C1, E1, G1, etc. will be left sides of records and B1, D1, F1, etc. will be right sides of records.

In the AY100U models, A1, B1, C1, D1, etc. will be left sides of records, and A2, B2, C2, etc. will be right sides of records.

**CAUTION:** Do not force records into record spaces! Any normal record will roll very freely into the record space. A record which is warped badly enough to have a tendency to bind in the magazine space would not be properly played in any automatic mechanism and should not be used.

When the left half of the magazine has been loaded, scan the carriage to the left and load the right half of the magazine. After the carriage has been loaded, set the Service Switch to the "PLAY" position (to the right).

**CAUTION:** Occasionally records will be found that have an undersized center hole. In some cases, this is caused by the paper label which has been pushed into the center hole. An undersized record center hole may make the record stick on the record pin.

#### Program Holders

The Program Holders are shown in Figure 3. The large holders can be individually lowered by releasing the retainer springs and can be re-latched by pressing the springs back into place.

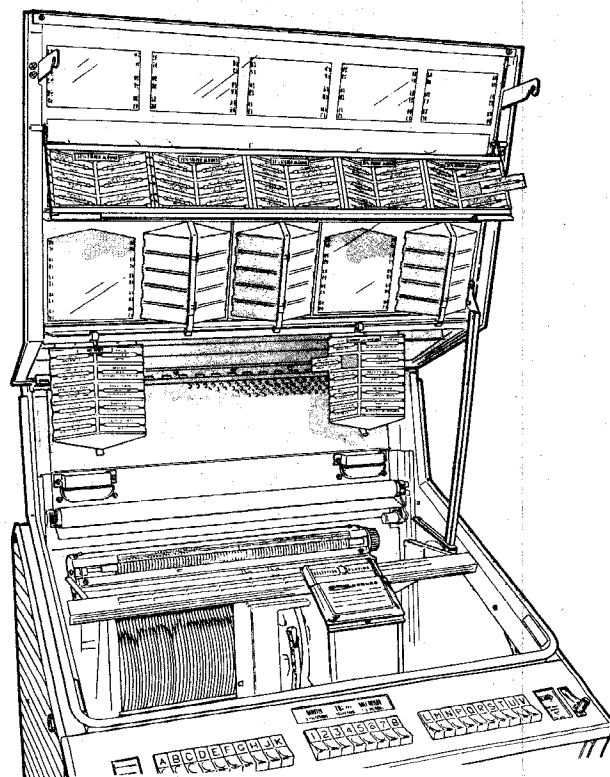
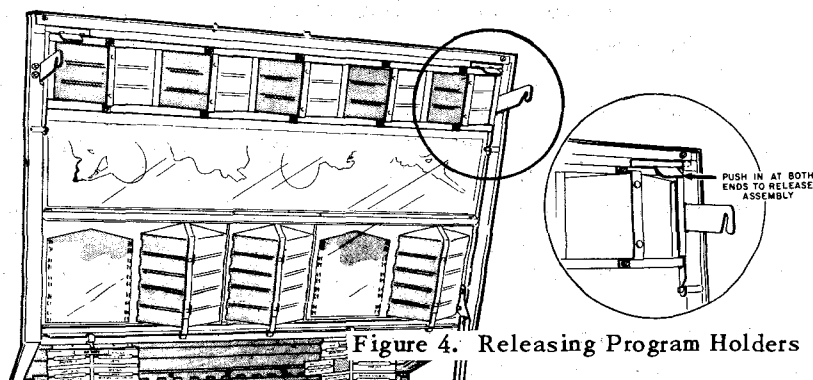


Figure 3. Loading Programs Holders

The smaller program holders (in AY160U models only) are retained in a five-unit assembly which is hinged on to the cabinet lid. To release the assembly for insertion of program strips, push inwards on the retaining latches and swing down (see Figure 4). The entire unit may be unhooked from the lid to facilitate servicing.



#### Personalized Location Display

The AY100U and AY160U models feature an illuminated panel located behind the upper lid glass which may be used to identify the location. Remove shipping screw (tagged) from center of name plate frame (see Figure 5) and carefully unsnap both ends. Lift out of the cabinet. The letters and numbers required are available from your Seeburg Distributor. Make up the sign by sliding the plastic letters or numbers into place. All characters must be close together on the same plane and centered in the frame. Replace the entire assembly on the lid glass.

#### ARTIST OF THE WEEK - RECORD PACKAGE

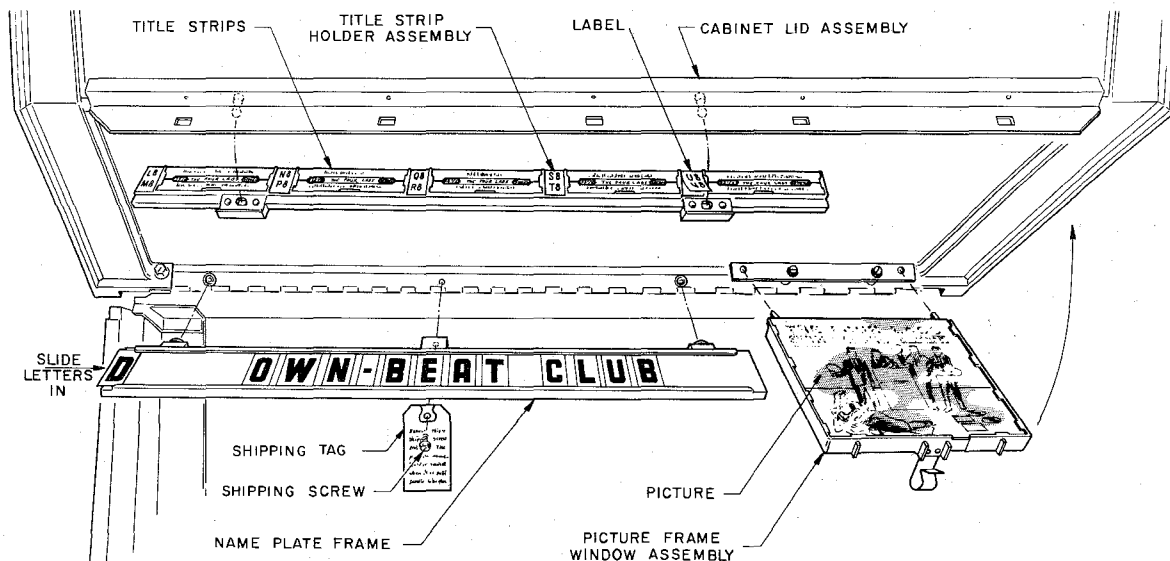


Figure 5. Artist of the Week picture, title strips and location display installation.

"The Artist of the Week" record package consists of the following items:

- A. (5) 33-1/3 rpm. stereo 7-inch records, recorded by one artist.
- B. (2) lithographed, colored pictures of artist featured on the records.
- C. (10) printed title strips for each of the above records.
- D. (10) Artist name cards to be used on Wall-O-Matics.

#### INSTALLATION

1. Unsnap picture window frame, swing down and remove as shown in above illustration.

**CAUTION:** Do not force locating pins.

2. Insert picture and replace picture window.
3. Unsnap title strip holder and remove from lid.
4. Insert title strips and replace loaded holder.
5. Load "Artist of the Week" records associated with title strips.

**NOTE** Self-adhesive Title Strip Identification Labels are provided:

Part No. 485923 for AY100U models,  
Part No. 485925 for AY160U models.

## UNIVERSAL PRICING UNIT, Type USPU1

The Universal Pricing Unit is designed for use with the AY100U and AY160U model Select-O-Matic phonographs. It exemplifies the ultimate in accumulative credit units and is capable of extreme flexibility in setting up pricing combinations.

The value in mixed coins that can be accumulated is dependent upon premiums given for Quarters and Half Dollars. Example of accumulated value is shown below for pricing combinations of:

5¢ play, 6 for Quarter, 14 for Half Dollar  
or  
10¢ play, 3 for Quarter, 7 for Half Dollar.

\$1.50 for any combination of Nickels and Dimes;  
\$1.25 for 5 Quarters;  
\$1.10 for 2 Half Dollars & 2 Nickels (or 1 Dime)  
\$1.25 for 1 Half Dollar, 1 Quarter and any combination of Nickels and Dimes totalling 50¢.

Figure 6 constitutes a chart condensing information regarding the capabilities and set-up requirements for seven (7) popular pricing combinations. Lithographed Pricing Windows are supplied with the phonograph. (Group Part No. 486516)

### INSTALLATION

The pricing information window is located in the center of the phonograph Selector Key Panel. To gain access to the pricing window, raise the cabinet lid and remove lower fluorescent light. Unscrew two (2) retaining screws and remove the Pricing Window Bracket. Install the pricing window transparency selected onto the clear glass window. Adjust the Universal Pricing Unit as indicated in the chart, *Figure 6*, and illustrated in Adjustments, *Figures 7 and 8*. Refer to instruction sheet Part No. 486550 for detailed information.

PRICING COMB.	PRICING WINDOWS			"ADD" STOP POSITIONS			ZERO STOP SET.	SUBTRACT SETTING
				DIME	QUARTER	HALF DOLLAR		
No. 1	10¢ PER SELECTION	QUARTER 3 SELECTIONS		* 2	* 6	NOT USED	* 0	* SUB 2
No. 2	5¢ PER SELECTION	QUARTER 6 SELECTIONS		* 2	* 6	NOT USED	1	SUB 1
No. 3	10¢ PER SELECTION	QUARTER 4 SELECTIONS		* 2	8	NOT USED	* 0	* SUB 2
No. 4	QUARTER 5 SELECTIONS	5¢ SELECTION	HALF DOLLAR 11 SELECTIONS	* 2	5	11	1	SUB 1
◆ No. 5	QUARTER 4 SELECTIONS	10¢ SELECTION	HALF DOLLAR 9 SELECTIONS	NOT USED	4	9	1	SUB 1
No. 6	QUARTER 6 SELECTIONS	5¢ SELECTION	HALF DOLLAR 13 SELECTIONS	* 2	* 6	13	1	SUB 1
No. 7	QUARTER 3 SELECTIONS	10¢ SELECTION	HALF DOLLAR 7 SELECTIONS	* 2	* 6	* 14	* 0	* SUB 2

\* STANDARD FACTORY SETTINGS (FIGURE 3).

◆ USE SLUG REJECTOR WITH FLIPPER & CONNECT DIME SWITCH TO NICKEL ADD SOLENOID.

Figure 6: Pricing Combination Set-Up Chart

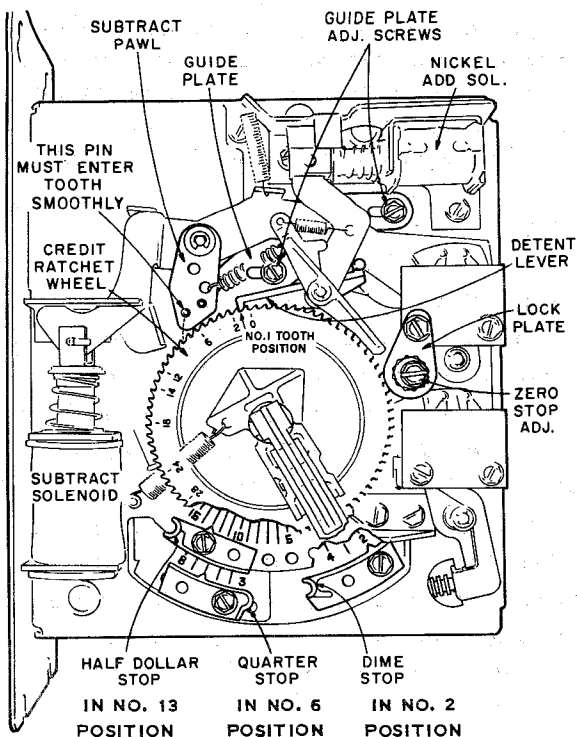


Figure 7

#### ADJUSTMENT FOR 5¢ PLAY (Figure 7)

1. Advance Credit Ratchet Wheel to 0+1 tooth (between 0 and 2). This now becomes the zero position for 5¢ play.
2. Remove the lock plate on the zero credit stop.
3. Loosen screw on zero credit stop.
4. Rotate zero credit stop so that the long radius of the eccentric post is facing the Credit Ratchet Wheel and position so that wheel may be rotated approximately  $\frac{1}{2}$  tooth in a counter-clockwise direction.
5. Barely tighten screw on zero credit stop.
6. Replace lock plate and its hold down screw.
7. Tighten screw on zero credit stop.
8. Advance Credit Ratchet Wheel so Detent Lever is engaged with tooth No. 6.
9. Loosen two screws on subtract pawl guide plate.
10. Shift pawl position plate so that the subtract pawl enters the valley of tooth No. 13 as the subtract lever is operating without appreciably striking the sides of the tooth.
11. Tighten the two screws on the guide plate.

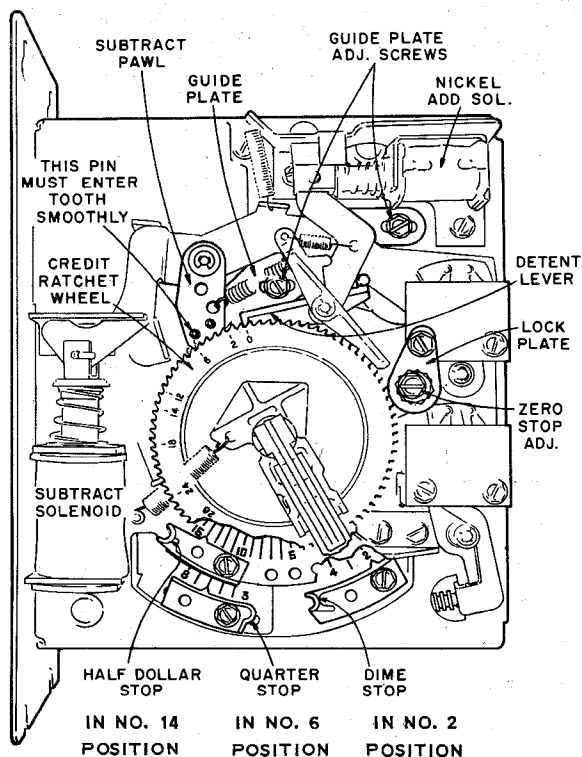


Figure 8: Standard Factory Settings

#### ADJUSTMENT FOR 10¢ PLAY (Figure 8)

1. Remove lock plate on the zero credit stop.
2. Loosen screw on zero credit stop.
3. Rotate zero credit stop so that the long radius of the eccentric post is facing away from the Credit Ratchet Wheel.
4. Engage the Detent Lever with the No. 0 tooth on the ratchet wheel and make certain that the zero credit stop is so positioned as to allow approximately  $\frac{1}{2}$  tooth counter-clockwise rotation of the Credit Ratchet Wheel.
5. Barely tighten the screw on zero credit stop.
6. Replace the lock plate and its hold down screw.
7. Tighten screw on zero credit stop.
8. Advance the Credit Ratchet Wheel so the Detent Lever is engaged with tooth No. 6.
9. Loosen two screws on subtract pawl guide plate.
10. Shift pawl position so that the subtract pawl enters the valley of tooth No. 12 as the subtract lever is operated without appreciably striking the sides of the tooth.
11. Tighten the two screws on the guide plate.

## POPULARITY METER

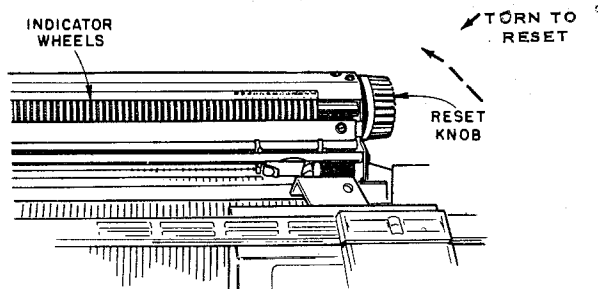


Figure 9. Popularity Meter

The Popularity Reset Knob is located at the right end of the Popularity Meter. To reset turn the knob in a clockwise direction; continue turning until all the wheels indicate zero.

## SELECTION COUNTER

The Selection Counter is located on the upper right hand side of the Electrical Selector and beneath the fluorescent light (see Figure 10). The counter totals selections made through the Electrical Selector in the phonograph.

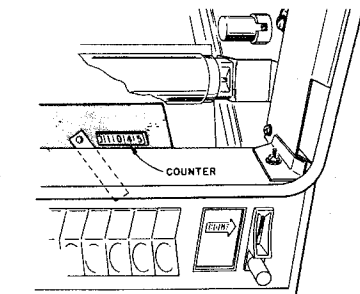


Figure 10. Selection Counter

If a remote control system is used, the counter totals selections made through the Wall-O-Matics and the Electrical Selector.

## SELECT-O-MATIC MECHANISM

The Select-O-Matic Mechanism can be removed from the back of the cabinet as a unit for repair or replacement purposes in all series of models. To gain access, unlatch and open bottom rear door. Remove screws from upper access panel and lift up and latch.

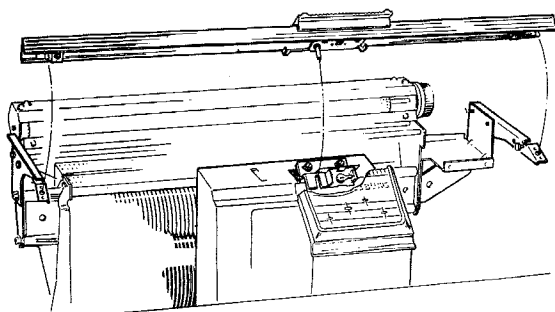


Figure 11. Removing Selection Playing Indicator

To remove the Mechanism, lift Cabinet Lid and latch. Remove selection playing indicator assembly as shown in Figure 11.

Remove pins in mechanism mounting channels. Remove cable assemblies. Slide Mechanism from cabinet.

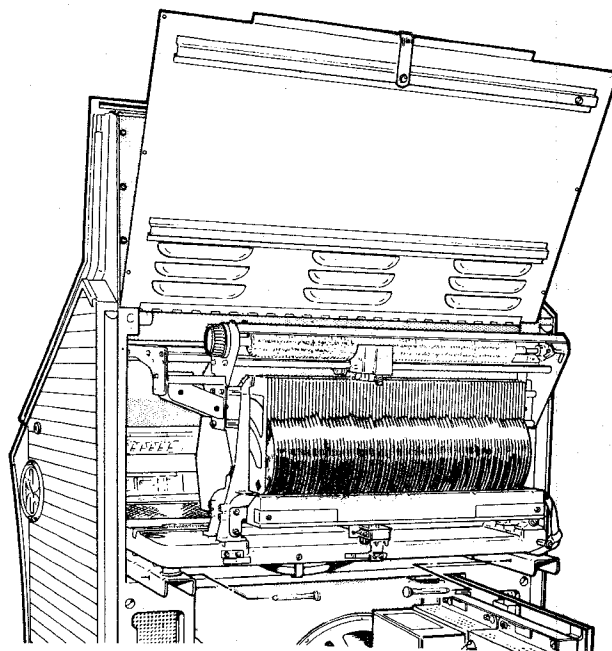


Figure 12. Mechanism Removal

## AUDIO CONTROLS

### Stereophonic

The Stereo Amplifier is equipped with dual tone controls and dual volume controls which assure simultaneous adjustment for both Channel 1 and Channel 2 Audio. The Master Volume Control is located on the outside of the rear door on the upper left hand side. Its shaft is slotted for use with a screw driver.

For high fidelity stereophonic reproduction the balance between bass and treble must be maintained. A Record Compensation and Tone Balance Settings table is provided in the stereo phonograph cabinet and duplicated in Figure 13.

## SELECT-O-MATIC PHONOGRAPH SPEAKERS

### Stereophonic

The phonograph speaker system incorporates two heavy duty 12-inch speakers connected through a Stereo Network to their respective amplifier channel.

# TONE CONTROL SETTINGS

LOCATION CONDITIONS	CONDITION OF RECORDS					
	NEW (Good Quality)		FAIR (Average)		POOR (Worn & Scratched)	
ACOUSTICALLY LIVE—Hard walls, ceiling and floor—little or no upholstery and draperies.	BASS	MAX-MED	BASS	MAX-MED	BASS	MED
	TREBLE	MIN	TREBLE	MIN	TREBLE	MIN
AVERAGE ROOM—Average amount of sound deadening material.	BASS	MED	BASS	MED	BASS	MED
	TREBLE	MED	TREBLE	MED-MIN	TREBLE	MIN
ACOUSTICALLY DEAD—Acoustic tile, heavy draperies and carpets, upholstered booths.	BASS	MED-MIN	BASS	MED-MIN	BASS	MED
	TREBLE	MAX	TREBLE	MED	TREBLE	MED-MIN

**ROOM SIZE**—In Small Rooms REDUCE treble range one position. In Large Rooms without Remote Speakers INCREASE treble range one position.

**NOISE**—The noise encountered in some locations (restaurants, etc) has a masking effect on high frequencies. Final control settings should be made under actual noise conditions with a representative number of people present.

**NOTE:** GOOD QUALITY REPRODUCTION CANNOT BE ATTAINED WITH POOR QUALITY RECORDS OR WITH WORN STYLII. REMEMBER—WORN STYLII WILL RUIN YOUR RECORDS.

Figure 13.

## TWIN STEREO SPEAKERS

The Seeburg Twin Stereo Speakers are specifically designed to be used in pairs. Each speaker carries its own channel identification, i.e. Channel 1 and Channel 2 respectively. The following types are available:

- A. Package of one each, Type TW1-8C1 and Type TW1-8C2, Twin Stereo Speakers for wall type installation (Part No. 502890).
- B. Package of one each, Type TC1-8C1 and Type TC1-8C2, Twin Stereo Speakers for corner installation (Part No. 502891).
- C. Package of one each, Type TR1-8C1 and Type TR1-8C2, Twin Stereo Speakers for recessed type installation (ceiling or wall) (Part No. 502892).

**NOTE 1:** Series TW1 Wall Speakers may be readily converted for corner installation by the addition of Corner Adapters available as a package of two each, Type CA1, Part No. 502881.

**NOTE 2:** Series TW1 Wall Speakers may be grouped in units of four identical speakers for ceiling suspension by the use of a Type 4PA-1 Four-Way Pendant Assembly, Part No. 502985.

**NOTE 3:** Series TW1 Wall Speakers may be grouped in units of two identical speakers for ceiling suspension by the use of a Type 2PA-1 Two-Way Pendant Assembly, Part No. 512020.

- D. Package of one each, Type EBTC1-12C1 and Type EBTC1-12C2, Twin Stereo Speakers for corner installation requiring the optimum bass response (Part No. 502897).

- E. Package of two, Type EBWC1-12 Stereo Speakers for wall or corner installation requiring the optimum bass response (Part No. 512280).

## STEREO SPEAKER CONTROL

### Type S10LT-3 (Accessory)

The Stereo Speaker Control, Type S10LT-3, is used for volume level adjustment of stereo speakers connected to constant voltage speaker lines. One or more pairs of stereo speakers may be controlled in seven 3 db steps (or turned off) without affecting other speakers connected to the stereo amplifier.

## POWERED REMOTE VOLUME CONTROL

### Type PRVC2 (Accessory)

The Powered Remote Volume Control, Type PRVC2, is an accessory which may be used with the phonograph to remotely control the volume and cancel selections.

The set includes a motor which is installed on the amplifier volume control and is operated by the remote switch to increase or decrease volume of the phonograph. A slip clutch permits volume adjustment at the phonograph independently of the remote control.



## THE SEEBURG STEREOPHONIC SYSTEM

### BASIC RULES FOR INSTALLATION

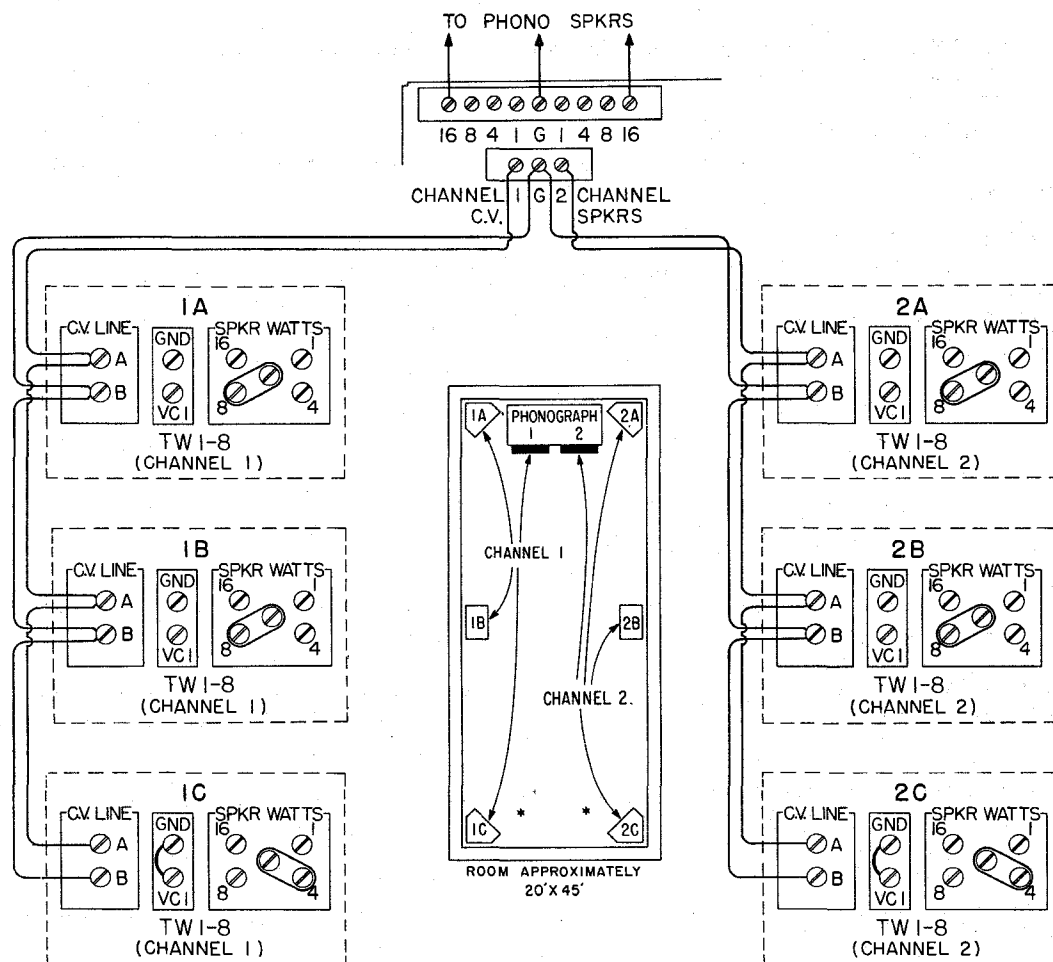
THE FOLLOWING BASIC RULES FOR THE INSTALLATION OF THE SEEBURG STEREOPHONIC SYSTEM ARE GUIDEPOSTS TOWARD THE SUCCESSFUL ACHIEVEMENT OF STEREOPHONIC REPRODUCTION.

1. **ALL LOCATIONS.** There is not a location in the country, regardless of size, which cannot successfully and to good advantage use a Stereo System.
2. **TWIN STEREO SPEAKERS - A MUST.** At least one pair of remote twin Stereo Speakers, properly placed, is essential to the reproduction of stereo. Use additional pairs as required to obtain good distribution throughout the listening area.
3. **SPEAKERS IN PAIRS - OPPOSITE.** Remote Twin Stereo Speakers should be installed in pairs (approximately opposite one another) and the speakers of each pair should face into the same area.
4. **HEIGHT FROM FLOOR.** The proper distance from the floor to the grille centers of wall and corner speakers should be as follows:

<u>ROOM WIDTH</u>	<u>HEIGHT ABOVE FLOOR</u>
(Distance between channels)	
8 feet .....	7 feet to 7½ feet
12 feet .....	7½ feet to 8 feet
18 feet .....	8 feet to 8½ feet
25 feet to 30 feet .....	8½ feet to 9½ feet

5. **PHASING.** The connections must be such that the phasing of all remote twin stereo speakers and phonograph speakers will be alike.
6. **SPACING WITHIN A CHANNEL.** The spacing between channel 1 remote speakers shall be about 15 to 20 feet; likewise, the spacing between channel 2 remote speakers shall be about 15 to 20 feet - depending upon room dimensions.
7. **SPACING BETWEEN CHANNELS.** The distance between remote speaker channels should be not less than 8 feet, and not more than 30 feet.
8. **TEN PAIRS IS MAXIMUM.** At no time shall more than ten remote speakers be connected to either channel of an amplifier. If additional speakers are required, use a type HFA1-L6 or a type HFA3 amplifier in each channel.
9. **BALANCE CHANNELS WATTS.** The sum of the wattage settings of all remote speakers must be the same for each channel.
10. **MORE BASS AT FAR POINTS.** When a pair of remote twin stereo speakers is installed more than 40 feet from a stereo phonograph, or in a separate room, a wire jumper should be placed from "VC1" to "GND" of each of these speakers. In these areas where the listener cannot hear the bass from the stereo phonograph it is important that corner type twin stereo speakers, TC1-8C1 and TC1-8C2 or EBTC1-12C1, EBTC1-12C2 and EBWC1-12 be used.
11. **SPEAKERS JUMPERED - 8 WATTS MAX.** Remote speakers with wire jumpers from "VC1" to "GND" must never be connected for more than 8 watts each. Exception is the EBTC1-12 and EBWC1-12 series which may be connected for 16 watts each.
12. **20 WATTS MAXIMUM.** Add total watts of all remote speakers in a channel with jumpers between "VC1" and "GND" to the wattage set-up of the phono speaker. This total must not exceed 20 watts.
13. **PHONO SPEAKER WATTAGE.** Add total watts of all remote speakers in a channel without jumpers between "VC1" and "GND". This must approximately equal the wattage of the phono speaker as set up on the Select-O-Matic speaker terminal strip.
14. **NETWORK SETTING.** Make sure that stereo network switch is set in "yes" position when using twin stereo speakers.
15. **BALANCING.** A stereo installation is never complete without a final test of balance between the two channels, using an output meter and a monaural record. Never attempt to balance system with a conventional stereo record.

# TYPICAL INSTALLATION OF THE SEEBURG STEREO SYSTEM



## CHANNEL 1 LOADING

1A (NO "VC1" TO "GND" JUMPER) SET AT 8 WATTS  
1B (NO "VC1" TO "GND" JUMPER) SET AT 8 WATTS

TOTAL 16 WATTS

EQUALS PHONOGRAPH SPEAKER  
TAP SETTING OF 16 WATTS

1C (WITH "VC1" TO "GND" JUMPER) SET AT 4 WATTS  
PHONO SPEAKER TAP SETTING OF 16 WATTS

TOTAL 20 WATTS

WHICH IS SATISFACTORY AMPLIFIER LOADING.

## CHANNEL 2 LOADING

2A (NO "VC1" TO "GND" JUMPER) SET AT 8 WATTS  
2B (NO "VC1" TO "GND" JUMPER) SET AT 8 WATTS

TOTAL 16 WATTS

EQUALS PHONOGRAPH SPEAKER  
TAP SETTING OF 16 WATTS

2C (WITH "VC1" TO "GND" JUMPER) SET AT 4 WATTS  
PHONO SPEAKER TAP SETTING OF 16 WATTS

TOTAL 20 WATTS

WHICH IS SATISFACTORY AMPLIFIER LOADING.

*\*Speakers 1C and 2C may be Seeburg Type EBTC1-12 or EBWC1-12 for optimum base reproduction in the area remote from the phonograph.*

## RECORD AND STYLUS CARE

### Record Care

To avoid accumulation of dust and dirt, keep oil off the records. Wipe your hands with a clean cloth before handling records, and always handle records by edge and center hole. Records that show signs of surface dust or dirt should be wiped with a slightly dampened cloth, using a circular motion. Use only water to dampen the cloth - solvents will damage the records. Records not in use should be stored on edge in a cool place. Avoid exposing the records to excessive heat. Records become overheated in a very short time if exposed to direct sunlight or if stored in a closed automobile or truck. Temperature above 120 degrees F. should be avoided. See instructions on "PLACING THE SELECT-O-MATIC".

### Stylus Replacement

In the presence of friction, wear of the Stylus starts with the first play and continues until the Stylus is replaced. The tone quality is good and distortion remains at a low figure for the first few thousand plays but gradually distortion increases until a disagreeable amount is noticed.

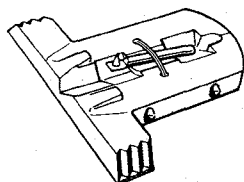


Figure 14. Armature Assembly

When only good vinylite 45 rpm. or 33-1/3 rpm. records are used, armature assemblies with Sapphire Styluses should be changed every four or five thousand plays to maintain good reproduction. If, because of the presence of oil on the records, dust or dirt is permitted to accumulate and remain on the surface, the wear will be more rapid; economical operation will require more frequent armature assembly replacement. Armature assemblies with Diamond Styluses that fit the Seeburg Magnetic Pickup Head are obtainable through your Seeburg Distributor.

**CAUTION:** If the armature assemblies are not replaced before objectionable distortion sets in, the records may be permanently damaged, and replacing the styluses will not restore the original tone quality.

### To Replace Armature Assemblies

1. Make a selection to the right of magazine center and left side of a record to position carriage and pickup arm cradle for easiest access to styluses.
2. Remove worn Styluses by gripping the top portion of the "T" using the thumb and forefinger. Light pressure in the direction away from the Stylus Point will slide the Armature out of the cartridge slot.

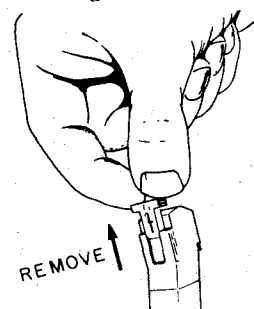


Figure 15. Removing Armature Assembly.

3. Install new Armature Assembly by laying it flat in open end of cartridge slot, and sliding forward in slot until it bottoms.

In order to retain good quality reproduction, it is necessary to keep the pickup and Styluses clean and in good condition.

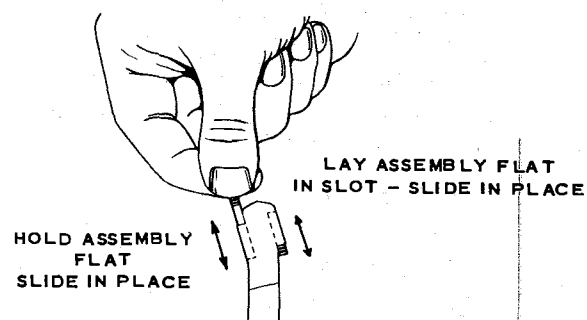


Figure 16. Installing New Armature.

**CAUTION:** The pickup and styluses must be handled carefully or the delicate armature suspension may be damaged.

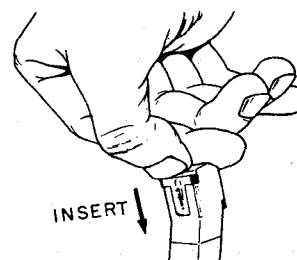


Figure 17. Installing New Armature.

## ADJUSTMENT OF TRANSISTORIZED AUTO-SPEED UNIT

If a listening test indicates off-speed (not 33-1/3) turntable operation, adjust the auto-speed unit as follows:

1. Replace a record with the Seeburg 33-1/3 Auto-Speed Strobe Disc, Part No. 508487 for 60 cycle phonographs or Part No. 508478 for 50 cycle phonographs. Light source frequency must conform to frequency indicated on Strobe Disc.
2. Select Strobe Disc on to the mechanism turntable and carefully prop pickup arm out of the way.
3. Allow unit to run approximately 3 minutes.
4. Set the motor speed to 33-1/3 RPM by adjusting the Motor Speed Control so that the outer and inner bands on the Strobe Disc move in opposite directions.
5. If this adjustment does not bring the motor to the proper speed, turn the Motor Drive Control clockwise or counter clockwise, whatever is needed, by 1/8 turn and repeat step 4.

6. Repeat Steps 5 and 4 as many times as necessary.
7. *Note:* Usually Steps 5 and 6 will not be necessary.
8. Remove the Strobe Disc.

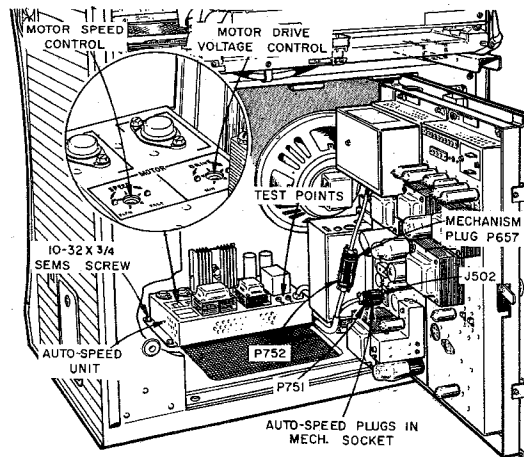


Figure 18. Typical Installation

## MAINTENANCE AND SHIPPING

### LUBRICATION

Follow the complete lubrication instructions given on the lubrication chart in the envelope on the inside wall of the phonograph.

The recommended lubricants are Seeburg Select-O-Matic Oil, Part No. 53014, and Aero Lubriplate, Part No. 53006.

### LIGHT REPLACEMENT

#### Upper Cabinet Light

The upper Cabinet Light illuminates the upper Program Holders and Pictorial Window. It is a 25-watt, 28-inch cool White Fluorescent tube which is accessible for replacement when the cabinet lid is latched in the raised position.

#### Lower Cabinet Light

This is a 25-watt, 28-inch cool White Fluorescent Light with associated starter. It illuminates the lower Program Holders and front of the Cabinet and is accessible when the lid is open.

#### Credit Lamps

One Credit Lamp Socket Assembly using a No. 55 bulb is cabled on the left hand side of the Tormat Electrical Selector.

### PREPARING INSTRUMENT FOR MOVING

1. Put the shims under the base, at the mechanism hold-down bolts.
2. Tighten four mechanism hold-down nuts.
3. Remove all records from magazine.
4. With the pickup arm in left hand side playing position, scan mechanism to a point at selection A-1.
5. Place protective tube over pickup cartridge and install pickup arm shipping support.
6. Put two fibre pads (a long pad in the rear and a short pad in the front) under the carriage wheels and bolt the carriage to the base by means of two 4½ inch long thumb screws, which are to be inserted thru mechanism base.

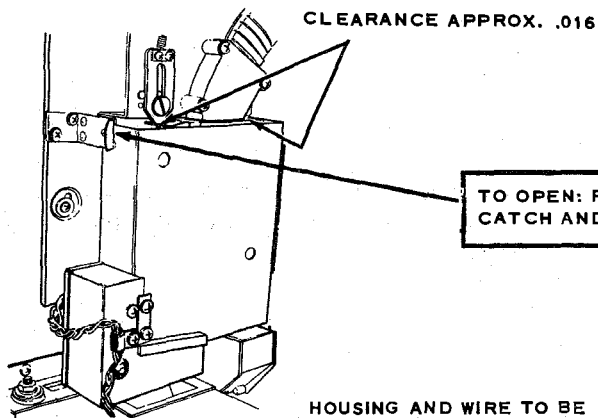
### TO SHIP

If the instrument is to be shipped by way of a transportation company, it should be blocked and crated in the same manner in which it was received from the factory.

# SLUG REJECTOR

5¢, 10¢, 25¢

5¢, 10¢, 25¢, 50¢



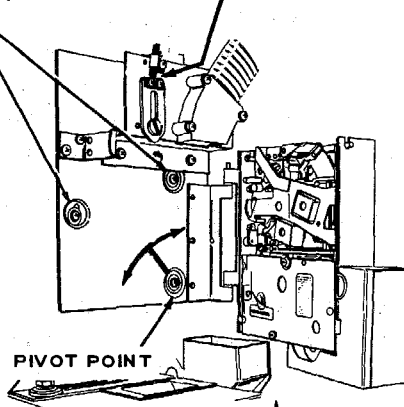
CLEARANCE APPROX. .016

HOUSING AND WIRE TO BE POSITIONED SO THAT A FULL STROKE OF SCAVENGER IS OBTAINED, WHEN SCAVENGER BUTTON IS DEPRESSED FLUSH.

TO OPEN: RELEASE THIS CATCH AND SWING OUT

HOUSING AND WIRE TO BE POSITIONED SO THAT A FULL STROKE OF SCAVENGER IS OBTAINED, WHEN SCAVENGER BUTTON IS DEPRESSED FLUSH.

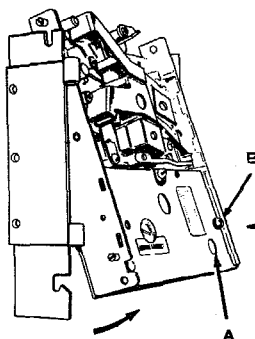
TO LEVEL: LOOSEN THESE (2) SCREWS AND SWING FRAME TOWARD FRONT OR REAR.



PIVOT POINT

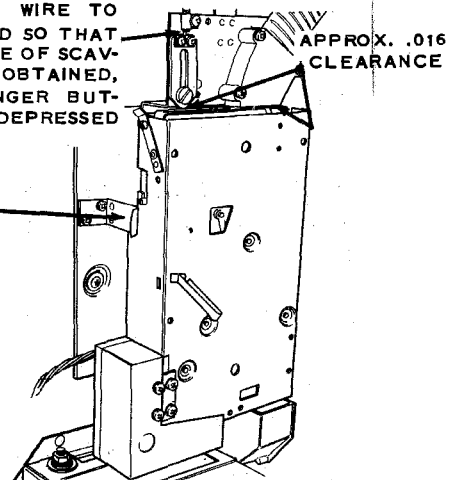
SLUG REJECTOR AND FRAME ASSEMBLY MAY BE LIFTED UP AND OFF FOR EXAMINATION OR SERVICE.

TO REMOVE SLUG REJECTOR FROM ITS FRAME LIFT UP AND SWING OUT.



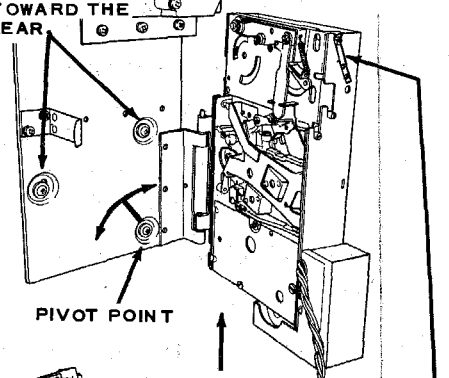
WHEN SLUG REJECTOR IS EQUIPPED WITH FLIPPER, NORMAL OPERATION REQUIRES SHORT SCREW AT "A" AND LONG SCREW AT "B".

TO LOCK OUT FLIPPER INTERCHANGE SCREWS WITH FLIPPER IN MAXIMUM COUNTER-CLOCKWISE POSITION.



APPROX. .016 CLEARANCE

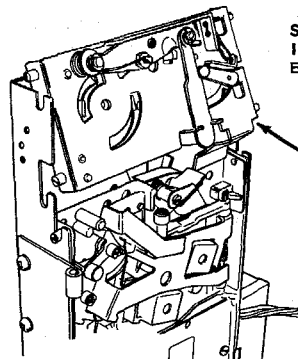
TO LEVEL SLUG REJECTOR: LOOSEN THESE (2) SCREWS AND SWING TOWARD THE FRONT OR REAR.



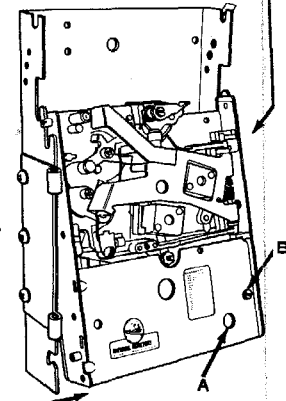
PIVOT POINT

SLUG REJECTOR AND ITS FRAME MAY NOW BE LIFTED UP AND OFF.

TO REMOVE SLUG REJECTOR: RELEASE THIS CATCH THEN LIFT 50¢ SECTION UP AND OUT



NEXT, LIFT 5¢, 10¢ & 25¢ SECTION UP AND SWING OUTWARD



## WARRANTY NOTICE

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### NOTICE

THE SEEBURG CORPORATION reserves the right to make any changes or improvements in its products without notice and without obligation, and without being required to make corresponding changes or improvements in products theretofore manufactured or sold.

### WARRANTY

THE SEEBURG CORPORATION warrants this product, manufactured by it, to be free from defects in material or workmanship under normal use. Our obligation under this warranty, is limited to making good at our factory any part or parts thereof which shall, within ninety days after delivery of such product to the original purchaser, be returned to us or to our authorized dealer or distributor from whom purchased with all transportation charges prepaid to our factory, and which our examination shall disclose to our satisfaction to have been thus defective.

This warranty does not extend (1) to any of our products which have been subject to misuse, neglect, accident, incorrect wiring not our own, improper installation, or to use in violation of instructions furnished by us, (2) to units which have been repaired or altered outside of our factory, (3) to cases where the serial number of the product has been removed, defaced or changed, (4) to tubes or lamps, or (5) to accessories not of our own manufacture used with our products.

Any part found by us to be defective will be exchanged by the authorized dealer or distributor without charge to the owner.

This warranty applies only to our products which are used within the continental limits of the United States of America and is in lieu of all warranties expressed or implied, and no representative or person is authorized to assume for us any other liability in connection with the sale of our products.

THE SEEBURG CORPORATION

CHICAGO 22, ILLINOIS, U.S.A.

# SEEBURG UNIVERSAL PRICING UNIT, Type USPU1 with Select-O-Matic AY100U and AY160U Models


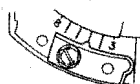


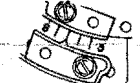

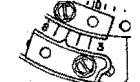


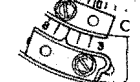





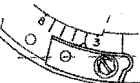

The Universal Pricing Unit is designed for use with the AY100U and AY160U model Select-O-Matic phonographs. It exemplifies the ultimate in accumulative credit units and is capable of extreme flexibility in

The figure below constitutes a chart condensing information regarding the capabilities and set-up requirements for seven (7) popular pricing combinations. Lithographed Pricing Windows are supplied with the phonograph (Group Part No. 486516).

## INSTALLATION

The pricing information window is located in the center of the phonograph Selector Key Panel. To gain access to the pricing window, raise the cabinet lid and remove lower fluorescent light. Unscrew two (2) retaining screws and remove the Pricing Window Bracket. Install the pricing window transparency selected on the underside of the clear glass window. Adjust the Universal Pricing Unit as indicated in the chart, below, and illustrated in Adjustments, on page 2.

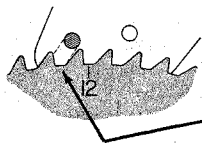
\$1.50 for any combination of Nickels and Dimes; \$1.25 for 5 Quarters; \$1.10 for 2 Half Dollars & 2 Nickels (or 1 Dime); \$1.25 for 1 Half Dollar, 1 Quarter and any combination of Nickels and Dimes totalling 50¢.

PRICING WINDOW	ADD STOP POSITIONS			ZERO STOP	SUBTRACT PAWL	SLUG REJECTOR	COIN SWITCH JUMPER
	DIME	QUARTER	HALF DOLLAR				
<div>QUARTER 5 SELECTIONS</div> <div>5¢ PER SELECTION</div> <div>HALF DOLLAR 11 SELECTIONS</div>	 IN NO. 2 POSITION	 IN NO. 5 POSITION	 IN NO. 11 POSITION	POSITION 2	POSITION 1	POSITION 1	POSITION 1
<div>5¢ PER SELECTION</div> <div>QUARTER 6 SELECTIONS</div>	 IN NO. 2 POSITION	 IN NO. 6 POSITION	NOT USED	POSITION 2	POSITION 1	POSITION 1	POSITION 1
<div>QUARTER 6 SELECTIONS</div> <div>5¢ PER SELECTION</div> <div>HALF DOLLAR 13 SELECTIONS</div>	 IN NO. 2 POSITION	 IN NO. 6 POSITION	 IN NO. 13 POSITION	POSITION 2	POSITION 1	POSITION 1	POSITION 1
<div>10¢ PER SELECTION</div> <div>QUARTER 3 SELECTIONS</div>	 IN NO. 2 POSITION	 IN NO. 6 POSITION	NOT USED	POSITION 1	POSITION 2	POSITION 1	POSITION 1
<div>QUARTER 3 SELECTIONS</div> <div>10¢ PER SELECTION</div> <div>HALF DOLLAR 7 SELECTIONS</div>	 IN NO. 2 POSITION	 IN NO. 6 POSITION	 IN NO. 14 POSITION	POSITION 1	POSITION 2	POSITION 1	POSITION 1
<div>10¢ PER SELECTION</div> <div>QUARTER 4 SELECTIONS</div>	 IN NO. 2 POSITION	 IN NO. 8 POSITION	NOT USED	POSITION 1	POSITION 2	POSITION 1	POSITION 1
<div>QUARTER 4 SELECTIONS</div> <div>10¢ PER SELECTION</div> <div>HALF DOLLAR 9 SELECTIONS</div>	NOT USED	 IN NO. 4 POSITION	 IN NO. 9 POSITION	POSITION 2	POSITION 1	POSITION 2	POSITION 2

## SUBTRACT PAWL AND GUIDE PLATE:

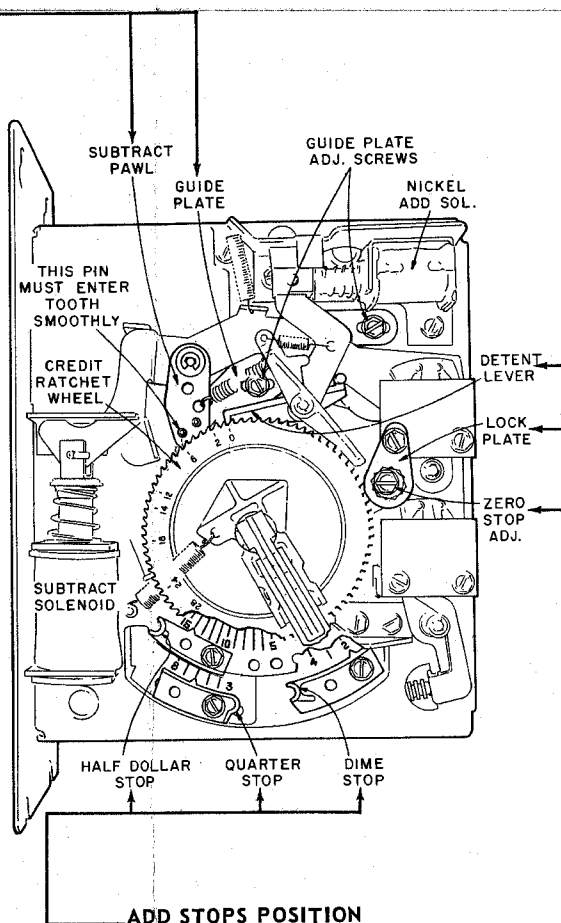
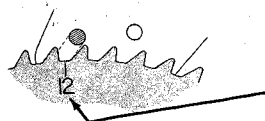
### POSITION NO. 1

- Advance Credit Wheel so detent lever is engaged with tooth No. 6.
- Loosen two screws on subtract pawl guide plate.
- Position guide plate so, when subtract solenoid operates, the subtract pawl enters tooth No. 13 without striking the sides of the tooth.
- Tighten screws on guide plate.



### POSITION NO. 2

- Advance Credit Wheel so detent lever is engaged with tooth No. 6.
- Loosen two screws on subtract pawl guide plate.
- Position guide plate so, when subtract solenoid operates, the subtract pawl enters tooth No. 12 without striking the sides of the tooth.
- Tighten screws on guide plate.



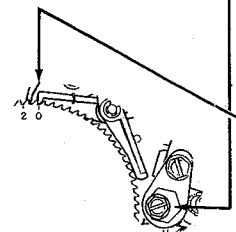
CREDITS FOR COINS ARE DETERMINED BY POSITIONING STOPS.

- Remove screw from stop.
- Shift stop to desired position using pointer on stop as indicator.
- Replace and tighten screw.

## ZERO STOP:

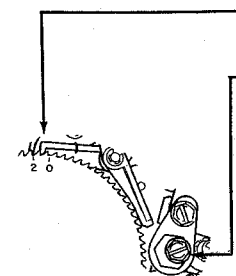
### POSITION NO. 1

- Remove lock plate. Loosen screw on zero credit stop and rotate stop so the long radius of the eccentric post is facing away from the Credit Wheel.
- Engage detent lever with No. 0 tooth on Credit Wheel.
- Bias the wheel against the stop.
- Adjust stop position so there is slight clearance between the tip of the detent lever and the face of the No. 0 tooth.
- Replace lock plate and tighten screws.



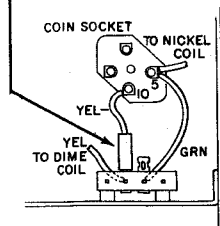
### POSITION NO. 2

- Engage detent lever with No. 1 tooth on Credit Wheel.
- Remove lock plate. Loosen screw on zero credit stop and rotate stop so the long radius of the eccentric post is facing the Credit Wheel.
- Bias the wheel against the stop.
- Adjust stop position so there is slight clearance between the tip of the detent lever and the face of the No. 1 tooth.
- Replace lock plate and tighten screws.

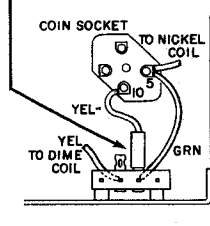


## COIN SWITCH JUMPER:

### POSITION NO. 1



### POSITION NO. 2



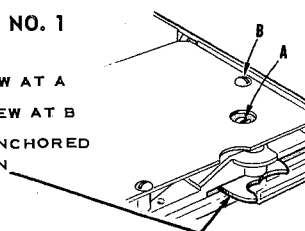
## SLUG REJECTOR:

### POSITION NO. 1

LONG SCREW AT A  
SHORT SCREW AT B  
FLIPPER ANCHORED  
AS SHOWN

### POSITION NO. 2

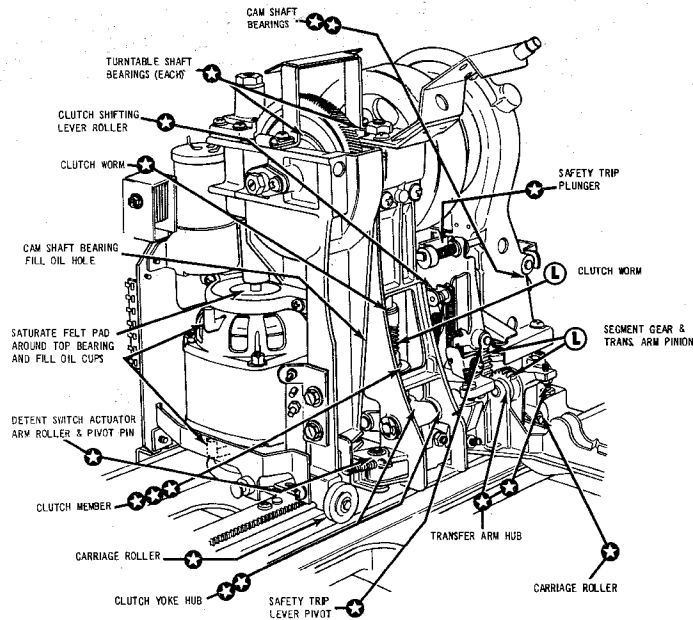
LONG SCREW AT B  
SHORT SCREW AT A  
FLIPPER NOT  
ANCHORED





# SEEBURG

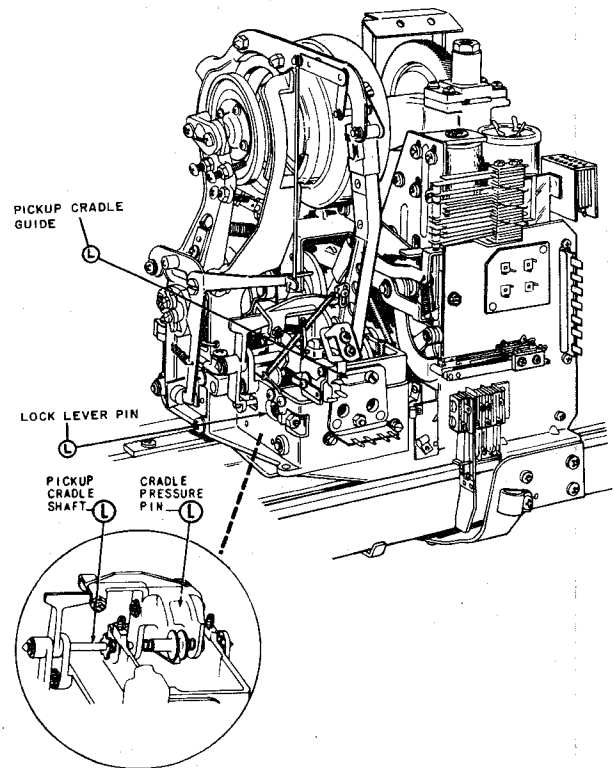
## LUBRICATION CHART



OIL ALL ROLLER PIVOT BEARINGS - 1 OR 2 DROPS

USE AERO LUBRIPLATE\*\* SPARINGLY EVERY SIX MONTHS

USE SEEBURG SPECIAL PURPOSE OIL\* EVERY SIX MONTHS IN AMOUNT SHOWN 1 DROP FOR EACH



\* SEEBURG SPECIAL PURPOSE OIL NO. 53014 MAY BE OBTAINED FROM YOUR SERVICE PARTS DEPARTMENT AT YOUR DISTRIBUTOR.

\*\* AERO LUBRIPLATE MAY BE OBTAINED FROM YOUR SERVICE PARTS DEPARTMENT AT YOUR DISTRIBUTOR.

... IN A HANDY HALF - PINT TOOL KIT SIZE CAN

*SEEBURG SPECIAL PURPOSE SELECT-O-MATIC OIL* is a premium quality, first line lubricating oil in a container that provides maximum economy consistent with a convenient tool-kit size. Its high quality makes it suitable for many different applications but it is intended especially for lubricating the Select-O-Matic "100" and "200" mechanisms as shown on equipment lubrication charts. Some of the advantages of this oil are:



**HIGH STABILITY:** Solvent refined base stock plus oxidation inhibitor makes possible exceptional resistance to chemical change. It does not easily sludge, become acid, increase in viscosity, or form varnish. This is important when an oil is used for long periods without periodic equipment cleaning.

**HIGH VISCOSITY INDEX** is a feature that indicates the oil does not thin excessively at high temperatures or thicken excessively at low temperatures. This is important when equipment is started at low temperatures and avoids loss of lubrication due to thinning at high temperatures.

**NON-FOAMING:** This *Seeburg Oil* contains an effective defoaming additive. Important in gear cases.

**RUST PREVENTION:** A corrosion and rust inhibitor is added that plates out on metal surfaces and prevents chemical attack of them.

**LOW POUR POINT:** Waxy constituents are removed in manufacture and pour point depressant additive is incorporated.

**PHYSICAL PROPERTIES** of oils do not indicate the quality but they do provide data on performance. The Seeburg Select-O-Matic oil has the following specifications:

Minimum Flash Temperature	410° F.
Maximum Pour Temperature	
Viscosity at 100° F. (Saybolt Sec.)	208
AGMA Number	1