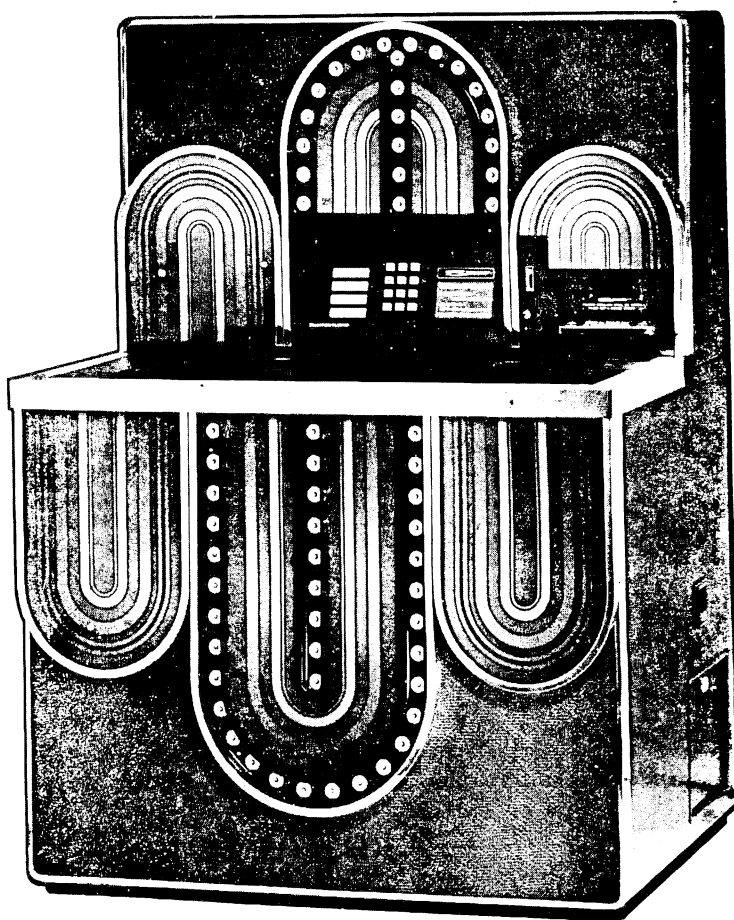
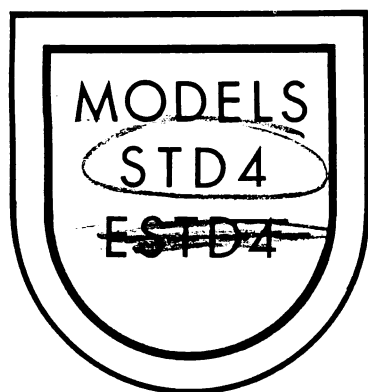
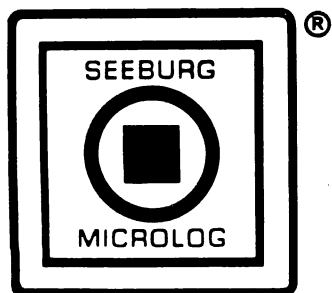


SEEBURG^{PH} STEREO PHONOGRAPH



INSTALLATION & OPERATION MANUAL

STEREO PHONOGRAPH

EXPORT NOTE

- U.S. MODEL AND TYPE NUMBERS ARE USED IN THE TEXT OF THIS MANUAL.
SEE BELOW FOR EQUIVALENT EXPORT MODEL AND TYPE NUMBERS.

| 120 VOLTS 60 HERTZ | 120 VOLTS 50 HERTZ | 235 VOLTS 50 HERTZ | DESCRIPTION |
|-----------------------|-----------------------|-----------------------|----------------------------------|
| Model STD4 | ESTD4-* | ESTD4-*-H5 | Select-O-Matic Phonograph |
| Type PJU12-56 | PJU12-56 | PJU12-H5 | Power Junction Unit |
| Type 160ST28 | 160ST28-5 | 160ST28-5 | Select-O-Matic Mechanism |
| Type SHP3-56 | SHP3-56 | SHP3-H5 | Seeburg High Power Amplifier |
| Type DCC42-56 | DCC42-56 | DCC42-H5 | Digital Control Center |
| Type LPS4-56 | LPS4-56 | LPS4-H5 | Light Power Supply (Sequencer) |
| Type SAS2K3 | SAS2K3-5 | SAS2K3-5 | Solid State Auto Speed Kit |
| Type SAS2 | SAS2-5 | SAS2-5 | Solid State Auto Speed Unit |
| Type DCPS1K-56 | DCPS1K-56 | DCPS1K-H5 | Digital Console Power Supply Kit |
| Type DCPS1-56 | DCPS1-56 | DCPS1-H5 | Digital Console Power Supply |
| Type DEC | EDEC-* | EDEC-* | Digital Electronic Console |
| Type QCP3 | EQCP3-56 | EQCP3-H5 | Quad Conversion Packet |
| 105/130V. | 105/130V. | 210/260V. | Voltage Rating |
| 81-508487 | 81-508478 | 81-508478 | Strobe Disc |

*Varies with country

| POWER REQUIREMENTS: | 120 volts, 50 Hertz | 235 volts, 50 Hertz |
|---------------------|----------------------|----------------------|
| Standby | 170 watts, 2.2 amps. | 170 watts, 1.1 amps. |
| Operating | 275 watts, 3.1 amps. | 275 watts, 1.6 amps. |

| FUSES - same as 120V., 60 Hz. EXCEPT: | 120 volts, 50 Hertz | 235 volts, 50 Hertz |
|---------------------------------------|-----------------------|----------------------|
| Amplifier | Same as 120V., 60 Hz. | 1.6 Amp. (45-319400) |
| Power Junction Unit | | 3.0 Amp. (45-302352) |
| Light Power Supply | | 0.5 Amp. (45-306369) |

NOTE: The following Catalogs are available from the Seeburg Parts Division:

| | |
|-----------|---|
| 81-254155 | 160 Mechanism Parts Catalog |
| 81-254157 | Mechanism Operation & Adjustment Manual |
| 81-319370 | Electronic Parts Catalog |
| 81-457044 | Accessory Parts Catalog |
| 81-459462 | Console Parts Catalog |
| 81-459079 | Service Manual |

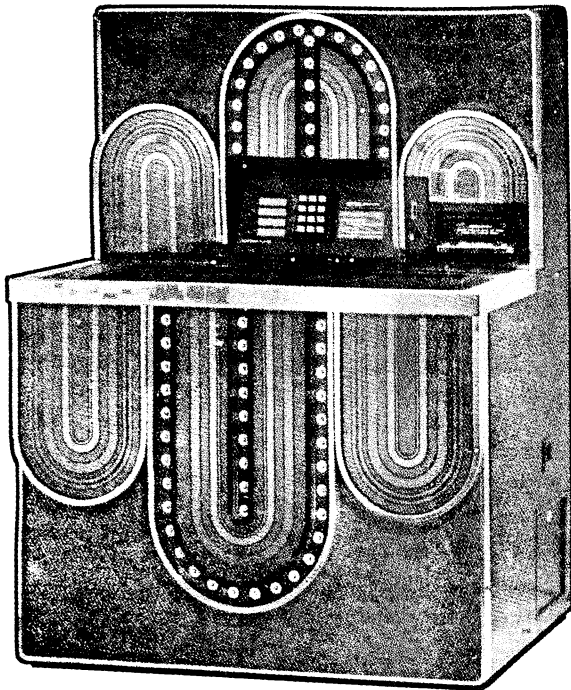
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STEREO PHONOGRAPH

SPECIFICATIONS



RECORD CAPACITY 80 records
(160 selection)

RECORD TYPE .. 45 rpm. 7-inch diameter
(and 33-1/3 rpm when an SAS2K3 is
installed)

PICKUP Convenient plug-in, high
compliance mu-metal shielded stereo-
phonic magnetic pickup assembly with
two diamond stylii.

PHONOGRAPH SPEAKERS Two 12-inch,
low frequency and two horn type, high
frequency.

STEREO NETWORK Type SN12

SEEBURG HIGH POWER AMPLIFIER Type SHP3

VOLUME CONTROL ASSEMBLY Type VC4

DIGITAL TRANSMITTER and
PRICING UNIT Type DTP1

DIGITAL ELECTRONIC SELECTOR . Type DES5

DIGITAL CONTROL CENTER .. Type DCC42-56

FIVE BIT SEQUENCER Type 5BS1

LIGHT POWER SUPPLY Type LPS4-56
for Sequencer

CABINET FINISH Chrome & baked
enamel panels, and anodized & baked
polyester aluminum trim.

DIMENSIONS and WEIGHTS

| | |
|-----------------------|---------------|
| Height | 53-7/8 inches |
| Width | 40 inches |
| Depth | 27-3/4 inches |
| Net Weight | 364 pounds |
| Shipping Weight | 399 pounds |

POWER REQUIREMENTS 120 volts, 60 Hertz
Standby 170 watts, 2.0 amps.
Operating 275 watts, 2.9 amps.

CABINET LIGHTING
Cool White Fluorescent Lamps:
Two 30 watt 36", FS4 starters

LID KEY NUMBER F293

SELECT-O-MATIC MECHANISM ..Type 160ST28

TORMAT MEMORY UNIT Type 160TM7

CONTACT BOARD ASSEMBLY Type CB4

DIGITAL RECEIVER and DECODER .Type DRD1

DIGITAL SELECTION DISPLAY ... Type DSD8

FUSES (120 V., 60 Hz.):

| | |
|--|-----------------------|
| Digital Control Center, 7.5 amp., | Part No. 45-307536 |
| *Digital Control Center, 3.2 amp., slo blo (For DBV2 only) ... | 45-303713 |
| Digital Control Center, 1/8 amp., slo blo | 45-311157 |
| Digital Control Center, 0.8 amp., slo blo | 45-375650 |
| Select-O-Matic Mechanism, 1/2 amp., slo blo, pigtail | 45-252464 |
| Seeburg High Power Amplifier, 3.2 amp., slo blo | 45-319401 |
| Seeburg High Power Amplifier, 2.0 amp., pigtail | 45-317946 |
| *Solid State Auto-Speed Unit, 2 amp., | 45-300103 |
| Power Junction Unit, 6-1/4 amp., slo blo | 45-603180 |
| Light Power Supply (Sequencer), 1 amp., slo blo non-tamp..... | 45-306334 |

*Accessory

STEREO PHONOGRAPH

SPECIFICATIONS (continued)

*ACCESSORIES

Lighted 50 Watt Speakers:

| | |
|--|---------------------|
| Type QS50K | ME-513101 |
| Light Power Supply, Type LPS2-56 (For LS50 & QS50) | 10-302780 |
| ("H5" | 10-302781) |
| Ceiling Mount Kit, Type CM1K (For LS50 & QS50 - 2 pair) | ME-513150 |
| Ceiling Mount, Type CM1 (For LS50 & QS50 - 1 pair) | ME-513155 |
| Corner Adaptor, Type CA3 (For LS50, FR50 or QS50 - 1 pair) .. | 10-513036 |
| Stereo Speaker Control, Type S10LT3 | ME-508110 |
| Powered Remote Volume Control Kit, Type PRVC4K | 50-509211 |
| Digital Electronic Consolettes: | |
| Type DEC3 | ME-516300 |
| Type DEC4 | ME-516301 |
| Consolette Mounting Accessories: | |
| Consolette Bar Bracket Assembly (for DEC) | 10-516030 |
| Back Plate Assembly | 10-516078 |
| Wall Mtg. Plate | 85-516080 |
| Digital Consolette Power Supply Kit, Type DCPS1K-56 | 50-317168 |
| ("H5" | 50-317169) |
| Digital Recording Income Totalizer Kit, Type DRIT1BK6-56 | 40-453593 |
| +Digital Add Buffer Assembly | 70-311199 |
| Dollar Bill Validator Kit, Type DBV2K12 | 10-423667 |
| #Dollar Bill Validator Mtg. Kit, Type DMK13 | 10-423668 |
| #Validator Interface Kit, Type VIK3 | 70-311525 |
| Phono Audio Control Kit, Type PACK1-56 | 70-319120 |
| PACK Connecting Package | |
| (used to connect PACK1 into Phonograph) | ME-458073 |
| Solid State Auto-Speed Kit, Type SAS2K3 | ME-317897 |
| ("5" | ME-317898) |
| **No. 2 Diode & Switch Board Assembly | 70-311590 |
| Transistorized Paging Kit, Type TP1K | 47-302574 |
| Stand-by Service Kit, Type PB1K | ME-509992 |
| Security Bar Kit, Type SBK1 | ME-509985 |
| Two Amplifier Interconnecting Kit | 70-510059 |
| Chassis Mtg. Bracket | 12-459476 |
| (used to mount 2nd Amplifier) | |
| Service Man's Kit | ME-509858 |
| ("H5" | ME-509859) |
| Quad Conversion Packet, Type QCP3 | ME-510180 |
| ("E-56" | ME-510181) |
| ("E-H5" | ME-510182) |
| Dollar Bill Validator & Interface Packet, Type DBV2-IP | ME-423660 |
| (Incls. only DBV2 & VIK3) | |
| Pricing Windows for change of pricing | See Figs. 15A & 15B |
| Pricing Programmer for change of pricing | See Figs. 15A & 15B |

*Refer to "Accessory" section of this manual.

+Part of DRIT1BK6-56

#Part of DBV2K12 Kit

**Part of SAS2K3 Kit

STEREO PHONOGRAPH

DESCRIPTION

SEEBURG MICROLOG SYSTEMS

The Model STD4 Select-O-Matic phonograph is coin operated, designed for selective playing of the selections in a program of 80, 33-1/3 and 45 rpm., 7-inch records. This phonograph model features a Digital Electronic Selecting and Pricing System.

The Transmitter, Receiver, Decoder and Pricing Unit have no moving parts; instead all logic functions are performed by solid state circuitry incorporating the latest in microelectronic technology (Seeburg MICROLOGS). Both the Digital Transmitter & Pricing Unit and Digital Receiver & Decoder are factory sealed units, each carrying a 3-year warranty detailed in the warranty certificate on the phonograph.

The Pricing System includes an Actual Cash Value Bonus feature. With this feature, any 25 cent combination of nickels and dimes deposited in succession gives the same credit as a quarter; and likewise, any 50 cent combination of nickels, dimes and quarters deposited in succession, gives a half dollar worth of credits. The Pricing Unit permits "one for quarter" or "two for quarter" pricing with nickel and dime acceptance; selections are not permitted until a minimum of 25 cents has been deposited. In the event that less than the minimum amount has been deposited, a window illuminates, instructing the customer to deposit more coins. In addition to the Actual Cash Value Bonus feature, the Pricing Unit also features quick, simple price changing by use of plug-in Pricing Programmer Boards.

A precision coin switch energizes the pricing unit when a coin is deposited in the phonograph. The switch connections may be modified to suit different makes of coin equipment.

The system is easily adapted to most foreign coins by merely changing the Programmer & coin switch connections.

Another feature is the Selecting System, using only a 10 button selector with a 3 digit selecting code.

The Digital Electronic Selector is located in the control panel. It consists of ten numerical buttons which are used for making a selection. It also has two reset buttons, each of which give the customer the option of changing his selection after pressing the first or second buttons. In the event that a set of buttons is pressed that do not correspond to a programmed selection or correspond in price (when set for dual pricing), a window illuminates, instructing customer to make another selection.

Information from the Digital Electronic Selector (on the Phonograph or from the Digital Console) is stored in the Type DTP1 Digital Transmitter and Pricing Unit. Upon completion of the selection, the information is then transmitted to the Type DRD1 Digital Receiver and Decoder, which in turn, decodes it and transfers this information to the Tormat Memory Unit and other mechanism electronics, for selection play.

GENERAL

The associated audio system in the phonograph includes a printed circuit, Type SHP3, all silicon solid state, 200 watt, dual channel amplifier for stereophonic as well as monaural reproduction. This amplifier features a silicon solid state AVC circuit and factory pre-set Equalization & Scratch Compensation. It also has built-in solid state protection against short circuits and overloads in the speaker system. Further details on this feature are described in "Amplifier Short Circuit Protection", see page 16. For 400 watt capability, a second SHP3 amplifier can be connected into the system. For further details on accessories, see "Accessory" section of this manual.

Two 12" speakers are housed in an acoustically tuned enclosure located at the bottom of the cabinet under the pho-

STEREO PHONOGRAPH

nograph mechanism compartment. A stereo network diverts mid and high frequency music to the horn type speakers. The horn speakers are located behind the grilles in the upper lid.

In the lower right hand corner of the upper lid, a space is reserved for the future addition of a Dollar Bill Validator. The control panel is illuminated by a cool white fluorescent 30 watt lamp.

Titles for records are displayed on standard size dual title strips and may be viewed in an easily accessible program holder. One 30 watt, cool white fluorescent lamp illuminates the program holder.

Power distribution for the phonograph is from the Type DCC42 Digital Control Center. A Solid State Auto-Speed Kit, available as an accessory, provides the necessary A.C. voltage and frequency output to the turntable in the mechanism, when 33-1/3 rpm records are played. See "Accessory" section of this manual.

A Type PB1 Stand-By Service Unit that keeps the phonograph operating in an emergency situation is available as an accessory. See "Accessory" section of this manual.

The Type DES5 Digital Electronic Selector features a circuit that illuminates the reset & reselect light whenever an incorrect selection is made.

This model phonograph features the companion Type DEC Digital Electronic Consolette, which does not require any stepper to operate with the phonograph. It features instantaneous remote digital selecting, using the same Digital Transmitter and Pricing Unit used in the phonograph. A Type DCPS1-56 Power Supply must be installed in the phonograph for use with the Consolettes. Up to eight Digital Electronic Consolettes may be used with each power supply which may be purchased separately. (See "Access-

sory" section of this manual for additional details.)

This model phonograph features 59 small incandescent lamps in the decorative panels of the upper lid and lower front panel that are set to flash "on" & "off" in a pre-determined manner (4 "on", 1 "off", etc.).

A Dollar Bill Validator Kit, available as an accessory, will accept a dollar bill and establish a dollar bill's worth of credit on the pricing unit (see "Accessory" section of this manual for additional details).

The phonograph may be equipped with a Type DRIT1BK6-56 Digital Recording Income Totalizer. This device totals all monies deposited in the phonograph and indicates actual cash value which may be printed on an income record form. Additional details on income totalizers are described in the "Accessory" section of this manual.

For controlled switching of the phonograph speakers when consolettes are used in conjunction with the phonograph, the Type PACK1 Phono Audio Control Kit may be installed. This device is described further in the "Accessory" section of this manual.

A paging system may be added to the phonograph by using the Type TPK Transistorized Paging Kit. This system is described further in the "Accessory" section of this manual.

A Type QCP3-56 Quad Conversion Packet may be used to adapt this model phonograph for "Quad Sound". For further details, see "Accessory" section of this manual.

A Type SBK1 Security Bar Kit may be installed to the exterior of the phonograph cabinet to discourage break-ins into the cash box. See "Accessory" section of this manual.

STEREO PHONOGRAPH

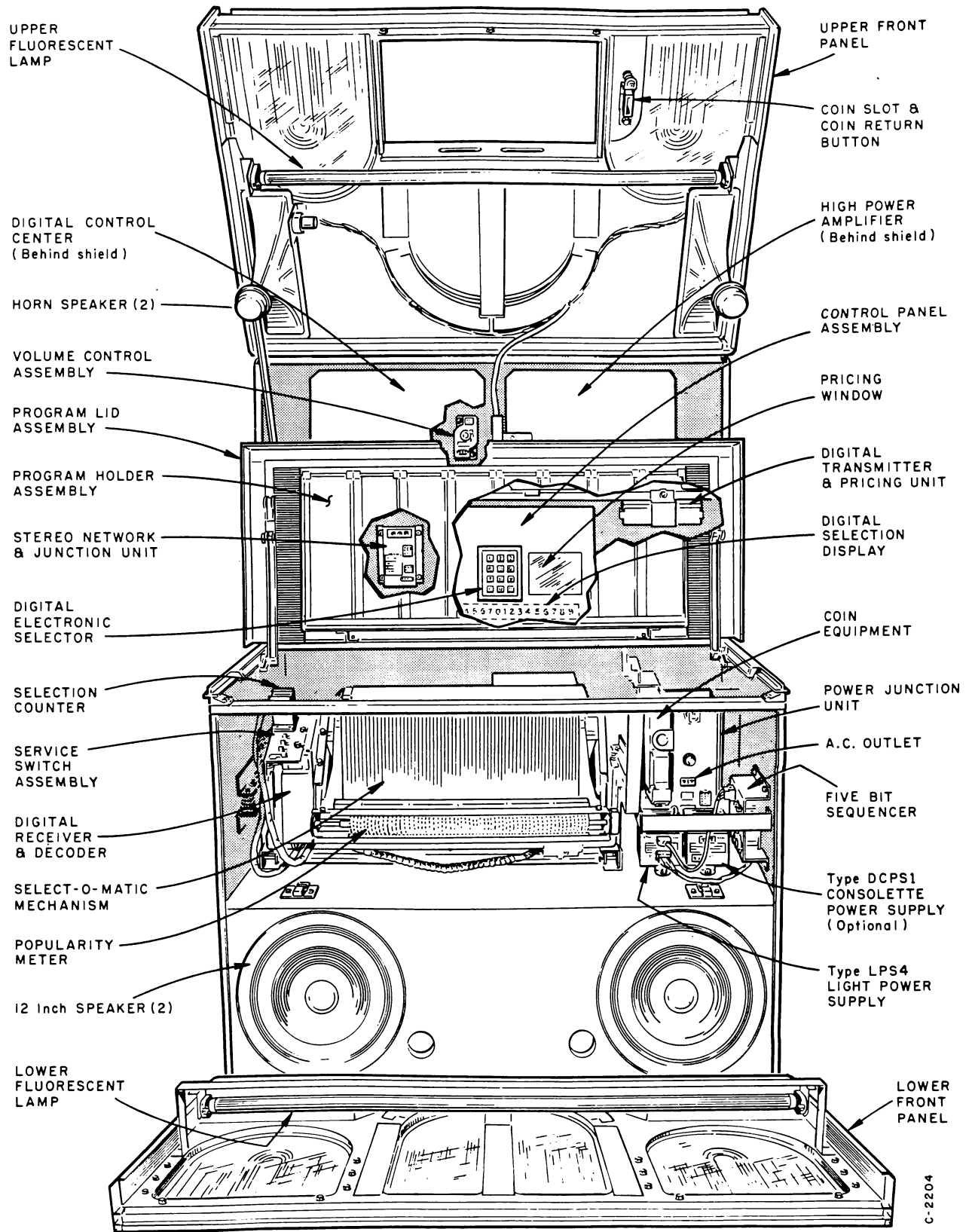


Figure 2. Cabinet Component Identification

STEREO PHONOGRAPH

INSTALLATION

DAMAGE CAUSED BY SHIPPING

Examine the phonograph immediately after unpacking. If any damage is found, notify the transportation representative within 5 days.

UNLOCKING PROGRAM LID

To unlock, turn lid lock key clockwise. The program lid may be slid forward (see Figure 3). Pull lid forward all the way, then swing it up. This allows access to lower cabinet interior, program holder, coin equipment and service switches. The lower front panel latches may also be reached. For opening the upper front panel, refer to the "Upper Front Panel" paragraph.

NOTE:

It may be necessary to gently push back on the lid when unlocking.

Before closing the lid, check to see that the program holder is securely latched in the lid on both sides. Lower the lid (if in the raised position). Push the lid toward the rear of the cab-

inet as far as it will go. It is self-locking. The key is not used to lock the lid.

CAUTION:

Push back firmly on each side of the lid to make sure each side locks.

UPPER FRONT PANEL

The upper front panel may be opened by first unlocking and sliding the program lid forward. The upper panel may then be lifted to its fully raised position. The panel is held in the fully raised position when the lid support "snaps" backward and engages its notch on the support plate.

Lifting this assembly allows access to the upper fluorescent lamp, electronic components, selector panel and horns.

CAUTION:

Do not move the phonograph while the upper front panel or program lid are in their opened or raised position.

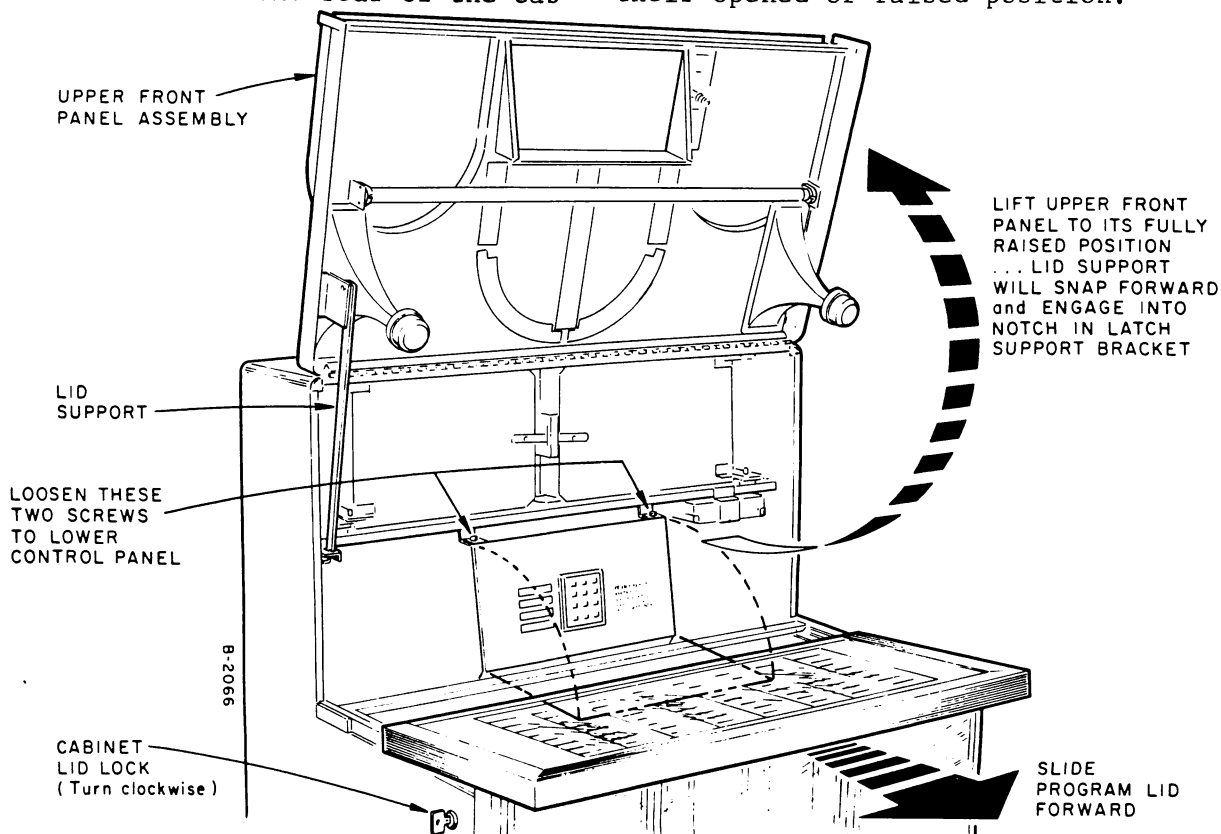


Figure 3. Unlocking Upper Front Panel & Program Lid

STEREO PHONOGRAPH

To lower upper front panel, push the panel slightly upward, pull lid support toward the front of the cabinet and gently lower the panel. To lock the upper front panel, first lower it and then close and lock the program lid (the upper front panel has no lock of its own).

CONTROL PANEL

To gain access to the rear of the control panel, open the upper lid, re-close program lid, loosen the two screws at the top of the panel (see Figure 3), gently grasp the upper edge of the control panel and tilt forward and downward. Allow control panel to rest on program lid. Lowering this panel allows access to the rear of the selector switch, lamps and windows.

REMOVING LOWER FRONT PANEL

Removal of the lower front panel exposes the phonograph Mechanism, Digital Receiver and Decoder, both 12" speakers, lower fluorescent lamp and interconnecting cables. To remove the panel, first unlock and raise the program lid. Then, unplug its cable, unlatch the two

latches that hold the panel (see Figure 4), swing the top of the panel outward and lift panel out.

NOTE:

Make sure front panel is securely latched before locking lid.

UNBLOCKING

Before operating the phonograph, it is necessary to remove or loosen the shipping hardware. Peel off the tape from the amplifier latch and remove chassis shipping bracket. Remove the two carriage bolts that hold the mechanism carriage to the mechanism base (see Figure 5). These bolts may be reached through the cash box compartment after removing the cash box. Loosen all four mechanism hold-down nuts until they jam at the top of the studs.

When shipped from the factory, the mechanism is held in place by two pins and two bolts. Completely remove the two bolts and two shipping spacers (see Figure 5) but not the pins. Access to shipping blocks and tags behind the mechanism may be obtained by sliding

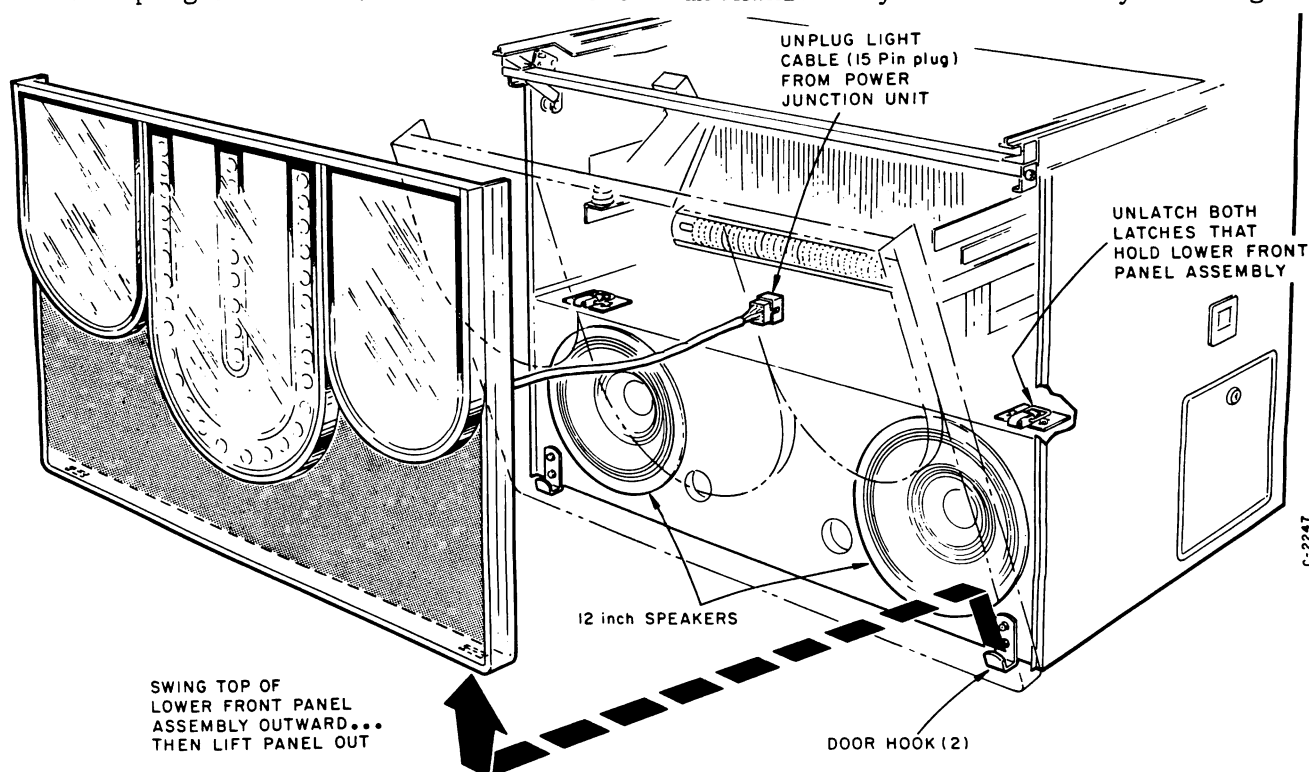


Figure 4. Removing Lower Front Panel Assembly

STEREO PHONOGRAPH

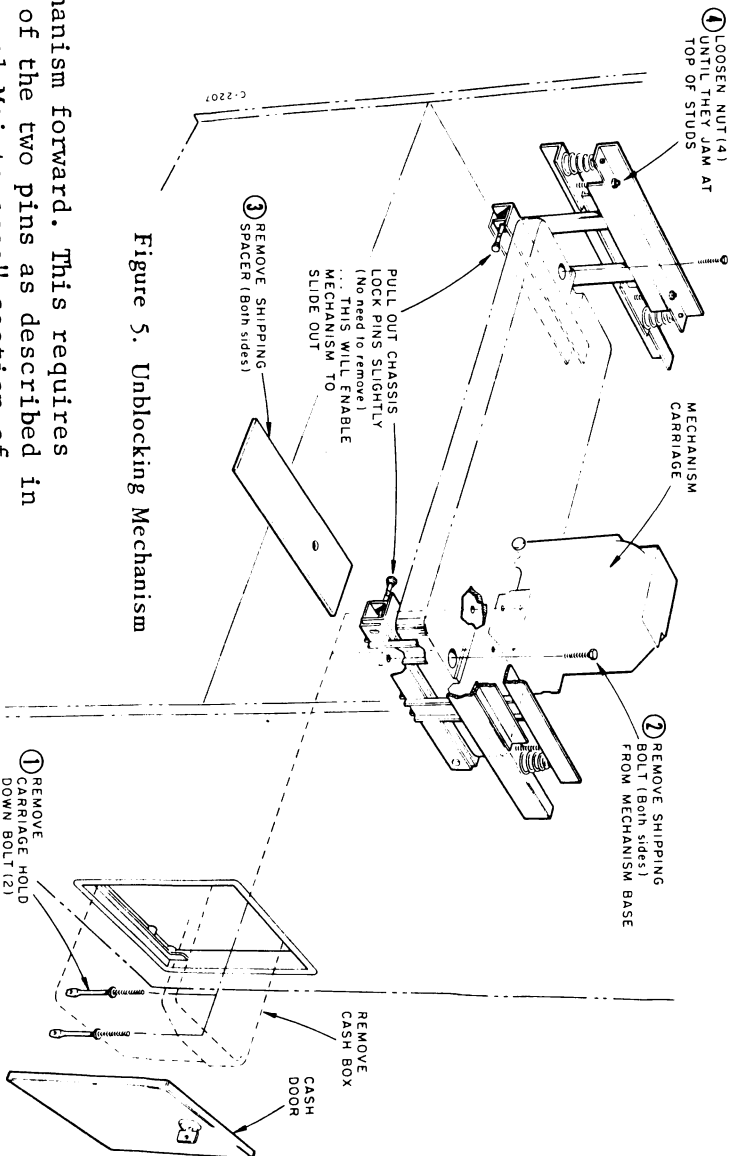


Figure 5. Unlocking Mechanism

the mechanism forward. This requires the removal of the two pins as described in the "General Maintenance" section of this manual. Access to the blocks and tags may also be obtained by removing the rear access panel (shown in Figure 9), as described in the "General Maintenance" section of this manual.

CAUTION:

Do not attempt mechanism operation by manually turning the flywheel. This may damage the mechanism. Use the service switch as described in "Service Switch Operation" paragraph.

NOTE:

Do not put packing blocks, instruction cards or any other material over the air intake screens or louvers in the back of the cabinet. This will obstruct ventilation and cause overheating. Overheating will warp the records and shorten the life of this equipment. Store the blocking material elsewhere for future use.

CONNECTING PLUGS

Before connecting the phonograph power supply cord, see that all interconnecting cable plugs are firmly seated in their connectors. Particular attention should be paid to the printed circuit

board connectors, as described in the following paragraph.

PRINTED CIRCUIT BOARD CONNECTORS

Cable connectors that are plugged directly onto printed circuit boards (in DTPI, DRDI, etc.), are either keyed or unkeyed. The unkeyed connectors (see Figure 6A) will fit onto the board regardless of whether the terminals are

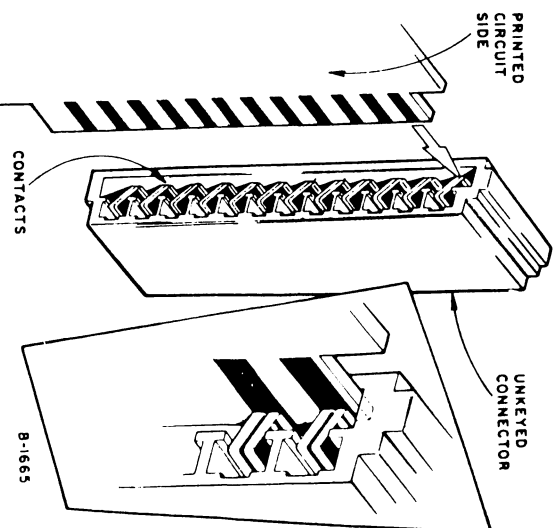


Figure 6A. Printed Circuit Unkeyed Connectors

on the same side of the circuit. Therefore, care must be taken to see that the connector is plugged onto the board with its terminals contacting the circuit, this is illustrated in Figure 6A. A keyed connector, shown in Figure 6B, will not fit onto the printed circuit board unless positioned properly.

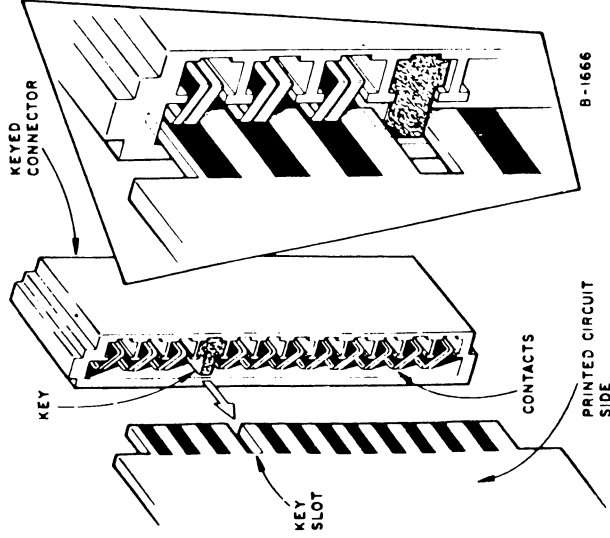


Figure 6B. Printed Circuit Keyed Connectors

VOLTAGE RATING

Before connecting the line cord, make certain that the voltage and frequency are correct. Although this equipment is designed for 120 volt, 60 Hertz operation, it will perform satisfactorily at any line voltage between 105 and 130 volts. Each model may be converted for operation at other voltages. Refer to Service Manual for details.

PLACING THE CONSOLE

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

WARNING!

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

or louvers. A space of at least 2" (5 cm.) must be allowed between the back of the cabinet and the wall to assure adequate ventilation.

SERVICE SWITCH OPERATION

This model phonograph features a simplified Service Switch Assembly, see Figure 7. For location of this switch refer to Figure 8. The switch assembly consists of the credit, mechanism start, mechanism stop and record reject switches. Their functions are described as follows:

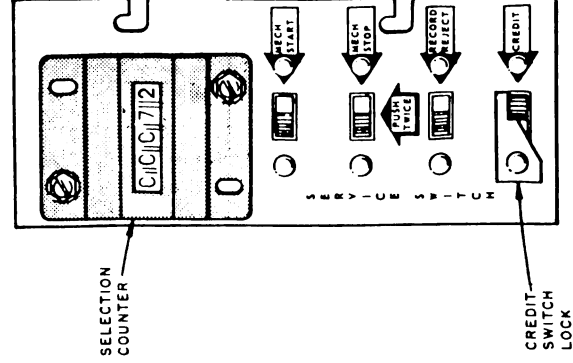


Figure 7. Service Switch Assembly

MANUAL CREDIT SWITCH

The spring-loaded manual credit switch is for establishing credit on the phonograph without depositing coins. During normal operation of the phonograph, the manual credit switch is locked in place by a switch lock. After swinging the lock counter-clockwise, the switch will be ready for establishing credit. Each time the switch is actuated, a 10¢ credit is established. Remember to place the switch lock back in its locked position.

MECHANISM START SWITCH

When this switch is actuated and released, the mechanism will start scanning, return and stop at the right end of the base.

STEREO PHONOGRAPH

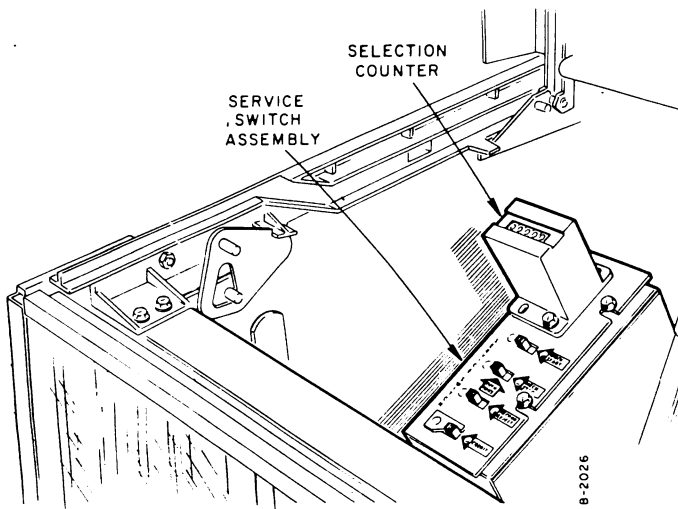


Figure 8. Selection Counter Location

MECHANISM STOP SWITCH

With the mechanism scanning, it may be stopped at any point of travel by actuating the mechanism stop switch twice.

RECORD REJECT SWITCH

To reject a record that is playing, actuate this switch once.

SELECTION COUNTER

The selection counter is located inside the cabinet to the left of the mechanism (see Figure 8). The counter totals all selections made at the phonograph (and all Digital Electronic Consolettes if they are installed with the phonograph).

RECORD REJECT SWITCH (external)

A slide switch is used for rejecting a playing selection. The switch is part of the Volume Control Assembly and is accessible at the back of the cabinet, see Figure 9, and is operated by sliding to the left.

REMOVAL OF REAR ACCESS PANEL (See Fig.9)

To remove the rear access panel, push down on the panel latch bracket and allow panel to fall back thru its opening. Then lift the panel out. To replace the access panel, engage the lower edge of panel in cabinet back and, from inside of cabinet, grasp panel latch bracket, push down on it and swing access panel up into place and release latch bracket. Push up on latch bracket to make sure it is properly latched. **NOTE:** For added security, the center nut holding the latch bracket may be tightened down.

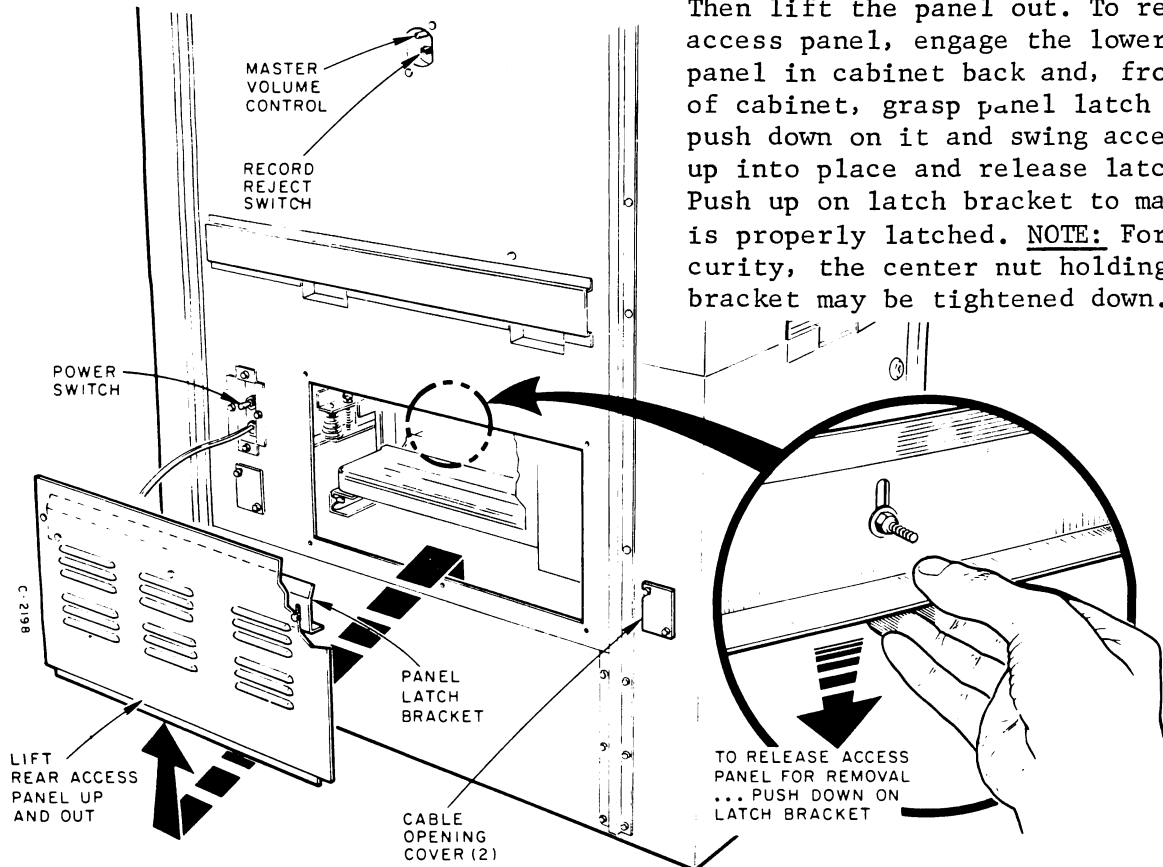


Figure 9. Removing Rear Access Panel

STEREO PHONOGRAPH

LOADING RECORDS

To obtain optimum performance, it is necessary that new or nearly new records be used. Use only standard 7-inch commercial records. If album records are to be played, see "Album Programming" paragraph.

Push up the main switch (located on the upper right side of the back of the cabinet) to the "ON" position. If a record is playing, reject the record and stop the mechanism (see "Service Switch Operation").

Starting at the left end of the magazine, insert one record into each space. 100, 101, 102, 103, etc. will be the left sides of the records and 200, 201, 202, 203, etc. will be the right sides.

CAUTION!

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

CAUTION!

Occasionally records will be found

that have an undersized center hole. In some cases this is caused by the paper label that has been pushed into the center hole. An undersized record center hole may make the record stick on the record pin.

ALBUM PROGRAMMING

This model phonograph is prepared at the factory to program only single records. If album records are to be programmed, a Solid State Auto-Speed Kit is required. See "Accessory" section of this manual for details.

LOADING PROGRAM HOLDER

The program holder is hinged to the program lid. With the program lid in the raised position, the program holder may be swung upward for insertion of the program title strips. This may be done after pressing downward on the two plastic tabs shown in Figure 10.

Figure 10 shows the program lid and program holder in the raised position. The title strips, inserted or removed are also shown. The entire program holder and frame assembly may be removed after removing the two screws, shown in Figure 11. (make sure the program holder

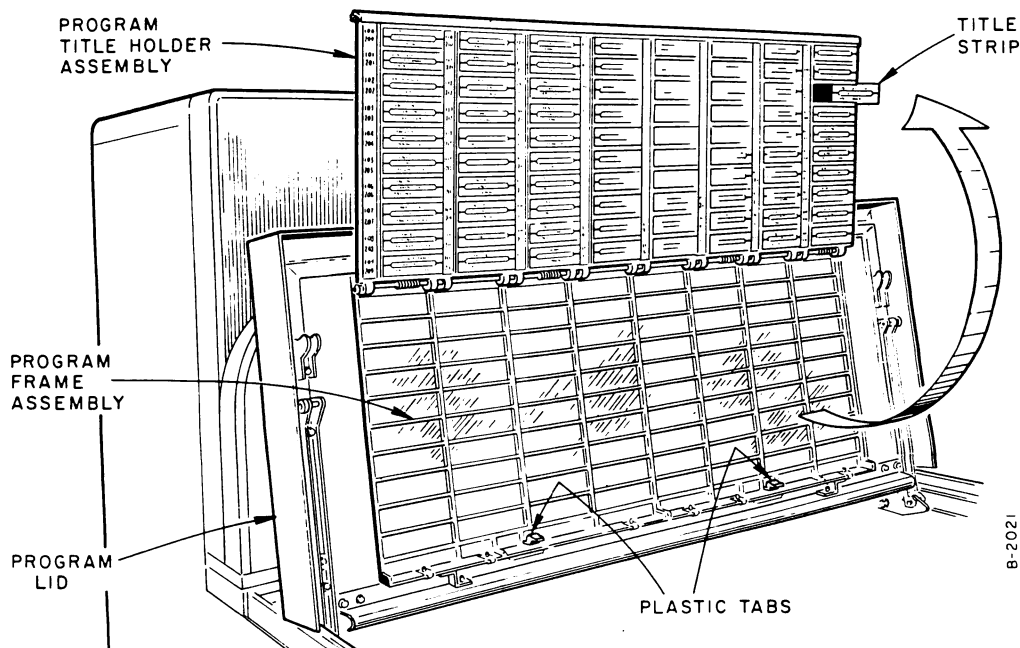


Figure 10. Changing Title Strips

STEREO PHONOGRAPH

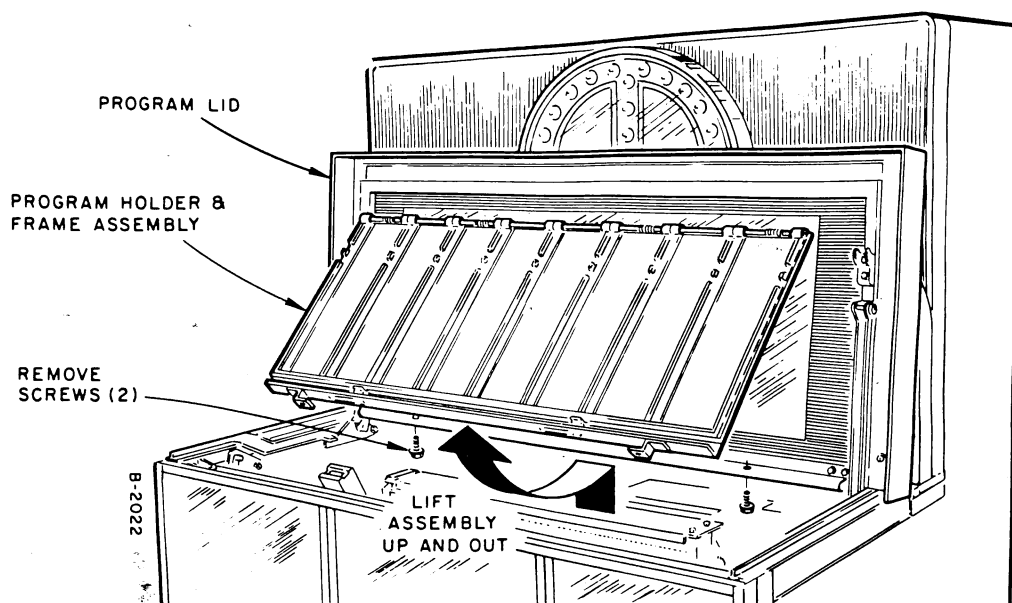


Figure 11. Removing Program Holder Assembly

is latched in the frame before removing). Pull the program holder and frame assembly up and out. A supply of 81-407354 duplex title strips, will be found in the phonograph in the Service Envelope Assembly.

CAUTION!

Make certain that the program holder is positively latched when folded up into the lid. Neglecting to do so may cause it to fall open when the cabinet lid is closed.

POPULARITY METER

The popularity meter indicates the number of times (up to forty) each record has been selected. The popularity reset knob is located at the right end of the popularity meter (see Figure 12).

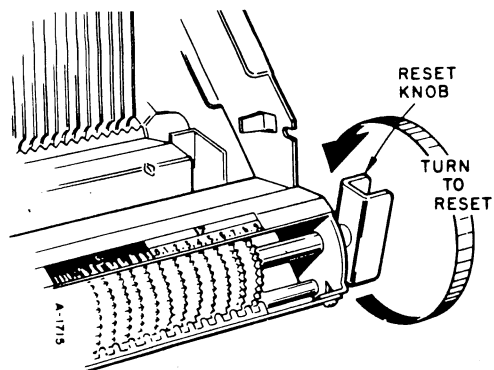


Figure 12. Resetting Popularity Meter

To reset the meter, rotate the knob clockwise until all dials indicate zero.

AUDIO CONTROLS

The all silicon Type SHP3 Seeburg High Power Amplifier is equipped with a 3-position bass control, a 3-position treble control, a preset scratch compensator and preset equalization. The bass and treble controls are dual controls for assuring simultaneous adjustments of both left and right channel audio and are adjusted to provide proper tone balance to suit location acoustics and personal preference as detailed in the Tone Control Setting Chart, Figure 13.

| LOCATION CONDITIONS | TONE CONTROL SETTINGS | |
|--|-----------------------|----------|
| ACOUSTICALLY LIVE - HARD WALLS! CEILING AND FLOOR - LITTLE OR NO UPHOLSTERY AND DRAPERIES. | BASS | MAX. MED |
| | TREBLE | MIN |
| AVERAGE ROOM - AVERAGE AMOUNT OF SOUND DEADENING MATERIAL. | BASS | MED |
| | TREBLE | MED |
| ACOUSTICALLY DEAD - ACOUSTIC TILE, HEAVY DRAPERIES AND CARPETS, UPHOLSTERS BOOTH. | BASS | MED. MIN |
| | TREBLE | MAX |

ROOM SIZE - IN SMALL ROOMS REDUCE TREBLE RANGE ONE POSITION. IN LARGE ROOMS WITHOUT REMOTE SPEAKERS INCREASE TREBLE RANGE ONE POSITION.

NOISE - THE NOISE ENCOUNTERED IN SOME LOCATIONS (RESTAURANTS, ETC.) HAS A MASKING EFFECT ON HIGH FREQUENCIES. FINAL CONTROL SETTINGS SHOULD BE MADE UNDER ACTUAL NOISE CONDITIONS WITH A REPRESENTATIVE NUMBER OF PEOPLE PRESENT.

Figure 13. Tone Control Setting Chart

STEREO PHONOGRAPH

The preset scratch compensator is used to obtain the best possible performance from records consistent with their quality. Its effect is of a dynamic nature. It allows full range operation but, automatically reduces surface noise when music is at a low level. The equalization is preset to approximate the recording characteristics of American and European records. Nine combinations of the two control settings permit optimum adjustments for a wide variety of field acoustical conditions.

VOLUME CONTROL

The volume control (part of Type VC4 Volume Control Assembly), accessible through a hole in the rear of the cabinet (see Figure 9), is for simultaneous control of the right and left channels. Its shaft may be turned by hand.

GAIN SET AND BIAS SET CONTROLS

Each channel has gain set (mounted on top surface of chassis) and bias set (mounted on side of chassis) controls that have been preset at the factory. Do not attempt readjustment of these controls without referring to the Service Manual.

AMPLIFIER SHORT CIRCUIT PROTECTION

The Type SHP3 Seeburg High Power Amplifier has a special solid state circuit that requires no adjustment and protects it against faults in the speaker system; such as short circuits, overload or incorrect speaker connections.

If a fault occurs on the speaker line of either channel, the circuit causes the amplifier audio level of both channels to switch off. The circuit is self-resetting; that is, after the record playing is rejected, the circuit allows the amplifier to return to the normal level. Therefore, in case of a momentary fault, the system corrects itself. However, in the case of a permanent fault, the amplifier level will switch down each time a record begins to play and continue to do so until the fault is corrected.

TESTING OVERLOAD PROTECTION

After the phonograph is installed and all internal and external speakers are connected, perform this test. Play a high level record at full volume. If the amplifier is overloaded, the overload protector will act to shut off the amplifier and there will be no sound from the speakers. Possible sources of trouble could be:

1. speaker line shorted,
2. low impedance speaker connected to C.V. line,
3. or too many speakers in system.

PRICING WINDOW & CREDIT WINDOW INSTALLATION

These windows are located on the control panel. They are accessible after raising the upper lid and lowering the control panel assembly. Install windows as shown in Figure 14.

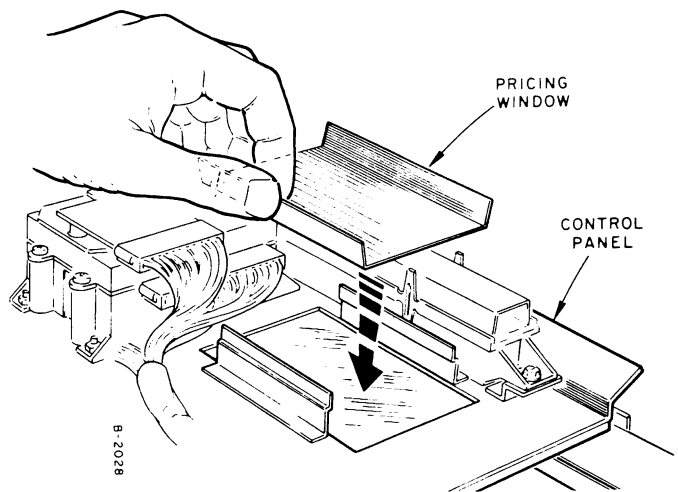


Figure 14A. Installing Pricing Window

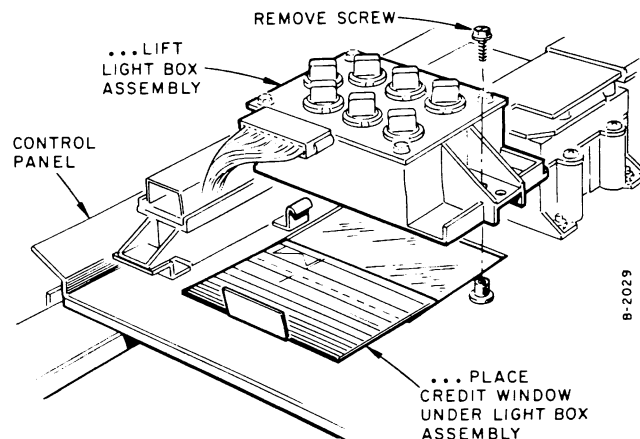


Figure 14B. Installing Credit Window

STEREO PHONOGRAPH

PRICING

The DTP1 Digital Transmitter and Pricing Unit is capable of diversified pricing combinations in conjunction with specialized "Album Programming". It provides for the sale of selections at two different basic prices. Since the value in mixed coins are equal to the actual value of the accumulated coins, the maximum that can be accumulated is dependent only on the pricing programmer that is used. For example, using the 70-310102 or 70-310103 2 for 25¢ pricing programmer, a maximum of \$3.00 can be accumulated in any combination of coins (this has an actual cash value of \$3.75). The pricing setup may be changed simply by changing the pricing programmer in the DTP1. Another pricing example is: using the 1/25¢, 4/50¢ 70-310107 pricing programmer, a maximum of \$3.75 can be accumulated in any combination of coins (this has an actual cash value of \$7.25).

CHANGE OF PRICING

To obtain various pricing setups, simply change the pricing programmer and pricing window, (available from the Seeburg Parts Division). Any available pricing programmer may be used with the DTP1. The proper combination of pricing programmer, pricing window and coin equipment adjustment is detailed in Figures 15A & 15B.

PRICING PROGRAMMER INSTALLATION

The DTP1 Digital Transmitter and Pricing Unit does not have to be removed from the cabinet when removing or installing a pricing programmer. Before removing the programmer make sure the current to the phonograph is switched off. Loosen screw holding DTP clamp (see Figure 15B), lower DTP and remove programmer lock bracket. Then hold the DTP1 with one hand and pull the programmer straight out as shown in Figure 15B. Before inserting the new programmer, check its part number to

make sure it applies to the required pricing setup. Remember to place DTP back in its clamp and tighten the screw.

COIN EQUIPMENT

The coin equipment is preset at the factory to accept nickels, dimes, quarters and half dollars. If a different type rejector is installed, re-connect the coin switch per Figure 31.

NICKEL FLIPPER

If a rejector is used with a nickel flipper, make sure it is set for one nickel operation; that is, the nickel flipper is anchored. The nickel flipper must be anchored when used with the DTP1. If not set in this manner, remove the slug rejector from its frame (see "Coin Equipment Removal" paragraph) and proceed as detailed in Figure 16.

PRICING AND COIN EQUIPMENT SUMMARY

Figures 15 A, 15B, 16 & 31 constitute a chart and condensed information regarding set-up requirements and adjustments as provided in the factory installed system.

LAMP SEQUENCER

The Type 5BS1 5 Bit Sequencer uses all solid state circuitry and determines the rate at which the decorative lamps flash. It derives its power from the Type LPS4-56 Light Power Supply. Both are located to the right of the mechanism in front of the Power Junction Unit (see Figure 2).

FLASH RATE CONTROL

This control, mounted on the top surface of the chassis, has been preset at the factory. If faster or slower flashing is desired, turn the control clockwise or counter-clockwise (respectively). This control is accessible thru a hole in the chassis and is marked "Flash Rate".

STEREO PHONOGRAPH

| | | PRICING WINDOW | PRICING PROGRAMMER | STANDARD IN MODEL | * DOLLAR BILL Bonus Selections |
|----------------|-------------------------------------|---|--------------------|--------------------------------------|--------------------------------|
| PRICING | 2 FOR 25 CENTS Pt. No. 83-459477 | 10 SELECTIONS \$1.00 in mixed coins | 70-310102 | STD4 | 12 Selections |
| | | 5 SELECTIONS 50¢ or HALF DOLLAR 2 SELECTIONS 25¢ or QUARTER | 70-310103 | Pricing Modification (See Note 1) | 14 Selections |
| | 1 FOR 25 CENTS Pt. No. 83-459479 | 8 SELECTIONS \$1.00 in mixed coins | 70-310107 | Pricing Modification | 9 Selections |
| | | 4 SELECTIONS 50¢ or HALF DOLLAR 1 SELECTION 25¢ or QUARTER | | | |
| | 7 FOR 50 CENTS Pt. No. 83-459480 | 14 SELECTIONS \$1.00 in mixed coins | 70-310104 | Pricing Modification | 15 Selections |
| | 1 FOR 25 CENTS Pt. No. 83-459478 | 6 SELECTIONS \$1.00 in mixed coins | 70-310105 | Pricing Modification (See Note 2) | 7 Selections |
| | | 3 SELECTIONS 50¢ or HALF DOLLAR 1 SELECTION 25¢ or QUARTER | 70-310106 | Pricing Modification | 9 Selections |

*Dollar Bill Bonus Selections are available when a Dollar Bill Validator is used.

NOTE 1

70-310102 and 70-310103 pricing programmers may be used interchangeably, unless a Dollar Bill Validator is installed in the phonograph. 70-310102 programmer gives 12 selections for a dollar bill while 70-310103 gives 14 for a dollar bill.

NOTE 2

70-310105 and 70-310106 pricing programmers may be used interchangeably, unless a Dollar Bill Validator is installed in the phonograph. 70-310105 programmer gives 7 selections for a dollar bill while 70-310106 gives 9 for a dollar bill.

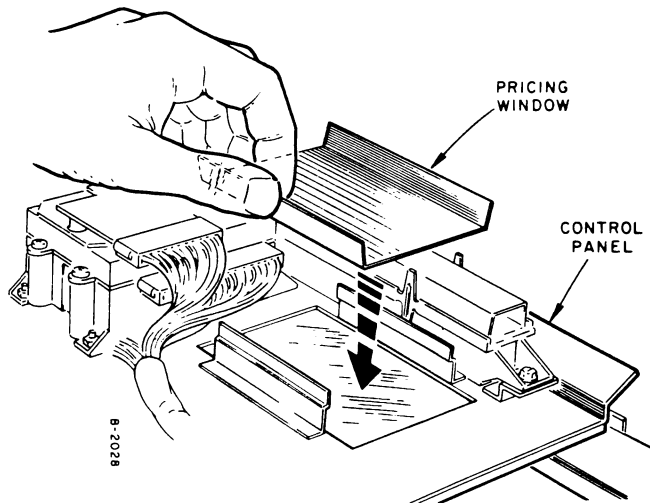
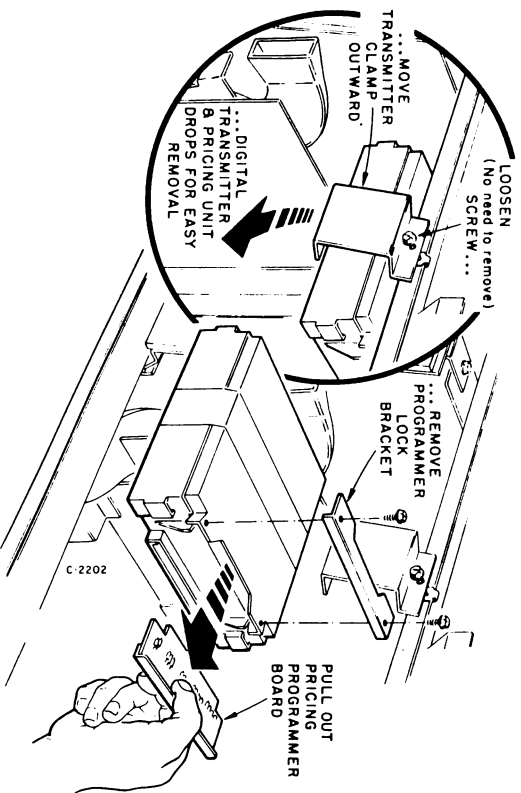


Figure 15A. Pricing Window Information (Singles)

STEREO PHONOGRAPH

| PRICING WINDOW | | PRICING PROGRAMMER | STANDARD IN MODEL | * DOLLAR BILL Bonus Selections | |
|---|---|--|---------------------------------|---|-----------------------------|
| 10 CENTS Pt. No. 83-459486 | 1 FOR 25 CENTS Pt. No. 83-459485 | 2 FOR 25 CENTS Pt. No. 83-459484 | | | |
| 1 SINGLE 25c OR QUARTER 4 SINGLES 50c OR HALF DOLLAR 8 SINGLES \$1.00 IN MIXED COINS ALBUMS 2 SIDES 50c 4 SIDES \$1.00 | 1 SINGLE 25c OR QUARTER 4 SINGLES 50c OR HALF DOLLAR 8 SINGLES \$1.00 IN MIXED COINS ALBUMS 2 SIDES 50c 4 SIDES \$1.00 | 2 SINGLES 25c OR QUARTER 5 SINGLES 50c OR HALF DOLLAR 10 SINGLES \$1.00 IN MIXED COINS ALBUMS 2 SIDES PLUS ONE SINGLE 25c 5 SIDES \$1.00 | 70-310102 ----- 70-310103 | Pricing Modification ----- Pricing Modification | 6 Sides ----- 7 Sides |
| 1 SINGLE DIME OR 2 NICKELS 3 SINGLES 25c OR QUARTER 7 SINGLES 50c OR HALF DOLLAR 14 SINGLES \$1.00 IN MIXED COINS ALBUMS PER SIDE 25c 2 SIDES PLUS 1 SINGLE 50c 4 SIDES PLUS 2 SINGLES \$1.00 | 1 SINGLE DIME OR 2 NICKELS 3 SINGLES 25c OR QUARTER 7 SINGLES 50c OR HALF DOLLAR 14 SINGLES \$1.00 IN MIXED COINS ALBUMS PER SIDE 25c 2 SIDES PLUS 1 SINGLE 50c 4 SIDES PLUS 2 SINGLES \$1.00 | 2 SINGLES 25c OR QUARTER 5 SINGLES 50c OR HALF DOLLAR 10 SINGLES \$1.00 IN MIXED COINS ALBUMS PER SIDE 25c 2 SIDES PLUS ONE SINGLE 50c 5 SIDES \$1.00 | 70-310104 | Pricing Modification | 5 Sides |

* Dollar Bill Bonus Selections are available when a Dollar Bill Validator is used.
 Album Selections shown. For Singles see Figure 15A.



CHANGE OF PRICING - To obtain other pricing setups, simply change the Pricing Programmer and Pricing Window. Any available Pricing Programmer may be used with the DTP1. The proper combination of Pricing Programmers and Pricing Windows are as shown.

The pricing programmer, which determines the pricing arrangement in the DTP1 is easily accessible at the front of the DTP1.

NOTE:
 Pricing programmers and pricing windows are available for countries as required.

All pricing programmers and pricing windows are available from the Seeburg Parts Division.

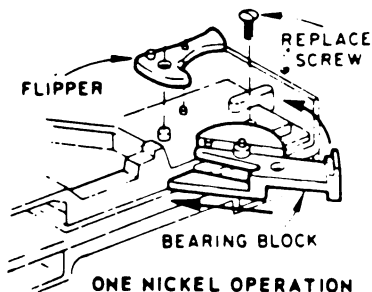
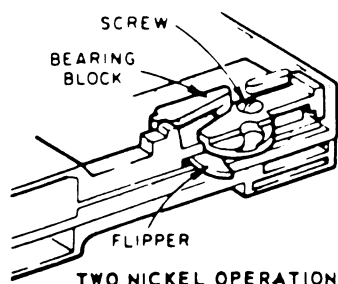
Figure 15B. Pricing Window Information (Albums)

STEREO PHONOGRAPH

NATIONAL REJECTORS, INC.

To Change From TWO NICKEL To ONE NICKEL Operation:

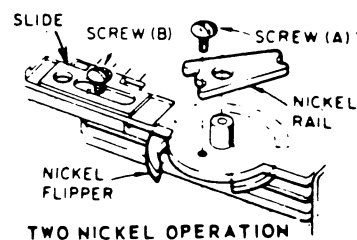
1. Remove screw to release bearing block and flipper.
2. Store flipper and install bearing block.
3. Insert screw and tighten.



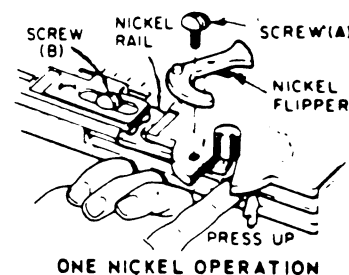
COIN ACCEPTORS, INC.

To Change From TWO NICKEL To ONE NICKEL Operation:

1. Remove screw (A) and stored nickel rail.
2. Note position of slide and loosen screw (B).
3. Lift up plastic cover and remove nickel flipper.
4. Insert nickel rail.
5. Store nickel flipper on top of plastic cover. Secure in place with screw (A).
6. Tighten screw (B) with slide in original position.



TWO NICKEL OPERATION



ONE NICKEL OPERATION

Figure 16. Nickel Flipper Positions

ACCESSORIES

REMOTE QUAD & STEREO SPEAKERS

Seeburg Full Range Speakers are specifically designed to be used in "4's" for Quad or pairs for Stereo listening. The following is available:

LIGHTED 50 WATT SPEAKER PACKAGES:

ME-513101 package of two, Type QS50K, for ceiling or wall type installation, vertical or horizontal mounting. These are full range, low impedance (5 ohm - not C.V.) speakers.

TYPE LPS2-56 LIGHT POWER SUPPLY:

Furnishes power for the light in the lighted speaker. Up to six speakers can be powered from one power supply.

TYPE CM1K CEILING MOUNT KIT:

Includes the necessary hanger brackets to mount two pair (4) of LS50 or QS50 speakers on a ceiling or wall. When mounted to a ceiling, these hangers allow vertical and horizontal adjustment of the speakers.

TYPE CM1 CEILING MOUNT:

Same as CM1K except includes only one pair (2) of hanger brackets.

TYPE CA3 CORNER ADAPTOR:

Includes the necessary brackets to vertically mount two LS50, QS50 or FR50 speakers in a corner. If horizontal corner mounting is required, two 12-513019 horizontal corner adaptor brackets for each speaker to be mounted may be ordered from Seeburg Parts Division.

Variations to speaker power connections are made at the speaker terminal board in the Seeburg High Power Amplifier to suit location requirements. Basic rules for installation of speakers and typical examples are illustrated in the following pages.

TYPE S10LT3 STEREO SPEAKER CONTROL

This Speaker Control is used for volume level adjustment of stereo speakers connected to C.V. (constant voltage) speaker lines. One or more pairs of

STEREO PHONOGRAPH

stereo speakers may be controlled in seven 3 db steps (or turned off) without affecting other speakers connected to the Amplifier.

TYPE PRVC4* POWERED REMOTE VOLUME CONTROL

This Remote Volume Control is an accessory which may be used with the phonograph to remotely control the volume and cancel selections.

The set includes a motor which is installed on the volume control and is operated by the remote switch to increase or decrease volume of the phonograph.

TYPES DEC3 and DEC4* DIGITAL ELECTRONIC CONSOLETTES

The remote choice of selections is made possible by these Seeburg Digital Consolettes, used in conjunction with this model phonograph equipped with a Type DCPS1K-56 Digital Consolette Power Supply Kit.

NOTE:

All Types DEC Consolettes are the only Consolettes that can be used with this Model Phonograph. Types SC, SCH and Wall-O-Matics cannot be used with this Model.

If a totalizer is to be used with the Consolettes, make sure that a "B" type Totalizer is used or that the Digital Add Buffer Assembly in the Totalizer is changed to the new 70-311199.

The DEC3 and DEC4 type Consolettes feature a circuit that illuminates the reset & reselect light whenever an incorrect selection is made.

These Consolettes can accept nickels, dimes & quarters. Types DEC3 and DEC4 are preset at the factory for 2 for 25¢, 5 for 50¢ pricing. A pair of speakers - right and left channels - provide for localized reproduction of selections.

* See "Special Accessory Information" section

Speaker volume may be controlled at the Consolette by push buttons marked SOFT and LOUD. Selections are made from a Type DES6 Digital Electronic Selector.

These Consolettes are equipped with a special audio control circuit that causes the Consolette speakers to switch on and off. When the last selection is made at a particular Consolette, the Select-O-Matic Mechanism will make two complete scans after playing these selections and cause the Consolette speakers to switch off. If no selection is made at any other Consolette, or the Console, the Select-O-Matic Mechanism will come to rest. If a selection has been made at some other Consolette or at the Console while the Console was playing, the Select-O-Matic Mechanism will continue to operate, but the particular Consolette speaker will switch off.

Up to eight Consolettes may be installed in conjunction with a phonograph equipped with a Digital Consolette Power Supply Kit. If the installation requires more than eight Consolettes, an additional Type DCPS1K-56 Digital Consolette Power Supply Kit must be installed for each additional group of eight Consolettes.

CONSOLETTTE MOUNTING ACCESSORIES

For mounting the Type DEC Digital Consolette, the following accessories may be purchased from the Seeburg Parts Division:

10-516030 consolette bar bracket - for mounting the Consolette on a bar, counter, table or any adaptable horizontal surface. Designed for mounting the unit at three different heights from the surface.

10-516078 back plate assembly - for mounting the Consolette on other types of brackets.

85-516080 wall mounting plate - for mounting the Consolette on a wall.

STEREO PHONOGRAPH

TYPE DCPS1K-56* DIGITAL CONSOLETTETTE POWER SUPPLY KIT

The Type DCPS1-56 Power Supply (included in the Type DCPS1K-56 Power Supply Kit) is used in converting this Model Phonograph to incorporate remote selections of records when used in conjunction with Digital Electronic Consolettes. Each DCPS1-56 can supply power for up to eight Consolettes. The Consolette Installation and Operation Manual describes in detail, the power requirements depending on the number of Consolettes to be installed. The Kit includes the power supply, terminal blocks and all cables and hardware necessary for installation in the phonograph.

TYPE DRIT1BK6-56* DIGITAL RECORDING INCOME TOTALIZER KIT

The Digital Recording Income Totalizer keeps an accurate account of all monies deposited in the phonograph (and all of its remote Consolettes, if any). The totalled amount of money may be viewed through a window in the totalizer. The unit also has manually operated facilities for printing the totalled amount on a form. This Totalizer may be used on this model phonograph, whether or not they are equipped with remote control facilities.

TYPE DBV2K12* DOLLAR BILL VALIDATOR KIT (U.S. Only)

The Type DBV2K12 Dollar Bill Validator Kit may be installed in this Model Phonograph to accept dollar bills. All items necessary to complete this installation are included in the kit. Power for the validator is furnished by the Digital Control Center in the phonograph. The Type DBV2 Dollar Bill Validator, only, may be installed in these models.

CAUTION!

Do not use a Type DBV1 Dollar Bill Validator with this equipment.

The 10-423668 Type DMK13 Dollar Bill Validator Mounting Kit is separately

* See "Special Accessory Information" section

available for installing a validator already obtained. This kit consists of all parts necessary for the validator's installation - but not including the 70-311525 Type VIK3 Validator Interface Kit. This kit, as well as the VIK3, is available from the Seeburg Parts Division.

TYPE PACK1 PHONO AUDIO CONTROL KIT

For controlled switching of the phonograph speakers when Consolettes are used in conjunction with the phonograph, the Type PACK1 Phonograph Audio Control Kit (plus PACK Connecting Package - see note) may be installed. This unit incorporates the special feature for switching the console speakers. A selection made at the console will turn on the console speakers but, a selection made at a Consolette will not turn on the console speakers.

The last selection made at the console will cause the Select-O-Matic Mechanism to make two complete scans and the console speakers to switch off. If no selection is made at the Consolette, the Select-O-Matic Mechanism will come to rest. If a selection has been made at the Consolette while the console was playing, the Select-O-Matic Mechanism will continue to operate, but the console speakers will switch off.

NOTE:

To mount a PACK1 in this model phonograph, a new ME-458073 PACK Connecting Package is required. It can be purchased from the Seeburg Parts Division. See Figure 20 for mounting information.

TYPE SAS2K3 SOLID STATE AUTO-SPEED KIT

For Album and Singles programming, the Type SAS2K3 Solid State Auto-Speed Kit may be installed. This Kit features dual price programming and the playing of 33-1/3 and 45 rpm 7-inch records. The Kit includes an SAS2 Auto-Speed Unit which is plugged into the Digital Control Center, a 70-311590 No. 2 Diode & Switch Board Assembly which is installed on the DES5 Digital Selector and a 2/25¢, 5/50¢ dual pricing window. No other modifications are required.

STEREO PHONOGRAPH

TYPE TPIK TRANSISTORIZED PAGING KIT

The Transistorized Paging Kit is a Paging Microphone and Preamplifier system that may be used with a phonograph requiring microphone "paging" operation. The Kit is complete and ready to "plug-in" when used with a SHP Type Amplifier.

All hardware and 50 feet (15 meters) of cable for installation are included in the Kit. Additional 70-302631 25 foot (7.5 meters) extension cables can be purchased from the Seeburg Parts Div.

TYPE PB1K STAND-BY SERVICE KIT

In an emergency situation, the Stand-By Service Unit keeps the phonograph in operation without the use of coins as long as the mechanism and amplifier are operative and the 25 VAC in the Digital Control Center is available until a convenient time when the phonograph can be properly diagnosed. This Service Unit is an easy to use plug-in assembly and can be used only with the DCC4 or later type Digital Control Centers.

TWO AMPLIFIER INTERCONNECTING KIT

This Kit includes an interconnecting cable and instructions for interconnecting two SHP Amplifiers to provide up to 400 watts of power (200 watts per channel).

NOTE:

To mount a 2nd amplifier in this model phonograph, two new 12-459476 chassis mtg. brackets are required. They may be purchased from the Seeburg Parts Div. See Figure 20 for mounting information.

TYPE SBK1 SECURITY BAR KIT

This Kit is intended to discourage cash box break-ins and is mounted externally to the cabinet over the cash box door. It consists of a heavy gauge steel strap and eyebolt that mount to existing holes in the cabinet. The system is then locked in place with a padlock.

TYPE QCP3-56 QUAD CONVERSION PACKET

Used to convert this model phonograph for "Quadraphonic Sound". It includes all necessary items; such as, Quad Decoder, Power Supply for illuminating speakers & "Quad" graphic panel. Domestic packets also include 1/25¢, 3/50¢ pricing window & programmer as well as a Dollar Bill Mtg. Kit. If a Validator & VIK3 are required, a DBV2-IP may be ordered separately.

Also the illuminated speakers need to be ordered separately. They come with wall mtg. brackets; Ceiling Mount or Corner Adaptors may be ordered separately.

TYPE DBV2-IP DBV & INTERFACE PACKET

Includes a DBV2 and VIK3 & is intended for use with the Quad Conversion Packet.

STEREO PHONOGRAPH

SPECIAL ACCESSORY INFORMATION

When installing the accessories mentioned in this section, refer to the applicable accessory instruction sheet and the modifications described as follows:

TYPE PRVC4 POWERED REMOTE VOLUME CONTROL

When installing the PRVC4 motor assembly to the volume control, it is necessary to remove the VC4 from the back wall of the phonograph cabinet. To do this, remove the two nuts that mount the VC4 to the back of the cabinet and lift the assembly off. Assemble the VC4 to the motor and plug the PRVC4 into the VC4. Then install this assembly to the same two studs that held the VC4. All connections are to be made to the 5 lug terminal board (located on volume control drive motor assembly). Be sure the wire colors match those connected to the terminal board.

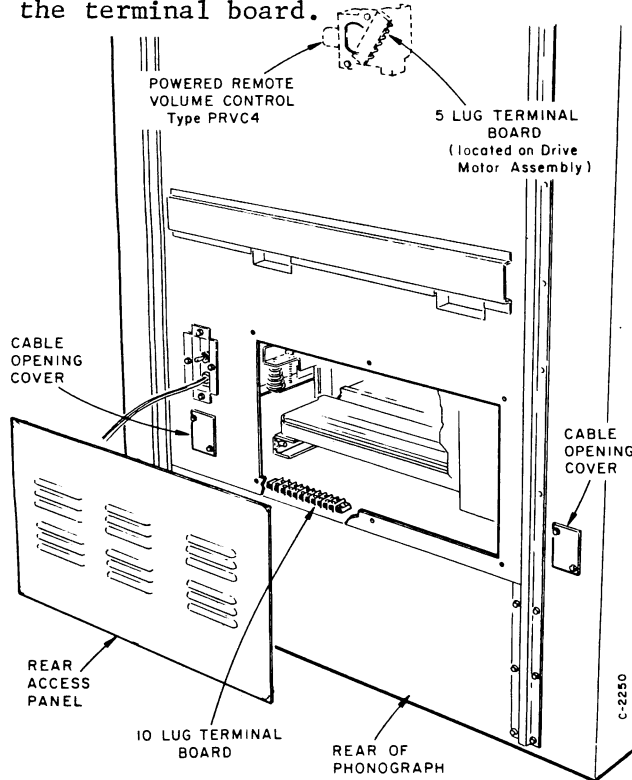


Figure 17. Location of Terminal Boards

TYPES DEC3 and DEC4 DIGITAL ELECTRONIC CONSOLETTES

Install the 10-lug terminal board on shelf in the rear of the cabinet close to the cable opening hole (see Figure 17). The 6-wire cable should then be plugged into the connector marked "Remote Selector" on the Stereo Network & Junction Unit. See Figure 2.

The long 3-wire audio cable (approx. 68" long) should be connected to the "Console Speaker" terminals on the Stereo Network & Junction Unit.

TYPE DCPS1K-56 DIGITAL CONSOLETTTE POWER SUPPLY KIT

The DCPS1 Power Supply Unit should be installed in the right front corner of the cabinet on the shelf as shown in Figure 18. Plug the primary line cord into the socket on the Light Power Supply.

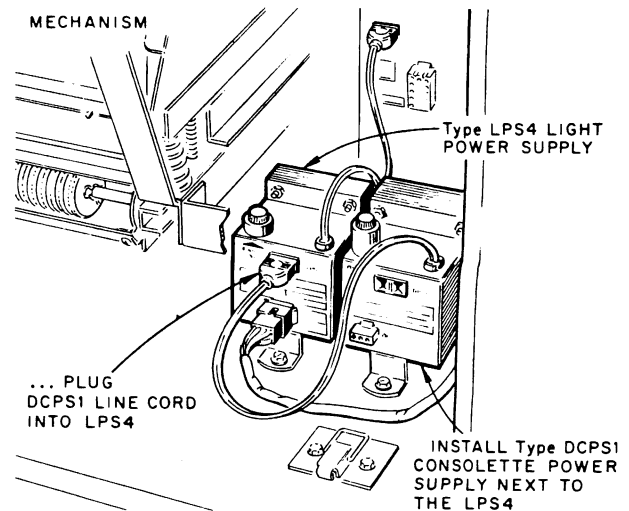


Figure 18. Location of Power Supplies

DIGITAL RECORDING INCOME TOTALIZER KIT, Old Type Kits (Prior to Present DRIT1BK6-56)

To install a Totalizer already obtained, the following parts should be purchased from the Seeburg Parts Division:

- 1 - 10-457505 Top Support Assembly
- 1 - 10-457503 Bottom Support Assembly
- 1 - 55-499817 #656 Lamp
- 4 - 31-961174 10-32 x 3/8 S.T. Screw
- 1 - 83-507534 Seal
- 1 - 81-453991 Instruction Sheet

The connector may be locked in place by using the 83-507534 seal (see Figure 19).

STEREO PHONOGRAPH

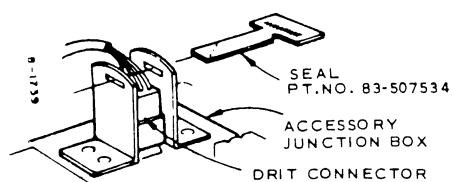


Figure 19. Installing Seal

If "-B" or "-F" or new DEC3 or DEC4 type Consolettes are to be used with these Totalizers, make sure that the Digital Add Buffer Assembly in the Totalizer is 70-311199.

TYPE DBV2K12 DOLLAR BILL VALIDATOR KIT (U.S. Only)

The Dollar Bill Validator cable should be plugged directly in the DBV socket on the control center and any excess cable should be dressed behind the coin chute.

To install a validator already obtained, the following parts should be purchased from the Seeburg Parts Division:

- 1 - 10-423668 Type DMK13 Dollar Bill Validator Mtg. Kit
- 1 - 70-311525 Type VIK3 Validator Interface Kit

MOUNTING PHONO AUDIO CONTROL

The phono audio control may be mounted

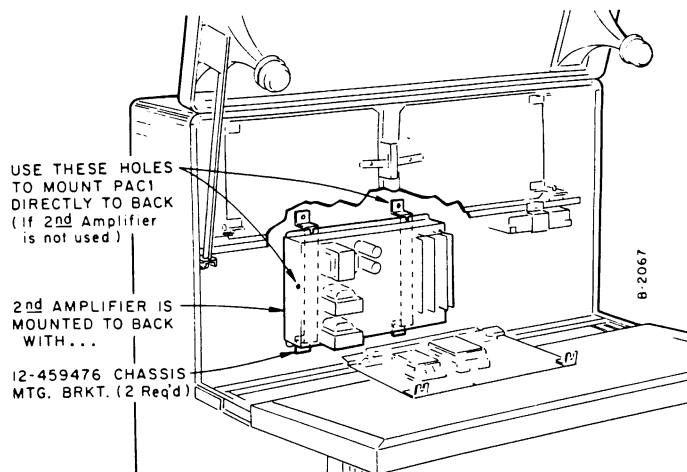


Figure 20. Mounting PAC1 or 2nd Amplifier

directly to the inside back wall of the phonograph with two screws (see Figure 20). Purchase the 70-319120 Type PACK1-56 Phono Audio Control Kit and ME-458073 PACK Connecting Package from Seeburg Parts Div.

MOUNTING 2nd AMPLIFIER

A 2nd Amplifier may be mounted inside the phonograph using two 12-459476 chassis mtg. brackets (see Figure 20). Make connections using 70-510059 Two Amplifier Interconnecting Kit. Purchase brackets and interconnecting kit from Seeburg Parts Div.

THE SEEBURG STEREOGRAPHIC SYSTEM BASIC RULES FOR INSTALLATION

The following basic rules for the installation of the Seeburg Stereophonic System are guideposts toward the successful achievement of Stereophonic Reproduction:

1. ALL LOCATIONS: There is not a location in the country, regardless of size which cannot successfully and to good advantage use a Stereo System.

2. REMOTE STEREO SPEAKERS: In rooms too large for adequate audio coverage by the phonograph speaker array, at least one pair of remote stereo speakers, properly placed, is essential to the reproduction of stereo. Use additional pairs as required to obtain good distribution throughout the listening area.

3. SPEAKERS IN PAIRS-OPPOSITE: Remote stereo speakers should be installed

in pairs (approximately opposite one another) and the speakers of each pair should face into the same area.

4. HEIGHT FROM FLOOR: The proper distance from the floor to the grille centers of wall and corner speakers should be as follows:

| ROOM WIDTH (Distance between Channels) | HEIGHT ABOVE FLOOR |
|---|--------------------|
| 8 feet | 7 to 7½ feet |
| 12 feet | 7½ to 8 feet |
| 18 feet | 8 to 8½ feet |
| 25 to 30 feet | 8½ to 9½ feet |

STEREO PHONOGRAPH

5. PHASING: The connections must be such that the phasing of all remote stereo speakers and phonograph speakers will be alike.

6. SPACING WITHIN A CHANNEL: The spacing between the left channel remote speakers shall be about 15 to 20 feet; likewise the spacing between the right channel remote speakers shall be 15 to 20 feet - depending upon room dimensions.

7. SPACING BETWEEN CHANNELS: The distance between remote speaker channels should be not less than 8 feet, and not more than 30 feet.

8. TEN PAIRS IS MAXIMUM: At no time shall more than ten remote speakers be connected to either channel of an amplifier.

9. 100 WATTS MAXIMUM: Add total watts of all speakers in a channel including remote speakers and consolettes. This total must not exceed 100 watts. When individual remote speakers are connected for monaural operation, divide the wattage setting by two (2) to obtain the loading on each channel.

10. BALANCE CHANNELS WATTS: The sum of the wattage settings of all remote speakers must be the same for each channel.

11. DIGITAL ELECTRONIC CONSOLETTA SPEAKERS: The Digital Electronic Console speaker loading may be considered at 1 watt per speaker.

12. FULL RANGE 50 WATT SPEAKERS: These are low impedance speakers (approximately 5 ohms) and are to be connected only to the low impedance taps on the amplifier. The QS50, LS50 or FR50 speaker loading may be considered to be the same as that as marked by the low Z tap to which they are connected. Do not, at

any time, connect these speakers to the C.V. connections.

13. COLUMN SPEAKERS: Full Range Column Speakers and Universal Column Speakers are both full range C.V. speakers and may be connected for 16 watts each. They may be used at any point in an installation. Do not, at any time, connect a wire jumper between any terminals on these speakers.

14. MORE BASS AT FAR POINTS: Use QS50, LS50, FR50, or UCS1 Speakers at any point in an installation. See Steps 12 & 13. In areas where the listener cannot hear the bass from the stereo phonograph, it is important to use Type QS50, LS50 or FR50 Full Range 50 Watt Speakers, or Type UCS1 Universal Column Speakers.

When a pair of remote Type TW1, TC1 or TR1 Twin Stereo Speakers is installed more than 40 feet from a stereo phonograph, or in a separate room, a wire jumper should be connected from "VC1" to "GND" on each of these speakers.

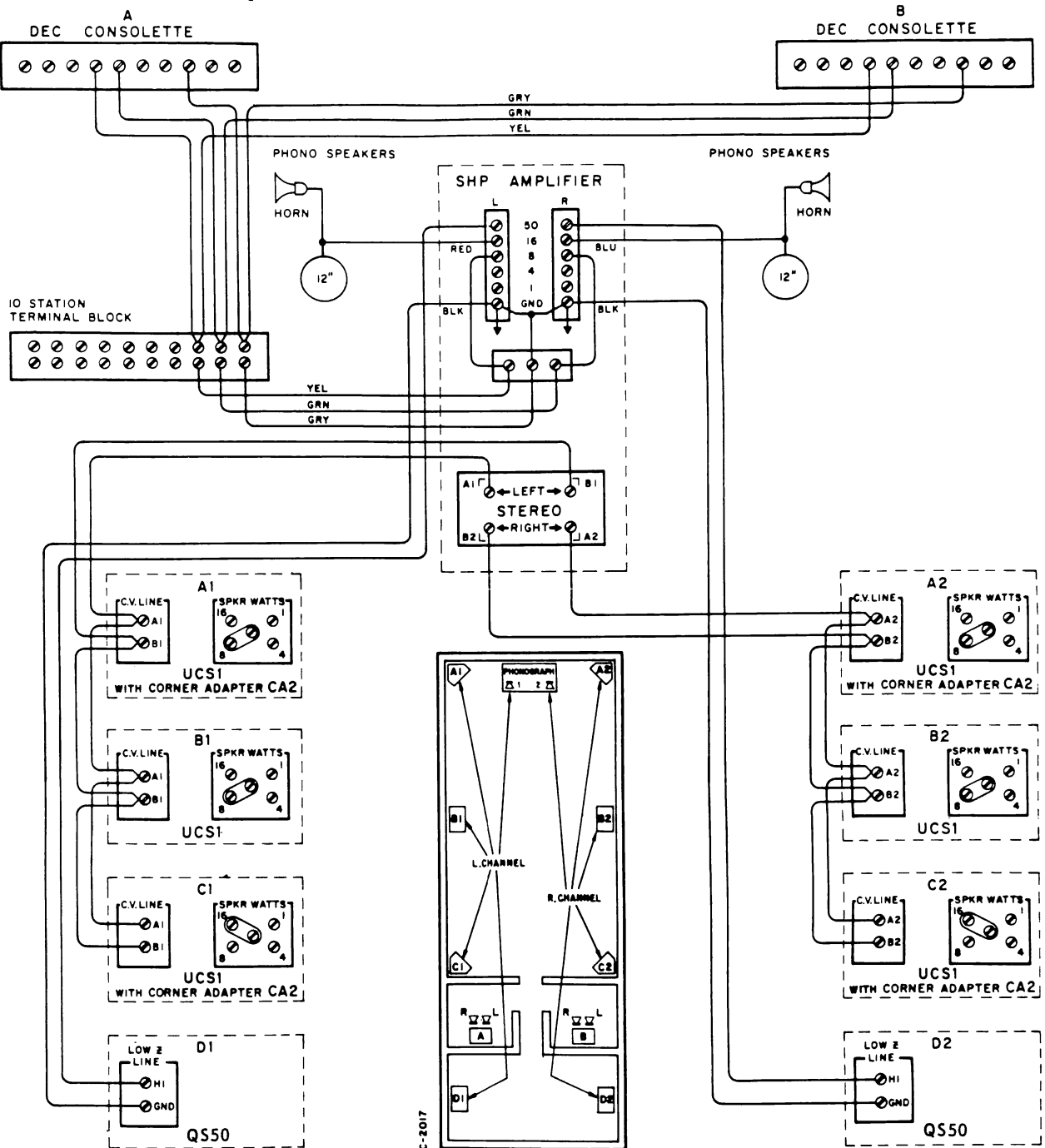
15. SPEAKERS JUMPERED - 8 WATTS MAX: Remote speakers with wire jumpers from "VC1" to "GND" must never be connected for more than 8 watts each. The Universal Column Speakers do not use any wire jumpers and may be connected for 16 watts each. The QS50, LS50 or FR50 speakers do not use any wire jumpers and may be connected for 50 watts each.

16. BALANCING: A stereo installation is never complete without a final test of balance between the two channels, using an output meter and a monaural record. Never attempt to balance system with a conventional stereo record. Adjust the acoustical balance by decreasing the left or right channel gain set potentiometer. Never increase the setting of these potentiometers: see Service Manual for the proper adjustment procedure of these controls if it is found that they are badly misadjusted.

STEREO PHONOGRAPH

COMPLETE STEREO SPEAKER SYSTEM INSTALLATION

Large room containing a Phonograph equipped with six remote speakers set up exclusively for stereo reproduction. Two small adjoining rooms contain Seeburg Digital Electronic Consolettes for remote selection and reproduction of stereo records. One small adjoining room contains two remote speakers set up for stereo reproduction.



LEFT CHANNEL LOADING

"A" DIGITAL ELECTRONIC CONSOLETTA SPKR.... 1 WATT
 "B" DIGITAL ELECTRONIC CONSOLETTA SPKR.... 1 WATT
 A1 SET AT 8 WATTS
 B1 SET AT 8 WATTS
 C1 SET AT 16 WATTS
 D1 CONNECTED FOR 50 WATTS
 PHONOGRAPH SPEAKER TAP SETTING OF 16 WATTS

TOTAL 100 WATTS

WHICH IS SATISFACTORY AMPLIFIER LOADING.

RIGHT CHANNEL LOADING

"A" DIGITAL ELECTRONIC CONSOLETTA SPKR.... 1 WATT
 "B" DIGITAL ELECTRONIC CONSOLETTA SPKR.... 1 WATT
 A2 SET AT 8 WATTS
 B2 SET AT 8 WATTS
 C2 SET AT 16 WATTS
 D2 CONNECTED FOR 50 WATTS
 PHONOGRAPH SPEAKER TAP SETTING OF 16 WATTS

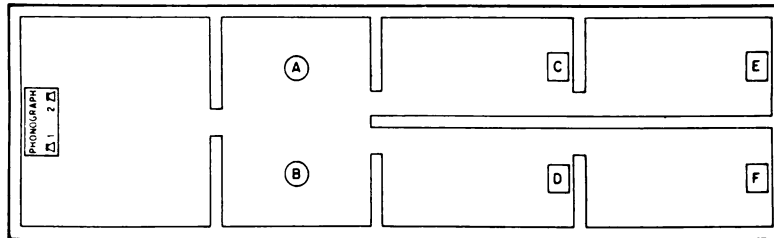
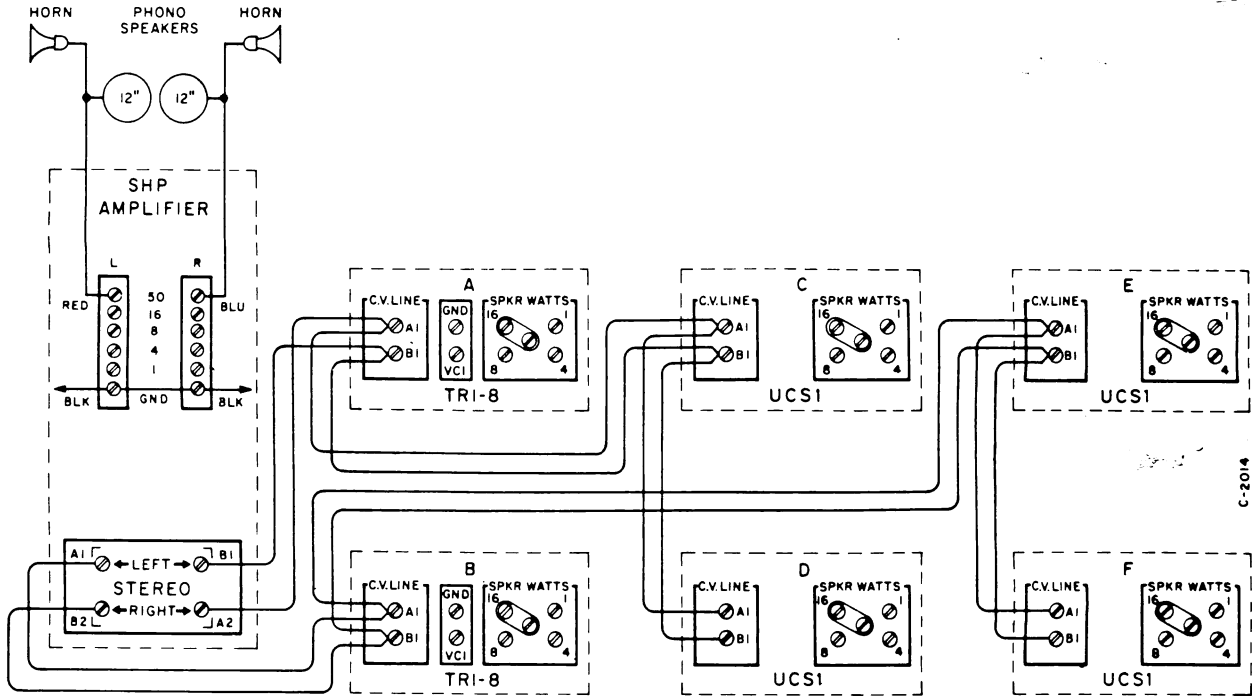
TOTAL 100 WATTS

WHICH IS SATISFACTORY AMPLIFIER LOADING.

STEREO PHONOGRAPH

MONAURAL ONLY ON REMOTE SPEAKER SYSTEM INSTALLATION

Large room containing Phonograph. Smaller rooms equipped with ceiling and wall speakers only; one per room. NOTE: The Full Range 50 watt (low Z) speakers cannot be set up for monaural reproduction.



POWER DRAWN BY ALL SPEAKERS

- A (NO "VC1" TO "GND" JUMPER) SET AT 16 WATTS WHICH IS 16 + 2 OR 8 WATTS PER CHANNEL.
- B (NO "VC1" TO "GND" JUMPER) SET AT 16 WATTS WHICH IS 16 + 2 OR 8 WATTS PER CHANNEL.
- C SET AT 16 WATTS WHICH IS 16 + 2 OR 8 WATTS PER CHANNEL.
- D SET AT 16 WATTS WHICH IS 16 + 2 OR 8 WATTS PER CHANNEL.
- E SET AT 16 WATTS WHICH IS 16 + 2 OR 8 WATTS PER CHANNEL.
- F SET AT 16 WATTS WHICH IS 16 + 2 OR 8 WATTS PER CHANNEL.

TOTAL 48 WATTS

PHONOGRAPH SPEAKER TAP SETTING OF 50 WATTS

TOTAL 98 WATTS PER CHANNEL

WHICH IS SATISFACTORY AMPLIFIER LOADING.

RECORD and STYLUS CARE

RECORD CARE

To avoid accumulation of dust and dirt, keep oil off the records. Wipe hands with a clean cloth before handling records, and always handle records by the edge. Records that show signs of surface dust or dirt should be wiped with a slightly dampened cloth, using a circular motion. Use only water to dampen the cloth - solvents will damage the records. Records not in use should be stored on edge in a cool place. Avoid exposing the records to excessive heat. Records become overheated in a very short time if exposed to direct sunlight or, if stored in a closed automobile or truck. Temperature above 122°F (50° C) should be avoided. See instructions on "Placing The Console".

STYLUS REPLACEMENT

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

When only good vinylite 45 rpm or 33-1/3 rpm records are used, armature assemblies with diamond styluses should be inserted every four or five thousand plays to maintain good reproduction. If, because of the presence of oil on the records, dust or dirt is permitted to accumulate and remain on the surface, the wear will be more rapid; economical operation will require more frequent armature assembly cleaning or replacement.

Your Seeburg Distributor has equipment for microscopic examination of styluses to determine whether cleaning or replacement is necessary. If cleaning is all that is required, the Seeburg Ultrasonic Stylus Cleaner will scientifically and rapidly rehabilitate the stylus.

CAUTION!

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

TO REPLACE ARMATURE ASSEMBLIES

1. Make a selection to the right of magazine center and right side of a record to position carriage and pickup arm cradle for easiest access to cartridge.
2. Open the cabinet lid.
3. Remove cartridge from tone arm by pulling "up" on cartridge (support tone arm with one hand), see Figure 21A.

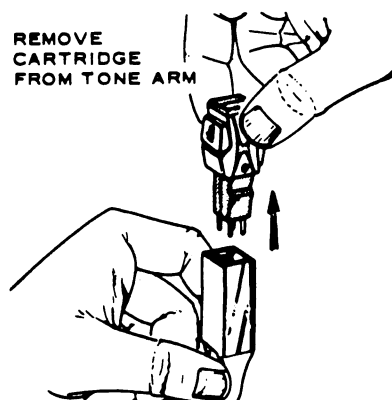


Figure 21A. Cartridge Removal

4. Remove either armature by gripping the edges of the armature using the thumb and forefinger. Light pressure in the direction away from the stylus point will slide the armature out of the cartridge slot. See Figure 21B.

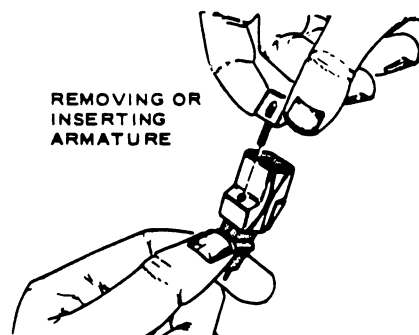


Figure 21B. Armature Replacement

STEREO PHONOGRAPH

5. Install new armature assembly by laying it flat in open end of cartridge hole, and sliding forward in hole until it bottoms.

6. Re-install cartridge in tone arm until it "detents".

7. Check that armature assemblies are still fully seated.

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

CAUTION:

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

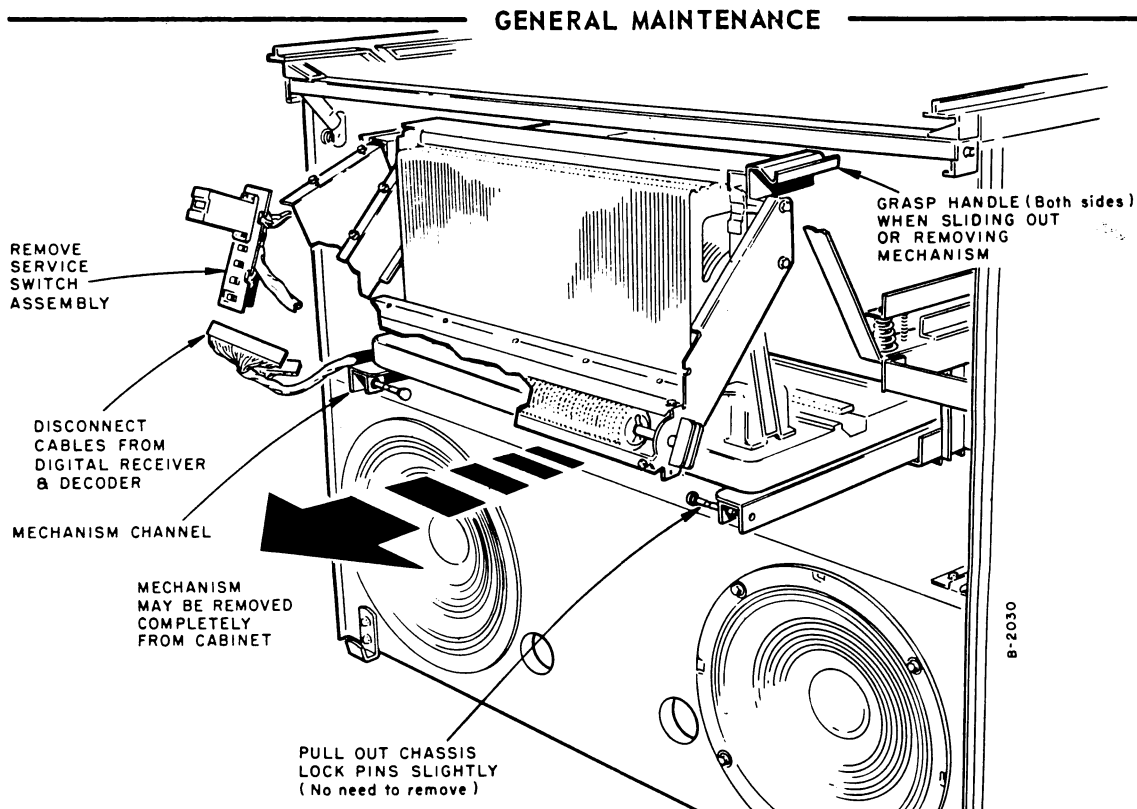


Figure 22. Mechanism Removal

MECHANISM REMOVAL (see Figure 22)

The mechanism may be partially slid out, depending upon what area must be serviced, or completely removed. To slide the mechanism out, proceed as follows:

1. Remove lower front panel assembly (as shown in Figure 4).

2. Remove the two mechanism chassis lock pins.

3. Remove service switch assembly by loosening two screws and sliding it off bracket.

4. Remove digital receiver & decoder cover. (See Figure 25).

5. Disconnect cables from digital receiver & decoder.

6. The mechanism may now be completely removed from cabinet.

CAUTION:

Use the two handles when lifting or carrying mechanism.

NOTE!

Remember to replace the two mechanism lock pins.

STEREO PHONOGRAPH

REAR ACCESS PANEL

Removal of the rear access panel (shown in Figure 9), exposes the carriage mechanism and adjacent areas. This allows access to the carriage switch plate and limited access to the nearby area without the necessity of sliding the mechanism out of the cabinet. Scanning of the carriage may then be observed.

To remove the rear access panel, see Figure 9. The carriage cover may then be removed by first removing its two screws. When replacing access panel, position louvers down

ADJUSTMENT OF 33-1/3 RPM SOLID STATE AUTO-SPEED UNIT (when used) (see Figure 23)

1. Unlock and raise the program lid.
2. Replace the record in the 219 section with 81-508487 strobe disc.
3. Make the 219 selection and allow

the mechanism to pick up the strobe disc.

4. Turn the mechanism off at the service switch.

5. Carefully prop the pickup arm out of the way.

6. Start the mechanism at the service switch.

7. Allow the unit to run approximately three minutes.

8. Lower the program lid and move it to the pulled out position. This is for viewing the strobe disc through the open space behind the program lid.

9. Open the upper front panel and swing out the Digital Control Center.

10. Set the motor speed to 33-1/3 rpm by adjusting the speed control, so that the outer and inner bands rotate in opposite directions.

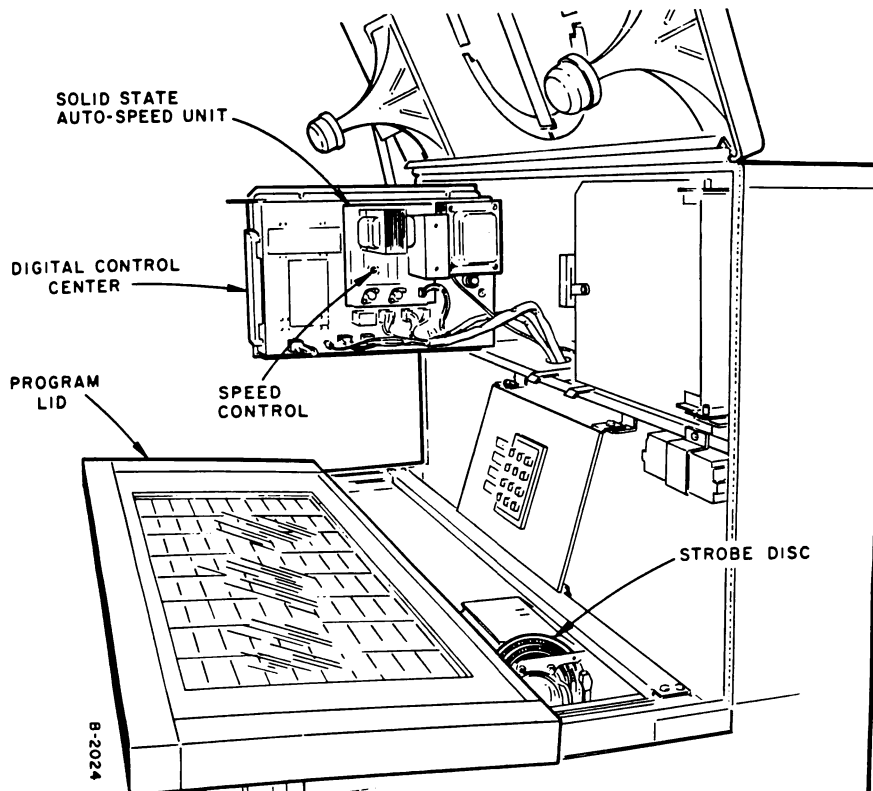


Figure 23. Adjusting Auto Speed Unit

STEREO PHONOGRAPH

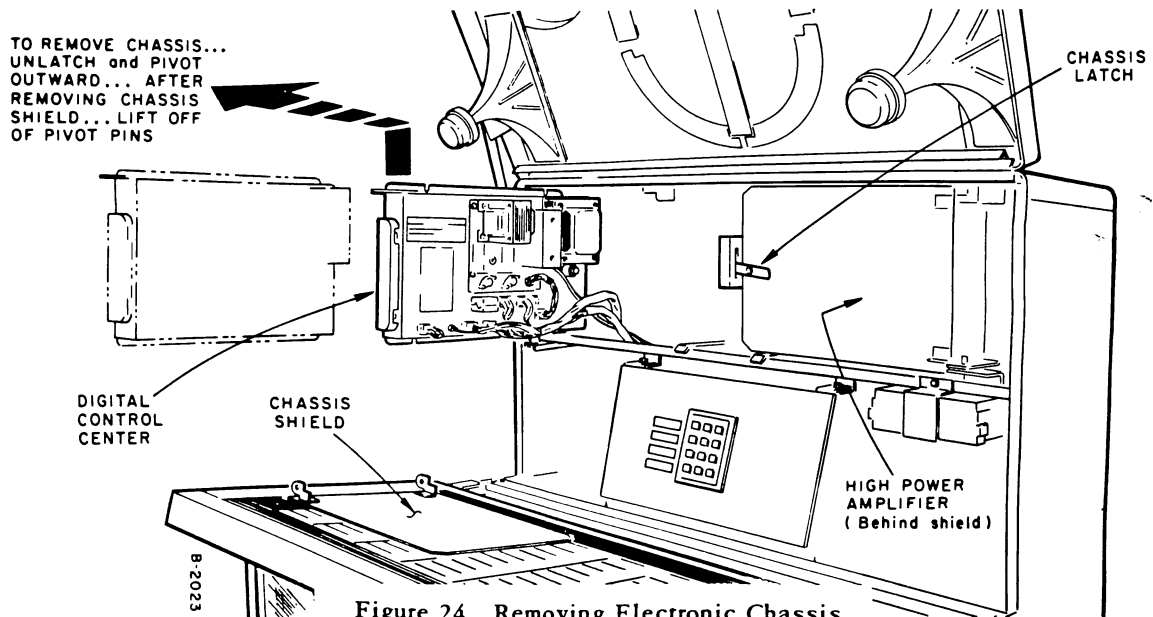


Figure 24. Removing Electronic Chassis

NOTE:

The speed control is accessible through the top of the chassis. Another factory set control is accessible from below the chassis and has been preset at the factory. Do not attempt readjustments of the factory set control without referring to the Service Manual.

The cables to these components should be disconnected before removal.

NOTE:

When replacing components make sure that all cables are properly dressed and clamped.

11. Perform the above procedure in the reverse order and remove the strobe disc.

REMOVAL OF DIGITAL RECEIVER AND DECODER

The Type DRD1 Digital Receiver and Decoder is located on the left side of the Select-O-Matic Mechanism, see Figure 25, and is accessible after removing

LUBRICATION

Follow the complete instructions given in 81-490173 lubrication chart in the Service Envelope in the phono graph. The recommended lubricants are:

- 93-53025 - Seeburg Improved Special Purpose Oil
- 93-53006 - Aero Lubriplate

COMPONENT REMOVAL

The Seeburg High Power Amplifier and Digital Control Center may each be pivoted outward for access to all their areas, or completely removed.

Each component is held in place by a latch (shown in Figure 24). To pivot a component outward, first turn the latch up. For complete removal of the Control Center or Amplifier, after pivoting outward, first lift its sheet metal shield off of the pivot pins, then lift the chassis to disengage it from pivot pins.

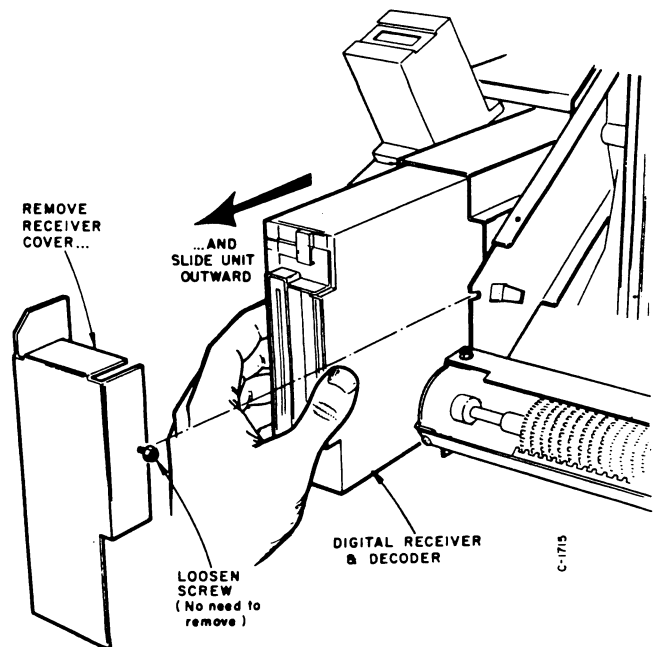


Figure 25. Removal of Digital Receiver & Decoder

lower front panel. Before removing this unit, remove front cover and unplug the cables. Slide the unit straight out. When replacing the unit, slide it in all the way. Reconnect the cables (see "Printed Circuit Board Connections" paragraph, Page 11). Replace front cover.

REMOVAL OF DIGITAL TRANSMITTER AND PRICING UNIT

The Type DTP1 Digital Transmitter and Pricing Unit is accessible after lifting the upper lid. To remove the DTP1, first loosen the screw holding the DTP clamp, see Figure 26. Move the clamp out of the way and lower the DTP. Disconnect the cables at the rear of the unit. For removing the pricing programmer only, do not disconnect cables. Simply remove the programmed lock bracket (see Figure 15B) and pull the pricing programmer out. To replace the DTP1, first connect the cables (see "Printed Circuit Board Connectors" paragraph on Page 11). Place the unit back in its clamp and tighten the screw.

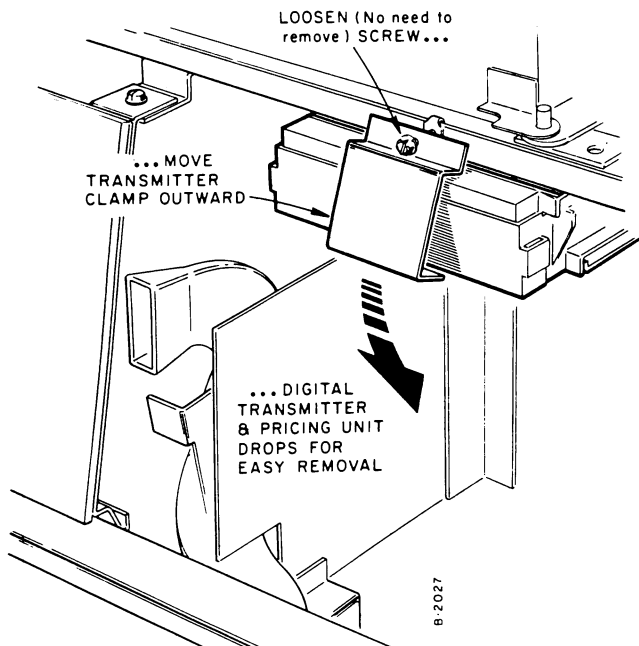


Figure 26. Removing Digital Transmitter & Pricing Unit

COIN EQUIPMENT REMOVAL AND ADJUSTMENTS

The coin equipment is accessible after opening and lifting the program lid. To

remove the coin equipment, grasp the handle with one finger as shown in Figure 27. Push the handle to the left and pull the coin equipment straight out. Adjustment of this equipment is detailed in Figures 16 and 31.

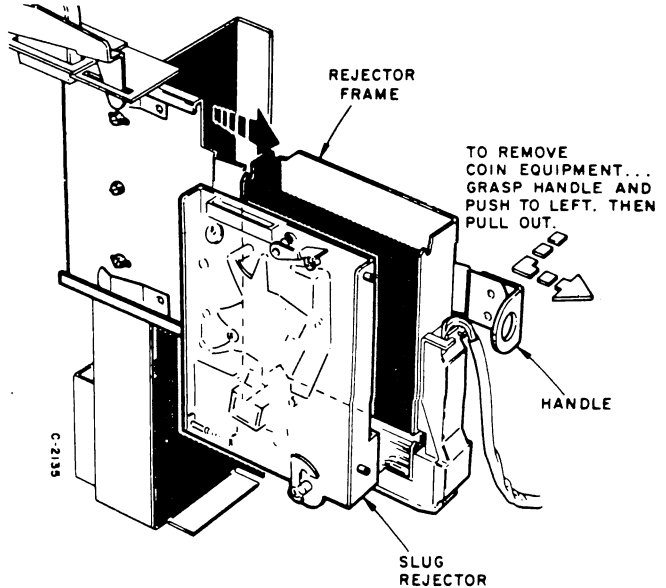


Figure 27. Coin Equipment Removal

LAMP SEQUENCER REPLACEMENT (See Fig. 2)

Disconnect both cables, remove both nuts along top flange and lift unit up and out.

LAMP REPLACEMENT (see Figure 28)

FLUORESCENT LAMPS -

The upper fluorescent lamp is accessible after opening the upper front panel. The lower fluorescent lamp is accessible after lifting the program lid upward.

CAUTION:

Always make sure the correct fluorescent starters are used:

FS4 - Upper and Lower Lamps

INSTRUCTION AND CREDIT WINDOWS LAMPS
Lamps for the instruction window and credit window are Type 656 (Seeburg 55-499817) or Type 152 (Seeburg 55-499818) or Type 650 (Seeburg 55-499819). These are accessible when the upper front panel is open and the control panel is in

STEREO PHONOGRAPH

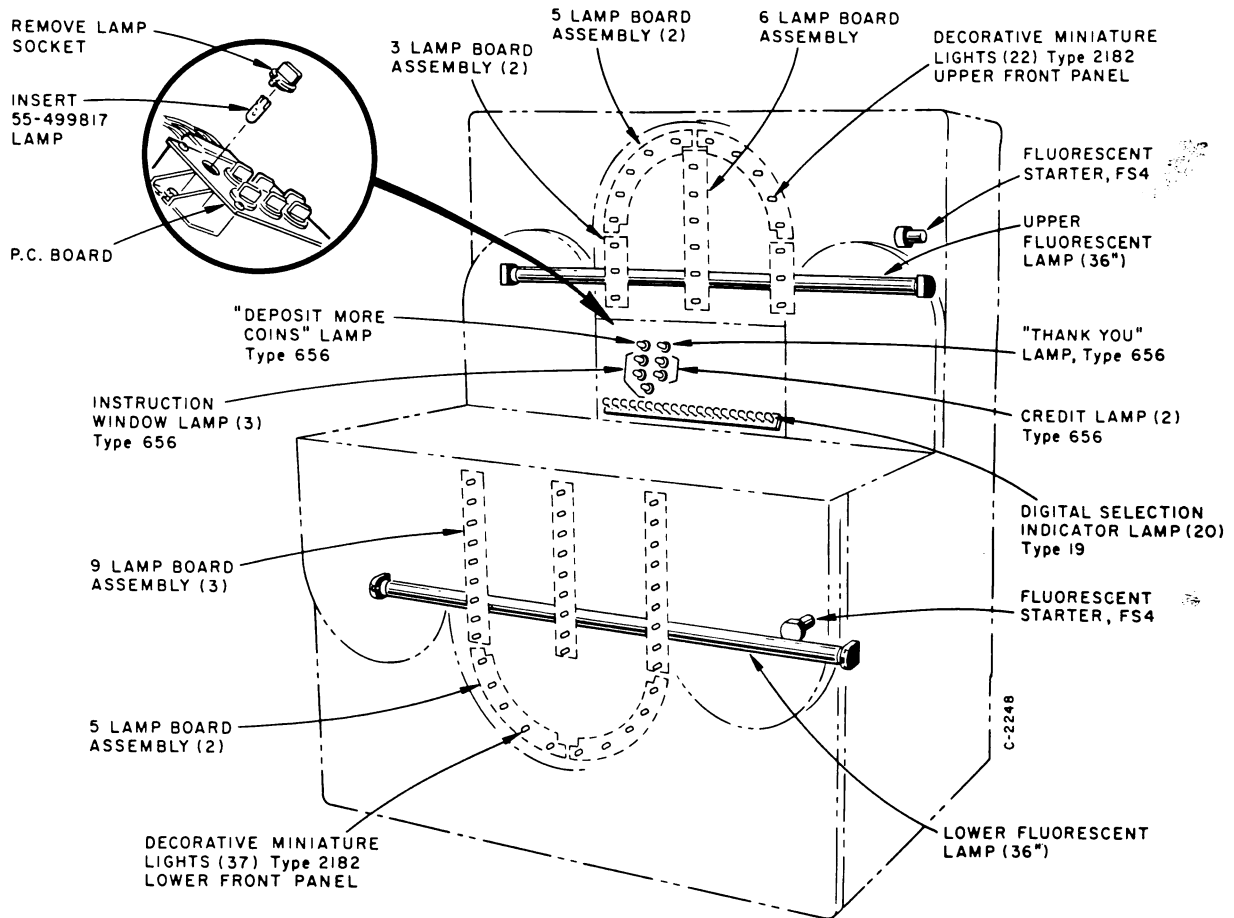


Figure 28. Lamp Locations

the lowered position. Do not use lamps other than one of these three types when replacement is necessary. Lamp sockets are mounted on a printed circuit board and may be removed by turning socket 1/8 turn to left. See Figure 28.

DECORATIVE SEQUENCING LAMPS

Lamps for the decorative sequencing lamp assemblies are No. 2182 (Seeburg 55-456049). These lamps are soldered into printed circuit boards. There are four different board assemblies with 3, 5, 6 & 9 lamps each. For replacement of these lamp assemblies, open the upper front panel and/or the lower front panel. Turn off phonograph power, or unplug lamp cable to be worked on. Unplug the individual wires from the defective lamp P.C. board assembly, remove screws hold-

ing P.C. board to panel and remove board assembly. Replace with good board assembly. When inserting the wires back onto the pins on the board assembly, make sure to match the wire breakout position to the pin position. Also white wire goes to pin marked (etched) WHT on P.C. board.

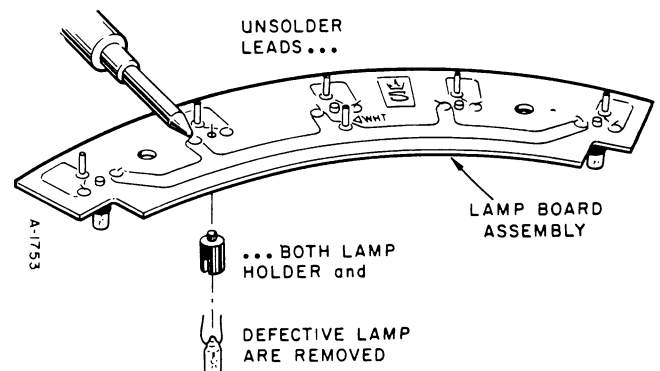


Figure 29. Removing Decorative Lamps

STEREO PHONOGRAPH

To replace defective lamp on P.C. board, unsolder its leads and remove lamp, see Figure 29. Insert new lamp into lamp holder. Leads of the new lamp must come out thru the slots on the sides of the lamp holder and project down into the lead holes in the P.C. board. Solder leads to P.C. board.

DIGITAL SELECTION DISPLAY LAMPS

Lamps for the digital selection display are No. 19 (Seeburg 55-507522). For replacement of the lamps, open the upper front panel and lower the control panel and remove the lamp assembly. This is done by simultaneously squeezing the tabs and pulling the assembly straight up, see Figure 30. Do not use lamps other than NO. 19 when replacement is necessary.

PREPARING PHONOGRAPH FOR MOVING

1. Secure the Amplifier and Control Center for shipment with the chassis shipping bracket.

2. Bolt the base to the shelf by means of two 3-1/2" long bolts.

3. Tighten the four mechanism hold-down nuts.

4. Remove all records from magazine.

5. With the pickup arm in the right hand side playing position, scan the mechanism to a point at selection 179.

6. Place protective tube over pickup cartridge and install pickup arm shipping support.

7. Put two fiber pads (a long pad in the rear - towards magazine, and a short pad in the front) under the carriage wheels and bolt carriage to base by means of two 4-1/2" long thumb screws. These are to be inserted through the mechanism base (accessible through the cash box compartment).

TO SHIP

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

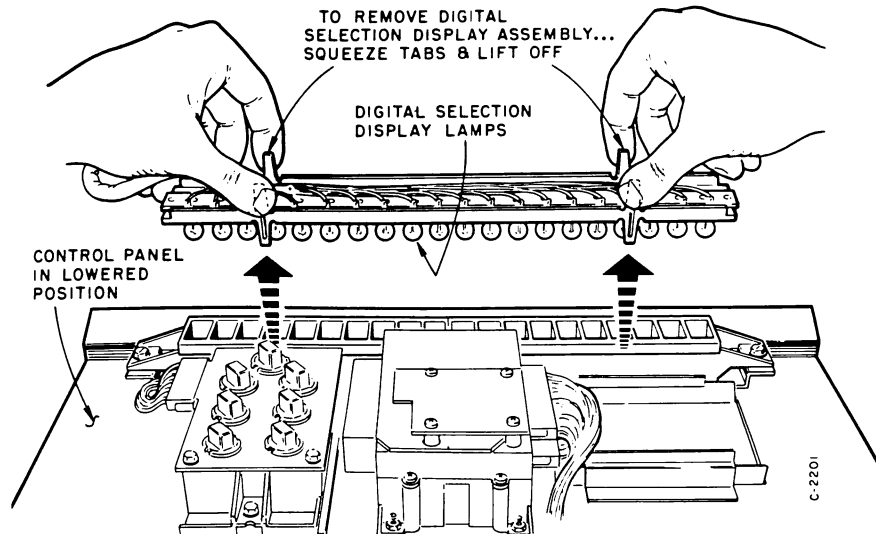
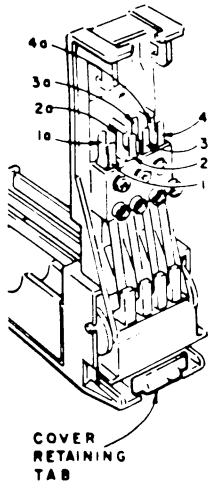


Figure 30. Removing Digital Selection Lamp Housing

COIN SWITCH ADJUSTMENTS



| REJECTOR | SWITCH TABS | | | | | | | |
|-------------------|-------------|--------|----------|--------|----------|--------|---------|--------|
| | 1 | 1a | 2 | 2a | 3 | 3a | 4 | 4a |
| 4 COIN | | | | | | | | |
| 421740 | nickel | | quarter | | dime | | half | |
| 421205 (C A) | 1 Wh,Gr | 1a GRN | 2 Wh,Rd | 2a RED | 3 Wh,Yel | 3a YEL | 4 Wh,Bu | 4a BLU |
| 421743 | nickel | | dime | | quarter | | half | |
| 421206 (N R I) | 1 Wh,Gr | 1a GRN | 2 Wh,Yel | 2a YEL | 3 Wh,Rd | 3a RED | 4 Wh,Bu | 4a BLU |

CAUTION!
 COIN SWITCH WIRING AND COIN SWITCH POSITION MUST BE CHANGED WHENEVER A SLUG REJECTOR OF A DIFFERENT PART NUMBER IS USED.
 DEPRESS TAB AT BOTTOM OF COVER AND PULL OFF COVER. CHANGE WIRING TABS (see chart).

| REJECTOR | SWITCH TABS | | | | | | | |
|---------------------------|-------------|--------|---------|--------|----------|--------|---------|--------|
| | 1 | 1a | 2 | 2a | 3 | 3a | 4 | 4a |
| 3 COIN | | | | | | | | |
| ANY C A or N R I | not used | | nickel | | dime | | quarter | |
| | 1 Wh,Bu | 1a BLU | 2 Wh,Gn | 2a GRN | 3 Wh,Yel | 3a YEL | 4 Wh,Rd | 4a RED |

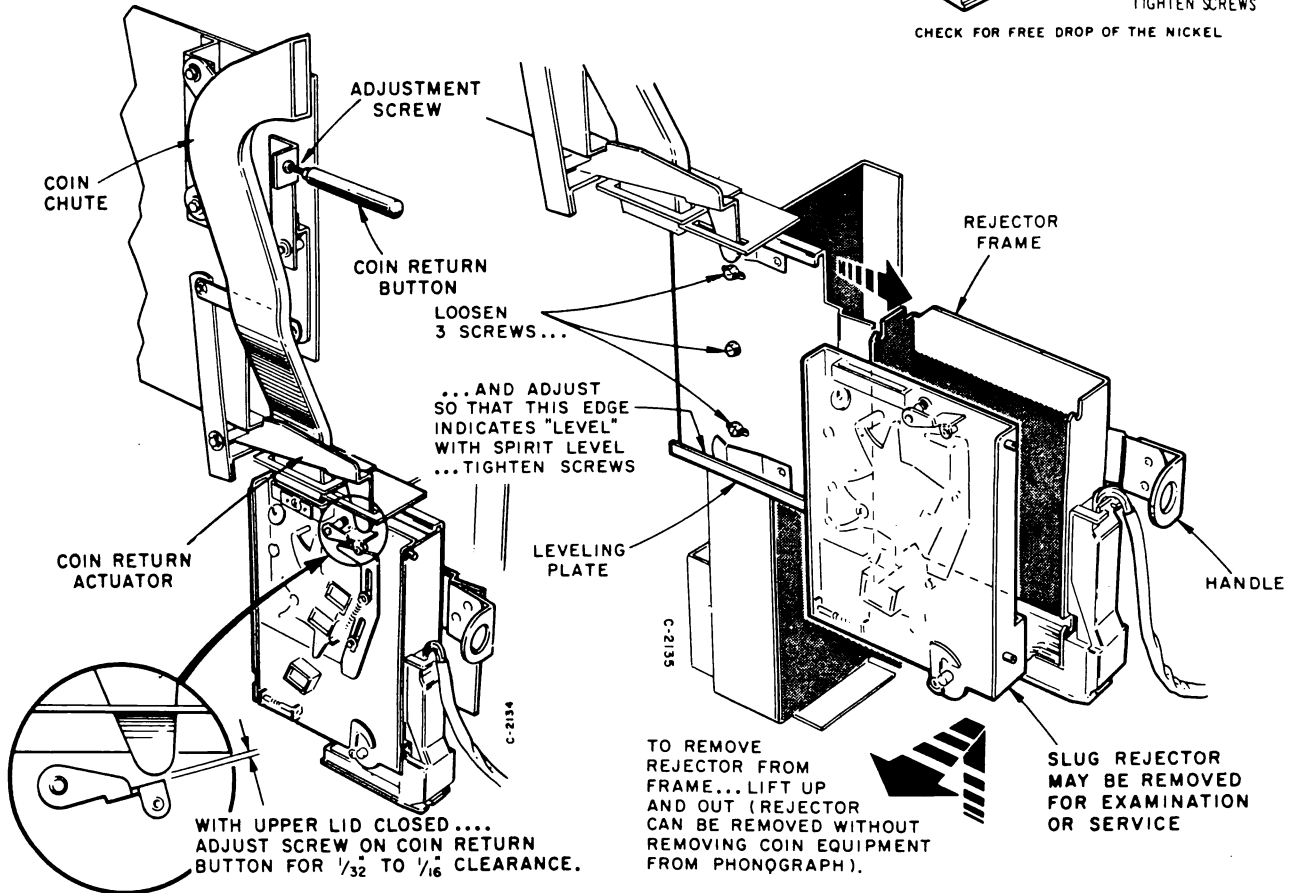
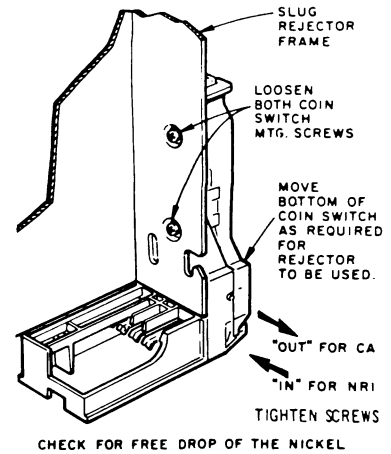


Figure 31. Coin Equipment Instructions