



CD-100B
LaserStar®
Compact Disc
Phonograph

**Field Service Manual
& Parts Catalog**

Volume 1 of 2

Installation, Programming, Routine Service

**PART NO. 21822617
FIRST EDITION**

Rowe extends to the original operator of this equipment the following warranty:

All parts are guaranteed to be free of defects in material and workmanship for the specific periods which follow. Rowe agrees to repair without charge during such period any part which proves defective upon examination by Rowe. All costs of shipping an allegedly defective part to or from Rowe's offices shall be borne by the original operator.

Phono Mechanism Moving Parts	5 Years
Electronic Circuit Boards	2 Years
Electrical and Mechanical Parts	1 Year
Lamps and Styli	90 Days
CD Players, VCR's, Monitors, and CD Decks	1 Year

In the case of parts supplied to Rowe as components, Rowe extends the same warranty period as extended by the original manufacturer.

The above warranty applies provided that all parts of the machine have been serviced properly as directed in the service manual, and provided the alleged defective part, upon examination by Rowe, shall prove to be thus defective.

This warranty will not apply to any machine or any part which has been subjected to any accident, abuse, or misuse.

ROWE INTERNATIONAL, INC. EXTENDS NO WARRANTY, EXPRESSED OR IMPLIED, TO PURCHASERS OR USERS OF ITS PRODUCTS EXCEPT AS HEREIN SET FORTH, WHETHER BY OPERATION OF LAW OR OTHERWISE.



WARNING:

When servicing, do not approach the laser exit with the eye too closely. In case it is necessary to confirm laser beam emission, be sure to observe from a distance of more than 10 inches from the surface of the objective lens on the optical pick-up block.

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

CD-100B

LaserStar[®] *Compact Disc Phonograph*

Field Service Manual And Parts Catalog

Volume 1



1500 UNION AVE, SE • GRAND RAPIDS, MI 49507-1884
(616) 243-3633

Printed in USA

Part No. 21822617
First Edition
Second Printing December 1991

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Preface

To make installation easier, this manual describes a typical installation. This "typical" installation only includes loading the title rack and discs, setting up the sound system, and in some situations, modifying the pricing.

If you wish to make further programming changes, make them using the information that follows the basic installation. This manual contains all of the information that was previously available in the *Enhanced Features Supplement*. If you have a copy of the Enhanced Features Supplement, you may use it with a CD-100, but do not use it with a CD-100B.

Because this manual has become so large, we have split it into two parts. The split is between Sections 3 and 4. The first half, Volume 1, contains routine installation and service information. The second half, Volume 2, contains troubleshooting charts, schematics, and other maintenance information. Please take time to read this page and review the *Table of Contents* in both volumes.

The *Troubleshooting* section has been expanded to include schematics, component lists, and board layouts for all serviceable modules.

This service manual is divided into eight sections:

Volume 1

- Section 1** **System Description** — Introduces you to the CD-100B, its features, and its major components, principles of operation, and step-by-step unpacking instructions. After unpacking the CD-100B, you should continue the installation process by following the title rack loading and programming instructions in *Section 2*.
- Section 2** **Installation And Programming** — Continues the installation process with disc and title rack loading instructions, programming references, and step-by-step programming and pricing instructions. Whether you are familiar with previous Rowe phonographs or not, pay special attention to the pricing and programming.
- Programming and pricing have been set at the factory, so you may not wish to change any of the CD-100B options. After you load the titles and the discs, the CD-100B is ready to play.
- Section 3** **Routine Service** — Provides routine service instructions for collecting money, doing cash and play audits, resetting phonograph totals, and doing preventive maintenance.

Volume 2

- Section 4** **OBA-2 Maintenance** — Contains all OBA-2 maintenance information, except for the OBA-2 replacement parts, which are in the *Parts Catalog*.
- Section 5** **Troubleshooting** — Provides troubleshooting charts, error code and disc condition descriptions, troubleshooting procedures, block diagrams, schematics, circuit board layouts, and component lists. This section also contains the sequence of operation.
- Section 6** **Mechanical Adjustments** — Details the mechanical checks and adjustment procedures for all of the CD-100B's modules, except for the OBA-2 modules, which are described in *Section 4*.
- Section 7** **Miscellaneous** — Contains specifications, fuse and circuit breaker locations, and a resistor color code chart.
- Section 8** **The Parts Catalog** — Lists and illustrates all replaceable modules in the CD-100B. The Accessory Equipment List is at the end of this section.

This manual is intended for owners, route operators, and technicians. This manual provides all field and shop related service and maintenance material. Accessories and their installation and service are discussed in the corresponding accessory instructions (or manuals).

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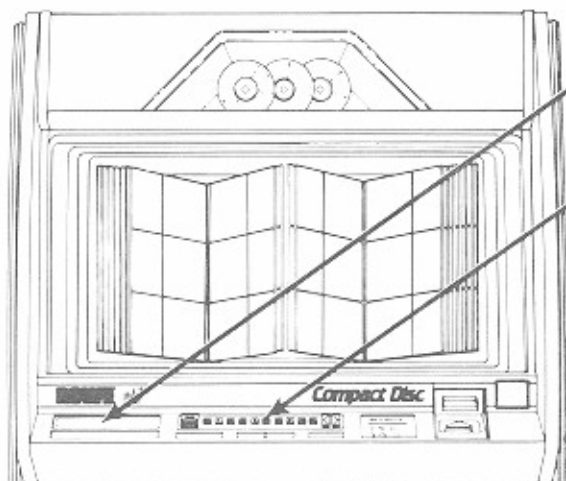
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DIGITAL DISPLAYS -
Show the SELECTION PLAYING, SELECTION
BEING MADE, SELECTIONS REMAINING,
and SERVICE MODE DISPLAY.

SELECTOR KEYBOARD -
Enters numbers and contains
the POPULAR and RESET Keys

BILL ACCEPTOR - Accepts \$1 and \$5 bills

COIN ACCEPTOR - Accepts coins

CENTRAL CONTROL COMPUTER -
Controls all functions of the Phonograph

OUTPUT TRANSFORMERS -
Provide connections to the speakers

SERVICE SWITCH -
Selects the mode of operation

AMPLIFIER COMPARTMENT -
Contains the Amplifier and Main Power Supply

CD MECHANISM -
Selects and plays discs

FRONT DOOR LATCHES -
Allow the front door to swing out

HANDY CASE -
Contains the Service Manual
and spare parts

SPEAKER SYSTEM -
Woofers and High/Midrange
(not shown) Speakers

MECHANISM CONTROL UNIT -
Controls Disc Mechanism

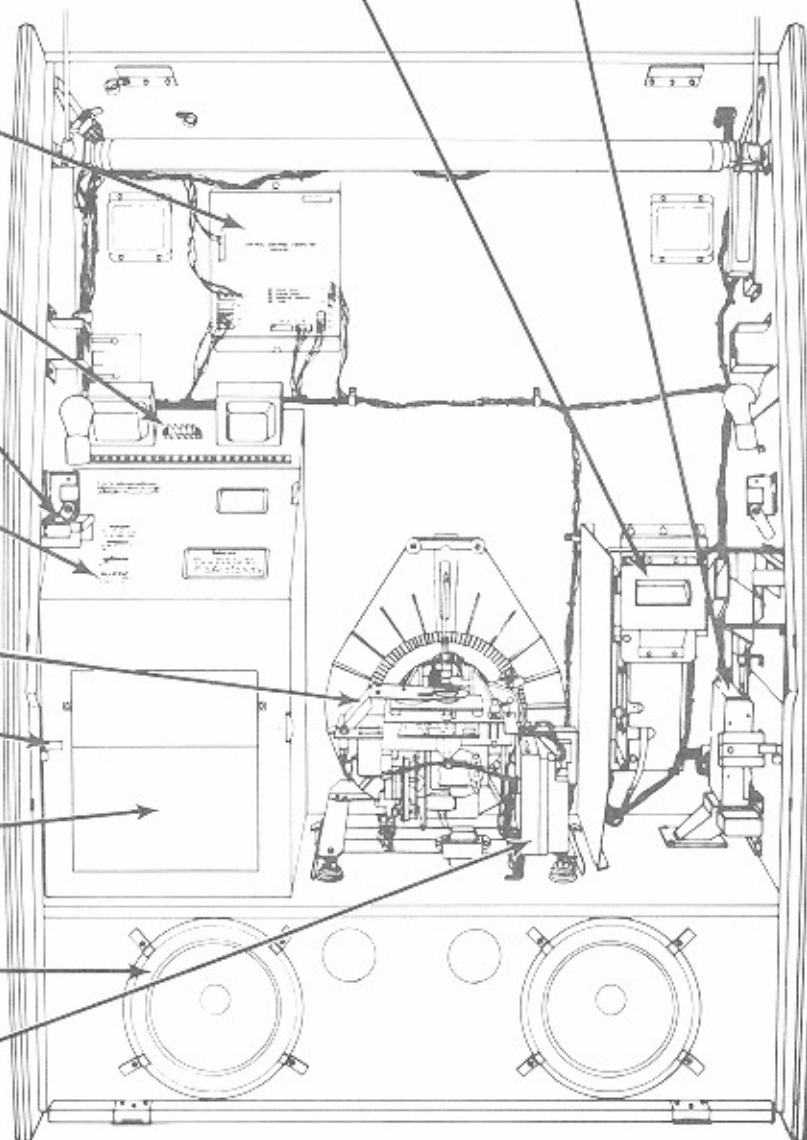


Figure 1-1. CD-100B Major Components

Section 1: Installation & System Description

INTRODUCTION

The CD-100B phonograph is an updated version of the very successful CD-100A Phonograph. The CD-100B plays compact discs exclusively. The outer appearance of the CD-100B is similar to the CD-100A, and many of the functional modules are very similar to previous 45 RPM record models. The reliable record mechanism has been modified to hold up to 100 compact discs. These discs are played through a 250 watt stereo sound system.

Before you begin to unpack and use this phonograph, you need to pay special attention to the following:

Read This Carefully Before You Put Your New CD-100B In Service:

- ***Mechanism***—Completely unpack the mechanism before you plug the 2-wire Yellow and White/Black cable into P10 on the CD mechanism.
- ***Title Pages***—If you wish to turn the title pages manually, use the handwheel on the back of the title rack.
- ***CD Player***—Read the CD player unpacking procedure and the static caution that accompanies the procedure.
- ***Title Rack***—Before you close the top door, make sure that you have returned the title rack and hinged title rack support bracket to their normal positions.

FEATURES

The CD-100B utilizes many of the standard Rowe CD phonograph service features and contains many new features. The major CD-100B features are:

General Features:

- Sturdy construction and reliable design
- Conveniently located customer, operator, and service controls
- New attention getting animation display and expanded Autoplay options
- Electrically operated title pages
- Entire albums can be selected
- A 250 watt amplifier with dual 7-band graphic equalizer
- Increased AVC range keeps CD volume constant over a wider range
- 100 disc capacity
- As selected (FIFO) playback or random playback
- 500 Bill capacity
- Attract mode to merchandise music or advertising
- Many new phonograph programming options
- A total of 50 selections may be "locked out"
- A total of 10 selections may be "priorities"
- A total of 25 selections may be "premium"
- A real-time clock allows Autoplay, lockouts, and free play to be scheduled by time and day
- Accessory available to play background music and/or autoplay at different volume levels

Service Features:

- All servicing can be done from the front of the phonograph
- Modular component construction for easy removal and replacement
- Alpha/Numeric display gives you more comprehensive readouts
- Complete cash and play audit information
- Three levels of security access provide limited access to route operators if desired
- Disc condition logging feature to help find skipping selections and unplayable discs.
- Machine errors and disc conditions are logged by time and date
- Choice of 3 CD initialization procedures
- Optional RS-232 Interface allows you to print audit data, Memorec data, pricing options, disc conditions, and error history.

UNPACKING INSTRUCTIONS

This section contains information for unpacking the CD-100B and installing it on location. The phonograph is shipped with all major components in place. Save all tie-down hardware in case the CD-100B must be moved to another location.

Exterior

1. Remove the shipping carton with care: Do not use shipping hooks or sharp tools that could damage the phonograph cabinet.
2. Remove the plastic bag that covers the phonograph.
3. Carefully inspect the interior and exterior of the phonograph to ensure that no damage occurred during transit.

If damage is detected, the carrier who delivered the phonograph should be contacted immediately to examine it. Regardless of the exterior condition of the shipping cartons, the carrier should be called and notified of damage. Do not destroy the packing material or boxes until the carrier's agent has examined them. Damage claims are your responsibility. Do not return shipping damaged merchandise until after your claim has been established. Once your claim has been established, merchandise may be returned to your Rowe distributor for repair. The invoice amount for repair charges can then be collected from the carrier.

Doors

1. Locate the red bag on the top door. Remove the door key from the bag and unlock the top door. Turn the key to the right and press down on the top door as you turn the key.



WARNING:

Step back as you release the top door so that you do not hit your chin with the top door.

2. Open the front door by pressing down on both front door latches (*see figure 1-1*).

Shipping Bolts, Clips, And Tape

TITLE RACK

1. Remove the shipping tape from both ends of the lower title rack assembly support bar.
2. Remove the shipping tape from the front of the title rack pages.



CAUTION:

Do not attempt to turn the CD title pages by hand. Use the handwheel on the back of the title rack (see figure 1-2).

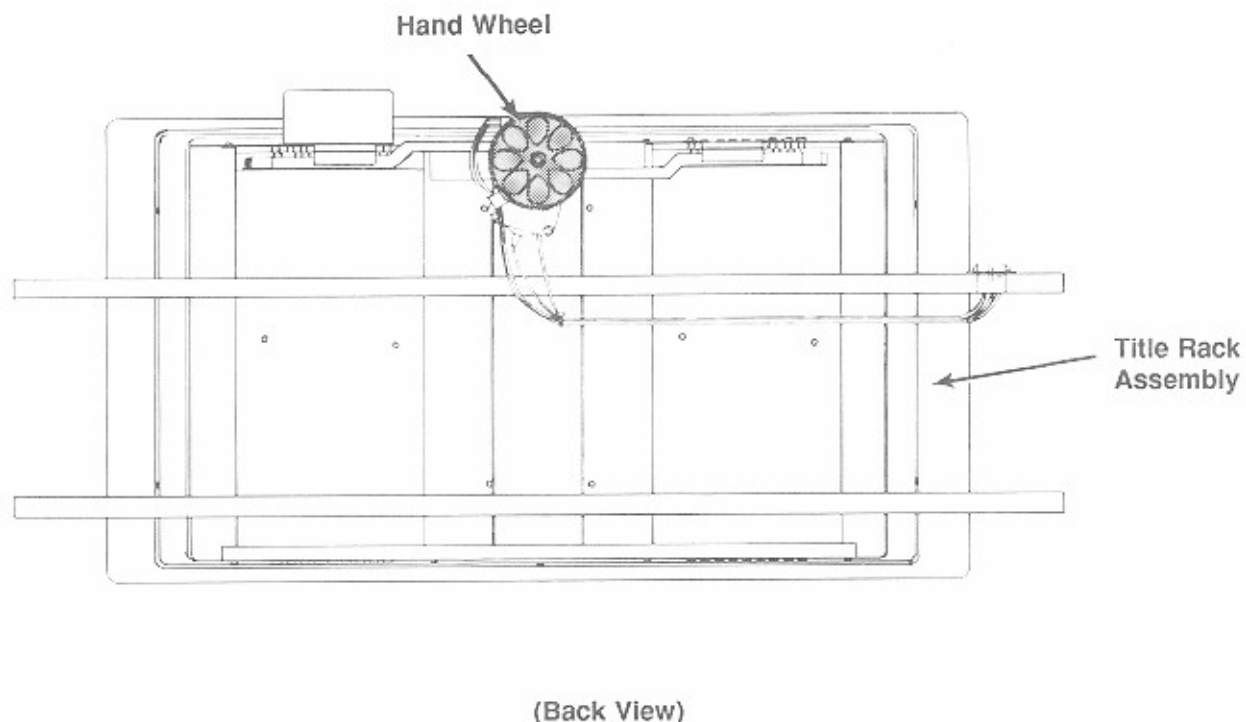


Figure 1-2. Title Rack Hand Wheel

Save all shipping hardware that you remove in the following six steps:

Mechanism

CD UNPACKING

1. Remove the CD changer mechanism shipping bolt from the back of the phonograph cabinet (see figure 1-3).

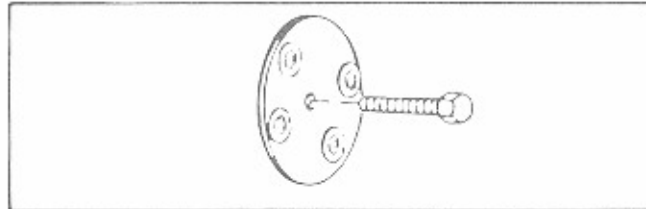


Figure 1-3. Shipping Bolt Removal

2. Remove the shipping tape from the front ends of the mechanism tie-down levers on the side of the mechanism frame (see to figure 1-4).
3. Push the end of the lever down slightly, rotate the lever away from the frame until the latch tab clears the hole in the frame, rotate the lever up until the mechanism is free, and remove the levers.

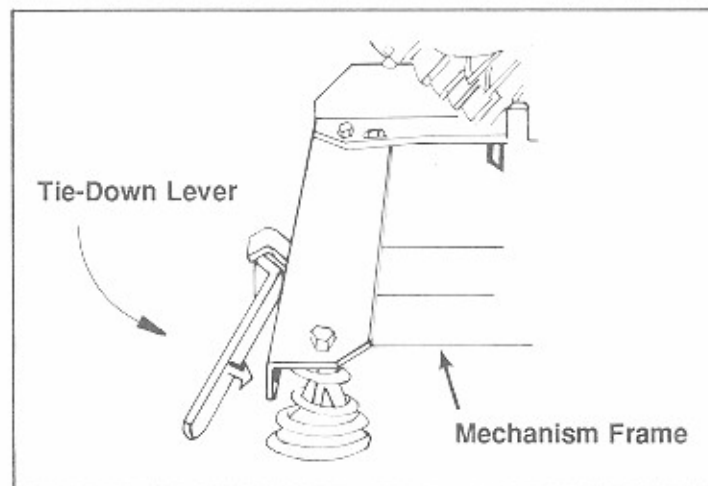


Figure 1-4. CD Changer Tie-Down Levers

Do not proceed with unpacking until you read and understand the following caution:



CAUTION:

The CD mechanism is extremely sensitive to static discharges. The photo diodes and the laser are more sensitive to discharges than MOS IC's. Careless handling may immediately destroy components within the player or cause undetectable damage that will lead to failure after several weeks or even months of use. Before you touch the player, discharge your hands and tools by touching a grounded metal part of the phonograph, such as the amplifier or power supply chassis. If you need to remove the CD player for servicing, place the CD player into the anti-static bag (shipped with the phonograph for this purpose) immediately after you remove it from the phonograph.

4. Remove the rubber band on the hold-down plate.
5. Remove the rubber band, wire hook, and warning tag that hold the sprag lever out of the sprag wheel.
6. Remove all tape from the magazine belt and magazine pulley.
7. Plug the 2-wire, Yellow and White/Black mechanism cable into P10 of the CD mechanism control module.
8. Check to see that the title page assembly is plugged in.

VISUAL INSPECTION

Check to be sure that all electrical plugs are completely seated into their receptacles.

PHONOGRAPH LEVELING

To ensure proper coin acceptor operation (if used), level the phonograph cabinet from left-to-right and front-to-back by inserting spacers under the caster wheels.

HANDY CASE

The Handy Case is a blue plastic envelope located on the left hand side of the phonograph. The Handy Case contains a variety of items, including the phonograph service manual and parts catalog, spare parts, and fuses. Keep the Handy Case inside the phonograph so that the service manual and parts will be readily available when needed.

WARRANTY REGISTRATION CARD

A postage-paid Warranty Registration Card is included with the phonograph. This card should be filled out and returned to Rowe.

MAJOR COMPONENTS OF THE CD-100B

Figure 1-1 shows the major CD-100B Phonograph components. Take a minute to familiarize yourself with these components.

Table 8-1 (Volume 2, Section 8) lists the accessories that you may have in addition to the standard phonograph.

CD Selection System

CD selections are made by entering the four digit selection number on the selector keyboard (keyboard) (See figure 1-5).



Figure 1-5. Keyboard

Keyboard

The keyboard consists of 14 keys, ten digit keys (0-9), and four special keys. The two PAGE CHANGE keys move the title pages electrically. The RESET button allows the customer to re-enter his selection, if he has changed his mind or made a mistake. The POPULAR key selects the selection that customers have selected the most number of times. Pressing the POPULAR key a second time will select the second most popular selection. Pressing the POPULAR key a third time will select the third most popular selection and so on.



NOTE:

On a new phonograph, a phonograph that has had its CCC replaced, or a phonograph that has had the POPULARITY cleared, the POPULAR key will not select any disc number until at least one normal selection has been made.

Central Control Computer

The central control computer (CCC) keeps track of all of the phonograph's activities and determines what the various components are to do next. The CCC regulates the following functions:

- Calculating credit and making selections
- Keeping track of selections not yet played
- Calculating the most popular selection list
- Remembering the operator's programmed values

Memorec

Memorec is the part of the CCC that remembers the:

- Number of times each selection was played
- The total amount of money deposited in the phonograph

Autoplay

When no selections have been made for a predetermined time, the Autoplay feature will play selections from a programmed list or make random selections. The choice of which selections are chosen, the selection sequence, and the selection interval can be programmed by the owner or service person.

PRINCIPLES OF OPERATION

Audio System

The audio system consists of the electronic components that transform the recorded sound into music. The major components of the audio system are the:

- CD player
- Stereo amplifier
- Output transformers
- Speaker system

CD PLAYER

This sub assembly translates digital pulses from the CD into a left and right channel audio signals.

STEREO AMPLIFIER

The amplifier assembly (*see figure 1-6*) contains two major sections, the preamplifier (preamp) and the power amplifier (amp).

Preamp

The preamp increases the signal from the CD player, corrects for varying recording levels (automatic volume control or AVC), allows the volume to be adjusted manually, and modifies the CD tone (Tone changes are made through a 7-band graphic equalizer).

Power Amplifier

The power amplifier converts the preamp signal to a signal that can be used by the phonograph speakers.

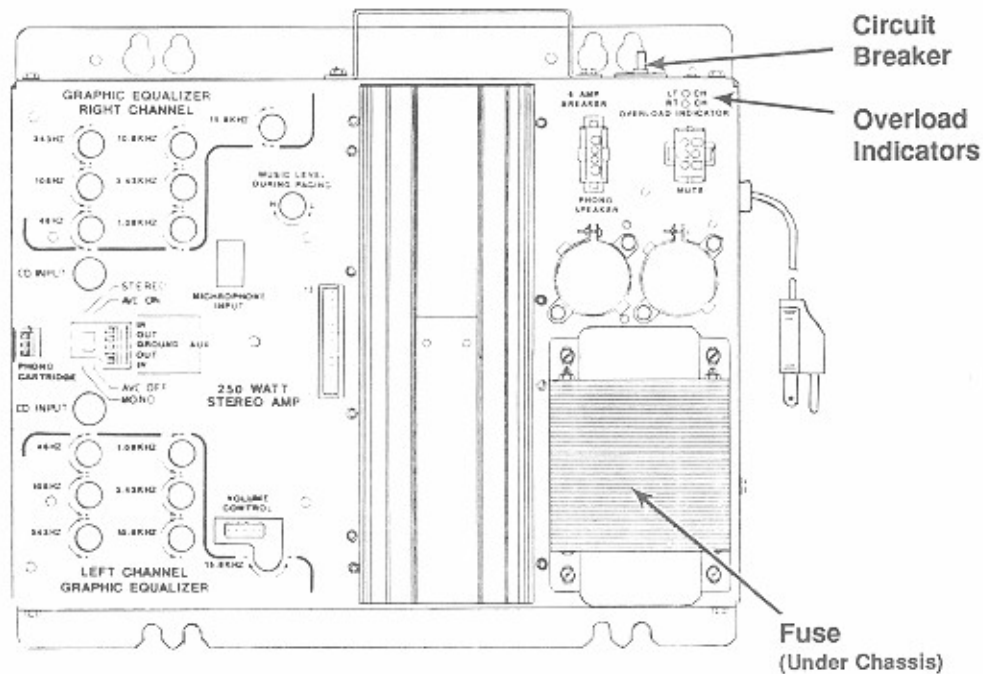


Figure 1-6. 250 Watt Stereo Amplifier Components

TWO-WIRE VOLUME CONTROL

A Rowe innovation, the two-wire volume control simplifies complex installations and reduces cost. A special preamplifier design permits volume control wiring using any unshielded two-wire cable.

OUTPUT TRANSFORMERS

The output transformers (figure 1-7) "step up" the power amplifier's output voltage for 70-volt extension speakers. The output transformers, also, provide connections (taps) for selecting different power levels and impedances (loads) for the speakers.

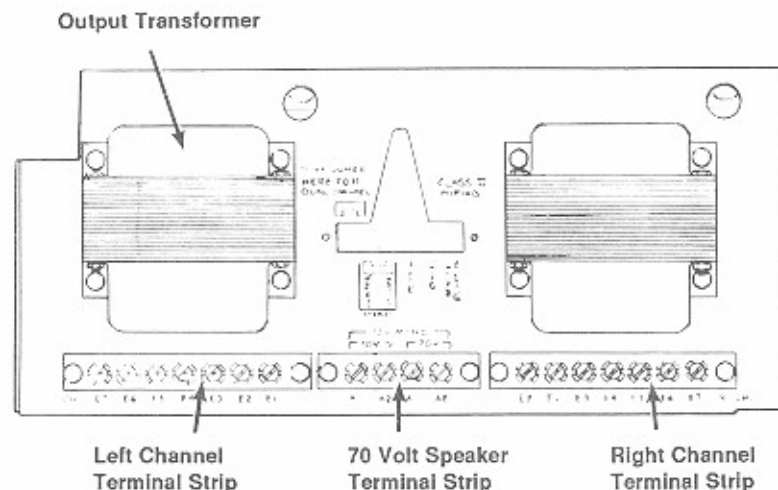


Figure 1-7. Output Transformer Package Components

THE SPEAKER SYSTEM

The speaker system consists of two specially designed speaker channels. Each channel consists of one 10-inch woofer, one mid/high range speaker, a tweeter, and a crossover network.

CD Changer Mechanism

The CD changer mechanism, also referred to as the "mechanism" or "mech", is located in the center of the cabinet's interior. It is the primary mechanical component of the phonograph. The mechanism holds 100 CD's and plays selections on command from the selection system (*refer to figure 1-8 for the location of each of the major magazine components*).

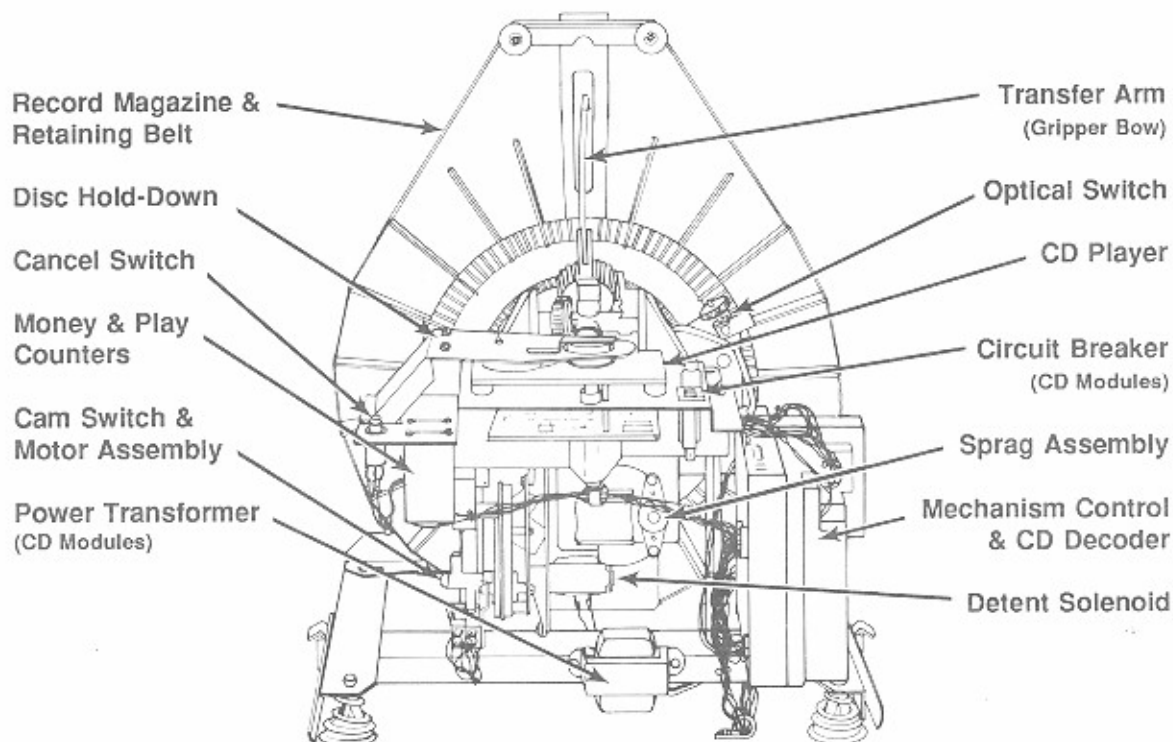


Figure 1-8. CD Changer Mechanism

MAGAZINE

The CD magazine stores 100 CD's.

PLAY COUNTER

The play counter accumulates the total number of plays on the mechanism.

MONEY COUNTER

The money counter registers the total money deposited in the phonograph.

OPTICAL SWITCH

The optical switch senses the CD magazine position so that the CCC can determine which CD is in gripping position.

CAM SWITCH AND MOTOR ASSEMBLY

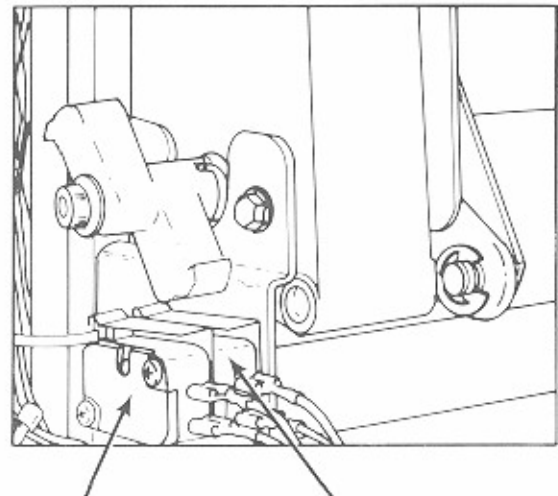
The cam switch and motor assembly (see figure 1-9) consists of the transfer motor, cam, and two cam switches.

SPRAG ASSEMBLY

This assembly locks the CD magazine in position.

CD MODULES

The CD player and the CD decoder play CD's after they are positioned on the turntable by the disk transfer arm.



Outer Cam Switch	Inner Cam Switch
Actuated in Record Playing Position	Actuated in Standby

Mechanism Control Unit

This solid state switching unit controls the scan and transfer.

Main Power Supply

The main power supply (see figure 1-10), located inside the amplifier compartment, distributes unregulated +28 VDC, 28 VAC, and regulated +8 VDC to the phonograph. The 120 VAC line voltage to the main power supply is controlled by the power switch on the rear of the phonograph cabinet.



WARNING:

The 120 VAC AMPLIFIER OUTLET on the main power supply does not shut off by turning the POWER ON/OFF switch on the back of the phonograph OFF.

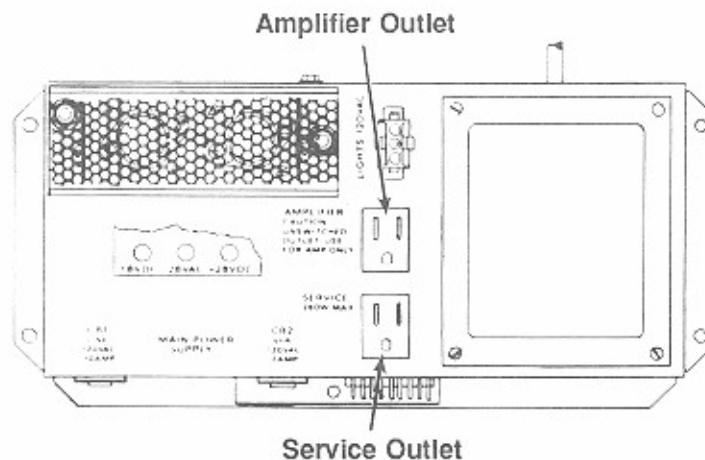


Figure 1-10. Main Power Supply

Section 2: Installation And Programming

INTRODUCTION

This section describes the installation and programming process. This information begins with a summary of what happens when the phonograph is powered up and continues with detailed instructions on how to load the titles and discs, modify the pricing and set up the sound system. The last part of this section describes how to make other programming changes (You can keep a record of the factory settings and your changes by using the *Operator's Set-Up Sheet* at the end of this section if you wish).

POWER ON

The following steps are a summary of the detailed *Power On Process* that is described in *Section 5* of this manual.

- Step 1. Power turned on, main power supply +8 VDC, 28 VDC, and 28 VAC LED's light, and all modules and components receive power.
- Step 2. The +5 VDC LED's light on the CCC, mechanism control, OBA-2 control unit, and digital display. The Board Error LED's on CCC and mechanism control flash three times. The OBA-2 Control Unit BA Status and RS-485 Status LED's flash one time. The CCC Rowelink Command, mechanism control Rowelink Response, and OBA-2 Control Unit RS-485 Status LED's continuously flicker.
- Step 3. Phonograph is ready to operate.

LIFTING THE TITLE RACK



CAUTION:

Do not attempt to turn the CD title pages by hand. Use the handwheel on the back of the title rack (see figure 1-2).

Before you begin changing discs, you may wish to lift the title rack to give yourself more room to work. Lift the title rack as follows:

1. Open the phonograph top door.
2. Rotate the two retaining latches on the ends of the title rack lower support bar (see figure 2-1) away from the support bar and lift the bottom of the title rack up and toward you with your left hand.
3. With your right hand, swing the title rack support brace out to hold the title rack in the raised position.

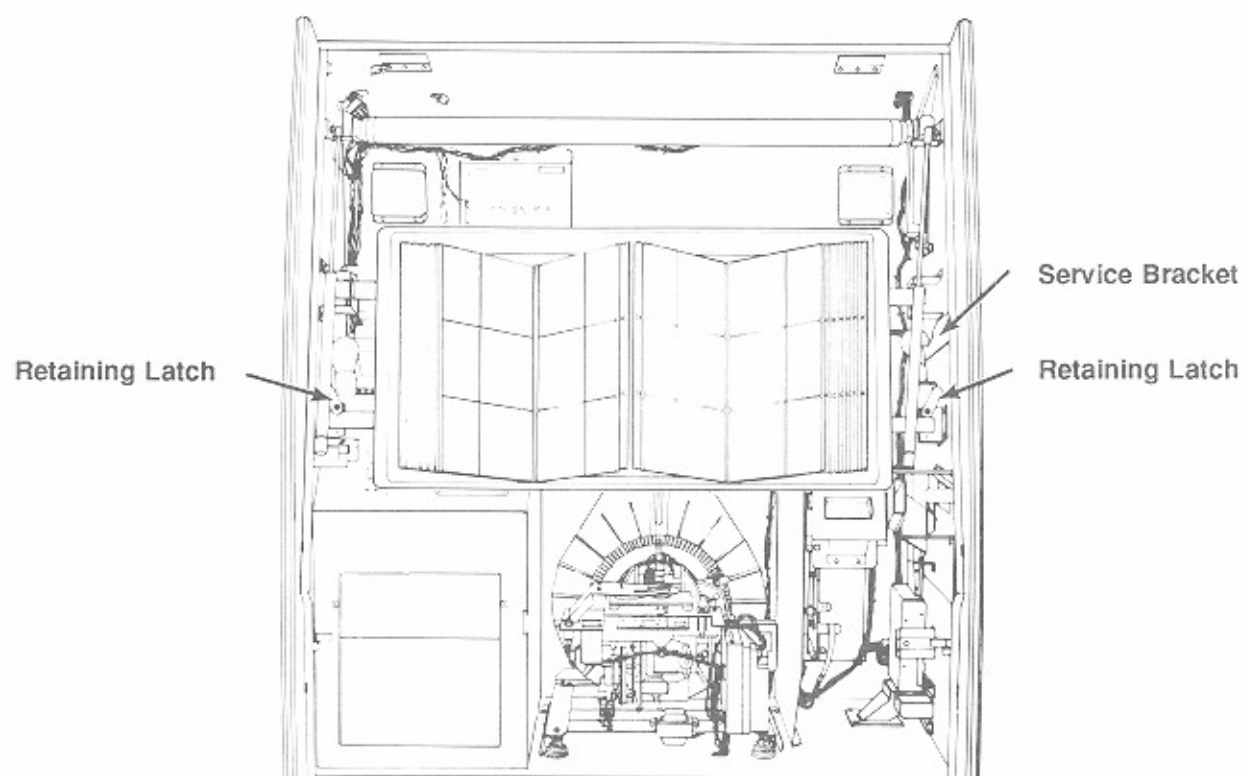


Figure 2-1. Raising The Title Rack

LOADING CD'S AND TITLES



CAUTION:

Do not attempt to turn the CD title pages by hand. Use the handwheel on the back of the title rack (see figure 1-2).

The procedure for loading CD's and titles into an empty phonograph is different from the procedure to change CD's and titles. Please make sure that you are following the procedure that describes your situation.

Preparing Titles For The Title Rack

If your titles have not been shipped with the discs or pre-printed, you will need to prepare the title strips yourself.

Loading The Title Rack

All of the titles on the title strip sheet can be used for either right or the left-hand titles. If your title strips have not been pre-printed, you may want to type the titles before you tear the individual title strips off of the title strip sheet.

Refer to the sample, *Blank Title Sheet*, in figure 2-2. Refer to figure 2-2 for examples of how to tear the title strips off of the title strip sheets.

These step-by-step instructions describe the procedure to load one CD album and one title strip. Repeat this procedure for each CD that is being loaded.

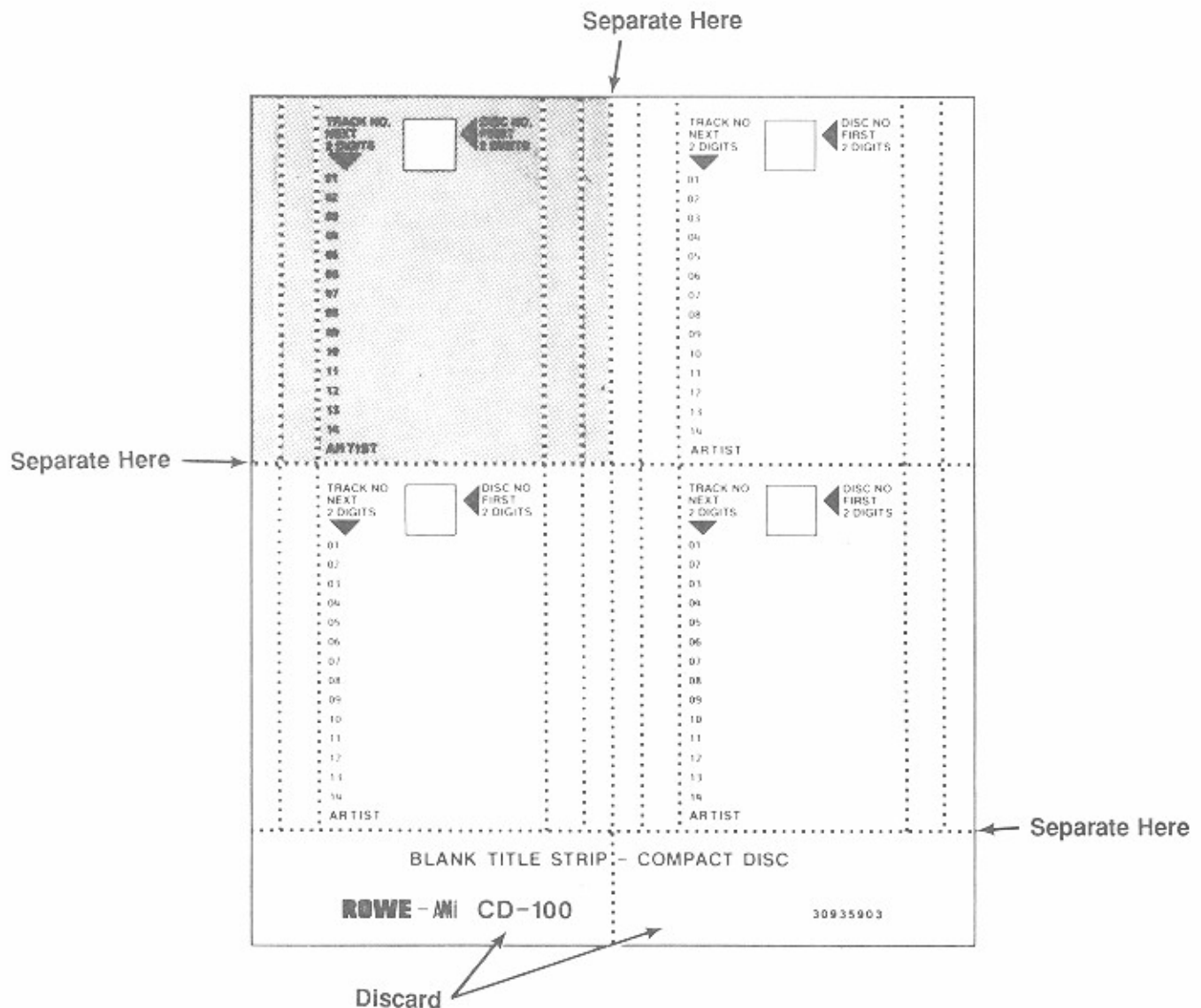


Figure 2-2. Blank Title Sheet

STEP-BY-STEP INSTRUCTIONS

1. Tear each title strip from the title sheet so that the two perforated columns appear on the side of the title strip (the shaded portion of the title strip in *figure 2-2* represents a title strip that has been removed from the title sheet).
2. Fold the title strip along the inner most perforated line on both sides of the title strip (see *figure 2-3*).
3. Locate the CD album booklet that matches the title strip that you have just made. If the CD booklet is more than two sheets thick, remove the inner sheets so that the booklet is no thicker than two title strips.

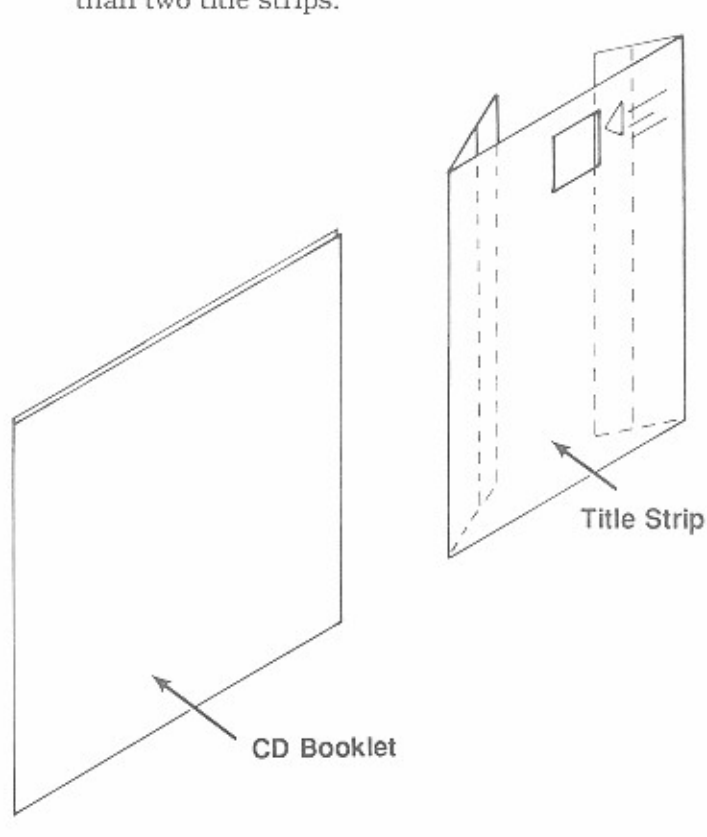


Figure 2-3. Folding The Title Strip

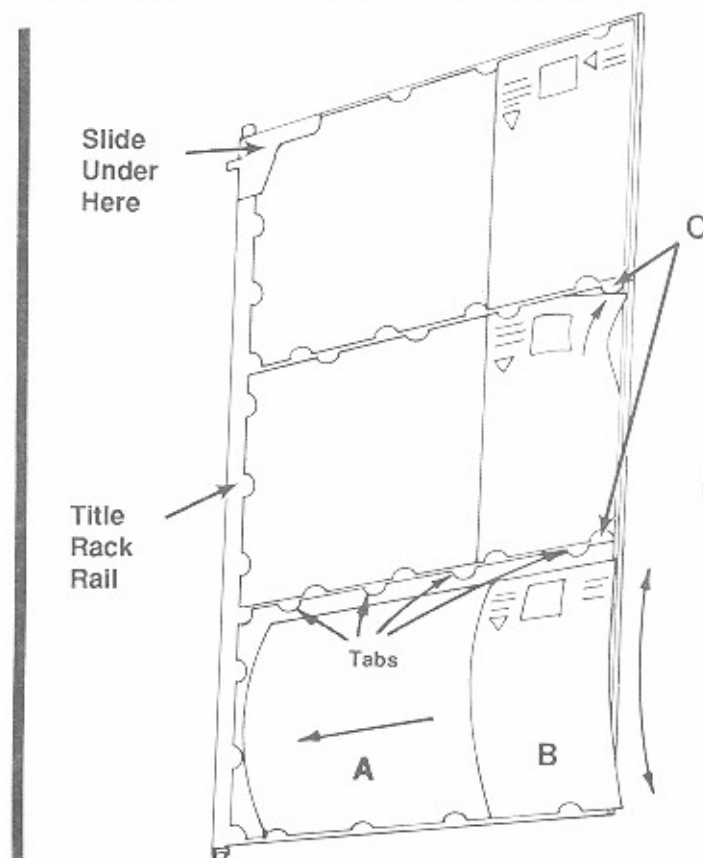


Figure 2-4. Loading The Title Rack

4. Insert the CD booklet under the top and bottom tabs of the title rack. Slide the CD booklet toward the pivot of the title rack until the booklet is trapped by the molded stops on the title page (see *figure 2-4, ref A*).
5. Insert the folded title strip under the top and bottom tabs of the title rack. Slide the title strip until the disc number shows in the opening of the title strip and the title strip is locked in place by the molded stops (see *figure 2-4, ref B*).
6. All of the tabs surrounding the CD booklet and title strip should be holding them in place. If you missed a tab, carefully tuck the loose paper under the tab as shown in *figure 2-4, ref C*.
7. Repeat steps 4 and 5 until all titles are installed. Use the PAGE switch (*figure 2-5*) to change title rack pages. Insert filler title strips (Part Number 30940601) to fill out any unused space left on a page. Insert these in the same way that you installed the fill-in title strips.

LOADING DISCS

Load discs as follows:

1. Unlock and open the top door, if not already done.
2. Move the SERVICE switch to the SERVICE position, if not already done (refer to figure 2-5).
3. Press the CANCEL/SCAN button to move the disc space to the left or right of the transfer arm.
4. Slide the CD into the slot with the label to the right.

Note that disc positions in the molded CD magazine are identified by numbers at every other slot, with even numbered slots labeled on one half of the magazine, and odd numbered slots labeled on the other half.

For example, on the even numbered half of the magazine, slots 00, 04, and 08 are labeled, and the slots in between – 02 and 06 – are not, as illustrated in figure 2-6.

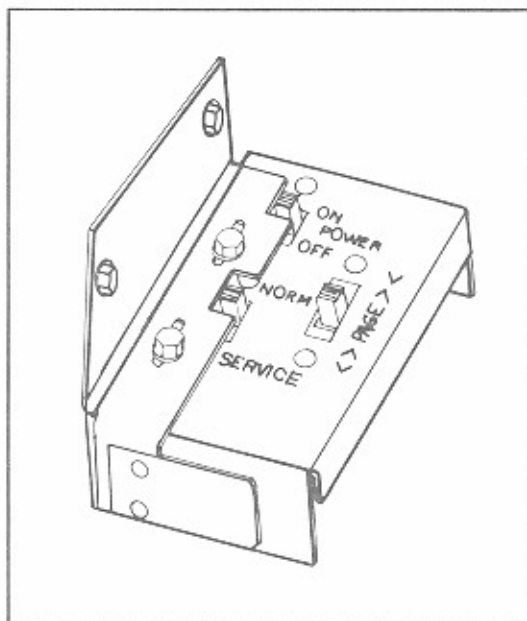


Figure 2-5 Service Switch



NOTE:

When loading the magazine, be sure that the disc rests in the same numbered slot in both the front and rear of the magazine.

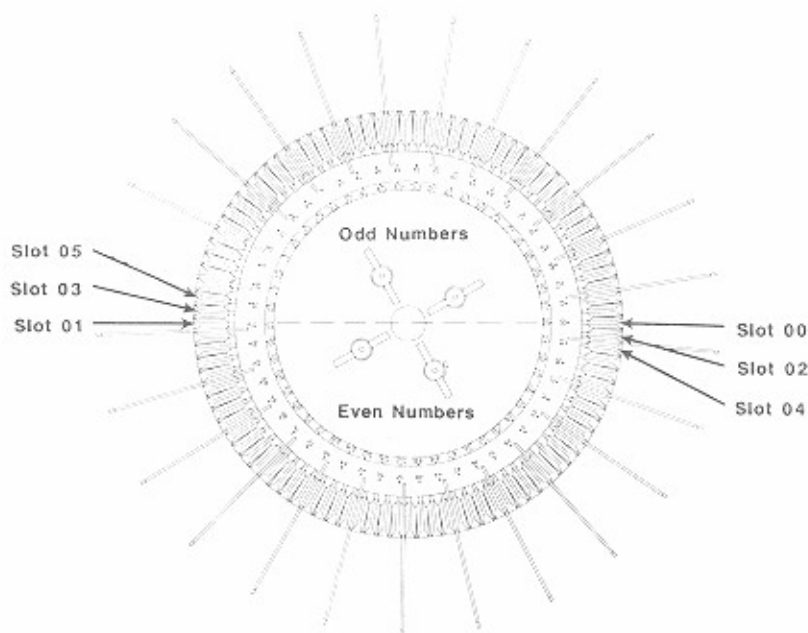


Figure 2-6. Loading the Molded CD Magazine

**NOTE:**

When loading discs, be sure to keep the magazine disc load approximately balanced. If the magazine is partially loaded with all discs on one side, the sprag wheel may lock and the magazine will not turn.

5. Check title strips and disc sequence to ensure that the titles and discs correspond.
6. After all titles and discs are in the proper places, perform a disc initialization. Initialization is performed in the following manner:

- A. Make sure that the phonograph is in the SERVICE mode and *SERVICE MODE* appears on the display.
- B. Type 3 to select the INITIALIZE sub menu and type 0. FULL INITIALIZE will appear on the display. Press POPULAR to start the initialization and close the top door or place the phonograph in the NORMAL mode.

The initialization process will start and continue for approximately 30 minutes. During this time, the phonograph can be used (*see the notes that follow*).

7. When initialization is finished, check that all discs have initialized. To do this, re-enter the SERVICE mode and:
 - A. Type 3 to select the INITIALIZE sub menu and then type 4 to view the number of discs that have been initialized. If this number does not match the number of discs that should have been initialized, do the following step. If the number matches the number of discs that you expected to be initialized, initialization is complete.
 - B. If the number of discs initialized does not match the number of discs that you expected to be initialized, hold RESET and press 0 twice. This will place you in the DISC __ TRACK __ menu and display the first disc and its number of selections. Hold RESET and press 3 to see the next disc and its number of selections. Continue through the list by holding RESET and pressing 3 until you find a disc with the number of tracks equal to 0 (zero). Continue through the disc list noting, all discs with track numbers equal to 0.
 - C. Check that each disc on your list (ones with track numbers equal to 0) is in the proper slot, with the label facing to the right. If it is not, move it to the proper slot. If the disc is in the proper slot, it may be defective. Repair or replace it and do the individual disc initialization (*see Changing Discs in Section 3*).

**NOTE:**

1. The initialization process will stop whenever the phonograph is in the SERVICE mode, and will resume when the phonograph is returned to the NORMAL mode if the phonograph is in Standby (i.e. no selections are in memory).
2. During full initialization, all disc limits are initially set to 99. As each disc is scanned, the proper limits for that disc are stored in memory allowing only valid selections to be made.

SETTING TITLE PAGE LIMITS FOR THE FIRST TIME

This procedure gives you specific instructions on how to set the page limits only.

The phonograph is shipped with all pages accessible. Pages 1 through 9 can be "flipped" and viewed. When you install discs, you may not need all 9 pages. If you do not need all 9 pages, you should restrict page movement to just those pages that have titles. Set the title page limits as follows:

1. Unlock and open the top door, if not already done.
2. Move the SERVICE switch to the SERVICE position, if not already done (*refer to figure 2-5*).
3. Make sure that * SERVICE MODE * appears on the display.
4. Type 2 to select the ATTRACT sub menu then type 4 to select the PAGE LIMIT function and you will see the display for entering the first page number to use and the last number to use. Press POPULAR, which sets the first page number to 1. Notice that the blinking number has moved to the right. Type the last page number to be used and press POPULAR.

PRICING

The prices charged for CD selections may be changed as needed. When shipped from the factory the prices are set as follows:

Price of Selections

3 Selections for \$1.00
7 Selections for \$2.00
18 Selections for \$5.00

PRICE OF SELECTIONS

■ PLAYS FOR \$1.00
■ PLAYS FOR \$2.00
■ PLAYS FOR \$5.00

Figure 2-7A. Alternate Price Card

**NOTE:**

If you are using the factory pricing, skip to *Sound System Set Up*.

To set Alternate Disc prices:

The Handy Case has an Alternate Price Card (see figure 2-7A) that may be substituted for the Standard Price Card. The Handy Case also contains a Price Sheet with printed prices (see figure 2-7B), which can be peeled off and placed at the appropriate spot on the Alternate Price Card.

Using the phonograph keyboard, the pricing structure of the phonograph may be adjusted to match the prices on the Alternate Price Card. The maximum amount that can be charged for a selection is \$99.95. The maximum number of selections that can be entered is 999. The POPULAR key must be pressed to record the data entered on the display.

Figure 2-7B. Universal Price Sheet

If you wish to use alternate pricing, follow the steps to complete the Alternate Price Card and enter the prices. Also, for your records, fill-in the *Pricing* section of the *Rowe CD Phono Operator's Set Up Sheet* at the end of this section. Before making the actual pricing changes, step through the sample pricing that follows:

How CD-100B Pricing Works

Pricing is determined by the numbers that are stored in the PRICE LEVELS and PLAYS @ LEVEL menus. The LEVEL 1 PRICE corresponds to the LEVEL 1 PLAYS in the following way: Enough money must be deposited to reach the first (#1) price level before any selections can be made. Once the amount of money matches this price, the number of selections in the LEVEL 1 PLAYS menu can be made.

To make pricing changes, set the LEVEL 1 PRICE and LEVEL 1 PLAYS to match the lowest price and number of plays on the Alternate Price Card. Then enter the remaining PRICE LEVELS and PLAYS @ LEVEL until you have set all five levels (if you do not have prices for all levels, enter 0's in all of the remaining PRICE and PLAYS positions).

SAMPLE PRICE CHANGES

1. Determine the prices that are to be charged for disc selections and place the price decals from the Price Sheet into the slots on the Alternate Price Card. The following is an example of a completed Alternate Price Card:

Price of Selections

4 for \$1.00
9 for \$2.00
25 for \$5.00

2. Enter the SERVICE mode by setting the SERVICE switch to the SERVICE position.

**NOTE:**

This example will not give the correct dollar amounts for U.S. money unless PRICING OPTION 3 is set to 5 (this is the factory setting for U.S. phonographs and you should not have to change it).

Use the prices in the example that follows to help yourself understand the phonograph's pricing better.

Example CD Prices

4 for \$1.00
9 for \$2.00
25 for \$5.00

**If You Have A Problem In A Menu**

1. Press and hold down RESET and then press 0 until you come to the top of current menu.
2. If this menu name doesn't help, Press and hold RESET and then press POPULAR. This will move you to the top of the previous menu. In most cases, this will return you to the main menu (*SERVICE MODE*).
3. If you still cannot determine where you are, press and hold RESET and then press POPULAR again. This will return you to the main menu (*SERVICE MODE*).

3. Select the PRICE LEVELS menu, Option 1, from the main menu by pressing 511.
4. Now enter the LEVEL 1 PRICE, which is the lowest disc selection price (enter 0100 and press POPULAR).
5. Move down to the next price (LEVEL 2 PRICE) by pressing and holding RESET and then pressing 1. Enter the next highest price (enter 0200 and press POPULAR).
6. Move down to the next price (LEVEL 3 PRICE) by pressing and holding RESET and then pressing 1. Enter the next highest price (enter 0500 and press POPULAR).
7. Move down to the next price (LEVEL 4 PRICE) by pressing and holding RESET and then pressing 1. Enter 0000 (because only three prices are being used) and press POPULAR.

8. Move down to the last price (LEVEL 5 PRICE) by pressing and holding RESET and then pressing 1. Enter 0000 and press POPULAR.
9. Press and hold RESET while pressing POPULAR 2 times. This will place you in the main menu. Select the PLAYS @ LEVEL menu, Option 1, from the main menu by pressing 521.
10. Enter the number of disc selections to be given for the lowest amount on the disc portion of the example price card into LEVEL 1 PLAYS (enter 004 and press POPULAR).
11. Move down to the next play option (LEVEL 2 PLAYS) by pressing and holding RESET and then pressing 1 (enter 009 and press POPULAR).
12. Move down to the next play option (LEVEL 3 PLAYS) by pressing and holding RESET and then pressing 1 (enter 025 and press POPULAR).
13. Move down to the next play option (LEVEL 4 PLAYS) by pressing and holding RESET and then pressing 1 (enter 000 and press POPULAR).
14. Move down to the last play option (LEVEL 5 PLAYS) by pressing and holding RESET and then pressing 1 (enter 000 and press POPULAR).

CHECKING THE PRICING

Add bills (and coins, if a coin acceptor is installed) to reach the first (or next) price level. Check for proper credit at each price level.

SOUND SYSTEM SET UP

If you are not using extension speakers, skip to *Sound System Acoustical Compensation (Equalizer Tone Controls)*.

Extension Speaker Operation

To avoid a poor sounding phonograph, care must be taken when adding extension speakers. Three requirements must be met:

1. Speakers must be wired so that the power consumed by the phonograph speakers and the extension speakers does not exceed the amplifier power rating.
2. Extension speakers should produce the desired sound level relative to the sound level of the speakers on the phonograph.
3. All speakers must be connected with the correct polarity.



NOTE:

The left channel output phase is reversed with respect to the right channel. This reversal is necessary to extend monaural sound in a stereo phonograph system. Because of this reversal, speaker connections to the left channel must be reversed when compared to the right channel, except for 70-volt speaker connections. The 70-volt phasing is reversed inside the output transformers.

Several charts have been included to assist you with connecting the extension speakers. *Figure 2-8* shows the entire sound system.

70-Volt Speakers

To avoid prohibitive cable losses on long speaker lines, use 70-volt speakers.

The power level in the 70-volt speakers is set at each speaker.

Low Impedance Speakers

Low impedance speakers (8 ohms) can be used when the connecting cable is less than 100 feet.

4-OHM SPEAKERS

No more than one 4-ohm speaker should be connected to a speaker line. If several 4-ohm speakers are to be used, each speaker should have its own line.

8-OHM SPEAKERS

The loss in 100 feet of zipcord feeding one 8-ohm speaker is 15%. The loss for two 8-ohm speakers is 30%.

Do not connect a low impedance speaker to a speaker tap that exceeds the speaker's power rating.



NOTE:

In any speaker installation, the total speaker load (the sum of all power ratings of all speakers) must not exceed 250 watts.

SELECTING SPEAKER POWER

General Instructions

This section will lead you through the power and speaker selection process. This process consists of three major steps and several smaller steps. The major steps are:

1. Identifying the extension speakers and computing the extension speaker power
2. Making the external speaker connections
3. Determining and selecting the phonograph power

Step-By-Step Instructions

1. Use a pencil (you may want to revise your figures) to fill in the work sheet on the following pages:

Table 2-1. Extension Speaker Work Sheet
Sheet 1

Extension speakers are available in these general categories: General purpose speakers (4 and 8 ohm speakers) and 70-volt speakers.

Use this work sheet to help you calculate the amount of power consumed by the extension speakers.

Use this work sheet as a guide to help you select which power tap to use for each type of external speaker that you are using.

4-OHM SPEAKERS

Place the quantity of stereo speakers in the blank under QTY and multiply the quantity times the power consumption (show stereo speakers as 2 speakers). Place your results in the TOTAL blank.

4-Ohm Stereo Speakers	QTY	Total	Connections
Speakers for the 1 watt taps:	___ at 1 watt each =	___ watts	(E1 to E2)
Speakers for the 1.75 watt taps:	___ at 1.75 watts each =	___ watts	(E4 to E5)
Speakers for the 4 watt taps:	___ at 4 watts each =	___ watts	(E1 to E3)
Speakers for the 9 watt taps:	___ at 9 watts each =	___ watts	(E2 to E4)
Speakers for the 16 watt taps:	___ at 16 watts each =	___ watts	(E1 to E4)
Speakers for the 28 watt taps:	___ at 28 watts each =	___ watts	(E1 to E5)
Speakers for the 64 watt taps:	___ at 64 watts each =	___ watts	(E1 to E6)
Speakers for the 113 watt taps:	___ at 113 watts each =	___ watts	(E1 to E7)

4-Ohm Mono Speakers

Speakers for the 4 watt taps:	___ at 4 watts each =	___ watts	(E2 to E2)
Speakers for the 16 watt taps:	___ at 16 watts each =	___ watts	(E3 to E3)
Speakers for the 64 watt taps:	___ at 64 watts each =	___ watts	(E4 to E4)
Speakers for the 113 watt taps:	___ at 113 watts each =	___ watts	(E5 to E5)

Table 2-1. Extension Speaker Work Sheet
Sheet 2

8-OHM SPEAKERS

Place the quantity of stereo speakers in the blank under QTY and multiply the quantity times the power consumption (show stereo speakers as 2 speakers). Place your results in the TOTAL blank.

8-Ohm Stereo Speakers

	QTY	Total	Connections
Speakers for the .5 watt taps:	___ at .5 watt each =	___ watts	(E1 to E2)
Speakers for the .9 watt taps:	___ at .9 watts each =	___ watts	(E4 to E5)
Speakers for the 2 watt taps:	___ at 2 watts each =	___ watts	(E1 to E3)
Speakers for the 4.5 watt taps:	___ at 4.5 watts each =	___ watts	(E2 to E4)
Speakers for the 8 watt taps:	___ at 8 watts each =	___ watts	(E1 to E4)
Speakers for the 14 watt taps:	___ at 14 watts each =	___ watts	(E1 to E5)
Speakers for the 24 watt taps:	___ at 24 watts each =	___ watts	(E2 to E6)
Speakers for the 32 watt taps:	___ at 32 watts each =	___ watts	(E1 to E6)
Speakers for the 57 watt taps:	___ at 57 watts each =	___ watts	(E1 to E7)

8-Ohm Mono Speakers

Speakers for the 2 watt taps:	___ at 2 watts each =	___ watts	(E2 to E2)
Speakers for the 8 watt taps:	___ at 8 watts each =	___ watts	(E3 to E3)
Speakers for the 32 watt taps:	___ at 32 watts each =	___ watts	(E4 to E4)
Speakers for the 57 watt taps:	___ at 57 watts each =	___ watts	(E5 to E5)
Speakers for the 128 watt taps:	___ at 128 watts each =	___ watts	(E6 to E6)

70-VOLT SPEAKERS

70-Volt speakers have a power tap on them or on their associated transformer. Add together all of the 70-volt speaker tap settings and enter that value:

___ watts (A1 to A2)

Table 2-1. Extension Speaker Work Sheet
Sheet 3

Combine all speaker's consumptions:

	Stereo	Mono	
4-Ohm:	_____	_____	
8-Ohm:	_____	_____	
70-Volt:	_____	_____	
	Stereo	Mono	Grand Total
Totals:	_____	+ _____	= _____

Subtract the Grand Total from 250 and write the result in the blank at the end of this line:

Power Available For The Phonograph _____

The Grand Total is the amount of power that the phonograph will need to supply to the extension speakers. This amount must be less than 250 watts. If this amount is not less than 250 watts, you must reduce the power used by the extension speakers to reduce the total power consumed; then recalculate the total power consumed.

When you subtract the Grand Total from 250, you will get the "Power Available For The Phonograph" figure. Be sure to write this value down in the blank because you will not be using it until you have wired all of the extension speakers.

- When you have reached a satisfactory combination of speakers and speaker power consumption, use the CONNECTION column (the connections are in parentheses) as a wiring guide to make the actual connections. Refer to figure 1-1 for the location of the speaker terminal strips and refer to figure 2-8 for typical examples of speaker connections.



NOTE:

- The amplifier may be connected to a load of 250 watts before distortion will begin to increase beyond specification.
- Refer to figure 2-9 for remote volume control connection diagrams.

3. The phonograph wires to change are the Violet (left channel) and the Pink (right channel) on the output transformer assembly (see table 2-2A).

Use table 2-2A as a guide to select the power used by the phonograph. This power should roughly match the amount indicated in "Power Available For The Phonograph" on the previous page.

Table 2-2A. Phonograph Speaker Power

Select the speaker taps that will use up most of the "available Speaker Power".	
You may select more power or less phonograph power to suit your phonograph volume preference.	
Phono Power ¹	Phono Speaker Connections
1	Violet connects to Left E2, Pink connects to Right E2
4	Violet connects to Left E3, Pink connects to Right E3
16	Violet connects to Left E4, Pink connects to Right E4
28	Violet connects to Left E5, Pink connects to Right E5
64	Violet connects to Left E6, Pink connects to Right E6
113	Violet connects to Left E7, Pink connects to Right E7
Do not move the Black wire; it should stay on either the Left or Right E1 terminal.	

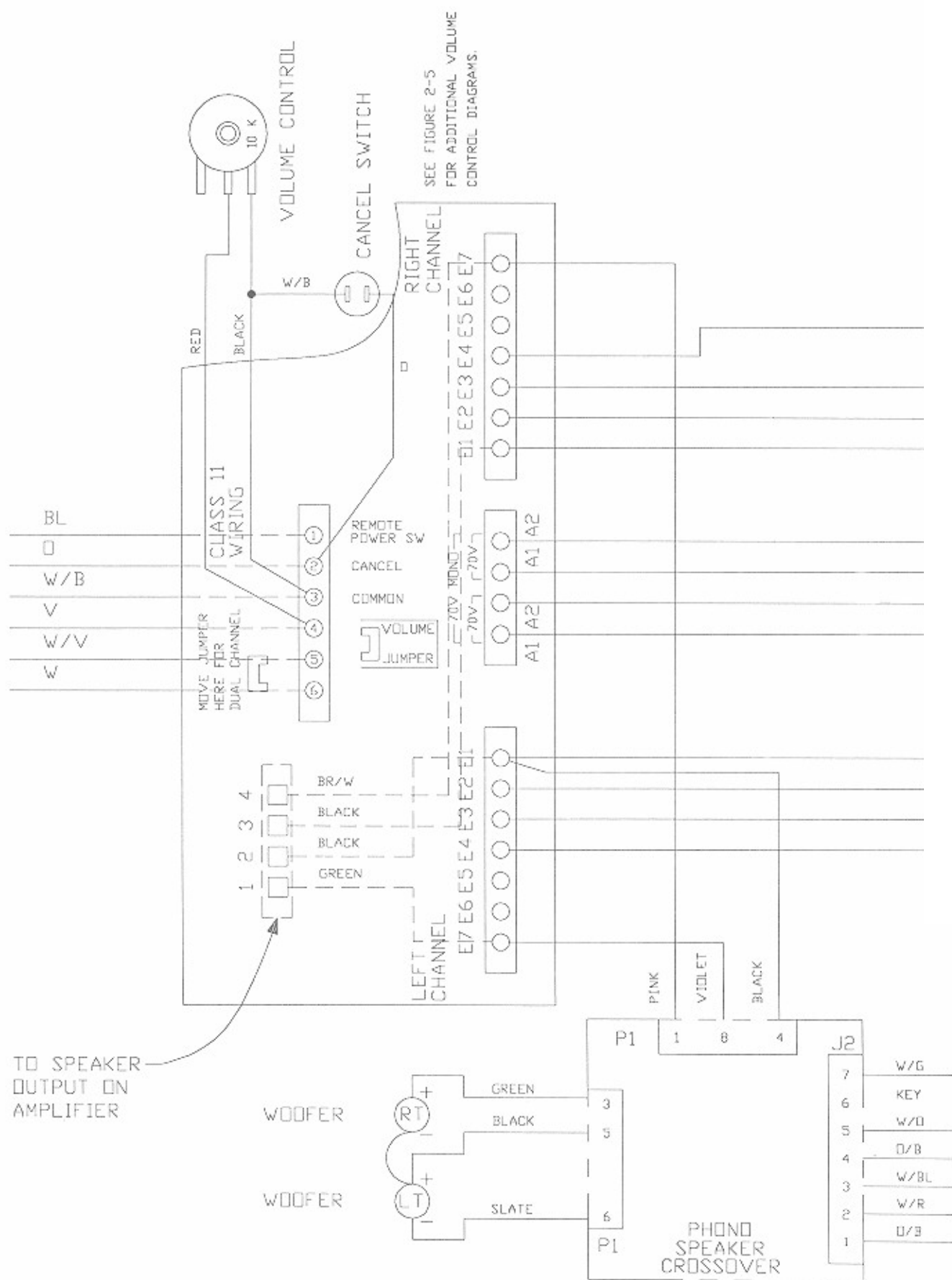
Table 2-2B. Amplifier Overload Check

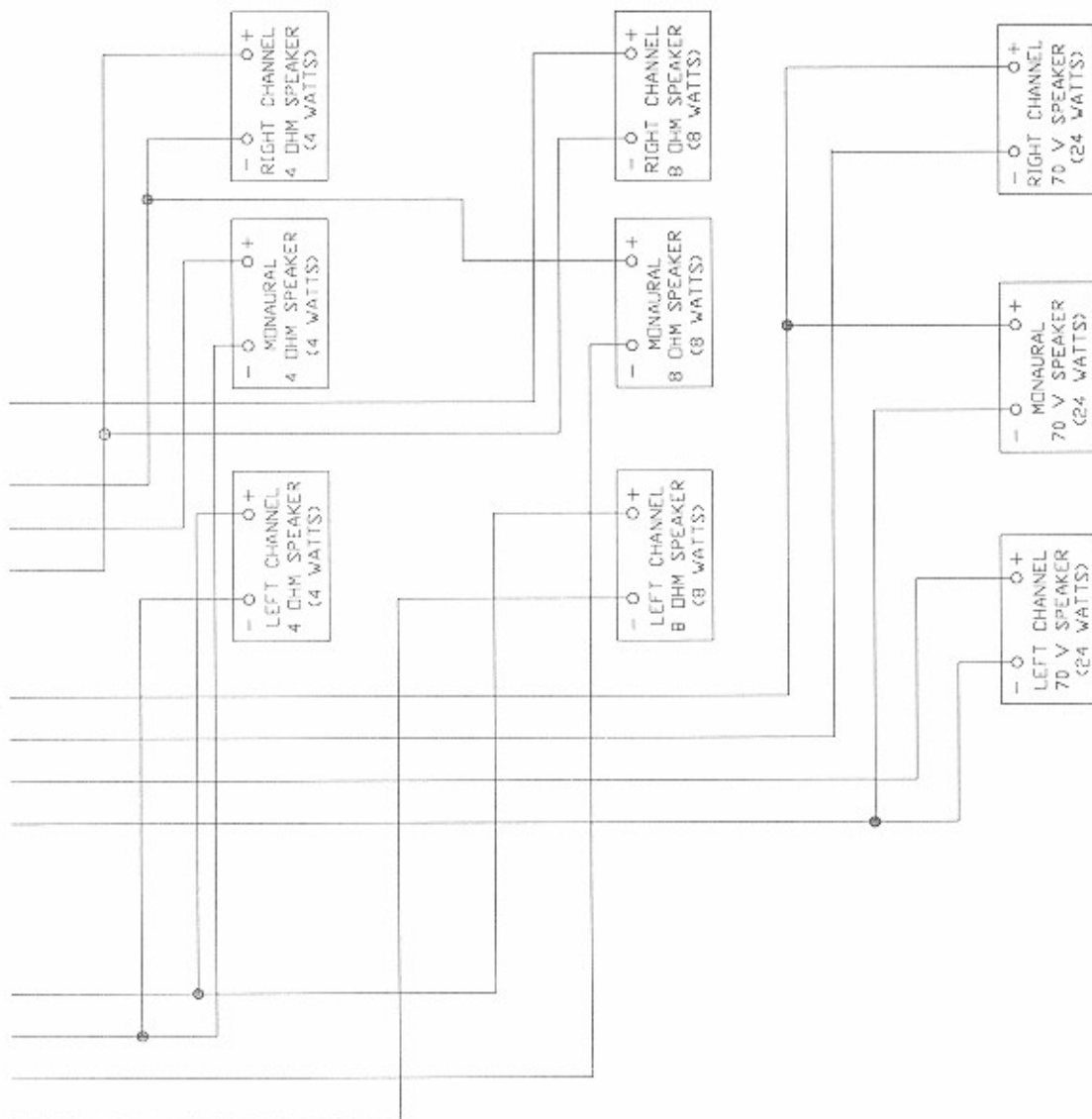
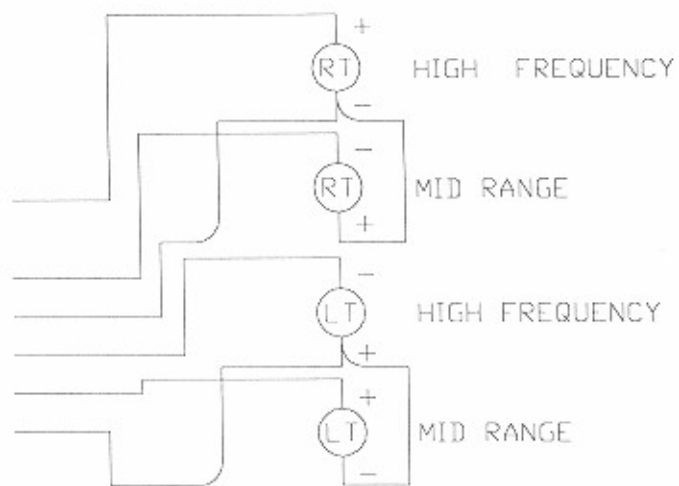


Check that the amplifier is not overloaded by performing the following five steps:

1. Make sure that the phonograph and extension speakers are connected to the proper speaker taps.
2. On the amplifier, set all seven RIGHT CHANNEL and all seven LEFT CHANNEL graphic equalizer controls fully counter-clockwise.
3. Set the volume control fully clockwise (maximum volume) and make a selection.
4. While the music is playing, if the OVERLOAD INDICATORS(S) stay OFF or occasionally flicker in a random manner, the load is acceptable. If the OVERLOAD INDICATOR(S) are always lit or flicker continuously, the amplifier is overloaded and you must perform Step 5.
5. Do this step only if the OVERLOAD INDICATOR(S) came on as described in the previous step. Find the source of the overload (shorted speaker wires, too many speakers connected, or speaker power taps too high). After you fix the short, disconnect a few speakers, or lower the speaker power tap selection; repeat Step 4.

¹ This value is the total for both channels. The power consumption for each channel is one-half of this value.





Note: See Section 5 for the crossover schematic and components list

Figure 2-8. Speaker Connections

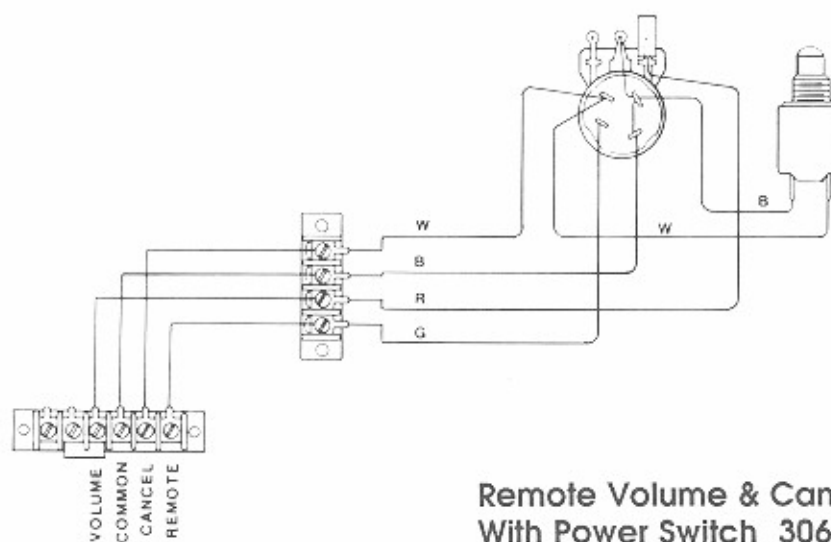
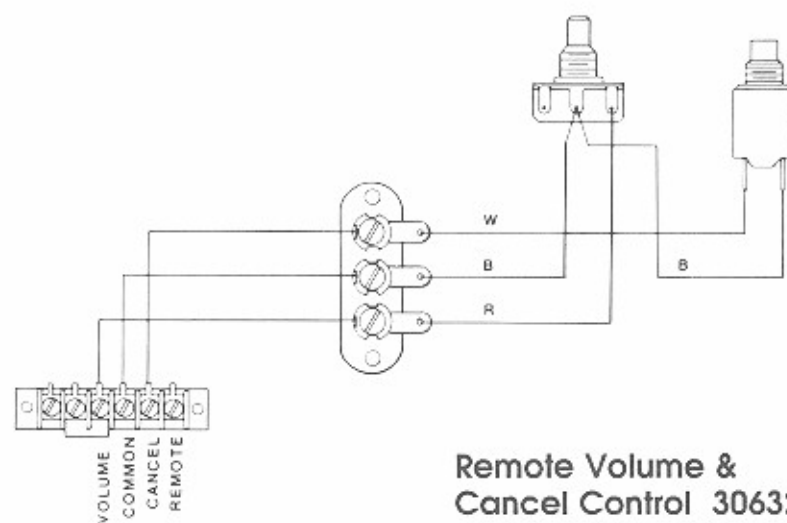
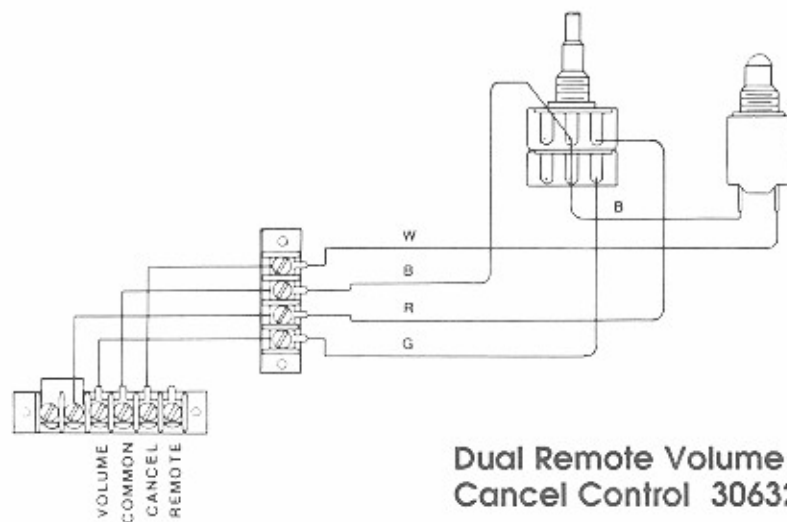


Figure 2-9. Remote Volume Control Diagrams

SOUND SYSTEM

Acoustical Compensation (Equalizer Tone Controls)

The preamplifier contains seven tone controls on each channel to compensate for room acoustics in various locations. These controls are on the amplifier chassis. The sound level at which the phonograph will be operated and the room furnishings determine the settings of these controls.

A room with carpet and drapery is a soft or highly absorbent location. A crowded room is also highly absorbent. These locations require greater emphasis of high frequencies.

A room with paneled walls and a bare or tiled floor is a hard, non-absorbent location, which requires greater low frequency emphasis.

Regardless of the room acoustics, the high and low frequency characteristics of your speakers can influence the equalizer settings as much or more than the room acoustics.

What This Graphic Equalizer Does

This graphic equalizer controls the tone for seven specific tone ranges. The frequency for each range is printed next to each equalizer control.



Important:

- Before setting these controls, do *Steps 1 through 5* in *table 2-2B* to ensure that the amplifier is not overloaded.
- Each of these controls can limit the maximum volume for its range by as much as 85%.
- This means that if a control is set to minimum, that the maximum power available for that range is only about 40 watts.
- If all of the graphic equalizer controls are set to minimum, then the phonograph will produce no more than approximately 40 watts of its 250 watt capacity.

Equalizer Settings

These equalizers work equally well for stereo and mono sound and may be used with single and dual volume controls.

The settings that follow will give a good sound for a room with the matching acoustics (highly-absorbent, moderately absorbent, non-absorbent). Set the right and left channel equalizer controls to the positions that match the room described (or most closely described) in the three illustrations that follow this paragraph. These settings may be just right, or they may not sound 100% right to you. If the sound is not satisfactory, make small changes in the settings until the sound is just the way you want it.

If The Room Or Speaker System Requires A Trade-Off

Since the equalizer limits the volume of all of the audio frequencies, you may find that the best sound for a specific room or set of speakers requires that most of the graphic equalizer controls need to be turned down. In this situation, the overall phonograph volume may not be adequate. If you find that you have this situation, you will need to increase each graphic equalizer control slightly until the phonograph can produce the required volume.

Step-By-Step Instructions

Select one of the Room Acoustics that most closely matches your room's acoustics and follow the instructions for that room type. If your room is an average or moderately absorbent room, or you like the phonograph's sound, you can use the factory settings just the way they are.

Soft And Highly Absorbent Rooms

Rooms with carpet and drapery are considered to be "soft and highly-absorbent."

1. Turn all seven right channel and seven left channel graphic equalizer controls fully counter-clockwise.
2. Turn the 46 and the 108 Hz controls to the position midway between the maximum and the minimum position as shown to the right. Leave all of the other controls turned all the way counter-clockwise.
3. The graphic equalizer's controls should now be set as shown to the right.
4. Play a selection and turn the controls slightly (no more than 1/8 of a turn at a time) until the sound is acceptable. Be sure that the phonograph volume is adequate. If the volume is not adequate, you will need to turn each control up (counter-clockwise) slightly until the volume is satisfactory.

Remember: The maximum volume setting is obtained when all controls are turned fully counter-clockwise.

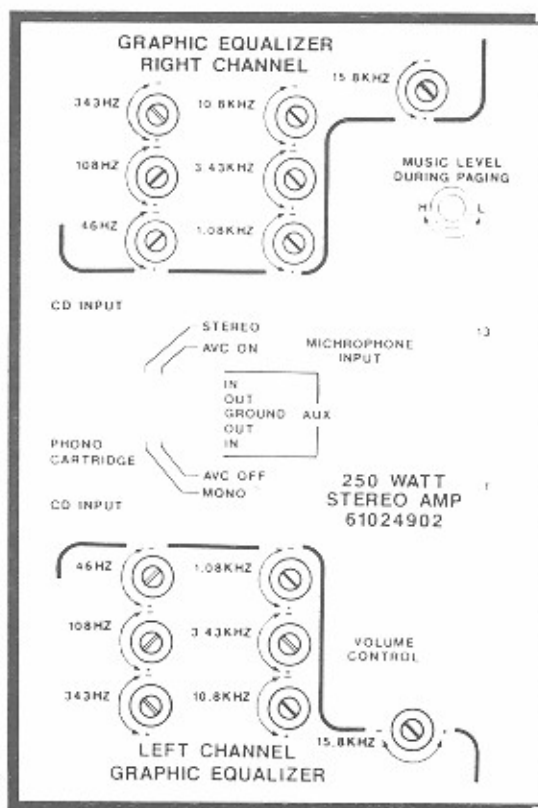


Figure 2-10A. "Soft" Rooms

Average Or Moderately-Absorbent Rooms

(These are the factory settings)

1. Turn all seven right channel and seven left channel graphic equalizer controls fully counter-clockwise.
2. The graphic equalizer's controls should now be set as shown to the right
3. Play a selection and turn the controls slightly (no more than 1/8 of a turn at a time) until the sound is acceptable. Be sure that the phonograph volume is adequate. If the volume is not adequate, you will need to turn each control up (counter-clockwise) slightly until the volume is satisfactory.

Remember: The maximum volume setting is obtained when all controls are turned fully counter-clockwise.

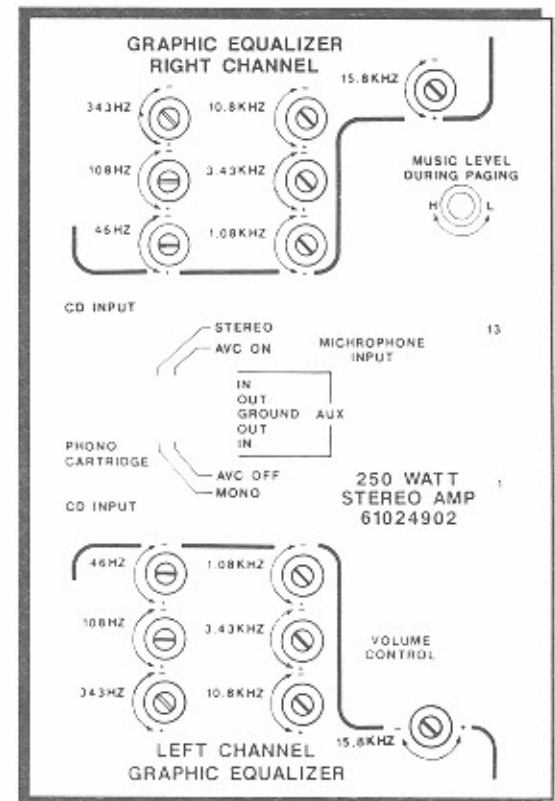


Figure 2-10B. "Average" Rooms

Hard And Non-Absorbent Rooms

Rooms that are paneled and have bare or tiled floors are considered to be "hard or non-absorbent."

1. Turn all seven right channel and seven left channel graphic equalizer controls fully counter-clockwise.
2. Turn the 15.8 KHz control all the way clockwise as shown to the right.
3. Turn the 10.8 KHz control to the position midway between the maximum and minimum position as shown to the right. Leave the 46 Hz, 108 Hz, 343 Hz, 1.08 KHz, and 3.43 KHz controls turned all the way counter-clockwise.
4. The graphic equalizer's controls should now be set as shown to the right.
5. Play a selection and turn the controls slightly (no more than 1/8 of a turn at a time) until the sound is acceptable. Be sure that the phonograph volume is adequate. If the volume is not adequate, you will need to turn each control up (counter-clockwise) slightly until the volume is satisfactory.

Remember: The maximum volume setting is obtained when all controls are turned fully counter-clockwise.

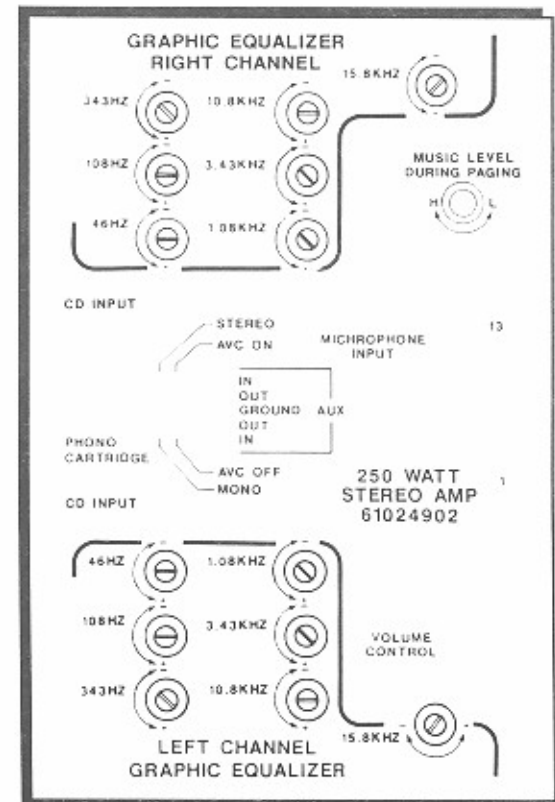


Figure 2-10C. "Non-Absorbent" Rooms

Paging

Paging circuitry is part of the 61023702 Preamplifier. The microphone cable plugs directly into the preamplifier.



NOTE:

Basic installation and setup are now completed and the CD-100B is ready for your customer.

Use the procedure that follows to clear or change remaining credits:

CHANGING THE NUMBER OF CREDITS REMAINING

Use these steps to increase or decrease the number of CREDITS REMAINING on the phonograph.

1. Enter the SERVICE mode by setting the SERVICE switch to the SERVICE position.
2. Type 84 and then type the number of CREDITS REMAINING that you want. Press POPULAR to complete the change.



The remainder of Section 2 explains the Service Mode and other programmable features of the CD-100B

Entering The Service Mode

Menus can only be used while the phonograph is in the SERVICE mode. To enter the SERVICE mode, open the top door and place the SERVICE switch (*figure 2-5*) in the SERVICE position.

When the phonograph is placed into the SERVICE mode, the message * SERVICE MODE * appears on the digital display (*see figure 1-1 if you are not familiar with the keyboard or display*).

Occasionally, the message that first appears will say - ERRORS EXIST -. This is just an indication that an error has been logged. Pushing the POPULAR key will return the * SERVICE MODE * message.



NOTE:

The phonograph's display can display a maximum of 16 characters at a time. SERVICE mode commands and messages are abbreviated to fit the 16-character space.

Viewing Menus

To view a menu option, hold down the RESET button and press either the 0 digit or the 1 digit. The 1 digit will move you down one item and the 0 will move you up one item. This method of viewing menu options will allow you to view your options in any menu (or submenu). Refer to *figure 2-11, the Service Mode Map*, and note that an arrow following the command indicates that a submenu exists. Press the POPULAR key to enter a submenu. Hold the RESET key and press the POPULAR key to exit a submenu.

IF YOU "GET LOST" IN THE MENUS

Since the menu mode of pricing and programming does not require you to use any reference material, you may (occasionally) find that you have ventured down the wrong menu and that you don't know what option is next. Don't panic . . . you can find your way:

1. Press and hold down RESET and then press 0 until you come to the top of current menu.
2. If this menu name doesn't help, Press and hold RESET and then press POPULAR. This will move you to the top of the previous menu. In most cases, this will return you to the main menu (* SERVICE MODE *).
3. If you still cannot determine where you are, press and hold RESET and then press POPULAR again. Repeat this step until you get to the main menu (* SERVICE MODE *).

Using CD-100B Commands

CD-100B Commands are formed by combining the numbers that appear on the left side of the menus that appear in *figure 2-11*. To construct and use CD-100B commands, you need to refer to *figure 2-11* or *table 2-4*.

As An Example: You want to view the number of cycles that the CD mechanism has made. Using *figure 2-7*, you determine that you need to select AUDITS (1), on the main menu; NON-RESETTABLES (2), on the AUDIT menu; and MECH (7), on the NON-RESETTABLES menu. Use the digits to form a numeric command, which is 127. Type 127 and The number of mechanism cycles is displayed.



NOTE:

To use the command mode effectively, you should return to the main menu after each command is completed. Do this by holding RESET down and pressing POPULAR until the words "SERVICE MODE" appear on the digital display.

Combining Menu And Command Modes

The most efficient way to set pricing and change programming is to use a combination of the menu mode and the command mode to move through the menus. To do this, use the command mode to get you to the command you want to use, execute the command, and use the menu mode to go to your next selection.

NOTE: A line beginning with an * is the title of a page. A line ending with -> indicates another page exists.

Ver 2.3

* SERVICE MODE *
0 SECURITY ->
1 AUDITS ->
2 ATTRACT ->
3 INITIALIZE ->
4 AUTOPLAY ->
5 PRICING ->
6 OPTIONS ->
7 REPORTS ->
8 STATUS ->
9 RF REMOTE ->

KEY FUNCTIONS

RESET+0 -> Move up 1 line
 RESET+1 -> Move down 1 line
 RESET+2 -> Move left, decrement
 RESET+3 -> Move right, increment
 RESET+4 -> Delete
 RESET+5 -> Insert
 RESET+7 -> Negate
 RESET+8 -> Copy
 RESET+9 -> Toggle/Next
 RESET+POPULAR -> Escape/Backup
 POPULAR -> Enter

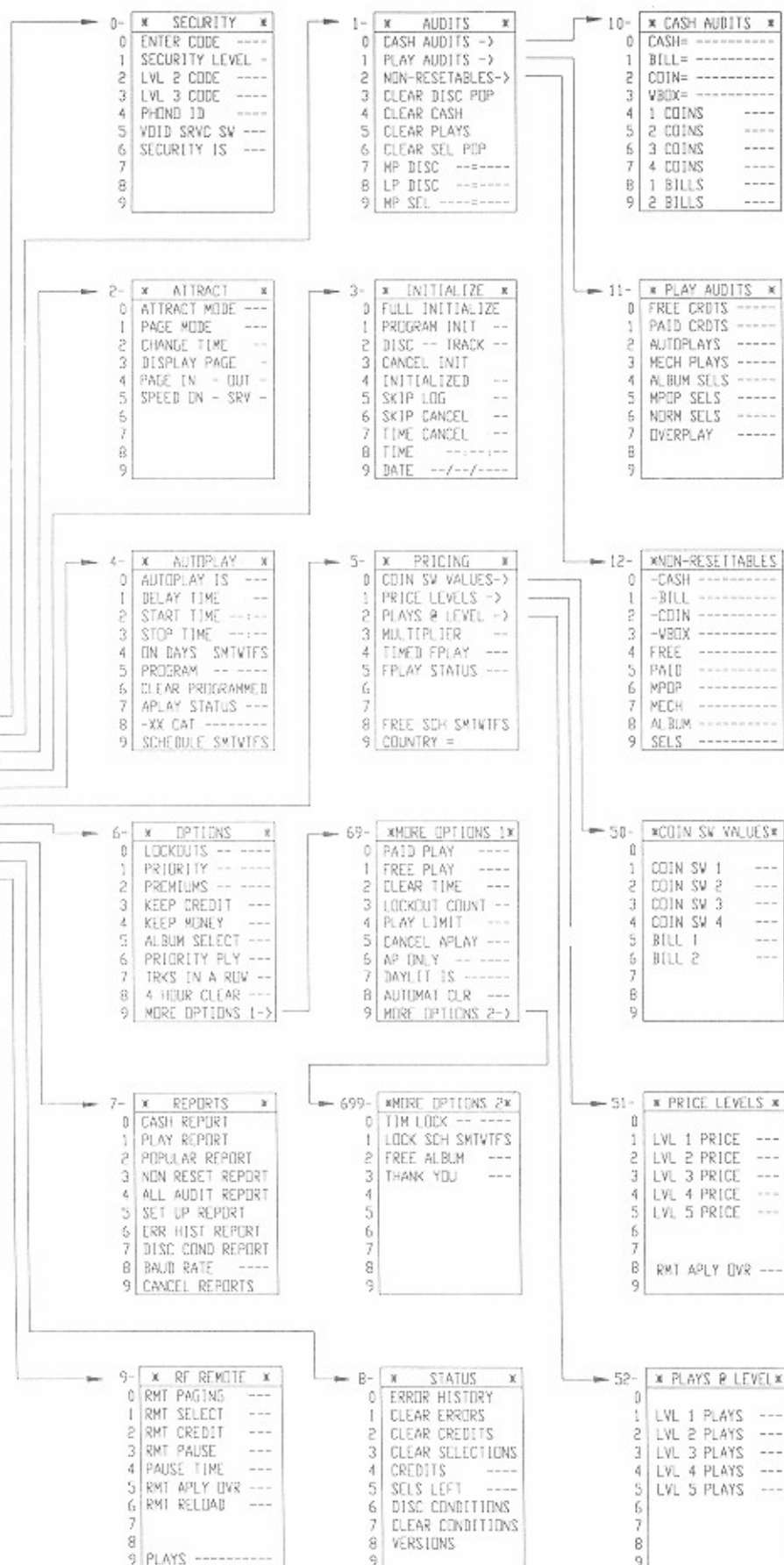


Figure 2-11. Service Mode Map

Service Mode Menu

The SERVICE MODE menu (referred to as the "MAIN menu") is the starting point for all service, pricing, and programming functions. This menu contains the general title for each submenu. Some of the submenus contain commands only. Other submenus contain both commands and further submenu names. Refer to *figure 2-11*, the *CD-100B Service Mode Map*, for a illustration of the following menu descriptions:

Security Menu

This menu contains all of the command options that must be executed to display or change a phonograph security code or enter a security level. This menu also contains a command to change the phonograph ID.

The last SECURITY option, the VOID SERVICE SWITCH option, allows you to completely close the phonograph door (which places the SERVICE switch in the NORMAL position) and remain in the SERVICE mode.

To enter this menu from the MAIN menu: Type 0.

Audits Menu

The AUDITS menu allows you to display and clear the various cash, play, and popularity totals that are routinely reset when money is collected.

To enter this menu from the MAIN menu: Type 1.

Attract Mode Menu

Attract mode is designed to draw attention to customers by moving the selection pages.

To enter this menu from the MAIN menu: Type 2.

Initialize Menu

This menu controls the type of CD initialization that is to be done whenever a disc is changed or moved to a new disc number. This menu must be used to identify empty CD mechanism slots.

This menu also contains options to change the phonograph's time and date.



NOTE:

The phonograph will automatically adjust the disc limits whenever a disc is played. This form of initialization is not recommended as a substitute for the selections in this menu.

To enter this menu from the MAIN menu: Type 3.

Autoplay

Autoplay is the function that plays CD's when no customers have made selections. Autoplay can be used to stimulate play or provide background music. This feature can be scheduled and customized from the Autoplay menu.

To enter this menu from the MAIN menu: Type 4.

Pricing Menu

This menu allows you to change the pricing structure, select FREE PLAY, or return to the factory (default) pricing.

To enter this menu from the MAIN menu: Type 5.

Options Menu

This menu is a collection of disc selection options that allow you to:

- Prevent playing a track (Lockout)
- Give certain tracks priority play
- Charge a double price for certain selections
- Retain credits during a power failure
- Retain the current money total during a power failure
- Buy an entire album
- Limit the number of tracks that can be played from a disc before another disc is allowed to play.
- Retain or erase selections waiting to play if power is off for a significant interval of time, such as overnight (internally programmable from 0 to 999 minutes).

To enter this menu from the MAIN menu: Type 6.

More Options 1 Menu

This menu is a collection of options that allows you to:

- Select FIFO or random playback of selections
- Automatically lockout defective discs (Lockout Count)
- Cancel Autoplay when a paid selection is made.
- Use certain discs for Autoplay only (locked out from the keyboard)
- Automatic or manual Daylight savings time correction

More Options 2 Menu

This menu allows you to:

- Use timed lockouts
- Enable or disable the "Thank You" message
- Enable or disable album buys in FREE PLAY mode.

Reports Menu (Optional)

The REPORTS options allow you to connect a printer or a personal computer to the RS-232 connector on the CCC. This information is the same information that can be displayed on the keyboard display, except that it has been arranged in a simple report format that can be printed or stored on a disk or diskette.

To enter this menu from the MAIN menu: Type 7.

Status Menu

This menu allows you to display and clear the various phonograph error messages, clear and set credits, clear selections, and display and clear disc condition messages, and display software versions.

To enter this menu from the MAIN menu: Type 8.

HOW TO MAKE PROGRAMMING CHANGES

The CD-100B Phonograph allows you to perform programming activities in two ways.

The primary or MENU mode uses menus to move through the choices until you find the desired function. This method of selecting the function that you want is more time consuming than the COMMAND mode, but does not require you to remember any commands.

The Command mode uses two and three digit commands to tell the phonograph what function you want to perform. The command mode requires you to know exactly what command you want because you will go straight to the function that you have requested: You will not receive any intermediate prompts (as you would in the menu mode).

Keyboard Controls

The POPULAR and RESET buttons on the selector keyboard (*see figure 1-1 if you are not familiar with the selector keyboard or digital display*) are used to tell the phonograph how to use the digits that you are about to enter. Table 2-3 describes the results of using these buttons.

Table 2-3. Keyboard Controls

Keys Pressed	Results
POPULAR	Completes a transaction
RESET+0 (hold RESET down)	Moves you up one item in a menu
RESET+1 (hold RESET down)	Moves you down one item in a menu
RESET+2 (hold RESET down)	Moves you left, or decrements
RESET+3 (hold RESET down)	Moves you right, or increments
RESET+4 (hold RESET down)	Removes an entry (such as a programmed Autoplay entry) from the list.
RESET+5 (hold RESET down)	Makes a space in a list (such as programmed Autoplay) so that new information can be inserted
RESET+9 (hold RESET down)	Toggles between two possible selections.
RESET+POPULAR (hold RESET down)	Cancels the current activity or moves you back to the previous menu title.

Security Levels

The CD-100B uses security levels to protect audit and programmable information.

- Level 1 lets you view all of the phonograph information, except the security codes, but does not allow you to change any of the information.
- Level 2 lets you review all of the information, except the security codes, and clear the audit information.
- Level 3 lets you view, clear, or change any information.

Factory Security Level

The phonograph is shipped from the factory with SECURITY OPTION (06) set to OFF.



NOTE:

When the SECURITY OPTION (06) is set to OFF, Security Level 3 is automatically established whenever the phonograph is in the SERVICE MODE.

If you set Security ON, Level 1 is established whenever the phonograph is put in the SERVICE MODE, and you must enter the proper four digit security code to change to Level 2 or Level 3.



NOTE:

You should leave the SECURITY option OFF, unless you need security to prevent tampering with your music programming, pricing, or phonograph options.

Table 2-4, which follows, describes the commands and how to make programming changes.

Working Example Of Enhanced Autoplay

PAUL'S MOTEL

Paul, the owner, operator of Paul's Motel wants to play music in his bar and in the separate restaurant. Paul wants to have the music played everyday in the following format:

- Easy Listening for his breakfast crowd from 5:30 to 10:00 am with a one minute delay between Autoplay selections.
- Top 40 and oldies from 10:00 am to 4:00 pm with a fifteen minute delay between Autoplay selections.
- Specials (certain Top 40 discs) during happy hour from 4:00 to 6:00 pm with a five minute delay between Autoplay selections.
- Easy Listening and Background music for the dinner crowd with a 3 minute delay between Autoplay selections.
- All types of music from 9:00 pm to 3:00 am with a twenty minute delay between Autoplay selections.

To accomplish this format, Paul asked Jeff, his music operator to install a CD-100B in Paul's bar area. Jeff is now installing a 21639701 Background Music Volume Control Kit, and he will use Enhanced Autoplay to give the restaurant the exact music style that Paul desires.

Jeff installs the CD-100B and the background music volume control kit so that the restaurant speakers switch on the restaurant during the Autoplay selections.

HOW JEFF SET UP ENHANCED AUTOPLAY

1. Jeff reads the tutorial carefully and begins to install Enhanced Autoplay by planning his work first.
2. Jeff fills out the Disc Category List (*see figure 2-16*).

DISC CATEGORY LIST

Date 9-8-89

Location PAUL'S MOTEL

Name each of the eight categories and then assign the discs to each category.

Category #	Category Name	Category #	Category Name
1	<u>ALL DISC'S</u>	5	<u>URBAN</u>
2	<u>POP MUSIC - TOP 40</u>	6	<u>OLDIES</u>
3	<u>EASY LISTENING</u>	7	<u>COUNTRY - WESTERN</u>
4	<u>SPECIAL - HAPPY HOUR</u>	8	<u>BACKGROUND MUSIC</u>

Place an X on the category that you wish to assign to each disc.

00	1	X	3	X	5	6	7	8	50	1	2	3	4	5	6	7	8
01	1	2	X	4	5	6	7	8	51	1	2	3	4	5	6	7	8
02	1	2	3	4	5	6	7	8	52	1	2	X	4	5	6	7	8
03	1	2	3	4	5	6	7	8	53	1	2	X	4	5	6	7	8
04	1	2	3	X	5	6	7	8	54	1	2	3	4	5	6	7	8
05	1	2	3	X	5	6	7	8	55	1	2	3	4	5	6	7	8
06	1	2	X	4	5	6	7	X	56	1	2	3	4	5	6	7	8
07	1	2	3	4	5	6	7	8	57	1	2	3	4	5	6	7	8
08	1	2	3	X	5	6	7	8	58	1	2	3	4	5	6	7	8
09	1	2	3	X	5	6	7	8	59	1	2	3	4	5	6	7	8
10	1	2	3	4	5	6	7	8	60	1	2	X	4	5	6	7	8
11	1	2	X	4	5	6	7	8	61	1	2	3	4	5	6	7	8
12	1	2	3	X	5	6	X	8	62	1	2	X	4	5	6	7	8
13	1	2	3	4	5	6	7	8	63	1	2	3	4	5	6	7	8
14	1	2	X	4	5	6	7	8	64	1	2	3	4	5	6	7	8
15	1	2	3	4	5	6	7	8	65	1	2	3	4	5	6	7	8
16	1	2	3	X	5	6	7	8	66	1	2	X	4	5	6	7	8
17	1	2	3	4	5	6	7	8	67	1	2	3	4	5	6	7	8
18	1	2	3	4	5	6	7	X	68	1	2	3	4	5	6	7	8
19	1	2	3	4	5	6	7	8	69	1	2	X	4	5	6	7	8
20	1	2	3	4	5	6	7	8	70	1	2	3	4	5	6	7	8
21	1	2	3	4	5	6	7	8	71	1	2	X	4	5	6	7	8
22	1	2	3	4	5	6	7	8	72	1	2	X	4	5	6	7	8
23	1	2	3	X	5	6	7	X	73	1	2	3	4	5	6	7	8
24	1	2	3	4	5	6	7	8	74	1	2	3	4	5	6	7	8
25	1	2	3	X	5	6	7	8	75	1	2	3	4	5	6	7	8
26	1	2	3	4	5	6	7	8	76	1	2	3	4	5	6	7	8
27	1	2	3	4	5	6	7	8	77	1	2	3	4	5	6	7	8
28	1	2	3	X	5	6	7	X	78	1	2	3	4	5	6	7	8
29	1	2	3	4	5	6	7	8	79	1	2	3	4	5	6	7	8
30	1	2	X	4	5	6	7	8	80	1	2	X	4	5	6	7	8
31	1	2	X	4	5	6	7	8	81	1	2	3	4	5	6	7	8
32	1	2	3	4	5	6	7	8	82	1	2	3	4	5	6	7	8
33	1	2	3	4	5	6	7	8	83	1	2	3	4	5	6	7	8
34	1	2	3	4	5	6	7	8	84	1	2	3	4	5	6	7	X
35	1	2	3	4	5	6	7	8	85	1	2	X	4	5	6	7	8
36	1	2	X	4	5	6	7	8	86	1	2	3	4	5	6	7	8
37	1	2	X	4	5	6	7	8	87	1	2	3	4	5	6	7	8
38	1	2	X	4	5	6	7	X	88	1	2	X	4	5	6	7	8
39	1	2	3	4	5	6	7	8	89	1	2	3	4	5	6	7	8
40	1	2	X	4	5	6	7	8	90	1	2	3	4	5	6	7	8
41	1	2	X	4	5	6	7	X	91	1	2	3	4	5	6	7	8
42	1	2	X	4	5	6	7	8	92	1	2	3	4	5	6	7	8
43	1	2	X	4	5	6	7	8	93	1	2	3	4	5	6	7	X
44	1	2	3	4	5	6	7	8	94	1	2	3	4	5	6	7	8
45	1	2	3	4	5	6	7	8	95	1	2	3	4	5	6	7	8
46	1	2	X	4	5	6	7	8	96	1	2	3	4	5	6	7	8
47	1	2	3	4	5	6	7	8	97	1	2	3	4	5	6	7	8
48	1	2	3	4	5	6	7	8	98	1	2	3	4	5	6	7	X
49	1	2	3	4	5	6	7	8	99	1	2	3	4	5	6	7	8

Figure 2-16. Sample Disc Category List

3. Jeff then enters the information shown in *figure 2-16* in the following sequence:

- A. Jeff enters the SERVICE mode. The list that follows shows what keys he presses and displays what he sees after he presses the keys.
- B. The Steps:

Step #	Keystroke	Display
1	COMMAND 40	AUTOPLAY IS STD
2	RESET+9	AUTOPLAY IS ENH
3	POPULAR	
4	RESET+POPULAR	* AUTOPLAY *
5	RESET+POPULAR	SERVICE MODE
6	COMMAND 48	=00 CAT 1-----
7	RESET+9	00 CAT=1-----
8	Press Key 2, Press Key 4	00 CAT=12-4----
9	POPULAR	01 CAT=1-----
10	Press Key 3	01 CAT=1-3-----
11	POPULAR	02 CAT=1-----

Jeff repeats Steps 9, 10, and 11 to assign all discs according to the Disc Category List. In Step 10, he presses the necessary keys (1-8) to delete (unassigned categories display as a dash) and assign (assigned categories display as the category number) the categories. When he finishes, Jeff will have assigned categories to 38 of the 100 discs possible (some discs will have been assigned to multiple categories).

Note that the factory has assigned all discs to Category 1, and Jeff may choose to turn Category OFF while he assigns categories (In *figure 2-16*, Category 1 is not marked with any "X"s because the factory has already assigned Category 1 to all discs).

- C. Next, Jeff fills out the Autoplay Schedule according to Paul's schedule (*see figure 2-17*).

AUTOPLAY SCHEDULE					
Location <u>PAUL'S MOTEL</u>			Date <u>9-8-89</u>		
Fill in the Autoplay event times, delay times, categories, and volume changes before you make the actual scheduling changes.					
Day: <u>SMTWTFS</u>					
Event	Time	Categories	Delay	Vol 1	Vol 2
1	<u>03:00</u>	<u>—</u>	<u>02</u>	<u>0</u>	<u>0</u>
2	<u>05:30</u>	<u>3</u>	<u>1</u>	<u>0</u>	<u>0</u>
3	<u>10:00</u>	<u>2, 6</u>	<u>15</u>	<u>0</u>	<u>0</u>
4	<u>16:00</u>	<u>4</u>	<u>5</u>	<u>0</u>	<u>0</u>
5	<u>18:00</u>	<u>3, 8</u>	<u>3</u>	<u>0</u>	<u>0</u>
6	<u>21:00</u>	<u>ALL</u>	<u>20</u>	<u>0</u>	<u>0</u>

Figure 2-17. Sample Autoplay Schedule

- D. Jeff now enters the SERVICE mode and begins to make the entries.
The steps are:

Step #	Keystroke	Display
1	COMMAND 49	SCHEDULE SMTWTFS
2	POPULAR	SU 01 TIME --:--
3	Press Keys 0, 3, POPULAR, POPULAR	SU 01 TIME 03:00
4	RESET+9, POPULAR	[-----]
5	RESET+9	SU 01 DELAY 00
6	Press Keys 0, 2, POPULAR	SU 01 DELAY 02
7	RESET+9 (THREE TIMES)	SU 01 TIME 03:00
8	RESET+3	SU 02 TIME --:--
9	Press Keys 05, POPULAR, 30, POPULAR	SU 02 TIME 05:30
10	Press RESET+9	SU 02 [-----]
11	Press Keys 3, POPULAR	SU 02 [--3-----]

Step #	Keystroke	Display
12	Press RESET+9	SU 02 DELAY 00
13	Press Keys 1, POPULAR	SU 02 DELAY 01
14	Press RESET+9 (three times)	SU 02 TIME 05:30
15	Press RESET+3	SU 03 TIME --:--
16	Press Key 10, POPULAR, POPULAR	SU 03 TIME 10:00
17	Press RESET+9	SU 03 [-----]
18	Press Keys 2, 6, and then POPULAR	SU 03 [-2---6--]
19	Press RESET+9	SU 03 DELAY 00
20	Press 1, 5, POPULAR	SU 03 DELAY 15
21	Press RESET+9 (three times)	SU 03 TIME 10:00
22	Press RESET+3	SU 04 TIME --:--
23	Press Key 1, 6, POPULAR, POPULAR	SU 04 TIME 16:00
24	Press RESET+9	SU 04 [-----]
25	Press Keys 4, POPULAR	SU 04 [---4----
26	Press RESET+9	SU 04 DELAY 00
27	Press 0, 5, POPULAR	SU 04 DELAY 05
28	Press RESET+9 (three times)	SU 04 TIME 16:00
29	Press RESET+3	SU 05 TIME --:--
30	Press Keys 1, 8, POPULAR, POPULAR	SU 05 TIME 18:00
31	Press RESET+9	SU 05 [-----]
32	Press Keys 3, 8, then POPULAR	SU 05 [--3----8]
33	Press RESET+9	SU 05 DELAY 00
34	Press 3 then POPULAR	SU 05 DELAY 03
35	Press RESET+9 (three times)	SU 05 TIME 18:00
36	Press RESET+3	SU 06 TIME --:--
37	Press Keys 2, 1, POPULAR, POPULAR	SU 06 TIME 21:00

Step #	Keystroke	Display
38	Press RESET+9	SU 06 [-----]
39	Press Keys 1 through 8, then POPULAR	SU 06 [12345678]
40	Press RESET+9	SU 06 DELAY 00
41	Press 2, 0, then POPULAR	SU 06 DELAY 20
42	Press RESET+9 (three times)	SU 06 TIME 21:00
43	Press RESET+POPULAR twice)	SERVICE MODE
44	Press Keys 4, 9	SCHEDULE SMTWTFS
45	Press RESET+8	CPY SU-> S
46	Press RESET+2 (twice)	CPY SU-> SMTWTFS
47	Press POPULAR	SCHEDULE SMTWTFS

Worksheet Masters



On the following pages you will find blank worksheet masters for *Multiple Free Play On/Off Times*, the *Disc Category List*, and the *Autoplay Schedule*.

Carefully remove these masters from this manual and copy them freely for your use. Note that extra room has been left on the left hand margin of each sheet so that it may be hole-punched and kept in a binder for future reference.



MULTIPLE FREE PLAY ON/OFF TIMES

Fill in the START times, STOP times, and the COMMENTS before you make the actual scheduling changes.

Sunday	On	Off	Comment
1	____ : ____	____ : ____	_____
2	____ : ____	____ : ____	_____
3	____ : ____	____ : ____	_____

Monday	On	Off	Comment
1	____ : ____	____ : ____	_____
2	____ : ____	____ : ____	_____
3	____ : ____	____ : ____	_____

Tuesday	On	Off	Comment
1	____ : ____	____ : ____	_____
2	____ : ____	____ : ____	_____
3	____ : ____	____ : ____	_____

Wednesday	On	Off	Comment
1	____ : ____	____ : ____	_____
2	____ : ____	____ : ____	_____
3	____ : ____	____ : ____	_____

Thursday	On	Off	Comment
1	____ : ____	____ : ____	_____
2	____ : ____	____ : ____	_____
3	____ : ____	____ : ____	_____

Friday	On	Off	Comment
1	____ : ____	____ : ____	_____
2	____ : ____	____ : ____	_____
3	____ : ____	____ : ____	_____

Saturday	On	Off	Comment
1	____ : ____	____ : ____	_____
2	____ : ____	____ : ____	_____
3	____ : ____	____ : ____	_____

DISC CATEGORY LIST

Date _____

Location _____

Name each of the eight categories and then assign the discs to each category.

Category #	Category Name	Category #	Category Name
1	_____	5	_____
2	_____	6	_____
3	_____	7	_____
4	_____	8	_____

Place an X on the category that you wish to assign to each disc.

00	1	2	3	4	5	6	7	8	50	1	2	3	4	5	6	7	8
01	1	2	3	4	5	6	7	8	51	1	2	3	4	5	6	7	8
02	1	2	3	4	5	6	7	8	52	1	2	3	4	5	6	7	8
03	1	2	3	4	5	6	7	8	53	1	2	3	4	5	6	7	8
04	1	2	3	4	5	6	7	8	54	1	2	3	4	5	6	7	8
05	1	2	3	4	5	6	7	8	55	1	2	3	4	5	6	7	8
06	1	2	3	4	5	6	7	8	56	1	2	3	4	5	6	7	8
07	1	2	3	4	5	6	7	8	57	1	2	3	4	5	6	7	8
08	1	2	3	4	5	6	7	8	58	1	2	3	4	5	6	7	8
09	1	2	3	4	5	6	7	8	59	1	2	3	4	5	6	7	8
10	1	2	3	4	5	6	7	8	60	1	2	3	4	5	6	7	8
11	1	2	3	4	5	6	7	8	61	1	2	3	4	5	6	7	8
12	1	2	3	4	5	6	7	8	62	1	2	3	4	5	6	7	8
13	1	2	3	4	5	6	7	8	63	1	2	3	4	5	6	7	8
14	1	2	3	4	5	6	7	8	64	1	2	3	4	5	6	7	8
15	1	2	3	4	5	6	7	8	65	1	2	3	4	5	6	7	8
16	1	2	3	4	5	6	7	8	66	1	2	3	4	5	6	7	8
17	1	2	3	4	5	6	7	8	67	1	2	3	4	5	6	7	8
18	1	2	3	4	5	6	7	8	68	1	2	3	4	5	6	7	8
19	1	2	3	4	5	6	7	8	69	1	2	3	4	5	6	7	8
20	1	2	3	4	5	6	7	8	70	1	2	3	4	5	6	7	8
21	1	2	3	4	5	6	7	8	71	1	2	3	4	5	6	7	8
22	1	2	3	4	5	6	7	8	72	1	2	3	4	5	6	7	8
23	1	2	3	4	5	6	7	8	73	1	2	3	4	5	6	7	8
24	1	2	3	4	5	6	7	8	74	1	2	3	4	5	6	7	8
25	1	2	3	4	5	6	7	8	75	1	2	3	4	5	6	7	8
26	1	2	3	4	5	6	7	8	76	1	2	3	4	5	6	7	8
27	1	2	3	4	5	6	7	8	77	1	2	3	4	5	6	7	8
28	1	2	3	4	5	6	7	8	78	1	2	3	4	5	6	7	8
29	1	2	3	4	5	6	7	8	79	1	2	3	4	5	6	7	8
30	1	2	3	4	5	6	7	8	80	1	2	3	4	5	6	7	8
31	1	2	3	4	5	6	7	8	81	1	2	3	4	5	6	7	8
32	1	2	3	4	5	6	7	8	82	1	2	3	4	5	6	7	8
33	1	2	3	4	5	6	7	8	83	1	2	3	4	5	6	7	8
34	1	2	3	4	5	6	7	8	84	1	2	3	4	5	6	7	8
35	1	2	3	4	5	6	7	8	85	1	2	3	4	5	6	7	8
36	1	2	3	4	5	6	7	8	86	1	2	3	4	5	6	7	8
37	1	2	3	4	5	6	7	8	87	1	2	3	4	5	6	7	8
38	1	2	3	4	5	6	7	8	88	1	2	3	4	5	6	7	8
39	1	2	3	4	5	6	7	8	89	1	2	3	4	5	6	7	8
40	1	2	3	4	5	6	7	8	90	1	2	3	4	5	6	7	8
41	1	2	3	4	5	6	7	8	91	1	2	3	4	5	6	7	8
42	1	2	3	4	5	6	7	8	92	1	2	3	4	5	6	7	8
43	1	2	3	4	5	6	7	8	93	1	2	3	4	5	6	7	8
44	1	2	3	4	5	6	7	8	94	1	2	3	4	5	6	7	8
45	1	2	3	4	5	6	7	8	95	1	2	3	4	5	6	7	8
46	1	2	3	4	5	6	7	8	96	1	2	3	4	5	6	7	8
47	1	2	3	4	5	6	7	8	97	1	2	3	4	5	6	7	8
48	1	2	3	4	5	6	7	8	98	1	2	3	4	5	6	7	8
49	1	2	3	4	5	6	7	8	99	1	2	3	4	5	6	7	8

AUTOPLAY EVENT SCHEDULE

Location _____

Date _____

Fill in the Autoplay event times, delay times, categories, and volume changes before you make the actual scheduling changes.

Day: _____

Event	Time	Categories	Delay	Vol 1	Vol 2
1	_____ : _____	_____	_____	_____	_____
2	_____ : _____	_____	_____	_____	_____
3	_____ : _____	_____	_____	_____	_____
4	_____ : _____	_____	_____	_____	_____
5	_____ : _____	_____	_____	_____	_____
6	_____ : _____	_____	_____	_____	_____
7	_____ : _____	_____	_____	_____	_____
8	_____ : _____	_____	_____	_____	_____
9	_____ : _____	_____	_____	_____	_____
10	_____ : _____	_____	_____	_____	_____
11	_____ : _____	_____	_____	_____	_____
12	_____ : _____	_____	_____	_____	_____
13	_____ : _____	_____	_____	_____	_____
14	_____ : _____	_____	_____	_____	_____
15	_____ : _____	_____	_____	_____	_____
16	_____ : _____	_____	_____	_____	_____
17	_____ : _____	_____	_____	_____	_____
18	_____ : _____	_____	_____	_____	_____
19	_____ : _____	_____	_____	_____	_____
20	_____ : _____	_____	_____	_____	_____

SERIAL # _____

LOCATION _____

**ROWE
CD PHONO
OPERATOR'S SET-UP SHEET**

SUGGESTION: Record any changes on this log and keep for future reference.

INSTRUCTIONS -

1. Items in parentheses do not appear on the digital display.
2. Customer fills in blanks where program differs from factory settings.

MENU COMMAND	MENU NAME	FACTORY SETTINGS	OPERATOR CHANGES
* SECURITY *			
02	LVL 2 CODE	0000	_____
03	LVL 3 CODE	0000	_____
04	PHONO ID	0000	_____
05	VOID SRVC SW (ON/OFF)	OFF	_____
06	SECURITY IS (ON/OFF)	OFF	_____
* ATTRACT *			
20	ATTRACT MODE (ON/OFF)	ON	_____
21	PAGE MODE (AD/OFF/CHG)	AD	_____
22	CHANGE TIME (# MINUTES)	10	_____
23	DISPLAY PAGE (PAGE #)	1	_____
24	PAGE IN - OUT (1 - 9)	IN-1 OUT-9	IN _____ OUT _____
25	SPEED ON - SRV (1 - 9)	ON-4 SRV-6	ON _____ SRV _____
* INITIALIZE *			
35	SKIP LOG	05	_____
36	SKIP CANCEL	99	_____
37	TIME CANCEL	99	_____
38	TIME ¹	EASTERN STD.	_____ : _____
39	DATE ²		_____
* AUTO PLAY *³			
40	AUTO PLAY IS (STD/ENH/OFF)	STD	_____
41	DELAY TIME (# MINUTES)	20	_____
42	START TIME (TIME OF DAY)	00:00	_____
43	STOP TIME (TIME OF DAY)	23:59	_____
44	ON DAYS	SMTWTFS	_____
45	PROGRAM	00 _____	00 _____ 01 _____ 02 _____ 03 _____
47	APLAY STATUS (ON/OFF)	ON	_____
48	(ENH APLAY)	=00 CAT 1-----	_____
49	SCHEDULE	SMTWTFS	_____
* PRICING *			
53	MULTIPLIER	5	_____
54	TIMED FPLAY (ON/OFF)	OFF	_____
55	FPLAY STATUS (ON/OFF)	OFF	_____
58	FREE SCH ⁴	SMTWTFS	_____
59	C O U N T R Y (US/UK/AUSTRA/CANADA)	= US	_____
* COIN SW VALUES *			
501	COIN SW 1	1	_____
502	COIN SW 2	2	_____
503	COIN SW 3	5	_____
504	COIN SW 4	10	_____
505	BILL 1	20	_____
506	BILL 2	100	_____
* PRICE LEVELS *			
511	LVL 1 PRICE	100	_____
512	LVL 2 PRICE	200	_____
513	LVL 3 PRICE	500	_____
514	LVL 4 PRICE	0	_____
515	LVL 5 PRICE	0	_____
* PLAY @ LEVELS *			
521	LVL 1 PLAYS	3	_____
522	LVL 2 PLAYS	7	_____
523	LVL 3 PLAYS	18	_____
524	LVL 4 PLAYS	0	_____
525	LVL 5 PLAYS	0	_____

MENU COMMAND	MENU NAME	FACTORY SETTINGS	OPERATOR CHANGES
* OPTIONS *			
60	LOCKOUTS (50 MAX) ⁵	00 _____	00 _____ 01 _____ 02 _____ 03 _____
61	PRIORITY (10 MAX) ⁵	00 _____	00 _____ 01 _____ 02 _____ 03 _____
62	PREMIUMS (25 MAX) ⁵	00 _____	00 _____ 01 _____ 02 _____ 03 _____
63	KEEP CREDIT (ON/OFF)	ON	_____
64	KEEP MONEY (ON/OFF)	ON	_____
65	ALBUM SELECT (ON/OFF)	ON	_____
66	PRIORITY PLY (ON/OFF)	ON	_____
67	TRKS IN A ROW	2	_____
68	4 HOUR CLEAR (ON/OFF)	ON	_____
* MORE OPTIONS 1*			
690	PAID PLAY (FIFO/RAND)	FIFO	_____
691	FREE PLAY (RAND/FIFO)	RAND	_____
692	CLEAR TIME	240	_____
693	LOCKOUT COUNT	99	_____
694	PLAY LIMIT	0	_____
695	CANCEL APLAY (ON/OFF)	ON	_____
696	AP ONLY (25 MAX) ⁵	00 _____	00 _____ 01 _____ 02 _____ 03 _____
697	DAYLIT (STD/NONSTD/OFF) DAYLIT ON (ONLY FOR NON STD) DAYLIT OFF (ONLY FOR NON STD)	STD	_____
698	AUTOMAT CLR (ON/OFF)	ON	_____
* MORE OPTIONS 2*			
6990	TIM LOCK (25 MAX) ⁵	00 _____	00 _____ 01 _____ 02 _____ 03 _____
6991	LOCK SCH ⁴	SMTWTFS	_____
6992	FREE ALBUM ON/OFF	OFF	_____
6993	"THANK YOU" ON/OFF	ON	_____
* REPORTS *			
78	BAUD RATE (600/1200/2400/4800/9600)	2400	_____
* RF REMOTE *			
90	RMT PAGING (ON/OFF)	OFF	_____
91	RMT SELECT (ON/OFF)	OFF	_____
92	RMT CREDIT	0	_____
93	RMT PAUSE (ON/OFF)	OFF	_____
94	PAUSE TIME	1	_____
95	RMT APLY OVR (ON/OFF)	OFF	_____
96	RMT RELOAD (0)	0	_____

¹ Time shows current time of day

² Date shows current month/day/year

³ See Enhanced Autoplay Tutorial

⁴ See Timed Free Play and Timed Lockout Scheduling Tutorial

⁵ See Programming Autoplay, Premium, Priorities, and Lockouts

Section 3: Routine Service

INTRODUCTION

Routine and preventive maintenance are to be performed on your normal periodic service call. This section discusses how to change discs and titles, how to collect money, audit statistics, and preventive maintenance procedures.

LIFTING THE TITLE RACK



CAUTION:

Do not attempt to turn the CD title pages by hand. Use the handwheel on the back of the title rack (see figure 1-2).

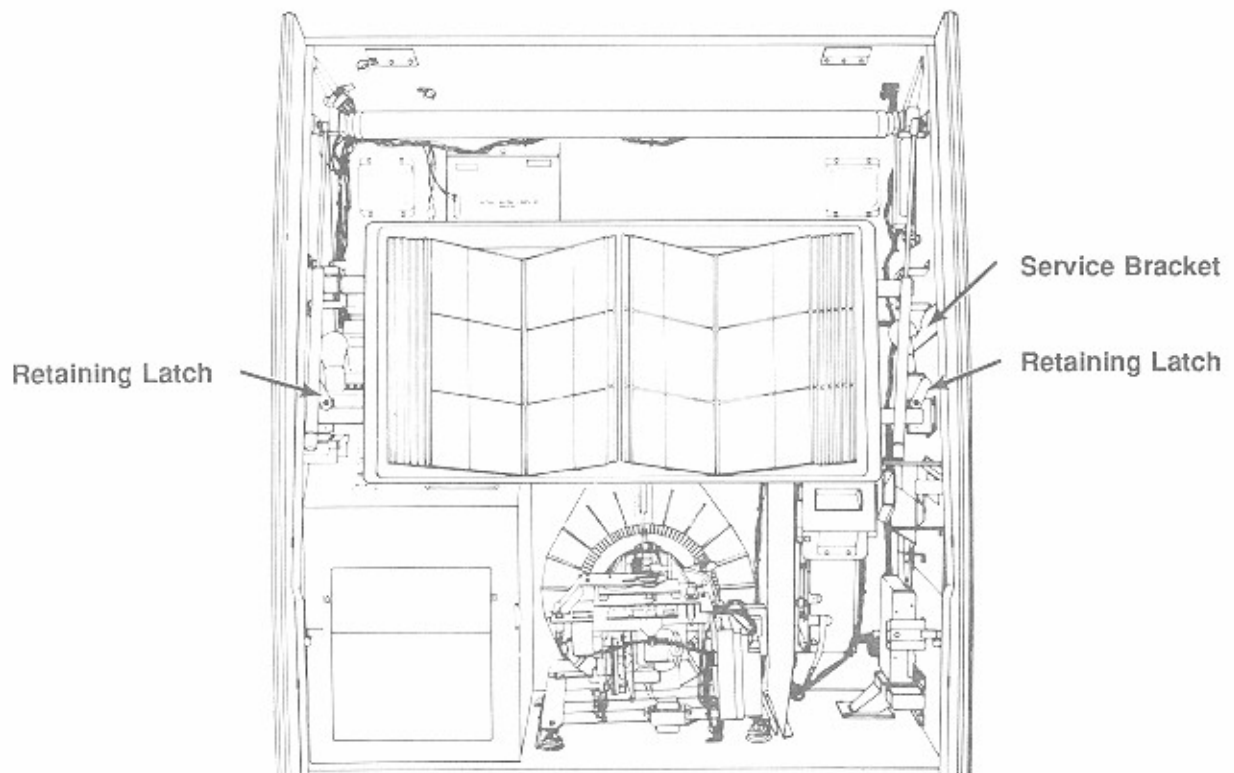


Figure 3-1. Lifting The Title Rack

Before you begin changing discs, you may wish to lift the title rack to give yourself more room to work. Lift the title rack as follows:

1. Open the phonograph top door.
2. Rotate the two retaining latches (see figure 3-1) away from the title rack bar and lift the bottom of the title rack up and toward you with your left hand.
3. With your right hand, swing the title rack service bracket out to hold the title rack up.

DOING AN AUDIT

The following pages describe how to:

1. Access the phonograph's audit menus and extract audit figures
2. Change title strips and discs
3. Collect money

You can perform these three activities in any order that you wish.

COLLECTING AUDIT FIGURES

The pages that follow describe the major auditing activities that need to be done on a routine service call. If you wish to do additional auditing, you can obtain the additional commands from table 3-1, the AUDIT commands.

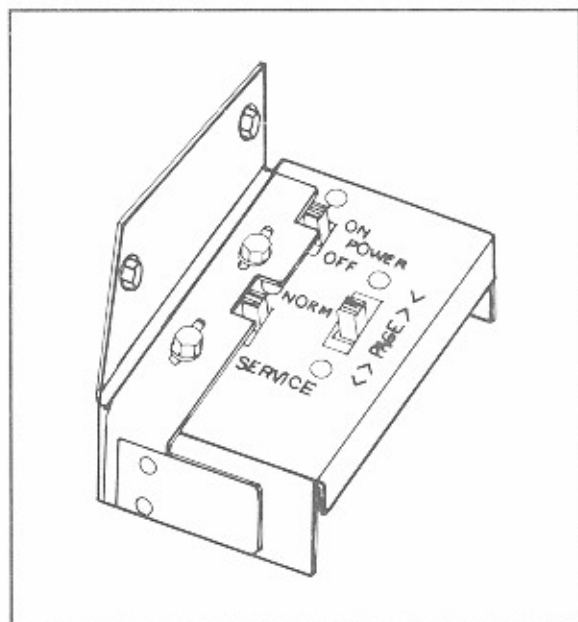


Figure 3-2. Service Switch

Entering The Service Mode

1. Open the top door and place the SERVICE switch (figure 3-2) in the SERVICE position. The phonograph display will say * SERVICE MODE *.



NOTE:

If you find that you are not seeing the display that you expect, you can always: press and hold RESET and then press POPULAR three times. This will take you back to the main menu.

At this point you can begin doing the audits. Refer to the CD-100B Service Mode Map (figure 2-7) for a diagram of the audit menus and commands. Do audits for cash, play, non-resettables, clear disc popularity, clear cash, clear plays in the following manner:

Cash Audits

1. Type 100. This displays the CURRENT CASH value. Record the CURRENT CASH figure in your usual way and go to the next step.
2. Press and hold RESET and then press 1. This will move you down to the next display. Record the CASH VALUE in the usual way.
3. Repeat Step 2 until you do the last CASH audit, which is the #2 BILLS audit. Do this audit and then press and hold RESET while you press POPULAR three times.

Play Audits

1. Type 110. This displays the FREE CREDITS value. Record the FREE CREDITS figure in your usual way and go to the next step.
2. Press and hold RESET and then press 1. This will move you down to the next display. Record the credit value in the usual way.
3. Repeat Step 2 until you do the last PLAY audit, which is the OVERPLAY audit. Do this audit and then press and hold RESET while you press POPULAR three times.

Non-Resettable Audits

1. Type 120. This displays the NON-RESETTABLE CASH value. Record the NON-RESETTABLE CASH value in your usual way and go to the next step.
2. Press and hold RESET and then press 1. This will move you down to the next display. Record the value in the usual way.
3. Repeat Step 2 until you do the last NON-RESETTABLE audit, which is the SELS audit. Do this audit and then press and hold RESET while you press POPULAR three times. This returns you to the main menu.

Most Popular Disc

1. Type 17. The most popular disc number will be displayed.
2. If you wish to know the next-to-the-most popular, press and hold RESET and then press 3. Press and hold RESET and then press 3 to display each successive "Most Popular" disc. Press and hold RESET and then press 2 to move through the popularity display toward the most popular disc.
3. Press and hold RESET while you press POPULAR twice. This returns you to the main menu.

Least Popular Disc

1. Type 18. The least popular disc will be displayed.
2. To display the next "Least Popular" disc, press and hold RESET and then press 2. Press and hold RESET and then press 2 to display each successive least popular disc. Press and hold RESET and then press 3 to move through the popularity display toward the least popular disc.
3. Press and hold RESET while you press POPULAR twice. This returns you to the main menu.

Most Popular Selection

1. Type 19. The most popular selection number will be displayed.
2. To display the next most popular selection, press and hold RESET and then press 3. Press and hold RESET and then press 3 to display each successive most popular selection. Press and hold RESET and then press 2 to move through the popularity display toward the most popular selection.

You can request the popularity for a particular selection by pressing the selection number (four digits).

Clearing The Audit Values

The three CLEAR options will not clear the corresponding audit value until the POPULAR button is pressed.

For example:

You can display the CLEAR CASH message and then move to CLEAR PLAYS and then move back to CLEAR CASH without actually clearing either set of values.

The following steps describe how to perform each of the three CLEAR commands as a separate activity. If you wish to use the "short cut" method, follow the *Using The CD-100B Commands instructions in Section 2*. Each of these commands may be executed from SECURITY LEVEL 2 or 3.

CLEAR CASH

1. Make sure that you are in the SERVICE mode and that * SERVICE MODE * is on the display.
2. Type 14. The message CLEAR CASH will appear on the display. Press POPULAR to clear the cash values. The display will blink when the command is executed.
3. Press and hold RESET while you press POPULAR twice.

CLEAR PLAYS

1. Make sure that you are in the SERVICE mode and that * SERVICE MODE * is on the display.
2. Type 15. The message CLEAR PLAYS will appear on the display. Press POPULAR to clear the play values. The display will blink when the command is executed.
3. Press and hold RESET while you press POPULAR twice.

CLEAR SELECTION POPULARITY

1. Make sure that you are in the SERVICE mode and that * SERVICE MODE * is on the display.
2. Type 16. The message CLEAR SEL POP will appear on the display. Press POPULAR to clear the popularity values. The display will blink when the command is executed.
3. Press and hold RESET while you press POPULAR twice.

CHANGING CD'S AND TITLES

**NOTE:**

Do not attempt to turn the CD title pages by hand. Use the handwheel on the back of the title rack (see figure 1-2).

The procedure for loading CD's and titles into an empty phonograph is different from the procedure to change CD's and titles. Please make sure that you are following the procedure that describes your situation.

Preparing Titles For The Title Rack

1. If your titles have not been shipped with the discs or pre-printed, you will need to prepare the title strips yourself.
2. Tear each title strip from the title sheet so that the two perforated columns appear on the side of the title strip (the shaded portion of the title strip in figure 3-3 represents a title strip that has been removed from the title sheet).

Separate Here

Separate Here

TRACK NO. NEXT 2 DIGITS	DISC NO. FIRST 2 DIGITS	TRACK NO. NEXT 2 DIGITS	DISC NO. FIRST 2 DIGITS
01		01	
02		02	
03		03	
04		04	
05		05	
06		06	
07		07	
08		08	
09		09	
10		10	
11		11	
12		12	
13		13	
14		14	
ARTIST		ARTIST	
01		01	
02		02	
03		03	
04		04	
05		05	
06		06	
07		07	
08		08	
09		09	
10		10	
11		11	
12		12	
13		13	
14		14	
ARTIST		ARTIST	
BLANK TITLE STRIP		COMPACT DISC	
ROWE - MI CD-100 Discard		109 15 903	

Separate Here

Figure 3-3. Blank Title Sheet

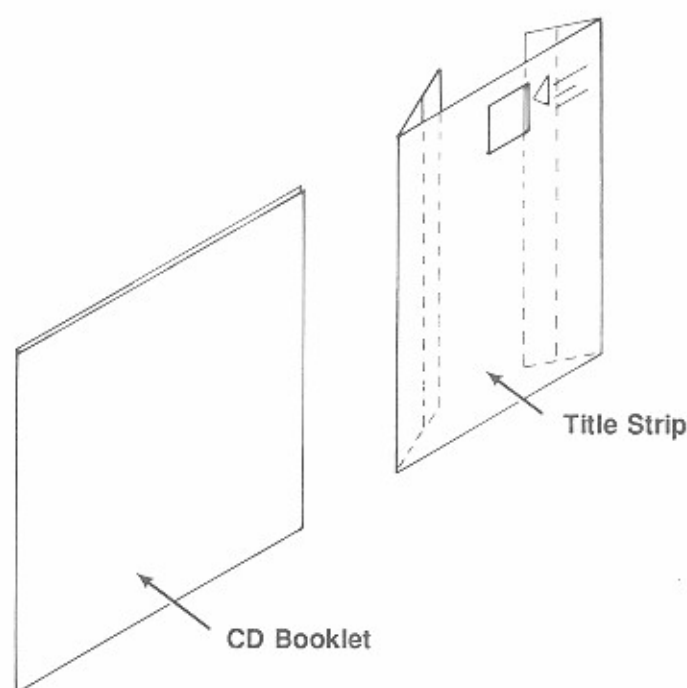


Figure 3-4. Folding The Title Strip

3. Fold the title strip along the inner most perforated line on both sides of the title strip (see figure 3-4).
4. Locate the CD album booklet that matches the title strip that you have just made. If the CD booklet is more than two sheets thick, remove the inner sheets so that the booklet is no thicker than two title strips.
5. Insert the CD booklet under the top and bottom tabs of the title rack. Slide the CD booklet toward the pivot of the title rack until the booklet is trapped by the molded stops on the title page (see figure 3-5, ref A).
6. Insert the folded title strip under the top and bottom tabs of the title rack. Slide the title strip until the disc number shows in the opening of the title strip and the title strip is locked in place by the molded stops (see figure 3-5, ref B).
7. All of the tabs surrounding the CD booklet and title strip should be holding them in place. If you missed a tab, carefully tuck the loose paper under the tab as shown in figure 3-5, ref C.
8. Repeat steps 4 through 7 until all titles are installed. Use the CHANGE PAGE buttons to change title rack pages. Insert filler title strips (Part Number 30940601) to fill out any unused space left on a page. Insert these in the same way that you installed the fill-in title strips.

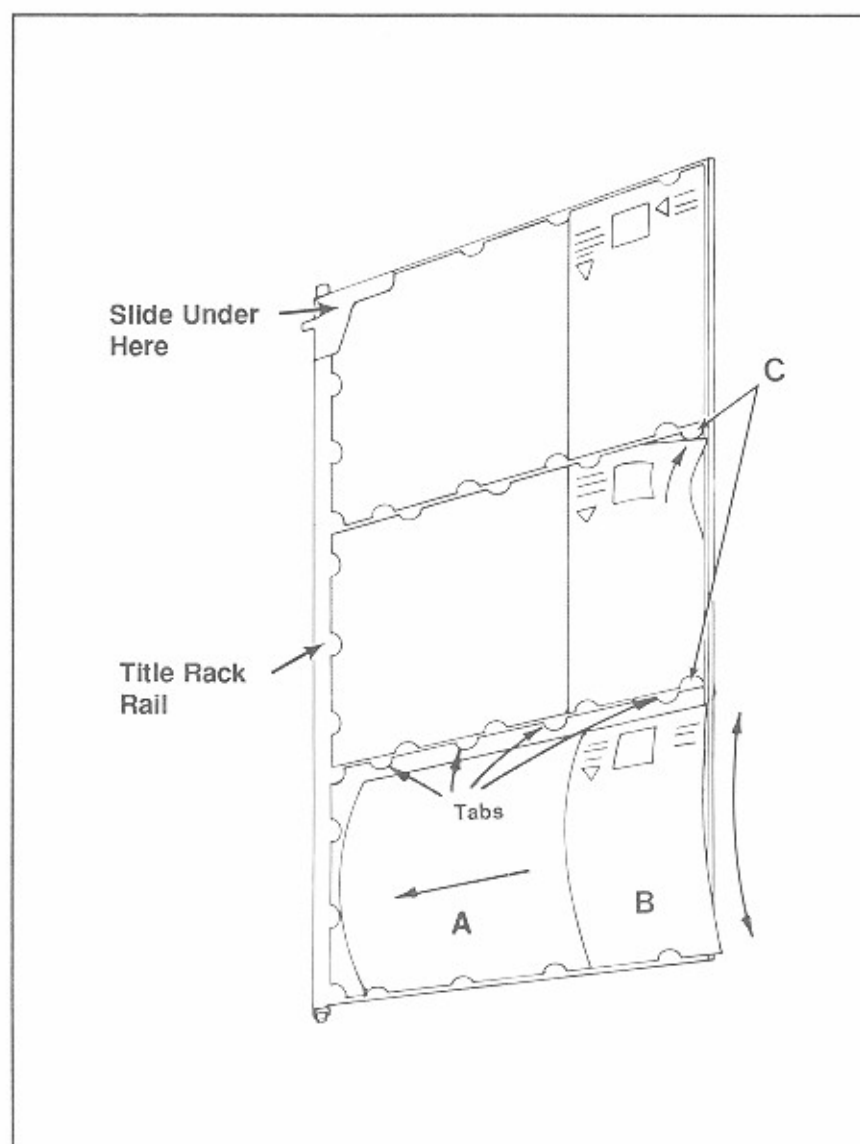


Figure 3-5. Loading the Title Rack
(Right-Hand Page)

Changing Title Page Limits On An Installed Phonograph

1. Unlock and open the top door, if you have not already.
2. Move the SERVICE switch to the SERVICE position, if not already done (refer to figure 3-2).
3. Make sure that * SERVICE MODE * appears on the display.
4. Type 24 and you will see the display for entering the first page number to use and the last number to use. Type the first page number (page numbers are counted from the left to the right) and press POPULAR. Notice that the blinking number has moved to the right. Type the last page number to be used and press POPULAR.

Changing Discs

You can (1) initialize each disc as you change it, or (2) you can write down all of the disc numbers and then type them all into the INITIALIZE command. The following steps describes the second method.

Change discs as follows:

1. Unlock and open the top door, if not already done.
2. Move the SERVICE switch to the SERVICE position, if not already done (refer to figure 3-2).
3. Press the SCAN button to move the disc space to the left or right of the transfer arm.
4. Slide the old CD out of the slot and slide the new CD into the slot (see figure 3-6) with the label to the right. Write the disc number on a note pad.

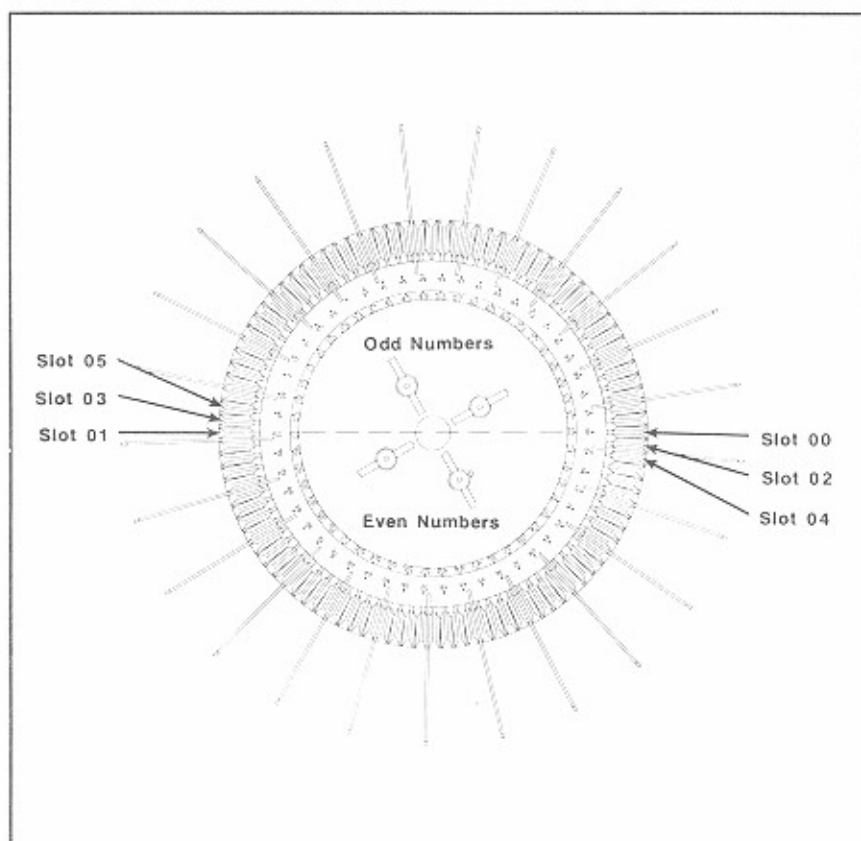


Figure 3-6. Loading The Molded CD Magazine

Note that disc positions in the molded CD magazine are identified by numbers at every other slot, with even numbered slots labeled on one half of the magazine, and odd numbered slots labeled on the other half.

For example, on the even numbered half of the magazine, slots 00, 04, and 08 are labeled, and the slots in between - 02 and 06 - are not, as illustrated in figure 3-6.



NOTE:

When loading the magazine, be sure that the disc rests in the same numbered slot in both the front and rear of the magazine.

Be sure to keep the magazine disc load approximately balanced. If the magazine is partially loaded with all discs on one side, The sprag wheel may lock and the magazine will not turn.

5. Repeat step 4 until all discs have been changed.
6. Make sure that you have placed the SERVICE switch in the SERVICE mode and that * SERVICE MODE * is on the keyboard display.
7. Type 31 and the display will show PROGRAM INIT - -. Enter the CD numbers that you have changed and press POPULAR after each number. After you have entered all of the disc numbers, place the phonograph into the NORMAL mode and the initialization process will start. Selections can be made while the new discs are being initialized.

COMPLETE AUDIT COMMAND LIST

Table 3-1 is a complete list of the Audit commands with an explanation of what each command does.

Table 3-1. Audit Commands

Command	Description
1	AUDITS - Are the functions and menus that allow you to display and reset the various accumulated figures for money, popularity, number of plays, and credits.
10	Cash Audits - Is the menu that allows you to display, but not change, cash totals, number of coins through the coin switches, and the total number of bills.
11	Play Audits - Is the menu that allows you to display, but not change, credits, autoplays, mechanism plays, and album plays.
12	Non-Resettables - Is the menu that allows you to display the ongoing totals. These totals cannot be reset from any security level.
13	Clear Disc Popularity - Clears the popularity for all discs. This option should only be used after the popularity figures (Selections 7 and 8 in this menu) have been read and recorded. Press POPULAR to clear the disc popularity values. The display will blink when the command is executed.
14	Clear Cash - Clears all current cash totals. This option should only be used after the figures for Cash Audits (Selection 0 in this menu) have been read and recorded. Press POPULAR to perform this function. The display will blink when the command is executed.
15	Clear Plays - Clears all current play totals. This option should only be used after the Play Audit figures in Play Audits (Selection 1 in this menu) have been read and recorded. Press POPULAR to perform this function. The display will blink when the command is executed.
16	Clear Selection Popularity - Clears all current selection popularity. This option should only be used after Popularity Figures (Selection 9 in this menu) have been read and recorded. Press POPULAR to perform this function. The display will blink when the command is executed.
17	Display The Most Popular Disc - Displays the most popular disc number (00-99), followed by the number of plays (9999 maximum) that disc had. To display the next most popular disc, press and hold RESET and then press 3. Press and hold RESET and then press 3 to display each successive most popular disc. Press and hold RESET and then press 2 to move up through the popularity display toward the most popular disc.

You can request the popularity for a particular disc by pressing the disc number.

Table 3-1. Audit Commands
Continued

Command	Description
18	<p>Display The Least Popular Disc - Displays the least popular disc number (00-99) followed by the number of plays that the disc had. To display the next "least popular" disc, press and hold RESET and then press 2. Press and hold RESET and then press 2 to display each successive least popular disc. Press and hold RESET and then press 3 to move up through the popularity display toward the least popular disc.</p> <p>You can request the popularity for a particular disc by pressing the disc number.</p>
19	<p>Display The Most Popular Selection - Displays the most popular selection number (Disc 00-99 followed by Selection 00-99, a total of four digits), followed by the number of plays (9999 maximum) that selection had. To display the next "Most Popular" selection, press and hold RESET and then press 3. Press and hold RESET and then press 3 to display each successive most popular selection. Press and hold RESET and then press 2 to move up through the popularity display toward the most popular selection. A total of 100 selection numbers may be contained in the MOST POPULAR list.</p> <p>You can request the popularity for a particular selection by pressing the selection number (four digits).</p>
10	<p>CASH AUDITS - Allows you to display, but not change, cash totals, number of coins through the coin switches, and the total number of bills.</p>
100	<p>Current Cash - Displays the total amount of bill and coin money collected since the last time the CLEAR CASH command (Selection 4 in the AUDITS menu) was used.</p>
101	<p>Current Bill - Displays the total amount of bills collected since the last time the CLEAR CASH command (Selection 4 in the AUDITS menu) was used.</p>
102	<p>Current Coin - Displays the total amount of coins collected since the last time the CLEAR CASH command (Selection 4 in the AUDITS menu) was used.</p>
103	<p>Current Wallbox - Displays the total amount of money collected by wallboxes since the last time the CLEAR CASH command (Selection 4 in the AUDITS menu) was used.</p>
104	<p>Current Number Of Type 1 Coins - Displays the total number of Type 1 coins (5¢) collected since the last time the CLEAR CASH command (Selection 4 in the AUDITS menu) was used.</p>
105	<p>Current Number Of Type 2 Coins - Displays the total number of Type 2 coins (10¢) collected since the last time the CLEAR CASH command (Selection 4 in the AUDITS menu) was used.</p>
106	<p>Current number Of Type 3 Coins - Displays the total number of Type 3 coins (25¢) collected since the last time the CLEAR CASH command (Selection 4 in the AUDITS menu) was used.</p>

Table 3-1. Audit Commands
Continued

Command	Description
107	Current Number Of Type 4 Coins - Displays the total number of Type 4 coins (50¢) collected since the last time the CLEAR CASH command (Selection 4 in the AUDITS menu) was used.
108	Number Of Type 1 Bills - Displays the total number of Type 1 (\$1) bills collected since the last time the CLEAR CASH command (Selection 4 in the AUDITS menu) was used.
109	Number Of Type 2 Bills - Displays the total number of Type 2 (\$5) bills collected since the last time the CLEAR CASH command (Selection 4 in the AUDITS menu) was used.
11	PLAY AUDITS - Allows you to display, but not change, credits, autoplays, mechanism plays, and album plays.
110	Free Credits - Displays the number of free credits given since the last time the CLEAR PLAYS command (Selection 5 in the AUDITS menu) was used.
111	Paid Credits - Displays the number of paid credits given since the last time the CLEAR PLAYS command (Selection 5 in the AUDITS menu) was used.
112	Autoplays - Displays the number of Autoplays made since the last time the CLEAR PLAYS command (Selection 5 in the AUDITS menu) was used.
113	Mechanism Plays - Displays the number of times the mechanism has played CD's since the last time the CLEAR PLAYS command (Selection 5 in the AUDITS menu) was used.
114	Album Buys - Displays the number of times albums have been bought since the last time the CLEAR PLAYS command (Selection 5 in the AUDITS menu) was used.
115	Most Popular plays - Displays the number of times that the POPULAR button was used to select the most popular selection since the last time the CLEAR PLAYS command (selection 5 in the AUDITS menu) was used.
116	Normal Selections - Displays the number of selections made from the keyboard.
117	Overplay - Displays the number of overplays selected since the last time the CLEAR PLAYS command (Selection 5 in the AUDITS menu) was used.
12	NON-RESETTABLES - These totals for cash, plays, and credits can be displayed from any security level, but they cannot be reset from any security level. These totals constitute the permanent phonograph history.
120	Cash - Displays total cash (bill and coin) received by the phonograph.
121	Bill - Displays total bill cash received by the bill acceptor.

Table 3-1. Audit Commands
Continued

Command	Description
122	Coin - Displays total coin cash received by the coin acceptor.
123	Wallbox - Displays total cash received by all wallboxes.
124	Free - Displays total free credits
125	Paid - Displays total paid for credits
126	Most Popular - Displays the total number of Most Popular selections made with the POPULAR button.
127	Mechanism - Displays the total number of mechanism cycles.
128	Album - Display total album buys.
129	Selections - Displays the total number of selections made using the keyboard.

Collecting Money

1. Open the top door (if it is not already open) and reach in, behind the bill acceptor, and unlock the bill acceptor bill box.
2. Remove the currency and close and lock the bill box.
3. Close the top door.

PREVENTIVE MAINTENANCE

Preventive maintenance should be performed at the regular intervals specified, while adjustments should be made only when necessary.

In addition to cleaning the cabinet each time the location is visited, clean the interior every three to six months, as required. Keeping the cabinet interior clean reduces dust, resulting in increased disc and component life (see table 3-2 for details).

- Use a vacuum cleaner to remove heavy dust deposits.
- Use a clean, lint free cloth saturated in denatured alcohol to clean mechanical parts.
- Clean electrical parts using a clean, dry cloth or camel hair brush.



WARNING:

Use solvents in a well ventilated area only. Do not use solvents on plastic parts.

Table 3-2. Cabinet Cleaning

Action Required	Procedure
1. Clean Glass	a. Clean all glass with a paper towel and a non-abrasive glass cleaner such as Windex. b. Dry with a clean, lint-free cloth.
2. Clean painted wood and metal surfaces	a. Clean all painted wood and metal surfaces with mild soap and water. DO NOT USE SOLVENTS. b. Apply a good quality auto or furniture wax to protect the finish.
3. Clean chrome trim	a. Use a damp or dry cloth to remove any dust or dirt. b. Use mild soap and water to remove stubborn deposits. Do not use strong detergents or abrasives of any kind.
4. Clean plastic trim	a. Wipe all plastic surfaces with a damp or dry cloth only. DO NOT USE SOLVENTS.
5. Clean electrical components	a. Clean all electrical components with a clean, dry, lint-free cloth or a soft bristled brush only.

CD Player Laser Lens

The CD player laser lens can collect dust, dirt, and smoke. These deposits can cause various intermittent problems that may, in time, become more severe. To avoid these problems, we recommend that you clean the laser lens occasionally. This interval can be as often as every other month, or less in some locations. Follow this procedure to safely clean the laser lens:



NOTE:

Before you clean the laser lens, be sure to turn the jukebox power OFF and ground yourself by touching a grounded component (such as the OBA) to discharge any static buildup that may harm the CDM-3 player.

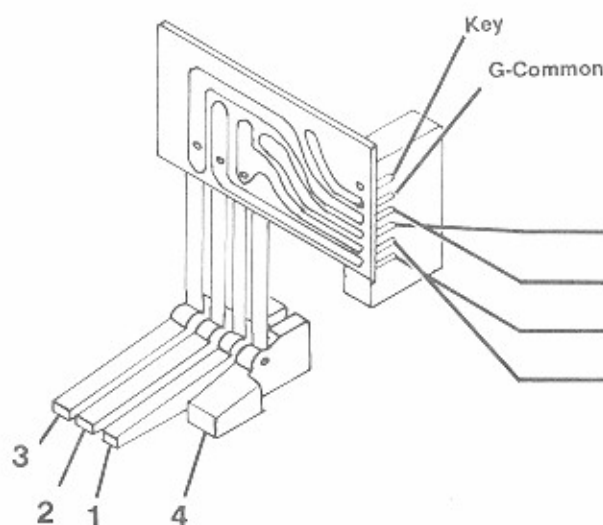
1. Remove loose particles from the lens by gently brushing it with a camel's hair brush or a blow brush (both items can be purchased at most camera supply stores). Take care not to snag brush bristles under the lens. The lens is mounted on a delicate suspension spring that may be damaged with even a soft brush.
2. Remove any remaining dirt by placing one to three drops of Kodak Lens Cleaner (Kodak Catalog Number 176 7136, available from photographic supply stores) on a lint-free "Q"-Tip and very gently wiping dust and smoke deposits from the lens. Take care not to damage the delicate lens suspension spring. Do not allow any of the lens cleaner to run down the side of the lens.

COIN ACCEPTORS (optional)

Coin Switch

Coin Switch Wiring Note:

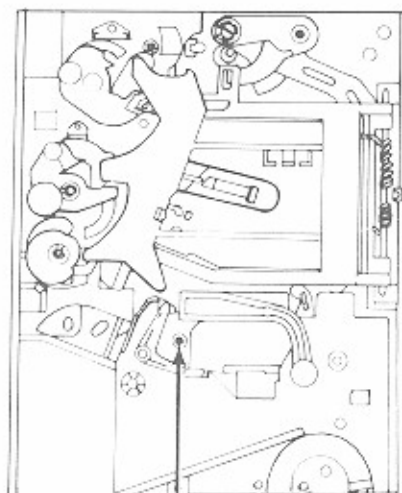
Table 3-3 shows how to set the coin switch values for 3-coin and 4-coin acceptors. Programming The multiplier (PRICING SELECTION 3) should always be set to 5 for U.S. currency.



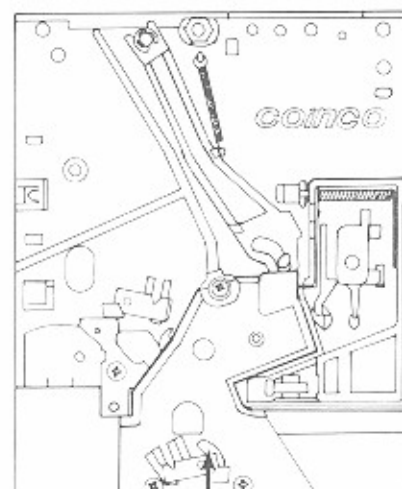
3 & 4 Coin Wiring	Coin Switch Number	3 Coin		4 Coin	
		Value	Program	Value	Program
Y	4	---	504 = 10	5¢	504 = 1
BL	3	25¢	503 = 5	50¢	503 = 10
S	2	10¢	502 = 2	10¢	502 = 2
V	1	5¢	501 = 1	25¢	501 = 5

Table 3-3. Coin Switch Wiring

3 Coin Acceptor

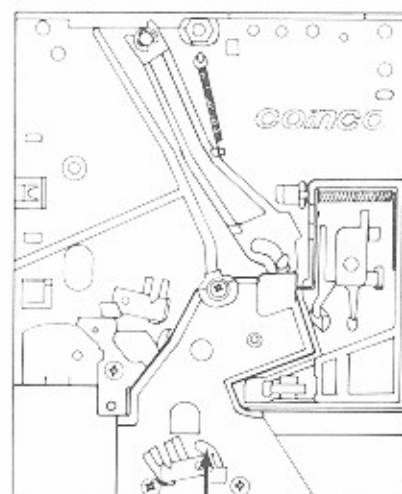
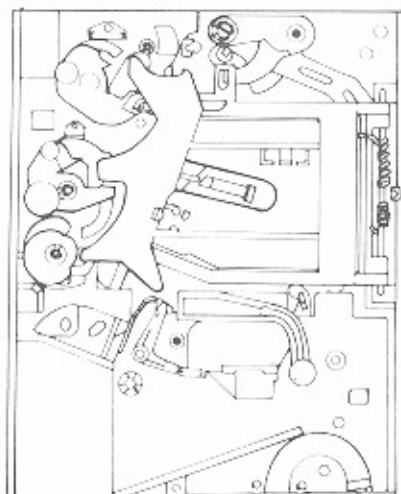


REMOVE COVER AND DRIVE
No. 6-32 SCREW INTO BOSS AS
SHOWN TO REJECT NICKELS



TO REJECT DIMES ADD COINCO
No. 903-915 BLOCK OUT WIRE

4 Coin Acceptor



TO REJECT DIMES ADD
COINCO No. 903-915 BLOCK OUT WIRE

Figure 3-7. Coin Acceptors

CHECKS AND ADJUSTMENTS

Coin Lever

Refer to figures 3-7 and 3-8 in the following steps:

1. Hold the plastic coin switch lever in the normal position and drop a coin through the slug rejector.
2. When the coin comes to rest on the lever, release the lever slowly.
3. Check that the weight of the coin operates the lever enough to close the coin switch and allow the coin to fall free.
4. Repeat Steps 1, 2, and 3 for the other three levers.

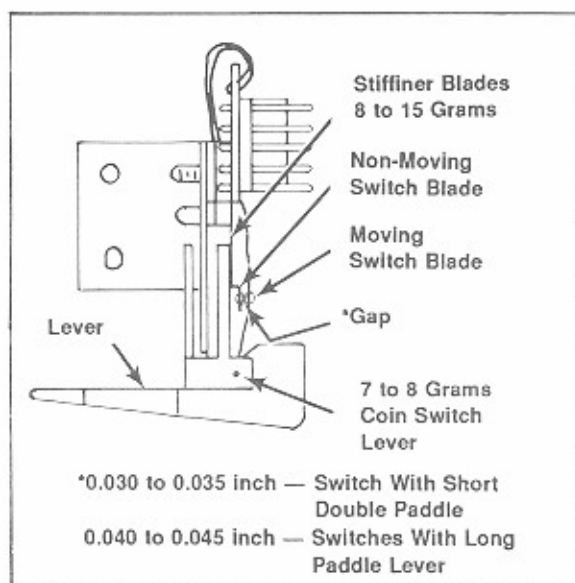


Figure 3-8. Contact Pressure
& Gap Adjustment

Contact Pressure And Gap

1. Check that each moving switch blade pushes against its lever with 7 to 8 grams force to hold the lever against the cushion (see figure 3-8). To adjust the pressure, bend the blade near its mounting point.
2. Check that each non-moving blade pushes against its stiffener blade with 8 to 15 grams force. To adjust the pressure, bend the contact blade near its mounting point.
3. Check that contact gap at switch with short double paddle is 0.035 inch. Check that the contact gap for long paddle switches is 0.045 inch.

DOOR SPRING REPLACEMENT

1. Open the top door.
2. While another person keeps the door open, find the appropriate style spring end fitting in *figure 3-9* and follow the example given.

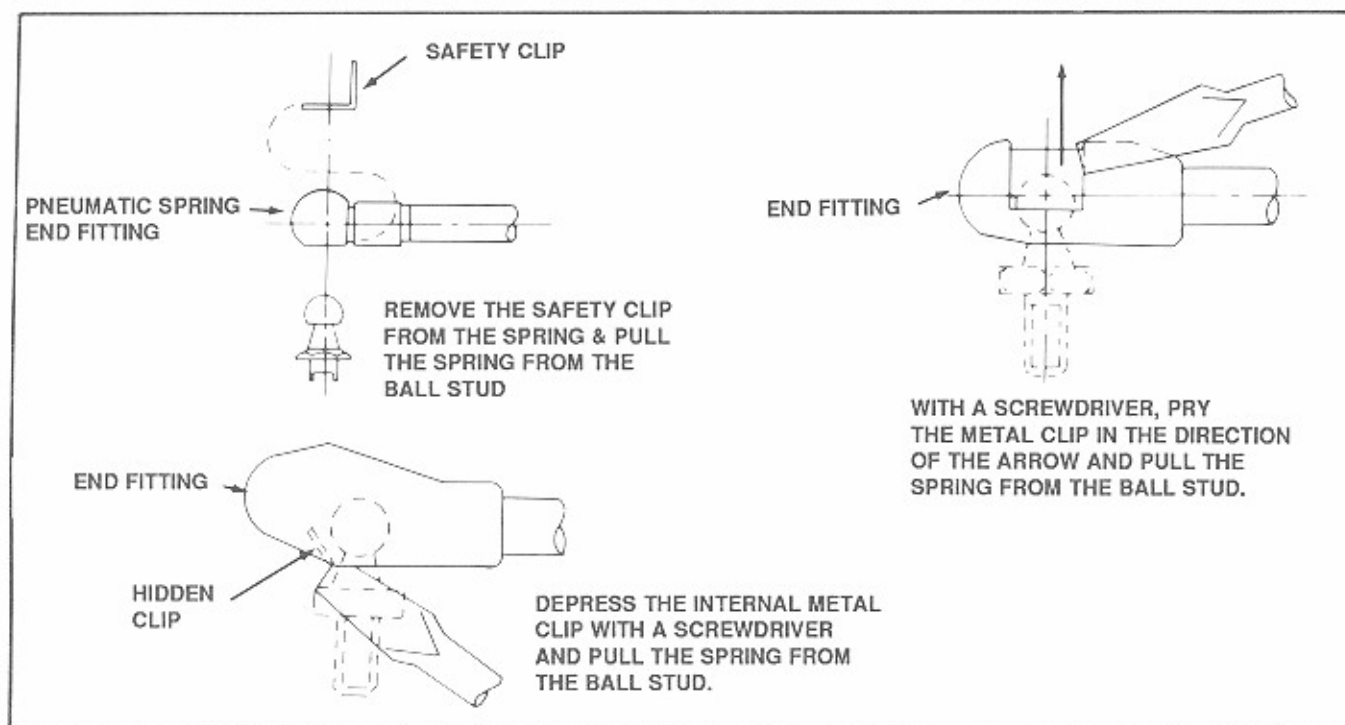


Figure 3-9. Door Spring Fittings

GLASS REPLACEMENT

**WARNING:**

The top door glass can break or fall on you if you do not follow the recommended removal procedure.

For your safety, Rowe does not recommend that you replace the top door glass while the top door is on the phonograph. The proper procedure requires two people to remove the top door safely.

1. Unplug the power to the phonograph.
2. Open the cabinet door.
3. Unplug the 120 volt AC harness at the connector on the upper right side of the phonograph. Unplug the 3-pin connector from the central control computer and disengage the harness from the cable clamps.
4. Remove all of the top door hinge screws except for one screw and one nut at each end of the hinge.
5. With your helper still holding the top door open, disconnect the door springs (use the *Door Spring* procedure in this section if you are not familiar with the procedure for removing the door springs).
6. Remove the two remaining top door hinge screws while your helper continues to hold the top door open.
7. Again, using a helper, lift the top door off of the phonograph and set the door on a clean smooth working surface (lay the door so the outside is down).
8. Remove all of the shroud bracket screws from the four shroud brackets.
9. Lift out the brackets and the plastic shroud.
10. Be sure to protect your hands from broken glass with protective gloves before you remove the door glass. Remove the remaining glass with any available brush.
11. Set the new door glass in the door, re-install the door shroud, and brackets.
12. Lift the door back onto the phonograph and attach all screws and nuts through the hinge. Make sure that the door is centered before you tighten all of the screws.
13. While your helper holds the door, reconnect the door springs and make sure that the door will be supported by the springs.
14. Reconnect the 120 volt AC harness (on the right side of the phonograph) and the other harnesses on the left side of the phonograph and then push them into the cable clamps.
15. Plug-in the phonograph and play a selection and make sure that the title rack pages turn, all lights are on, and the animated discs turn.
16. Check the top door-to-OBA clearance and adjust the OBA if necessary (*see OBA To Top Door Clearance in Section 4 of Volume 2 for this procedure*).