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Rock-Ola Manufacturing Co. LLC  
2335 208th Street, Torrance, CA 90501

**This Service Manual covers**  
**All Nostalgic RB Series Jukeboxes**

*Specifications are subject to change without notice.*

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**P/N 62792**

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## Jukebox Specifications

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*Operation and Service Manual*  
*Vinyl 45RPM Nostalgic Models*  
**P/N 62792**

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## ***SAFETY INSTRUCTIONS***

---

### ***IMPORTANT!***

- a. Read these instructions.
- b. Keep these instructions.
- c. Follow all instructions.
- d. Do not use this apparatus near water.
- e. Clean only with dry cloth.
- f. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- g. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- h. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- i. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the appliance.
- j. Only use attachments/accessories specified by the manufacturer.
- k. Unplug this apparatus during lightning storms or when unused for long periods of time.
- l. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



**WARNING:** Terminals marked with the lightning flash per are hazardous live and the external wiring connected to these terminals requires installation by an instructed person or the use of ready-made leads or cords.

## Jukebox Specifications – United States &amp; Canada

	<b>RB8x BUBBLER</b>	<b>RB4x, RB6x</b>
<b>Dimensions:</b>		
Uncrated:		
Height	61"	64 1/4"
Width	33 1/2"	33 1/2"
Depth	26 3/4"	26 3/4"
Crated:		
Height	73"	73"
Width	39"	39"
Depth	32"	32"
<b>Weight:</b>		
Uncrated	284 Lbs.	287 Lbs.
Crated	341 Lbs.	344 Lbs.

<b>Amplifier:</b>	
Output Power:	425wRMS/Channel @ 4 Ohms
Protection:	Speaker overload High temperature Automatic, self resetting
Frequency:	30 - 20,000 Hz
<b>Input Power:</b>	Domestic / Export
<b>Voltage:</b>	115V / 230V
<b>Frequency:</b>	60 Hz / 50 Hz
<b>Maximum Power Consumption:</b>	Watts Standby / Max 225 / 800
<b>Speakers:</b>	(2) 5 1/4" Midrange (2) Coaxially mounted tweeters (1) Woofer 10" dual voice coil

## Jukebox Specifications – Export

	RB-8x BUBBLER	RB4x, RB6x
<b>Dimensions:</b>		
Uncrated:		
Height	155 cm	163.5 cm
Width	85 cm	85 cm
Depth	68 cm	68 cm
Crated:		
Height	185.5 cm	185.5 cm
Width	99 cm	99 cm
Depth	81.5 cm	81.5 cm
<b>Weight:</b>		
Uncrated	129 kg.	130.5 kg
Crated	155 kg.	156.5 kg.

<b>Amplifier:</b>	
Output Power:	425wRMS/Channel @ 4 Ohms
Protection:	Speaker overload High temperature Automatic, self resetting
Frequency:	30 - 20,000 Hz
<b>Input Power:</b>	Domestic / Export
<b>Voltage:</b>	115V / 230V
<b>Frequency:</b>	60 Hz / 50 Hz
<b>Maximum Power Consumption:</b>	Watts Standby / Max 225 / 800
<b>Speakers:</b>	(2) 5 ¼" Midrange (2) Coaxially mounted tweeters (1) Woofer 10" dual voice coil



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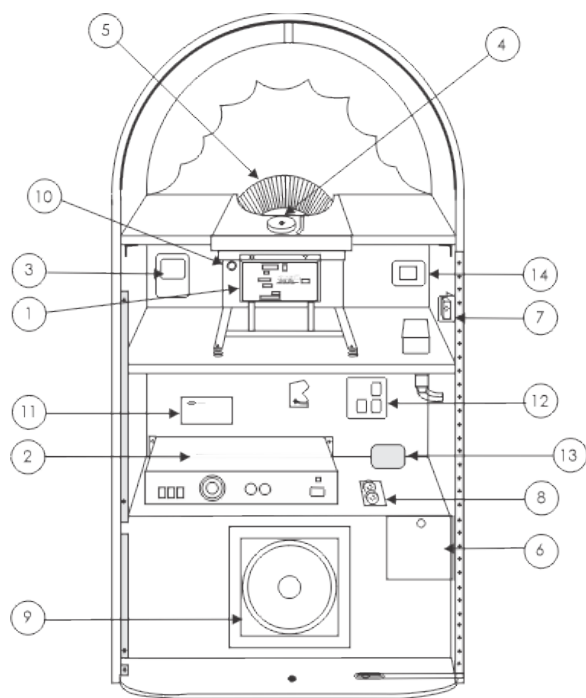
## Setup and Preparation

- Major Component Location
- Unpacking the Phonograph
- Power up
- Loading Program Pages
- Loading Compact Discs
- Repacking/Moving

Thank you for purchasing your new **Rock-Ola Vinyl 45 RPM Nostalgic Jukebox**. This manual will provide instructions for operating your new phonograph. If after reading the manual you have any questions about the operation of the jukebox, please call your authorized dealer. With a little practice, operation will become natural. Start by identifying the major components in the jukebox.

### Major Component Location

- |                      |                    |  |
|----------------------|--------------------|--|
| 1. Computer          | 5. Record Magazine | 10. Scan/Cancel Switch                                     |
| 2. Power Amplifier   | 6. Coin Box        | 11. Power Supply   |
| 3. Control Amplifier | 7. Service Switch  | 12. Power Distribution Box                                 |
| 4. Turntable         | 8. Crossover       | 13. 230V/115V Transformer<br>( <i>export models only</i> ) |
|                      | 9. Woofer, 10" DVC | 14. Volume Control   |



**Figure 1B**

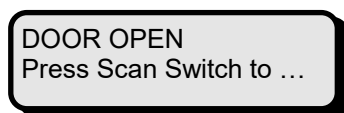
## Unpacking the Phonograph

- Open Door.
- Remove the twist ties from the title display assembly mounting clips.
- Remove lock nuts from bottom of shipping bolts.
- Remove shipping bolts from mechanism.
- Plug System Power Harness into the Power Supply Assembly.
- Make sure that no items/objects can interfere with the movement of the record magazine. Also ensure the title display pages movement cannot be obstructed in any way.

## Power up

**Note:** For safety, Rock-Ola's SyberSonic System incorporates an automatic mechanism interlock system.

Whenever the door is opened, the mechanism will enter a "suspend mode" and the machine's display will indicate: "DOOR OPEN" on the top line and the bottom line will scroll the message: "Press Scan Switch to Continue. Warning: Mechanism Could Start Anytime."



Ensure the Main Power Switch (on back of machine) is **OFF**. Connect Power Cord to Power Supply and plug into a properly polarized and grounded outlet.

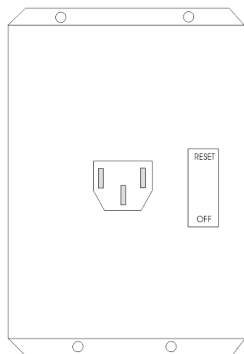


Figure 4B - Main Power Switch



### WARNING

Use of adapters or removal of the grounding pin of the plug may create a potential shock hazard and will defeat the surge protection devices causing erratic operation or destruction of the electronic assemblies and void all warranties.

### ADVERTENCIA

El uso de adaptadores o el remover el pin de "tierra" del enchufe podrían crear un peligro potencial de shock, y derrotará al artefacto de protección contra cambios de corriente, causando operación errática, o destrucción de ensamblado electrónico, al igual que eliminar las garantías.

### AVERTISSEMENT

L'utilisation d'adaptateurs ou le retrait de la broche de mise à la masse de la prise peut entraîner un risque d'électrocution et faire échouer les dispositifs de protection de secteur entraînant ainsi un fonctionnement irrégulier ou la destruction des montages électroniques, ainsi que l'annulation de toute garantie.

Ensure Service Switch (Fig 5B) is in the service position. Turn main power switch on. (Fig. 4B). Press the Scan/Cancel button once. Magazine should move 3 complete revolutions, then stop in the HOME Position. (With the gripper bow in the wide opening of the magazine).

See the sections covering machine installation, disc installation, machine programming and machine servicing for specific service information.

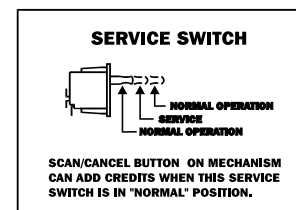


Figure 5B - Service Switch

## Loading Program Pages

To turn the title pages, set the **Service Switch** (Fig. 6B) to the **normal operation** position and use the [<] and [>] buttons on the keyboard.



### WARNING

Do not attempt to flip the program pages by hand. The pages must be turned using the [<] and [>] buttons on the keyboard or turn the small gear on the bottom of the base unit.

### ADVERTENCIA

No intente pasar las páginas de programa manualmente. Las páginas deben ser pasadas usando los botones (<) y (>) en el teclado o gira el pequeño engranaje en el fondo de la unidad despreciable.

### AVERTISSEMENT

N'essayez pas de tourner les pages de programme manuellement. Tournez les pages à l'aide des touches [<] et [>] figurant sur votre clavier ou tourner le petit engrenage dessous de l'unité ignoble.

1. Unplug the motor/switch harness connector then release the catches on either side of the title display. Remove by pulling out at the top and lifting out. Rotate the pages by turning the black gear on the underside of the rack.
2. Slide your title strips into the program pages keeping the records in the order they will be placed in the jukebox.

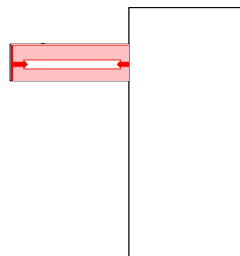



Figure 6B - Program Page Loading

## Loading Records

To rotate the magazine, put the Service Switch (Fig. 5B) into the SERVICE position and then push the **red Scan/Cancel** button located on the playing mechanism.

 **WARNING**  
Do not attempt to rotate the magazine by hand. The magazine may be rotated with the red scan/cancel switch only. It is located on the top of the mechanism.

**ADVERTENCIA**  
No intente rotar el magazine manualmente. El magazine puede ser rotado solamente con uso del interruptor rojo scan/cancel. Localizado en la parte superior del mecanismo.

**AVERTISSEMENT**  
N'essayez pas de tourner le magasin manuellement. Le magasin doit être tourné à l'aide du commutateur rouge balayage/annulation uniquement. Il est situé sur la partie supérieure du mécanisme.

Load records to match the title strips with the "A" side (First title) facing to the left of the cabinet. Continue the process until all the records are loaded.

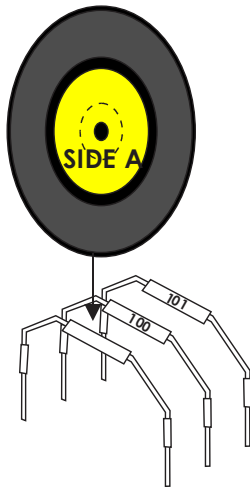


Figure 7B - Record Loading

## Repacking/Moving

 **WARNING**  
All shipping hardware must be correctly installed for shipping.

**ADVERTENCIA**  
Todo *hardware* debe ser instalado correctamente para el envío.

**AVERTISSEMENT**  
Tout le matériel de transport doit être installé correctement avant l'expédition.

1. Remove the records.
  2. Unplug the connector on the Power Supply.
- Install the shipping bolts through the mechanism base on each side and completely tighten.
- Note:** *The mechanism base must be in contact with the wooden platform and the springs must be fully compressed.*

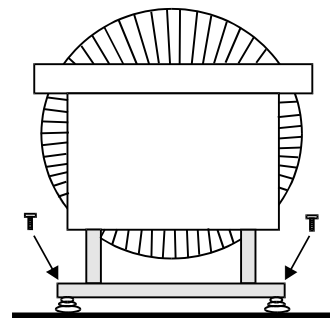


Figure 8B - Mechanism



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## Connecting Speakers and Installing Optional Hardware

- Speaker Connections
- Installation of the I.R. Remote Detector  
and Harness Assembly
- Connecting a Paging Microphone

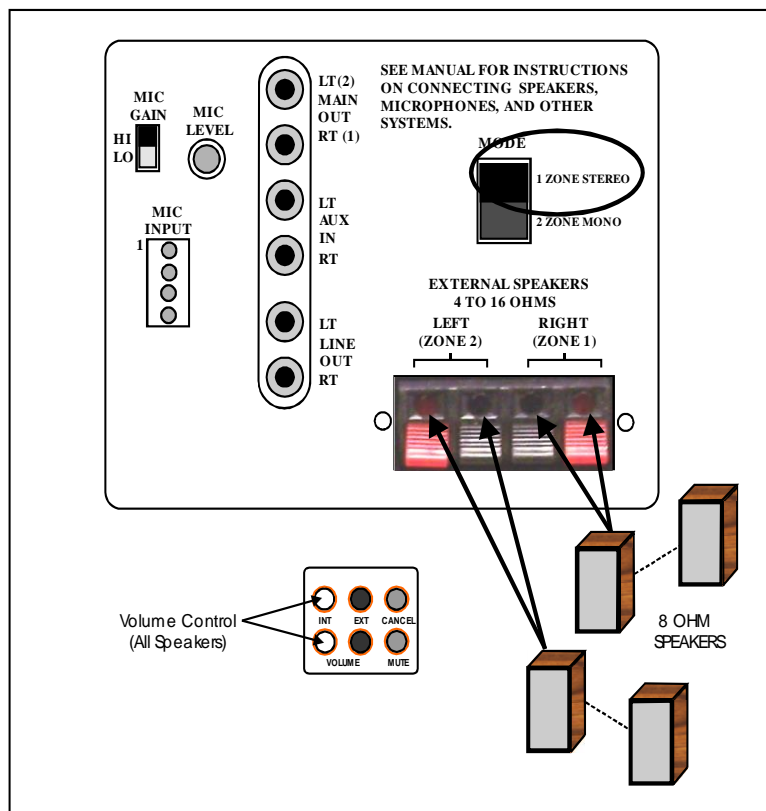
## External Audio Connections

The Rock-Ola Audio System has such a high level of versatility that almost any installation is easily accomplished. The amplifier is capable of driving most speaker systems with remarkable depth and clarity. System connections are easily made at the panel located on the back of the jukebox.

	<p><b>WARNING</b> The amplifier is capable of delivering up to 425 watts RMS power to external speakers. Be sure the speakers you connect can handle the power.</p>
	<p><b>ADVERTENCIA</b> El amplificador es capaz de entregar hasta 425 poder de vatios RMS a altavoces externos. Esté seguros los altavoces que usted conecta pueden manejar el poder.</p>
	<p><b>AVERTISSEMENT</b> L'amplificateur est capable de livrer jusqu'à 425 watts RMS le pouvoir aux haut-parleurs externes. Etre certain les haut-parleurs que vous connectez peuvent contrôler le pouvoir.</p>

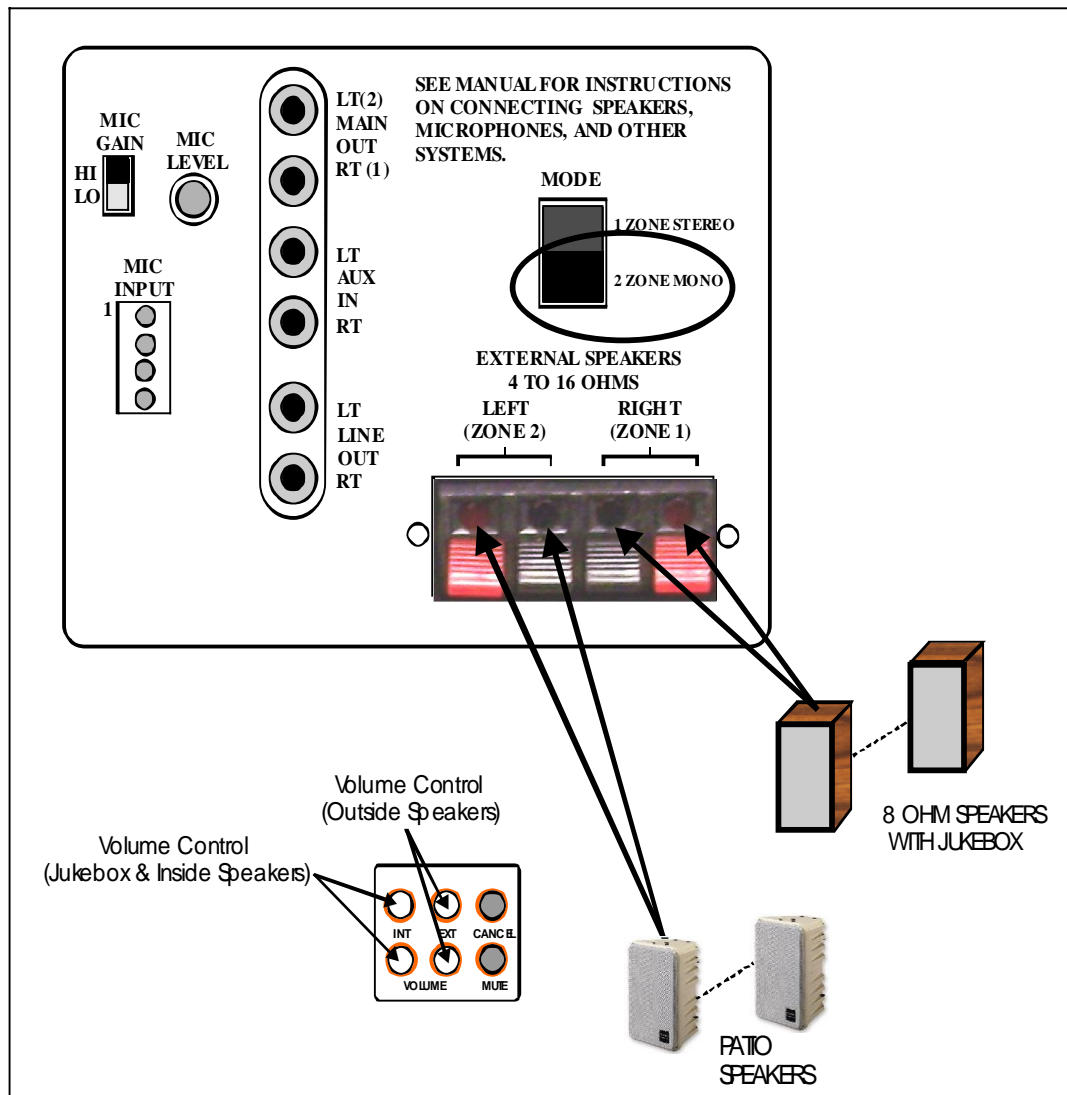
### 1-Zone Stereo

To connect speakers that will be located in the same room as the jukebox, insert the speaker wires into the terminal block on the back of the jukebox. Be sure to match the red speaker terminal to the red jukebox terminal (+ to +). If more than two sets of speakers are being connected, make sure the total system impedance is between 4 and 16 ohms. The Mode switch should be set to "1 Zone Stereo". The "INT" volume buttons will control both the speakers in the jukebox and the speakers connected on the back.



## 2-Zone Mono

To connect speakers that will be located in another room such as outdoor patio speakers, insert the speaker wires into the “ZONE 2” terminals. If there are speakers in the same room as the jukebox, insert the speaker wires into the “Zone 1” terminals on the back of the jukebox. Be sure to match the red speaker terminal to the red jukebox terminal. (+ to +). If more than two sets of speakers are being connected, make sure the total system impedance is between 4 and 16 ohms. The Mode switch should be set to “2 Zone Mono”. The “INT” volume buttons will control the speakers in the jukebox along with the speakers connected to the “Zone 1” terminals. The “EXT” volume buttons will control the speakers connected to the “ZONE 2” terminals.



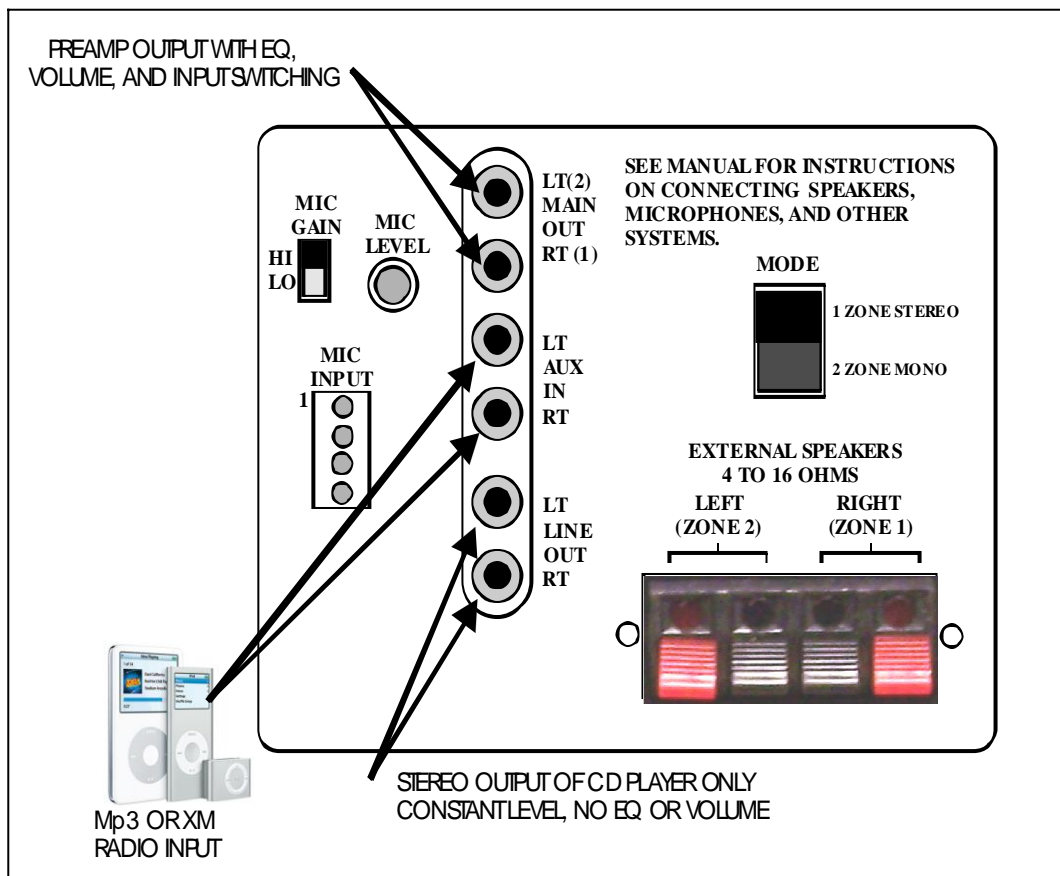
## RCA JACKS

To connect the jukebox to other external devices, there are three sets of RCA jacks available.

The top pair of jacks is labeled “MAIN OUT”. This is the output of the preamp and is affected by the EQ settings, volume, and input selection. In Stereo mode, the outputs are right and left. In Mono mode, they are zone 1 and zone 2.

The middle pair of RCA jacks is the auxiliary background music input. An MP3 player, XM radio, or other audio source may be connected here. If enabled, the auxiliary source will play through the system when the CD changer is idle. *See Page C-9 for programming instructions.*

The bottom pair of RCA jacks is the output of the record changer direct. Input switching, volume, and EQ settings do not affect these outputs. Use these to connect to a whole-house audio system or wireless speakers.



## Relocating the I.R. Remote Detector and Harness Assembly

Sometimes, it is advantageous to move the I.R. detector to the wall behind and above the jukebox.

1. Remove the I.R. detector and cable assembly from the front door behind the small grill.
2. Route harness and I.R. detector assembly through the cable cover hole on the back of the jukebox. Make sure not to route cable near any moving components.
3. For best results: Locate the detector eye on the wall behind the jukebox. Depending on the location of the jukebox, it maybe necessary to try different heights on the wall to obtain the best result.

**Note:** Infrared (I.R.) light transmitted from the hand held remote control can not be seen by the naked eye. The LED on the I.R. detector eye will flash when a button has been pressed to show that the I.R. detector eye is receiving a signal from the remote control.

The remote does not work when the door switch is in the service position.

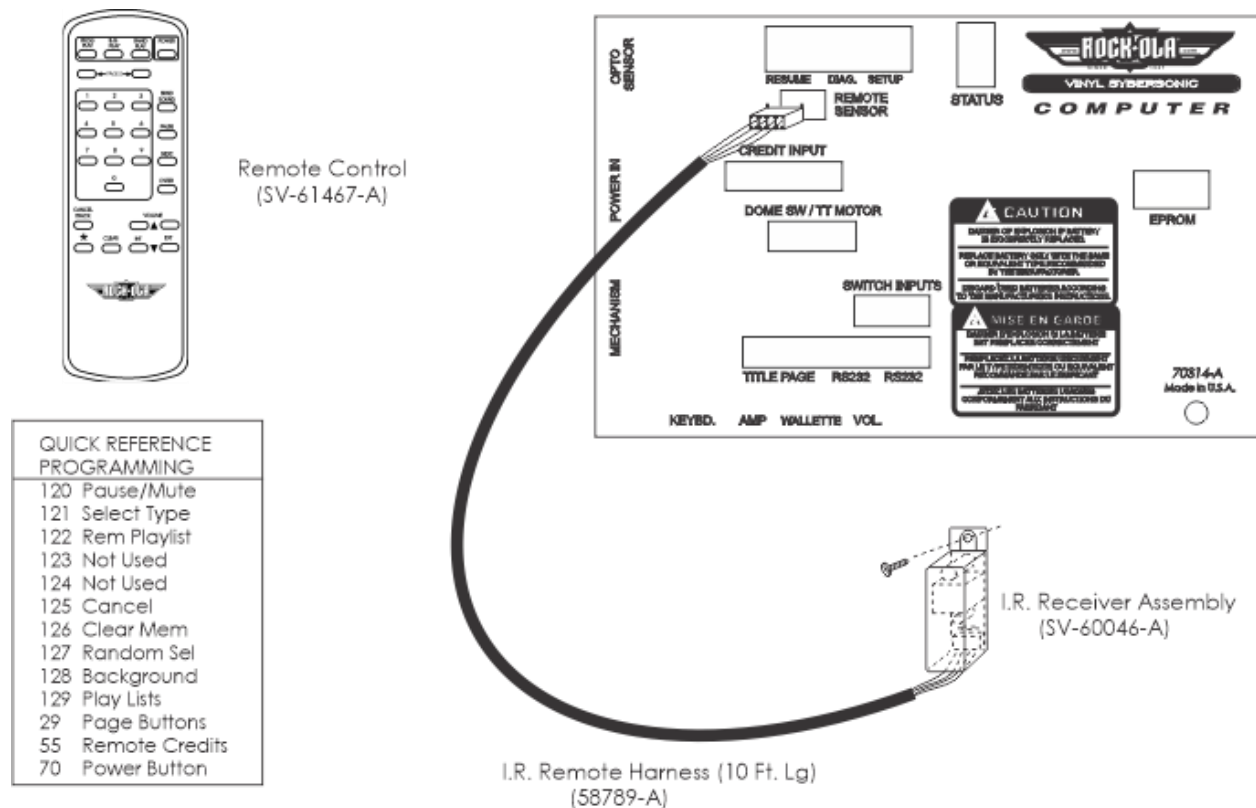


Figure 5C

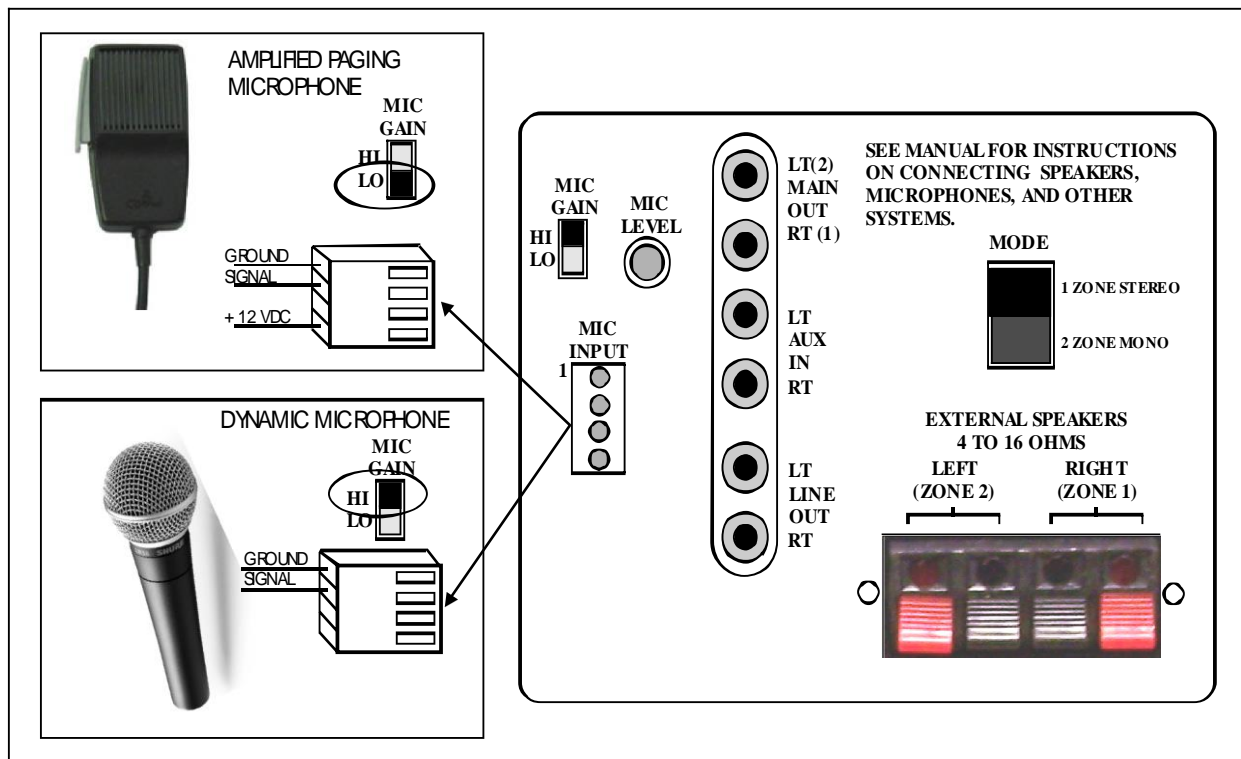
## Connecting A Microphone

The jukebox can be used with an amplified microphone for paging or a standard high impedance microphone for "sing-a-longs". Rock-Ola has a hand-held paging microphone kit available as part number 02379-02. The necessary connector is included with Rock-Ola paging kit. To use other microphones you will need to acquire one (1) Amp part number 640250-4 housing (RMC P/N ST-11244) and four (4) Amp part number 640252-1 contacts (RMC P/N ST-11245) or equivalent. These are available at any electronics part store.

The microphone system works by sensing audio on the signal line. Whatever microphone is used, it must have some kind of switch to mute the audio when not in use.

Set the Microphone gain switch to "LOW" and the gain control at midpoint. Press the talk button on the microphone and speak into it. The microphone signal should be heard in the speakers. Adjust the microphone gain control to the loudest level you want the location to be able to have. If more gain is necessary, turn the microphone gain switch to "HIGH".

Refer to the amplifier settings in section D for adjusting which channels to hear paging, the music level while paging, and length of time before the music comes back up.





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## Amplifier Description and Operation

- Amplifier Description
- Indicator LED's
- Amplifier Feature Descriptions
- Setting the Amplifier
- Internal Amp Settings
- Other Settings



Figure 1D – Rock-Ola Audio System

## Amplifier Description

The Rock-Ola Audio System has been engineered for ease of connection and has options to meet virtually any location requirement. With audio efficiencies approaching 95%, this system produces volume levels equal to an amplifier twice its size and does so without producing a great amount of heat.

The system consists of a stereo (2 channel) pre-amplifier combined with a 2-channel stereo power amplifier.

The system may be operated as a single zone stereo or a dual zone mono system with separate volume controls for each zone. The amplifier sends its power to a connection panel that is conveniently located on the back of the cabinet.

**Please Note: This section mentions Internal and External Amplifiers. “Internal” refers to the channel used with the jukebox speakers and/or Zone 1. “External” refers to the channel used with Zone 2.**

## Specifications and Operating Features

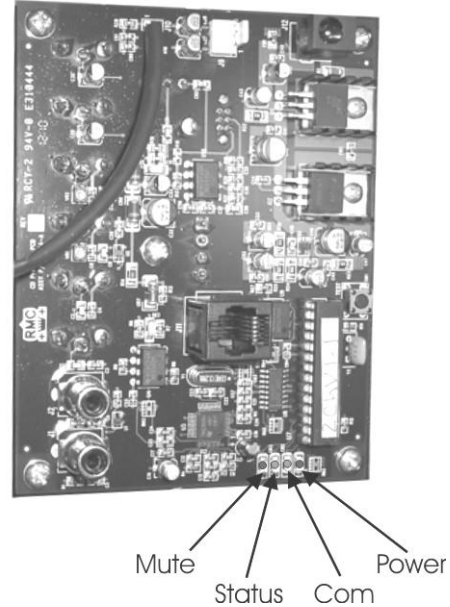
- System is rated at 425 watts / channel @4 Ohms. With audio efficiencies approaching 95%, this system produces volume levels equal to an amplifier twice its size and does so without producing a great amount of heat.
- Switchable Stereo/Mono Zones
- Separate 7 band equalizers for each channel.
- Loudness contour control. Setting is split to provide separate Left and Right channel control.
- Left to Right Balance Control.
- Multiple volume control configurations.
- Built in Paging System input.
- Switch setting for microphone gain. Dial control for maximum microphone volume.
- Music Level While Paging settings. Settings are split to provide separate Left and Right channel control.
- Automatic Volume Control. (AVC)

**Plug-in RCA Type Connectors for:**

**AUX BGM** Input with automatic switching and programmable minimum/maximum volume settings.

**Line Output** - Line level directly from the CD player.

**Main Output** – Pre-amp outputs. Signal level is variable with volume control settings.

**Indicator LED's**

The Digital SyberSonic pre-amplifier has LED's to give a visual indication of its operating condition and status. The LED's and their functions are as follows:

**Power (green)** - When lit indicates the amplifier has power.

**Status (orange)** - Indicates when the paging system (microphone) is active.

**Steady On** – Normal operation. Paging system is available.

**Flashing** – Paging system is in use.

**COM (orange)** - Indicates when amplifier receives instructions from the jukebox CPU.

**Always Off** - Indicates a communication fault between the amplifier and CPU.

**Single One Second Flash on Power Up** - Processor is running.

**Steady On** - Normal operation. Setup instructions received and installed.

**Intermittent Flashing** - Amplifier is receiving instructions from Jukebox CPU.

**Mute (red)** – When lit, indicates the amp is muted.

## Amplifier Feature Descriptions

Your Digital SyberSonic Amplifier system is preset at the factory for optimum operation, however some adjustment may be required to achieve the best sound or operating features for your particular environment. For ease of use, amplifier features are set/adjusted via the jukeboxes keyboard. **Instructions are found in the section titled “Setting The Amplifier” later in this chapter.**

**AVC Control** - The Digital SyberSonic Amplifier uses software to limit the difference between loud and soft recordings. Automatic Volume Control (AVC) will retain the dynamic range of the recording, just reduce it. The effect is that the music sounds natural but songs with loud passages are only *slightly* louder. AVC also controls the BGM IN signal. **Note:** *This feature is on all the time and cannot be defeated.*

**Equalizer** - This changes speaker tone by decreasing the response (gain) of a particular frequency range. The internal and external amplifiers have separate settings.

**Balance** - This setting allows you to adjust the left to right balance of the speakers. Set the balance for internal and external amplifiers separately.

**Music Level While Paging (MLWP)** - This setting changes how much of the music is heard when using a microphone for paging while music is playing. The internal and external amplifiers have separate settings. The music level is a percentage of the current volume. Choices are 0% to 100% in increments of 10% and Off where Off defeats paging for that channel.

**Page Decay** – Sets the amount of time in seconds before the music resumes its normal volume after a page. The range is from 2 seconds to 10 seconds.

**Loudness Contour** - This setting allows you to turn on or off the loudness contour enhancement for the internal and external amplifiers separately. The Loudness Contour enhances bass output at lower volume levels.

**Reset Internal/External Amp** - This provides for rapid resetting of the amplifier features

to their factory settings. The factory settings are as follows:

Equalizer - +5, +5, +4, +3, +4, +5, +5

Balance - Centered

MLWP - 50%

Loudness - On

The internal and external amplifiers are reset separately.

**Volume Limits** - The Digital SyberSonic amplifiers can have their volumes set to minimum and maximum levels. The internal and external amplifiers are set separately in both Normal Play and Background Music Modes. Additionally, each amplifiers maximum volume may be limited based on day of week and time of day.

**Volume Bridging** – not used in this system.

## Setting The Amplifier

The graphic equalizer, balance, and other features are adjusted via the jukebox keyboard with settings represented by a graphic shown on the keyboard display.

To set the amplifier features, access the SETUP MODE by ensuring the service switch is in its center position then “double click” the Red Scan/Cancel Button. Once in the Setup Mode, “program the amp” via the jukebox keyboard in the same way that all other programming is done. Section E of this manual contains specific instructions for accessing and using the SETUP MODE. Section E also contains “flow charts” which give a graphical representation of the SETUP MODE functions. The following section will only give the Quick Find programming number and what to expect when changing/adjusting features.

### Settings common to both the Internal and External Amps

#### Automatic Volume Control (AVC) -

AVC is controlled in software.

To change, from the setup mode, access quick find 231, then press Hits. Display will show:



AMP SETUP 231  
AVC *current setting*

Press Hits to make the current setting flash. Press #1 until the desired setting is displayed. Press Hits to lock in your choice when finished press Reset several times.

**Page Decay** – To change, from the Setup Mode, access Quick Find 212 then press hits. Display will show:

AMP SETUP 212  
Page Decay *current setting*

Press HITS to make the current setting flash then enter the number of decay seconds from 2 to 10. Once the desired time has been entered, press HITS to lock it in. Display will show:

AMP SETUP 212  
Page Decay *new setting*

When finished, press the RESET button several times.

## Internal Amp Settings

**Internal Equalizer** – Sets the internal amplifier 7 band graphic equalizer. (HINT: To hear the tone setting changes, play a song and set the volume before entering the Setup Mode.)

**Setting 7 Band Equalizer** – You may set the left and right channels simultaneously or each channel may be set individually.

EQ Join sets both channels. EQ L/R allows you to set the Left and Right channels separately. To set the equalizer, from the Setup Mode access Quick Find 213 then press HITS.

The display will show:

AMP SETUP 213  
Int Tone *current setting*

Press HITS to make "current setting" flash then press the #1 button to choose from EQ L/R or EQ Join. Press HITS to lock in your choice. Display will show:

AMP SETUP 213  
Int Tone EQ *your choice*

If **EQ Join** is chosen the display will show:

AMP SETUP 213  
Internal EQ

To change settings, press the HITS Button. The display will show a graphical representation of the current settings similar to the figure below.



Use the left or right Turn Pages button to move the asterisk to the desired frequency. Press the #1 key to raise the gain and the #2 key to lower it. The amplifier will respond to any changes instantly.

If **EQ L/R** is chosen the display will show:

AMP SETUP 213  
Int Left EQ

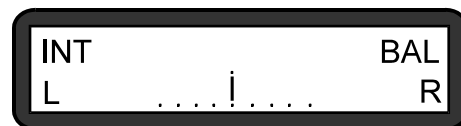
To change the **Left** channel, press HITS and set the same as in the EQ Join instructions above. Press Reset once when finished.

To change the **Right** channel, press the Right Turn Pages button so the display shows:

AMP SETUP 213  
Int Right EQ

Press the HITS button and set the same as in the EQ Join instructions above. When finished, press the RESET button several times.

**Internal Balance** - Access Quick Find 214 to view/change the balance for speakers connected to the internal amplifier. Use the left and right menu keys to change the balance. *NOTE: If Volume Control Bridging (QF 79) is set to Split, the balance control is defeated.* When finished, press the RESET button several times.



**Internal Music Level While Page (MLWP)** – The left and right channels are set separately. Choices are 0% (music completely muted) to 100% (no muting) in increments of 10% and Off. (no paging for that channel)

For **left channel**, from the Setup Mode, access Quick Find 218 then press HITS. Display will show:

AMP SETUP 218  
Int LTMLWP *current setting*

Press HITS to make the current setting flash then press #1 until the desired setting is displayed. Press HITS to lock in your choice. When finished, press the RESET button several times.

For **Right channel**, from the Setup Mode, access Quick Find 219 then press HITS. Display will show:

AMP SETUP 219  
Int RT MLWP *current setting*

Press HITS to make the current setting flash then press #1 until the desired setting is displayed. Press HITS to lock in your choice. When finished, press the RESET button several times.

**Internal Loudness** – Left and Right channels are set separately.

For **Left channel**, from the Setup Mode, access Quick Find 220 then press HITS. Display will show:

AMP SETUP 220  
Int Lt Loud *current setting*

Press HITS to make the current setting flash then press #1 until the desired setting is displayed. Press HITS to lock in your choice. When finished, press the RESET button several times.

For **Right channel**, from the Setup Mode, access Quick Find 221 then press HITS. Display will show:

AMP SETUP 221  
Int Rt Loud *current setting*

Press HITS to make the current setting flash then press #1 until the desired setting is displayed. Press HITS to lock in your choice. When finished, press the RESET button several times.

**Reset Internal Amp** - Access Quick Find 217 and press Hits twice to restore the internal amplifier to its factory settings. Once completed, press the RESET button several times.

## Other Settings

**Volume Control Options** - Choices are Normal, Split and Bridge.

**Leave set for Normal in this system.**

**Volume Limits** - Sets the minimum and maximum allowable volume for the internal and external amplifiers separately. A timed option is also available to limit the maximum volume during certain hours. **Note:** Background Music Volume limits are set in the Autoplay menu, Quick Find 43.

The volume limits cannot be set if Volume Control Option (Quick Find 79) is set to Split or Bridge. If the use of volume control splitting or bridging is desired, adjust the volume limits first, then set volume control option to the desired setting.

*When setting volume limits, the jukebox will automatically pick up CD number 00 and play its first track so that you can hear the volume level.*

**Internal Amp System Min/Max limits**, from the Setup Mode, access Quick Find 78 and press HITS. Display will show:

SET-UP 1 78  
Volume Range *Current Setting*

Press the HITS button. “*Current Setting*” will flash. Press the #1 button until display shows “Volume Range On” then press the HITS button. Display will show:

SET-UP 1 78  
Internal Limits

Press the HITS button again and the display will show:

SET-UP 1 78  
System Min/Max

Press the HITS button and the display will show:

SET-UP 1 78  
Min Vol *Current Setting*

Press HITS to make “*Current Setting*” flash then use the right Turn Pages button to increase the volume. (Range is 0-40) Once the desired level is reached, press HITS to lock it in. Display will show:

SET-UP 1            78  
Max Vol *Desired Setting*

Press the right Turn Pages button. Display will show:

SET-UP 1            78  
Max Vol *Current Setting*

Press HITS to make “*Current Setting*” flash then use the right Turn Pages button to increase the volume. (Range is 0-40) Once the desired level is reached, press HITS to lock it in. Display will show:

SET-UP 1            78  
Max Vol *Desired Setting*

When finished, press RESET several times.

**External System Min/Max limits (used in 2-Zone mono only)**, from the Setup Mode, access Quick Find 78 and press HITS. Display will show:

SET-UP 1            78  
Volume Range *Current Setting*

Press the HITS button. “*Current Setting*” will flash. Press the #1 button until display shows “Volume Range On” then press the HITS button. Display will show:

SET-UP 1            78  
Internal Limits

Press the right Turn Pages button. Display will show:

SET-UP 1            78  
External Limits

Press the HITS button and the display will show:

SET-UP 1            78  
System Min/Max

Press the HITS button and the display will show:

SET-UP 1            78  
Min Vol *Current Setting*

Press HITS to make “*Current Setting*” flash then use the right Turn Pages button to increase the volume. (Range is 0-40) Once the desired level is reached, press HITS to lock it in. Display will show:

SET-UP 1            78  
Max Vol *Current Setting*

Press the right Turn Pages button. Display will show:

SET-UP 1            78  
Max Vol *Current Setting*

Press HITS to make “*Current Setting*” flash then use the right Turn Pages button to increase the volume. (Range is 0-40) Once the desired level is reached, press HITS to lock it in. Display will show:

SET-UP 1            78  
Max Vol *Desired Setting*

When finished, press RESET several times.

**Internal Amp Timed Maximum Volume Settings.** Up to seven “Timed” programs may be entered to allow for different settings for each day of the week. If the timed maximum will be the same every day then only one program is needed.

To program, from the Setup Mode, access Quick Find 78 and press HITS. Display will show:

SET-UP 1            78  
Volume Range *Current Setting*

Press the HITS button. “*Current Setting*” will flash. Press the #1 button until display shows “Volume Range On” then press the HITS button. Display will show:

SET-UP 1            78  
Internal Limits

Press the HITS button again and the display will show:

SET-UP 1      78  
System Min/Max

Press the right Turn Pages button. Display will show:

SET-UP 1      78  
Timed Maximum -01

If setting more than one program, use the right Turn Pages button to choose 2 through 7. Otherwise press HITS. Display will show:

SET-UP 1      78  
Day *Current Setting*

Press HITS to make "*Current Setting*" flash than press #1 to choose desired day. (Note: if the timed maximum will be the same each day, choose "Every Day.") Press HITS to lock in your choice.

Press the right Turn Pages button. Display will show:

SET-UP 1      78  
Start Time *Current Setting*

Press the HITS button to make "*Current Setting*" flash then using the 24-hour clock format, type in the desired start time. Press HITS to lock in your time.

Press the right Turn Pages button. Display will show:

SET-UP 1      78  
Stop Time *Current Setting*

Press the HITS button to make "*Current Setting*" flash then, using the 24-hour clock format, type in the desired stop time. Press HITS to lock in your time.

Press the right Turn Pages button. Display will show:

SET-UP 1      78  
Timed Max *Current Setting*

Press HITS button to make "*Current Setting*" flash then type in the Maximum allowable volume level. Press HITS to lock in the setting. When finished, press RESET several times.

**External Timed Maximum Volume Settings.** Up to seven "Timed" programs may be entered to allow for different settings for each day of the week. If the timed maximum will be the same every day then only one program is needed.

To program, from the Setup Mode, access Quick Find 78 and press HITS. Display will show:

SET-UP 1      78  
Volume Range *Current Setting*

Press the HITS button. "*Current Setting*" will flash. Press the #1 button until display shows "Volume Range On" then press the HITS button. Display will show:

SET-UP 1      78  
Internal Limits

Press the right Turn Pages button. Display will show:

SET-UP 1      78  
External Limits

Press the right Turn Pages button. Display will show:

SET-UP 1      78  
Timed Maximum -01

If setting more than one program, use the right Turn Pages button to choose 2 through 7. Otherwise press HITS. Display will show:

SET-UP 1      78  
Day *Current Setting*

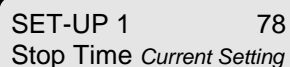
Press HITS to make "*Current Setting*" flash than press #1 to choose desired day. (Note: if the timed maximum will be the same each day, choose "Every Day.") Press HITS to lock in your choice.

Press the right Turn Pages button. Display will show:

SET-UP 1      78  
Start Time *Current Setting*

Press the HITS button to make “Current Setting” flash then using the 24-hour clock format, type in the desired start time. Press HITS to lock in your time.

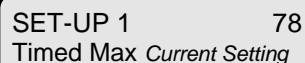
Press the right Turn Pages button. Display will show:



SET-UP 1                    78  
Stop Time *Current Setting*

Press the HITS button to make “*Current Setting*” flash then, using the 24-hour clock format, type in the desired stop time. Press HITS to lock in your time.

Press the right Turn Pages button. Display will show:



SET-UP 1                    78  
Timed Max *Current Setting*

Press HITS button to make “*Current Setting*” flash then type in the Maximum allowable volume level. Press HITS to lock in the setting. When finished, press RESET several times.

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## Operation and Programming Overview

- Normal Operation
- Programming, Service and Diagnostics Features
- Quick Find Reference Programming Definitions
- Quick Find Reference Programming Flow Charts

## Normal Operation (Play Mode)

The following messages will appear while the jukebox is in the Normal Operation mode. Displayed messages will differ depending upon which features have been selected in the Setup Mode.

**Attract State** - no credits in the jukebox, or after 2 minutes of no keyboard activity.

- The top line is stationary.
- The bottom line scrolls.
- Each message will stay on the display until the bottom message scrolls to completion.
- The display will blank between each message for a short time.

Example Message:



Rock-Ola Jukebox  
Press the Hits button...

Current Attract Messages - No credits on machine.

- Line 1 - toggles between "200 Selections" and "On 45RPM Records"

**If HITS button (Quick Find 45) is programmed to View, display will read:**

- Line 1 - Rock-Ola Jukebox...  
Line 2 - Press the HITS button to view each top hit.

**If Hits button (Quick Find 45) is programmed to Play, display will read:**

- Line 1 - Rock-Ola Jukebox...  
Line 2 - Press the HITS button to play each top hit.
- Line 1 - Rock-Ola Jukebox...  
Line 2 - To add credits insert bills or coins.
- Line 1 - Rock-Ola Jukebox...  
Line 2 - Press page buttons to view titles.

**If Free Play is active, display will read:**

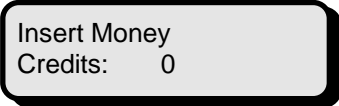
- Line 1 - Rock-Ola Jukebox...  
Line 2 - All selections are currently free

Customer started making selection via keyboard

- Line 1 - Your choice - - -  
Line 2 - Credits: Free

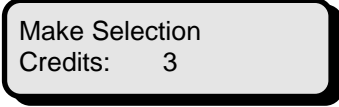
**Credits State** - customer put money in the jukebox.

- Not yet enough money for a credit.



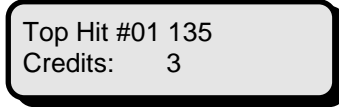
Insert Money  
Credits: 0

- Credits in jukebox.



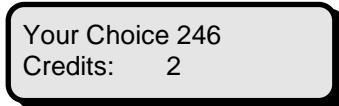
Make Selection  
Credits: 3

- Customer has pressed the **HITS** key and Hits Button (Quick Find 45) is programmed to View.



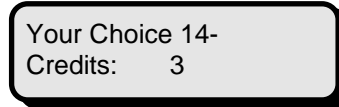
Top Hit #01 135  
Credits: 3

- Customer has pressed the **HITS** button with Hits Button (Quick Find 45) programmed to automatically play the top hits.




Your Choice 246  
Credits: 2

- Customer has started making a normal selection via keyboard



Your Choice 14-  
Credits: 3

- Customer has started pressing the number keys on the deluxe remote.

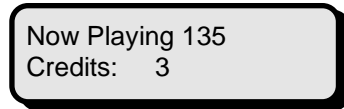


Remote Sel. 15-  
Credits: 3

- Customer has pressed the Programmed Play button on the remote.



Once the mechanism loads a disc onto the CD player and music is heard, the display will readout:



And messages will scroll by on the bottom line.

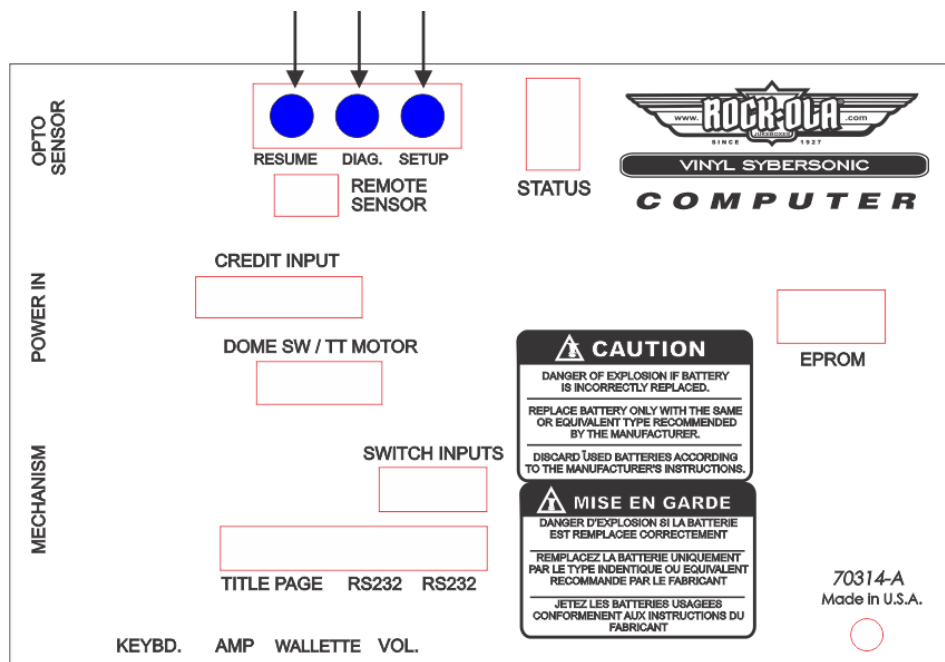


Figure 1E - SyberSonic Control Computer

Once the dome is open and the service mode is entered, the three (3) buttons on the top of the control computer become active. (To enter Service Mode, see explanation later in this section.) The 3 buttons are:

**Diagnostics** - This button puts the system into self-diagnostic mode that tests the control computer, CD player communications and keyboard / display assembly communication.

**Setup** - This buttons puts the system into programming set-up mode at the top of the menu hierarchy and also allows direct access to programs via program’s quick find numbers.

**Resume** – This button returns the system to the service mode from the setup mode.

## Programming, Service and Diagnostic Features

This section is intended to familiarize you with the service, programming and diagnostic features of the SyberSonic Electronics System. Specific programming and operating instructions will be covered in later sections.

### Suspend Mode

For safety, Rock-Ola's SyberSonic System (Software Version 3.6 and above) incorporates an automatic mechanism interlock system.

Whenever the Dome/Lid is opened the mechanism will enter a "suspend mode" and the machine's display will indicate: "DOOR OPEN" on the top line and the bottom line will scroll the message: "Press Scan Switch to Continue. Warning: Mechanism Could Start Anytime."

DOOR OPEN  
Press Scan Switch to ...

If a song is playing when the machine is opened, that song will finish and the mechanism will stop. The only exception is if the next song in the play queue is on the same disc. In that case the next song will play.

### Service and Setup Mode

The service and setup modes are where all of the service functions, auditing and programming take place.

#### Service Mode

The service mode is entered into by opening the dome/door and pressing the Scan/Cancel Button on playing mechanism one time. (If the dome/door is already opened, note the service switch is in its middle position.)

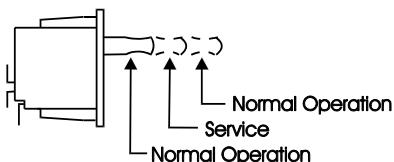


Figure 3E - Service Switch

The red scan/cancel switch on the mechanism only works when the service switch is in the service position (middle). *If the service switch is in the "normal operate" position, the scan/cancel switch will add credits to the jukebox.*

**When the dome/door is opened, the service switch automatically moves to its middle position.**

The top line of the display will indicate that the machine is in the Service Mode.

SERVICE MODE  
Service Mode is Active

The bottom line indicates that the service mode is active. This means the system is ready for further programming and/or diagnostic functions.

If songs are in queue and playing, they will continue to play.

In this mode the operator can insert money or make selections without affecting the audit totals. Used for testing bill and coin acceptors.

**Note:** Any money inserted while in Service Mode is not included in the accounting data.

Any songs selected while in the service mode will take priority over any songs that may be in the selection memory.

**Note:** Any selections made while in the service mode will not affect the popularity figures.

To rotate magazine press the scan/cancel button. Pressing the scan/cancel button while in the service mode will cause the display to change to:

SERVICE MODE  
At Slot 00

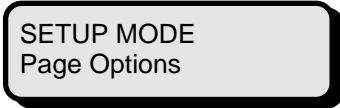
The displayed number indicates which slot is positioned under the record gripper bow. If a selection is playing, it will be canceled. Pressing the scan/cancel once will advance the magazine to the next slot and update the display. Pressing and holding the button will spin the magazine and update the display. When the scan/cancel button is released, the magazine will stop with a slot directly under the gripper bow and display that slot number.

#### Setup Mode

All auditing, programming and most testing is done from this mode. To enter the Setup Mode, make sure the jukebox is in the Service Mode then push the SETUP button on the SyberSonic Computer (Fig. 1E).

**The Setup Mode may be accessed by “Double Clicking” the Scan/Cancel Switch when the dome is first opened.**

The top line of the display will indicate “Setup Mode”.



The bottom line will indicate which menu choice is currently about to be entered.

Now the SyberSonic’s audit and programming features can be accessed two different ways. Via Menu Navigation or Quick Find Reference Programming.

**Menu Navigation**

The navigation keys and their function are:

<u>Key(s)</u>	<u>Function</u>
MENU buttons	View Menu
#1 Button	Toggle Choice/Load Record/Up
#2 Button	Return Record/Down
RESET Button	Reset/Escape/Clear
HITS Button	Enter

Menu Navigation allows browsing through the menu choices. There are 17 main menu choices: (These will show in the bottom line of the display as you navigate through the menu structure).

PAGE OPTIONS	AMP SET-UP
PLAY OPTIONS	AUTO PLAY
FREE PLAY	PRICING
SET-UP 1	SET-UP 2
SET-UP 3	ACCOUNTING
POPULARITY	TEST MODE
REMOTE CONTROL	
AUTO TEST	

Within each main menu are sub-menus that give or cause specific actions to take place or to set specific features at a value. (See the Quick Find Reference Programming Definitions Section for details on the sub-menu items.)

To use the Menu Navigation method of programming and auditing, first make sure that the phonograph is in the SETUP MODE, then use

the Menu keys to find the Main Menu item that you want.

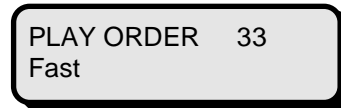
Once the item is found, press HITS to “get into” that menu item. The display’s top line will change to the main menu item that was just selected. It will also show the Quick Find item number.



The bottom line will indicate which sub-menu item is selected along with its current value. You may now use the Menu keys to find the specific sub-menu item you want. Once the sub-menu item is found, press HITS.

If the item selected is a list, (such as audit figures or an operating feature with many settings) you may move through that list using the Menu keys.

To change a displayed setting, press HITS to make the setting flash, then if it is a list of choices, press #1 to toggle until desired setting is displayed or, if the setting is a numerical setting, type the desired value then press HITS to lock it in.



If the sub-menu item is an audit feature, read its value.

To get out of a menu item, simply hit Reset. This will move you backward one menu level. Continue to hit Reset until you get back to the beginning of the menu structure.



To exit the Service or Setup Mode, simply close the dome/door.

**Quick Find Reference Programming**

This method provides *direct access* to a specific operating feature or audit capability. To use it, get into the SETUP MODE and type in the Quick

Find number for the item you want then press HITS.

SETUP MODE  
Quick Find: 72

The display will change to the selected programming feature.

SET-UP 1 72  
Clear Selections

Navigation within and getting out of the item is the same as in Menu Navigation.

## Diagnostic and Error Reporting Features

The SyberSonic's microprocessor technology allows it to "keep track" of itself. It senses when it does something wrong or when something abnormal happens, then stores that information in its memory to report it to you when you ask for it. In fact, the SyberSonic Jukebox automatically warns you if an error has occurred whenever the Service Mode is entered into by displaying:

SERVICE MODE  
Errors Present in: XXXX

"XXXX" indicating whichever area has errors.

## Hardware Errors

Every Rock-Ola Jukebox is constantly monitored by its SyberSonic Electronics system. The sys-

tem is always looking at its inputs and outputs to insure that everything is working correctly. Should a malfunction occur, the computer logs an error code, along with the date and time of the malfunction. A service technician can use this information to quickly diagnose and repair any problem. The error codes are stored in the Test Mode menu. (Quick Find items 136 through 140).

## Test Mode

All Rock-Ola SyberSonic Jukeboxes have easy to use "self tests" built in. These tests provide a means to test the electronics and mechanics of the machine. They also provide useful troubleshooting and adjustment tools. This feature takes the guesswork out of diagnosing a player malfunction while on location. The self-tests are found in the Test Mode menu. (Quick Find 131 through 134 and 142 through 149).

## Auto Test

This feature is used at the factory for "burning in" every jukebox we produce. It automatically runs the SyberSonic System through the Mech, Keyboard, Pages and Display tests. The Auto Test feature is also useful to test the machine for bad discs before installing the SyberSonic Jukebox on location. For more information, see the Quick Find Reference Definitions section for Quick Find 150 through Quick Find 160.

**Diagnostics Mode** - Tests the control computer & Keyboard Assembly.

Diagnostics mode is entered by pressing the Diag Button on the front of the control computer while in the Service Mode. Tests are automatically performed and status messages are displayed. (See Diagnostic Mode Operation in the Troubleshooting and Repair section H for more details.)

## Rock-Ola Quick Find Reference Programming

To program, open front door then "double click" red button. From the SETUP MODE enter the 2 or 3 digit number and push the HITS button. To change settings, press HITS to make setting flash then Toggle choices with #1 and #2 or enter numeric value. Press HITS to lock in setting. Use left and right "Turn Pages" buttons to navigate menus.

### 10-20 Reserved

### PAGE OPTIONS

- 25 Pages
- 26 Set Last Page
- 27 Set Home Page
- 28 Home Delay
- 29 Remote Pages

### PLAY OPTIONS

- 33 Play Order
- 39 Priority Slot

### AUTOPLAY

- 40 Auto Play
- 41 Background
- 42 Aux. Backgrnd
- 43 Background Vol.
- 45 Hits Button

### FREE PLAY

- 50 Free Play
- 51 Clear Free
- 52 Password FP
- 55 Remote Credit
- 56 Free Selections

### PRICING

- 60 Unit Price
- 61 Input Rates
- 62 Pricing Levels
- 63 Credits Spec.
- 64 Recirculate Lv.
- 65 Acct. Unit
- 66 Timed Bonus

### SET-UP 1

- 70 Remote Power
- 71 Serv. Credits
- 72 Clear Selections
- 73 Clear Credits
- 74 Set Clock/Date
- 75 Message
- 76 Scroll Rate
- 78 Volume Range
- 79 Vol Control Option

### SET-UP 2

- 80 PW 1 Security

- 81 PW 2 Security
- 82 PW 3 Security
- 83 Serial Num
- 85 Service Record
- 87 Factory Reset
- 88 Language

### SET-UP 3

- 200 Open Menu Id
- 201 Auto Power
- 202 Amp Mute

### ACCOUNTING

- 90 Last Reset
- 92 Basic acct.
- 93 Total Acct.
- 94 Clear PTD's
- 95 View Level 1
- 96 SP in Ratio
- 97 Power Cycles

### POPULARITY

- 100 Last Reset
- 101 View CD Order
- 102 Print Popularity
- 103 View Pop. Data
- 104 Clear Pop. Data

### 110-115 Reserved

### REMOTE CONTROL

- 120 Pause/Mute
- 121 Select Type
- 122 Rem Playlist
- 126 Clear Mem.
- 127 Random Sel.
- 128 Background
- 129 Play Lists

### TEST MODE

- 130 View Errors
- 131 View CPU Tests
- 132 Run Keybrd. Test
- 133 Run Display Test
- 134 Run Pages Test
- 135 View Mech. Tests
- 136 View CPU Errors
- 137 View Kybd Errors
- 138 View Mech Errors
- 139 View Page Errors

- 140 View Wlbox Errors
- 141 Clear Errors
- 142 Run PowerUp Test
- 143 Run Inputs Test
- 144 Run Outputs Test
- 145 Run Index Test
- 146 Run Gripper Test
- 147 Run Short Test
- 148 Test All Disc

### AUTO TEST

- 150 Run Auto Test
- 151 View Report
- 152 Print Report
- 153 Clear Report
- 154 Start MM/DD 00:00
- 155 Stop MM/DD 00:00
- 156 Elapsed 000:00
- 157 View Keybd Errors
- 158 View Mech Errors
- 159 View Page Errors
- 160 View Wlbox Errors

### 170-177 Reserved

### AMP SETUP

- 210 Internal Amp
- 211 External Amp
- 212 Page Decay
- 213 Internal Tone EQ
- 214 Internal Balance
- 215 Internal MLWP
- 216 Internal Loudness
- 217 Reset Internal Amp
- 218 Internal Left MLWP
- 219 Internal Right MLWP
- 220 Internal Left Loudness
- 221 Internal Right Loudness
- 222 External Tone EQ
- 223 External Balance
- 224 External MLWP
- 225 External Loudness
- 226 Reset External Amp
- 227 External Left MLWP
- 228 External Right MLWP
- 229 External Left Loudness
- 230 External Right Loudness
- 231 Internal AVC
- 232 External AVC

## Quick Find Reference Programming Definitions

For quick programming, from the SETUP MODE enter the 2 or 3 digit number then push the HITS button. Press HITS to make setting flash then Toggle choices with #1 and #2 or enter numeric value. Press HITS to lock in setting. See the programming flow charts following this section for specific “keystroke” details.

---

**Page Options** – Used to setup the title and albums jacket pages.

- 25 Pages** – Choose from Bubbler or Nostalgia. Default depends on model. *Note: If “Nostalgia” is chosen, Quick Find #26, 27 and 28 do not apply and cannot be set.*
- 26 Set Last Page** – Use to stop the pages from turning past a certain page number. (Use if the machine is not loaded with 100 discs.) Default depends on model.
- 27 Set Home Page** – Used to set a “display” page. Default depends on model.
- 28 Home Delay** – The amount of idle time (in minutes) before the display automatically turns to the “Home Page” set above. Default: 5.
- 29 Remote Pages** – This setting turns the remote control page buttons *On* or *Off*. Default: Off

---

**Play Options** – Used to set how records are played.

- 33 Play Order** – Fifo = as selected. (First in First Out)
  - Fast = in numeric order lowest to highest number.
  - Shfl = in random order
  - Default: Fifo
- 37 Clear Select** - Allows the SyberSonic System to hold or clear the current track in play and the selections in memory when power is off. Select from No, Yes or the number of hours to hold selections (1 to 9). Default: No.
  - **To clear the current selections, use Quick Find #72.**

- 38 Clear Credit** - Allows the SyberSonic System to hold or clear credits in memory when power is off. Select from No, Yes or the number of hours to hold credits (1 to 9). Default: No.

- **To clear the current credits, use Quick Find #73**

- 39 Priority Dsc** - When On, allows one slot for a record to take priority over all other selections. This feature is useful for an all occasion record. Default: Off

---

**Auto Play** - Used to set the machine to play automatically. (An attract mode.)

- 40 Auto Play** - Used to program the auto play style. Choose from Off, Random, Program, or Code. Default: Off.

**Off:** No Auto Play

**Random:** The jukebox will choose its own tracks to play from the discs you tell it to choose from during the programmed auto play time period. (Can have up to 21 auto play programs.)

**Program:** You may program up to 99 specific songs to play during the auto play time period. (Can have up to 21 auto play programs.)

**Code:** Allows up to 99 specific songs to play if a 4-digit code is entered.

- 41 Background** - Used to set specific discs to play at specific days and times. Can set up to 21 individual background music programs. Default: Off

- 42 Aux Background** – Enables the Auxiliary BGM Inputs on the SyberSonic Amplifier.

**Off** – Auxiliary BGM Inputs are disabled

**One** - Auxiliary BGM Inputs are live until the first selection begins to play. They are enabled again only when the last song in the play queue has finished playing and that disc has been put away. (No background music between songs.)

**Two** – Auxiliary Inputs are live unless a jukebox selection is playing. (Background music between songs.)

Default: Off

**43 Background Vol.** - Set the minimum and maximum allowable volume levels for programmed background music and Aux BGM Input.

**44 End Style** - Sets how a background record, if playing, ends when a paid selection is made. Choose from Cancel, Fade or Finish. **Note:** *This setting does not affect the action of the amplifier's Aux BGM inputs.*

**Cancel:** Immediately cancels the playing background selection.

**Fade:** The volume of the playing background selection will "fade" to minimum volume before canceling.

**Finish:** The playing background selection will not cancel until it reaches the end of the song. Default: Fade.

**45 Hits Button** - Sets the HITS BUTTON to either automatically play or display the jukeboxes top hits as determined by the built in popularity counter.

**View** - Will display the selection number of the most popular tune each time the Hits Button is pressed.

**Play** - If credit(s) exist, will cause the jukebox to automatically play the most popular tune on the jukebox each time the Hits Button is pressed. **Note:** *Will not work until popularity has been established. i.e. If the popularity totals have just been cleared, the Hits button will not work until a few songs have been selected via the keyboard.*

**V/T** - Will display the top hit *and* turn the title pages to the corresponding number. Allows the customer to see what the song displayed actually is. **Note:** *Will not work until popularity has been established. i.e. If the popularity totals have just been cleared, the Hits button will not work until a few songs have been selected via the keyboard.*

---

**Free Play** - Allows the phonograph to be set on various "Free Play" modes.

**50 Free Play** - No, Yes or Programmed. "Yes" sets the jukebox to full time free play. "Programmed" allows up to 21 Free Play time periods, each with its own parameters. The parameters include day of

week, start time, stop time and maximum number of free credits allowed. Default: No.

**51 Clear Free** - Clears the selections made for free from play queue when the stop time for the programmed free play period has been reached. Default: No.

**52 Password FP** - Allows free selections via a password typed into the keyboard during normal play. **The displayed credits must be 0.** Also sets the maximum number of free credits allowed each time the password is typed in. (The number of free credits must be set to 1 or above for this feature to function.) Default: No. Default: Password 0000.

**53 Free Special** - "Yes" allows selection of records designated as "special" (as set in Quick Find #13) during a free play period. Default: No.

**55 Remote Credit** - Allows use of the remote control's Asterisk (\*) button for adding free credits to the jukebox. **Note:** *Remote Credits are counted as "Free Plays" in accounting.*

**Off** - Disables the Remote Credit feature.

**On** - Enables the Remote Credit Feature.

If "On" is selected the following items also need to be programmed:

**Day** - Choose from "Every Day", "Monday through Sunday" or "None."

If "Every Day" or a specific day of the week is selected, the number of credits programmed below will automatically become available at 00:01 of that day. Once the credits are used no more will be available until 00:01 of the next scheduled day.

If "None" is selected and a number of credits is programmed, pressing the Cancel Disc Button will add credits to the jukebox and count down the number of available credits. Once the number of available are used, the credits need to be manually reprogrammed. No more will be automatically made available.

**Credits** - Possible settings are 00 - 99.

**Note:** *The number of remaining free credits are displayed during programming so the operator can monitor usage.*

- 56 Free Selections** – Allows certain songs to be played for free from the keyboard. The songs may be set up as normal or priority selections. If set up as priority, the selected song will be played as the next selection. The selection does not appear on the display as it's being made so as to keep patrons from trying to make other songs play for free.

## Pricing

- 60 Unit Price** - Base value of lowest coin. Default Unit Price = 005 in U.S. (005 = 5 cents or \$0.05).
- 61 Input Rates** - Sets the Total Value of each coin channel based upon the unit price. (Multiplier) i.e. "Input 6 Rate 20" showing on the display indicates that coin channel 6 is worth \$1.00.

Unit Price X Input 6 Rate = Total Value		
005	X 20	= 100
25 cents default	25 cents/\$1 coin default	
Input 1	001	001
Input 2	002	002
Input 3	005	005
Input 4	005	005
Input 5	005	020
Input 6	020	020

- 62 Pricing Levels** - The number of credits given for the amount of money inserted.

Default: Level 1 - 01 - 050  
 Level 2 - 02 - 100  
 Level 3 - 05 - 200  
 Level 4 - 15 - 500

- 64 Recirculate Lv.** - The level at which the pricing levels begin again. (Bonus Level)  
 Default: Level 1

- 65 Acct. Unit** - The accounting unit multiplier based on the Unit Price. In the U.S., the Acct. Unit is 20, which gives an Accounting Unit Value in dollars. Default: 20.

- 66 Timed Bonus** - Provides a means to program "Happy Hour" pricing. You may set up to 21 different timed bonus periods. The parameters include day of week, start time, stop time and the ratio of free credits given per paid credits. The number of free credits used are tabulated in "Free Keyboard Norm" under Free Detail section of the Total Accounting Menu. (Quick Find 93). Default: Off

### If set to On:

**View Settings** - Press HITS to continue.

**Timed Bonus (01-21)** - Choose which program you wish to add or change.

Default: 01

**Day** - Choose from None, Every Day or specific day of the week.

Default: Every

**Start Time** - Enter the time you desire Bonus Pricing to start. Use 24 hour clock. Valid times are 00:00 through 23:59.

Default: 15:00

**Stop Time** - Enter the time you desire Bonus Pricing to end. Use 24 hour clock. Valid times are 00:00 through 23:59.

Default: 17:00

**Free/Paid** - Enter the ratio of free credits to be given per paid credits. For example 01/03 will give 1 free credit for every 3 paid credits, or 4 for a dollar during the timed bonus period. Default: 01/03

---

**Set-up 1** - Sets time clock, messages and internal CPU functions.

**70 Remote Power** – Enables or disables the IR Remote Control power button.

**71 Serv. Credits** - The number of credits automatically given when the service mode is entered. *Note:* These credits will not remain on the jukebox when it is put back into the normal play mode. To add credits to the jukebox, (courtesy credits) pull the service switch to its out position and press the red scan/cancel button. Default: 00.

**72 Clear Selections** - Clears all selections currently stored in the play queue.

**73 Clear Credits** - Clears all credits appearing on the display.

**74 Set Clock/Date** - Sets internal clock for timed functions. Default: Today's Date, Pacific Time and Today's Day of Week.

**75 Message**

- **Factory** - Will scroll "200 Selections On 45 RPM Records" on the bottom line of the display along with the "Normal Mode" messages.
- **Program** - Allows the entry of a custom message to be scrolled on the bottom line of the display along with the "Normal Mode" messages.

**Clear Message** - Erases the currently entered custom message.

**Change Message** - Allows the entry and editing of a custom message. To

enter a custom message follow these steps:

1. With "Change Message" displayed, press HITS. The currently entered message (or blank if no message is currently entered) will show on the top line of display.
2. Press the Left or Right MENU buttons until the character you want is displayed on the bottom line. Press HITS. The character will move to the top line. (a blank between the ' ' is a space). To erase a character (backspace) press 0.
3. To save the entered message, press RESET.

- **Off** - No message is displayed other than the "Normal Mode" messages.

**76 Scroll Rate** - Speed at which the messages on the bottom line of the display scroll. Default: 05.

**78 Volume Range** - Allows the setting of minimum and maximum volume ranges for normal selections. In addition, timed maximum volume limit may be set. The volume range and timed maximum is set separately for the internal and external amplifiers. *See Section D for detailed setting instructions.*

**79 Vol Control Options** – Sets how the jukebox volume controls are used. *Detailed setting instructions are located in section D of this manual.*

**Normal** – The internal buttons control the standard amp and the external buttons control the optional auxiliary amplifier.

**Volume Bridge** – When bridged, the tied amplifier/channel's volume will change regardless of which volume control button is pushed. *This feature should be used **only** when the optional auxiliary amplifier is installed or when the external output jacks are used to feed an external audio system.*

**Bridge Int - Ext B.** Ties both the right and left external amplifier channels to the internal amplifier volume control. Normally used in installations where the jukebox and external speakers are located in the same room.

In this mode pushing either set of volume buttons will control the internal *and* external volume at the same time.

**Bridge Int - Ext R.** Ties the right external amplifier channel to the internal amplifier volume control. Normally used in an installation where the jukebox and an external speaker(s) are in one room with another external speaker(s) installed in another room or area.

In this mode pushing an internal volume button will change the volume for the jukebox *and* the external speaker(s) connected to the right external channel. Pushing an external volume button will change the volume for a speaker(s) connected to the left external channel which is another area or room.

**Bridge Int - Ext L.** Same as above except the channels are reversed.

Default: Normal.

---

**Set-up 2** - Password and machine service parameters are set in this menu.

### Password Protection

SyberSonic Password protection allows the operator to choose and set up the level of security necessary. There are three (3) passwords, each of which can be assigned a security level. This password/level scheme allows you to assign a password to different job types (i.e. Route Service, Technical Service, Supervisor) in your organization *and* assign each a different (or same if you choose) level of security. Match this option with the enhanced service record and you have all of the tools necessary to know “who, what, where and when.”

When assigning passwords, it is important to consider who needs access to what. For instance, you may not want your mechanics to have access to password and accounting functions but access to everything else. Assign Security Level 2 to them. You may want your route service people (collectors) to have access to accounting data but not pricing and free play options. Assign them to Level 1 and set View Level 1 (Quick Find 95) to On. You may want your supervisors to have access to everything. Assign them Level 3.

### Security Levels

The Security Levels and what can be accessed in each level are as follows:

- **Level 1** - Service Level

Page Options

Play Options

Set Up - 1

Set Up - 3

Popularity

Test Mode

Auto Test

Amp Set Up

- **Level 2** - Set Up Level

In addition to the items available in Level 1

Auto Play

Free Play

Pricing

- **Level 3** - Master Level

In addition to the items available in Level 1 and Level 2

Set Up - 2

Accounting (Can be reached from Level 1 if View Level 1 is set to On)

Remote Control

Set the passwords for each security level below.  
*Note: You must set a level 3 password to set any lower levels.*

- 80 PW 1 Security 1 - 3** - Sets the 1<sup>st</sup> of 3 available passwords. Sets which level of security this password is allowed to access. See the Security level explanation above for details.
- 81 PW 2 Security 1 - 3** - Sets the 2<sup>nd</sup> of 3 available passwords. Sets which level of security this password is allowed to access. See the Security level explanation above for details.
- 82 PW 3 Security 1 - 3** - Sets the 3<sup>rd</sup> of 3 available passwords. Sets which level of security this password is allowed to access. See the Security level explanation above for details.
- 83 Serial Num:** Program the machine's serial number into the computer. Default: Machine's Serial Number Programmed At Factory.
- 85 Service Record** - Logs date of last entry into Setup Mode and the password number entered.
- 87 Factory Reset** - Allows the programming and audit functions to be quickly reset to factory defaults for commercial or home use.

- 88 Language** - Allows normal operate mode screens to be displayed in a specific language. (Service/Set up mode screens are still displayed in English). Choose from **English, Spanish, German, Portuguese, Czech, French or Finnish**. Default: **English**. **Note: Check with your distributor for a list of the currently available languages.**

---

### Set Up 3

- 200 Open Menu ID** - Used to have the jukebox automatically go to the set feature when the setup mode is accessed. *Example: To have the jukebox automatically go to Basic Accounting, set this to Quick Find 92.*
- 201 Auto Power** - Use to have the jukebox automatically power up or down at a set time. Up to 7 cycles may be programmed.
- 202 Amp Mute** - Use to prevent amplifiers from going to "sleep" when not playing. If set to "off" there will not be a delay to wake up the amplifiers when the paging microphone is activated.

---

### Accounting

- 90 Last Reset** - Date and time that the Period To Date figures were last reset.
- 91 Print Acc. Data** - Sends the accounting data to the SyberSonic IR printer port for use with Rock-Ola Data Printer Kit # 02377-01 (optional).
- 92 Basic acct.** - Simple readouts show selections, plays and cash.
- 93 Total Acct.** - Gives detailed accounting information.
- 94 Clear PTDs** - Clears the period to date accounting data.
- 95 View Level 1** - Allows the viewing of audit data from the Security Level 1. All other protected features remain secure. Useful if you want the service person to have access to the accounting data without having access to the MASTER security level (Level 3). Default: No.
- 96 SP "Self Plays"**. If Yes self plays are included in the free percentage calculations.

- 97 Power Cycles** - Displays the date, time and if the jukebox power was cycled on or off.

A sample display is :

10/30 10:06 1

Indicates the jukebox power was turned on at 10:06AM on October 30. Another example is:

10/31 02:05 0

Indicated the jukebox power was turned off at 2:05AM on October 31.

---

**Popularity** - Allows readout of most/least popular selected records.

- 100 Last Reset** - The date and time the popularity was last reset.

- 101 View Pop.** - Select the direction you want to view the popularity. (To read the popularity data, use Quick Find 103) Choices are:

**Least** - View the disc popularity in ascending order from the least played slot to the most played slot.

**Most** - View the popularity in descending order from the most played to the least played.

**Slot Order** - View the popularity in ascending slot order 00 through 99.

Default: Least

- 103 View Pop. Data** - View the popularity data in the order based upon the setting in Quick Find 101.

- 104 Clear Pop. Data** - Clears the popularity data. **Note: If Pop Data is cleared and Hits Button is set to Play, Hits Button will not work until several tunes have been selected via the keyboard.**

---

**Remote Control** - Allows the features of the Standard and Optional Deluxe I.R. remote

transmitter to be programmed. (See Section “K” for Remote Control button functions.)

- 120 Pause/Mute** – Sets the amount of time, in minutes, a song will stop playing if the pause button on the IR remote control is pressed. Also sets how the machine will pause. Choose from Mute or Suspend Operation. Mute will shut off the audio but allow the jukebox to take money and selections. Suspend operation causes the jukebox to immediately stop playing and the display will read “Please Wait...”.

Pressing “pause” or any volume button on the remote will cause the song to resume playing. Once the set time has elapsed the jukebox will automatically resume playing. Entering “00” will cause the pause time to be unlimited. Default: 00.

- 121 Select Type** (Remote Selections) - Choose from Off, Any or Free. Default: Off.

**Off** - Disables the ability to make selections via the remote control.

**Any** - When this option is chosen, selections can be made via the remote control regardless of credit status. Credits, if they exist, will not be deducted. **Note:** *If this feature is used, Rem Playlist (Quick Find 122) must be set to OFF.*

**Free** - Selections can be made via the remote control only if the machine is on free play or if “free play” credits exist. Only “free play credits” will be deducted when selections are made.

- 122 Rem Playlist** - Enables or Disables specific discs that selections can be made from via the deluxe remote control regardless of credit status. **Note:** *If this feature is used, Select Type (Quick Find 121) must not be set to ANY.* Default: Off

- 126 Clear Mem.** - Will cancel entire play queue if ON and button is activated. Default: Off.

- 127 Random Sel.** - Enables random play as set in auto play menu. 4 available options: Off, On, Prog, and One. Default: Off.

- 128 Background** - Enables background playlists as set in auto play menu. Default: Off.

- 129 Play Lists** - Enables the ability to create 3 separate play lists with up to 50 songs per list. Default: Off.

---

**Test Mode** - Provides access to the self testing and self diagnostic routines of the SyberSonic System.

- 130 View Errors** - Lists, by sub-system, errors the SyberSonic self-diagnostic system has detected.

See the explanations for Quick Find 136 - 140 for further information about errors.

- 131 View/Run CPU Tests** - Allows the selection of one of three self-diagnostic routines for the CPU. The CPU tests include Power Up Test, Inputs Test and Output Test.

See the explanations for Quick Find 142 - 144 for further test information.

- 132 Run Keybrd. Test** - Allows the testing of the keyboard switches. When a keyboard button is pressed, the display will indicate which button is pressed. Errors (if any) will be logged into the Keyboard Error register. (Quick Find 137)

To exit this test, cycle the service switch or press the resume button on the CPU. (If further testing or programming is desired, you will need to re-enter the setup mode by pressing the service button on the CPU.)

- 133 Run Display Test** - Will cause the display to cycle through all of its available characters.

To stop this test press RESET on the keyboard.

- 134 Run Pages Test** - Will cause the title display pages to fully cycle. Errors (if any) will be logged into the Page Errors register. (Quick Find 139)

This test stops automatically at the end of its routine.

- 135 View/Run Mech. Tests** - Provides access to the five playing mechanism self test routines. These are Index Test, Gripper Test, Short Test, Test All Discs and CD Tests.

See the explanations for Quick Find 145 - 149 for further mechanism test information.

**136 View CPU Input Errors** - Displays the error code, date and time of CPU input errors. The display will indicate “End CPU Errors” when the end of the list is reached or if no errors exist.

See the Error Codes chart for further information.

**137 View Kybd Errors** - Displays the Error Code, Date and Time of Keyboard Errors. The Display will indicate “End Kybd Errors” when the end of the list is reached or if no errors exist.

See the Error Codes chart for further information.

**138 View Mech Errors** - Displays the Error Code, Date and Time of Mechanism Errors. The display will indicate “End Mech Errors” when the end of the list is reached or if no errors exist.

See the Error Codes chart for further information.

**139 View Page Errors** - Displays the Error Code, Date and Time of Page Errors. The display will indicate “End Page Errors” when the end of the list is reached or if no errors exist.

See the Error Codes chart for further information.

**140 View Wlbx Errors** - Displays the Error Code, Date and Time of Wallbox errors. The display will indicate “End Wlbx Errors” when the end of the list is reached or if no errors exist.

See the Error Codes chart for further information.

**141 Clear Errors** - Clears all Error Codes.

**142 Run Power Up Test** - This routine tests internal functions of the CPU and communication between the CPU and CD player.

See the Power Up Test Results chart for further information.

**143 Run Inputs Test** - This routine tests the 24 Input lines to the CPU. The display will cycle through each input, indicating its logic level (Hi or Lo).

See the Test Input Codes chart for further information.

**144 Run Outputs Test** - This routine tests the 14 output lines from the CPU. The display

will cycle through each output, indicating its voltage level (Gnd or Vcc).

See the Test Output Codes chart for further information.

**145 Run Index Test** - This routine will cause the playing mechanism to pick up and replace the disc in slots 00, 01, 49, 50, 98 and 99. The purpose of this is to check the function of the mechanism’s opto counter and also to check the basket to gripper bow alignment.

**146 Run Gripper Test** - Allows the gripper bow to be operated by pressing the Cancel/Scan switch on the mechanism.

**147 Run Short Test** - Will cause the mechanism to pick up each record and immediately cancel.

**148 Test All Disc (Long Test)** - Will cause the mechanism to pick up and play each record installed. In case a record is missing or defective, the system will cancel after 4 minutes.

---

**Auto Test** - Used for testing and burn-in of machine components.

**150 Run Auto Test** - Will cause the SyberSonic System to automatically run all of its self test routines.

**151 View Report** - Will display the start, end and elapsed times for the Auto Test. (Quick Find locations 154 - 156).

**152 Print Report** - Sends the Auto Test report to the SyberSonic I.R. printer port.

**153 Clear Report** - Clears the Auto Test report.

**154 Start MM/DD 00:00** - Displays the start time of the most recent Auto Test.

**155 Stop MM/DD 00:00** - Displays the stop time of the most recent Auto Test.

**156 Elapsed 000:00** - Displays the elapsed time of the most recent Auto Test.

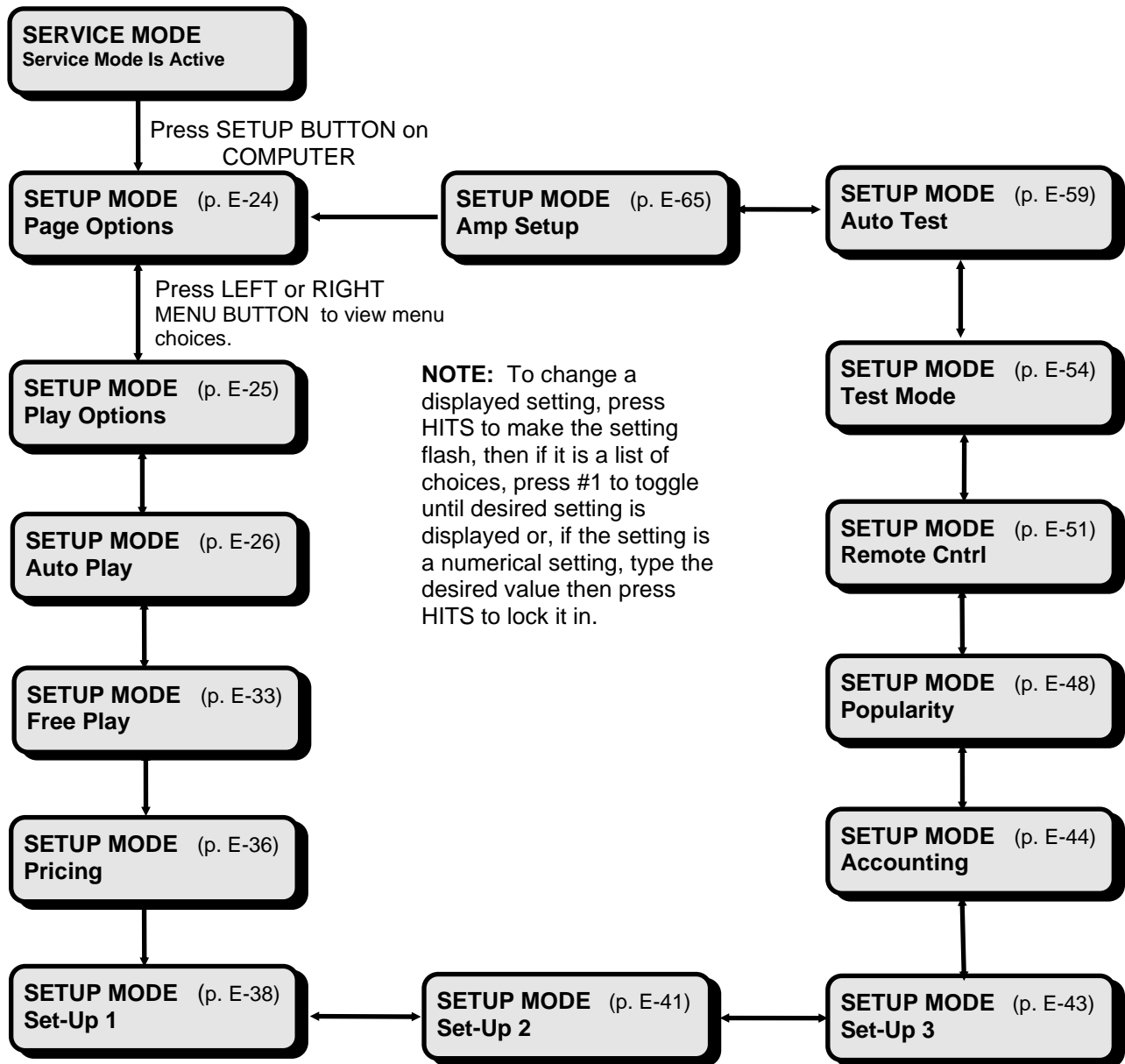
**157 View Keybd Errors** - Displays any keyboard errors that may have occurred during the Auto Test.

**158 View Mech Errors** - Displays any mechanism errors that may have occurred during the Auto Test.

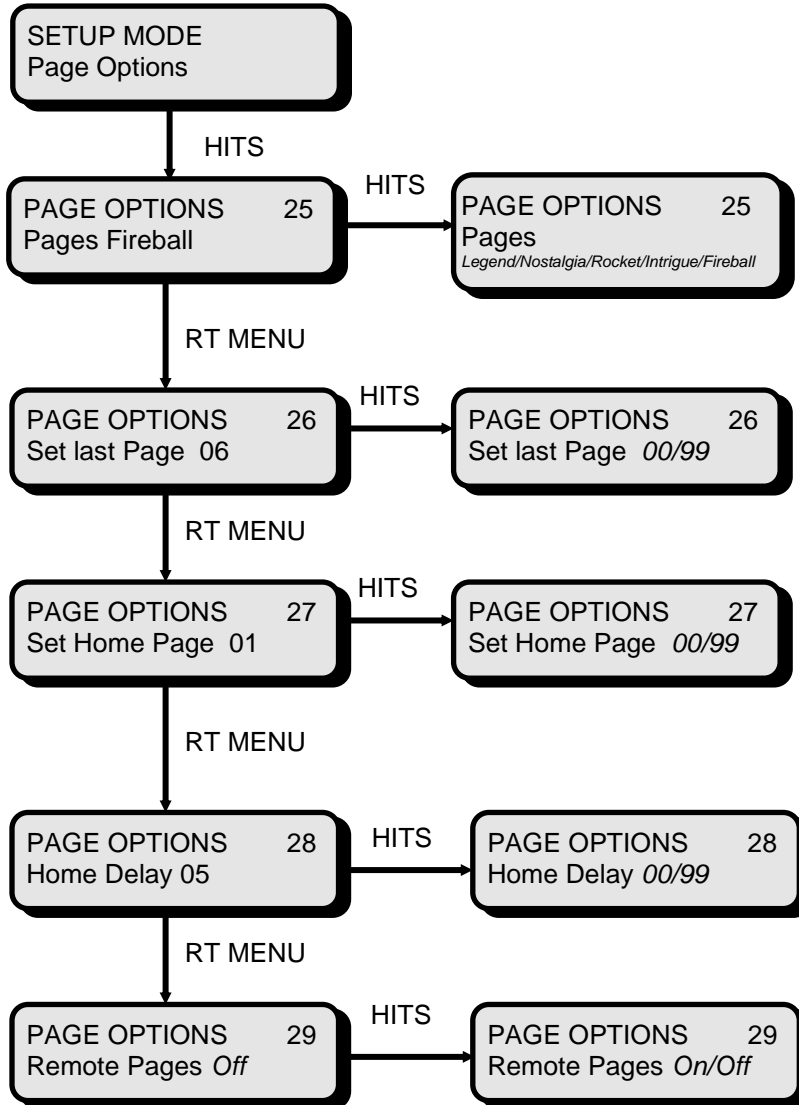
- 159 View Page Errors** - Displays any page errors that may have occurred during the Auto Test.
- 160 View Wlbox Errors** - Reserved for future use.
- 
- Amp Setup**- Provides access to the Equalizer, Balance, Music Level While Paging, Page Decay and Factory Reset functions for the Digital SyberSonic Amplifiers. **Detailed amplifier descriptions and programming instructions are located in Section D of this manual.**
- 210 Internal Amp** – Provides access to the standard Digital Amplifier setting options. When chosen will jump to Quick Find 213, Int. Equalizer.
- 211 External Amp** – Provides access to the optional Auxiliary Digital Amplifier setting options. When chosen will jump to Quick Find 222, Ext. Equalizer.
- 212 Page Decay** – Sets the delay time, in seconds, that the music will “fade” back to the set volume. Page decay is set for all channels simultaneously.
- 213 Int. Equalizer** - Sets the 7 band graphic equalizer for the internal amplifier.
- 214 Int. Balance** - Sets the left to right balance for the internal amplifier.
- 215 Int. MLWP** - Sets the Music Level While Paging for the internal amplifier. The MLWP is a percentage of the music volume heard while the paging microphone is used. If selected, will jump to Quick Find 218. Left and Right Channels are set separately via Quick Find 218 and Quick Find 219 respectively.
- 216 Int. Loudness** - Sets the loudness contour for the internal amplifier. If selected, will jump to Quick Find 220. Left and Right channels are set separately via Quick Find 220 and Quick Find 221 respectively.
- 217 Reset Int. Amp** - Quickly restores settings for the internal amplifier to their factory settings.
- 218 Internal Left MLWP** – Set how much of the music is heard through the Internal Left channel during a “page.”
- 219 Internal Right MLWP** – Sets how much of the music is heard through the Internal Right Channel during a “page.”
- 220 Internal Left Loudness** – Turns the loudness contour on or off for the Internal Amplifier’s Left Channel.
- 221 Internal Right Loudness** – Turns the loudness contour on or off for the Internal Amplifier’s Right Channel.
- 231 Internal AVC** – Turns the “Automatic Volume Control” on or off for the Internal Amplifier.
- 222 Ext. Equalizer** - Sets the 7 band graphic equalizer for the optional Auxiliary Digital Amplifier.
- 223 Ext. Balance** - Sets the left to right balance for the optional Auxiliary Digital Amplifier.
- 224 Ext. MLWP** - Sets the Music Level While Paging for the external amplifier. The MLWP is a percentage of the music volume heard while the paging microphone is used. If selected, will jump to Quick Find 227. Left and Right Channels are set separately via Quick Find 227 and Quick Find 228 respectively.
- 225 Ext. Loudness** - Sets the loudness contour for the external amplifier. If selected, will jump to Quick Find 229. Left and Right Channels are set separately via Quick Find 229 and Quick Find 230 respectively.
- 226 Reset Ext. Amp** - Quickly restores settings for the external amplifier to their factory settings.
- 227 External Left MLWP** – Set how much of the music is heard through the External Left channel during a “page.”
- 228 External Right MLWP** – Set how much of the music is heard through the External Right channel during a “page.”
- 229 External Left Loudness** – Turns the loudness contour on or off for the External Amplifier’s Left Channel.
- 230 External Right Loudness** – Turns the loudness contour on or off for the External Amplifier’s Right Channel.
- 232 External AVC** – Turns the “Automatic Volume Control” on or off for the External Amplifier.

# SETUP MODE FLOW CHART

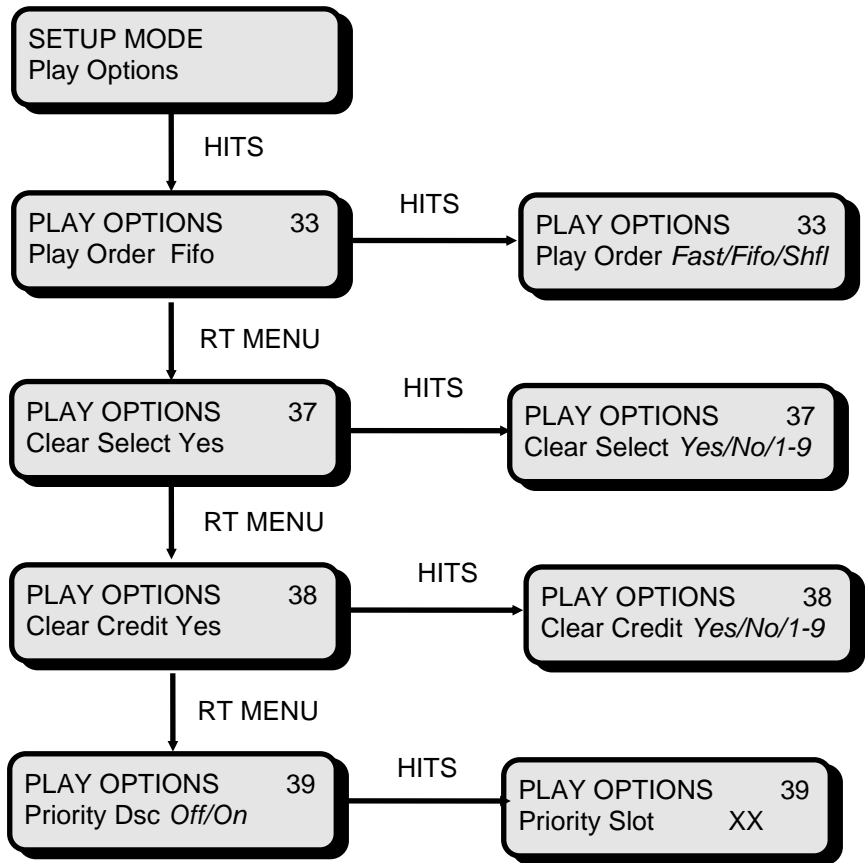
To enter the SETUP MODE, open dome/door, and press Scan/Cancel red button twice. To view Menu choices, press the left or right Menu buttons. The following chart represents the Main Menu flow path. Once the desired item is found, press the HITS button to access items within that Menu. For specific feature explanations, see the Quick Find Programming Definitions section. See the Menu Navigation Section for details on using the "Menu Navigation Keys". See the flow chart for the chosen menu item for further details. To EXIT, simply close the lid/door.



# PAGE OPTIONS



# PLAY OPTIONS

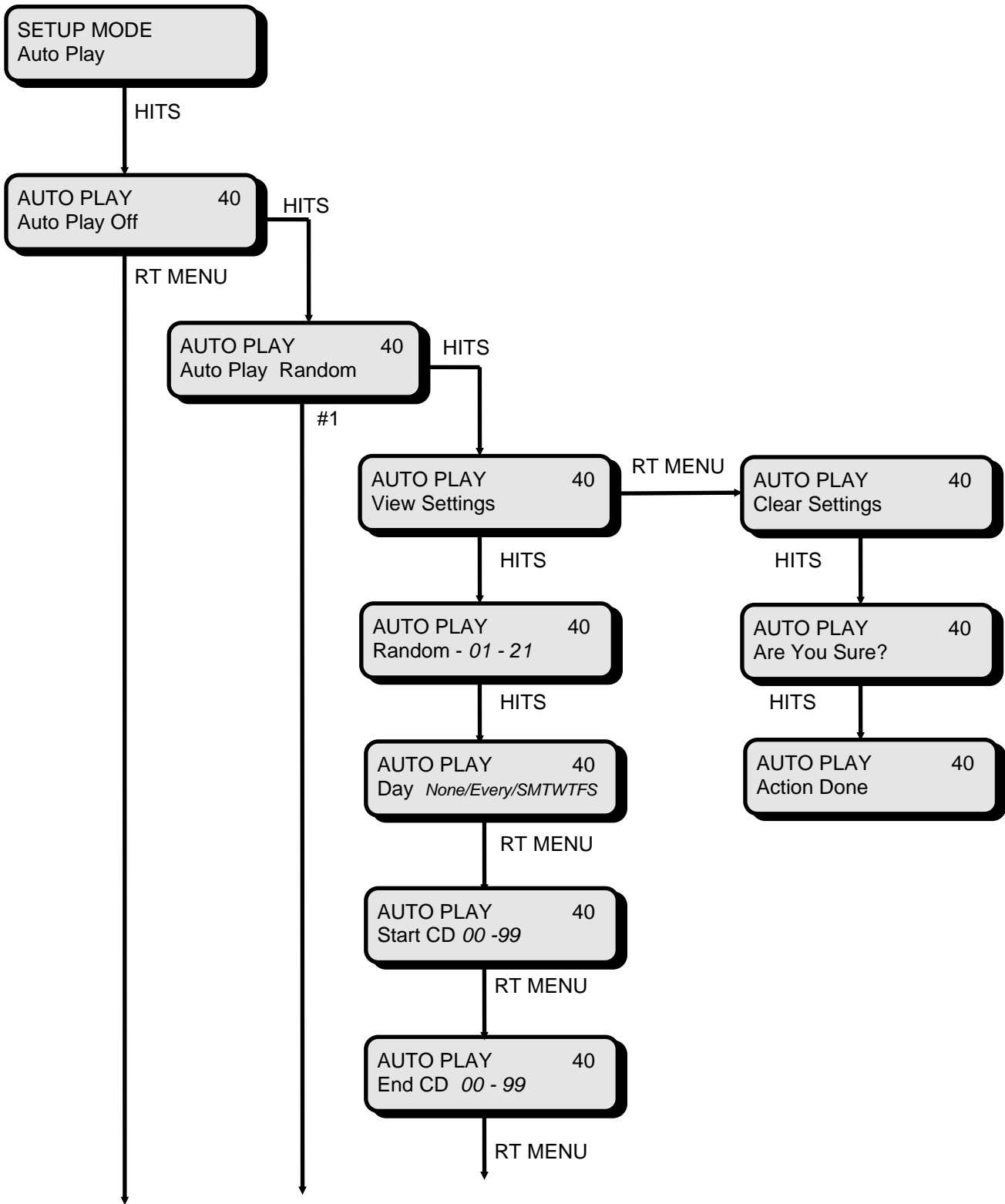


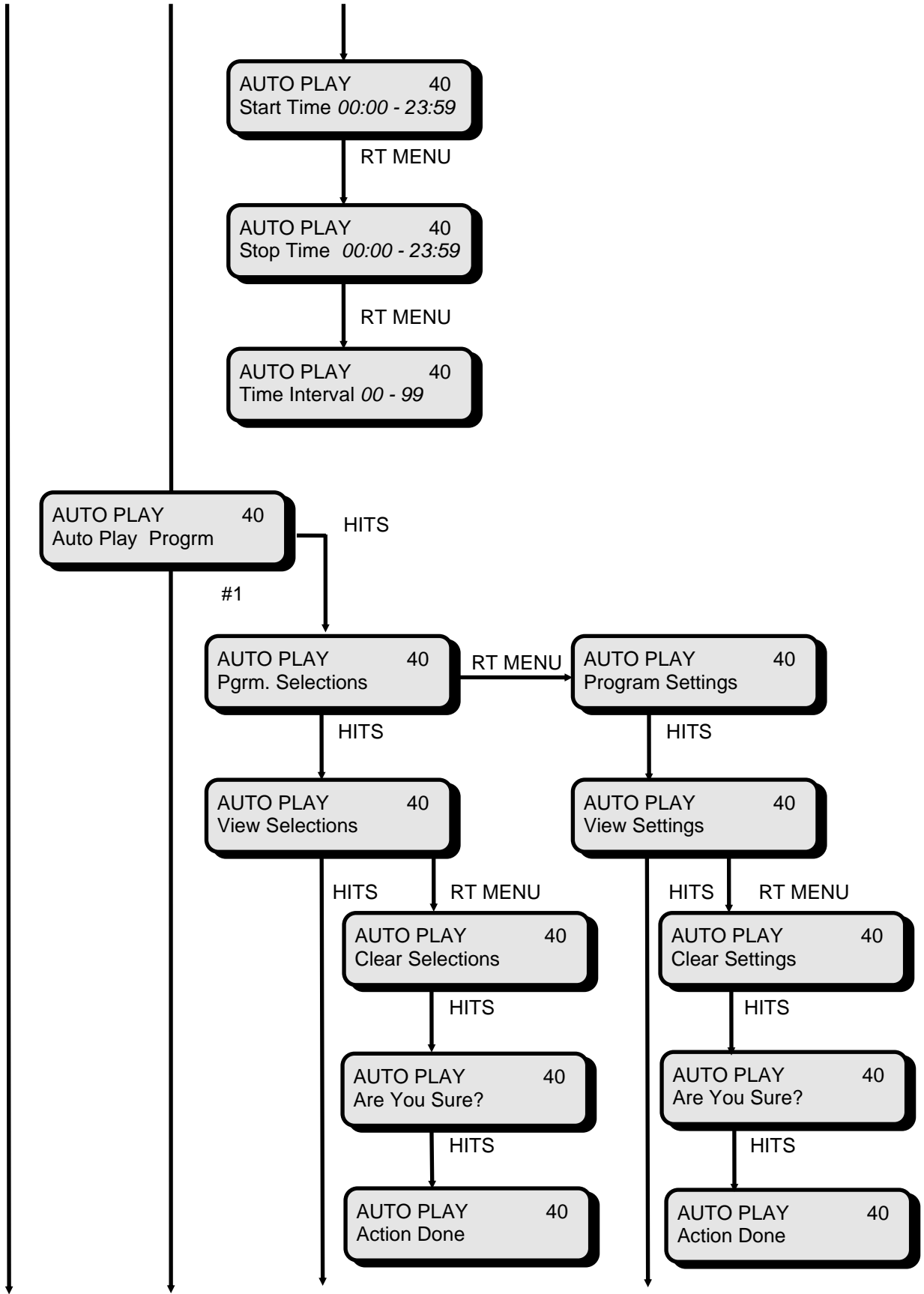
Fifo = First in First out  
Fast = Numeric order  
Shfl = Random order

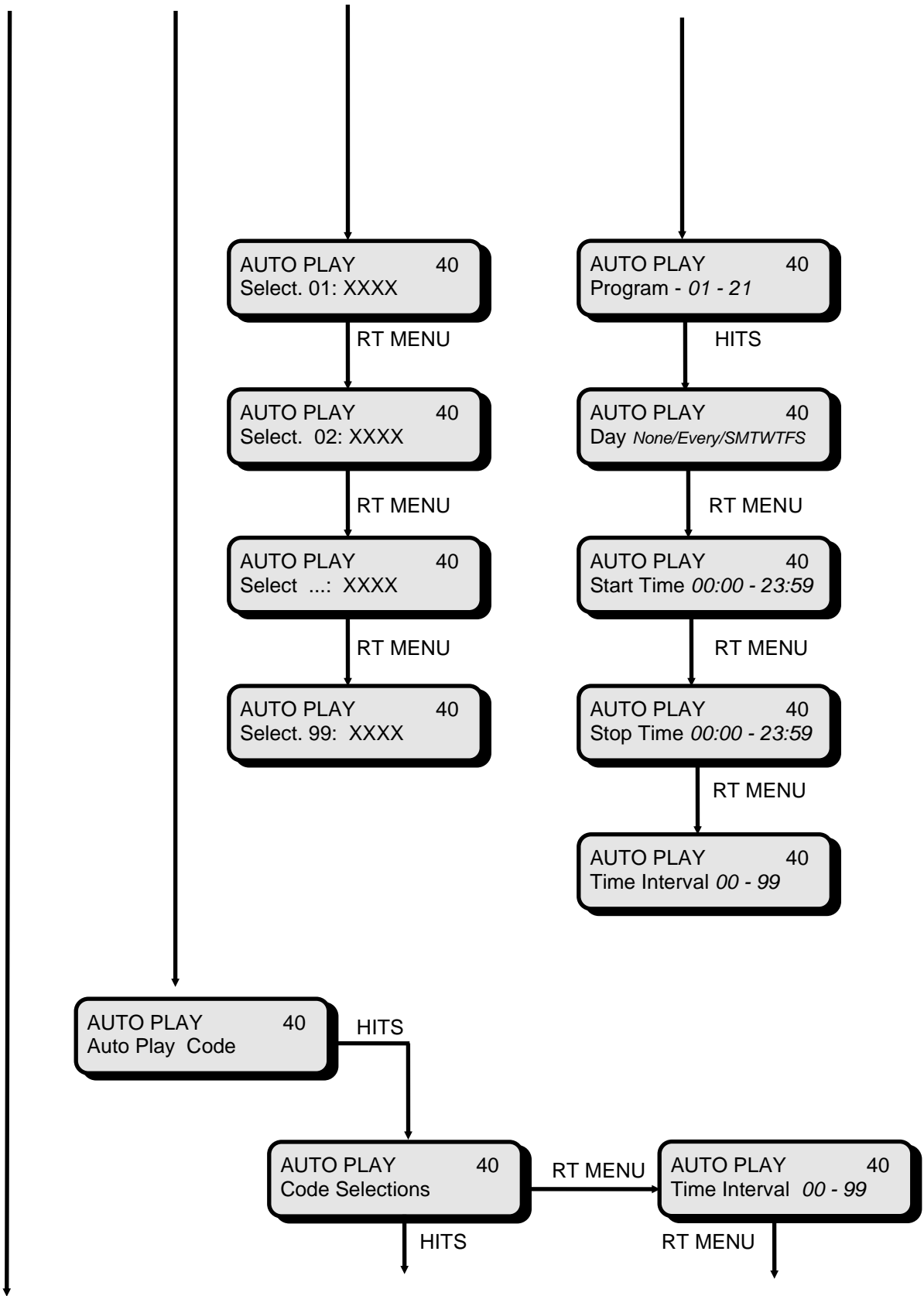
Choose from Yes, No or number of hours (1-9) with power off before selections in memory clear.

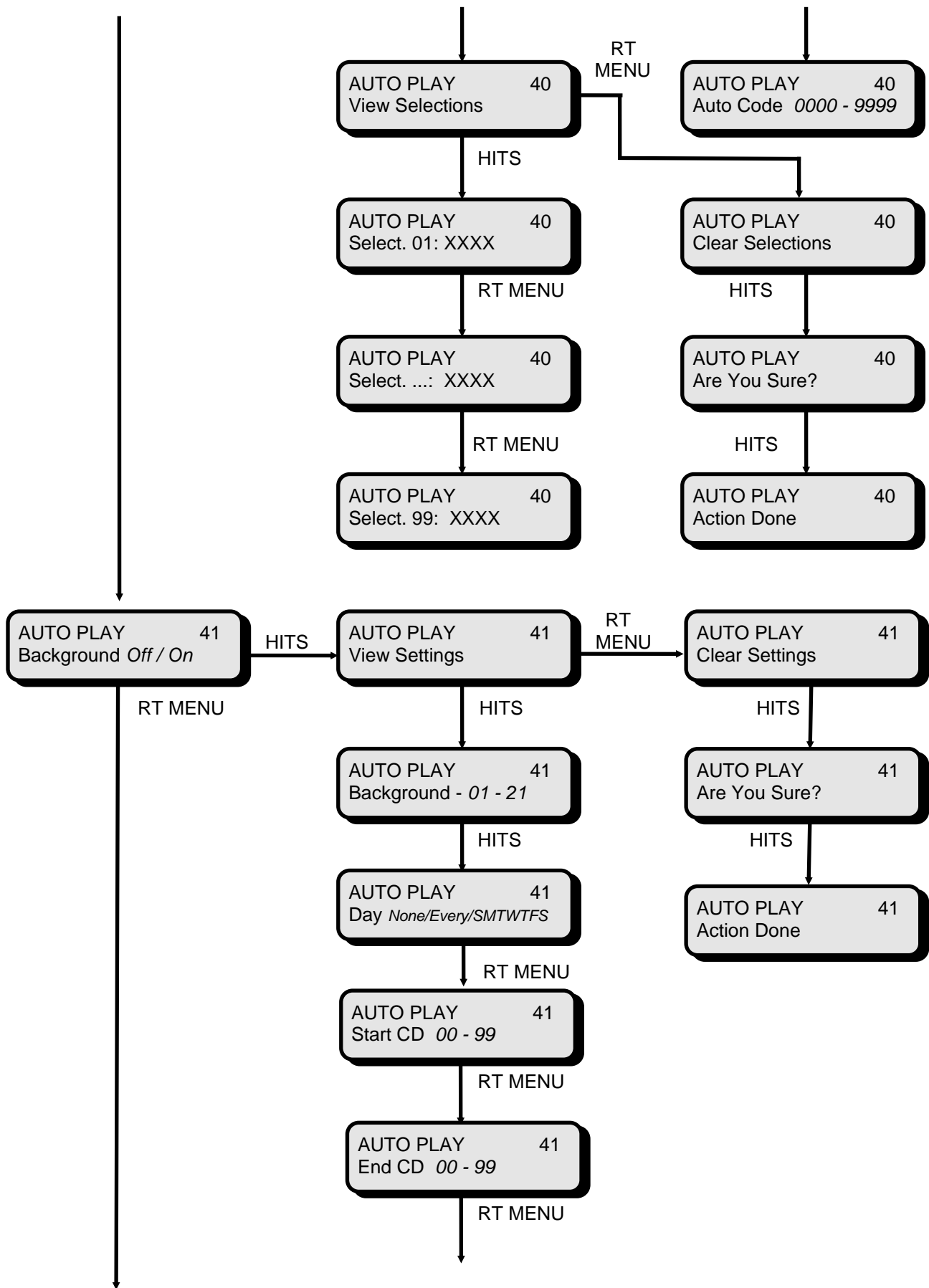
Choose from Yes, No or number of hours (1-9) with power off before credits in memory clear.

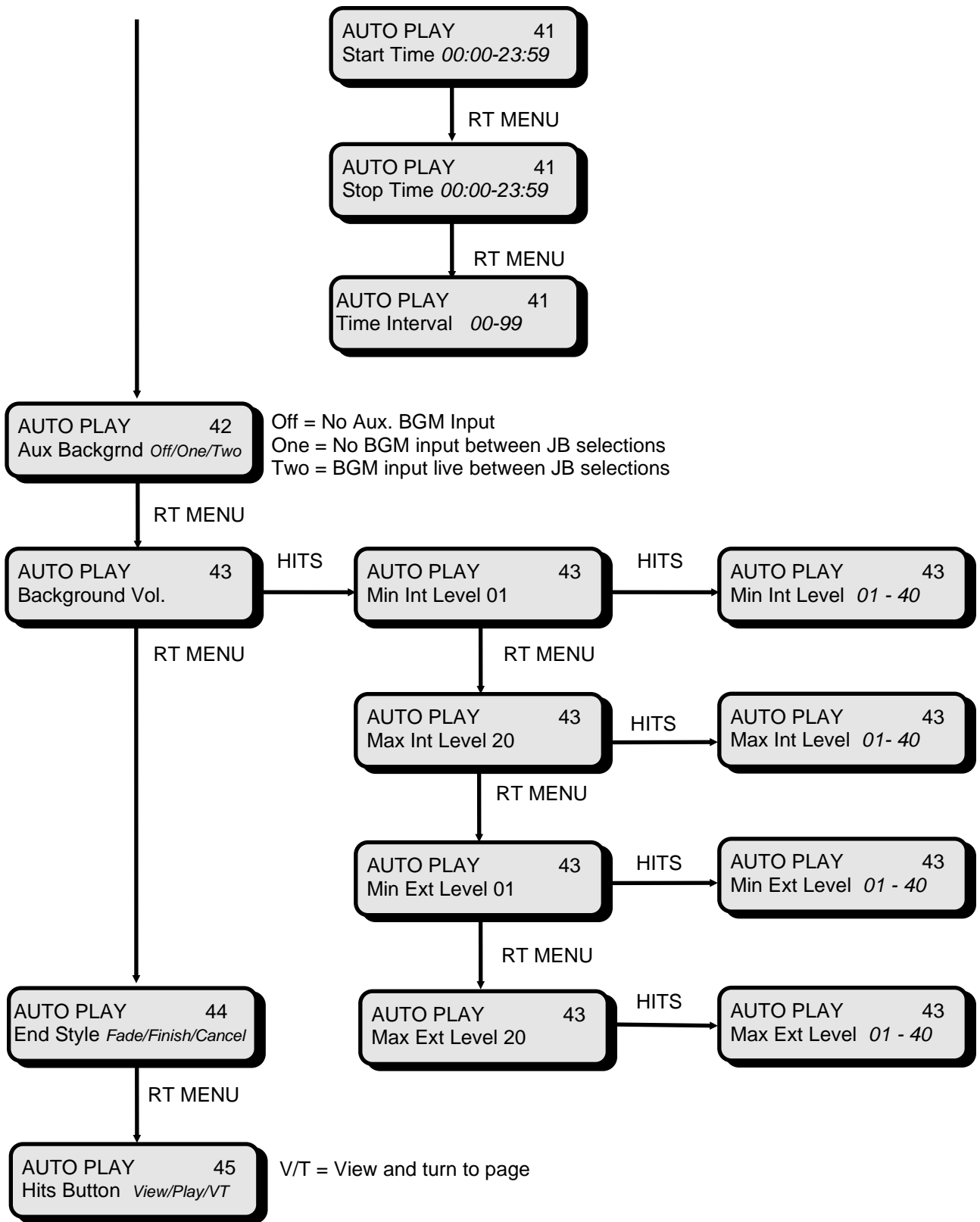
# AUTO PLAY



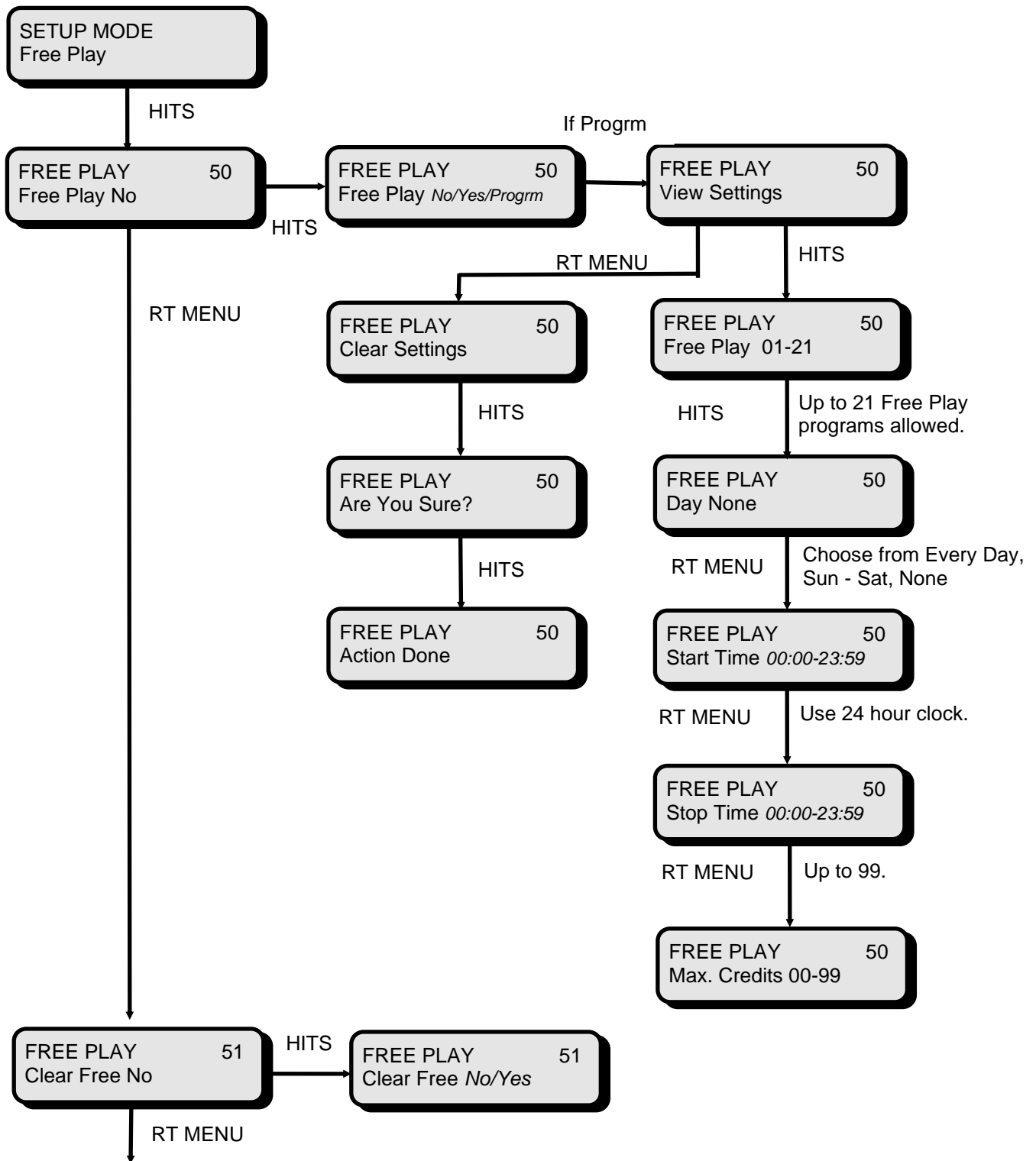


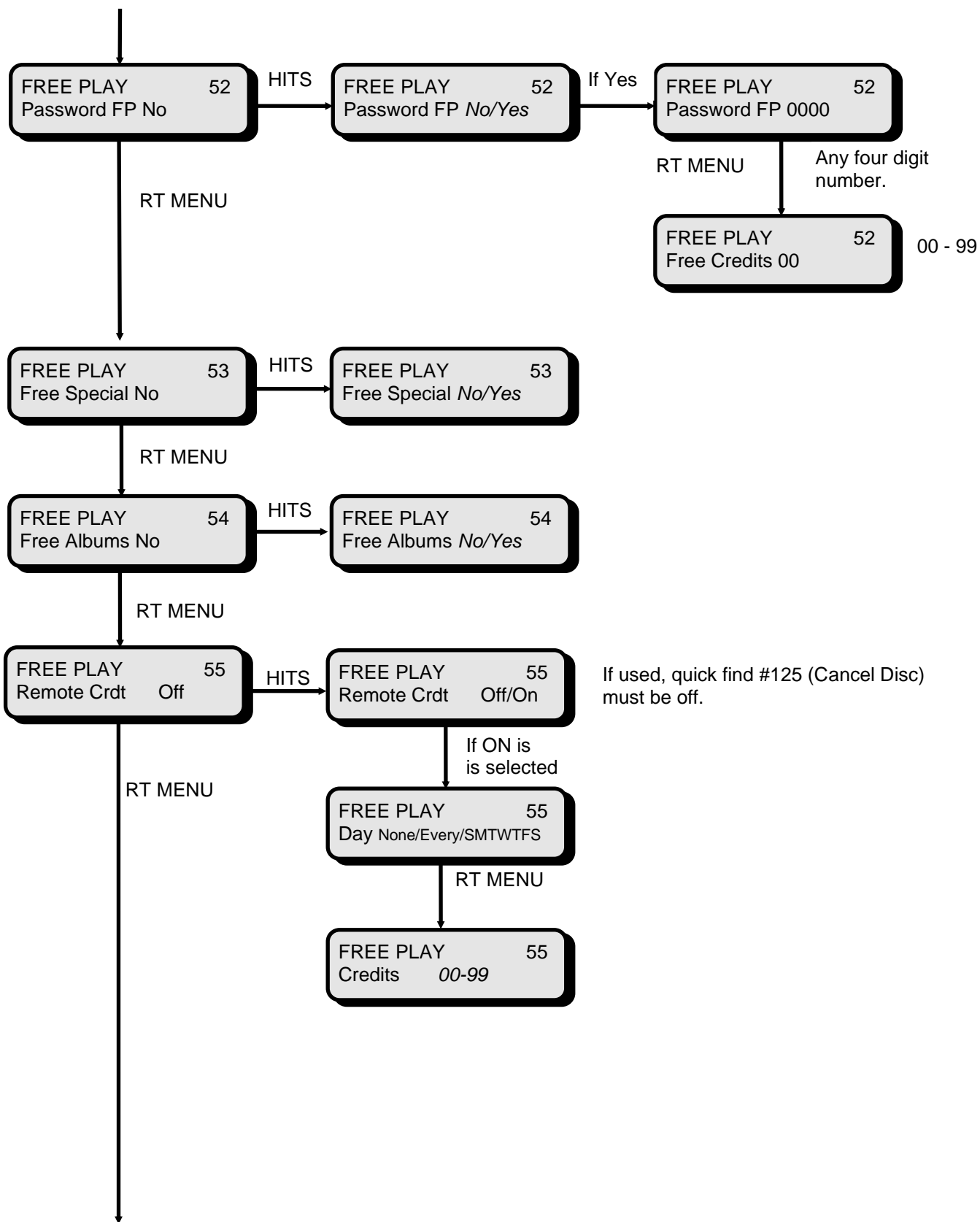


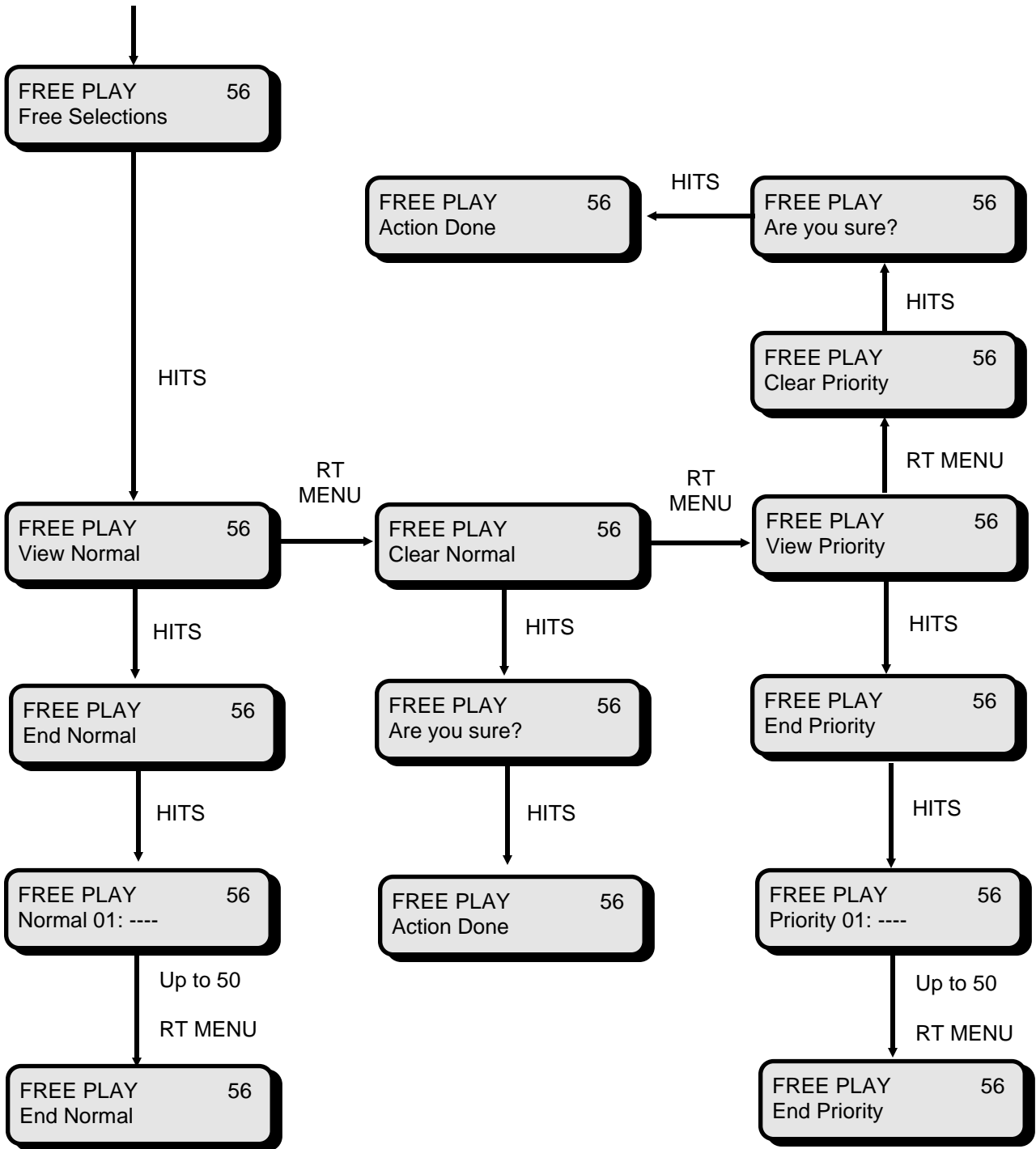




# FREE PLAY

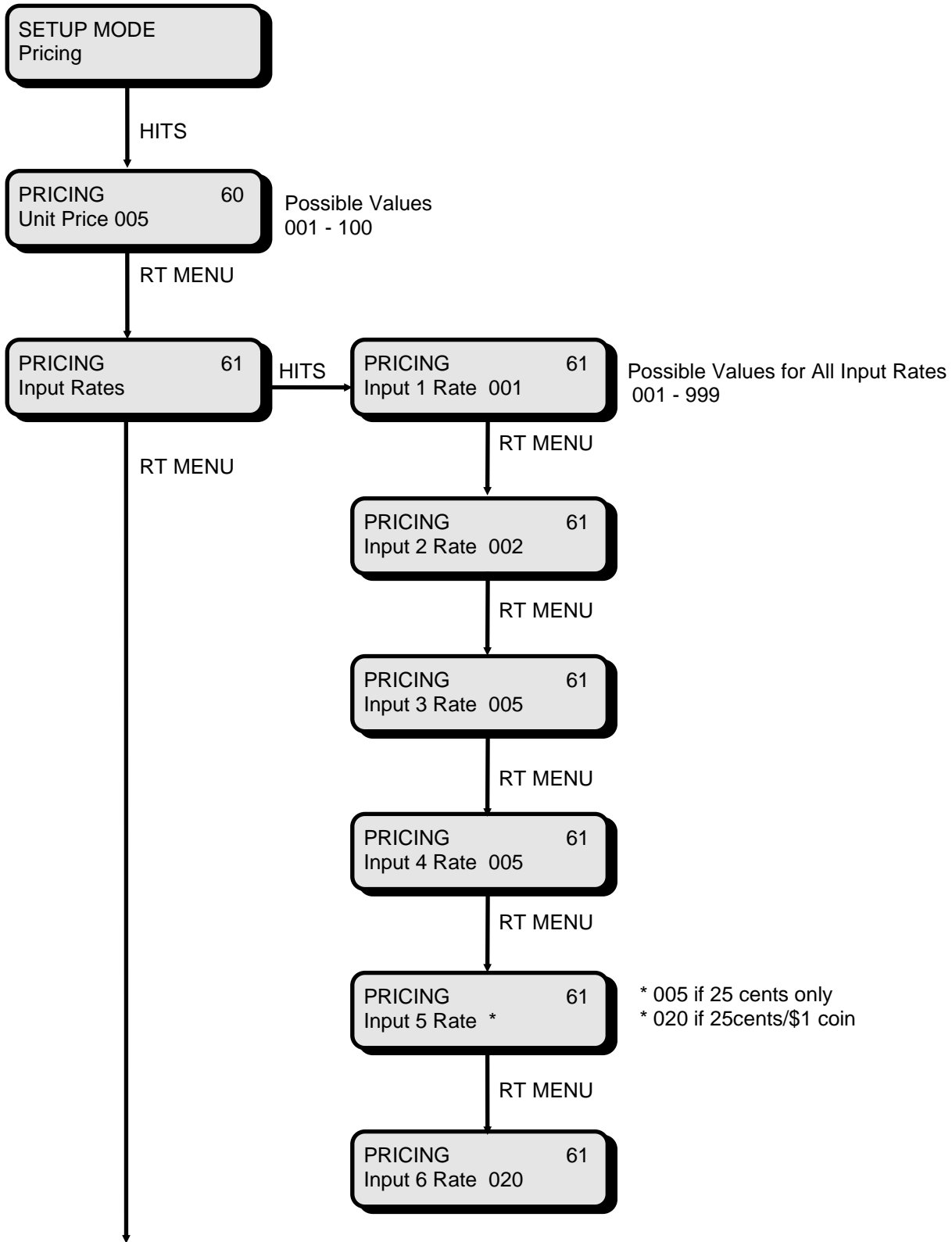


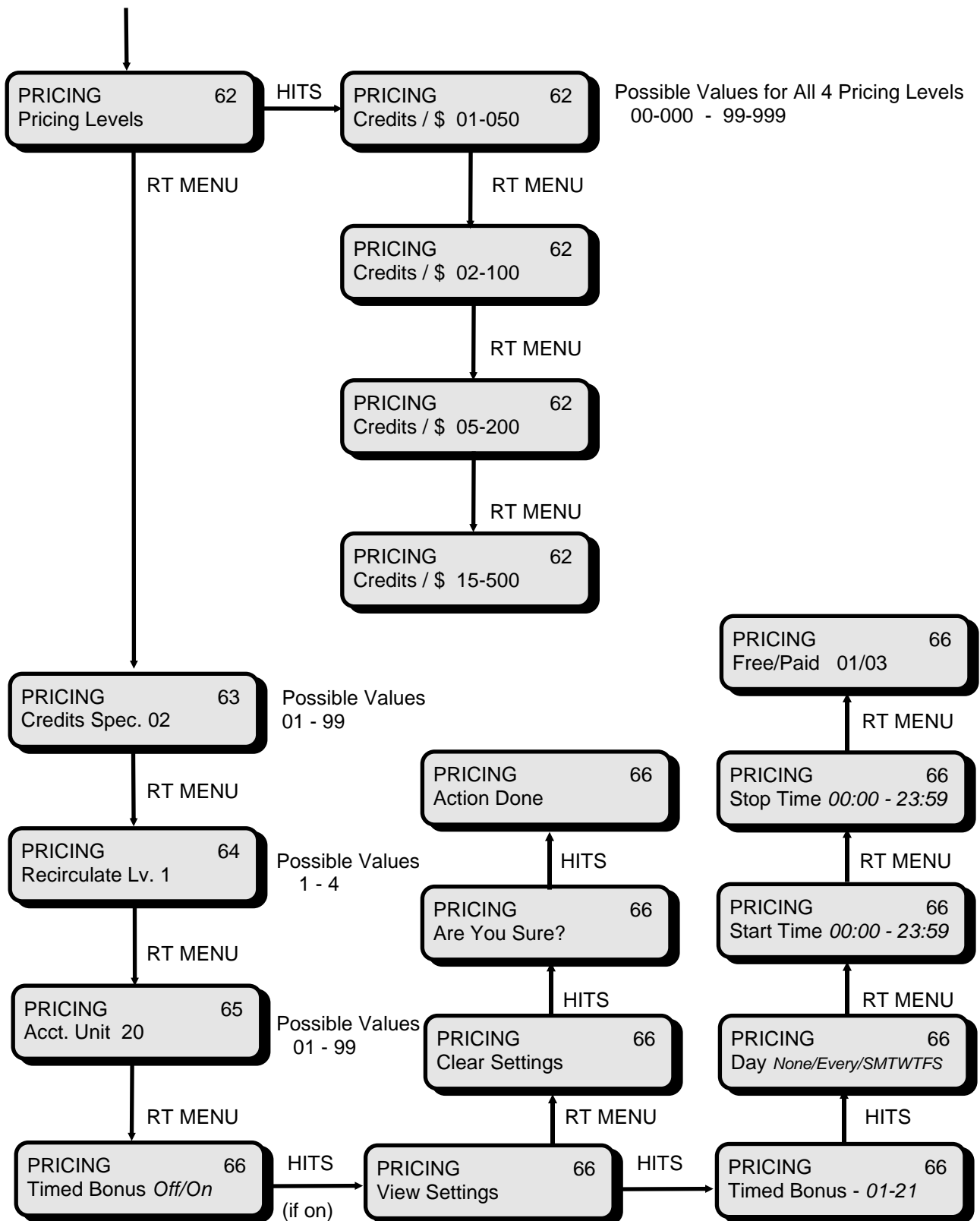




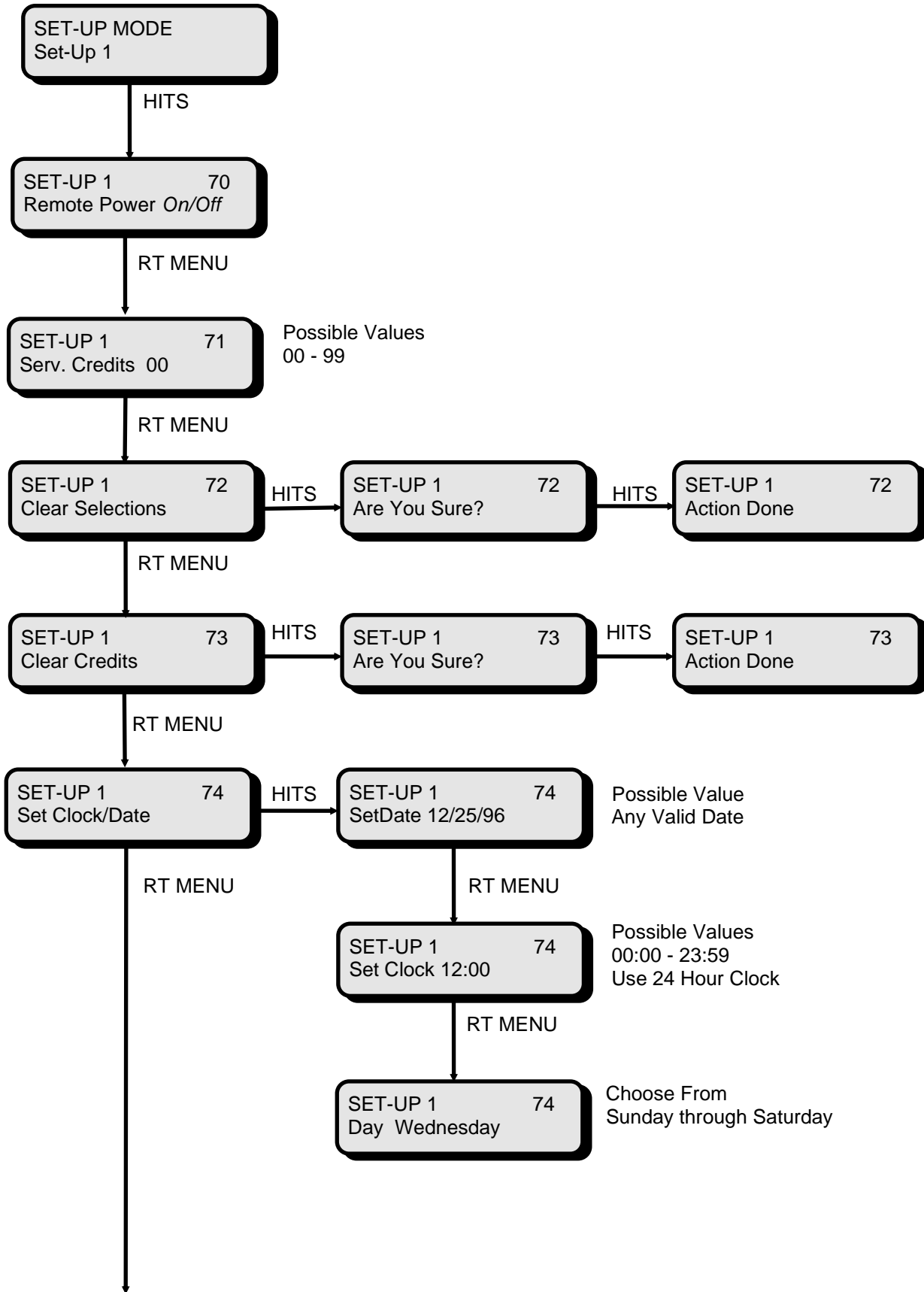
Clear priority repeats the same as clear normal.

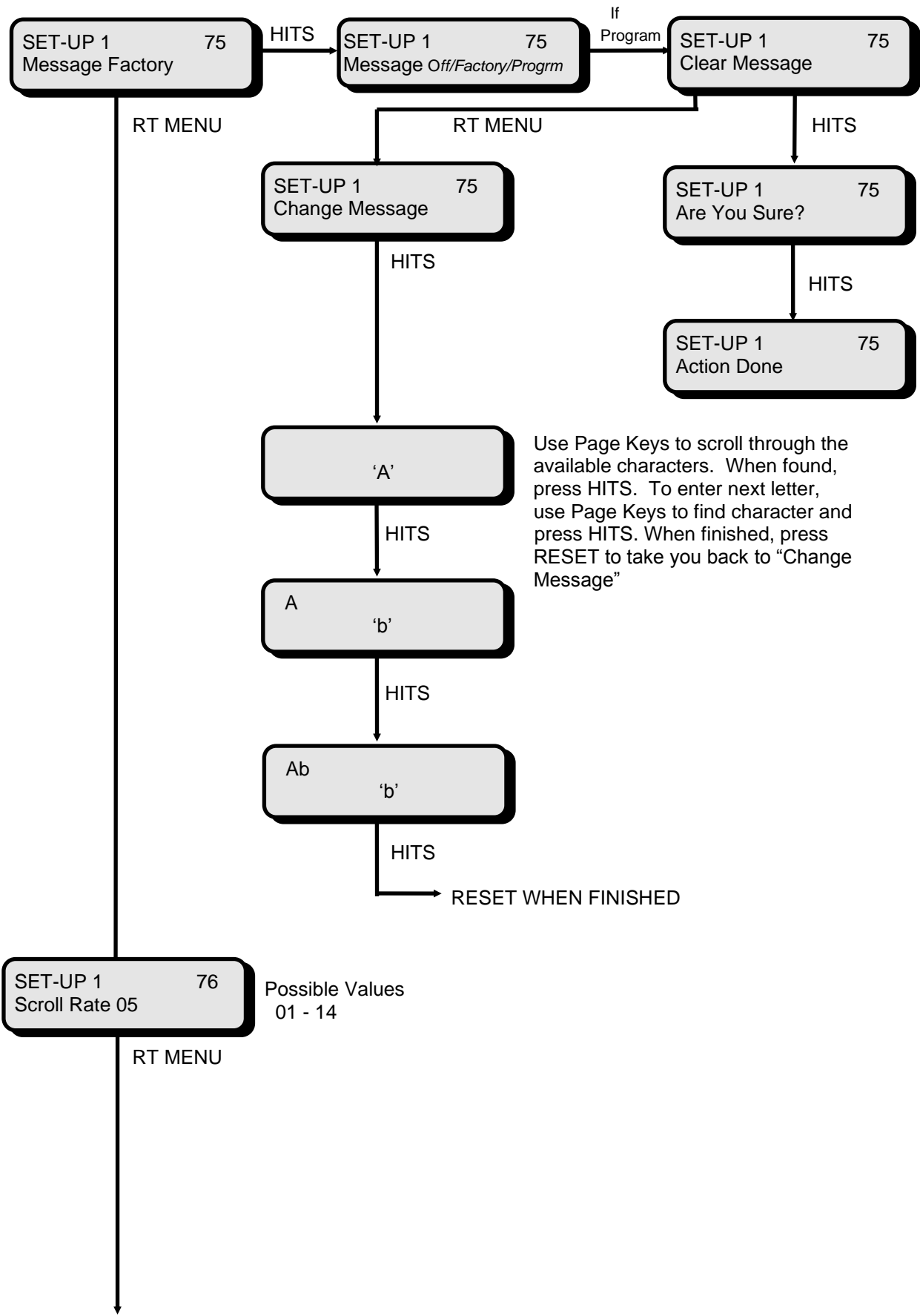
# PRICING

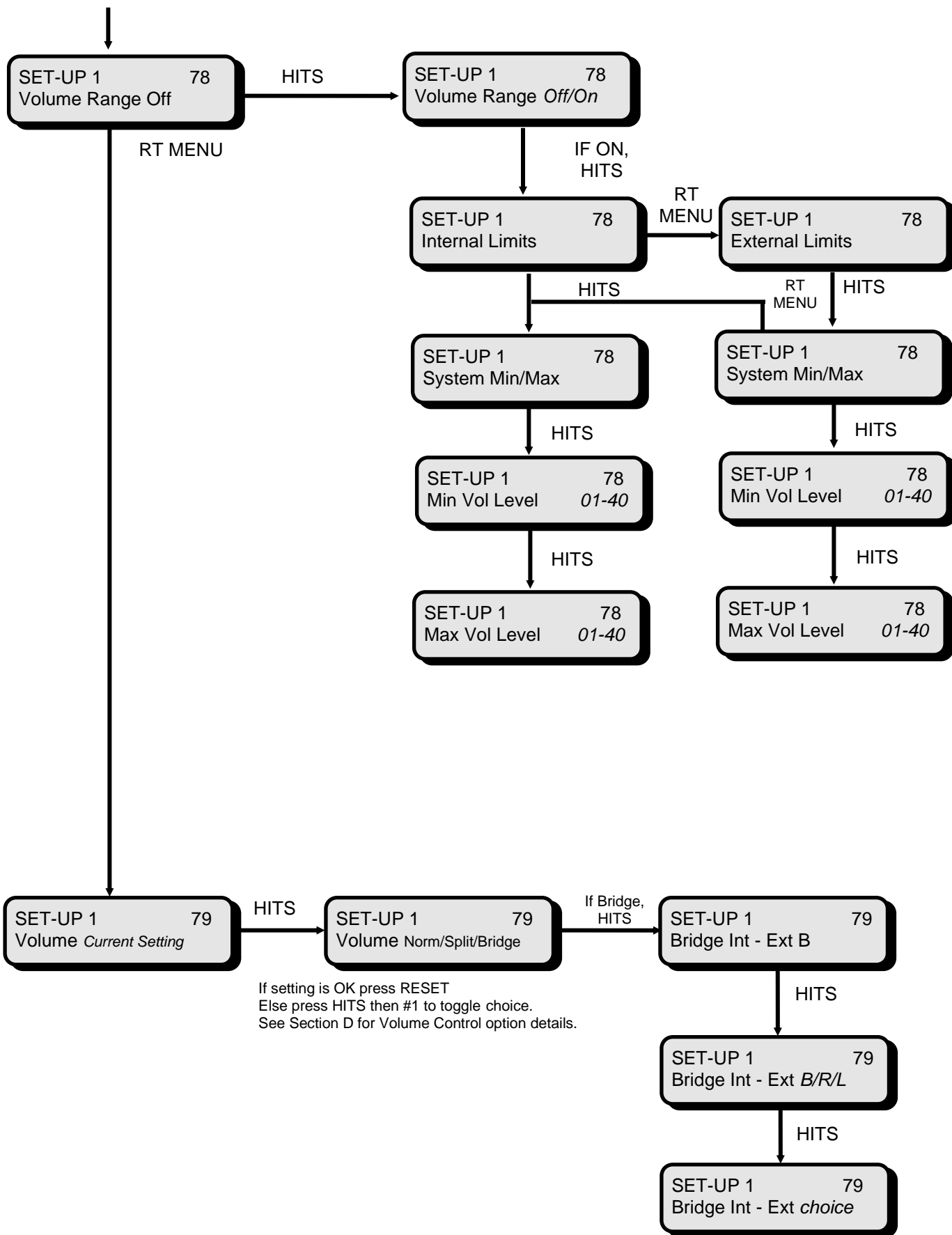




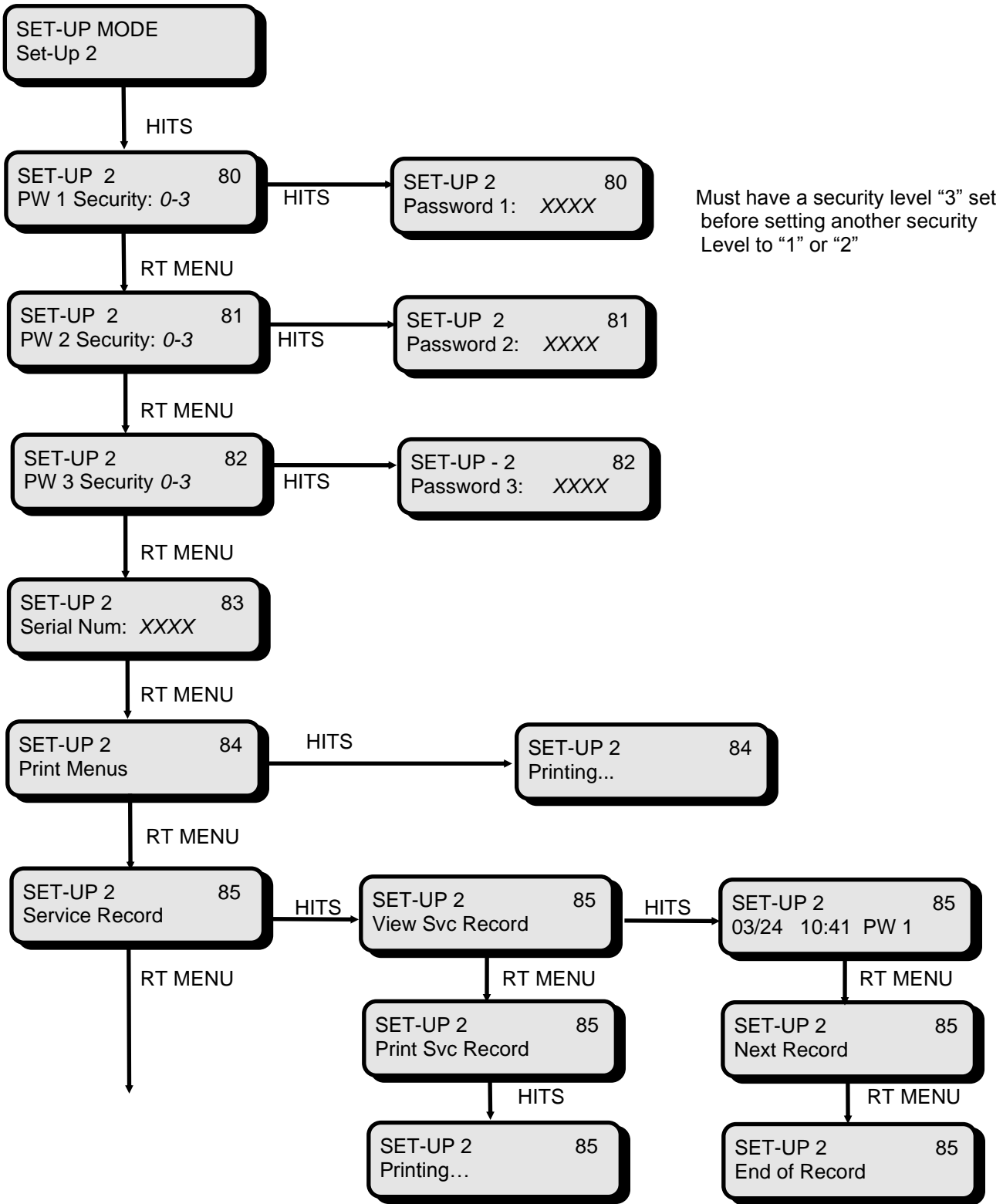
# SET-UP 1

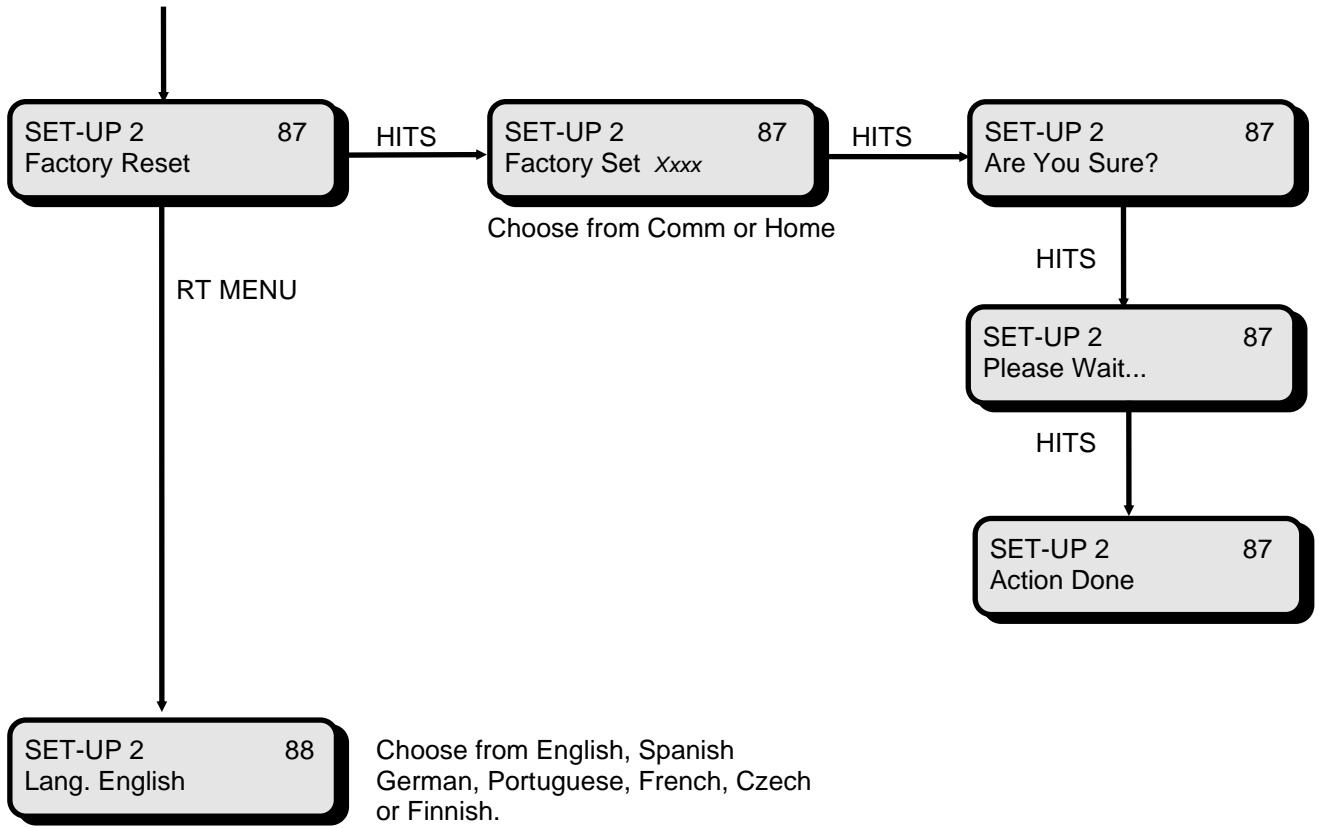




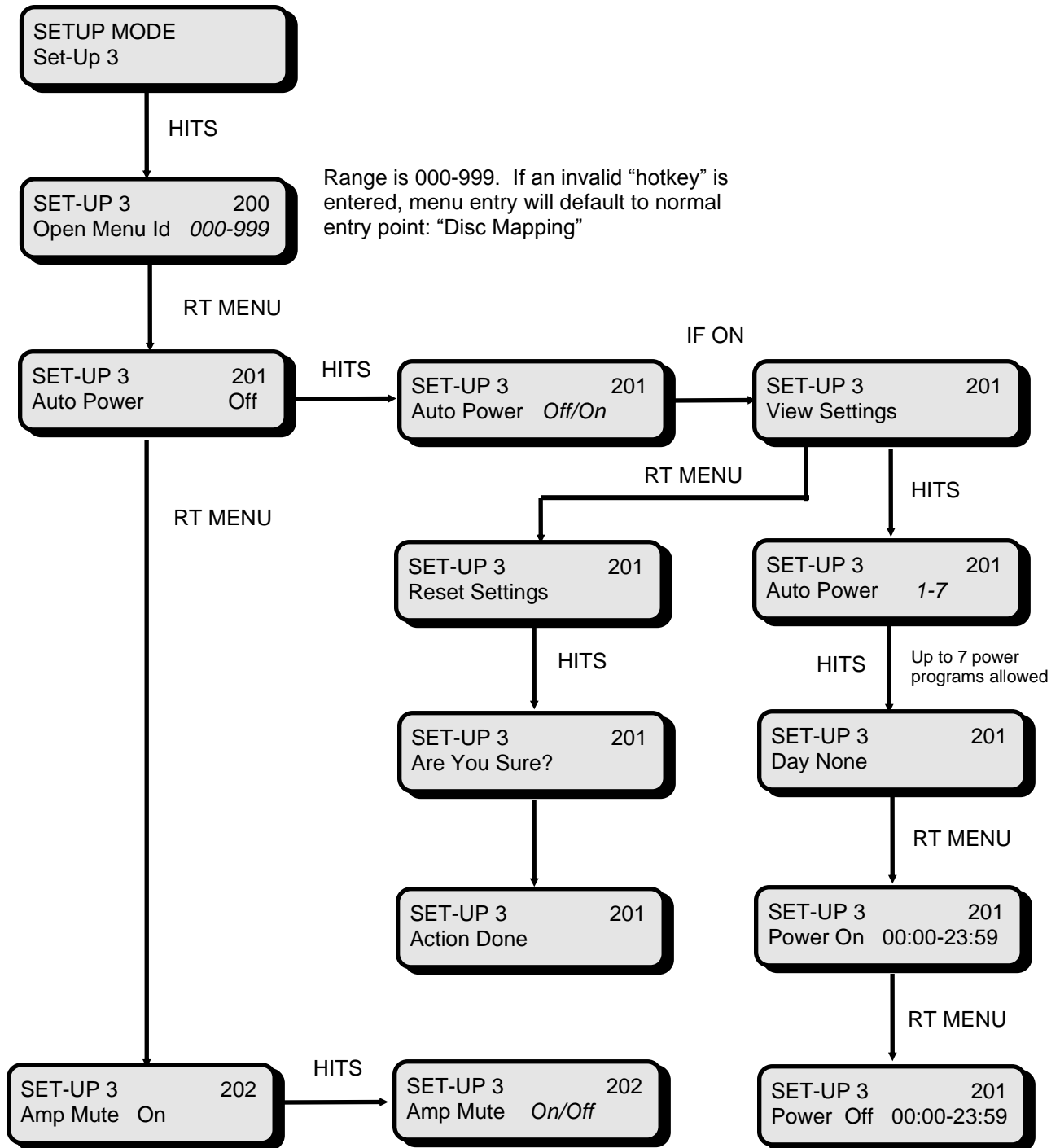


# SET-UP 2

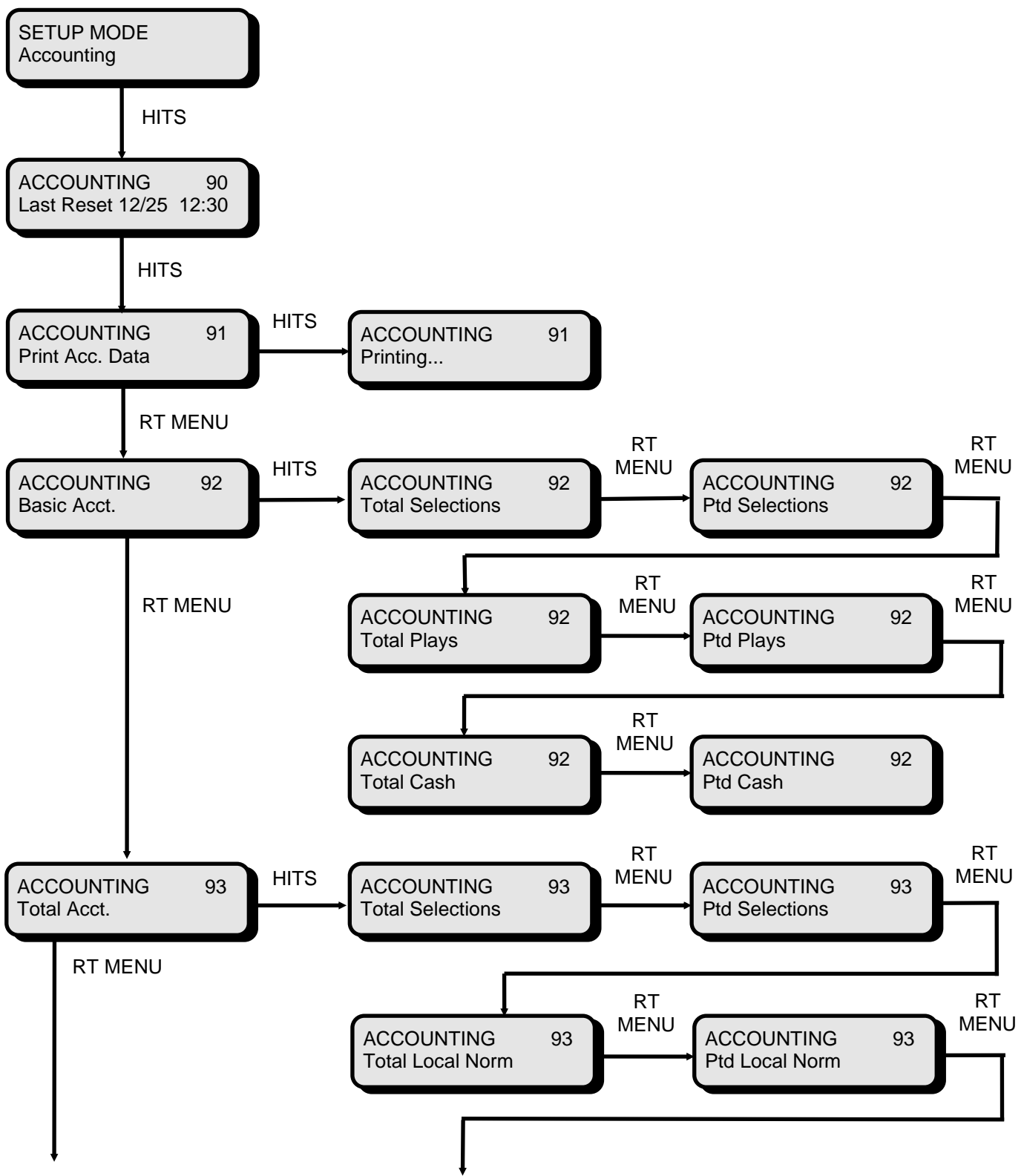


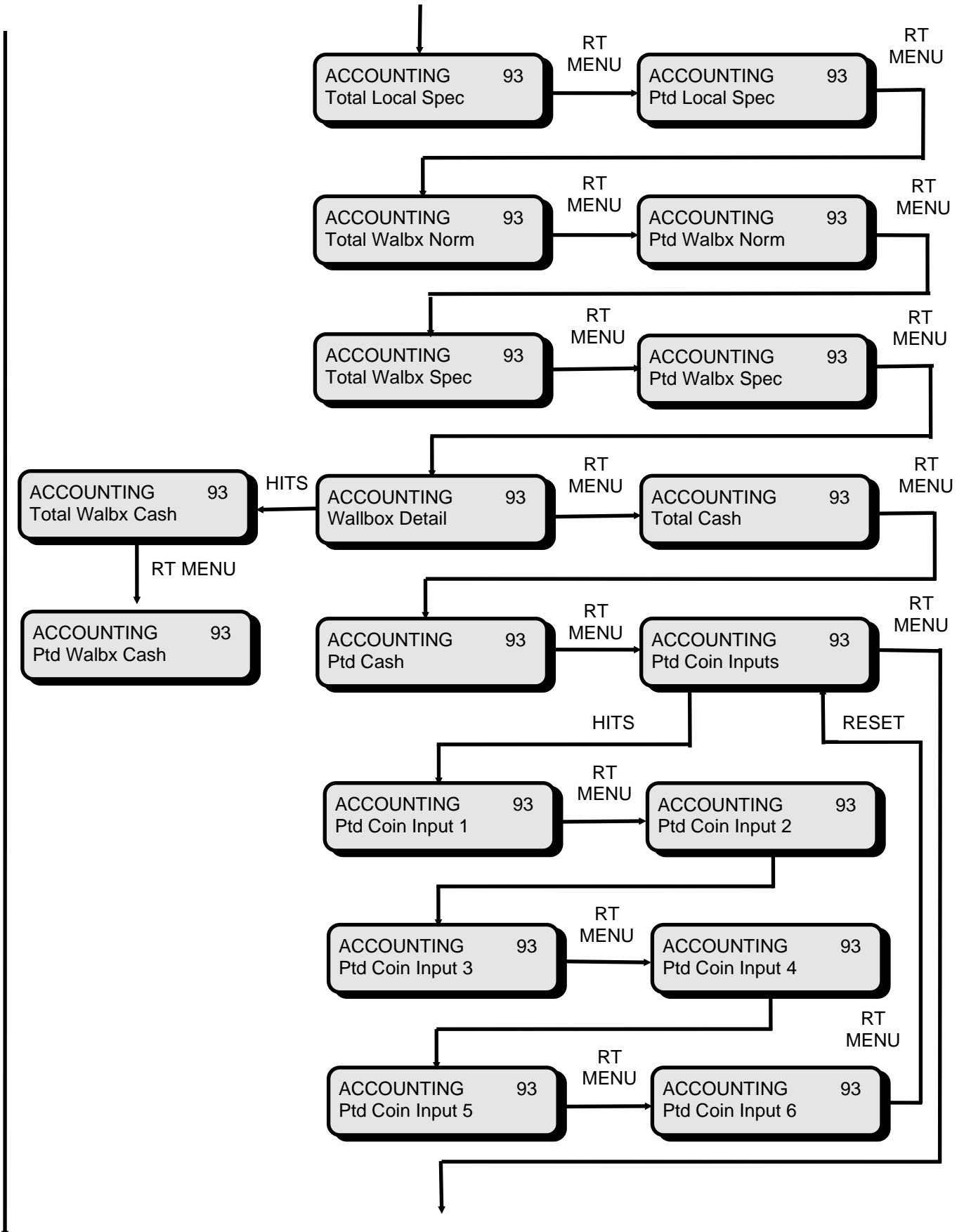


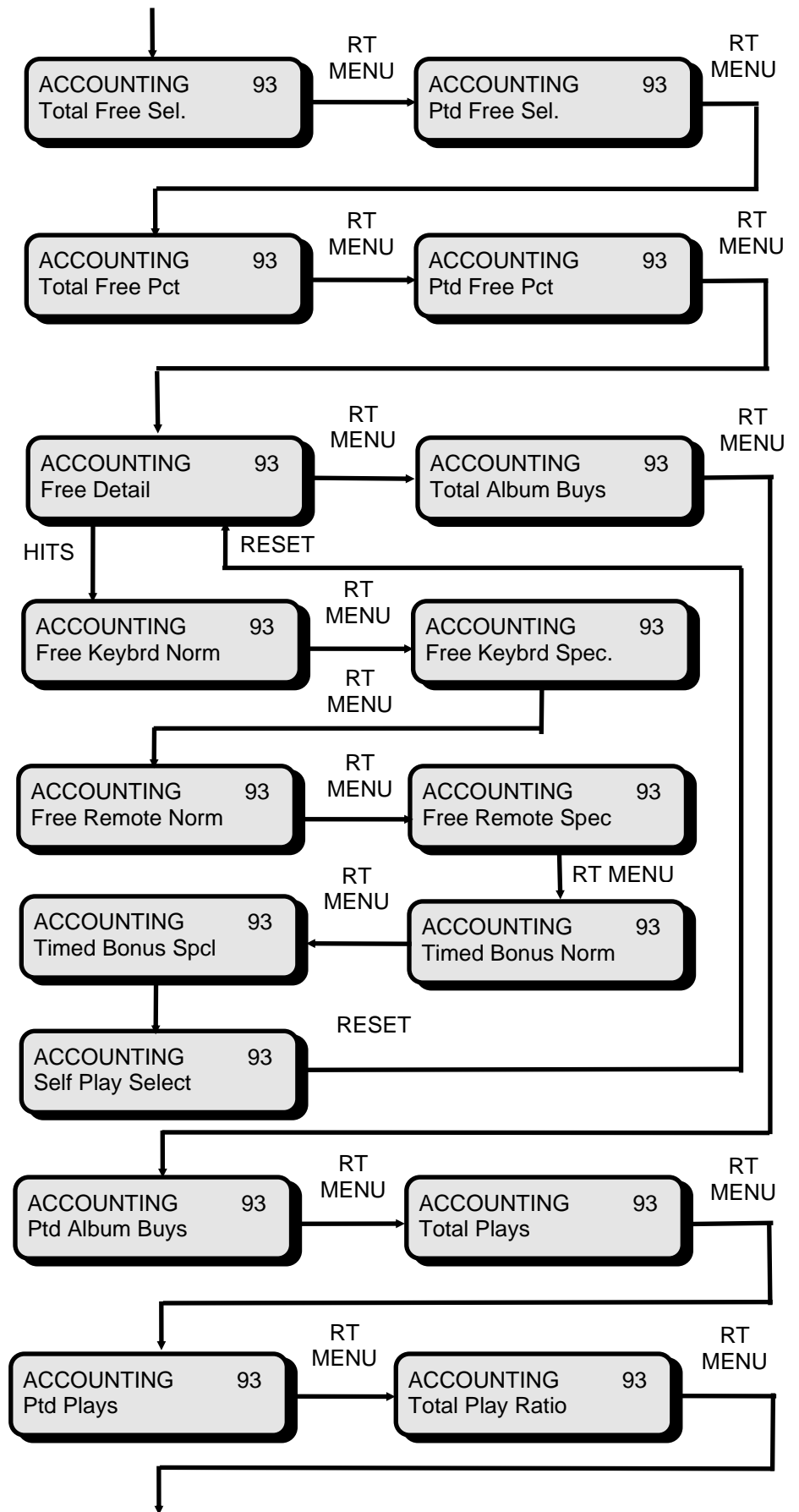
# SET-UP 3

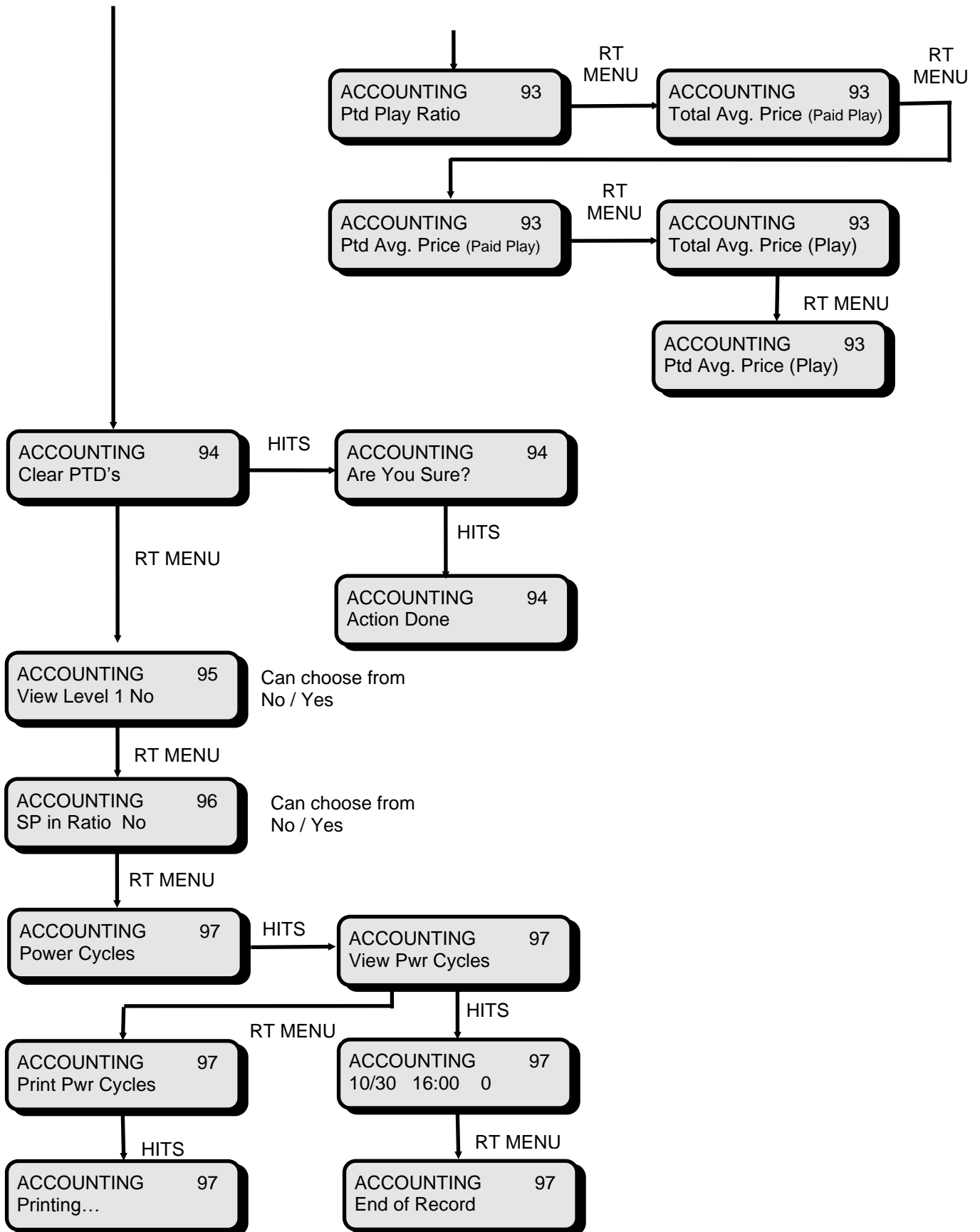


# ACCOUNTING

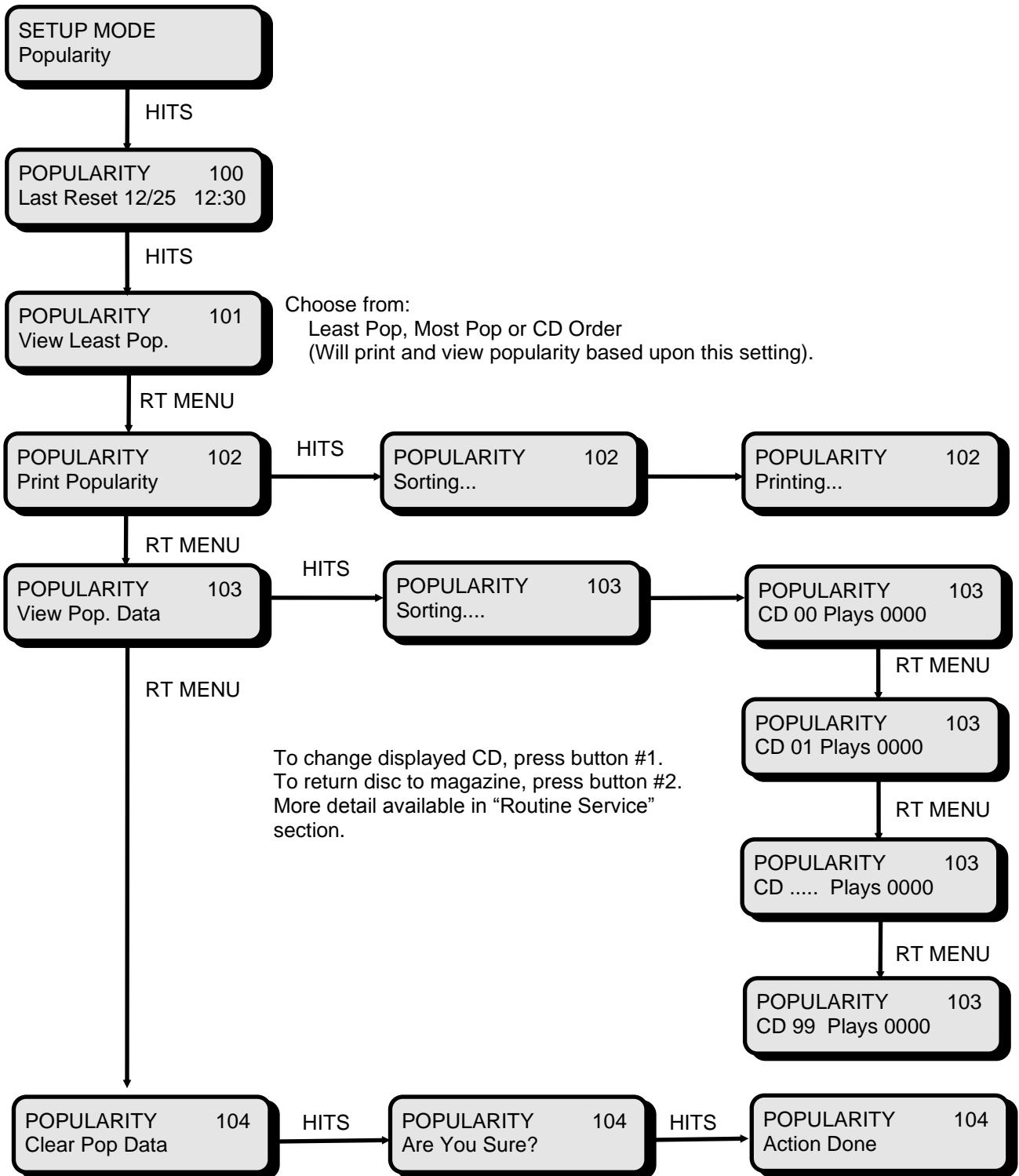




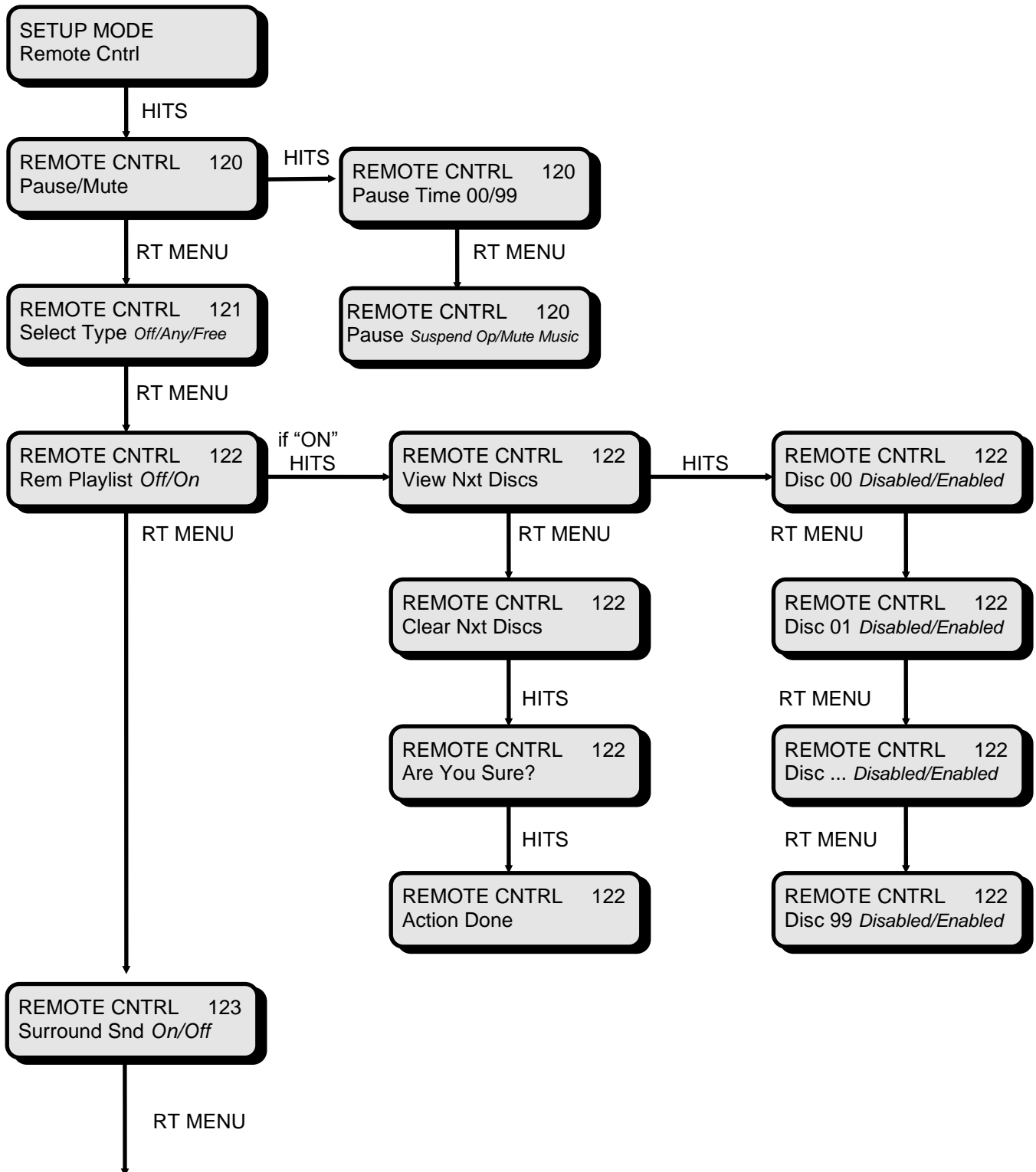


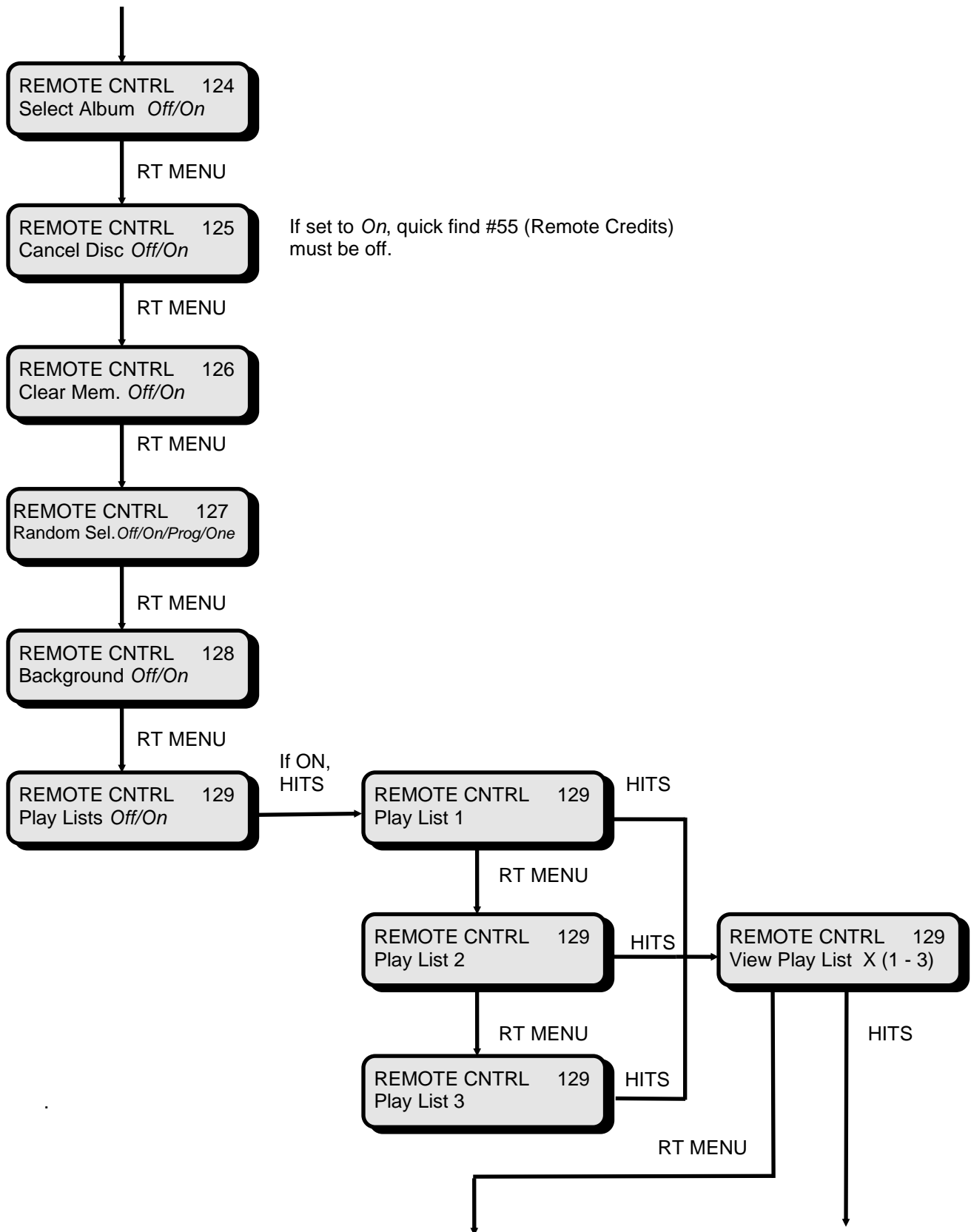


# POPULARITY

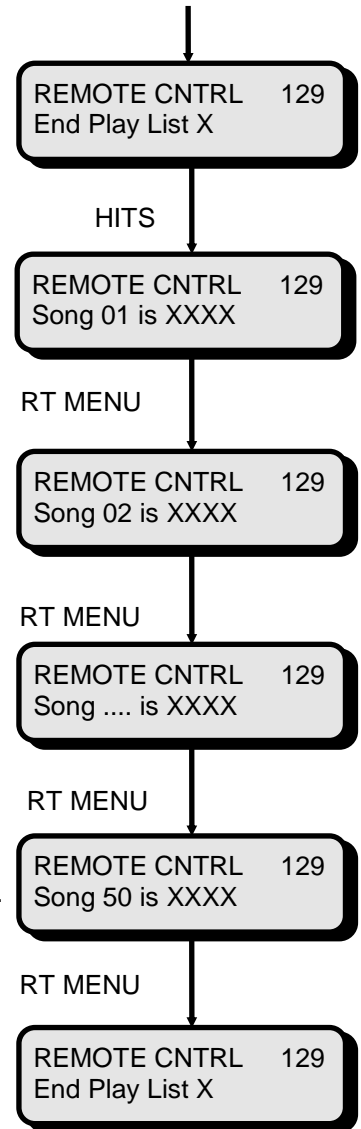
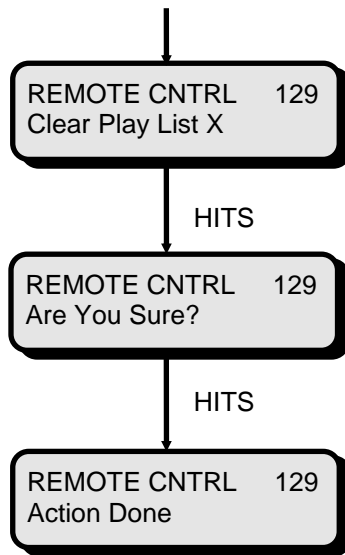


# REMOTE CONTROL





If set to *On*, quick find #55 (Remote Credits) must be off.

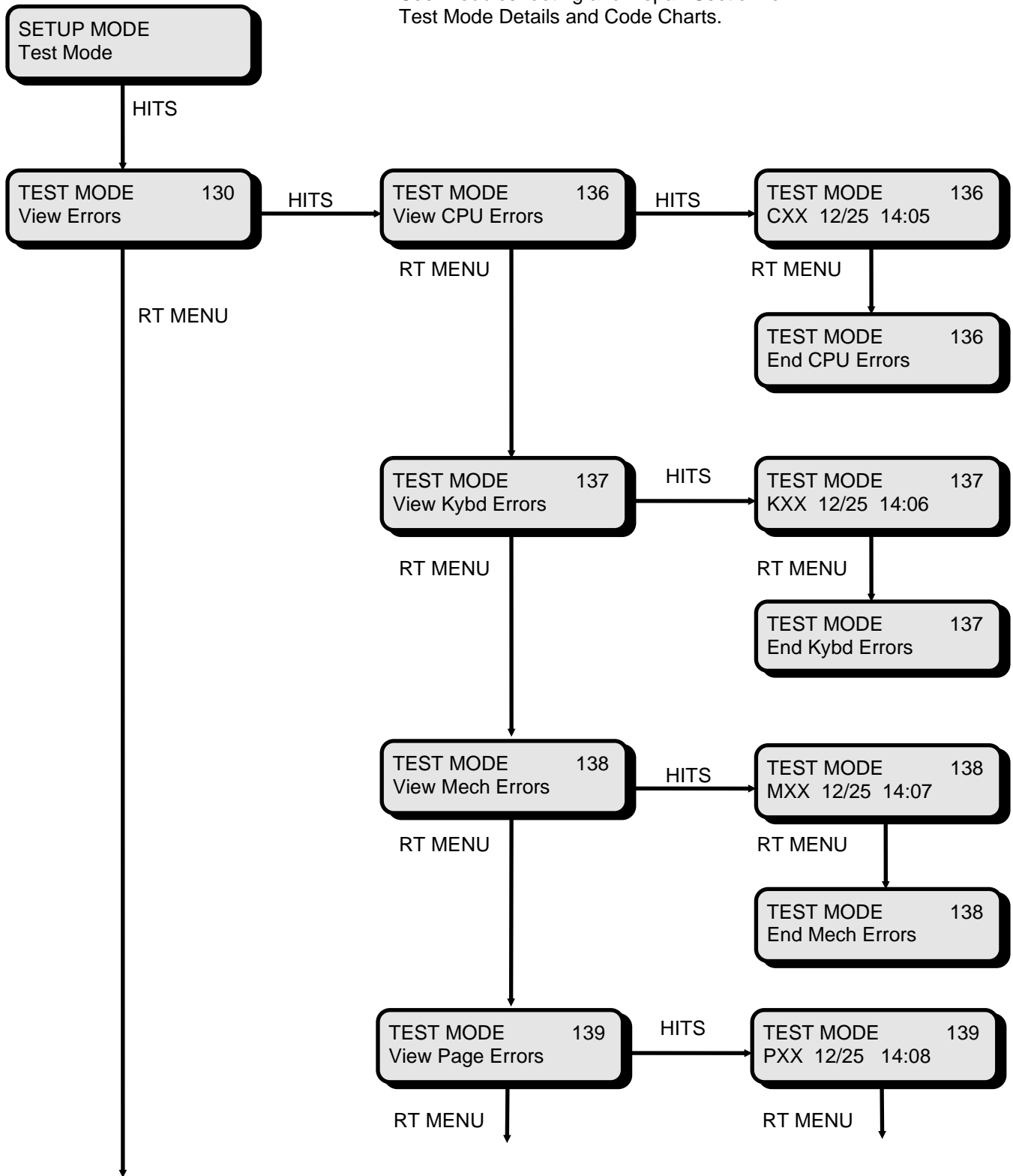


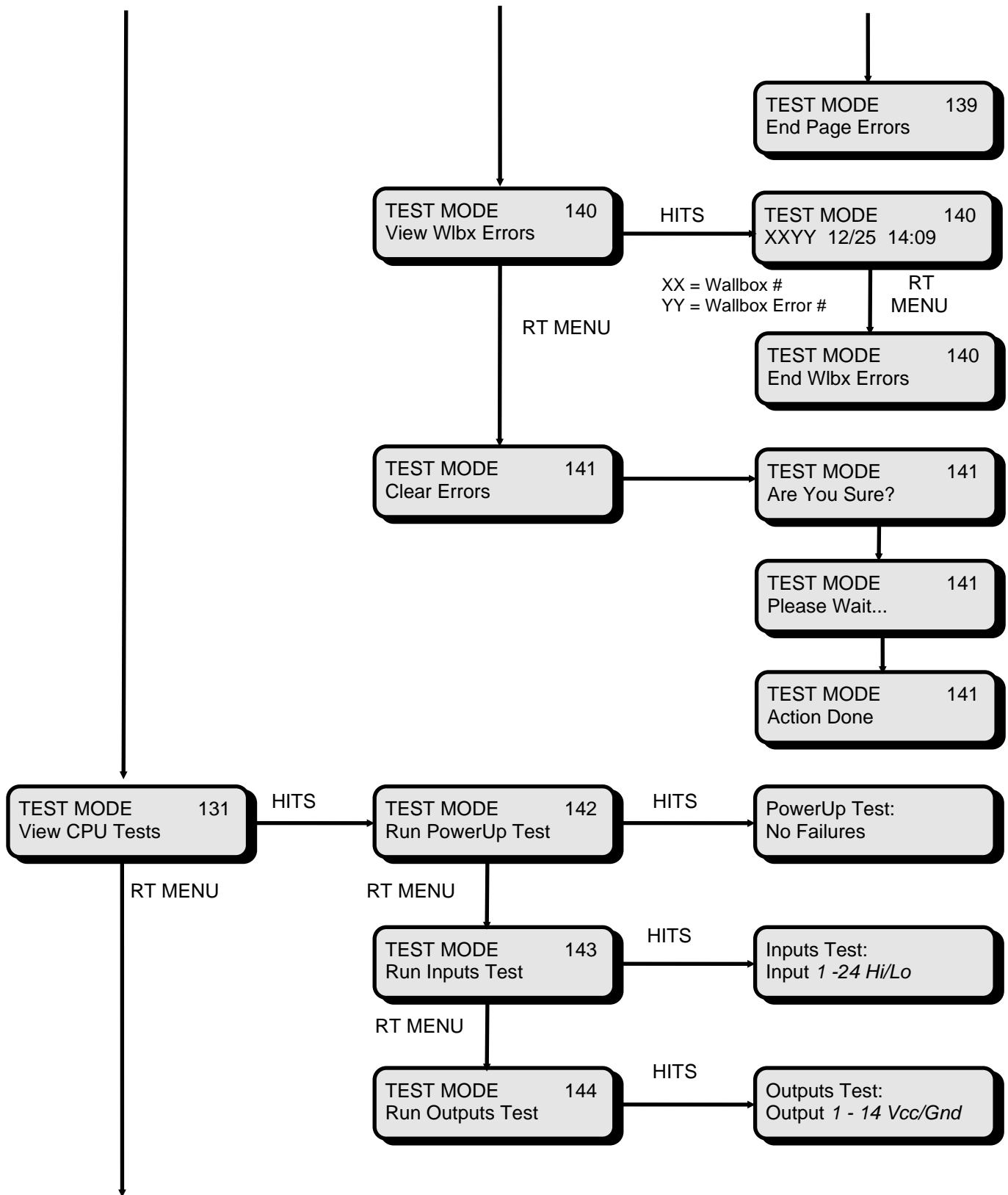
\*NOTE: To change a song entry: scroll to the entry, press hits, type in the selection number, then press hits.  
 To add an entry: scroll to the end of the list, press hits type in the selection number, then press hits.

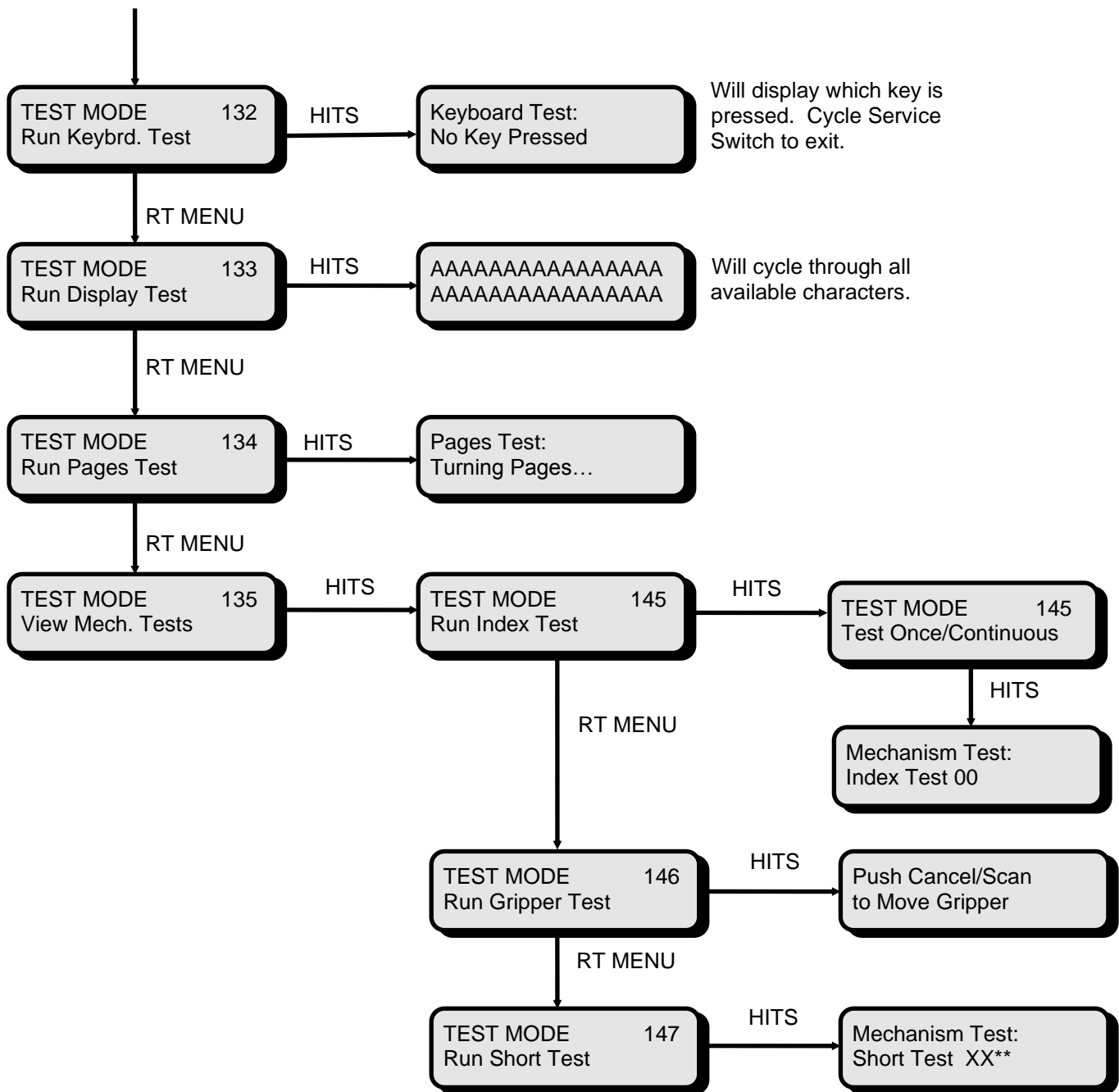
Up to 50 songs can be added to each play list.

# TEST MODE

See Troubleshooting and Repair Section for Test Mode Details and Code Charts.

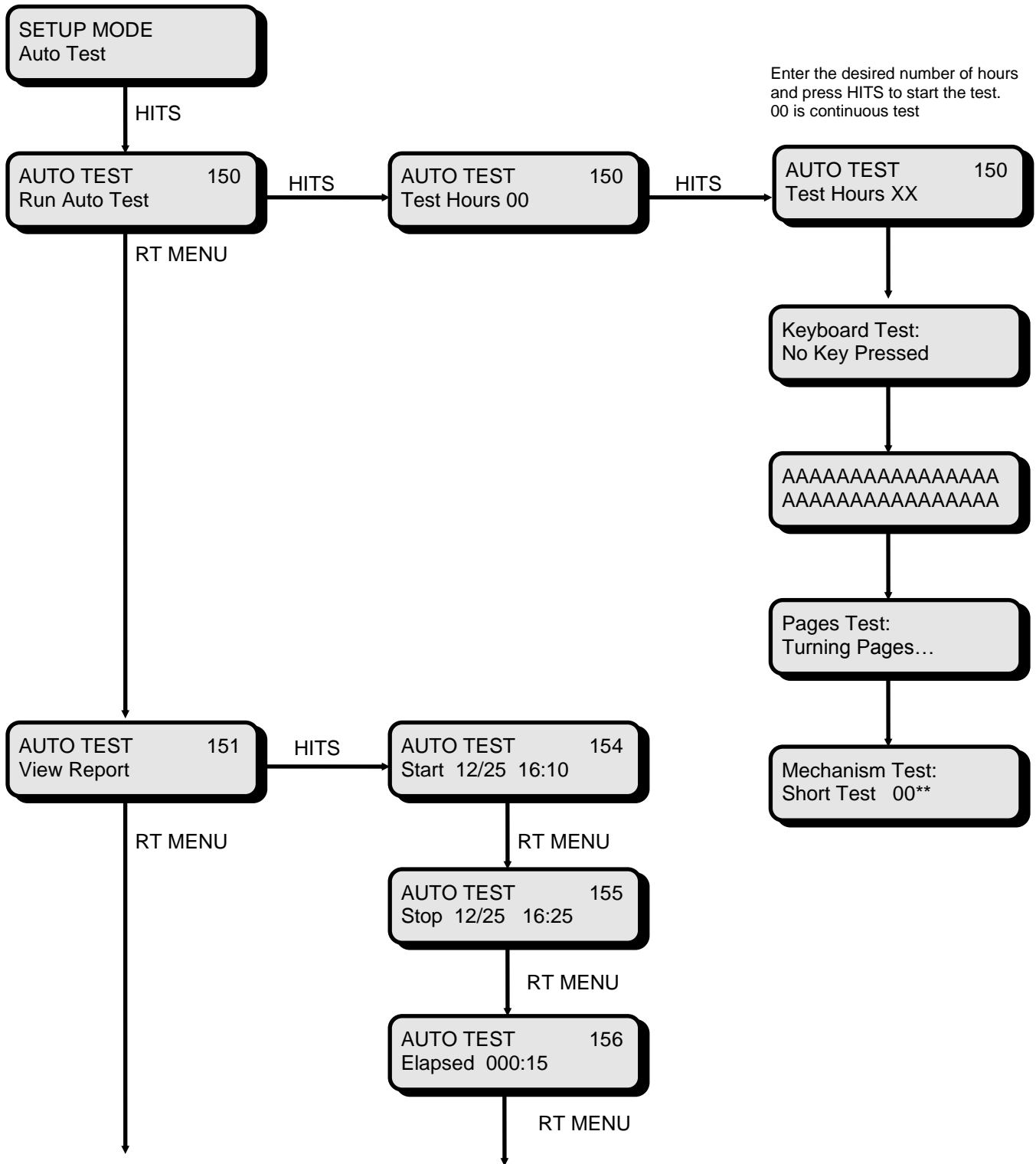


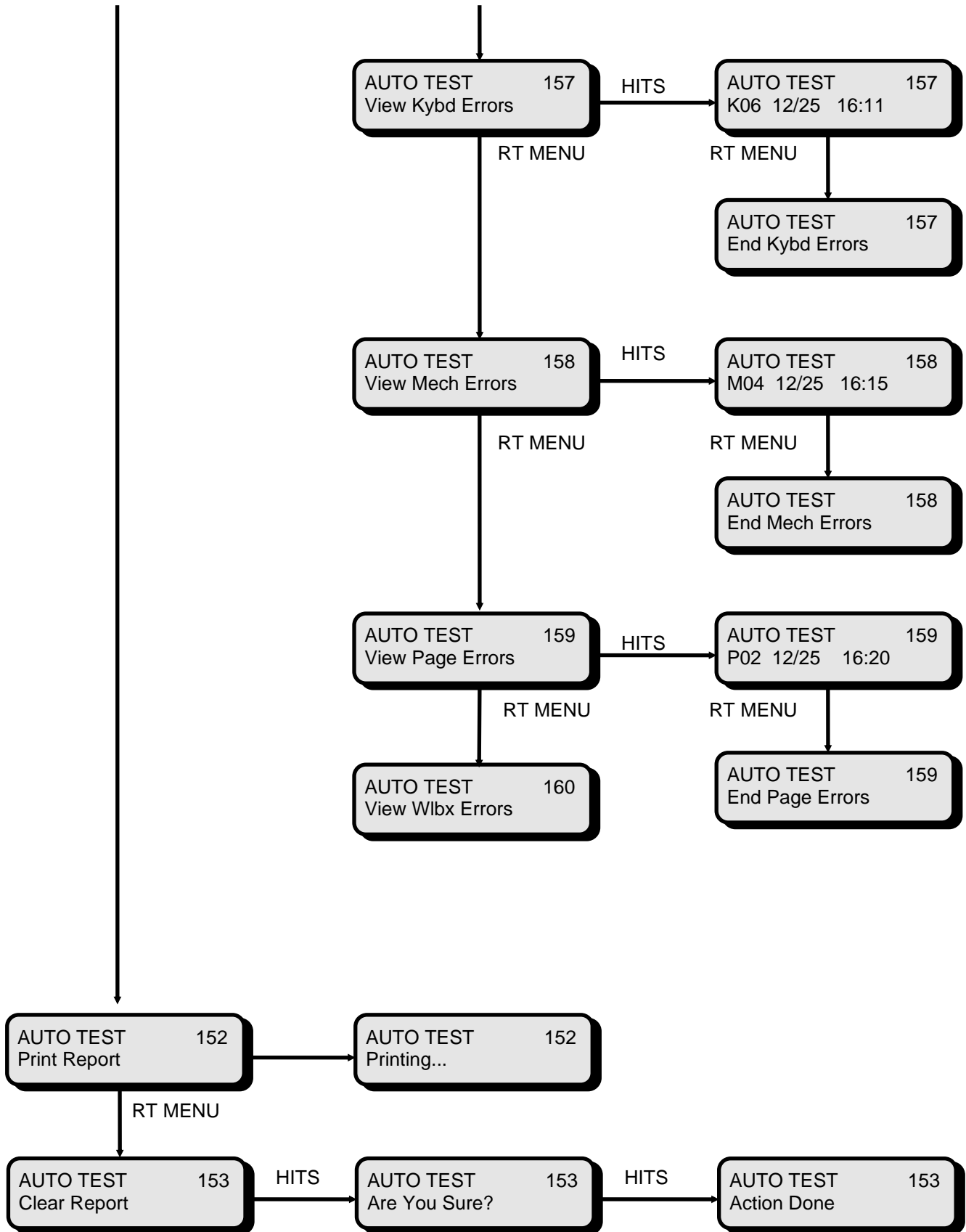




Short Test will pick up each record showing  
The slot number on the display

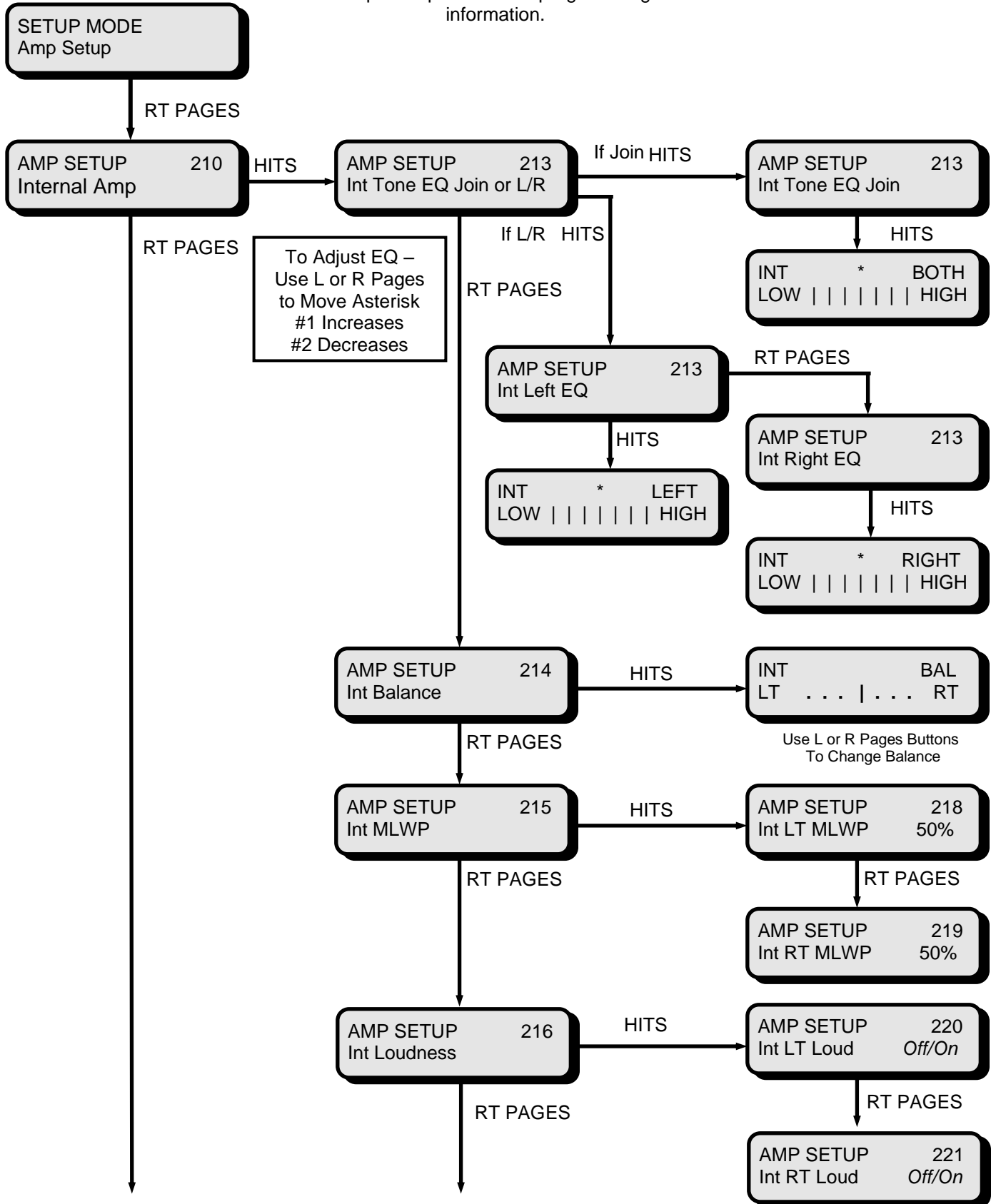
# AUTO TEST

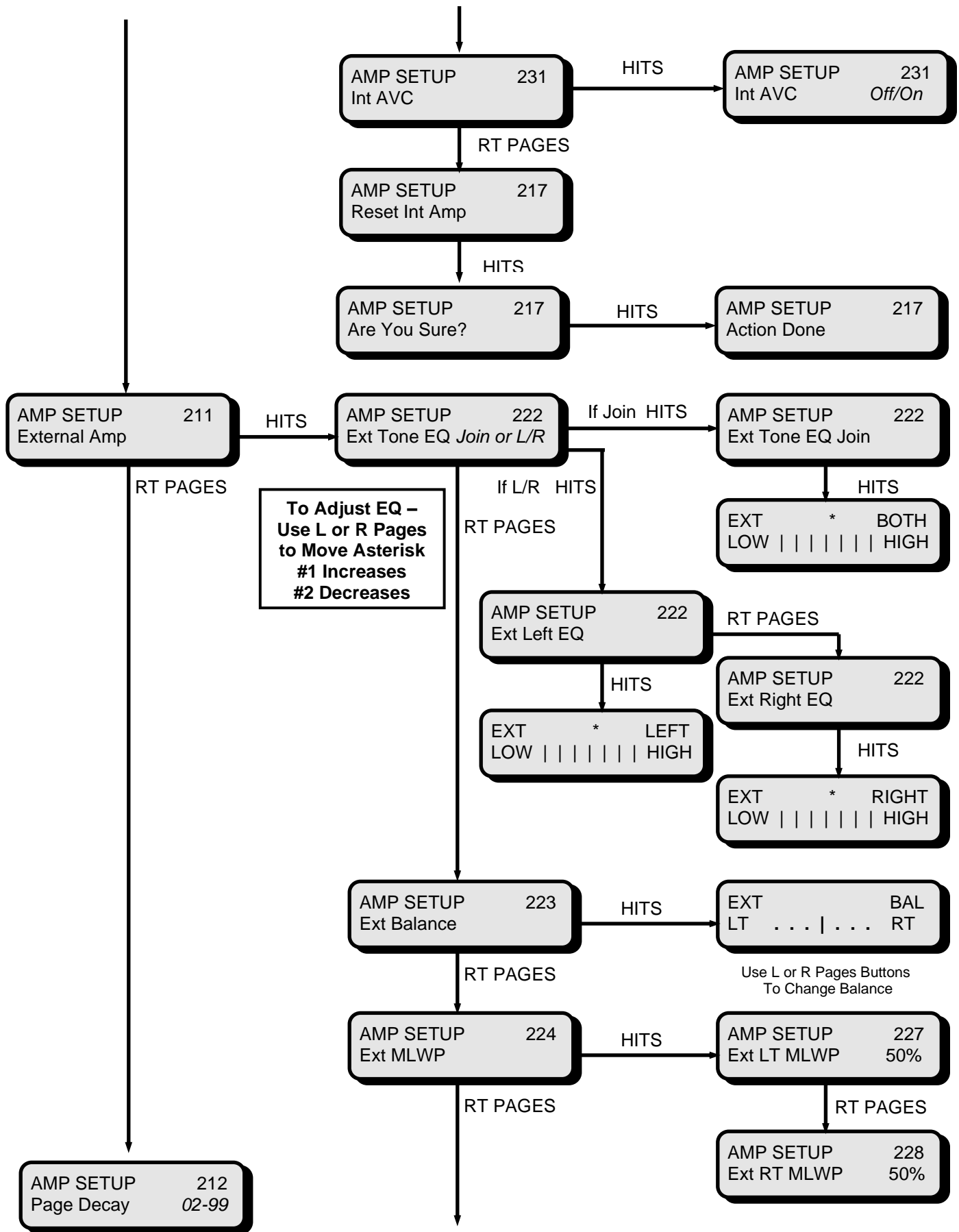


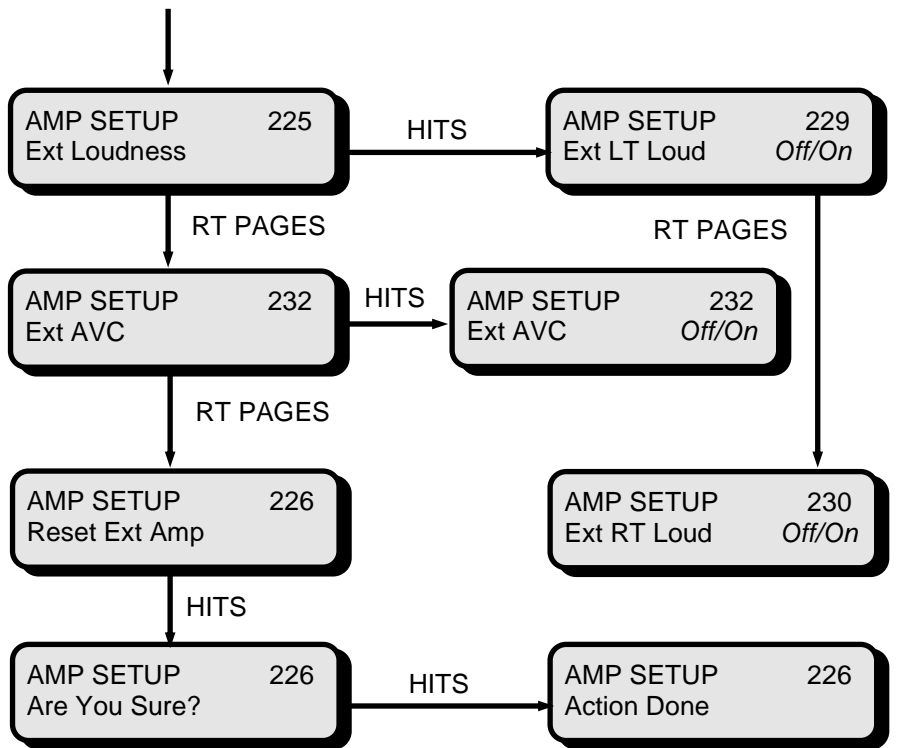


# AMP SETUP

See Section D of this manual for detailed amplifier operation and programming information.









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**F**

## Routine Service

- Accounting and Disc Changing
- Appearance & Preventative Maintenance
- Checking for Errors

## Accounting and Disc Changing

This section is intended to familiarize you with the data the SyberSonic Electronics system provides. When used properly, this data will give you the information you need to be able to maximize the income potential of your Rock-Ola Jukebox.

Appearance and preventative maintenance considerations are also discussed.

## Accounting and Popularity

Rock-Ola's SyberSonic Operating System has many accounting and popularity features. These include basic and detailed accounting data along with disc popularity data that can be configured to be viewed and/or printed in least popular, most popular or in magazine order.

This section will define and discuss the use of audit and popularity data. See Section E for access instructions and a graphical representation of the Accounting and Popularity Features.

## Accounting

**90 Last Reset** - This is the date and time the period to date audit data was last reset. This data can be used to calculate the number of days that have passed since the last audits were done.

**91 Print Accounting Data** - This feature causes the accounting data to be "sent" to the SyberSonic's IR printer port for use with the optional Data Printer Kit. (Rock-Ola part number 02377-01). See your distributor for details on the Data Printer Kit.

**92 Basic Accounting** - Simple readouts showing selections, plays and cash. This data is broken down into resettable period to date (Ptd) and non-resettable Total figures. The data is as follows:

**Total Selections:** This figure is the number of selections made over the lifetime of the jukebox. Non-resettable.

**Ptd Selections** - This figure is the number of selections made since the last reset. Resettable.

**Total Plays** - This figure is the number of songs played over the lifetime of the jukebox. Non-resettable. The difference between the songs selected and the songs played is the amount of overplay.

**Ptd Plays** - Number of songs played since the last reset. Resettable. The difference between the songs selected and the songs played is the amount of overplay.

**Total Cash** - The amount of money inserted (bills and coins) into the jukebox over the lifetime of the machine. Non-resettable.

**Ptd Cash** - The amount of money (bills and coins) inserted into the jukebox since the last reset. Resettable.

**93 Total Accounting** - Detailed readouts showing resettable (Ptd) and non-resettable (Total) figures for selections, plays and cash broken down by source. Sources include the jukebox keyboard, wallboxes and remote control.

**Total Selections:** Number of selections made from all sources over the lifetime of the jukebox. Non-resettable.

**Ptd Selections** - Number of selections made from all sources since the last reset. Resettable.

**Total Local Norm** - Number of "normal" selections made via the jukebox keyboard over the lifetime of the machine. Non-resettable.

**Ptd Local Norm** - Number of "normal" selections made via the jukebox keyboard since the last reset. Resettable.

**Total Local Spec** - Number of "special" selections made via the jukebox keyboard over the lifetime of the machine. (For definition of "special", see Quick Find #13 and #63 in the Quick Find Reference Programming Definitions section). Non-resettable.

**Ptd Local Spec** - Number of "special" selections made via the jukebox keyboard since the last reset. Resettable.

**Total Wallbox Normal** - Number of normal selections made via all wallboxes over the lifetime of the jukebox to which the wallboxes are connected. Non-resettable

**Ptd Wallbox Normal** - Number of normal selections made via all wallboxes since the last reset of the machine to which the wallboxes are connected. Resettable.

**Total Wallbox Spec** - Number of “special” selections made via all wallboxes over the lifetime of the jukebox to which the wallboxes are connected. Non-resettable

**Ptd Wallbox Spec** - Number of “special” selections made via all wallboxes since the last reset of the machine to which the wallboxes are connected. Resettable

**Wallbox Detail** - The amount of cash (coins and bills) inserted into wallboxes connected to the main jukebox.

**Total Wallbox Cash** - The total amount of cash inserted into wallboxes connected to the main jukebox over the lifetime of the main jukebox. Non-resettable.

**PTD Wallbox Cash** - The amount of cash inserted into wallboxes connected to the main jukebox since the last time the cash audits were reset. Resettable.

**Total Cash** - The amount of money (bills and coins) inserted into the jukebox over the lifetime of the machine. Non-resettable.

**Ptd Cash** - The amount of money (bills and coins) inserted into the jukebox since its last reset. Resettable.

**Ptd Coin Inputs** - This choice breaks down the money inserted into the jukebox by denomination as defined by the coin input settings. (See the definition for Quick Find #61 for details). Resettable.

**Ptd Coin Input 1** - The amount of cash inserted as sensed by coin input 1.

**Ptd Coin Input 2** - The amount of cash inserted as sensed by coin input 2.

**Ptd Coin Input 3** - The amount of cash inserted as sensed by coin input 3.

**Ptd Coin Input 4** - The amount of cash inserted as sensed by coin input 4.

**Ptd Coin Input 5** - The amount of cash inserted as sensed by coin input 5. *In the United States, this is the figure for the amount of money in quarters that has been inserted into the jukebox.*

**Ptd Coin Input 6** - The amount of cash inserted as sensed by coin input 6. *In the United States, this is the amount of money in bills (\$1 & \$5) that has been inserted into the jukebox.*

**Total Free Sel.** - Number of selections that have been made for free over the lifetime of the jukebox. Non-resettable.

**Ptd Free Sel.** - Number of selections that have been made for free since the last reset. Resettable.

**Total Free Pct** - The percentage of all selections made that were made for free over the lifetime of the jukebox. Non-resettable.

**Ptd Free Pct** - The percentage of all selections made that were made for free since the last reset. Resettable.

**Free Detail** - Detailed information about the source and type of free plays. Resettable.

**Free Keyboard Norm** - Number of free “normal” selections made via the jukebox keyboard.

**Free Keyboard Spec.** - Number of free “special” selections made via the jukebox keyboard.

**Free Remote Norm** - Number of free “normal” selections made via the IR remote control.

**Free Remote Spec.** - Number of free “special” selections made via the IR remote control.

**Timed Bonus Norm** - Number of free “normal selections” made during the timed bonus period.

**Timed Bonus Spcl** - Number of free “special” selections made during the timed bonus period.

**Self Play Select** - Number of selections made via the jukeboxes "self-play" features.

**Total Album Buys** – Not Applicable

**Ptd Album Buys** - Not Applicable.

**Total Plays** - Number of songs played over the lifetime of the machine. Non-resettable.

**Ptd Plays** - Number of songs played since the last reset. Resettable.

**Total Play Ratio** - The ratio of songs selected versus the number of songs actually played over the lifetime of the machine. This ratio is the "overplay" ratio. The higher this ratio, the more the overplay is. Non-resettable.

**Ptd Play Ratio** - The ratio of songs selected versus the number of songs actually played since the last reset. This ratio is the "overplay" ratio. The higher this ratio, the more the overplay is. Resettable.

**Total Average Price (Paid Play)** - The calculated average price per song based on paid play only over the lifetime of the machine. Non-resettable.

**Ptd Average Price (Paid Play)** - The calculated average price per song based on paid play only since the last reset. Resettable.

**Total Average Price (Play)** - The calculated average price per song based on paid and free play over the lifetime of the machine. Non-resettable.

**Ptd Average Price (Play)** - The calculated average price per song based on paid and free play since the last reset. Resettable.

**94 Clear Ptds** - Clears all period to date audit figures. Use this feature only after all desired data has been retrieved.

**95 View Level 1** - Allows the audit data to be viewed (but not cleared) while the machine is in security level 1. See the explanation for Quick Find #95 in the Quick Find Reference Programming Definitions found in section E of this manual.

**96 SP "Self Plays"** - If Yes, self plays are included in the the free percentage cal-

culations. *Total Free Pct* and *Ptd Free Pct* on prior page.

**97 Power Cycles** - Displays the date, time and if the jukebox power was cycled on or off. A sample display is:

10/30 10:06 1

which indicates the jukebox power was turned on at 10:06AM on October 30.

Another sample is:

10/31 02:05 0

which indicates the jukebox power was turned off at 2:05AM on October 31.

## Popularity

Popularity data compiled by the SyberSonic Electronics system provides you with the information necessary to determine what music is "working" (and not working) at the location in which the jukebox is installed. When used properly, this data will ensure that your jukebox never has any "stale" music installed.

**100 Last Reset** - The date and time the popularity was last reset. This information allows you to calculate the amount of time the popularity figures have had to accumulate. It is a good idea to reset the popularity data when a disc(s) have been changed in order to build new popularity data based upon the "new" CDs.

**101 View Pop.** - Select the direction you want to view the popularity. (To read the popularity data, use Quick Find 103). Choices are:

**Least** - View the record popularity in ascending order from the least played to the most played.

**Most** - View the popularity in descending order from the most played to the least played.

**Order** - View the popularity by slot number beginning with slot 00.  
Default Least.

**102 Not Used**

**103 View Pop. Data** - View the popularity data in the order based upon the setting in Quick Find 101.

**104 Clear Pop. Data** - Clears *all* the popularity data. Use only after the desired data has been retrieved and any new discs have been installed.

## Appearance and Preventative Maintenance

### Appearance

Over time, many operators have learned that one of the easiest ways to maintain maximum income from their jukeboxes is to simply keep them clean. We at Rock-Ola agree. That is the reason we designed the cabinet and exposed areas so that not only are they attractive and eye catching, cleaning them are fast and easy.

It is strongly recommended that at every routine service, the cabinet, glass and mechanism be cleaned. See Recommended Cleaning Supplies and Lubricants in Section G for a list of cleaning supplies.

It is also very important to make sure all of the lights, color wheels and animation features are working. These should be checked at each routine service.

### Preventative Maintenance

Rock-Ola SyberSonic Jukeboxes are designed and manufactured to provide years of trouble free operation. As with any mechanical device, some routine maintenance is required. However, SyberSonic Jukeboxes require very little. Basically, all that is necessary is to keep it clean and occasionally check a few adjustments.

Detailed preventative maintenance considerations can be found in Section G of this manual.

### Checking For Errors

Finally, one last thing to consider during routine service is to check the machine for proper operation.

Occasionally, as with anything mechanical, a malfunction may have occurred that for some reason the location did not communicate to you. In order to prevent the machine's income from suffering due to unreported malfunctions, the SyberSonic system has built-in diagnostic and error reporting features.

Sections G and H of this manual contain detailed maintenance and troubleshooting information.

It is recommended that the "error codes" be checked at every routine service. If any exist, the cause should be investigated and corrected as soon as possible. Many times a minor problem which can be easily corrected is ignored. That minor problem then becomes a major problem which should have never happened. Protect your income. Let the machine work for you. Use its features to *your advantage*.



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## Maintenance

- General Maintenance Considerations
- Preventative Maintenance
- Mechanical Adjustments
- Magazine Adjustments
- CD Player Adjustments
- Replacing Fluorescent Lamps

# G

## Maintenance

This section contains information about maintaining your Rock-Ola SyberSonic Jukebox. It covers general maintenance, preventative maintenance, mechanical adjustments, lubrication and cleaning.

**We strongly recommend that you contact your Dealer/Distributors Service Department for guidance before attempting any maintenance/repair task that you are not thoroughly familiar with.**

## General Maintenance Considerations

### Tools and Equipment

In order to properly maintain and repair the SyberSonic Jukebox, it is necessary to possess the correct tools and equipment. Following is a list of the basic tools and equipment recommended by Rock-Ola. This list contains only the items necessary to perform basic maintenance, troubleshooting and repair tasks. Other, more specialized, tools and equipment are necessary to perform more complex tasks.

- Nut Driver Set (3/16" through 1/2")
- 1/4" Slotted Screwdriver
- # 2 Phillips Screwdriver
- Long Nose Pliers
- Small Diagonal Cutters
- 1/4" Open End Wrench
- 3/8" Open End Wrench
- 1/2" Open End Wrench
- 6" Adjustable Wrench
- Volt/Ohm Meter with at least 20,000 Ohms per Volt impedance

### Cleaning Supplies and Lubricants

One of the most important factors in properly maintaining any equipment is keeping it clean and lubricated. The Rock-Ola SyberSonic Jukebox is no different. We recommend the following supplies be carried and used at any time the jukebox is serviced.

- Ammoniated Glass Cleaner
- Spray Furniture Wax
- Mild Detergent Solution
- Lint Free Wiping Cloth

- 1½" Paint Brush (For Dusting)
- Light Machine Oil
- White Grease

## Preventative Maintenance

In order to keep your Rock-Ola SyberSonic Jukebox running like new for many years, an occasional preventative maintenance routine is recommended.

The frequency at which the routine needs to be performed will vary based upon your local conditions, but we recommend annual maintenance.

This routine is basically a simple "clean up" and checking the mechanism index adjustment.

The Preventative Maintenance Routine is as follows:

- Check for errors. If any exist, investigate and correct the cause. See "Viewing Error Codes" in Section H for detailed instructions.
- Clean all dust and dirt from inside of cabinet and from mechanism.
- Clean All Records.
- Check Stylus (Needle). It is recommended to replace the stylus after 5000 plays.
- Lubricate the gripper assembly.
- Clean all glass inside and out. Clean and polish outside of cabinet.

## Mechanical Adjustments

The mechanism adjustments are inter-related. If the magazine motor, opto sensor, or control board is replaced, the adjustments should be checked. Read the instructions carefully before attempting the adjustments.

## Magazine Adjustments

Any adjustment made will change the settings of those following. Always check the indexing if any magazine adjustment is made.

### Magazine Band Adjustment

**WARNING**  
Adjust band with the magazine empty.

**ADVERTENCIA**  
Ajustar banda con el magazine vacío.

**AVERTISSEMENT**  
Ne réglez la bande que lorsque le magasin est vide.

Loosen adjustment screws to obtain approx. 1/32" gap between the magazine wire and the band. Re-tighten the screws. (Fig. 3G).

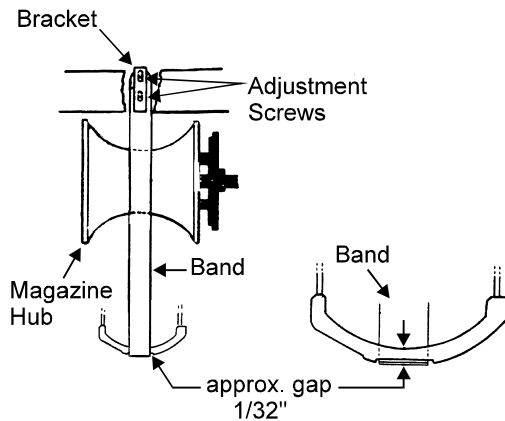


Figure 3G - Magazine Band Adjustment

### Gripper Rest Adjustment

Rotate the magazine until the inner gripper "V" is centered between two magazine separator wires. Adjust the gripper rest bracket so the gripper arm tip is centered between the wires and falls freely into the rest slot. (Fig. 4G).

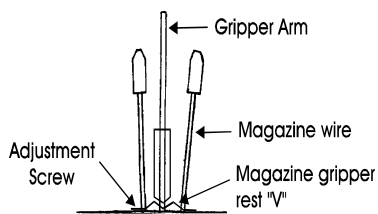


Figure 4G - Gripper Rest Adjustment

### Magazine Motor Gear Mesh Adjustment

Magazine rotational play must be less than 1/16". If the play exceeds 1/16", loosen the magazine motor and slide it toward the magazine gear.

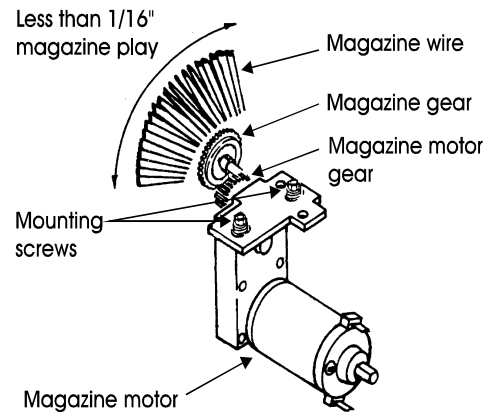


Figure 5G - Magazine Motor Gear

### Magazine Indexing Adjustment

**WARNING**  
Insert worthless records in slots 00, 01, 49, 50, 98, 99.

**ADVERTENCIA**  
Insertar discos dañados en compartimentos 00, 01, 49, 50, 98, 99.

**AVERTISSEMENT**  
Insérez les disques endommagés dans les fentes 00, 01, 49, 50, 98, 99.

### Mechanism Adjustments.

**WARNING:** Unplug the power cord to the Pre-amplifier before attempting any mechanism work.

**ADVERTENCIA:** Desenchufe el cable de alimentación del preamplificador antes de intentar cualquier mecanismo de trabajo.

**AVERTISSEMENT:** débranchez le cordon d'alimentation du préamplificateur avant d'essayer de faire fonctionner un mécanisme.

**NOTE:** Most adjustments may be made with the mechanism in place. Indexing adjustments need to be done with the mechanism moved forward in the cabinet.

**Run Index Test (Quick Find #145):** If the record is not being gripped exactly between the magazine wires, the indexing needs to be adjusted.



Adjustment #1 Inner Gripper. Remove records from slots 100-105, 47-53, 95-99. Select 100. As soon as the gripper starts to close, stop it using the service switch. Inspect the position of the inner gripper. It must be in the center of the wires.

If it is not, loosen the optic locking screws on the back of the mechanism. See Figure 2. Turn the adjusting screw (Figure 3) clockwise to move the stopping point earlier or counter-clockwise to move the stopping point later. Tighten the locking screws and repeat the test selecting 200. Keep repeating this procedure alternating between 100 and 200 until the stopping point is correct. Test at slots 149 and 199 as well.

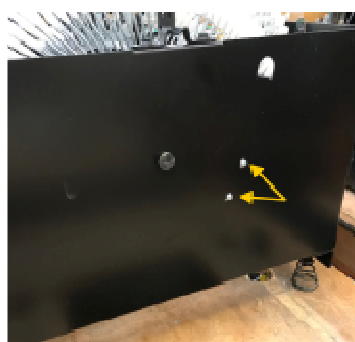


Figure 2

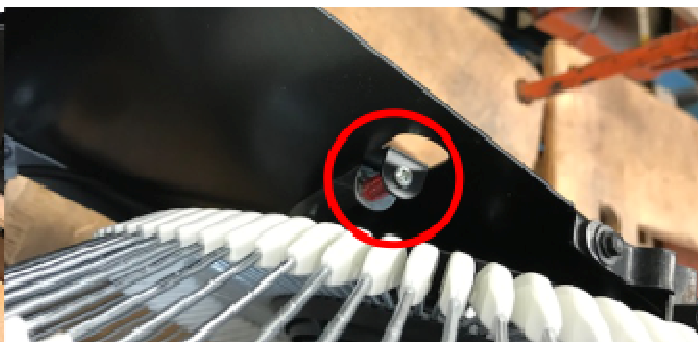
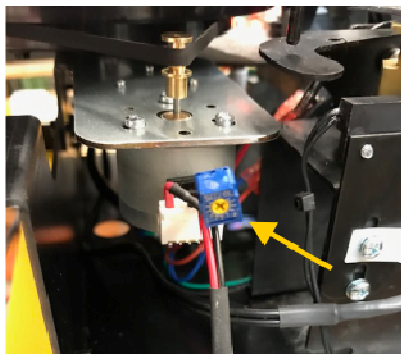


Figure 3



Adjustment #2 Outer Gripper. When the inner gripper is correct, be sure the outer gripper is lined up with the center of the wires too. Select 100. Stop the motor when the gripper closes. Loosen the gripper rest screws to move the rest back and forth to center the outer gripper.

Adjustment #3 Index test. Put records in 100, 101, 149, 150, 198, 199. Enter setup mode and select test 145. Run the test once being sure the records are pulled and put back into the slots correctly. Repeat steps 1 and 2 if not.

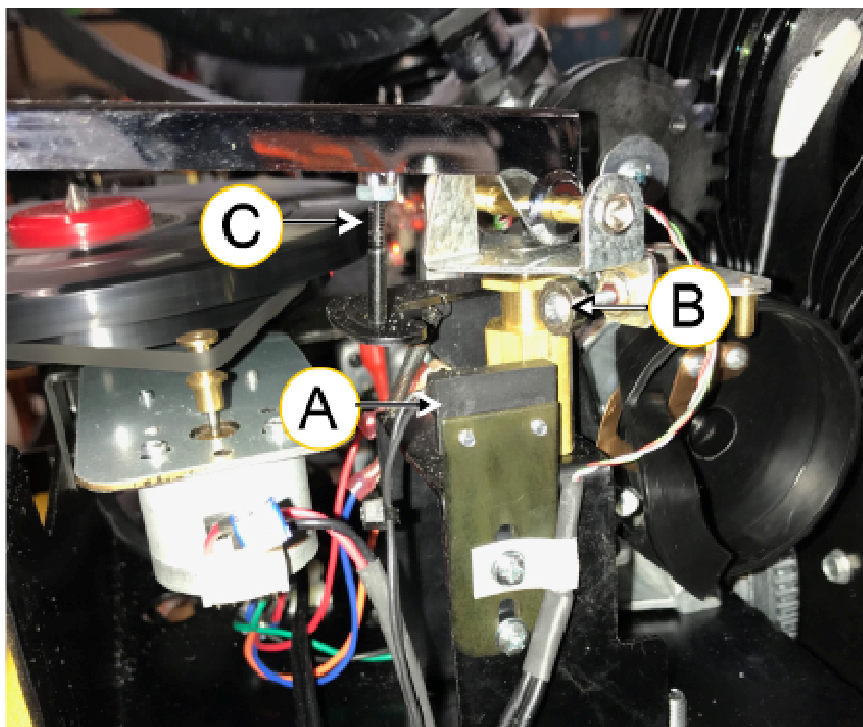
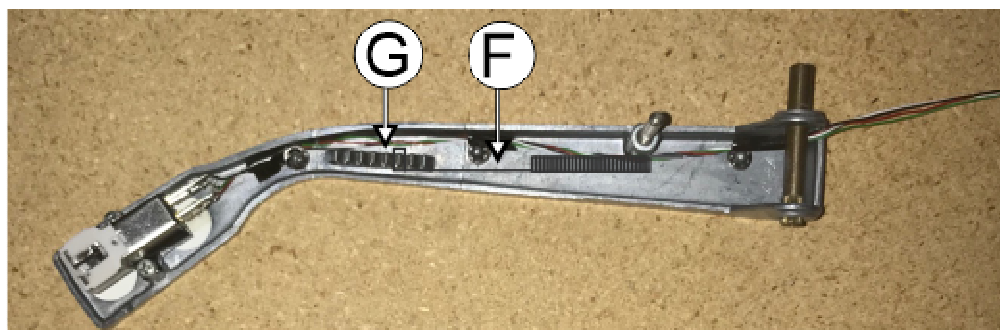


### TURNTABLE SPEED

The turntable motor has an electronic speed control. Speed may be adjusted with a trimmer potentiometer on the motor connector. With a strobe disc and a neon light source, adjust the speed until the lines on the disc appear stationary. Free discs are available from [vinylengline.com](http://vinylengline.com). Be sure to use the one for 50hz or 60hz power.

### STYLUS PRESSURE

The stylus pressure should be 4-5 grams. To adjust, move spring "F" to different lugs "G". Each lug is approximately 1 gram.

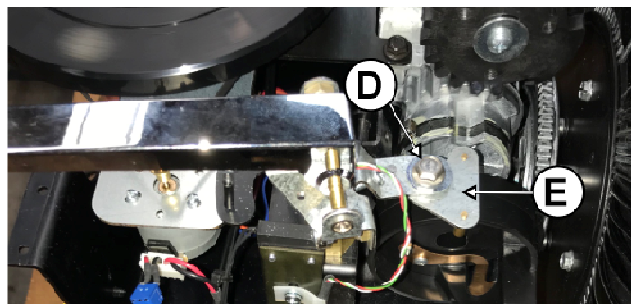


### RECORD REJECT

The Rock-Ola mechanism uses a magnetic sensor to cancel the record at the end. See Figure 6. When magnet "B" is over sensor "A" the sensor closes and signals the computer to start the reject cycle. To adjust, turn the magnet screw clockwise to make it reject later. Turn it counter-clockwise to make it reject sooner.

### TONE ARM HEIGHT

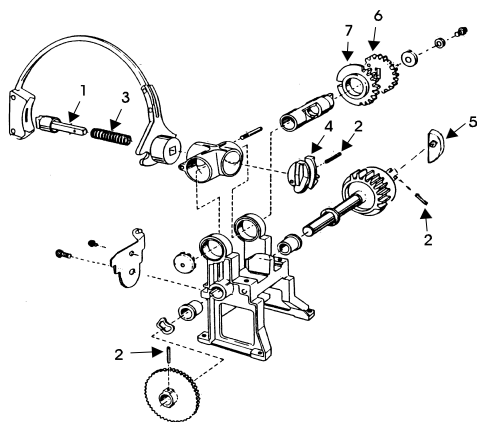
Tone arm height should be set so the stylus clears the gripper arm by approximately 1/8". To adjust, select record 200. Stop the mechanism when the stylus is over the gripper arm. Locate lift pin "C". Loosen the locknut and turn the pin to the correct height. Tighten the locknut.

**STONE ARM SET DOWN**

The stylus should touch down 1/16" in from the edge of the record. To adjust, make a selection and stop the mechanism just before the tone arm is lowered. Loosen locking screw "D". Hold pin guide "E" against the cam and move the tone arm as necessary. Tighten the locking screw.

**Lubricating of Gripper Unit**

1. Push on inner gripper #1 to expose pin #2.
2. Remove pin #2.
3. Remove inner gripper #1, spring #3, and reversing assembly #4.
4. Remove cam #5.
5. Scribe gear #6 and gear #7 so they can be replaced the same way.
6. Remove gear #6.
7. Wash all parts and the gripper housing in a solvent suitable for removing all old lubricant.
8. Re-lubricate all moving parts at their mating points with a light coat of white grease, Rock-Ola part number ST-09126 or equiv.
9. Re-install parts in reverse order.

**Gripper Assembly****Replacing LED Lamps****CAUTION**

The jukebox utilizes special LED lamps. Always disconnect the power to the lighting when replacing lamps. Only use genuine Rock-Ola replacement lamps.

**PRECAUCIÓN:**

La Rockola utiliza lámparas LED especiales. Siempre desconecte la maquina de la corriente cuando reemplace las lámparas. Utilice únicamente lámparas de repuesto Rock-Ola genuinas.

**MISE EN GARDE :**

Le jukebox utilise des lampes LED spéciales. Tou jours débrancher l'éclairage lors du remplacement des lampes. Utilisez uniquement des lampes de remplacement Rock-Ola authentiques.

- Turn the power to the jukebox off via the main switch on the power entry module.
- The lamps can be removed and replaced without tools. Squeeze the lamp in the center of the color cylinder tube and rotate 90°. Pull the lamp out of the socket ends. Slide the lamp out of the tube and replace. Insert the tube into the socket ends and rotate 90°. Be sure cylinder gears engage with the motor gear.
- Turn the main switch back on.



# S e c t i o n

## Troubleshooting and Repair

- Troubleshooting and Repair Overview
- Troubleshooting Charts
- Fuse and LED Locations
- Block Diagrams
- Start up and Diagnostic Mode Operation
- Test Mode
- Viewing Error Codes
- Using Error Codes
- Running Tests
- Amplifier Troubleshooting

# H

## Troubleshooting and Repair Overview

The SyberSonic Electronics System puts today's latest technology to work for you. It can assist you in troubleshooting tasks by providing comprehensive Input/Output Tests for the Control Computer, Keyboard and Display, and a testing utility for the Mechanism and Title Pages.

If an error occurs during normal operation, the Rock-Ola Control Computer will store an error code and then automatically remind you to check for error codes whenever the lid/door is opened.

We recommend that before beginning any troubleshooting or repair task that you thoroughly familiarize yourself with this section, along with sections E and G of this manual. If anything is still not clear, contact your dealer/distributor for assistance.

Information available in this section includes:

- Troubleshooting Charts
- Fuse And LED Locations
- Block Diagrams
- Start Up and Diagnostic Mode Operation
- Test Mode Operation which includes **reading error codes, error code charts and running tests.**

### Working With the Tools You've Got

Section G of this manual outlined the minimum tools and equipment necessary to properly service the Rock-Ola SyberSonic Jukebox. One set of tools it didn't mention were the tools you carry with you all the time... your senses and your common sense.

When a malfunction occurs, the first thing you need to do is evaluate what the symptoms *really* are. This is where *common sense* comes in.

A set of tools that are often ignored are your senses. Sight, Sound, Smell, Touch. You can see if something is disconnected, hear if something is scraping, smell if something "smoked" or feel if something is vibrating. Use your senses to help isolate the problem to a specific area.

It is beyond the scope of this manual to teach troubleshooting. However, we feel that the tools

available within the SyberSonic System combined with "your tools" will help even a novice to the source of the trouble quickly and easily.

### A Few Words About Power

Because of reliability provided to us by all the "Self-diagnosing, self-programming, self-curing, whiz-bang electronics", we can sometimes forget even the most basic troubleshooting concept... "Does it have good power?"

The first thing to check for is to see if the machine is receiving the *proper* power. Ungrounded, reverse polarized, overloaded and loose power outlets are not only dangerous due to the possible electrocution and fire hazard; to-day's electronic systems are not very tolerant of "dirty" power.

In many street location environments, it is not unusual to see neon lights, pool table lights, ice making machine *and the jukebox* all plugged into the same outlet. We, at Rock-Ola, understand what the conditions are "on the street" and have designed and manufactured our equipment to perform well even under the worst of conditions.

However, it is still most important to keep safety the first priority. Avoid using overloaded, ungrounded power sources. Avoid the use of extension cords. Be sure to install extension speakers securely. Use the proper wire and securing devices. Do not attempt to defeat any of the safety features built into the SyberSonic System.

By following the above basic, common sense safety rules, you can be assured the best performance will be attained from your Rock-Ola Jukebox.

## Troubleshooting Charts

The following charts should be used when a fault does not display an error code. See the Error Code Charts for other faults.

### Power and Start Up Problems

Fault	Symptom	Possible Cause
Jukebox fails to operate at all when power is turned on.	LEDs on Power Supply and LED lamps not on.	Main Power Switch Tripped or Off. Plug not in wall. Plug not seated in Power Distribution. Bad Power Cord. No power from wall outlet. Bad Power Supply.
	12 VDC LED only on.	System Power Plug on Power Supply not seated or broken connection. "Power In Plug" (P1) on Control Computer not seated or broken connection. Defective Power Supply.
Jukebox lamps not on.	Jukebox operational, but LED lamp(s) will not light.	Defective lamp(s). Lighting plug not seated in Power Dist. Defective lighting wiring. Defective Power Supply.
Mechanism runs but display is blank.	All Power Supply LEDs are on.	Broken connection at "Keyboard Connector" on Control Computer. Broken connection at "phone" connector on keyboard. Defective Keyboard Cable. Defective Keyboard Assy. Defective Control Computer.

**Play Problems**

<b>Trouble</b>	<b>Symptom</b>	<b>Possible Cause</b>
Not playing all songs.	Mechanism picks up record then puts it back into the magazine without spinning it.	Reject switch defective or mis adjusted.
Playing wrong songs.		
	Gripper picked up wrong record.	Indexing adjustment. Dirty Mech Opto Sensor. Defective Mech Opto Sensor. Defective Opto Sensor wiring.
Playing wrong songs.	Titles on disc and title strip do not match.	Correct/replace title strip. Replace record.
Record plays too fast or slow	Incorrect speed	Adjust speed control on the turntable motor .
Poor quality or scratchy sound	Distortion, scratchy sound	Bad records Worn stylus

**Page Problems**

<b>Fault</b>	<b>Symptom</b>	<b>Possible Cause</b>
Pages will not turn.	Pages will not turn at all.	Pages not plugged in. Pages harness at computer not seated. Pages not programmed properly. (See Page Options in section E.) Defective pages detent switch. Defective pages motor. Defective computer.
	Pages will only turn to a certain point.	Mechanical problem with page unit.

## Fuse and LED Locations

**There are no replaceable fuses in the Rock-Ola jukebox.**

The Power Supply has a self-resetting poly fuse that protects the low voltage circuits. In case of an overload, the fuse will reset after a few minutes of cooling.

The main switch is a circuit breaker. If tripped, the internal neon light will be dark.

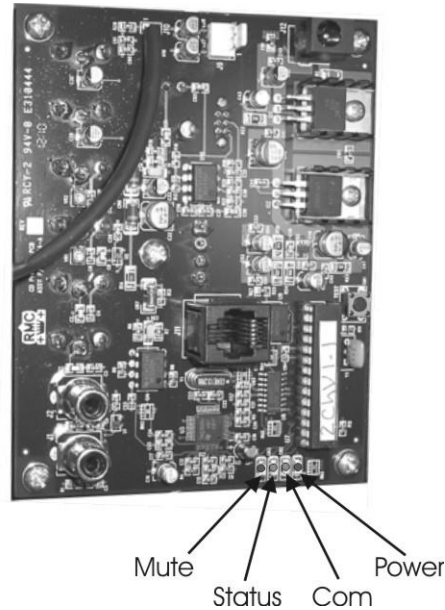
The Power Amplifier has a circuit breaker located on the back of the unit near the power cord connector.

### Keyboard LEDs

Data = Flashing  
Power = Always ON



### Pre-Amplifier LEDs



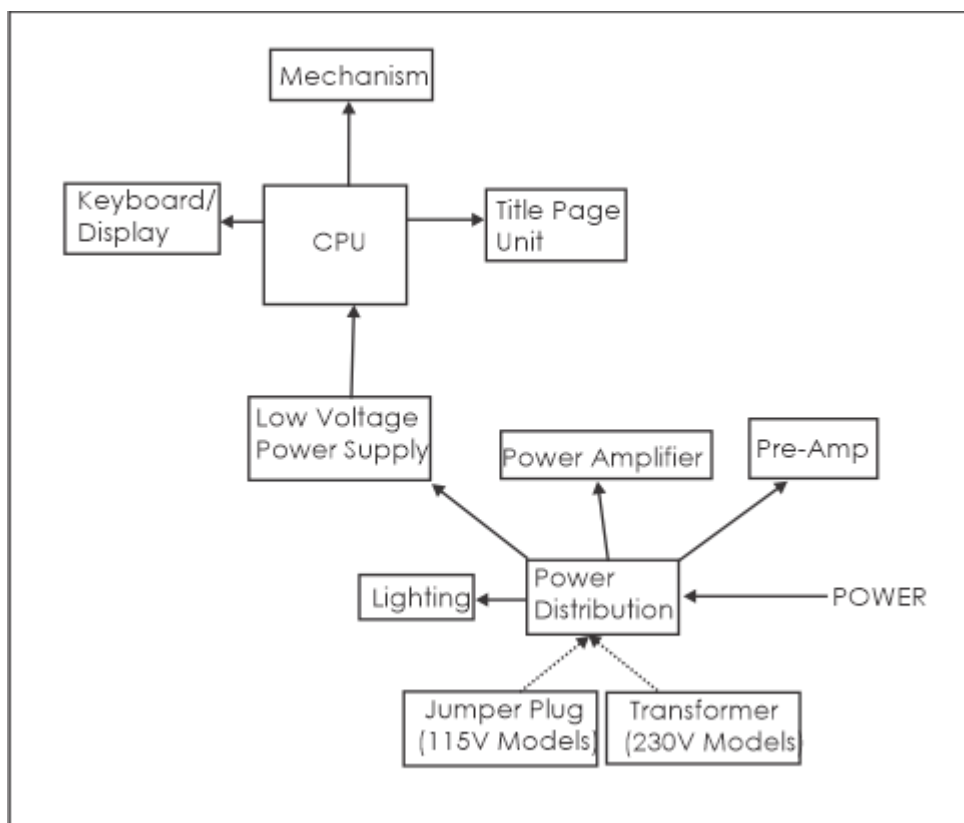
### Power Supply LEDs



**Yellow = 12V**  
**Green = 12V SW**  
**Red = 24V**

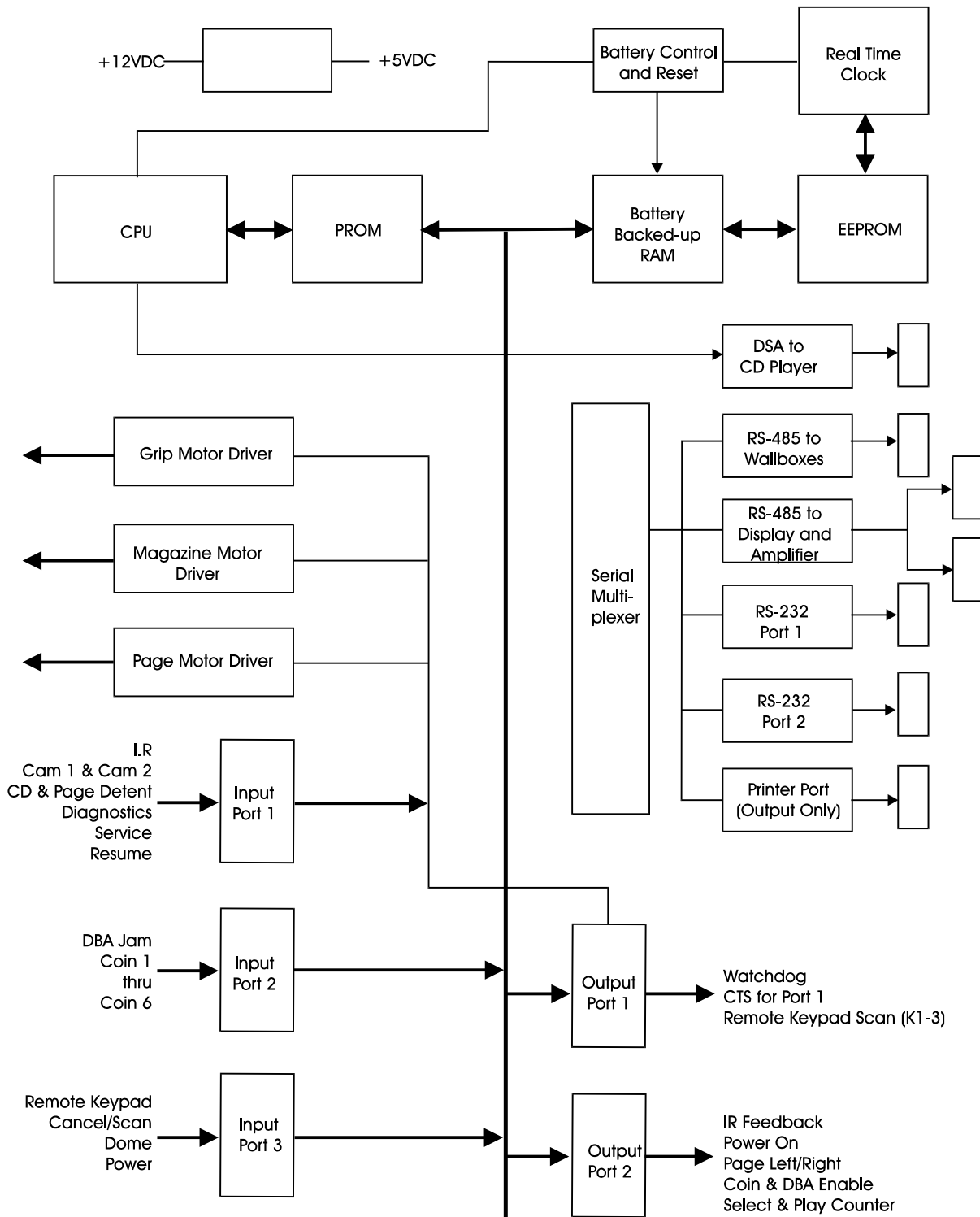
## Block Diagrams

### Power Block Diagram



**NOTE:** Regardless of input voltage, the Amplifier, Lighting, Pre-amp, and Low Voltage Power Supply are 115 Volt. If the product is configured for 230 volt power, a transformer steps the primary voltage down to 115.

### CPU Block Diagram



## Start Up and Diagnostic Mode Operation

### Start Up

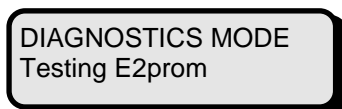
The first thing the SyberSonic Computer does upon start up is to load custom settings from memory. If successful, and assuming the machine is in the Play or Service mode, the disc magazine will begin to rotate. During this time, the computer is synchronizing the speed of the magazine motor to the mechanism's opto sensor. It takes 3 revolutions to initialize the disc magazine synchronization. Once initialized, the basket stops at the home position. Also, during the initialization process, the computer is establishing communication with the keyboard and amplifier.

If all communication is established and no errors are detected, the machine will enter the play mode. If a problem is detected, the problem will be shown on the keyboard/display. See the Diagnostic/Power Up Error Code Chart for specific code information.

### Diagnostic Mode

Diagnostics Mode is entered by pressing the Diagnostics Button on the front of the control computer while in the Service Mode. Tests are automatically performed and status messages are displayed as the tests are run.

Example Message:



DIAGNOSTICS MODE  
Testing E2prom

Each test is displayed on the bottom line while the test is being run.

List of Test Messages:

DIAGNOSTICS MODE  
Testing Ram

DIAGNOSTICS MODE  
Testing E2prom

DIAGNOSTICS MODE  
Testing Eprom

DIAGNOSTICS MODE  
Testing Rtcc

DIAGNOSTICS MODE  
Testing Keyboard

If all of the tests are successful, the following message will be displayed:

DIAGNOSTICS MODE  
Tests Successful

Otherwise, one of the following failure messages will be displayed:

DIAGNOSTICS MODE  
Ram Failure

DIAGNOSTICS MODE  
E2prom Failure

DIAGNOSTICS MODE  
Eprom Failure

DIAGNOSTICS MODE  
Rtcc Failure

DIAGNOSTICS MODE  
Keyboard Failure

**Note:** *If the keyboard/display is non-operational, the error code can be read on the STATUS LED located on the front of the CPU.*

See the Diagnostic/Power Up Error Codes Chart for Error code details.

*The Diagnostic Test takes about 50 seconds to run. If the keyboard/display is not illuminated, while in the Service Mode, ensure all four (4) Power Supply LEDs are illuminated, press the DIAG button on the Control Computer once and wait for about 50 seconds for an error code to appear. Then refer to the below chart for further instruction.*

**Diagnostic/Power-Up Error Codes:** Readout on LED on the front of the control computer.

Error Value	Device Error	Error Code Explanation	What To Do
0	NONE	All devices passed their specific test.	
1	RAM	Unable to write/read each byte in RAM.	Check battery and battery holder, U4 or U5
2	E2PROM	Unable to write/read each byte in E2prom.	Replace U1
3	EPROM	Eprom is corrupt.	Replace U8
4	RTCC	Unable to write/read a valid time in the real time counter clock.	Replace U7
5	KEYBOARD/DISPLAY	Unable to establish communication with the Keyboard/Display.	Check cable, 12 volt power to keyboard (is it lit?) and U2
6	Reserved		
7	Reserved		
8	EPROM	Eprom is bad, missing, installed incorrectly or is blank.	Check and/or replace U8.

Exit the diagnostic mode by pressing the **RESUME** button on the computer or closing the door/lid.

## Test Mode

Rock-Ola's SyberSonic Electronics System provides an easy to understand and simple to use self-diagnostic and self-testing utility. This section will provide information designed to assist you in using this tool to quickly diagnose and repair any problem that may develop.

- Press Hits. You will see the error code, date of error and time of error on the display. (See "Test Mode" flow chart in section E for sample displays).
- Refer to the following Charts for information and what to do about each error.

## Viewing Error Codes

When entering the Service Mode the SyberSonic Jukebox automatically checks its memory for the existence of stored error codes. If any exist, the warning "Errors Present in XXXX:" (XXXX indicates the area in which the error exists) will scroll across the digital display to remind you to view the error codes.

**To view the stored error codes:**

- Enter the set up mode.
- Access "View Errors" in the Test Mode Menu (Quick Find #130).
- Use the Right Pages Button to scroll to the area for which you want to view errors. (i.e. View Page Errors).

## Using Error Codes

After retrieving and reviewing the error code, the next step in the troubleshooting process is to determine why the error code exists. In most cases the problem is a "mechanical" one. That is, the problem could be a mechanical bind, a broken or bent cam, a bad switch or a broken wire. Occasionally, a malfunction may be caused by the electronics. By analyzing the code and its meaning, you can usually determine the cause of the malfunction very easily.

***If the Error Code Chart refers to a test, the instructions can be found under "Running Tests" later in this section.***

**CPU (Input) Error Codes**

<b>Error Value</b>	<b>Input Error</b>	<b>Error Code Explanation</b>	<b>What To Do</b>
C00	SERVICE	Service key depressed for longer than 1 minute.	Check Service Switch on Control Computer, Replace Control Computer.
C01	DIAGNOSTIC	Diagnostics key depressed for longer than 1 minute.	Check Diagnostic Switch on Control Computer, Replace Control Computer.
C02	RESUME	Resume key depressed for longer than 1 minute.	Check Resume Switch on Control Computer, Replace Control Computer.
C03	SCAN CANCEL	Scan/Cancel key depressed for 1 minute.	Check Scan/Cancel switch. Check wiring between switch and control computer for a short circuit.
C05	COIN 1	Coin 1 input active for longer than 1 minute.	Check Coin Switch 1, Check wiring between Coin Switch and Control Computer for a short circuit, Replace Control Computer.
C06	COIN 2	Coin 2 input active for longer than 1 minute.	Check Coin Switch 2, Check wiring between Coin Switch and Control Computer for a short circuit, Replace Control Computer.
C07	COIN 3	Coin 3 input active for longer than 1 minute.	Check Coin Switch 3, Check wiring between Coin Switch and Control Computer for a short circuit, Replace Control Computer.
C08	COIN 4	Coin 4 Input active for longer than 1 minute.	Check Coin Switch 4, Check wiring between Coin Switch and Control Computer for a short circuit, Replace Control Computer.
C09	COIN 5	Coin 5 Input active for longer than 1 minute. (In the U.S. this is the Quarter input).	Check Coin Switch 5, Check wiring between Coin Switch and Control Computer for a short circuit, Replace Control Computer.
C10	COIN 6	Coin 6 Input active for longer than 1 minute. (In the U.S. this is the Bill Validator input).	Check Coin Switch 6, Check wiring between Coin Switch and Control Computer for a short circuit, Replace Control Computer.
C11	EXT VOL UP	External Volume Up key depressed for longer than 1minute.	Check External Volume Up Switch, Replace Remote Volume Control, Check Remote Volume Control wiring for a short circuit, Replace Control Computer.
C12	EXT VOL DOWN	External Volume Down key depressed for longer than 1minute.	Check External Volume Down Switch, Replace Remote Volume Control, Check Remote Volume Control wiring for a short circuit, Replace Control Computer.
C13	INT VOL UP	Internal Volume Up key depressed for longer than 1 minute.	Check internal Volume Up Switch, Replace Remote Volume Control, Check Remote Volume Control wiring for a short circuit, Replace Control Computer.

C14	INT VOL DOWN	Internal Volume Down key depressed for longer than 1 minute.	Check Internal Volume Down Switch, Replace Remote Volume Control, Check Remote Volume Control wiring for a short circuit, Replace Control Computer.
C15	MUTE	Pause key depressed for longer than 1 minute.	Check Mute Switch, Replace Remote Volume Control, Check Remote Volume Control wiring for a short circuit, Replace Control Computer.
C16	CANCEL	Cancel key depressed for longer than 1 minute.	Check Cancel Switch, Replace Remote Volume Control, Check Remote Volume Control wiring for a short circuit, Replace Control Computer.

### Keyboard Error Codes

Error Value	Key Error	Error Code Explanation	What To Do
K00	NUMBER 0	Number 0 key depressed for longer than 1 minute.	Check S12, Replace Keyboard/Display
K01	NUMBER 1	Number 1 key depressed for longer than 1 minute.	Check S3, Replace Keyboard/Display
K02	NUMBER 2	Number 2 key depressed for longer than 1 minute.	Check S4, Replace Keyboard/Display
K03	NUMBER 3	Number 3 key depressed for longer than 1 minute.	Check S5, Replace Keyboard/Display
K04	NUMBER 4	Number 4 key depressed for longer than 1 minute.	Check S6, Replace Keyboard/Display
K05	NUMBER 5	Number 5 key depressed for longer than 1 minute.	Check S7, Replace Keyboard/Display
K06	NUMBER 6	Number 6 key depressed for longer than 1 minute.	Check S8, Replace Keyboard/Display
K07	NUMBER 7	Number 7 key depressed for longer than 1 minute.	Check S9, Replace Keyboard/Display
K08	NUMBER 8	Number 8 key depressed for longer than 1 minute.	Check S10, Replace Keyboard/ Display
K09	NUMBER 9	Number 9 key depressed for longer than 1 minute.	Check S11, Replace Keyboard/ Display
K10	PAGE LEFT	Page Left key depressed for longer than 1 minute.	Check S1, Replace Keyboard/Display
K11	PAGE RIGHT	Page Right key depressed for longer than 1 minute.	Check S2, Replace Keyboard/Display
K12	PLAY HITS	Play Hits key depressed for longer than 1 minute.	Check S14, Replace Keyboard/ Display
K13	RESET	Reset key depressed for longer than 1 minute.	Check S13, Replace Keyboard/ Display

**Mechanism Error Codes**

<b>Error Value</b>	<b>Mechanism Error</b>	<b>Error Code Explanation</b>	<b>What To Do</b>
M01	MAGAZINE	Unable to locate a slot number. Unable to find "Home".	Run Index Test, Check/Replace Mech Opto Sensor, Check Mech Opto Sensor Wiring, Replace Control Computer. Check magazine motor. Check cam switch wiring.
M02	LOADING	Unable to load a record.	Run Gripper Test, Check 24 VDC, Check Gripper Motor, Check Gripper Motor Wiring, Replace Control Computer. Check cam switches.
M03	UNLOADING	Unable to unload a record.	Run Gripper Test, Check 24 VDC, Check Gripper Motor, Check Gripper Motor Wiring, Replace Control Computer. Check cam switches.
M04	Reserved		
M05	Reserved		

## Running Tests

Rock-Ola's SyberSonic Electronics System has a set of built-in diagnostic tests that can be run via the keyboard. These tests are designed to eliminate guess work when troubleshooting a specific problem. You have the ability to test all inputs and outputs of the control computer, the electronics and mechanics of the CD Player, the turning of the pages, the digital display and the functions of the mechanism.

### CPU Tests

The CPU Tests consist of three (3) individual tests. The Power Up Test, Inputs Test and Outputs Test.

**Power Up Test** - This test checks the internal functions of the control computer and communication with the CD Player and keyboard.

To run this test access "Run Power Up Test" (Quick Find 142) in the Test Mode Menu. Press HITS. The control computer will run the test. If all tests pass the display will indicate the following message:

PowerUp Test:  
No Failures

If a failure occurred one of the following messages will be displayed.

PowerUp Test:  
Ram Failure

PowerUp Test:  
E2prom Failure

PowerUp Test:  
Eprom Failure

PowerUp Test:  
Rtcc Failure

PowerUp Test:  
Keyboard Failure

**Refer to the Diagnostic/Power Up Error Codes Chart for further instruction.**

### Inputs Test

This test checks the status of the inputs to the control computer.

To run this test:

- Access "Run Inputs Test" (Quick Find 143) in the Test Mode menu.
- Press HITS. The control computer will run the test.
- As the test progresses the keyboard display will indicate which input is tested and its current logic level (Hi or Lo). Sample displays can be found on the Test Mode Flow chart in Section E of this manual. Refer to the Test Inputs Code Chart for information about each input.

**Note:** *The Normal Logic Level shown on the chart assumes the machine is at rest with the magazine and gripper bow in the home position and the pages at page 1.*

**Test Input Codes:**

Input Value	Normal Logic Level	Input Location	Input Description
1	Hi	S1 on CPU Board	RESUME Button.
2	Hi	S3 on CPU Board	SERVICE Button.
3	Hi	S2 on CPU Board	DIAGNOSTICS Button.
4	Hi	J14.8 on CPU Board	PAGE OPTO SENSOR Input Line.
5	Lo	J2.3 on CPU Board	MAGAZINE OPTO SENSOR Input Line.
6	Hi	J5.12 on CPU Board	CAM 1 Switch Input Line.
7	Hi	J5.11 on CPU Board	CAM 2 Switch Input Line.
8	Hi	J3.2 on CPU Board	IR DETECTOR Input Line.
9	Hi	J4.1 on CPU Board	COIN 6 Input Line.
10	Hi	J4.2 on CPU Board	COIN 5 Input Line.
11	Hi	J4.3 on CPU Board	COIN 4 Input Line.
12	Hi	J4.4 on CPU Board	COIN 3 Input Line.
13	Hi	J4.5 on CPU Board	COIN 2 Input Line.
14	Hi	J4.6 on CPU Board	COIN 1 Input Line.
15	Hi	J4.11 on CPU Board	DOLLAR BILL JAM Input Line.
16	Hi	N/A	Unused Input Line.
17	Hi	J6.3 on CPU Board	POWER SWITCH Input Line.
18	Lo	J6.2 on CPU Board	SERVICE SWITCH Input Line.
19	Hi	J5.7 on CPU Board	CANCEL/SCAN BUTTON Input Line.
20	Hi	N/A	Unused Input Line.
21	Hi	N/A	Unused Input Line.
22	Hi	J7.3 on CPU Board	CANCEL/MUTE Matrix Input Line.
23	Hi	J7.2 on CPU Board	EXT. VOL. UP/EXT. VOL. DOWN Matrix Input Line.
24	Hi	J7.1 on CPU Board	INT. VOL. UP/INT. VOL. DOWN Matrix Input Line.

To stop the test, press RESET on the keyboard or RESUME on the control computer.

## Outputs Test

The outputs test checks the voltage level of the control computer outputs. It will either be Gnd (0 Volts) or Vcc (12 or 24 Volts depending on the output). To run the output test, access "Run Outputs Test" (Quick Find 144) in the Test Mode

menu. Press HITS and the test will begin. As the test progresses, the keyboard display will indicate the status of the output line. Sample displays can be found on the Test Mode Flow chart in Section E of this manual.

### Test Output Codes:

Output Value	Output Level	Output Location	Output Description
1	Gnd	J6.7 on CPU Board	TURNTABLE MOTOR Output Line.
2	Gnd	J6.6 on CPU Board	MONEY COUNTER Output Line.
3	Gnd	J4.10 on CPU Board	DOLLAR BILL ENABLE Output Line.
4	Gnd	J4.7 on CPU Board	COIN ENABLE Output Line.
5	Gnd	J14.2 on CPU Board	PAGE LEFT Output Line.
6	Gnd	J14.1 on CPU Board	PAGE RIGHT Output Line.
7	Gnd	J3.3 on CPU Board	IR LED FEEDBACK Output Line.
8	Gnd	J5.1 on CPU Board	GRIP IN MOTOR Output Line.
9	Gnd	J5.2 on CPU Board	GRIP OUT MOTOR Output Line.
10	Gnd	J5.5 on CPU Board	MAGAZINE MOTOR Output Line.
11	Gnd	J7.4 on CPU Board	MUTE/EXT. VOL. DOWN/INT. VOL. DOWN Matrix Output Line.
12	Gnd	J7.5 on CPU Board	CANCEL/EXT. VOL. UP/INT. VOL. UP Matrix Output Line.
13	Gnd	J7.6 on CPU Board	Unused Matrix Output Line.
14	Gnd	J10.1 on CPU Board	CLEAR TO SEND 1 Output Line.

## Keyboard Test

Access "Run Keyboard Test" (Quick Find 132) in the Test Mode Menu. Press HITS. Now as you press a Keyboard Button the Display will indicate which button is pressed. Sample displays can be found on the Test Mode Flow chart in Section E of this manual.

To exit the Keyboard Test, either press RESUME on the Control Computer or close the door/lid. (Pressing RESET will not cause you to exit from this test as the reset switch is one that is checked during the Keyboard Test).

The keyboard/display has its own built-in diagnostics system to test all aspects of the device to ensure proper functions and reliability.

To run the keyboard/display diagnostics test, you must first push and hold the test switch then connect a 12 volt DC source to plug J2 pin 4 (pos) and pin 5 (neg). Release the test switch and then the device is in self-diagnostics. It will fill the display with varying characters for ap-

proximately 2 seconds. The display will then blank and when the keys on the keyboard are pushed, they will be shown on the display.

To take the device out of test, you must press the RESET and HITS keys at the same time or disconnect the power to the keyboard.

## Display Test

Access "Run Display Test" (Quick Find 133) in the Test Mode Menu. Press HITS. The display will scroll through all of its available characters.

Observe that all the characters are properly displayed. Sample displays can be found on the Test Mode Flow chart in Section E of this manual.

To exit the display test, either press RESET on the Keyboard, press RESUME on the Control Computer or close the door/lid.

## Pages Test

Access “Run Pages Test” (Quick Find 134) in the Test Mode Menu. Press HITS. The Title Pages will run a full cycle from front to back. Observe that the pages move smoothly back and forth and that they stop in the correct position. Sample displays can be found on the Test Mode Flow chart in Section E of this manual.

To run the test again, press HITS.

To exit the test, either press RESET on the Keyboard, press RESUME on the Control Computer or close the door/lid.

## Mechanism Tests

Rock-Ola’s SyberSonic System provides five (5) individual mech tests which together create a comprehensive testing tool for the CD Mechanism and CD Player. Included are:

- Index Test which checks the synchronization between the Control Computer and the CD Magazine.
- Gripper Test which allows the testing of the electrical functions of the gripper motor as well as the mechanical functions of the gripper bow.
- Short Test which causes the mechanism to pick up each record and then replace it.
- Test All Slots which causes the mechanism to pick up each record and play it. In case of a defective or missing record, the system will cancel after 4 minutes.

## Running Mechanism Tests

### Index Test

Access “Run Index Test” (Quick Find 145) in the View Mech Tests area of the Test Mode Menu. Press HITS. Select “Once” or “Continuous”. The disc magazine will rotate a full revolution then stop at position 00, pick up the record then put it back away. It will then go to position 01 and repeat the above procedure. After 01 it will go to positions 49, 50, 98 and 99 to check synchronization at those positions.

While the test is running you should check to see that the record is being picked up and put away properly. See Magazine Indexing Adjustment in Section G for details.

Sample displays can be found on the Test Mode Flow Chart found in Section E of this manual.

To exit this test, either press RESET on the Keyboard, press RESUME on the Control Computer or close the door/lid.

### Gripper Test

Access “Run Gripper Test” (Quick Find 146) in the View Mech Tests area of the Test Mode Menu. Press HITS. The display will indicate “Push Cancel/Scan to Move Gripper.” Doing so will cause the Gripper Motor to run allowing you to check the electrical and mechanical functions of the Gripper Bow and related mechanics. Also check the Gripper Rest Adjustment. See Gripper Rest Adjustment in Section G for details.

For sample displays, see the Test Mode Flow Chart in Section E of this Manual.

To stop the test, either press RESET on the Keyboard, press RESUME on the Control Computer or close the door/lid.

### Short Test

Access “Run Short Test” (Quick Find 147) in the View Mech Tests area of the Test Mode Menu. Press HITS. The Magazine will rotate a full revolution and stop at position 00. The record in slot 00 will be picked up and placed on the turntable then returned to the magazine.

The magazine will then stop at position 01, 02, 03... etc. and perform the above procedure. The Short Test will continue until all of the magazine positions have been checked.

For sample displays, see the Test Mode Flow Chart in Section E of this Manual.

To stop the test, either press RESET on the Keyboard, press RESUME on the Control Computer or close the door/lid.

**Test All SLOT (AKA Long Test)**

Access "Test All Slot" (Quick Find 148) in the View Mech Tests area of the Test Mode Menu. Press HITS. The Magazine will rotate a full revolution and stop at position 00. The record in slot 00 will be picked up and placed on turntable and played. After play or 4 minutes, it will be put back into the magazine.

For sample displays, see the Test Mode Flow Chart in Section E of this Manual.

The magazine will then stop at position 01, 02, 03... etc. and perform the above procedure. Test All Disc will continue until all of the magazine positions have been checked.

To stop the test, either press RESET on the Keyboard, press RESUME on the Control Computer or close the door/lid.

## Amplifier Troubleshooting

Rock-Ola's Digital SyberSonic pre-amplifier has different color LED's to indicate the status of various systems. The state of the LED's is the most important tool when beginning to troubleshoot the audio system.

### LED's

* Power	Green	Preamp PCB Power	On - Normal Off - No power to the pre-amp board
* Status	Orange	State of the MP & Paging System	On - Normal Blinking - Paging System Active Off - Processor Faulted
* Com	Orange	State of the MP & Communication	On - Normal Flashing - Communicating with the Jukebox CPU Off - Settings not loaded
* Mute	Red	Power Amp Muting	On - Amplifier muted* Off - Normal

\* The Pre-amp is muted whenever a record is not in play and the background music system is off.

Symptom	LED	Problem	Solution
No Sound	Green LED Off	No Power to Pre-amp	Check that preamp power cube is plugged in.
	Green LED On Status LED On Comm LED Off	Not set up	Check communications cable from amplifier to CPU.
	Green LED On Status LED Off	Processor not running	Replace Pre-amp PCB
	Green LED On Orange LED's On Red LED On	Amplifier Muted	Be sure CD is in play (Now Playing on the Display)

### Power Amplifier

- Refer to the Instructions for information on the Power Amplifier.

### Weak Bass From The External Speakers

- Check speaker connections. All external speakers must be *wired in phase*. Positive (+) to positive (+) and negative (-) to negative (-).

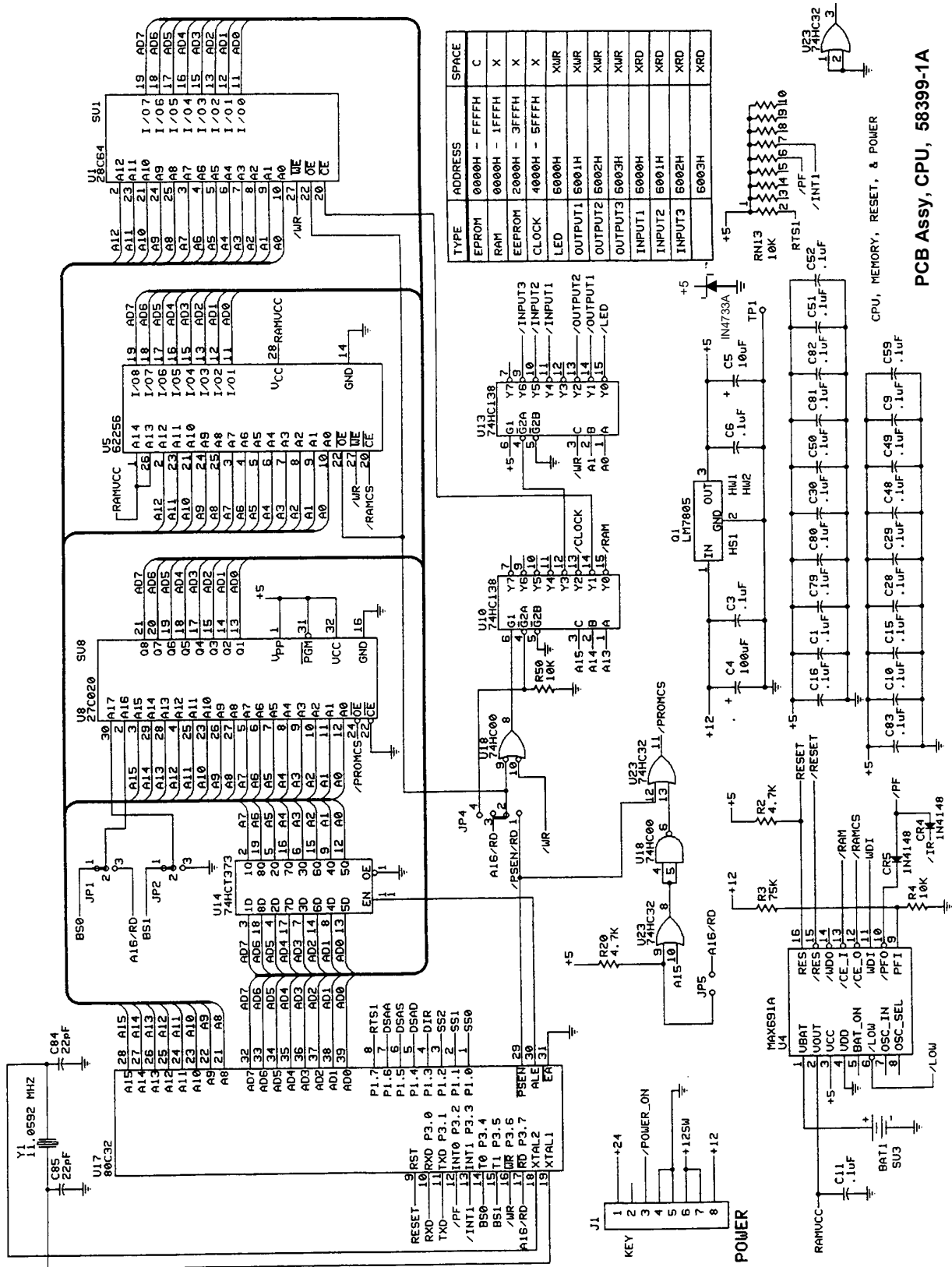
# S e c t i o n



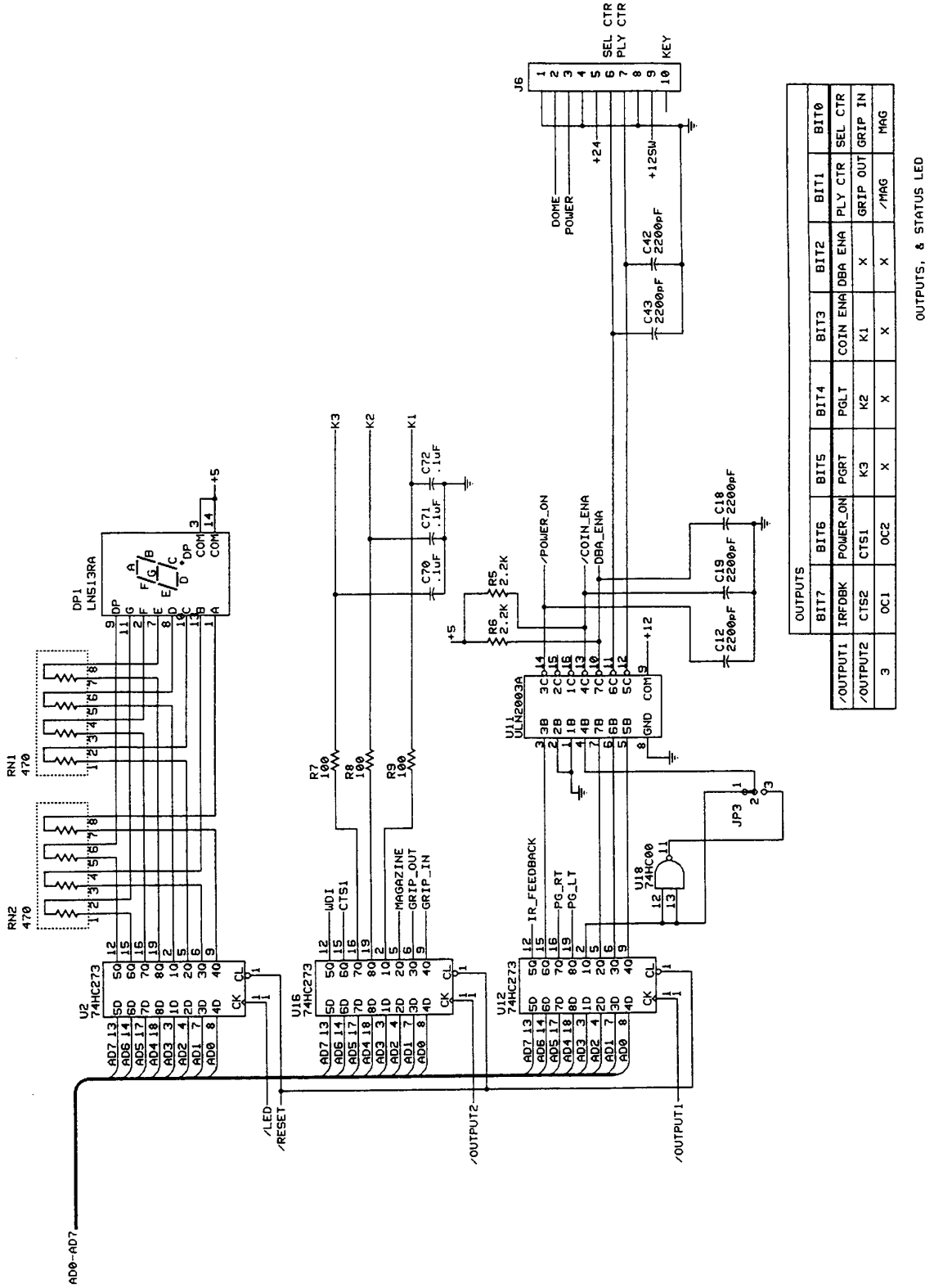
## Major Component Schematics

- CPU
- Digital Preamp
- Digital CD Power Supply
- Keyboard/Display
- Volume Control
- Crossover
- Lighting Wiring Diagram (CD-8)
- Primary Power Block Diagram, CD-4/6/8

# Computer (CPU)

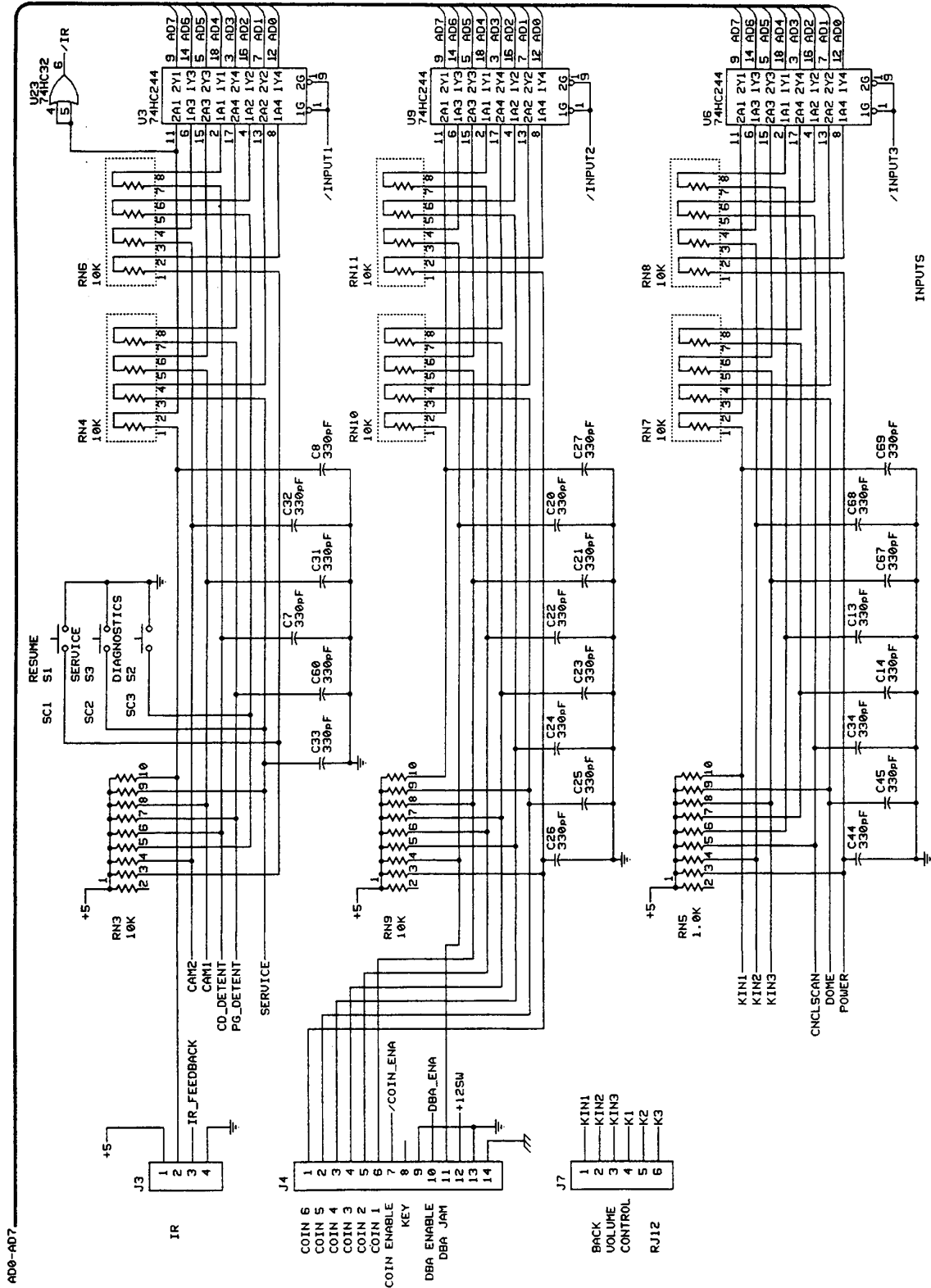




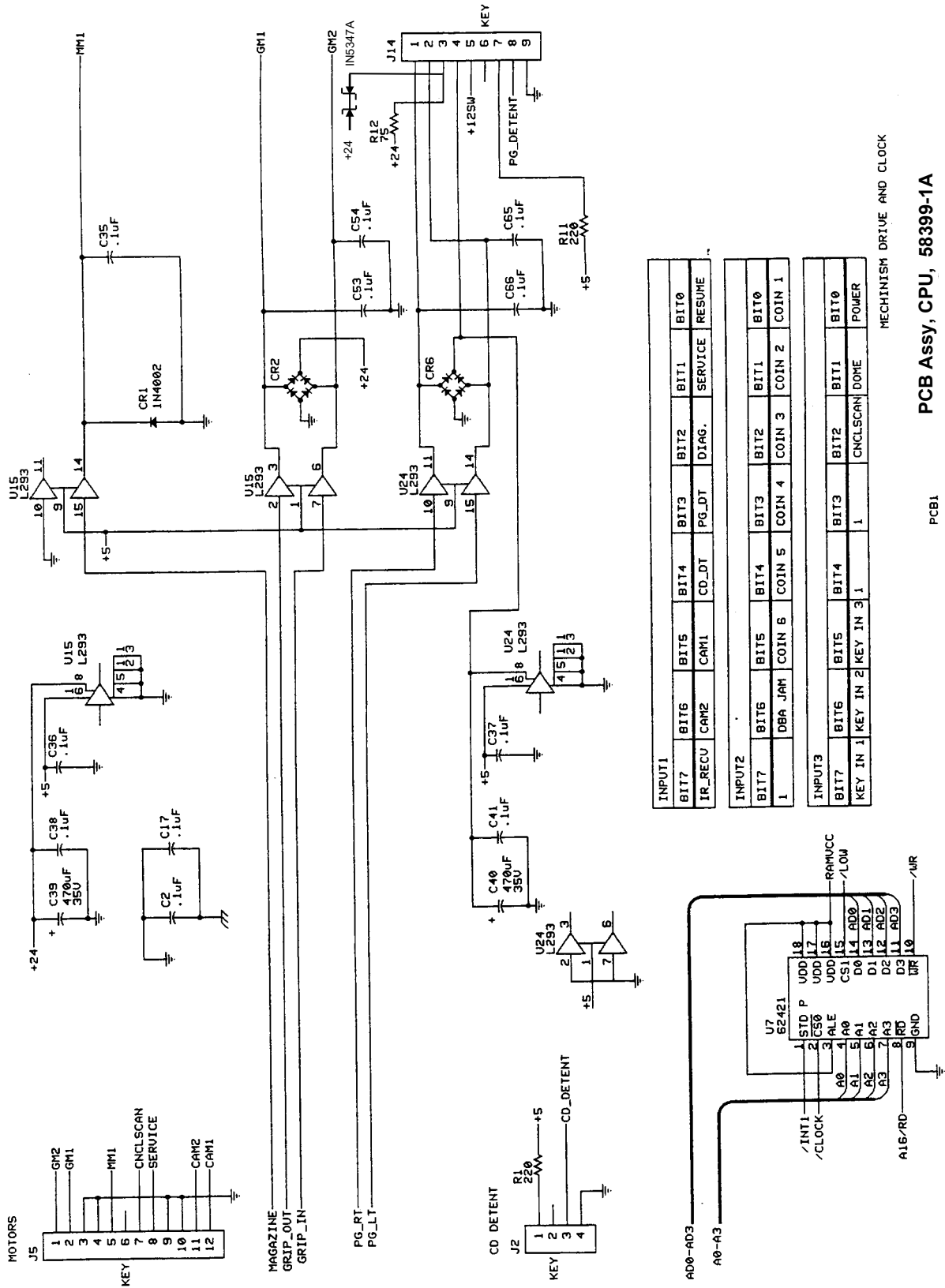


OUTPUTS												
BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0	OUTPUTS, & STATUS LED				
/OUTPUT1	IRFDBK	POWER_ON	PGRT	PGLT	COIN_ENA	DBA_ENA	PLY_CTR	SEL_CTR	GRIP_OUT	GRIP_IN	MAG	
		CTS2	CTS1	K3	K2	K1	X	X	X	X	X	
	3	OC1	OC2	X	X	X	X	X	X	X	X	

PCB Ass'y, CPU, 58399-1A



PCB Assy, CPU, 58399-1A



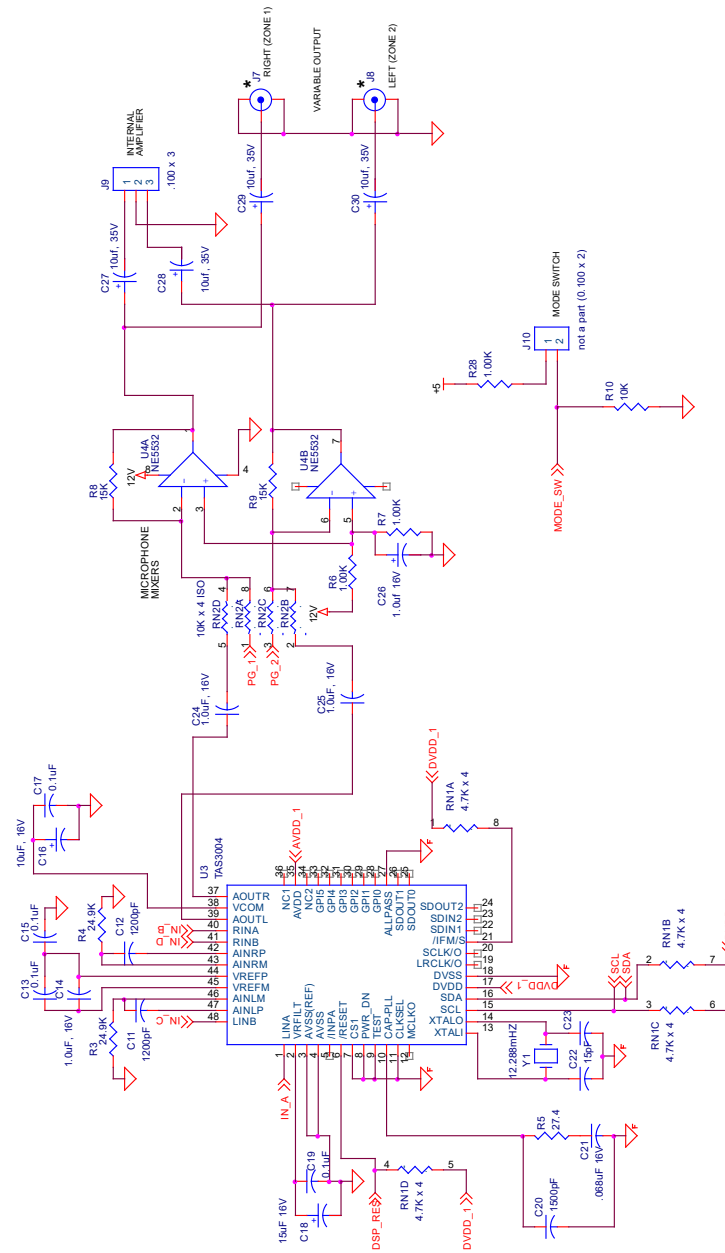
PCB Assy, CPU, 58399-1A

PCB1

## Bill of Materials - PCB Assy, CPU, 58399-1A

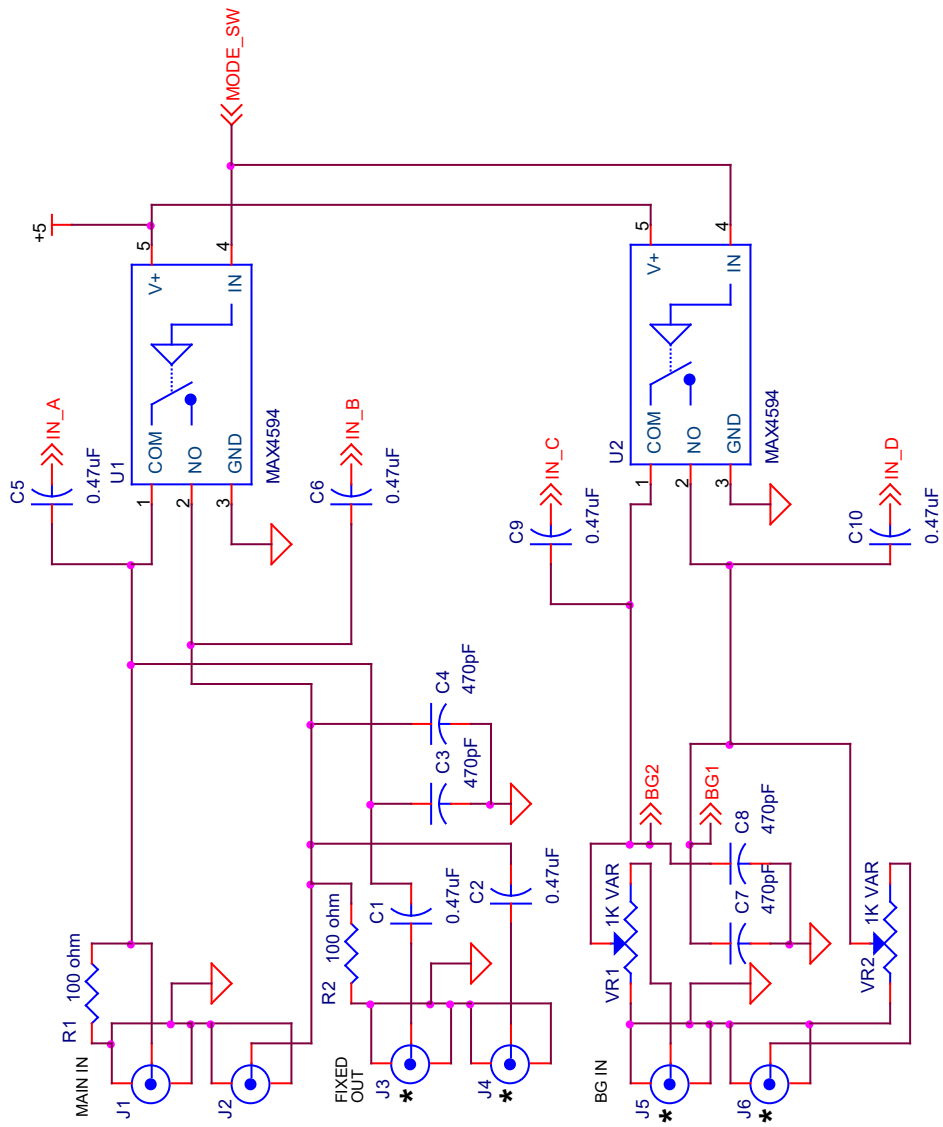
Reference	Part	Reference	Part
Back of board across 5V Supply	Diode, IN4733A	R10	Resistor: 180 ohm, 1/4W, 5%
Back of board across R12	Diode, IN5347A	R5, R6	Resistor: 2.2K ohm, 1/4W, 5%
BAT1	Battery, 3V Lithium	R2, R20	Resistor: 4.7K ohm, 1/4W, 5%
C1, C2, C3, C6, C9, C10, C11, C15, C16, C17, C28, C29, C30, C35-C38, C41, C47-C55, C59, C65, C66, C70, C71, C72, C79-C83	Capacitor: .1uF, 50V, Mono	R3	Resistor: 75K ohm, 1/4W, 5%
C12, C18, C19, C42, C43	Capacitor: 2200pF, 50V Mono	R12	Resistor: 75 ohm, 3W, 5%
C84, C85	Capacitor: 22pF, 100V, Mono	RN4, RN6, RN7, RN8, RN10, RN11	Resistor SIP Network, 10K ohm, 8 pin isolated
C7, C8, C13, C14, C20-C27, C31-C34, C44, C45, C56, C57, C58, C60, C61, C62, C63, C64, C67, C68, C69, C73 C78	Capacitor: 330pF, 100V, Mono	RN1, RN2, RN12	Resistor SIP Network, 470 ohm, 8 pin isolated
C4	Capacitor: 100uF, 25V	RN14	Resistor SIP Network, 4.7K ohm, 8 pin isolated
C5, C46	Capacitor: 10uF, 35V	RN5	Resistor SIP Network, 1.0K ohm, 10 pin common
C39, C40	Capacitor: 470uF, 35V	RN3, RN9, RN13, RN15	Resistor SIP Network 10k ohm 10 pin common
CR1	Diode, IN4002	S1, S2, S3	Switch, SPST Momentary
CR2, CR6	Diode Bridge 1A	SP1	Spacer, 3/8" for CR3
CR3	Light Emitting Diode, IR	SU1	28 pin Socket, low profile
CR4, CR5	Diode, IN4148	SU8	32 pin Socket, low profile
DP1	7 Segment Disp - com anode	SU3	Battery Holder 25mm dia.
HS1	Heatsink TO-220	TP1	Test Point
HW1	Screw, #6-32 x 3/8 Pan Hd	U15, U24	I.C. L293 - Quad Half-H Driver
HW2	Keps Nut #6-32	U4	I.C. MAX691A, Microprocessor Supervisor
J3	Connector: 4 pin .1	U11	I.C. ULN2003A, H-V, H-C
J9, J10	Connector: 6 pin .1	U7	I.C. 62421B - CMOS real time clock
J8	Connector: 8 pin .1	U17	I.C. 80C32 - 8 bit Microcomputer
J14	Connector: 9 pin .1	U5	62256-CMOS-32,768 Word by 8 Bit LSI
J6	Connector: 10 pin .1	U1	I.C. 28C64 - EEPROM 8KX8
J4	Connector: 14 pin .1	U8	I.C. 27C020
J2	Connector: 4 pin .156	U19, U20	I.C. 75176 - Differential Bus Transceiver
J1	Connector: 8 pin .156	U14	I.C. 74HCT373 H-CMOS Octal
J5	Connector: 12 pin .156	U18	I.C. 74HC00 H-CMOS Quad 2 input nand
J13	Connector: 4 pin RJH side. entry L.P.	U23	74HC32 H-CMOS Quad 2 input or gate
J7, J11, J12	Connector: 6 pin RJ12 side entry L.P.	U10, U13	I.C. 74HC138 H-CMOS 3/8 Decoder
JP5	Jumper Blk, 2 pin	U3, U6, U9	I.C. 74HC244 H-CMOS Octal Buffer
JP1, JP2, JP3	Jumper Blk, 3 pin	U2, U12, U16	I.C. 74HC273 H-CMOS Octal DFF w/ clear
JP4	Jumper Blk, 4 pin	U21, U22	4051 CMOS 8 Channel Analog
Q1	I.C. LM7805C	Y1	Crystal, 11.0592 Mhz
Q2	I.C. LM7809C		
Q3	NPN Transistor PN2222		
R7, R8, R9	Resistor: 100 ohm, 1/4W, 5%		
R4, R21, R50	Resistor: 10K ohm, 1/4W, 5%		
R1, R11	Resistor: 220 ohm, 1/4W, 5%		

# Digital Preamp

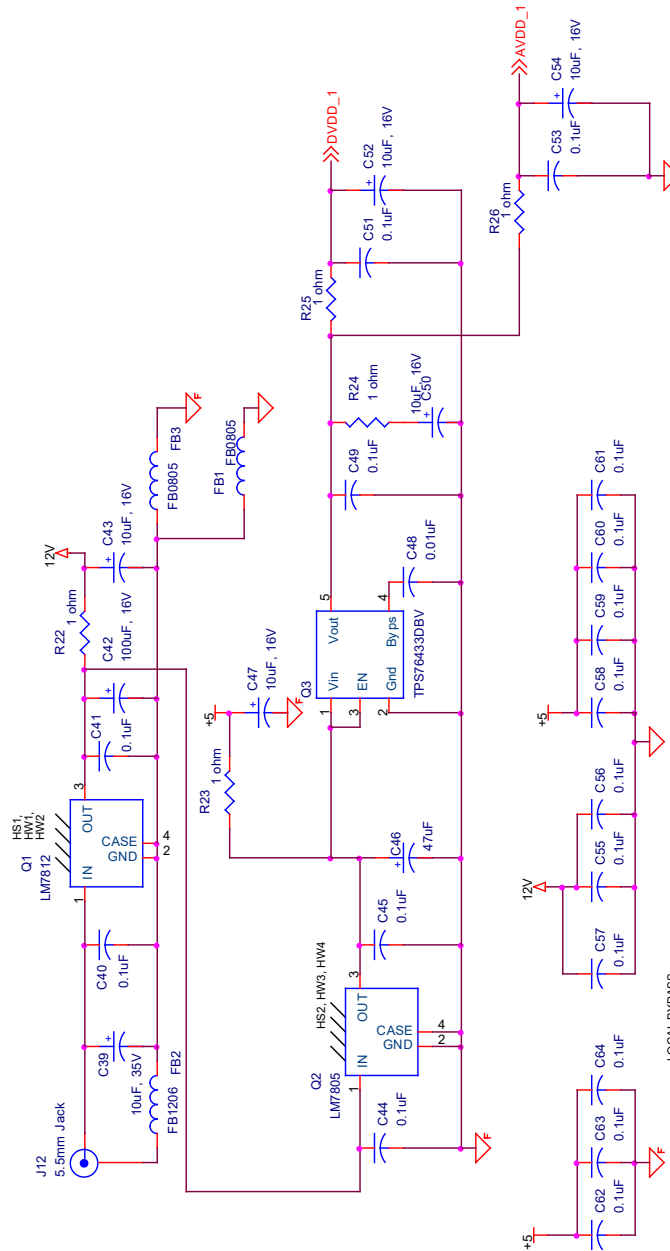


PCB Assy, Digital Preamp (DSP & Mixers), 62134-A





PCB Assy, Digital Preamp (Input Circuits), 62314-A



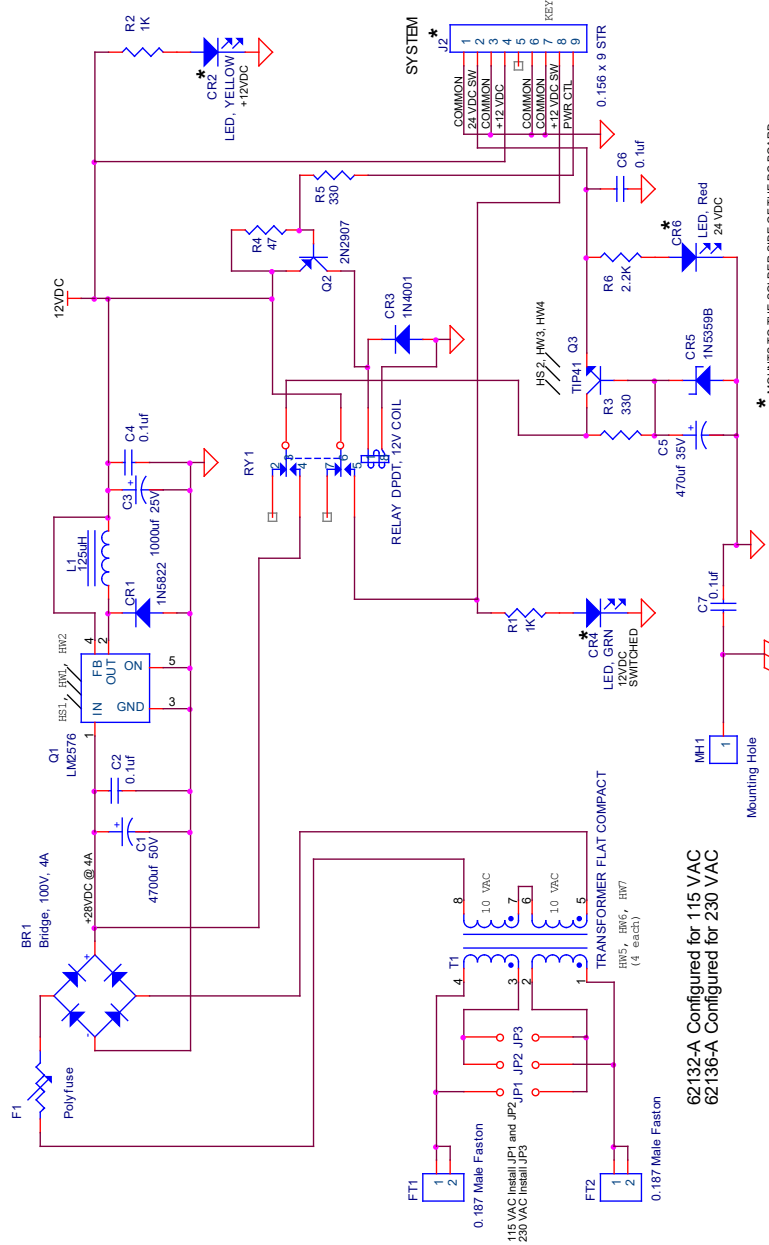
PCB Assy, Digital Preamp (Power Circuits), 62314-A

## Bill of Materials, Digital Preamp, 62314-A

Reference	Part
CR1	LED, GREEN
CR2, CR3	LED, ORG
CR4	LED, RED
CR6, CR5	1N4002
CR7	1N5231
C1, C2, C5, C6, C9, C10, C31, C38, C65	0.47uF 16V Ceramic
C3, C4, C7, C8, C35, C37	470pf
C11, C12	1200pF
C13, C15, C17, C19, C40, C41, C44, C45, C49, C51, C53, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64	0.1uF
C14, C24, C25	1.0uF, 25V
C16, C43, C47, C50, C52, C54	10uF, 16V *
C18	Cap, 15uF 16V Radial
C20	Cap, 1500pF, 50V
C21	Cap, .068uF, 16V
C22, C23	Cap, 15pF, 50V
C26, C34	Cap, 1.0uf 16V Tantalum
C27, C28, C29, C30, C33, C39	Cap, 10uF, 35V
C32, C46	Cap, 47uF, 16V
C36	Cap, 2200pf, 50V
C42	Cap, 100uF, 16V
C48	Cap, 10,000pF, 50V
FB1, FB3	Ferrite, 39 Ohm, 4A *
FB2	Ferrite, 31 Ohm, 1.5A *
J1, J2, J3, J4, J5, J6, J7, J8	RCA JACK, VERT
J9	Header, .100 x 3
J10	not a part (0.100 x 2) Harness
J11	6 x 6 Modular, Str
J12	5.5mm x 2.1mm Jack
J13	Header, 0.156 x 4
Q1	Reg, 12V, 1A TO-220
Q2	Reg, 5V, 1A, TO-220
Q3	TPS76433DBV
RN1	4.7K x 4
RN2	10K x 4 ISO
RN3	470x4
RN5, RN4	47K x 4
R2, R1	Res, 100 ohm, 1/8W, 1%
R3, R4	Res, 24.9K, 1/16W, 1%
R5	Res, 27.4 Ohm, 1/16W, 1%
R6, R7, R17, R18, R28	Res, 1.00K, 1/4W, 1%
R9, R8	Res, 15.0K, 1/16W, 1%
R10, R12, R13, R16, R21	Res, 10.0K, 1/16W, 1%
R15, R11	Res, 47.5K, 1/16W, 1%
R14	Res, 100 Ohm, 1/8W, 5%
R19	Res, 391K, 1/16W, 1%
R20	Res, 71.5K, 1/16W, 1%
R22, R23, R24, R25, R26	Res, 1.0 ohm, 1/8W, 5%
R27	0 ohm Jumper
SW1	SW PUSHBUTTON
SW2	SW DPDT
U1, U2	MAX4594 *

Reference	Part
U3	TAS3004 *
U4,U10	NE5532 *
U7	Socket, DIP .28 x .300
U7	PIC16C63 *
U8	MAX313 *
U9	IC, RS-485 Bus Transceiver *
VR1,VR2	Potentiometer, 1K, Vertical
VR3	Potentiometer, 10K, Vertical *
Y1	Insulator, Crystal
Y1	Crystal, 12.288mHZ *
Y2	Crystal w/caps, 8mHZ *
HS1, HS2	Heatsink, 4.5W, TO-220 *
HS1, HS2	Thermal Transfer Pad
HW1, HW3	Mch Scw, 4-40 x 5/16 or 3/8 phlps PH ZP
HW2, HW4	Hex Nut, 4-40, Keps

# Digital CD Power Supply



PCB Assy, Digital CD Power Supply, 62312-A

**Bill of Materials, Digital CD Power Supply, 62132-A**

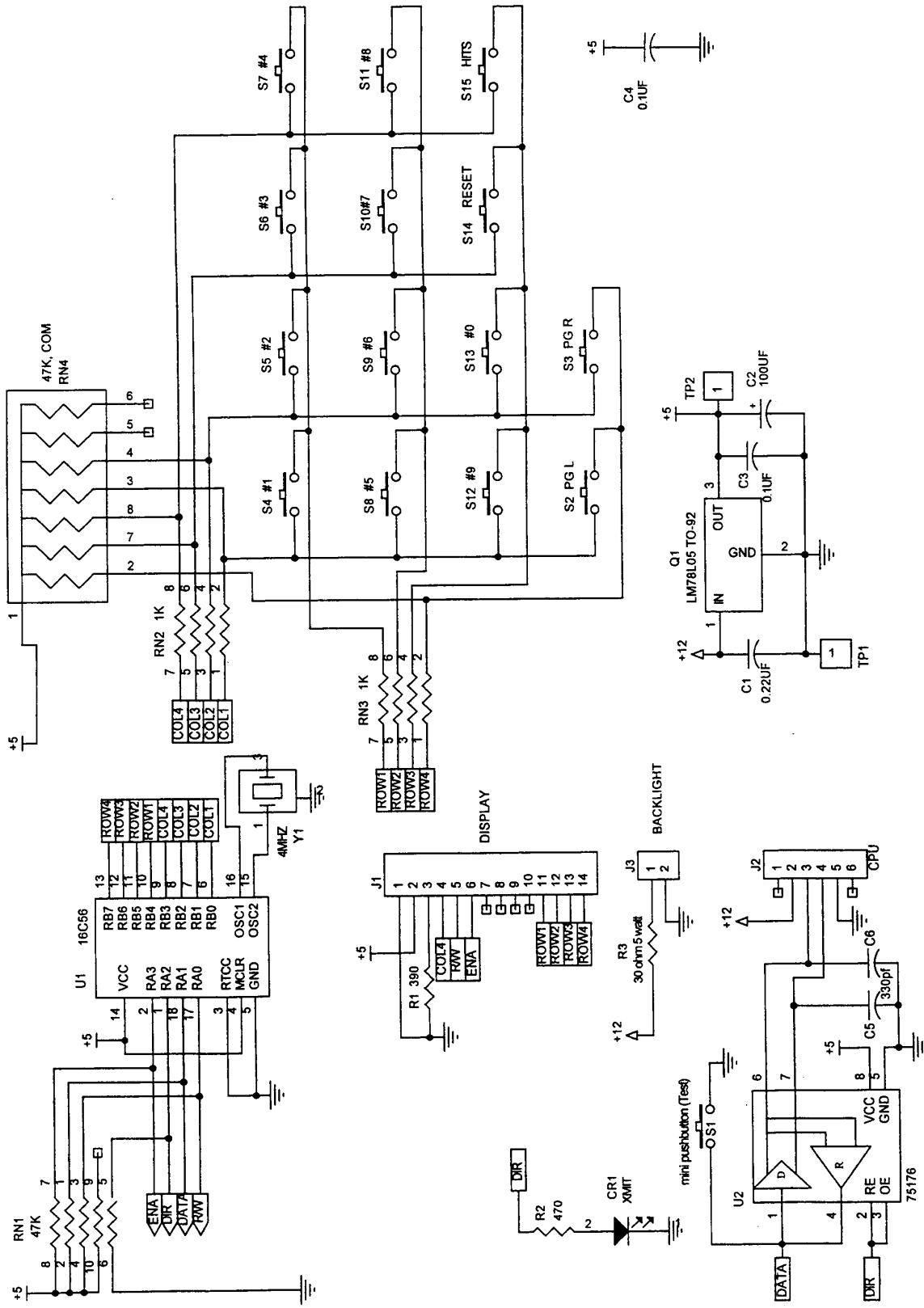
Reference	Description
BR1	Bridge, 100V, 4A *
CR1	Diode, Schottky, 40V, 3A
CR2	LED, Yellow, Diffused, T1 3/4
CR3	Diode, Silicon, 1N4001
CR4	LED, Green, Diffused, T1 3/4
CR5	Diode, Zener, 24V, 5 Watt
CR6	LED, Red, Diffused, T1 3/4
CR2, CR4, CR6	Spacer, #6 x 1/4" Nylon
C1	Cap, 4700uf 50V Alum
C2,C4,C6,C7	Cap, 0.1uf 50V MN
C3	Cap, 1000uf 25V Alum
C5	Cap, 470uf 35V Alum
FT1,FT2	0.187 Male
F1	Polyfuse *
JP1,JP2,JP3	JUMPER , 22AWG Solid wire
J2	Header, 0.156 x 9 STR (Cut Pin 7)
L1	Inductor, 125uH, 3.5A
MH1	Mounting Hole
Q1	Regulator, 12V, 3A, Switching
Q2	Transistor, PNP, 2N2907, TO-92
Q3	Transistor, NPN, TIP41, TO-220
RY1	RELAY DPDT, 12V COIL
R1,R2	Res, 1K, 1/4W, 5%, Thru-hole
R3, R5	Res, 330 Ohm, 1/2W, 5%, Thru-hole
R4	Res, 47 Ohm 1/4W, 5%, Thru-hole
R6	Res, 2.2K 1/4W, 5%, Thru-hole
T1	TRANSFORMER FLAT COMPACT *
HS1	Heatsink, 20W, TO-220 (Q1)
HS2	Heatsink, 4.5W, TO-220 (Q2)
HW1, HW3	Machine screw, 4-40 x 1/4" phlps pan hd ZP
HW2, HW4	Nut, Keps, 4-40, ZP
HW5	Machine screw, 8-32 x 1 3/4" Phlps Pan Hd ZP
HW6	Spacer, #8 x 5/8" Aluminum Spacer
HW7	Nut, Keps, 8-32 ZP



## Bill of Material 62770-A RIAA Preamp

ID	QTY	Description
C1, C2	2	220uf 250VDC Electrolytic Capacitor
C3, C4	2	22uf 350VDC Electrolytic Capacitor
C13,14	2	.1uf 400VDC Film Capacitor
C5,C6,C7,C8	4	22uf 25VDC Electrolytic Capacitor
C9, C16	2	.22uf 400VDC Film Capacitor
C10, C15	2	220Pf 1KV Ceramic Capacitor
C12, C18	2	3300pf 300VAC Ceramic Capacitor
C11, C17	2	.01uf 50VDC Ceramic Capacitor
CR1, CR2	2	1N4004 Diode
D1, D2	2	LED, Orange surface mount
F1	1	.25A Fuse
J2, J3, J4, J5	4	RCA Jack
J1	1	AMP Connector, 4 place
R1	1	15K 0.5 watt resistor 5% CF
R2	1	39K 0.5 watt resistor 5% CF
R7, R8, R14, R15	4	100K 0.5 watt resistor 5% CF
R9, R11	2	47K 0.5 watt resistor 5% CF
R6, R10, R12, R13	4	2.2K 0.5 watt resistor 5% CF
R4, R16	2	470K 0.5 watt resistor 5% CF
R5, R17	2	560K 0.5 watt resistor 5% CF
R3, R18	2	22K 0.5 watt resistor 5% CF
R19	1	390 Ohm 0.5 watt resistor 5% CF
T1	1	Power Transformer 164F120
HW1, HW2	2	Machine screw, 4-40 x 1 3/8"
HW3, HW4	2	Hex Nut, 4-40 w/ captive lockwasher
V1, V2	2	ECC83 Vacuum Tube
V1, V2	2	9 pin tube socket

# Keyboard/Display



Keyboard/Display 58926-A

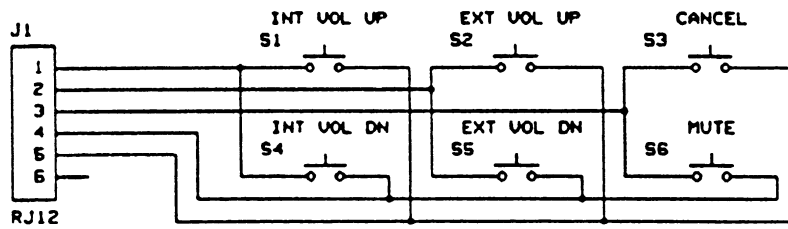
**Bill of Materials, PCB Assy, Keyboard/Display, 58926-A**

Reference	Part
C1	Capacitor 0.22uF
C2	Capacitor 100uF
C3, C4	Capacitor 0.1uF
C5, C6	Capacitor 330pF
CR1	Diode
J1	Connector (Display)
J2	Connector (CPU)
J3	Connector (Backlight)
Q1	I.C. LM78L05
RN1	Resistor 47K
RN2, RN3	Resistor 1K
RN4	Resistor 47K, (COM)
R1	Resistor 390 ohm
R2	Resistor 470 ohm
R3	Resistor 30 ohm, 5W
S1	Mini pushbutton (Test)
S2	Mini pushbutton (PG L)
S3	Mini pushbutton (PG R)
S4 - S13	Mini pushbutton

## Volume Control

(Back of Machine)

PCB Assy, Volume Control, 58515-A

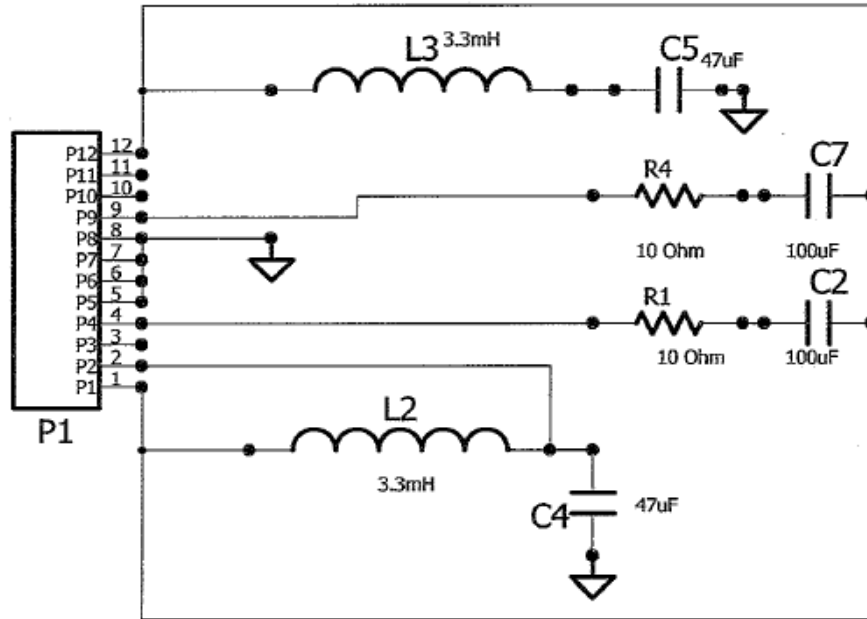


Bill of Materials - Volume Control PC Board Assembly, 58515-A

Reference	Part
J1	Conn Jack RJ12 PCB Low Prof w/ Stops
S1 - S6	Switch SPST, Mom, PB NO

**Crossover**

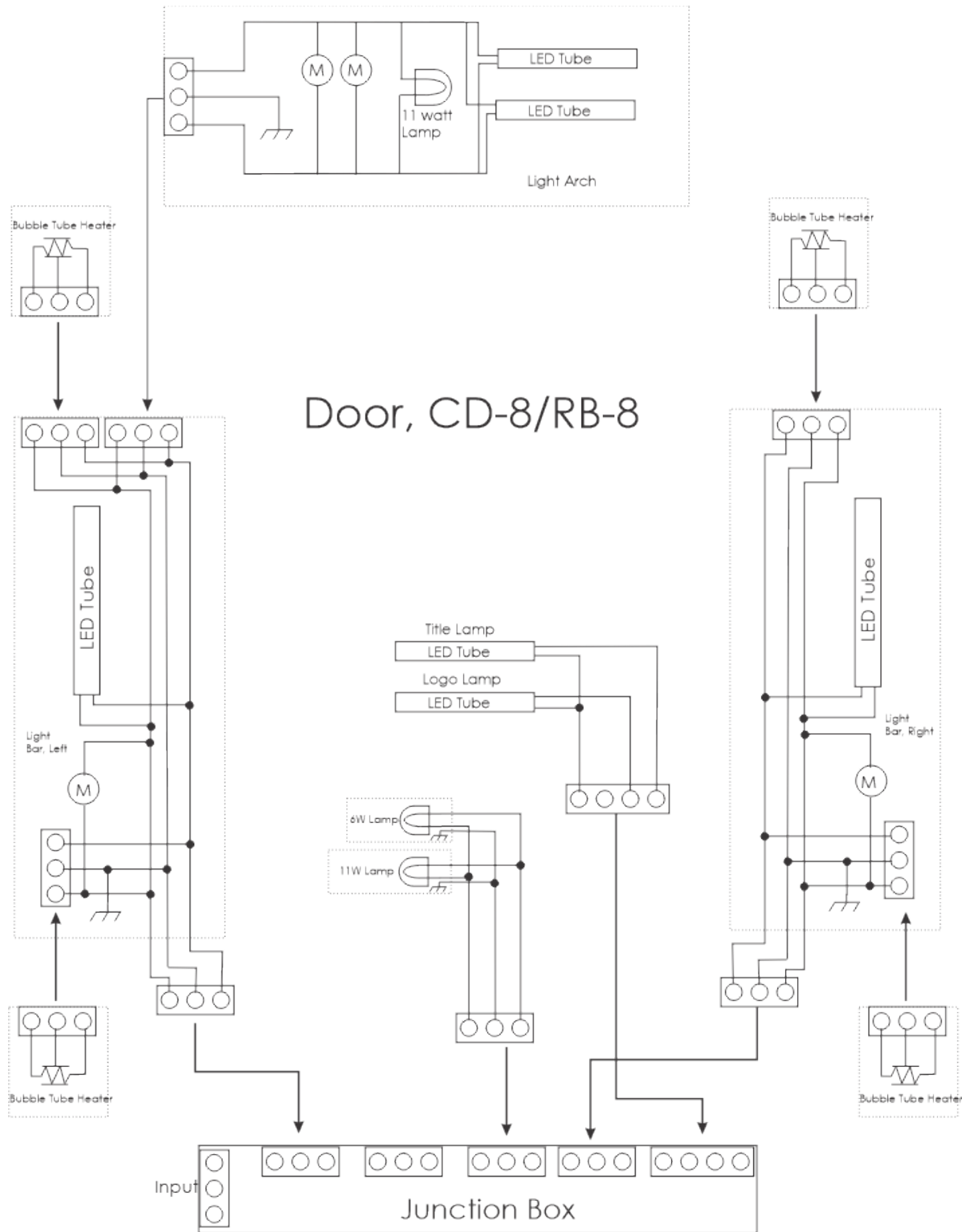
**PCB Assy, Crossover, 62793-A**



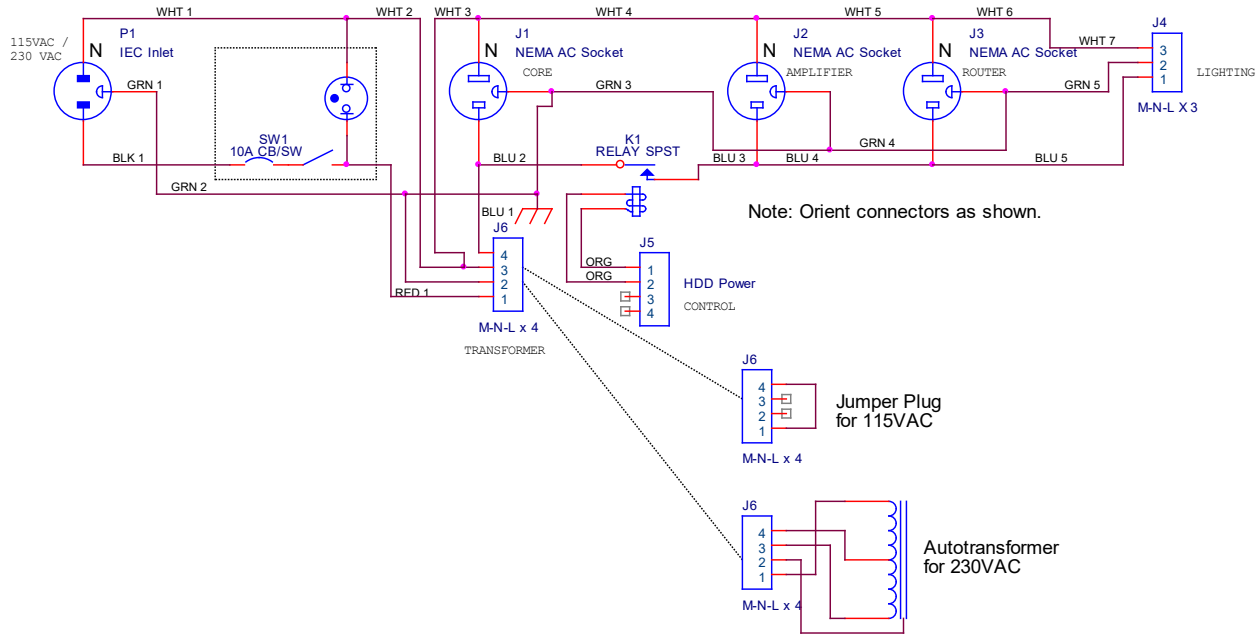
**Bill of Materials, PCB Assy, Crossover, 62793-A**

Reference	Part
C2, C7	Capacitor 100 uf
C4, C5	Capacitor 47 uf
J1	Header 12 pin
L2, L3	Coil 3.3 mh
R1, R4	Resistor 10 ohm

# Lighting Wiring Diagram, RB-8



**Primary Power Block Diagram, RB-4/6/8**



NOTE: Regardless of input voltage, the power supply, amplifier, pre-amp, and lighting all operate on 115VAC. The autotransformer steps 230V to 115V for export models. Replace the jumper plug with the autotransformer to go from 115 to 230 volt operation. Remove the autotransformer and replace with a jumper plug to convert from 230 to 115 volt operation.



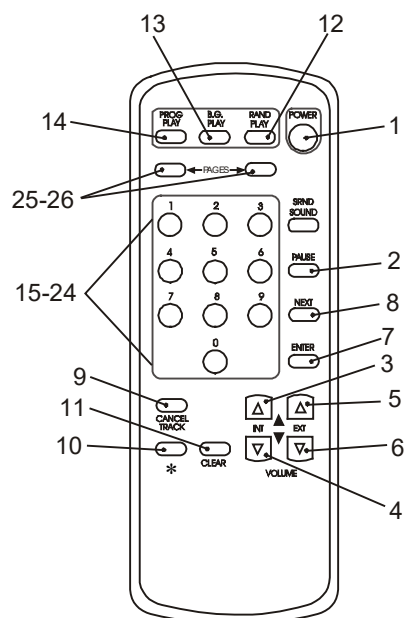
# S E C T I O N

# J

## Common Accessories

This section contains information about optional accessories for all models. This information also includes installation instructions for kits along with programming instructions for the accessories which require programming.

# Deluxe Remote Control P/N 58751-A



### Remote Control Functions:

1. **Power On/Off\*** - Turns the mech, lighting, CD player, and display ON and OFF. Puts the amplifier on standby. Set using Quick Find 70.
2. **Pause/Mute\*** - Puts the CD player in pause mode and mutes the amplifier for programmed period of time. Set using Quick Find 120.
3. **Internal Volume Up** - Raises the output of the internal amplifier.
4. **Internal Volume Down** - Lowers the output of the internal amplifier.
5. **External Volume Up** - Raises the output of the external amplifier.
6. **External Volume Down** - Lowers the output of the external amplifier.
7. **Enter\*** - Pressed after a four digit selection, the disc and track (if valid and enabled) will be added to the play queue. Quick Find 121 or 122 must be enabled.
8. **Next\*** - Pressed after a four digit selection, the disc and track (if valid and enabled) will be played next. This is especially useful for "Happy Birthday" or similar selections. Quick Find 121 or 122 must be enabled.

9. **Cancel Track** - Stops the current selection. The next selection in the play queue is played.
10. **\* - Programmable key.** Can be Remote Credits. Set using Quick Find 55.
11. **Clear\*** - If enabled, completely erases the play queue. Set using Quick Find 126.
12. **Random Play\*** - Activates the random play feature depending on how Quick Find 127 is configured. Set using Quick Find 127.
13. **Bckgrnd Play\*** - Enables/disables background auto play mode. Set using Quick Find 128.
14. **Program Play\*** - Activates one of the 3 programmed play lists. Each play list plays up to 50 selections. Set using Quick Find 129.
- 15-24 **Digits 0-9** - Used for entering selections and programming.
- 25-26 **Page\*** - When pressed, will cause the title pages to move one page. Set using Quick Find 29.

\* These are programmable functions for the deluxe remote control. Only track cancel and volume are fixed functions.

For programming instructions, see Section E of the SyberSonic Service Manual.

### QUICK FIND REFERENCE PROGRAMMING

120	Pause/Mute	125	Reserved
121	Select Type	126	Clear Mem.
122	Reserved	127	Random Sel.
123	Reserved	128	Background
124	Reserved	129	Play Lists

## Microphone Kit P/N 02379-02 (Yoga)

adjusting the Music Level While Paging. See the jukebox service manual for setting instructions.

### Parts List:

QTY	P/N	Description
1	59360-A	Yoga Microphone w/ mtg brkt
1	59356-A	Cable Assembly, 75 feet
1	ST-11474	DIN Socket, 3 Pin
1	ST-11244	Header, 0.156 X 4
3	ST-11245	Pin, 0.156 Tin



### Installation Instructions:

The microphone is connected to the jukebox amplifier with a 2 wire (22 AWG) shielded cable. This cable is supplied with kit.

- Install the microphone's mounting bracket on a firm surface. If possible, choose a location away from any speakers.
- Run the cable between the microphone location and phonograph. Be sure the DIN socket side of the cable is at the chosen location.
- At the microphone location, connect the microphone to DIN socket.
- At the phonograph end, run the cable into the phonograph through the cable access port in the rear. Route the cable to the amplifier being careful to not interfere with any moving parts. Plug the connector into the microphone input.

This completes the installation. Turn the phonograph on and set the jukebox amplifier per the jukebox service manual. Test the microphone by keying and speaking into it.

**Important:** Do not blow into the microphone. Test by tapping on the case or talking into the microphone.

**Note:** Microphone volume is independent of the jukebox volume and will work regardless of whether music is playing or not. If the jukebox is playing, the volume of the music will be reduced during paging. This level may be changed by

**This kit includes the necessary connectors to utilize existing location wiring if desired. Connect cable and microphone following the below charts.**

The cable wiring is as follows:

Wire Color	Function	DIN Socket	Header Socket
Red	Power	Pin 3	Pin 4
Black	Audio	Pin 1	Pin 2
Shield	Ground	Pin 2	Pin 1

The microphone wiring is as follows:

Wire Color	Function	DIN Plug
White	Power	Pin 3
Red	Audio	Pin 1
Shield	Ground	Pin 2

### Hints To Avoid Feedback Howl

1. Hold the microphone close to mouth when using 1/2" to 1" is best.
2. Keep the microphone gain (volume) as low as possible consistent with coverage requirements.
3. Keep the microphone as far from the speakers as possible.



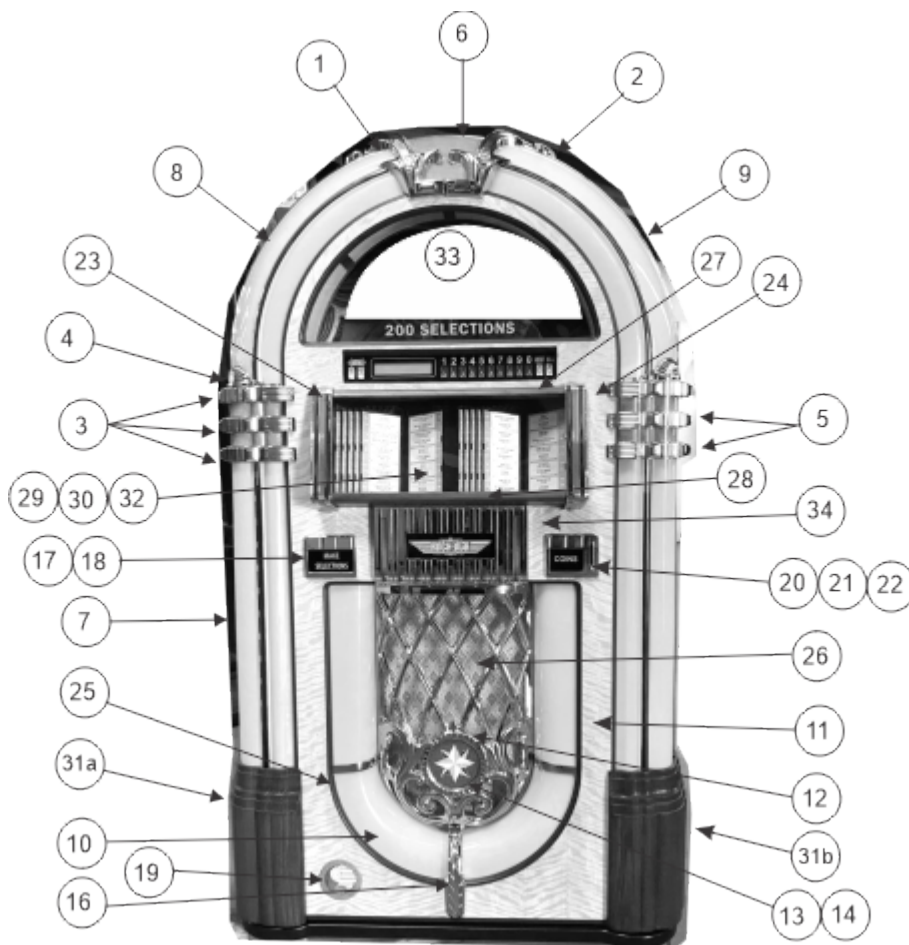
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## Parts Catalog

Door Assembly.....	2
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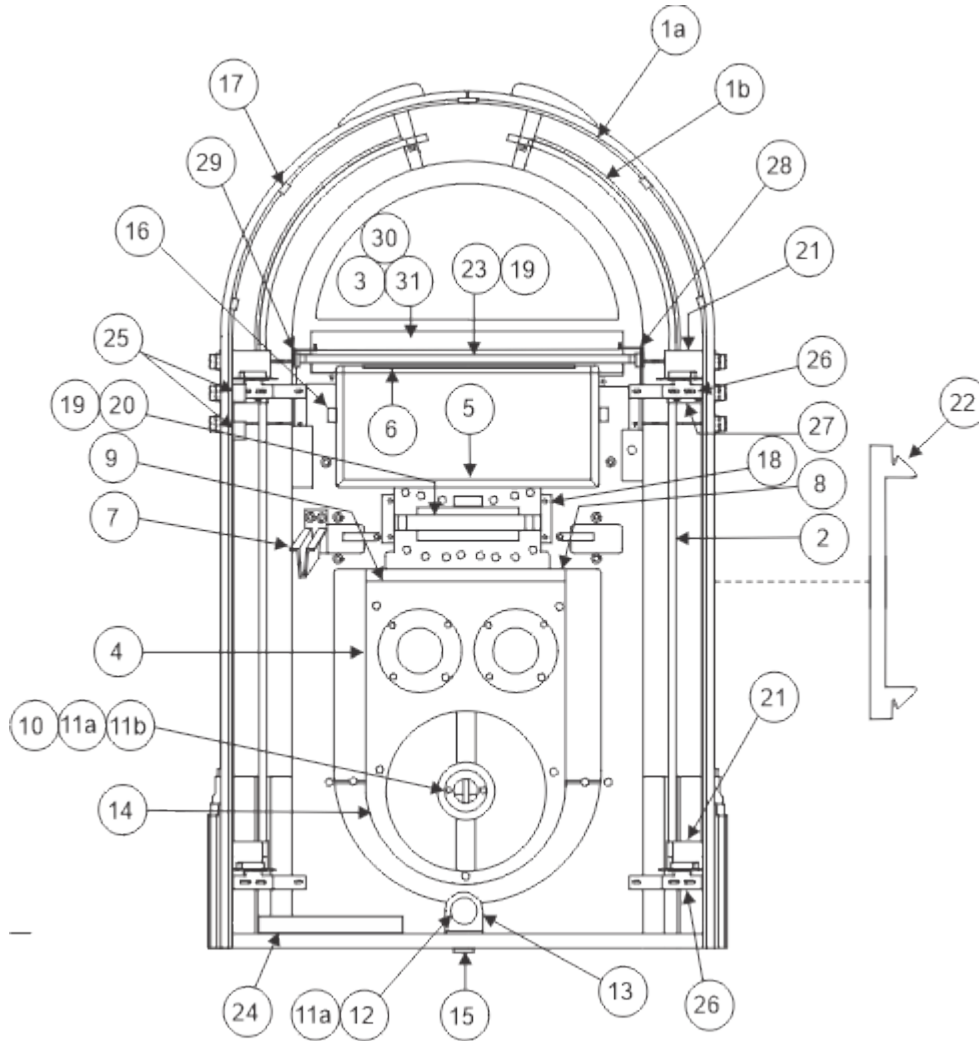
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# Door Assembly



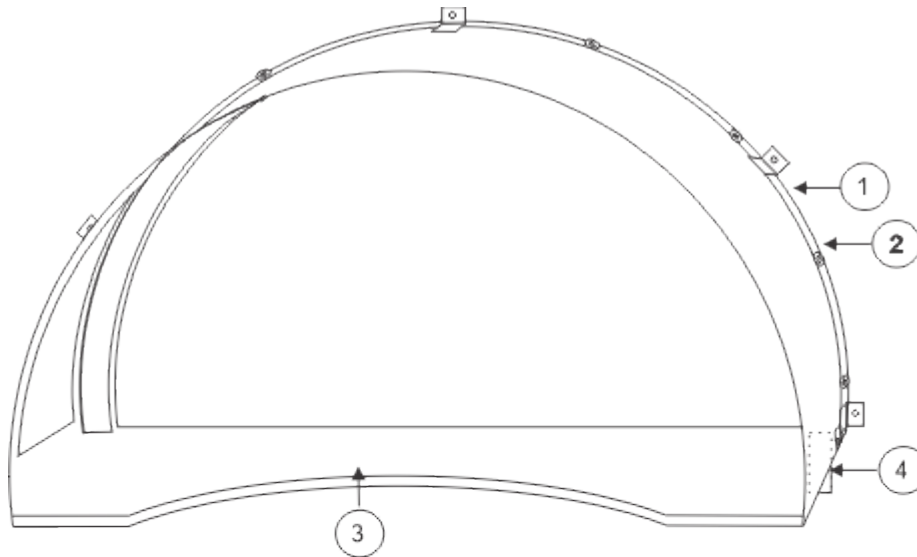
Item No.	Part No.	Description	Item No.	Part No.	Description
1	57380	Casting - Upper Trim LH	20	57316-01	Casting - Coin Entry
2	57381	Casting - Upper Trim RH	21	57317	Plastic - Coin Entry
3	57382	Casting - Side Trim (6 pl)	22	57716	Decal "Coins"
4	57383	Casting - Shell Trim (2 pl)	23	57457	Casting - Program Trim LH
5	57384	Plastic - Side Red (2 pl)	24	57458	Casting - Program Trim RH
6	57385	Plastic - Top Red	25	60202-LF	Grill Trim (2 pl)
7	57386-01	Plastic - Pilaster Cream	26	57472-19250	Grill Cloth Diamond Pattern 19-1/4"
8	57387	Plastic - Upper Curve Cream LH	27	SV-23826	Trim, Upper Display, Walnut
9	57388	Plastic - Upper Curve Cream RH		SV-23827	" " " Oak
10	57452	Plastic - Inner Curve (2 pl)	28	SV-23828	Trim, Lower Display, Walnut
11	57453	Plastic - Inner Straight (2 pl)		SV-23829	" " " Oak
			29	57459	Program Glass
	<b>SV-57392-A</b>	<b>Large Grill Assembly</b>	30	53774-17500	Rubber Channel 17 1/2"
12	57393	Casting - Large Grill	31a	61588	Knee Assembly, LH, Walnut
13	57394	Star Logo		SV-23849-A	" " " " Oak
14	SV-60771-A	Grill Diffuser Plastic & Bracket Assy	31b	61588	Knee Assembly, RH, Walnut
16	57450	Grill Support		SV-23848-A	" " " " Oak
17	57454	Casting - Bill Entry	32	SV-58726-1A	Title Page Assembly (p. 6)
18	60722	Plastic, Bill Entry, "Make Selections"	33	62762	Front Glass
19	62240-LF	Medallion	34	SV-58840-A	Small Grill Assembly (p. 4)

# Inside Door Assembly



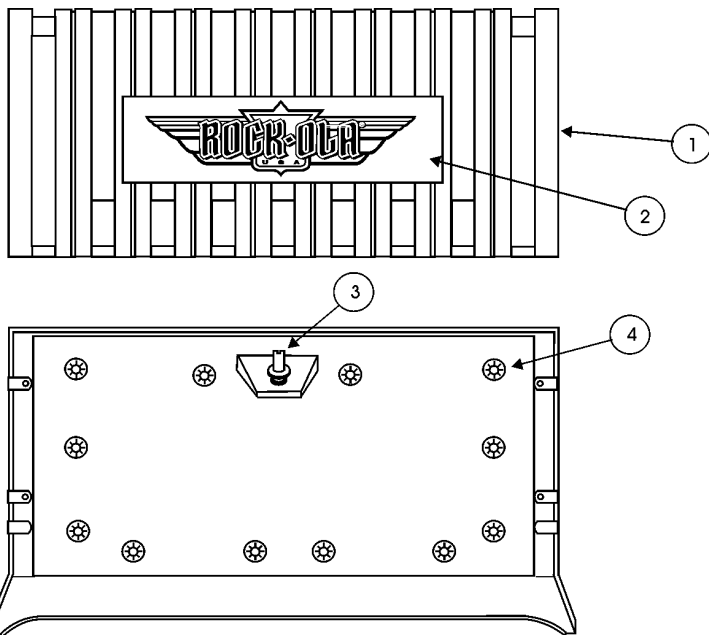
Item No.	Part No.	Description	Item No.	Part No.	Description
	See page 4	Light Arch Assembly (not shown)	15	57464	Kick Plate
	See page 5	Light Bar Assembly (not shown)	16	58251	Title Page Latch Spring (2 pl)
1a	57448	Bubble Tube, Long Curve (2 pl)	17	57439-01	Light Arch Hanging Bracket (4 pl)
1b	57449	Bubble Tube, Short Curve (2 pl)	18	60702	Fluorescent Light Bracket (2 pl)
2	57447	Bubble Tube, Straight Long (2 pl)	19	60757	Lamp Socket (2 pl)
3	SV-58926-A	Keyboard/Display Assembly	20	62573-LF	LED Tube 9" <i>MUST Be Rock-Ola Part</i>
4	SV-62785	Speaker 5 1/4" Midrange (2 pl)	21	SV-60764-A	Bubble Tube Heater & Mtg Assy (4 pl)
5	58252	Shroud, CD Title Page	22	58617	Dual Lock Strike
6	60756	White Plastic, Title Page Diffuser	23	62572	LED Tube 21" <i>MUST Be Rock-Ola Part</i>
7	SV-57661-A	Upper Coin Chute Assy	24	60747-A	Junction Box Assembly
8	57474	Light Diffuser Metal Frame	25	58802	Service Switch Bracket (2 pl)
9	57475	Door Light Diffuser	26	58443	Mounting Bracket, Heater (4 pl)
10	60899	Grill Light Bracket	27	58444	Mounting Bracket, Bubble Tube (2 pl)
11a	57431	Single Lamp Socket	28	60693-A	Bracket, Fluorescent Lamp, LH
11b	60894	Lamp, Incandescent, 4w	29	60694-A	Bracket, Fluorescent Lamp, RH
12	57433	Bulb 11 watt, Orange	30	59117	Keyboard Retainer Bracket
13	57468-01	Lower Door Light Bracket	31	60627	Keyboard Bezel
14	24126	Speaker Board			

### Light Arch Diffuser Assembly



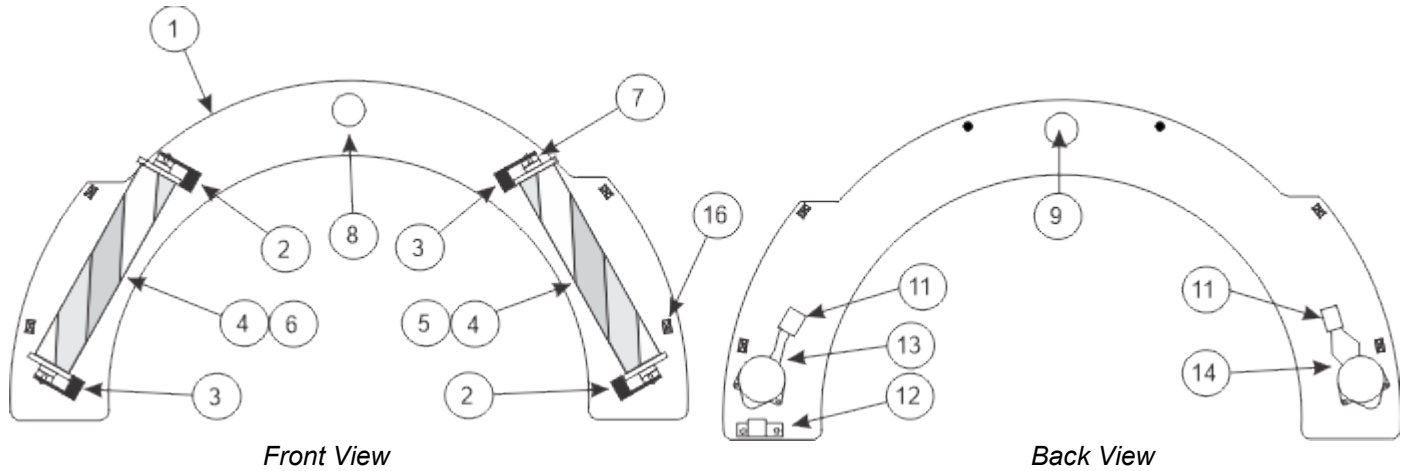
Light Arch Diffuser Assy		
ITEM NO.	PART NO.	DESCRIPTION
1	62807	Window Arch, RB-8E
2	62808	Window Arch Diffuser
3	24127	Door Trim Board, Walnut
3	24153	Door Trim Board, Black
3	24160	Door Trim Board, Oak
3	24167	Door Trim Board, Gloss White
3	24173	Door Trim Board, Gloss Black
4	62809	Bracket, Door Wood Trim (2)

### Small Grill Assembly #SV-58840-A (CD-8 / RB-8 Bubbler)



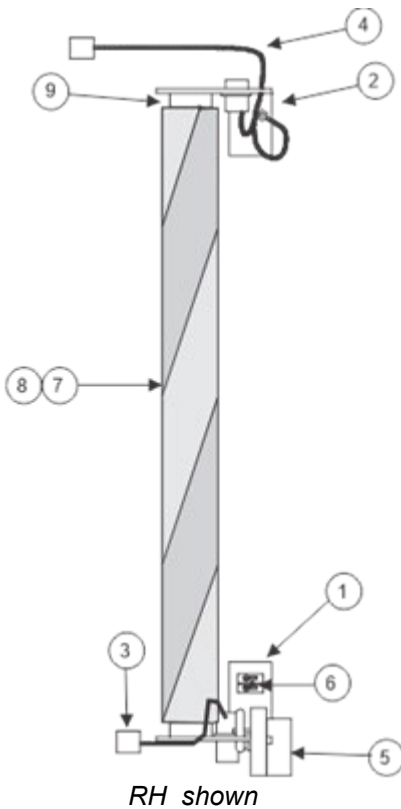
Item No.	Part No.	Description
1	58848	Small Grill Casting
2	58962-01	Rock-Ola Logo
3	58009	Mounting Stud
4	ST-11303	Speed Nut 3/16"

## Arch Light Assembly, LED SV-62588-A



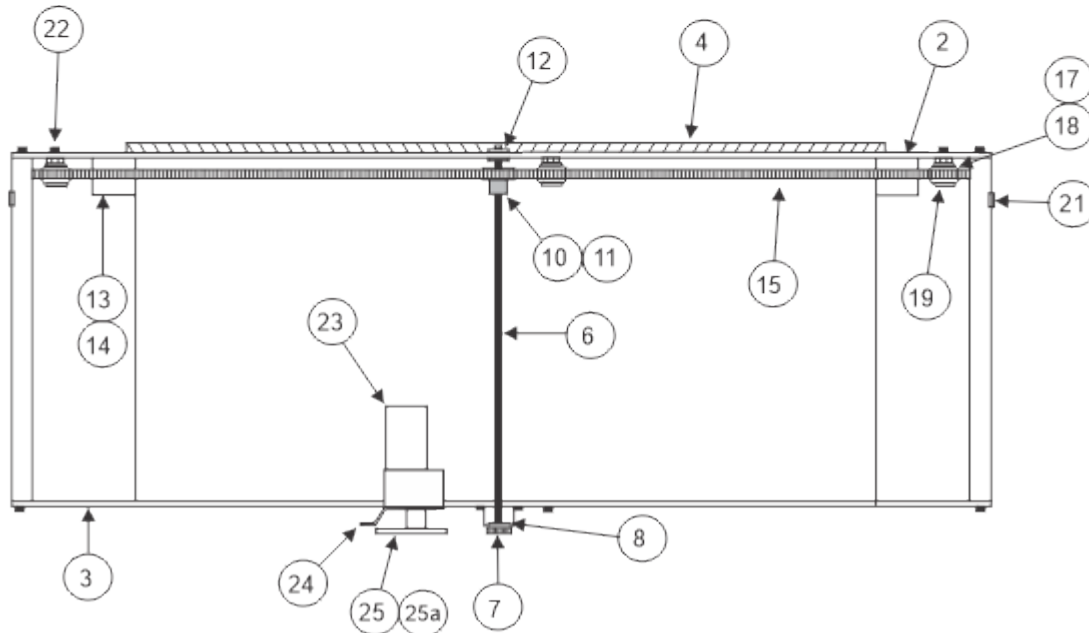
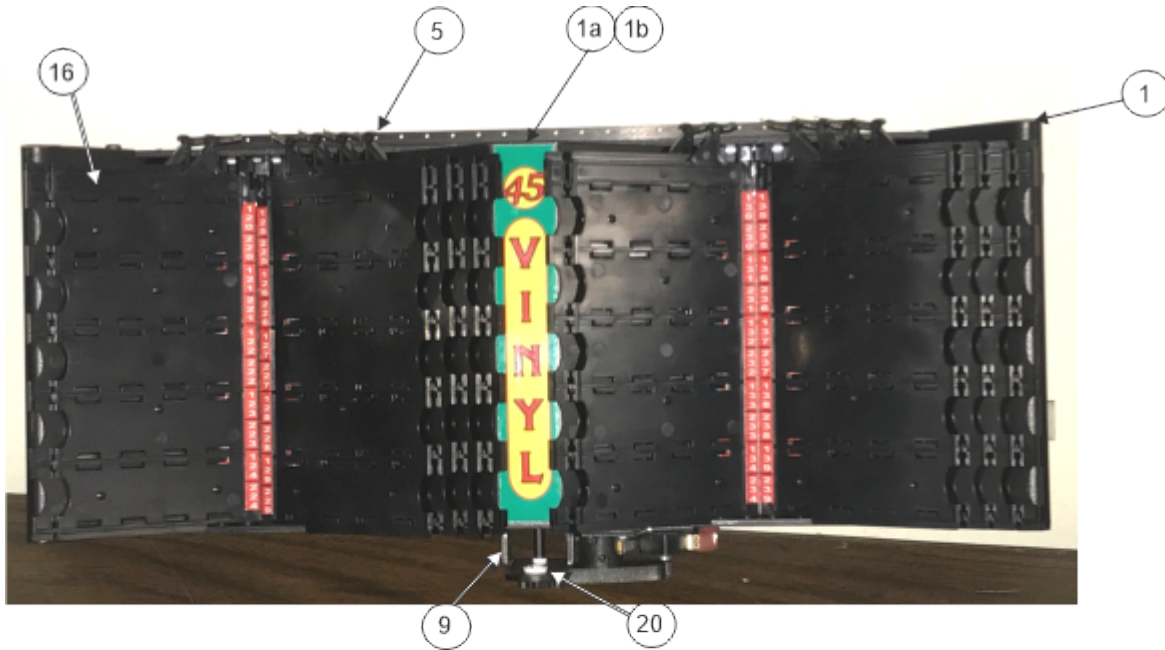
Item No.	Part No.	Description	Item No.	Part No.	Description
1	60696	Arch Light Frame	9	57431	Single Lamp Socket
2	57429	Lamp Bracket, RH	10	Not Assigned	
3	57430-01	Lamp Bracket, LH	11	57413	Terminal Strip, 2 pole
4	62570-LF	LED Tube, T8, 15"	12	60739	Power Connector, AMP
5	SV-62620-A	Color Cylinder Assy, RH	13	SV-58046-A	Motor Assy, RH
6	SV-62621-A	Color Cylinder Assy, LH	14	SV-58045-A	Motor Assy, LH
7	57415	Fluorescent bipin Socket	Not Shown	62588-A	Arch Light Cable Assy
8	57433	Bulb 11W Orange	16	57440	Nylon Latch, 1/4 Turn

## Light Bar Assembly



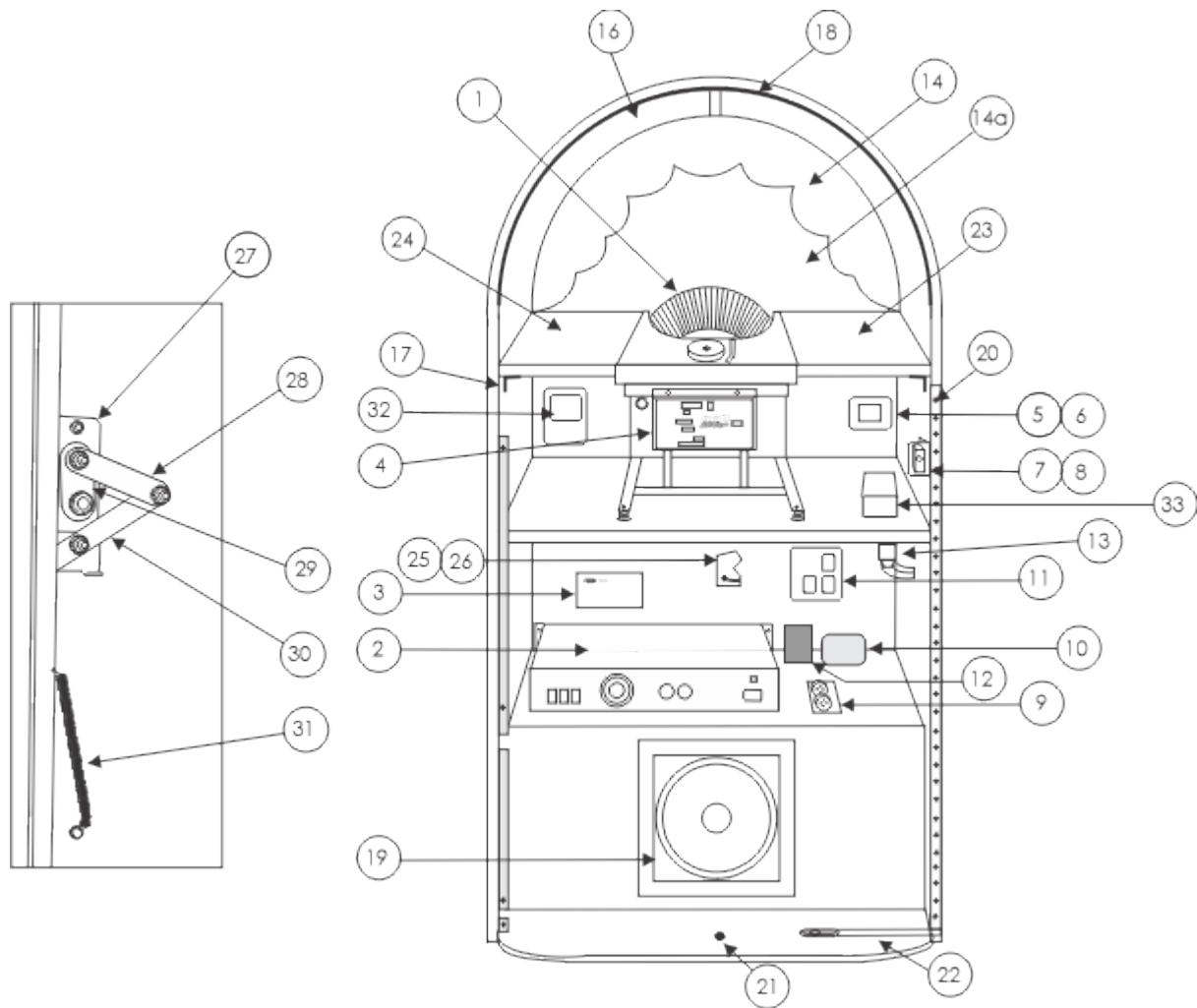
Item No.	Part No.	Description
1	62583-LF	Lower Light Door Bracket, LH
	62584-LF	“ “ “ “ RH
2	62581-LF	Upper Light Door Bracket, LH
	62582-LF	“ “ “ “ RH
3	SV-62617-A	Lower Door Bracket, Wired, LH
	SV-62616-A	“ “ “ “ RH
4		Light Arch Cable (RH Only)
	SV-58045-A	Motor Assembly, LH
5	SV-58046-A	“ “ “ “ RH
	60739	Terminal Block
7	SV-62619-A	Color Cylinder Assembly, LH
	SV-62618-A	“ “ “ “ RH
8	62571-LF	LED Tube, 24" T8
9	57415	Fluorescent bipin socket

## Title Page Assembly #SV-62790-A



Item No.	Part No.	Description	Item No.	Part No.	Description
1	57083-02	Title Page Main Frame	13	57353	Channel
1a	62795-LF	Center Trim, 45 Title Page	14	57493	Slide Actuator (2)
1b	62796	Decal, Center 45 Title Page	15	57354	Title Page Belt
2	57081-01	Top Bracket	16	62754	Title Page, Black Plastic (12)
3	57082	Bottom Bracket	16	62783	Title Holder Label Set
4	57402-01	Catch Spring	17	57357	Standoff
5	57347	Spring	18	57358	Roller
	<b>SV-57348-A</b>	<b>Drive Shaft Assembly</b>	19	ST-09245	"C" Clip 1/4
6	57349	Drive Shaft	20	57360	Nyliner Bearing 5/16"
7	57350-01	Brass Gear	21	57072	Nyliner Bearing 1/4"
8	57359	Nyliner Bearing 3/16"	22	ST-08268-D	8-32x5/16 Hex Hd Screw
9	62826	Bottom Mounting Guide	23	59346-A	Title Page Motor
10	57352	Nylon Gear	24	59682	Motor Bracket
11	ST-02255	Set Screw 6-32 x 3/16	25	59675	Page Drive Gear
12	ST-09263	"C" Clip 3/16	25a	ST-11460	Set Screw
			26	43414-01	Snap Switch

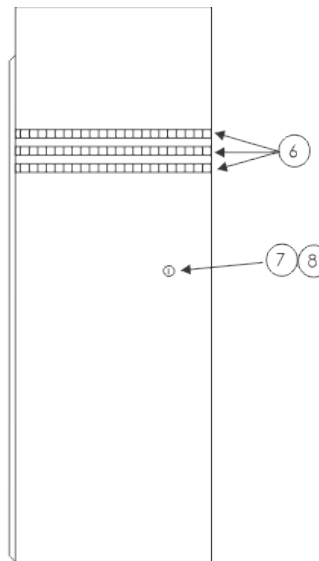
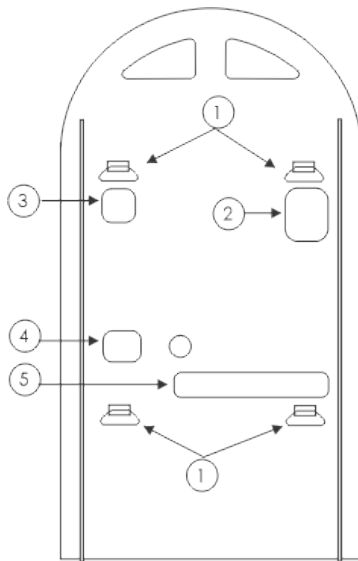
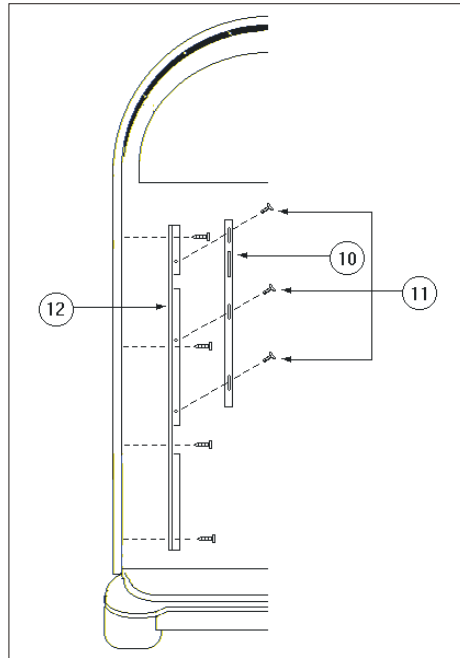
# Inside Cabinet Assembly



Item No.	Part No.	Description	Item No.	Part No.	Description
1	SV-62755-A	Mechanism Assembly	23	SV-24139	Mech Trim, RH, Walnut
2	SV-62712-A	Power Amplifier		SV-24159	" " " Oak
3	SV-70311-A	Power Supply		SV-24152	" " " Black
4	SV-70464-A	Computer		SV-24166	" " " Gloss White
5	58515-A	PCB, Volume Control		SV-24172	" " " Gloss Black
6	61961-A	Plate, Volume Control	24	SV-24138	Mech Trim, LH, Walnut
7	58602	Service Switch		SV-24158	" " " Oak
8	58622	Switch Bracket		SV-24151	" " " Black
9	SV-62793-A	Speaker Crossover		SV-24165	" " " Gloss White
10	59934	Cashbox		SV-24171	" " " Gloss Black
11	SV-62156-A	Power Distribution	25	46956	Cable Cover
12	62155	230V/115V Transformer (Export only)	26	ST-01352	Wing Nut
13	SV-57336-A	Coin Chute Assy	27	60881-A	Pivot Plate, Lock
14	60596	Mural/Curtain	28	60699	Lock Arm
16	57373-24500	Gold Foil	29	60697-A	Cam Bolt
17	57364	Mech Trim Bracket (2 pl)	30	60880-A	Lock Lever
18	57365	Light Block	31	57372	Extension Spring
19	57288-02	Woofers Speaker	32	SV-62837-A	Connection Panel Assy
20	57377	Door Hinge	33	62196-A-LF	Power Brick
21	57477	Nylon Base Tack Glide			
22	61021	Door Stop			

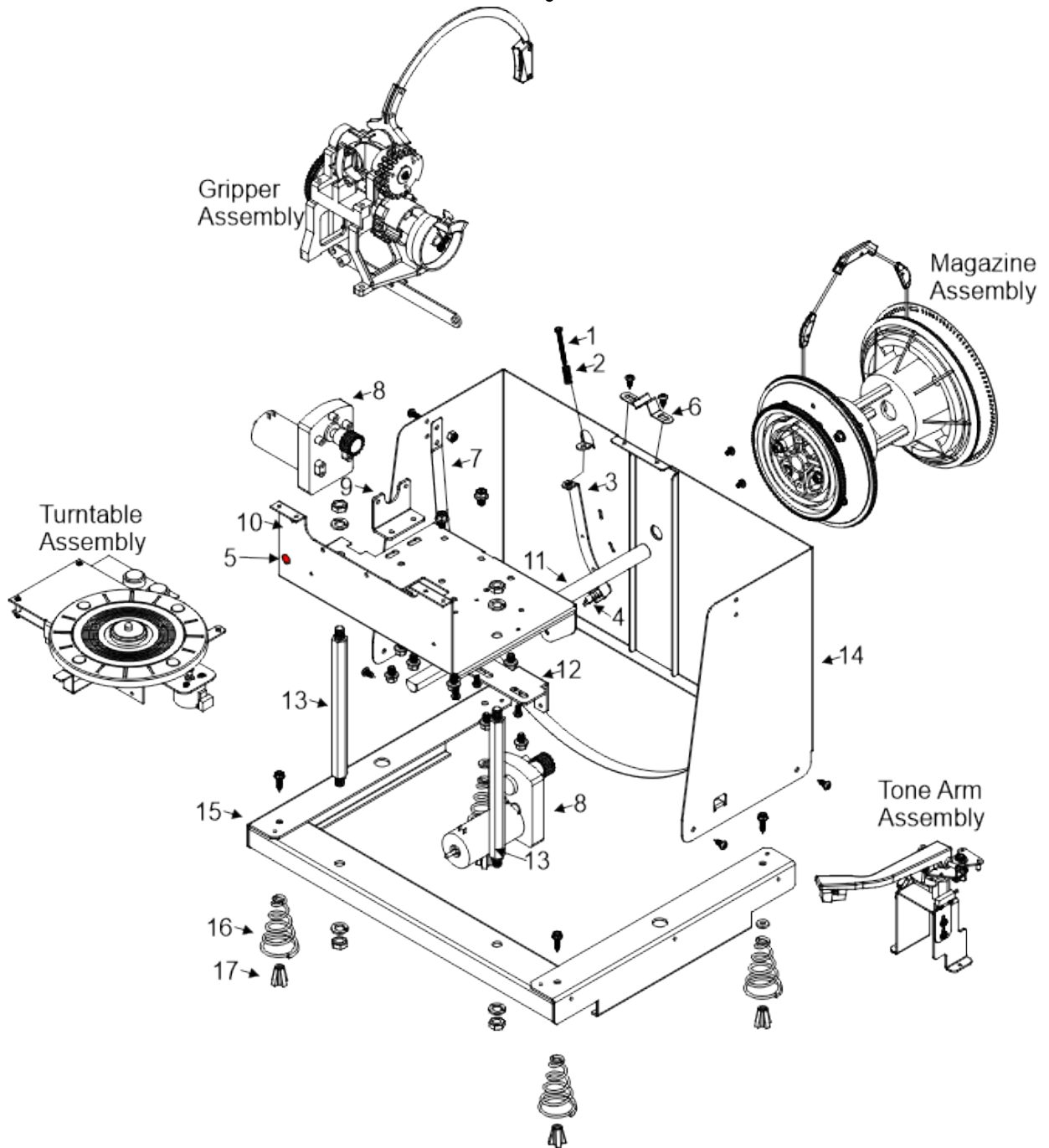
## Dual Lock Assembly SV- 57366-A

Item No.	Part No.	Description
10	57368	Dual Lock Side
11	57369	Shoulder Screw
12	57367	Dual Lock Guide



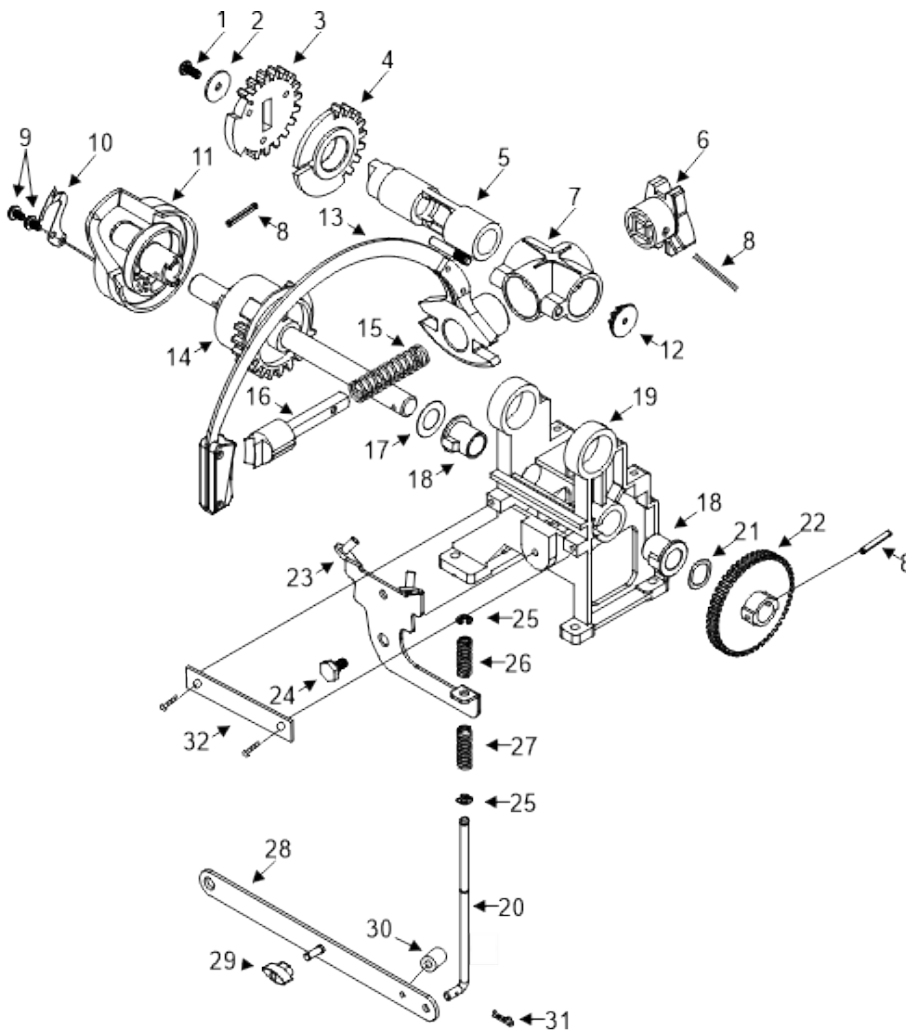
Item No.	Part No.	Description	Item No.	Part No.	Description
1	SV-49997-3A	Handle & Bracket Assy	4	SV-62172-A	Power Amplifier
2	SV-62203-A	Connection Panel Assy	5	57376-18500	Mirror Strips 18 1/2"
3		Volume Control Assy	6	ST-11296	Lock & Key
4	SV-62156-A	Power Distribution Assy	7	ST-11296-K	Key only

# SV- 62755-A Mechanism Assembly



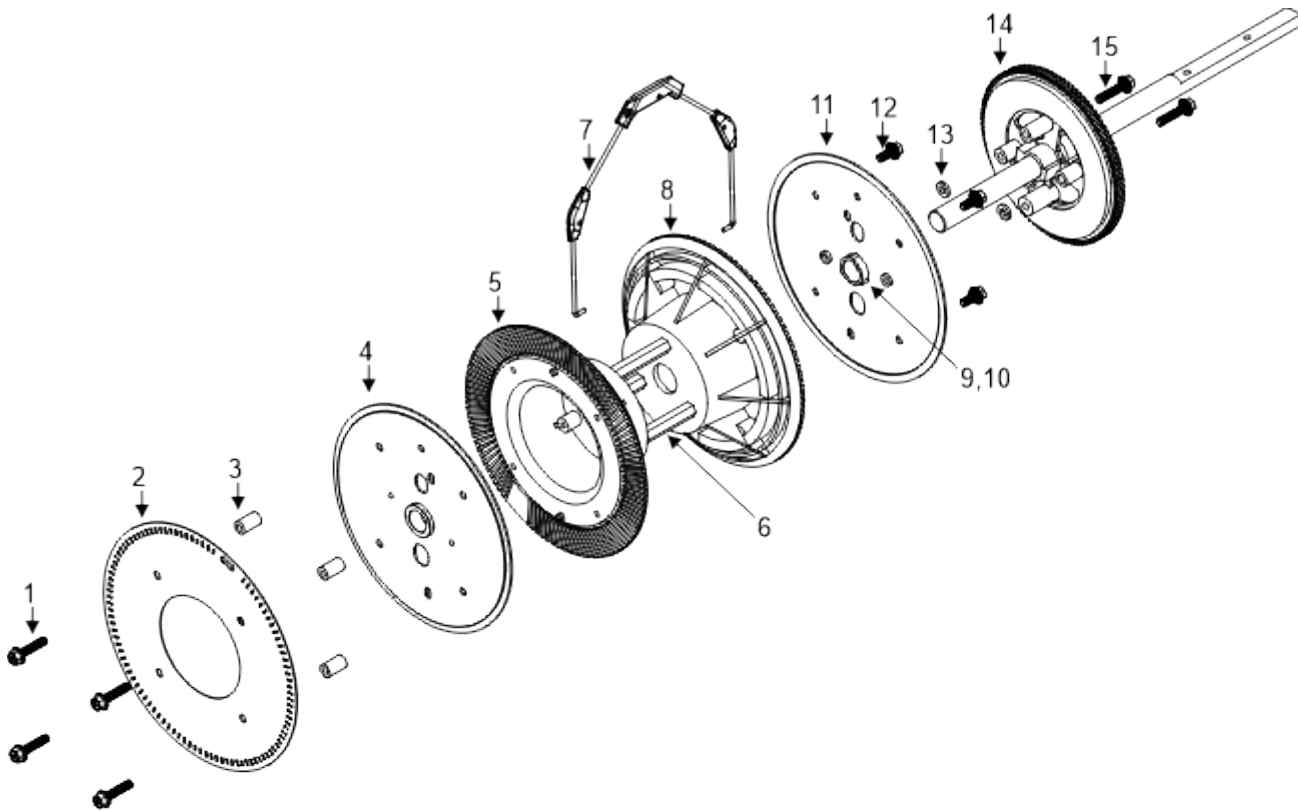
ITEM NO.	PART NO.	DESCRIPTION	ITEM NO.	PART NO.	DESCRIPTION
1	ST-02575-D	8-32 x 1 1/4 Hex Flg	10	62732	Chassis, Mech Plate
2	34447	Spring, Conrod Upper	11	62733	Shaft, Mechanism Vinyl
3	62749	Bracket, Opto Plate Adj.	12	62750	Bracket, Magazine Motor
4	58687-A	Mech Opto Cable Assy	13	62740	Standoff, Vinyl Mech (2)
5	58679	Momentary Switch	14	62729-A	Mount Plate, Rear Mech
6	57157	Gripper Arm Rest Bracket	15	62728-A	Frame Mechanism Base Vinyl
7	62813	Steel Band, Vinyl	16	62812	Spring, Compression Mech Base (4)
8	55941-A	D.C. Gearmotor Assy (2)	17	57168	Nylon Spring Insert (4)
9	62751	Bracket, Gripper Motor			

# SV- 62789-A Gripper Assembly



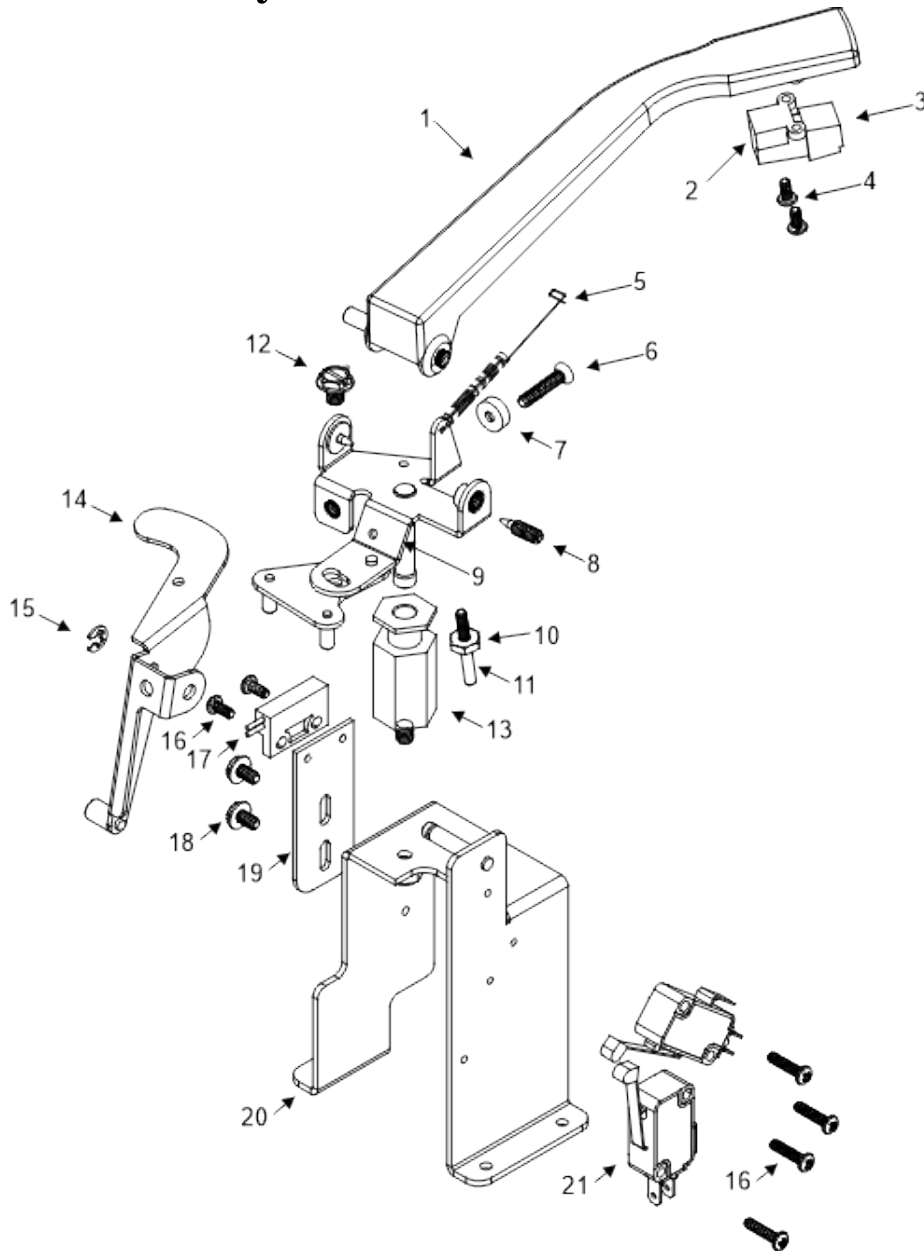
SV-62789-A Gripper Assembly					
ITEM NO.	PART NO.	DESCRIPTION	ITEM NO.	PART NO.	DESCRIPTION
1	ST-06535	Screw 8-32 x 5/8 Phil Pan Hd	17	34929	Gripper Shaft Thrust Washer
2	ST-04881	Flatwasher	18	45422	Gripper Housing Bearing
3	34311-04	Gripper Release Gear	19	45421-03	Gripper Housing
4	34312-02	Gripper Turnover Gear	20	52202	Connecting Rod
5	34399	Trunion Shaft	21	ST-04828	Spring Washer
6	34323-8A	Cam Gripper Arm Rev. Assy	22	34310-01	Gripper Shaft Gear
7	SV-34315-7A	Gripper Spider Assy	23	62752-A	Gripper Reverse Rivet Assy
8	ST-00534	Spirol Pin 1/8 x 15/16	24	34422-01	Gripper Reverse Hex Stud
9	ST-11491	4 x 3/8" Phl Pan Hd	25	ST-09249	"E" Ring 5/32"
10	17524	Tone Arm Cam Keeper Spring	26	34447	Spring Connecting Rod Upper
11	62742	Tone Arm Cam	27	34864	Spring Connecting Rod Lower
12	34877	Trunion Shaft Button	28	62782-A	Linkage Odd-Even Alternating Dog
13	62787-A	Gripper Arm Vinyl	29	62753	Odd-Even Alternating Dog
14	62803-A	Gripper Shaft and Gear	30	57172	Spacer Aluminum
15	54768	Gripper Spring	31	ST-12273	Retaining Clip
16	56185-1A	Inner Gripper Assy	32	62746	Retainer Bckt Gripper Reverse

# SV- Magazine Assembly



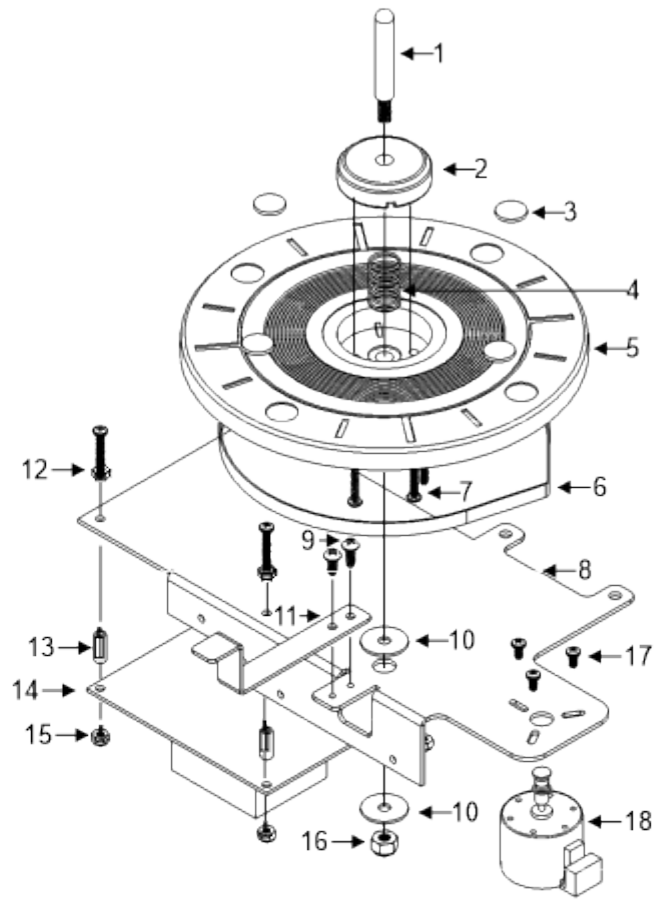
SV-62776-A Magazine Assembly		
ITEM NO.	PART NO.	DESCRIPTION
1	ST-11282	10 x 1 1/4 Hex Flg Type B
2	55278-02	Encoder Disk
3	57172	Spacer
4	57187-A	Cover, Magazine Assy
5	56017	Hub, Rear
6	62766-LF	Standoff, Hub Spacer
7	SV-62835-A	Separator Wire Assy Vinyl
8	56016	Hub, Front
9	50308-01	Main Bearing
10	ST-09264	Retaining Ring
11	57187-A	Cover, Magazine Assy
12	ST-10561	10 X 1/2 Flg Type B
13	56114	Spacer
14	57293	Drive Gear
15	ST-02586	10-32 X 1 1/2 Hex Flg MS

# Tone Arm Assembly



ITEM NO.	PART NO.	DESCRIPTION	ITEM NO.	PART NO.	DESCRIPTION
1	62836-A	Tone Arm Assembly	12a	ST-00399	Flat Washer
2	62738	Phono Cartridge	13	41612-A	Pivot Bushing and Ball Assy
3	62804	Stylus ATN3600	14	41609-A	Lifter Lever Assy
4	ST-12275	M2.5 x 8mm Torx Hd Screw	15	ST-09249	"E" Ring 5/32"
5	41758	Spring, Tone Arm	16	ST-07248	4-40 x 1/2 Phlps Pan Hd Mscrew
6	ST-12276	4-40 x 7/8 Phlps Flat Head	17	62735-A	A/B and Cancel Switch Cable Assy
7	62734	Cancel Magnet	18	ST-10386	6-32 x 1/4 Phlps Pan Hd Mscrew
8	41433	Tone Arm Pivot Screw	19	62800	Bracket Magnetic Switch
9	41608-A	Tone Arm Pivot Bracket Assy	20	62744-A	Tone Arm Base Assy
10	ST-00445	4-40 Hex Nut	21	43414-01	Snap Switch Enclosed SPDT
11	62784	Tone Arm Rest Pin	Not Shown	62737-A	Tone Arm Cable Assy
12	ST-02576	10-32 x 1/4 Hex Flg Whiz Lock			

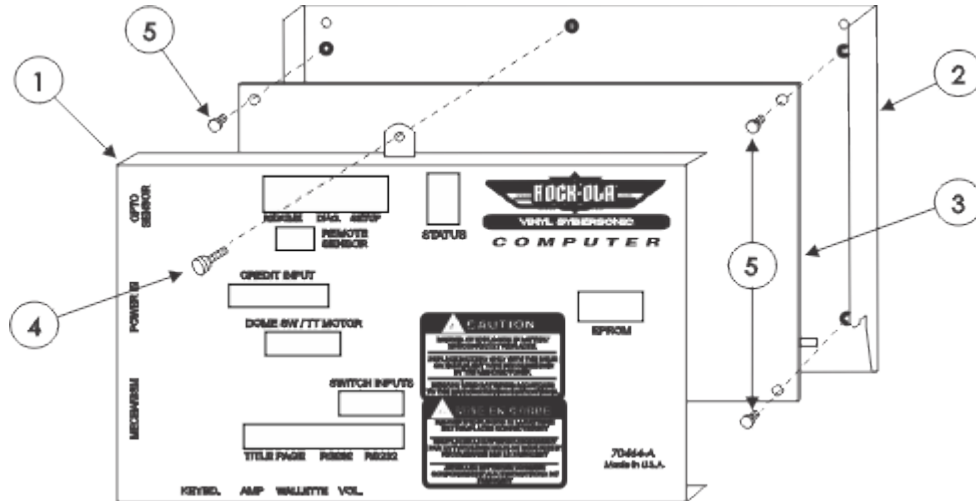
# Turntable Assembly



ITEM NO.	PART NO.	DESCRIPTION	ITEM NO.	PART NO.	DESCRIPTION
1	62273	Turntable Spindle	10	ST-12279	Washer, .203ID .750OD .047Thk (2)
2	62761	Turntable Hub	11	62815	Bracket, Gripper Arm Rest
3	62805	Turntable Button (4)	12	ST-00445	4-40 Hex Nut (4)
4	62814	Turntable Hub Spring	13	ST-12277	Standoff, Hex 4-40 x 1/2 (4)
5	62747	Turntable	14	62770-A	RIAA Preamp PCB Assy
6	62278	Turntable Drive Belt	15	ST-06577-D	4-40 x 1/4 Phil Pan Hd M/S (4)
7	ST-12272	#4 x 1" Phlps Pan Hd (2)	16	ST-08717	10-32 Hex Whiz Lock Nut
8	62772	Turntable Mounting Plate	17	ST-12278	M2.5 x 4mm Phlps Pan Hd M/S (3)
9	ST-08268-D	8-32 x 5/16" Hex Hd	18	62743	Turntable Motor

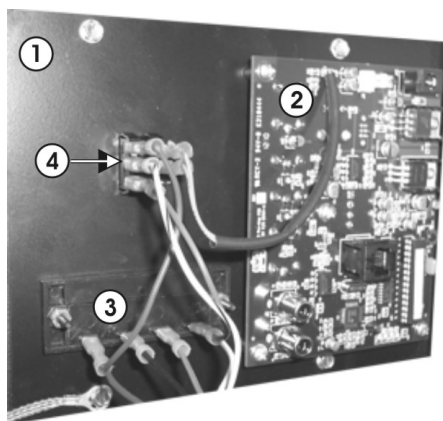
# Electronic Components

## Computer Assembly SV-70464-A

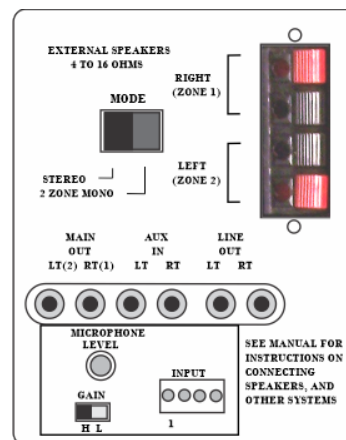


Item No.	Part No.	Description
1	62786-LF	Computer Cover
2	58597	Computer Chassis
3	SV-58399-2A	Computer PC Board Assy
4	ST-11429	Thumb Screw
5	ST-02557	6-32x3/8 Hex Flg Screw

## Connection Panel Assembly SV-62837-A



Inside Cabinet

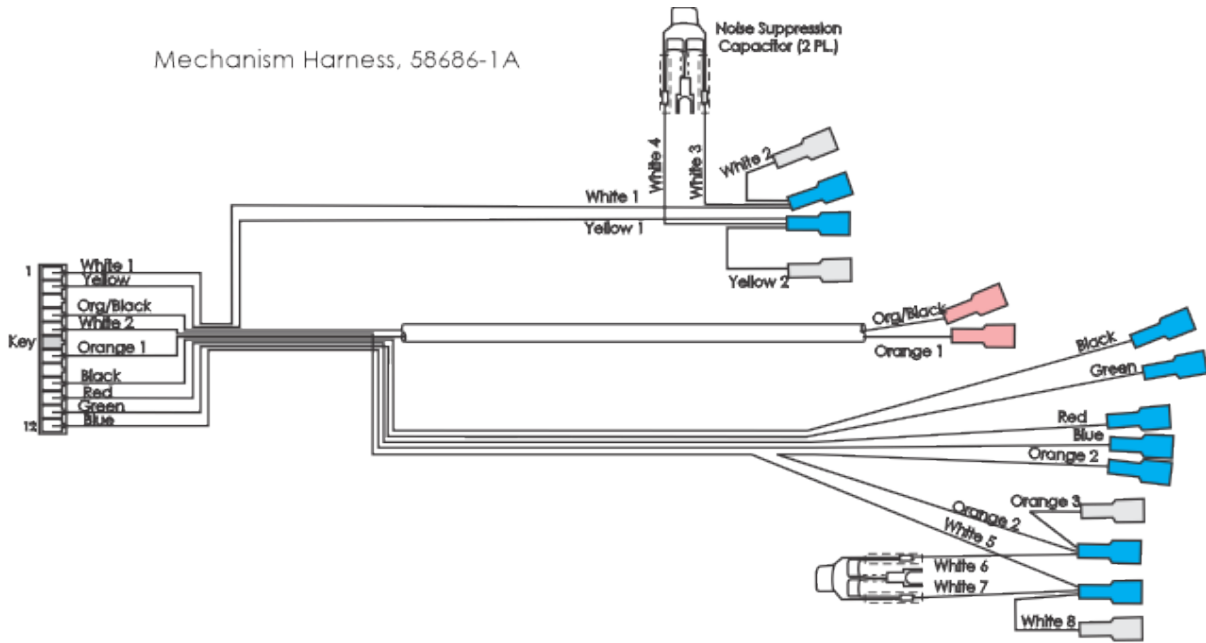


Outside Cabinet

Item No.	Part No.	Description
1	62755-A-LF	Connection Panel, Vertical
2	62134-A	Audio Processor PC Board
3	61856-LF	Speaker Terminal
4	61904-LF	Switch, DPDT, Snap-in

# Cables

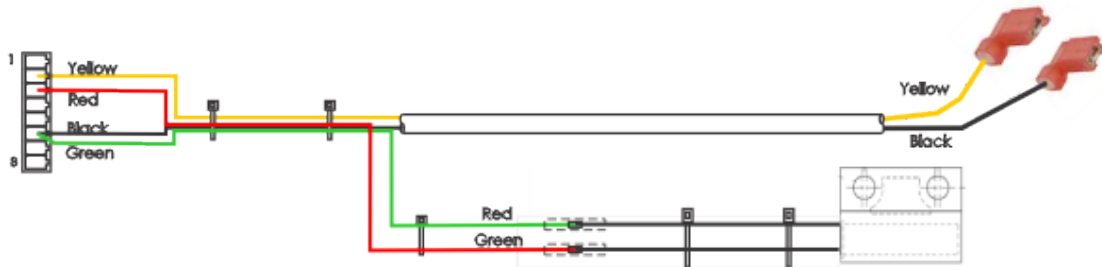
Mechanism Harness, 58686-1A



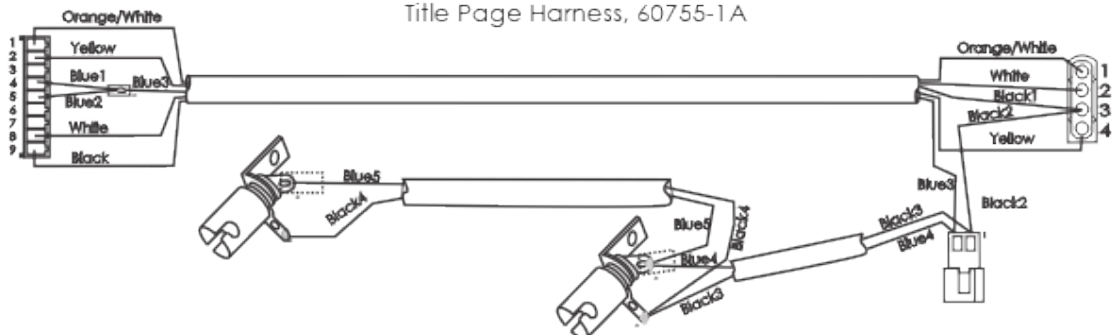
Mech Opto Harness, 62383-A



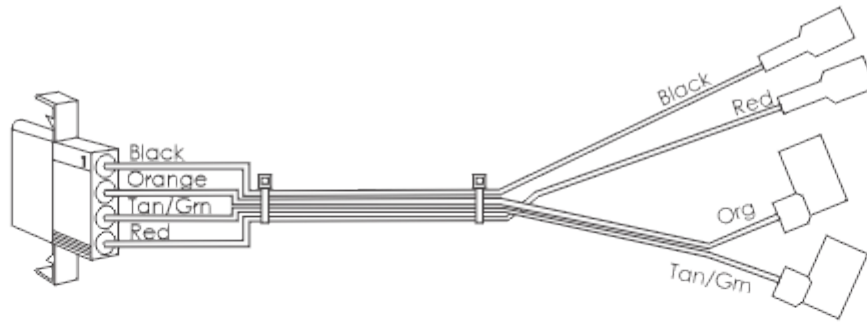
A/B and Cancel Cable 62735-A



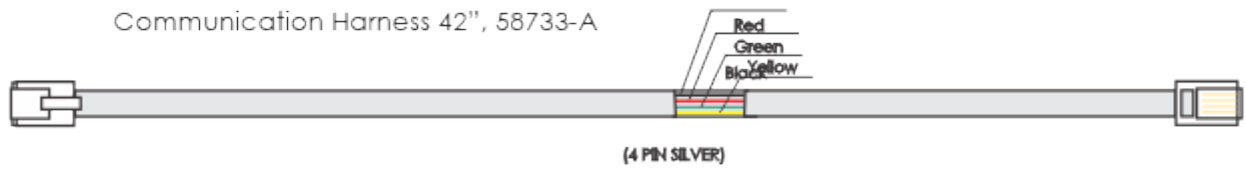
Title Page Harness, 60755-1A



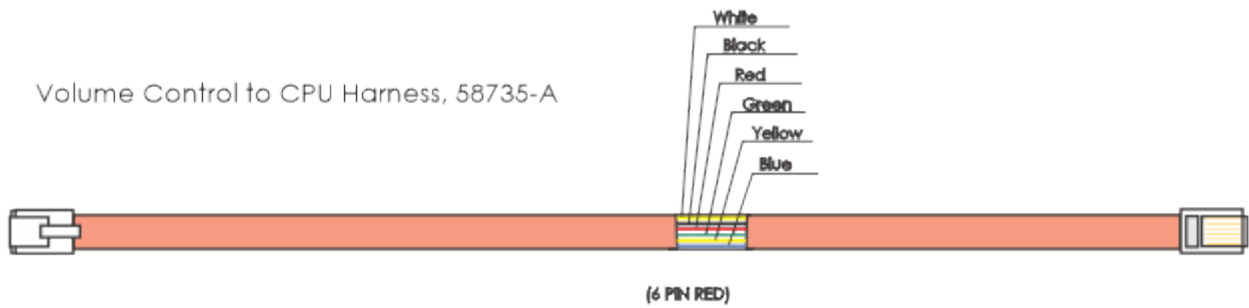
Title Page Motor & Switch Harness, 61521-A-LF



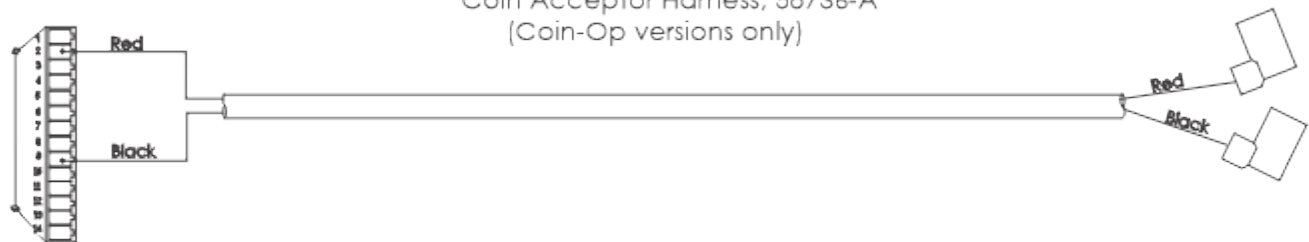
Communication Harness 42", 58733-A



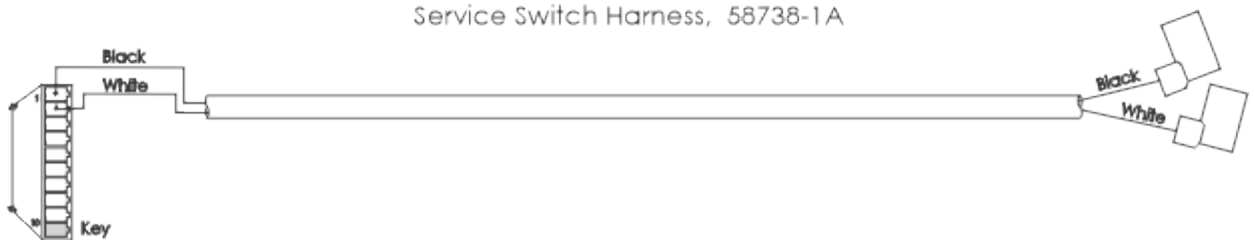
Volume Control to CPU Harness, 58735-A



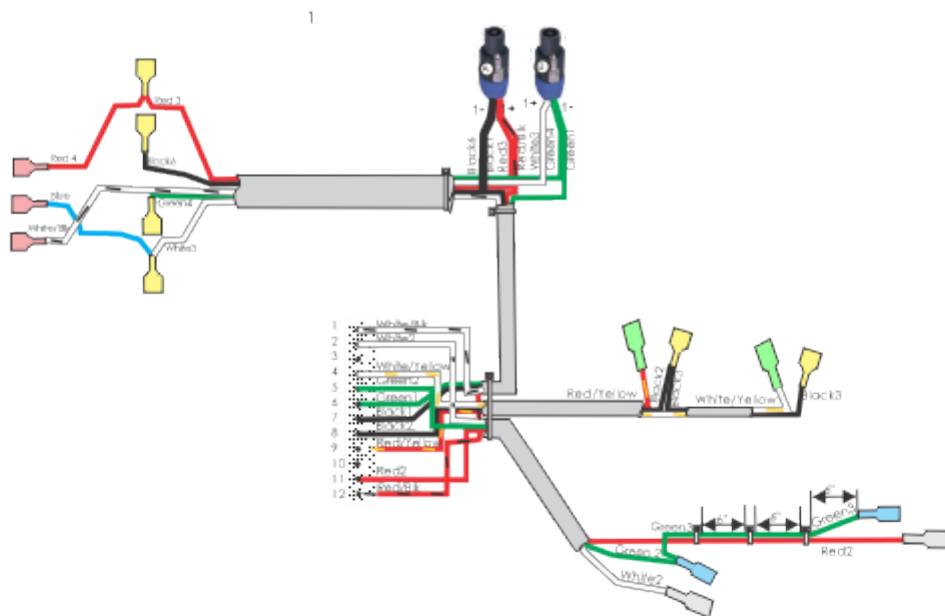
Coin Acceptor Harness, 58736-A  
(Coin-Op versions only)



Service Switch Harness, 58738-1A



Speaker Harness, 62799-A



Audio Cable 48", 56670



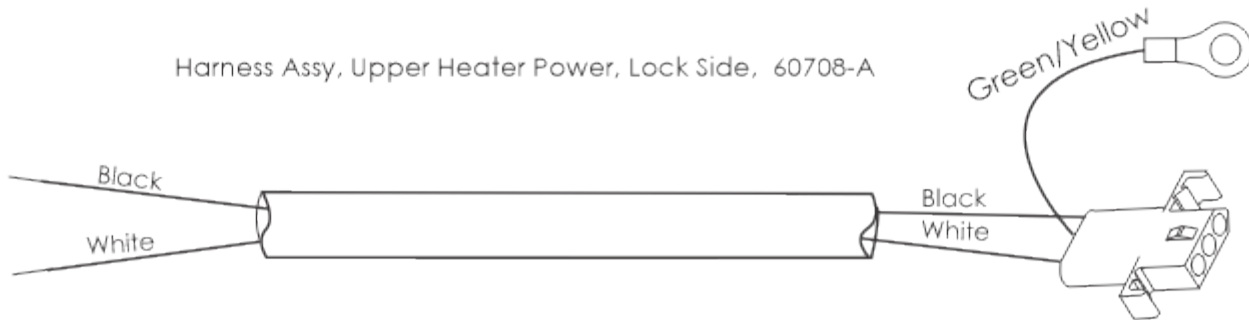
Ground Strap Harness

38" - 59511-A

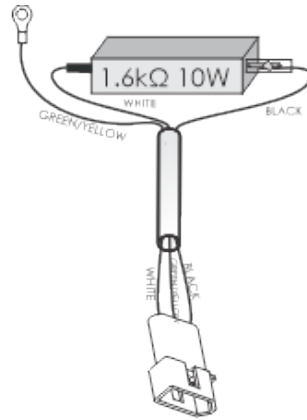
4-1/2" - 60742-1A



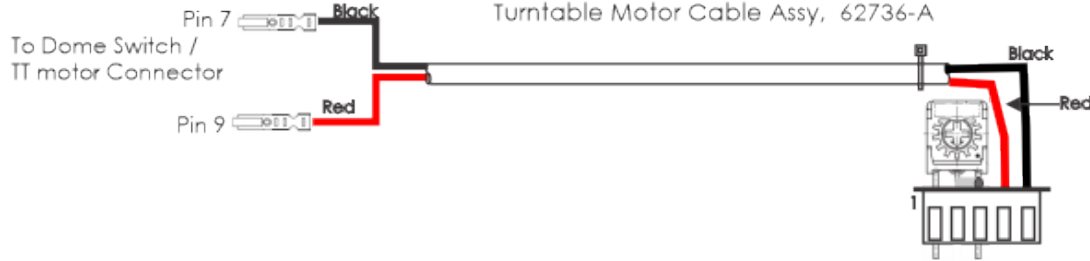
Harness Assy, Upper Heater Power, Lock Side, 60708-A



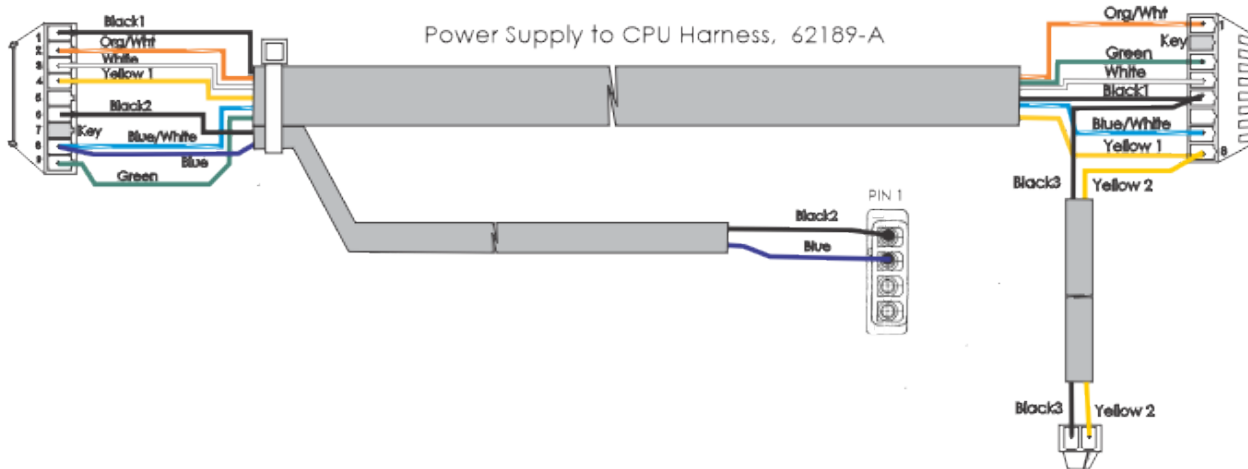
Heater Resistor Harness, 60710-A-LF



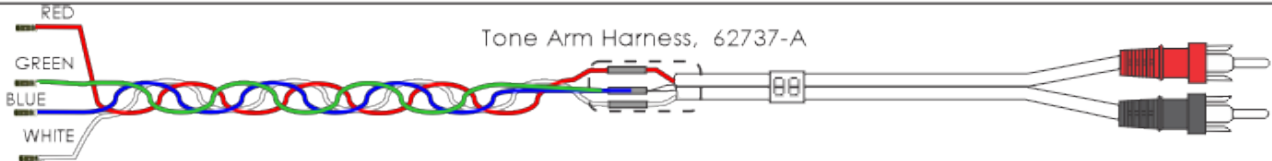
Turntable Motor Cable Assy, 62736-A



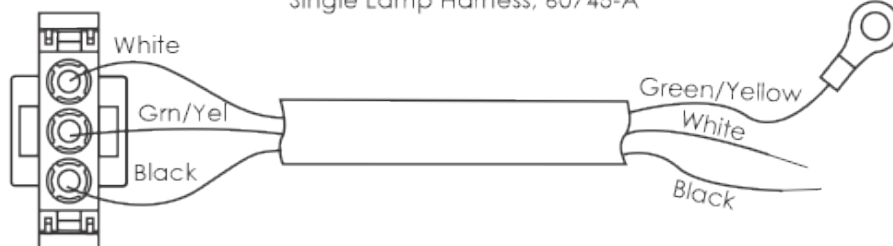
Power Supply to CPU Harness, 62189-A



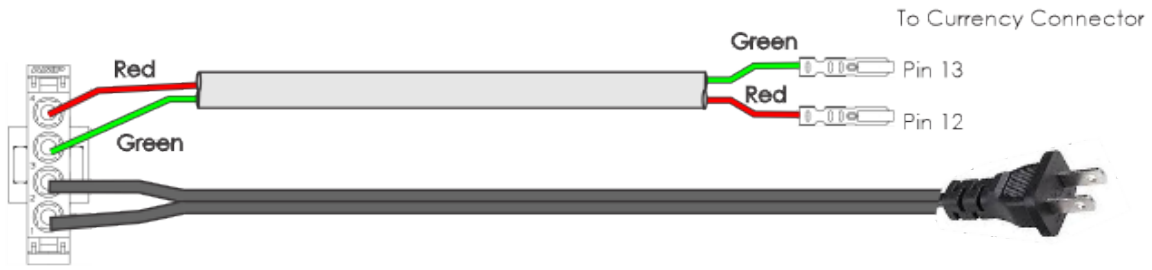
Tone Arm Harness, 62737-A



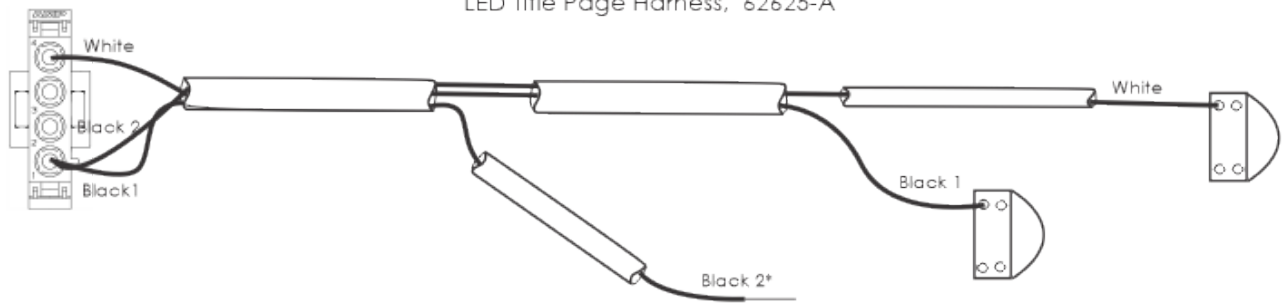
Single Lamp Harness, 60745-A



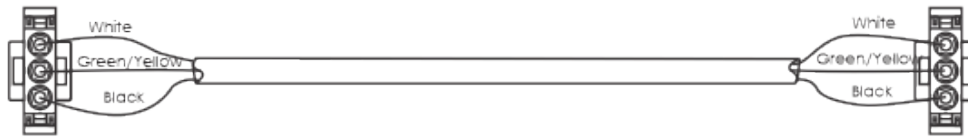
Preamp Power Harness, 60758-A



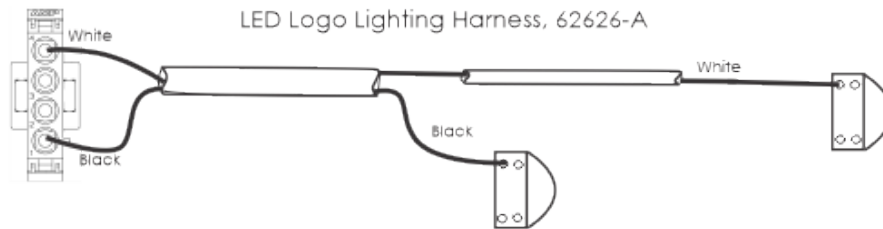
LED Title Page Harness, 62625-A



Power Supply to Junction Box Harness, 60729-A



LED Logo Lighting Harness, 62626-A



Star Lighting Harness, 60597-A

