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Rock-Ola Manufacturing Corporation
2335 208th Street, Torrance, CA 90501

This Service Manual covers

All Nostalgic CD Jukeboxes
Free-Play and Coin-Operated

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P/N 60761-02

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Section

A

Jukebox Specifications

Jukebox Specifications

	CD-8 BUBBLER Coin-Op	CD-4CF, CD-6CF, CD-8CF MODELS FreePlay
Dimensions:		
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”
Weight:		
Uncrated	284 Lbs.	287 Lbs.
Crated	341 Lbs.	344 Lbs.

Amplifier:	
Output Power:	Main amplifier 450 peak music power External amplifier 450 peak music power
Protection:	Speaker overload High temperature Over voltage Under voltage Automatic, self resetting
Frequency:	30 - 20,000 Hz
Input Power: **Voltage:** **Frequency:**	Domestic / Export 115V / 230V 60 Hz / 50 Hz
Maximum **Power Consumption:**	Watts Standby / Max 225 / 800
Speakers:	(2) Tweeter 3” (2) Midrange 6-1/2” (1) Woofer 10” dual voice coil

Section B

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 SyberSonic Compact Disc 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
2. Dual Digital Amp & Power Supply
3. Volume Control
4. CD Player
5. CD Magazine
6. Coin Mechanism *(Coin-Op Model only)*
7. Service Switch
8. Crossover
9. Speaker 10" dual voice coil
10. Scan/Cancel Switch
11. Power Cut Off Switch
12. Power Transformer

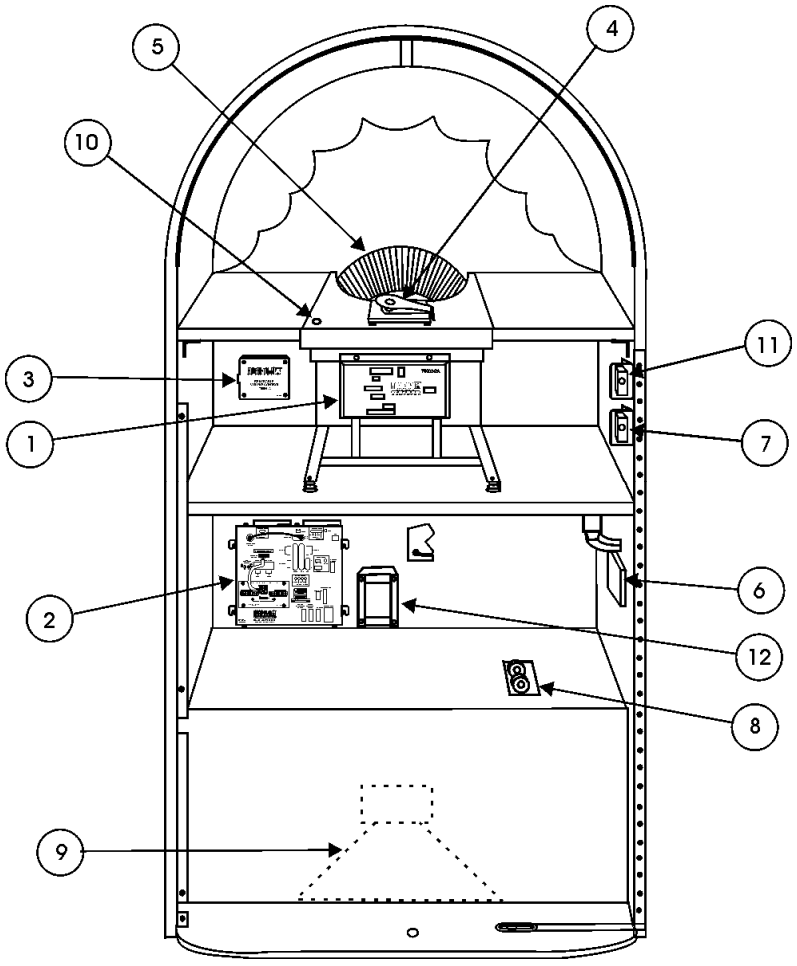

Figure 1B

WARNING
Do not apply AC power until the following instructions indicate you should.

ADVERTENCIA
No aplicar corriente A/C hasta que las siguientes instrucciones indiquen que puede.

AVERTISSEMENT
Ne mettez pas sous une tension en courant alternatif avant que les instructions suivantes le préconisent.

Unpacking the Phonograph

- Open Door.
- Remove the shipping braces (tape) from the title display assembly mounting clips.

The CD player is extremely sensitive to static discharges. Always ground yourself before touching the player and never touch the eye. The CD player itself has no adjustments. The only maintenance required is occasional lens cleaning.

El Toca-discos CD es extremamente sensitivo a descargas de electricidad estática. Siempre toque "tierra" antes de tocar el Toca-discos y nunca toque el ojo (lente). El Toca-discos CD no tiene ajustes en sí. El único mantenimiento requerido es el limpiar el ojo ocasionalmente.

Le lecteur de disque compact est extrêmement sensible aux décharges statiques. Veuillez toujours vous mettre à la masse avant d'y toucher et ne touchez jamais à l'oeil. Le lecteur de disque compact ne présente aucun réglage. Le seul entretien nécessaire est un nettoyage régulier de la lentille.

- Remove shipping bolts from mechanism.
- Remove rubber band from CD clamper plate. (Retain for future use).
- Remove shipping brace (tape) from the dollar bill validator (if installed). Make sure the bill stacker is properly seated.
- Plug System Power Harness into J7 of the Power Supply Assembly.
- Make sure that no items/objects can interfere with the movement of the disc magazine and the clamper plate. 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."

DOOR OPEN
Press Scan Switch to …

WARNING

Before applying power, put POWER CUT OFF SWITCH in the OFF position. (Figure 4B).

ADVERTENCIA

Antes de encender el aparato, poner el interruptor de encendido y apagado en la posición OFF (Figure 4B).

AVERTISSEMENT

Avant de mettre sous tension, mettez L'INTERRUPTEUR DE TENSION sur la position éteinte "OFF". (Figure 4B).

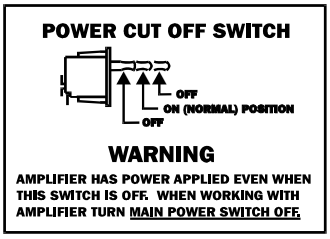

Figure 4B - Power Cut Off Switch

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.

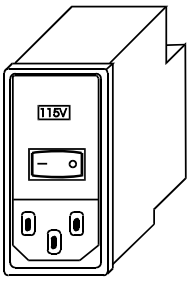

Figure 5B - Main Power Switch

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 garantias.

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 6B) is in the service position. Turn main power switch on. (Fig. 5B). Move the Power Cut off Switch (Fig. 4B) to the On position. 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.

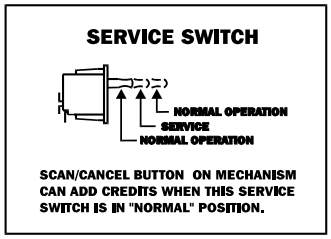

Figure 6B - Service Switch

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 turn the program pages by hand. The pages must be turned using the [<] and [>] buttons on the keyboard.

ADVERTENCIA

No intente pasar las páginas de programa manualmente. Las páginas deben ser pasadas usando los botones (<) y (>) en el teclado.

AVERTISSEMENT

N'essayez pas de tourner les pages de programme manuellement. Tournez les pages à l'aide des touches [<] et [>] figurant sur votre clavier.

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. There are 2 ways to display the titles:
   - If you are installing 1 to 50 discs, the single strips are used, and the numbers are installed in the square as shown starting with "00".
   - If you are installing 51 to 100 discs, use the full size split title strips and install the numbers in both top and middle areas as shown. Start with "00" at the top and "01" in the middle.
3. Load your title strips first keeping the discs in their jewel boxes in the order they will be placed in the jukebox.

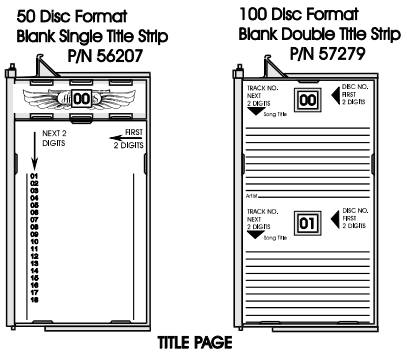

Figure 7B - Program Page Loading

Loading Compact Discs

To rotate the magazine, put the Service Switch (Fig. 6B) 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 mé**canisme.**

Load discs to match the jackets with the label side facing to the left of the cabinet. Be careful not to scratch or smudge the compact discs when loading. Continue the process until all the jackets and discs are loaded.

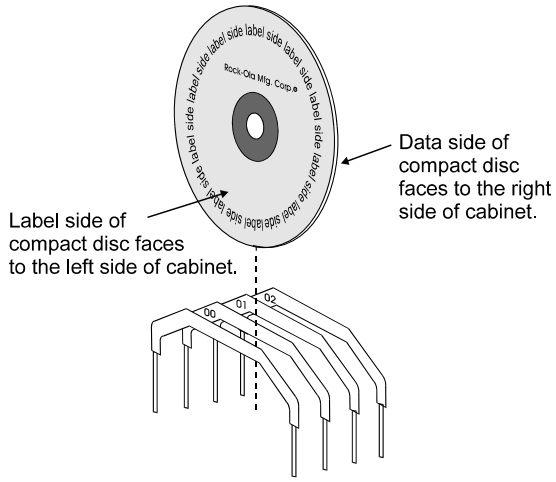

Figure 8B - Compact Disc Loading

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 discs**.**
2. Select disc "0001"
3. When the disc clamping plate comes down on the CD player, remove power.
4. Unplug the connector at J7 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.*

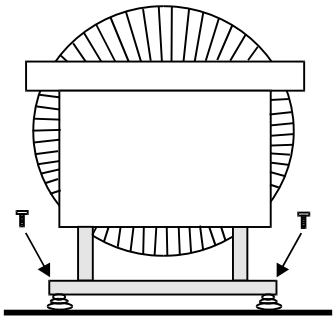

Figure 9B - Mechanism

Loading Compact Discs

To rotate the magazine, put the Service Switch (Fig. 6B) 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 mé**canisme.**

Load discs to match the jackets with the label side facing to the left of the cabinet. Be careful not to scratch or smudge the compact discs when loading. Continue the process until all the jackets and discs are loaded.

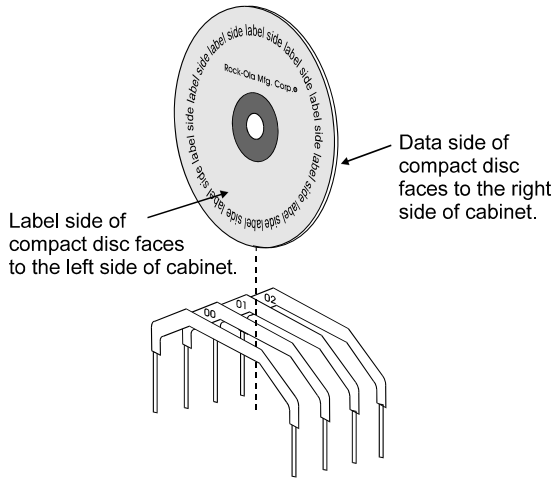

Figure 8B - Compact Disc Loading

Repacking/Moving

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4. Unplug the connector at J7 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.*

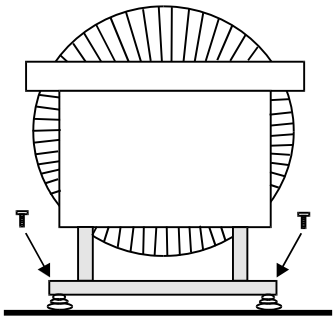


Figure 9B - Mechanism

iPod® Volume Adjustment

Any volume adjustment made for and during iPod® play ***does not*** adjust the volume for CD play. CD play volume adjustment is independent of iPod® volume adjustment. Likewise, adjusting the volume for and during CD play ***does not*** adjust the volume for the iPod® when it plays.

For additional information on iPod® programming and operation, see Section E of this manual.

A Note About Remotes

The **Nostalgic with iPod® Dock** model may come with two remote controls: one for the jukebox itself (provided with all Nostalgic models), and one for iPod® control. Please keep in mind the following:

- The jukebox remote control does not control ***any*** iPod® function or behavior, and
- The iPod® remote does not control any other jukebox function or behavior beyond iPod® selection, iPod® play volume, and iPod® power on and off.

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 discs.
2. Select disc "0001"
3. When the disc clamping plate comes down on the CD player, remove power.
4. Unplug the connector at J7 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.*

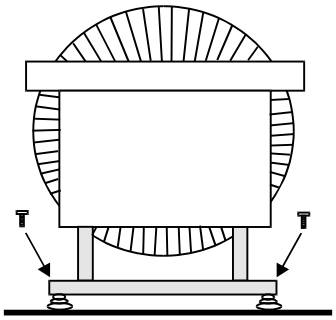


Figure 10B - Mechanism

Section

C

Connecting Speakers and Installing Optional Hardware

- Speaker Connections
- Installation of the Telephone Adaptor Kit for Removable Volume Control
- Installation of the I.R. Remote Detector and Harness Assembly
- Connecting a Paging Microphone
- Installation of iPod Dock

The Dual Digital Amplifier has such high level of versatility that almost any installation is easily accomplished. There are two 450 watt peak music power stereo amplifiers built into the same housing.

As shipped from the factory, the jukebox speakers are connected to the main or Internal amplifier such that they receive 100% of the power from one of the amplifiers. The second or External amplifier is available for connecting external speakers.

External Speaker Connections

Installation examples are divided into 3 types:

Example 1 – Jukebox plus 1 or 2 pairs of speakers in the same room with 1 volume control.
Example 2 – Jukebox in one room without speakers and 1 or more pairs of speakers in another room with separate volume controls.
Example 3 – Jukebox plus 1 or 2 pairs of speakers in 1 room and 1 or more pairs of speakers in another room with 2 separate volume controls.

Connections to the speakers should be made with a #14 gauge minimum speaker wire with runs of less than 50 feet.

Note: *Observe the correct positive (+) and negative (-) polarity when making your speaker connections. Reversed polarity on any speaker will reduce fidelity. "Cross-channel" connections are not possible as neither channel has an inverted output.*

All the connections to the amplifier cannot exceed the amplifiers rated total of 450 watts peak music power. (225 watts per channel.)

After all of the speakers are connected, play a selection and adjust the graphic equalizers as desired. Then run the system at the highest volume setting that the location will use. If the system plays without any distortion and does not "cut-out", then the speaker load is appropriate for the maximum volume, and the installation is complete.

If the audio is distorted or "cuts out", at a high volume setting, there are three options. Reduce the bass, reduce the maximum volume setting, or move one or more speaker lines to a lower impedance terminal. See the programming section on "Volume Limits" (Quick Find 78 in Section E of this manual.) to set the maximum volume if necessary. Retest the system after making the changes.

Note: *The Digital SyberSonic Amplifier will automatically reduce the volume in order to continue to operate even if the speaker load is incorrect however, there will be several seconds of silence when the overload condition occurs. This protection resets at power up.*

If greater flexibility in speaker loads is needed or 70-Volt CV speakers are to be used, an optional audio distribution assembly (P/N 70046-1A) may be installed.

Speaker Loading

To achieve maximum volume and prevent amplifier overloading, calculate total impedance of speakers and hook-up to corresponding tap on Audio Output Panel. Typical configurations are shown in the table below. Additionally, several common installation scenarios are shown on the following pages.

Speaker Loading Chart

Number of Pairs 8-Ohm Speakers	Ext Speakers Connected to Terminal No.
None	NA
1 Pair	4
2 Pairs	4
3 Pairs	2
4 Pairs	2
5 Pairs	1
6 Pairs	1
7 Pairs	1
8 Pairs	1

Example No. 1 - Jukebox plus 1 or 2 pairs of speakers in the same room with 1 volume control.

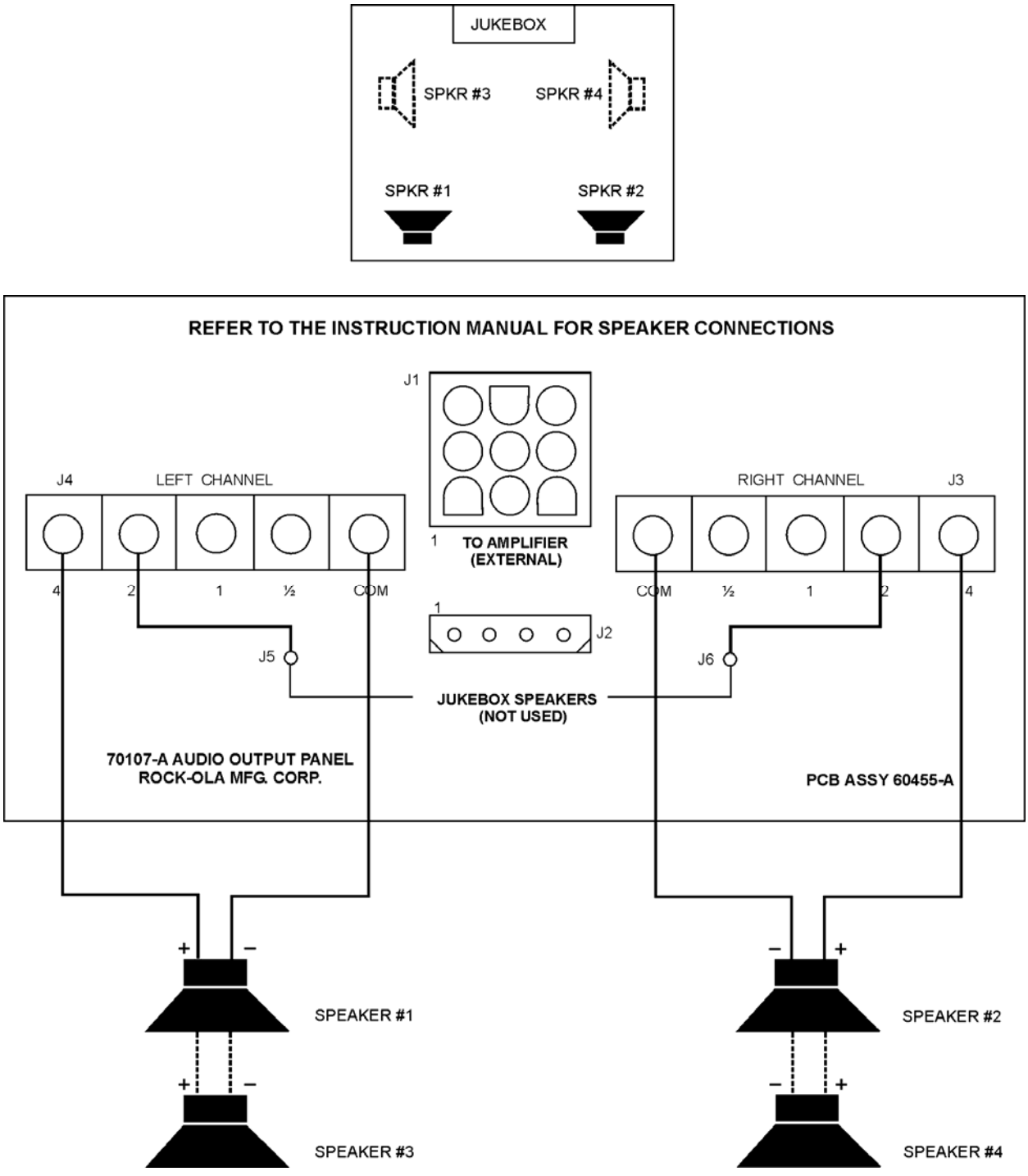
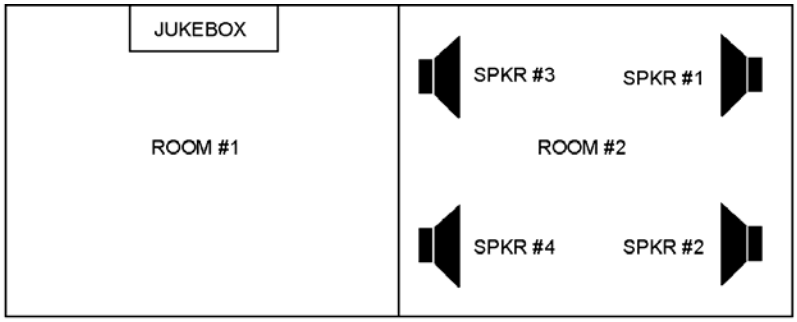


Figure 1C

If all of the speakers are located in the same room and a single volume control is to be used, connect them to the audio output panel as shown. The Internal volume buttons will control the jukebox speakers and the External volume buttons will control the external speakers. Once the sound is "balanced" between the external speakers and the jukebox speakers, the volumes may be "bridged" (QF 79) so as to preserve the balance and allow either the Internal or External volume buttons to be used.

Example No. 2 - Jukebox in 1 room without speakers and 1 or more pairs of speakers in another room with separate volume controls.



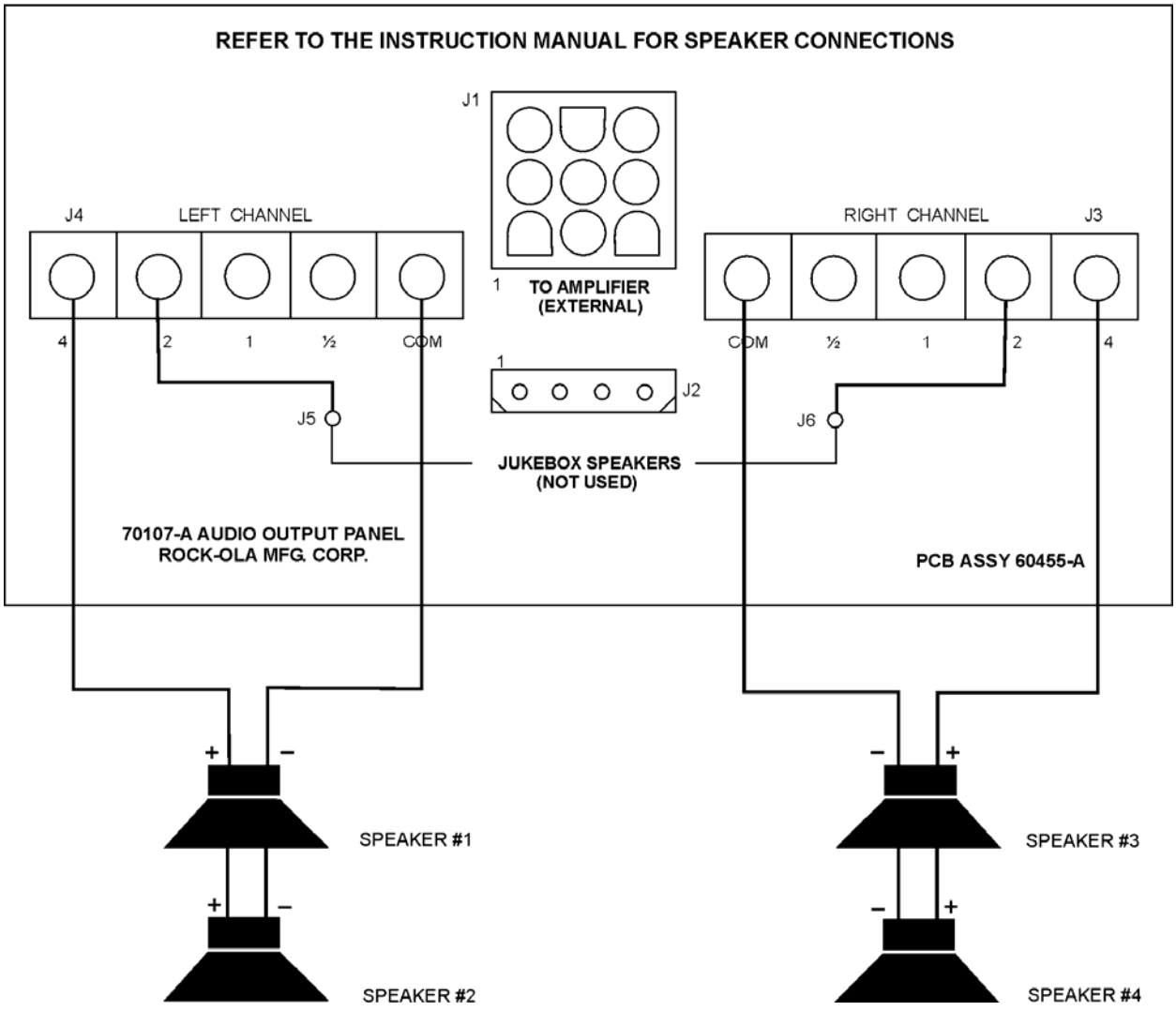


Figure 2C

If there are no external speakers in the room with the jukebox, connect the external speakers to the output panel. Use the Internal volume buttons to operate the jukebox volume and the External volume buttons to operate the external speakers.

Example No. 3 - In this example, the audio output panel is plugged into the main amplifier and the jukebox speakers are plugged into the output panel using the 60685-A adaptor harness package provided in the service envelope. The speakers that are in the same room as the jukebox are connected to the output panel taking care to use the proper taps. If 2 pairs of 8 ohm speakers are connected to the 4 ohm tap, then the jukebox must be connected to the 1 ohm tap. If the jukebox speakers are too loud compared to the external speakers, they may be moved to the ½ ohm tap. The speakers in the second room are then connected to the output terminal block. The Internal volume buttons will control the jukebox and speakers in the first room. The External volume buttons will control the speakers in the second room.

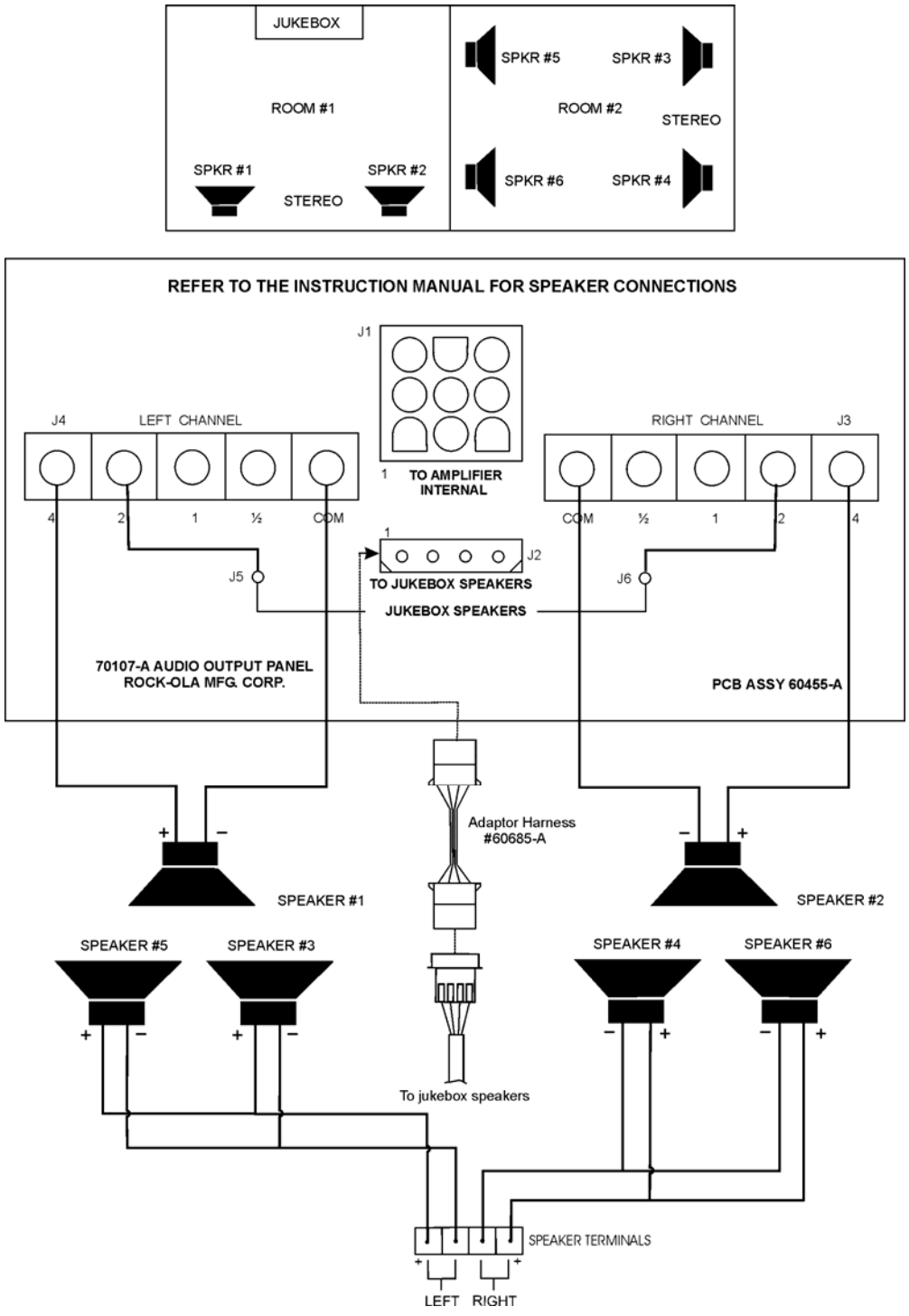


Figure 3C

Installation of the Telephone Adapter Kit (P/N 02413-01) for Removable Volume Control

1. Unplug and remove volume control from back of phonograph.

2. Install cover plate over volume control hole.

3. Install a 6-pin phone jack not more than 1" above the cover plate. (Installing the phone jack too high can cause interference with the title display assembly).

4. Route a 5-wire cable through wire hole in the back of cabinet and connect to the phone jack noting wire colors.

Color	Pin #	Description
BLU	Pin 1	Internal Common
YEL	Pin 2	External Common
GRN	Pin 3	Cancel & Mute Common
RED	Pin 4	Mute, Int Down, Ext Down
BLK	Pin 5	Cancel, Int Up, Ext Up
WHT	Pin 6	Not used

5. Re-install the phone jack cover and plug the red phone wire into the newly installed phone jack.

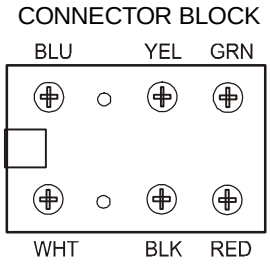
6. Mount the volume control assembly in a suitable location.

7. Mount the other phone jack to the right of and not more than 12 inches from the volume control module.

8. Connect the 5-wire cable to this phone jack using the same wiring scheme as step 4.

9. Install cover on phone jack and connect the 12" jumper to phone jack and volume control module.

10. Test for proper operation.



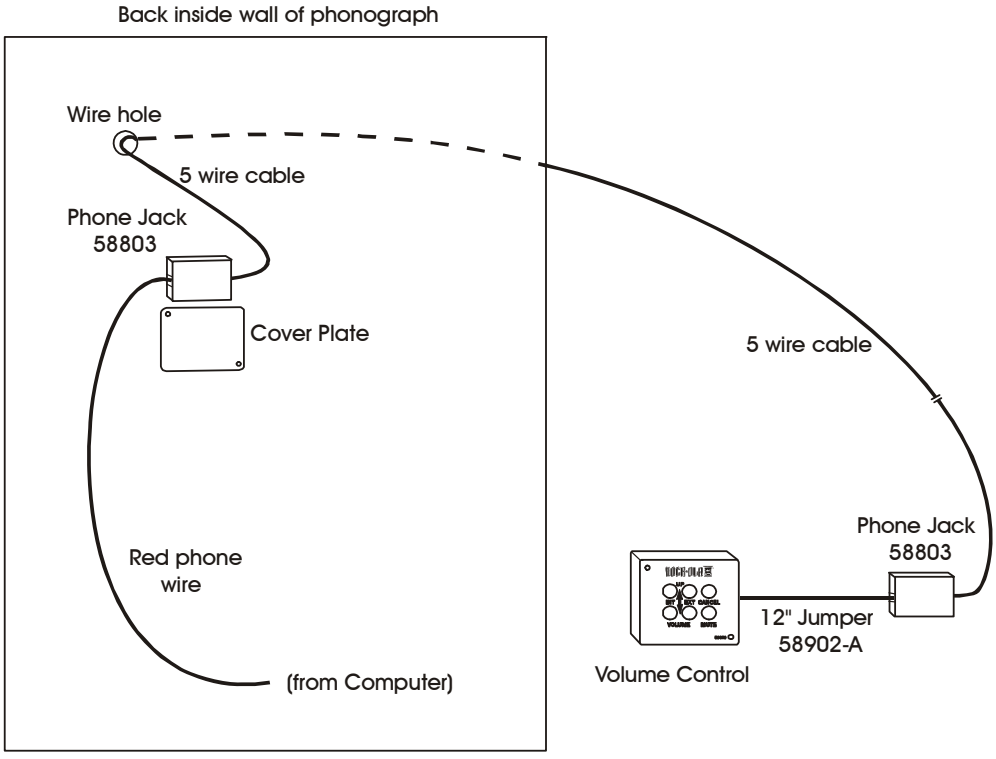


Figure 4C

Installation of the I.R. Remote Detector and Harness Assembly

1. Plug I.R. remote harness into the Syber-Sonic Computer assembly at the "Remote Sensor" location. (See diagram).

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.

For locations that you are unable to mount the detector eye on the wall behind the jukebox, you may try mounting the eye on the back wall of the jukebox. The I.R. signal will bounce off walls and ceilings.

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 dome switch is in the service position.

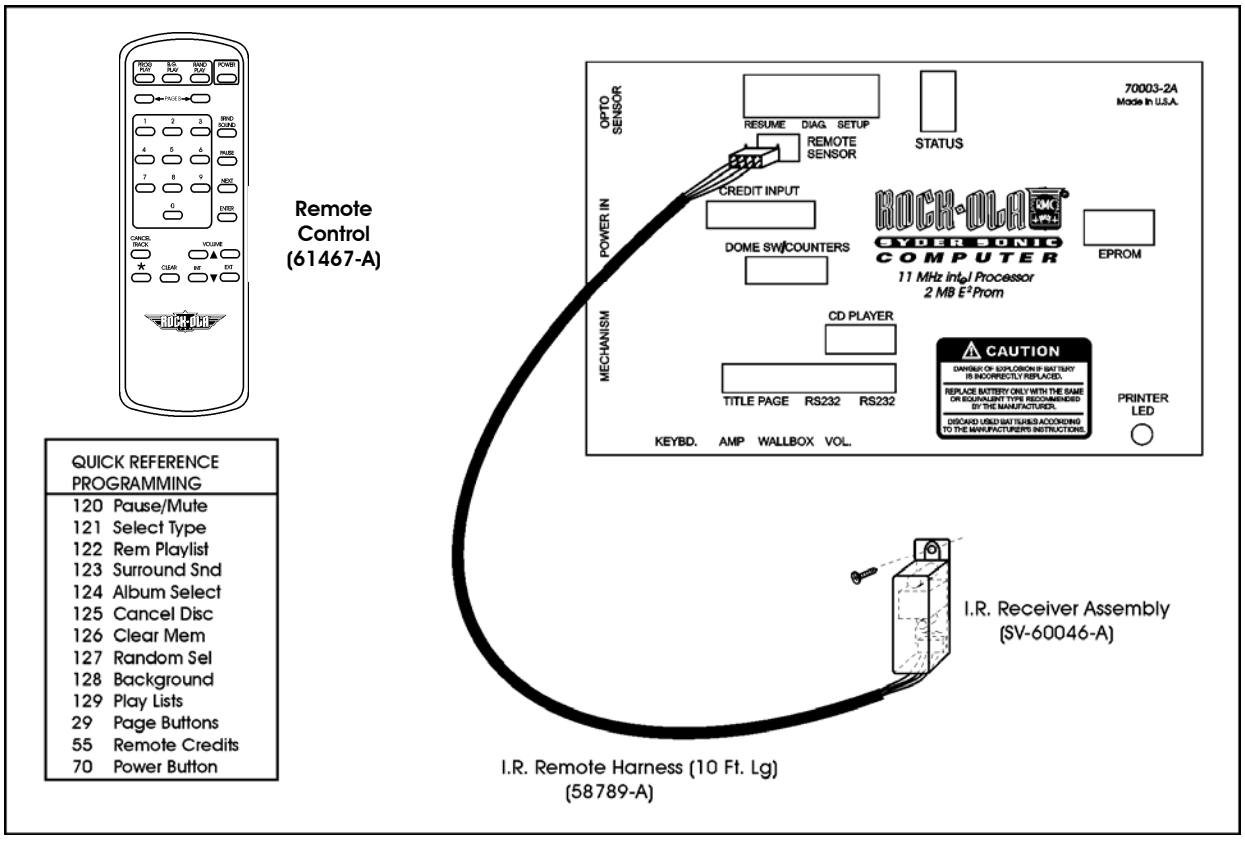
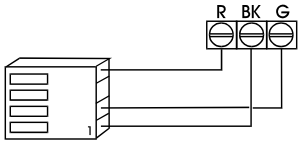


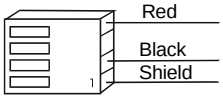
Figure 5C

Connecting A Paging Microphone

Rock-Ola's Advanced SyberSonic Amplifier can accept virtually any paging microphone. Pictured below are wiring diagrams for the most common paging kits. Installation Instructions for Yoga Paging Kit #02379-02 are in Section J of this manual. The necessary connector is included with Rock-Ola paging kit. To use other paging kits 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.

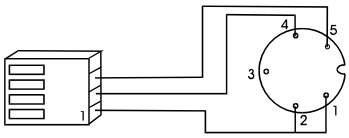


Rock-Ola® 02379-01

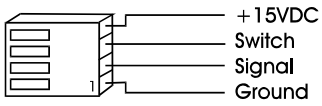


Yoga Microphone Kit 02379-02

Rowe®



NSM®



Generic

Figure 6C - Connecting a Paging Microphone

The paging 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 "Status" LED on the amplifier should blink and 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".

CAUTION

Be sure the gain control is turned down to avoid speaker damage from acoustical feedback.

PRECAUCIÓN

Asegúrese de que el control de ganancia esté en un ajuste bajo para evitar causar daños al altavoz debido a la retroacción acústica.

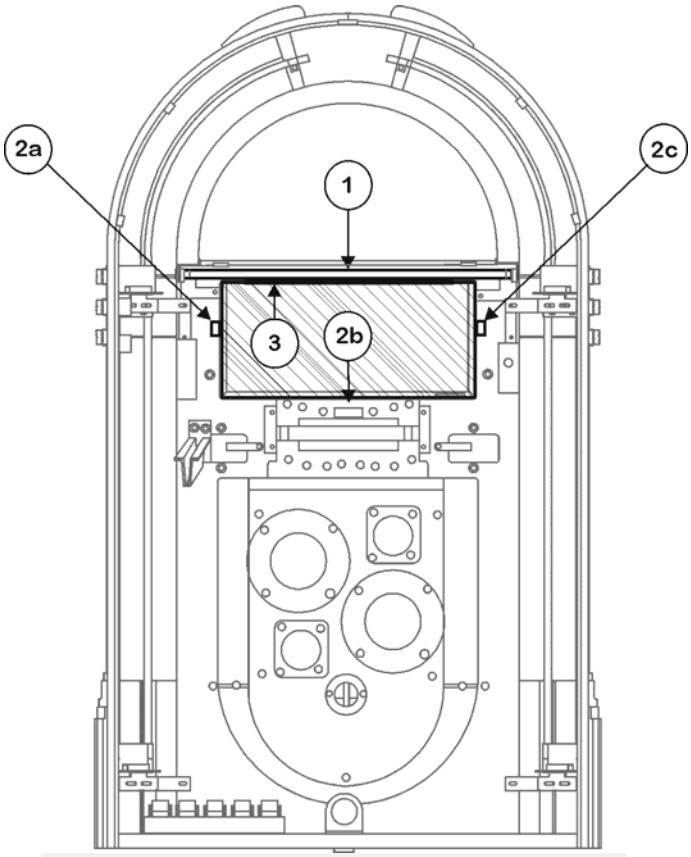
MISE EN GARDE

Assurez-vous de baisser la commande du gain afin d'éviter les dommages causés aux haut-parleurs par la rétroaction acoustique.

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.

Note: *If the jukebox is idle with auxiliary background music inputs off, there will be a short delay of approximately 2 seconds for the amplifiers to "wake up" when a paging signal is detected.*

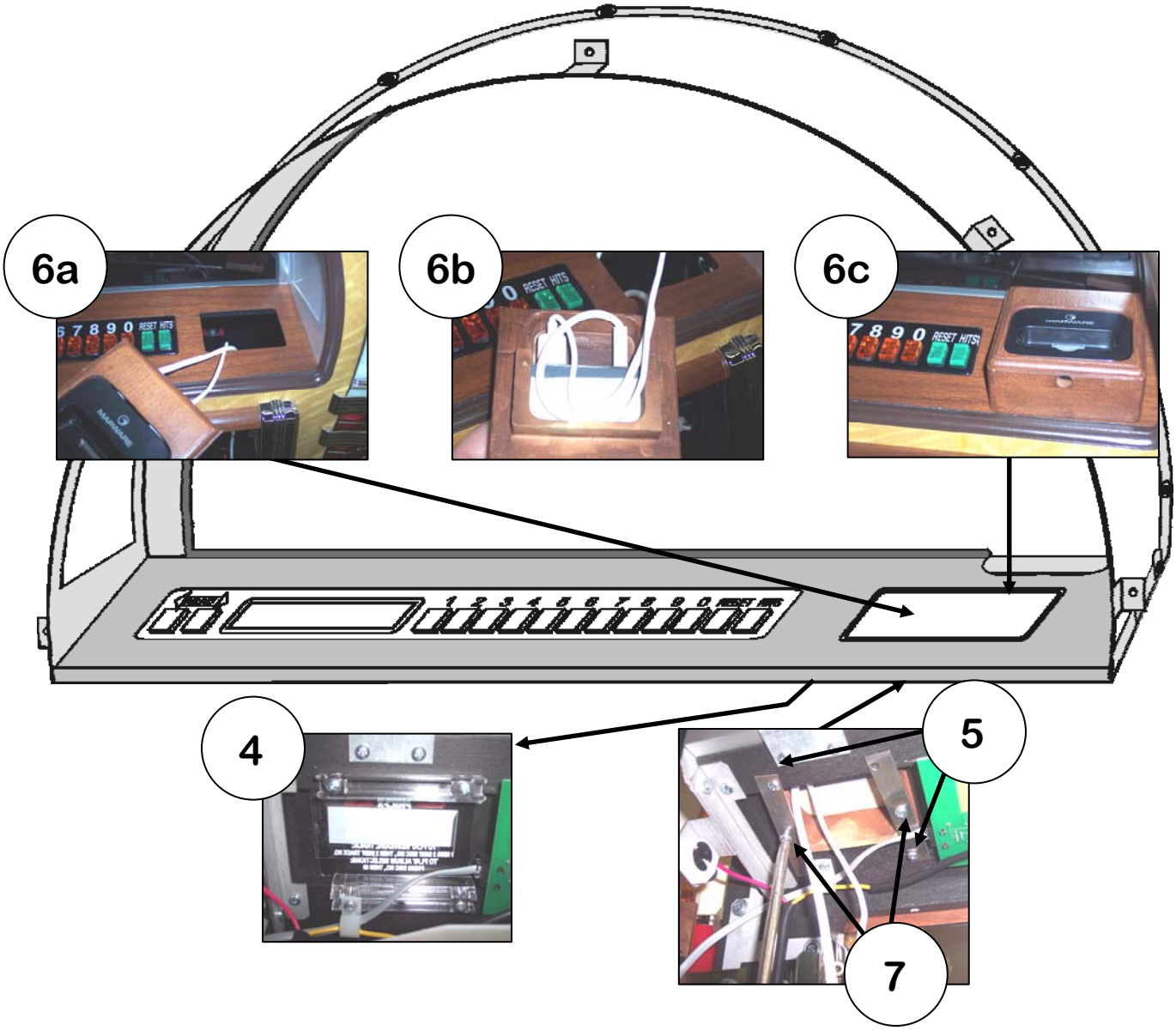
Installation of the optional iPod® Dock Kit (P/N 02465)

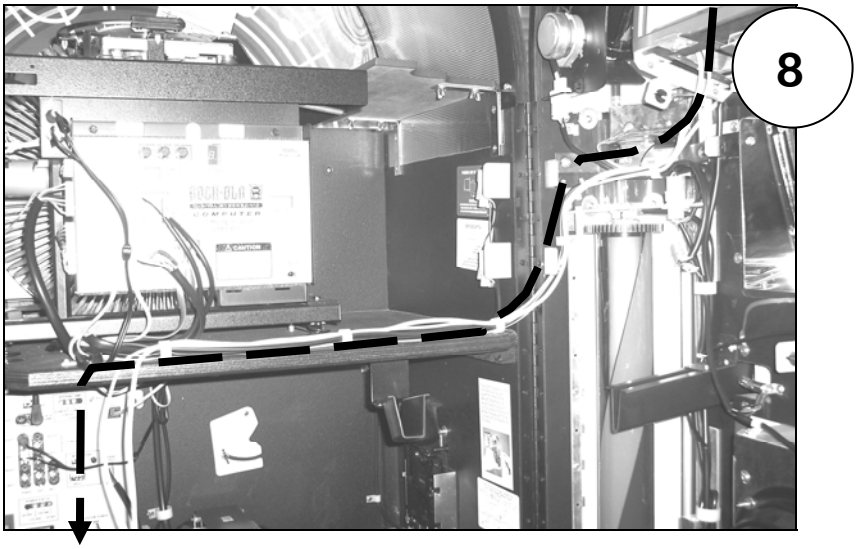


Turn off the power and unplug the machine then open the jukebox door.

1. Remove the 21” fluorescent lamp just under the light arch window. Set aside.
2. Remove the page unit.
   - Unplug the page unit motor harness
   - Release one side of the Page Unit from spring latch (2a), lift the unit up slightly and off the center hinge pin (2b) and release from the other spring latch (2c).
   - Remove the Page unit and set aside.
3. Remove the white plastic title page diffuser. It is fastened with three screws. Set aside the diffuser and SAVE the hardware.
4. Remove the price and instruction bezel.
   - Remove the two retainers from under the display keyboard. DISCARD retainers and hardware.
   - The price bezel should drop out. DISCARD.
   - If a small cable clamp was fastened with a retainer, replace it with one of the Phillips screws provided in the kit.
5. Mount the metal holding brackets to the underside of the display panel. Brackets should be parallel, ends front to back. Note that the holes at either end of each bracket are nearer one edge. Place the nearer-to-edge holes of each bracket facing each other and align each piece with an existing retainer hole. Fasten each bracket with a 3/8” Phillips screw on one end only. Stagger the ends so that if the left bracket is fastened nearer the front of the panel, the right bracket should be fastened nearer the rear.
6. Mount the iPod® base to the display keyboard.
   a. From the outside, insert the iPod® dock harnesses through the opening in the display board so that they hang inside the door.
   b. Tuck the harness cables close to the dock into the recess in the underside of the base.
   c. Place the base in the bezel position, making sure not to pinch the cables between base and bezel and fitting the base extrusions into the opening.
7. Fasten the dock to the display panel. From the inside under the display panel, use two screws to fasten the iPod® dock base. The base should fit flush on the display panel.

* iPod® is a trademark of Apple Computer Corp.


6a
6b
6c
4
5
7


8

8. Route the cables through the cable clamps, as shown.

9. Connecting the USB cable

a. Plug the USB connector into the power cube.

b. Plug the power cube into the adapter harness.

c. Plug the adapter harness onto the "120 – Switched" pins of the dual amplifier.

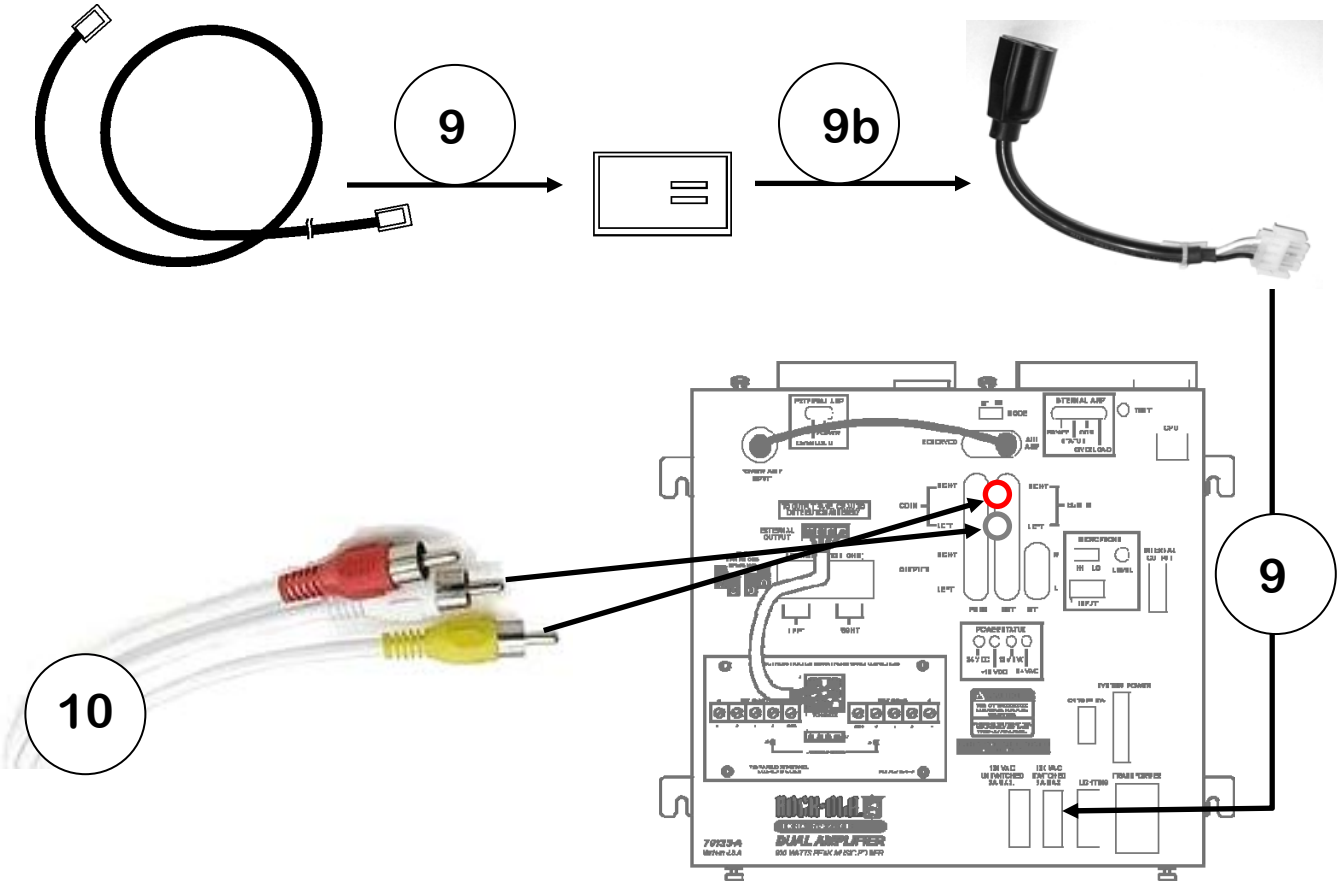
10. Connect the input cable to the amplifier at the BGM IN position, yellow plug to "RIGHT" socket, white plug to "LEFT" socket. The red (video) connector hangs free.

11. Replace the white plastic title page diffuser. Install back in its original position on the door with the saved hardware.

12. Replace the page unit.

- Position the page unit on the center hinge pin.
- Push the page unit into place until the spring latches catch on the tabs of the page unit, securing it in place.
- Reconnect the page unit motor harness to the cabinet power harness.

13. Replace the 21" florescent lamp in its sockets.



Programming

1. Open the door and press the red button on the CD changer twice quickly to enter Set-Up mode. The display should say "SETUP MODE, Disc Mapping".
2. Press 4 > 2 > HITS button. The display reads "AUTOPLAY 42, Aux Background Off".
3. Press HITS. The word "Off" should flash.
4. Press 1 to make it say "One"
5. Press HITS to stop the flashing.
6. Press Right Menu Button (PAGE). The display says "AUTOPLAY 43, Background Vol."
7. Press HITS. The display says "MIN INT LEVEL 01".
8. Press Right Menu Button (PAGE). The display says " MAX INT LEVEL 20"
9. Press HITS. The "01" will flash and a CD will be brought into play.

   Note: Make sure your machine has at least one CD loaded and mapped.
10. Use the Right Menu Button (PAGE) to raise the volume to the maximum level you want the iPod to play.
11. Press HITS to lock in the change.
12. If external speakers are used, press Right Menu Button (PAGE) twice for "MAX EXT LEVEL" selection.
13. Press HITS to make the level flash and the Right Menu Button (PAGE) button to raise the volume to the maximum level you want the external speakers to play.
14. Press HITS to lock in the change.
15. Close the door. Using the volume selector at the rear of the cabinet, run the INT and EXT volume down to about 25.

With the programming done, you may now use the iPod® remote control to play and manage your iPod® selections as well as turning it on and off. The iPod® remote will not affect any the CD-playing or power features of your Bubbler. You will need to use the Nostalgic IR remote control (P/N 61467-A) to operate the CD player.

About Volume adjustments: any volume adjustment made for and during iPod® play ***does not*** adjust the volume for CD play. CD play volume adjustment is independent of iPod® volume adjustment. Likewise, adjusting the volume for and during CD play ***does not*** adjust the volume for the iPod® when it plays.

Troubleshooting

Symptom	Problem	Solution
No power to the iPod®	Power connector or Power Cube is not connected	Re-check connections.
No audio from the iPod®	Audio not programmed	See programming instructions.
iPod® remote not working	Paper battery protector not removed	Remove protector.
Noise from speakers without iPod® in dock	Dock power on without iPod® in dock	Turn dock off with dock remote control.

Section D

Amplifier Description and Operation

- Amplifier Description
- Indicator LED's
- Signal Inputs & Outputs
- Amplifier Feature Description
- Setting the Amplifier

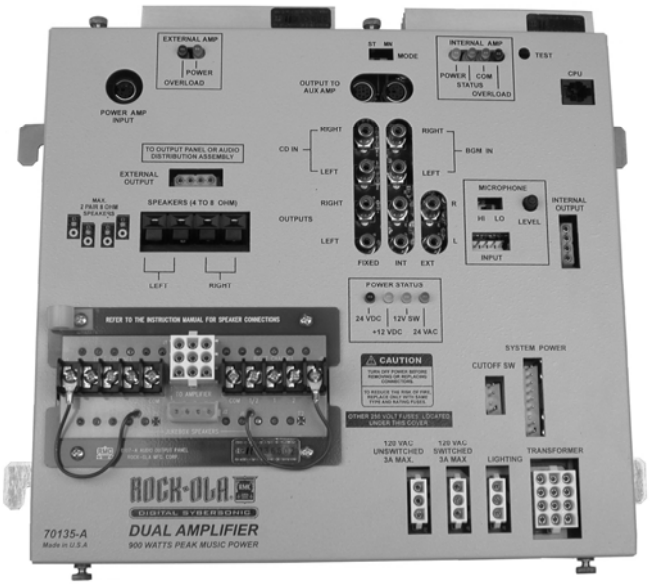


Figure 1D – Digital SyberSonic Dual Amplifier

Amplifier Description

Rock-Ola's Dual Digital SyberSonic Amplifier 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 dual stereo (4 channel) pre-amplifier combined with two 2-channel power amplifiers.

The system may be operated as a single zone or a dual zone stereo system with separate volume controls for each zone. The amplifier sends its power to an audio output panel that couples speaker loads of ½ to 4 Ohms.

If greater flexibility in speaker loads is needed or if the location is using 70-Volt CV speakers, an optional audio distribution assembly (P/N 70046-1A) may be installed.

Please Note: This section mentions Internal and External Amplifiers. "Internal" refers to the two channels controlled by the "INT" volume buttons and normally connected to the jukebox speakers. "External" refers to the 2 channels controlled by the "EXT" volume buttons used for external.

Specifications and Operating Features

- System is rated 900 Watts of peak music power at 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 Modes
- Separate 7 band equalizers for all four channels.
- 7 Band equalizer may be split for separate left and right channel settings.
- 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.
- "Always On" amplifier for special event audio and background music functions. (Only if phono is turned off with I.R. Remote Volume Control.)
- Automatic Volume Control. (AVC)

Plug-in RCA Type Connectors for:

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

CD Output - line level directly from the CD player.

Int/Ext Output – 4 channel pre-amp outputs. Signal level is variable with volume control settings.

Indicator LED's

The Digital SyberSonic 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 - When lit, indicates the amplifier has power.

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

Steady On – Normal operation. Paging system is available.
Flashing – Paging system is in use.

COM - Indicates when amplifier receives instructions from the jukeboxes 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.

Overload – When lit, indicates the amp is muted or a speaker overload condition exists.

Signal Inputs and Outputs

The Digital SyberSonic Amplifier has five (5) sets of RCA type jacks located at its upper right corner.

iPod® is a trademark of Apple Computer Corp.

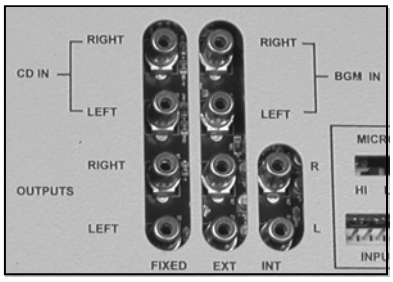


Figure 3D – RCA Jacks

Each set of connectors have separate functions, they are:

CD In - This connection is the analog audio signal that is being fed directly from the CD laser player into the amplifier.

CD Out - This connection is the unconditioned analog audio output from the CD laser player.

BGM In - This connection allows the input of the iPod® Dock (standard on some models) or allows the input of a low level signal (maximum 1 volt) from another audio source (such as a tape player, TV or FM tuner) to be fed into the amplifier for aux background music amplification. This input must be activated via software control in the Auto Play menu under AUX BGM Input (Quick Find #42). The signal volume level can be limited via software control in the Auto Play menu under Background Vol (Quick Find program #43).

Note: *This amplifier is designed to automatically switch between the AUX BGM and CD inputs where the CD input always takes priority.*

WARNING

Do not connect the AUX BGM Inputs to the speaker outputs of a receiver or power amp as this will damage the jukebox amplifier and void its warranty.

ADVERTENCIA

No conecte las entradas AUX BGM en las salidas del altavoz de un receptor o de un amplificador de potencia ya que esto puede dañar el amplificador de la rocola y anular su garantía.

AVERTISSEMENT

Ne reliez jamais les entrées AUX BGM aux sorties du haut-parleur d'un récepteur ou d'un amplificateur de puissance ; cela endommagerait l'amplificateur du juke-box et annulerait la garantie.

Int Out - This connection is a variable level output signal directly from the internal pre-amp. The signal level follows the internal volume control. Output signal may be limited via software control in the Set-up 1 menu under the Volume Range (Quick Find program #78).

Ext Out - This connection is a variable level output signal directly from the external pre-amp. The signal level follows the external volume control. Output signal may be limited via software control in the Set-up 1 menu under the Volume Range (Quick Find program #78).

Amplifier Feature Descriptions

Your Digital SyberSonic Amplifier 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 (dynamic range). 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 – There may be times when you do not want a location to have separate control of the internal and external amplifier. Or perhaps you want two areas to have separate volume controls. SyberSonic's advanced electronics system allows the "bridging" of its volume controls. When bridged, the tied amplifier/channel's volume will change regardless of which volume control button is pushed. Specific bridging information is in the "Setting the Amplifier" section.

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 con-

tains 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:

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:

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:

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:

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.

External Amp Settings

The External Amp (Auxiliary Amp) is set the same as the Internal Amp, therefore only the Quick Find numbers will be shown here. To set the External Amp, follow the Internal Amp instructions and substitute the appropriate Quick Find number.

External Equalizer - Access Quick Find 222 to view/change the equalizer/tone settings for the external amplifier.

External Balance - Access Quick Find 223 to view/change the balance for speakers connected to the external amplifier.

External Music Level While Page (MLWP) - Access Quick Find 227 for the Left channel or 228 for the Right channel and toggle to the desired setting.

External Loudness - Access Quick Find 229 for the Left channel or Quick Find 230 for the Right channel then toggle to Off or On.

Reset External Amplifier - Access Quick Find 226 and press Hits twice to restore the external amplifier to its factory settings.

External AVC – Access Quick Find 232 to turn the external AVC on or off.

Other Settings

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

Normal – The internal buttons control the standard amp and the external buttons control the optional auxiliary amplifier. To set, from the Setup Mode, access Quick Find 79 and press HITS. Display will show:

SET-UP 1 79
Volume *Current Setting*

Press HITS. "*Current Setting"* will flash. Press #1 until "Normal" is displayed. Press HITS to lock in the setting.

SET-UP 1 79
Volume Normal

Once finished, press RESET several times.

Volume Split – If selected, the internal buttons control the left channel and the external buttons control the right channel.

WARNING

This feature cannot be used if the external amplifier is installed or if the external output jacks are used. The auxiliary amplifier and external output signals will not function.

ADVERTENCIA

Esta característica no se puede usar si el amplificador externo está instalado o si se están usando los jacks de salida externa. El amplificador auxiliar y las señales de salida externa no funcionarán.

AVERTISSEMENT

Si l'amplificateur externe est installé ou si les prises de sortie externes sont utilisées, vous ne pourrez accéder à cette fonctionnalité. L'amplificateur auxiliaire ne fonctionnera pas ; aucun signal de sortie ne pourra être transmis.

To set, from the Setup Mode, access Quick Find 79 and press HITS. Display will show:

SET-UP 1 79
Volume *Current Setting*

Press HITS. "*Current Setting"* will flash. Press #1 until "Split" is displayed. Press HITS to lock in the setting.

SET-UP 1 79
Volume Split

Once finished, press RESET several times.

Volume Bridge – When bridged, the tied amplifier/channel's volume will change regardless of which volume control button is pushed. Volume Bridge Options are:

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 that is another area or room.

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

Note: *If an individual external channel is bridged to the internal amp, the external balance control is disabled.*

Before setting the volume bridge you *must* first "balance" the internal and external speakers. To do so, simply play a song and set the Internal and External volumes to the desired levels.

Once the desired balance has been achieved, access the setup mode by ensuring the service switch is in its center position then "double click" the Red Scan/Cancel button.

To set, from the Setup Mode, access Quick Find 79 and press HITS. Display will show:

SET-UP 1 79
Volume *Current Setting*

Press HITS. "*Current Setting"* will flash. Press #1 until "Bridged" is displayed. Press HITS to lock in the setting. Display will show:

SET-UP 1 79
Bridge Int – Ext *Current Setting*

Press HITS to make "Ext *Current Setting"* flash then press #1 until the desired bridge option is displayed. Press HITS to lock it in. Display will show:

SET-UP 1 79
Bridge Int – Ext *Desired Setting*

Once finished, press RESET several times.

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, 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.

Section E

Operation and Programming Overview

- Normal Operation
- Control Computer Buttons
- Programming, Service and Diagnostics Feature Overview
- Quick Find Reference Programming Definitions
- Quick Find Reference Programming Flow Charts

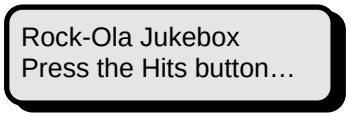
Normal Operation (Play Mode)

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:



Current Attract Messages - No credits on machine.

- Line 1 - toggles between “Rock-Ola Jukebox” and “100 Disc Changer” (if surround sound is OFF), else
- Line 1 - toggles between “Rock-Ola Jukebox” and “Enhanced Stereo” (if surround sound is ON).

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 albums.

If Free Play is active, display will read:

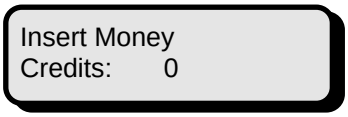
- Line 1 - Rock-Ola Jukebox…
  Line 2 - All selections are currently free

Customer started making selection via keyboard

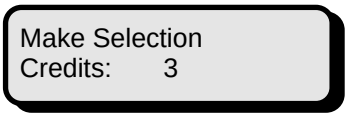
- Line 1 - Your choice - - -
  Line 2 - Credits: Free

Credits State - customer put money in the jukebox.

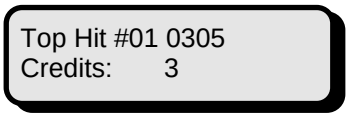
- Not yet enough money for a credit.



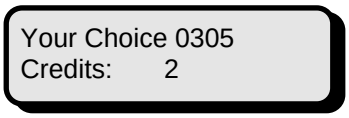
- Credits in jukebox.



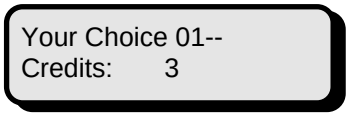
- Customer has pressed the **Hits** key and Hits Button (Quick Find 45) is programmed to View.



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



- Customer has started making a normal selection via keyboard



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

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

```
Program Play: -
Enter List (1-3)
```

- ## Not Available (scrolls the message).

```
01 Not Avai
Credits:    3
```

- #### Not Available (scrolls the message).

```
#### Not Avai
Credits:    3
```

- Album Selection Not Available (scrolls the message).

```
Album Selection…
Credits:    3
```

- Selection #### Requires ## Credits (scrolls the message).

```
Selection 0206 R
Credits:    3
```

- Remote Selection Not Available (scrolls the message).

```
Remote Selection…
Credits:    3
```

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

```
Now Playing 0305
Credits:    3
```

And messages will scroll by on the bottom line.

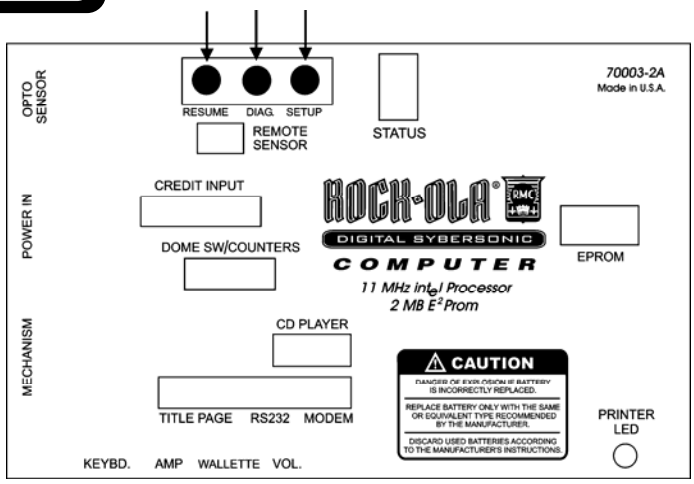


Figure 1E - SyberSonic Control Computer

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.)

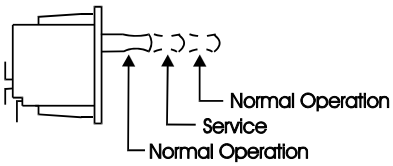


Figure 3E - Service Switch

Note: *If the jukebox has a TeleCommunications module installed and the Break-In Notification feature (Quick Find 172) is activated, the Setup Mode must be accessed and the correct password must be entered within 30 seconds of opening the lid/door. Failure to do so will result in the automatic sending of a break-in warning. The system will wait 30 seconds after being in the normal mode before rearming the Break-In feature.*

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 CD 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. (The system defaults to Disc Mapping upon initial entry into the Setup Mode.)

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:

Key(s)	Function
MENU buttons	View Menu
#1 Button	Toggle Choice/Load Disc/Up
#2 Button	Return Disc/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).

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

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.

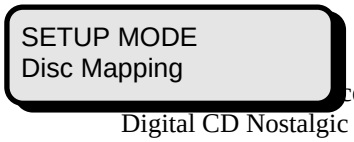
The bottom line will indicate which sub-menu item is selected along with its current value. You may now use the Menu keys to find the specific sub-menu item you want. Once the sub-menu item is found, press HITS.

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:  12
```

The display will change to the selected programming feature.

```
DISC MAPPING  12
Disc Lockouts
```

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.

Disc Errors

The SyberSonic system keeps track of playing errors and reports the disc and track numbers as well as how many times the error has occurred. If an individual disc or track exceeds the preprogrammed number of allowable errors, the jukebox automatically locks the track or disc out. Disc Error Quick Find numbers are 110 through 115.

Hardware Errors

Every Rock-Ola Jukebox is constantly monitored by its SyberSonic Electronics system. The system 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. Also provided is a test for the laser player. (Another of the many Rock-Ola exclusives.) 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, CD player communications & 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.

DISC MAPPING
10 Map
11 Track Lockouts
12 Disc Lockouts
13 Special Discs
14 Special Video
15 View Track Lockouts
16 Clear Track Lockouts
17 View Disc Lockouts
18 Clear Disc Lockouts
19 View Specials
20 Clear Specials

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

PLAY OPTIONS
30 Track Limit
31 Track Time
32 Album Select
33 Play Order
35 Bd Track Lock
36 Bd Disc Lock
37 Clear Select Time
38 Clear Credit Time
39 Priority Dsc

AUTOPLAY
40 Auto Play
41 Background
42 Aux. Backgrnd
43 Background Vol.
44 End Style
45 Hits Button

FREE PLAY
50 Free Play
51 Clear Free
52 Password FP
53 Free Special
54 Free Albums
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
77 Auto Clean
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
84 Print Menus
85 Service Record
86 Counter Out
87 Factory Reset
88 Language
89 Start Style

SET-UP 3
200 Open Menu Id
201 Auto Power
202 Amp Mute

ACCOUNTING
90 Last Reset
91 Print Acc. Data
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

DISC ERRORS
110 View By Order
111 Print Errors
112 Playing Errors
113 Locked Tracks
114 Missing Discs
115 Clear Errors

REMOTE CONTROL
120 Pause/Mute
121 Select Type
122 Rem Playlist
123 Surround Snd
124 Album Select
125 Cancel Disc
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 Wlbx 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
149 Run CD Tests

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 Wlbx Errors

TCM SETUP
170 Recv Calls
171 Call Office
172 Call if Prob
175 Modem
176 TCM Password
177 Reset TCM ID

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.

Disc Mapping – Used to initialize (or learn) each disc's Table of Contents (TOC) into memory.

10 **Map** - Can choose from Off, All Slots, Empty Slots, Single Slots or Clear Map. **It is not necessary to map discs which you have changed via the SyberSonic's Automatic Disc Changing Feature as the machine will automatically map the new disc(s) for you. See the explanation for Quick Find 103 (View Pop Data) for details.**

Off – The machine will not map discs.

All Slots – The machine will stop at every slot and attempt to initialize any disc that is in the slot. If a disc is not present at the time of initialization, the machine will consider it an empty slot and will lock out that number. Use to map the machine upon the first time installation of discs.

Empty Slots – The machine will attempt to initialize only the slots that it has listed in its memory as empty. Use to have the machine automatically map previously empty slots to which you have added CDs. **To view a list of the empty slots, use Quick Find 114 (Missing Discs).**

Single Slots – Can tell the machine which slots it should map.

Clear Map - Clears the current map without causing the machine to attempt to remap. Default: Off

11 **Track Lockouts** – Use to prevent the selection of specific tracks at specific days and times (50 lockouts possible). If selected, will jump to Quick Find 15 to view, add or change track lockouts. **To view the list of tracks automatically locked out due to playing errors, use Quick Find 113 (Locked Tracks).**

Default: No Lockouts

12 **Disc Lockouts** – Used to prevent music from certain discs from being selected at specific days and times (50 lockouts possible). If selected, will jump to Quick Find 17 to view, add or change disc lockouts. Default: No Lockouts

13 **Special Discs** – Designates certain discs as requiring more credits to play tracks from that disc. If selected, will jump to Quick Find 19 to view, add or change special discs. Default: All Discs Normal. (Set the number of credits necessary for a special selection in Quick Find #63).

14 **Special Video** – Designates whether special discs are CD video discs. If set to "Yes" the system will plays CDV's using the optional CDV Kit.

15 **View/Change/Add Track Lockouts**

16 **Clear Track Lockouts**

17 **View/Change/Add Disc Lockouts**

18 **Clear Disc Lockouts**

19 **View/Change/Add Specials**

20 **Clear Specials**

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

25 **Pages** – Choose from Intrigue, Legend, Comet (Rocket), Fireball 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 discs are played.

30 **Track Limit** – Number of tracks in a row that can be played from the same disc. If an entire album has been selected and other music is in the selection queue, the machine will play the number of tracks set here from the selected album then play other music before coming back to the fully selected album. Default: 02.

31 **Track Time** – Limits the time of the song playing and then when time expires causes the song to fade out. Default: 00. (Unlimited time).

32 **Album Select –** Choose from Off, One or Two.

If "One", an entire album can be selected by pressing 00 after typing in the album number (assuming sufficient credits to cover the number of tracks exist). If more than necessary credits exist, only the necessary number of credits will be deducted from the total credits.

If "Two", an entire album may be selected by pressing 00 after typing in the album number (assuming sufficient credits exist to cover the number of tracks on the album.) If there are not as many credits as there are tracks, the machine will play the same number of tracks as there are credits. If more than necessary credits exist, only the necessary number of credits be deducted.

Default: One.

33 **Play Order –** Fifo = as selected. (First in First Out)

Fast = in numeric order lowest to highest number.

Shfl = in random order

Default: Fifo

35 **Bd Track Lock** – Yes or No. If Yes is selected, the machine will automatically lock out an individual track after 20 playing errors occur. Default: No.

36 **Bd Disc Lockout** – Yes or No. If Yes is selected, the machine will automatically lock out an entire disc if it detects a problem reading the individual disc. Default: No. ***Use Quick Find 114 (Missing Discs) to view a list of discs the machine has designated as missing or bad.**

CAUTION

The missing disc list also contains the number(s) for slots that may have been left empty on purpose.

PRECAUCIÓN

La lista de discos faltantes también contiene el número o números de las ranuras que intencionalmente se pudieron haber dejado vacías.

MISE EN GARDE

La liste des disques manquants renferme également les numéros des logements laissés intentionnellement vides.

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 disc to take priority over all other selections. This feature is useful for an all occasion disc. 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 disc, 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 discs designated as "special" (as set in Quick Find #13) during a free play period. Default: No.

54 **Free Albums** - "Yes" allows the selection of entire albums 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:*** *The Cancel Disc function will not work if the Remote Credit feature is activated. 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

63 **Credits Spec.** - Amount of credits needed to select tracks from discs set in Quick Find #13. (Special Discs.) Default: 02.

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 *"Rock-Ola Compact Disc Player"* 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.

77 **Auto Clean** - Will cause the machine to pick-up and spin a laser-cleaning disc every 30 days. You set which slot the cleaning disc is in. Default: No, Disc #99.

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 Control Split – This feature allows the "splitting" of the volume control to individually control the standard installed digital amplifier's left and right channels. The internal buttons control the left channel and the external buttons control the right channel.

WARNING

This feature cannot be used if the optional auxiliary amplifier is installed or if the external output is used. The auxiliary amplifier and external output signal will not function.

ADVERTENCIA

Esta característica no se puede usar si el amplificador externo está instalado o si se están usando los jacks de salida externa. El amplificador auxiliar y las señales de salida externa no funcionarán.

AVERTISSEMENT

Si l'amplificateur externe est installé ou si les prises de sortie externes sont utilisées, vous ne pourrez accéder à cette fonctionnalité. L'amplificateur auxiliaire ne fonctionnera pas ; aucun signal de sortie ne pourra être transmis.

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
  Disc Mapping
  Page Options
  Play Options
  Set Up - 1
  Set Up - 3
  Popularity
  Disc Errors
  Test Mode
  Auto Test
  TCM Set Up
  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 1st 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 2nd 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 3rd 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.

84 **Print Menus** - Sends the current set up data to the SyberSonic IR printer port for use with Rock-Ola Data Printer Kit # 02377-01 (optional).

85 **Service Record** - Logs date of last entry into Setup Mode and the password number entered.

86 **Counter Out** - Sends pulses to optional mechanical selection counter (Rock-Ola Kit #02410). Default: All

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, Chech, French or Finnish.** Default: **English.** ***Note: Check with your distributor for a list of the currently available languages.***

89 **Start Style** - The Start Style allows you to control how the music starts. You may choose from "Fade or Norm."

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

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

10/31 02:05 0

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

Popularity - Allows readout of most/least popular selected CDs. The SyberSonic **Automatic Disc Change** feature is also accessed from this menu.

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 CD to the most played CD.

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

CD Order - View the popularity in ascending CD order 00 through 99. *Choose this option to use the Automatic Disc Changing Feature for the initial installation of CD's.*

For ease of use of the Automatic Disc Changing feature, we recommend leaving this feature set to **Least**.

Default: Least

102 **Print Popularity** - Sends the popularity data to the IR data port on the computer for use with Rock-Ola Data Printer Kit # 02977-01 (optional).

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

Can also use the **Automatic Disc Changing** feature by pressing **keyboard switch #1** to retrieve the disc number displayed. **#2 puts the selected disc away**. The SyberSonic System also "remembers" the disc number for automatic mapping. (See the section on disc changing for detailed instructions on the disc changing feature).

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.*

Disc Errors - Allows logging of errors of unplayable or skipping tracks or discs.

110 **View By Order** - Sets the way disc errors are displayed. "Order" will display disc errors in magazine ascending order (00-99). "Errors" will display the data by greatest to least number of errors. Discs with no errors will not be displayed. Default: Order.

111 **Print Errors** - Sends the Disc Error data to the SyberSonic I.R. printer port for use with Rock-Ola Data Printer Kit #02377-01 (optional).

112 **Playing Errors** - Displays the disc errors in the order as set in Quick Find 110.

113 **Locked Tracks** - Tracks that were automatically locked out after exceeding the maximum number of playing errors.

114 **Missing Discs** - Displays disc spaces that considered missing or could not be read by the CD player.

115 **Clear Errors** - Clears all disc error data, except for the missing discs.

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

123 Surround Snd - If enabled, allows the surround sound feature of the amplifier to be switched via the remote control. Default: Off.

124 Select Album - Allows the selection of an entire disc via the optional deluxe remote control by pressing 00 and enter after pressing the disc number. Default: Off.

125 Cancel Disc - If enabled, pressing the Asterisk (*) button on the remote will cancel all selections that have been made from the disc currently playing. **Note: If Remote Credit (Quick Find 55) is used, this feature will not function.** 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 Syber-Sonic 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 and spin each CD. The display will indicate the number of tracks on the currently spinning disc.

148 Test All Disc (Long Test) - Will cause the mechanism to pick up and play the first 5 seconds of each track on every CD installed. The display will show the number of tracks on the disc and then indicate the selection number as it is playing.

149 Run CD Tests - Provides a means to test the CD Player. When selected, the mechanism will pick up disc 00 and place it on the laser. Two tests are then available, Play Test and Servo Test.

Play Test: Will pick up disc 00 and play it. The Display will show the number of tracks on the disc. Once the disc is playing, the display will indicate the selection number playing. At this point you have the option of using keyboard buttons 1 - 4 to start the disc playing from the first track, move to the next track, move back to the previous track or stop the disc.

Servo Test: This test allows you to test the functions of the laser player. Using keyboard buttons 1 - 5, you may turn focus on, turn focus off, turn turntable on, turn turntable off, and move the laser arm in and out. The display will indicate each functions status.

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 itself 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 Wlbx Errors -** Reserved for future use.

TCM Setup - Settings and options for the Rock-Ola Telecommunications Module. (Module Kit is optional equipment). ***Note:*** *If TCM is not installed, all TCM setups must be left at factory defaults.*

170 **Recv Calls** - Sets the jukebox up to be able to receive modem calls for the purpose of downloading audit and popularity data and also for remote access to programming features.

- **No** - The line will never be answered. Use this setting if you do not want the machine to have remote access.
- **Yes** - This sets the machine to answer the line any time it rings.

  Number of Rings - Sets the number of rings that can pass before the machine automatically answers the phone line.

  Clear Settings - Quickly resets all receive call settings to factory defaults.
- **Prog** - Sets the machine to answer the line only on certain days and/or at certain times.

  Day - Choose day to receive call.

  Start Time - Choose the time to start receiving calls.

  Stop Time - Choose the time to stop receiving calls.

  Number of Rings - Sets the number of rings that can pass before the machine automatically answers the phone line.

  If you are sharing the line with a pay phone that does not accept incoming calls or are using a dedicated phone line, the recommended setting is 2.

  If you are sharing a line with the location's house phone or a public phone that accepts incoming calls, two methods are suggested.

  Answer after 15 rings during normal business hours.

  Answer after 2 rings during normally closed hours.

  Clear Settings - Quickly resets all receive call settings to factory defaults.

171 **Call Office** - These settings are used to have the jukebox automatically place calls to the office for the purpose of uploading data. *To have the machine automatically notify you in the event of a malfunction, see "Call if Prob" in the Automatic Malfunction Notification section below.* ***Enter the "Call Ofc" Number for Automatic Malfunction Notification in this area.***

- **No** - Do not call the office to upload data.
- **Yes** - Automatically call office and upload data.

  Day - Choose day to call.

Start Time - Choose the time to enable automatic calling.

Stop Time - Choose the time to disable automatic calling.

Telephone Number - The number to which the data is to be uploaded. This is entered the same way that a custom message is entered. (See the section describing message entry for detailed instructions.) Allowable characters are the numerals 0-9, *, # and capitol P.

A character "P" inserted into a telephone number will cause a 1 second delay after the "P." "PP" will cause a 2 second delay, "PPP" will cause a 3 second delay, etc. The pause is used to create a delay to allow for the entry of a calling (credit) card number, to wait for an outside line, etc.

Retries - Number of times TCM should try to send the message in the event of a communications malfunction.

Clear Settings - Quickly resets the "Call Office" features to the factory defaults.

172 Call if Problem

- **No** - Do not call for any malfunction.
- **Yes** - Call if a selected malfunction occurs. (The malfunctions will be selected below.)

  Enter Pager Number - If the machine is set to notify via pager, the telephone number, identification code (in any) and function numbers (if any) are entered here. This includes any dialing prefixes and suffixes. This is entered the same way that a custom message is entered. (See the section describing message entry below for detailed instructions.) Allowable characters are the numerals 0-9, *, # and capitol P.

  A character "P" inserted into a telephone number will cause a 1 second delay after the "P." "PP" will cause a 2 second delay, "PPP" will cause a 3 second delay, etc. The pause is used to create a delay to allow the paging system to respond and for the entry of a calling (credit) card number, to wait for an outside line, etc. Additional pauses may also be necessary if your paging service requires an access code. **<u>Important!</u> A minimum of 3 P's are necessary (3 second delay) after the pager number to allow the paging system time to respond. If no pause time is allowed, the paging system will not be able to properly receive and then transmit the data to you.**

  An example of a typical "direct dial" pager dialing string may look like: 5554567PPPP where 5554567 is the pager number and PPPP is a 4 second pause to allow the paging system to answer and respond before the jukebox sends its error code information. *To know exactly how many P's to insert into the dialing string, call your pager number from the phone line that the jukebox is plugged into and count the number of seconds from the time the last button is pushed until the paging service responds. Add one more second to that number and insert the corresponding number of pauses into the dialing string.*

  Another example: the following is used to call a Skytel® Pager:

  18007598888PPPPP#nnnnn#PPPP

  In the above example,

  18007598888 is the access number, PPPPP causes a 5 second delay to wait for the Skytel system to answer, #nnnnnnn# represent the "PIN" number and PPPP gives the paging system time to respond before the jukebox sends its error code.

  Enter Pager Suffix - This is a string of characters that ends the paging cycle after the error code is sent. i.e. A Skytel Pager requires 2 "#" tones be sent to end the paging cycle.

  Pages to Send - The number of times to successfully send the page. This setting is included to compen-

sate for paging systems that have a tendency to "miss" some pages. The system will retry if the location line is in use until it is successful.

Report DBA Jam

Yes - Will cause the machine to page *and* post a message at the office in the event of a jammed or full DBA. The "office" number to be called is the same one as set in Call Office (Quick Find 171).

No - Will cause the machine to ignore this malfunction.

Ofc - Will cause the machine to only post a message at the office.

Pgr - Will cause the machine to only page in the event of this malfunction.

Report Fatal Error

Yes - Will cause the machine to page *and* post a message at the office in the event of a "fatal error" such as an inoperative mechanism. The "office" number to be called is the same one as set in Call Office (Quick Find 171).

No - Will cause the machine to ignore this malfunction.

Ofc - Will cause the machine to only post a message at the office.

Pgr - Will cause the machine to only page in the event of this malfunction.

Report Break In

Yes - Will cause the machine to page *and* post a message at the office in the event of an unauthorized entry into the jukebox. The "office" number to be called is the same one as set in Call Office (Quick Find 171).

No - Will cause the machine to ignore this malfunction.

Ofc - Will cause the machine to only post a message at the office.

Pgr - Will cause the machine to only page in the event of this malfunction.

Note*: Setup mode must be accessed and password entered (if enabled) within 30 seconds of opening the lid or else the break-in warning will be sent.*

Report CD Errors

Yes - Will cause the machine to page *and* post a message at the office in the event of 50 CD playing errors in one day. The "office" number to be called is the same one as set in Call Office (Quick Find 171)

No - Will cause the machine to ignore this malfunction.

Ofc - Will cause the machine to only post a message at the office.

Pgr - Will cause the machine to only page in the event of this malfunction.

Clear Settings - Will quickly restore the factory default settings for the machine's power. Call if Problem options.

175 Modem

- **Rock-Ola** - This setting is to be used for the Rock-Ola modem provided in the 2417-02 kit.
- **DELETE** Sentence in parenthesis after Rckwl 14.4
- **Off -** This setting is turns the entire Telecommunications system off. Use when no modem is installed, or you do not the telecommunications to operate.
- **Direct** - This setting is used to connect the jukebox to a PC via a serial cable. After connecting the jukebox to the PC, choose this setting. Press the Cancel/scan button to exit the session, then return the setting to the off or the correct modem type.

176 Telecommunications Password

This is the four digit password used to identify this jukebox by the "Get Con-

nected" program. If it is left at the factory default of "0000" then it can be changed by remote control.

177 Reset Telecommunications ID

This clears the ID code assigned to the jukebox by the "Get Connected" program.

Resetting the ID means the jukebox will no longer be linked to the existing jukebox profile in the "Get Connected" program. This should only be necessary when you are selling the jukebox or discontinuing the use of the modem.

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."

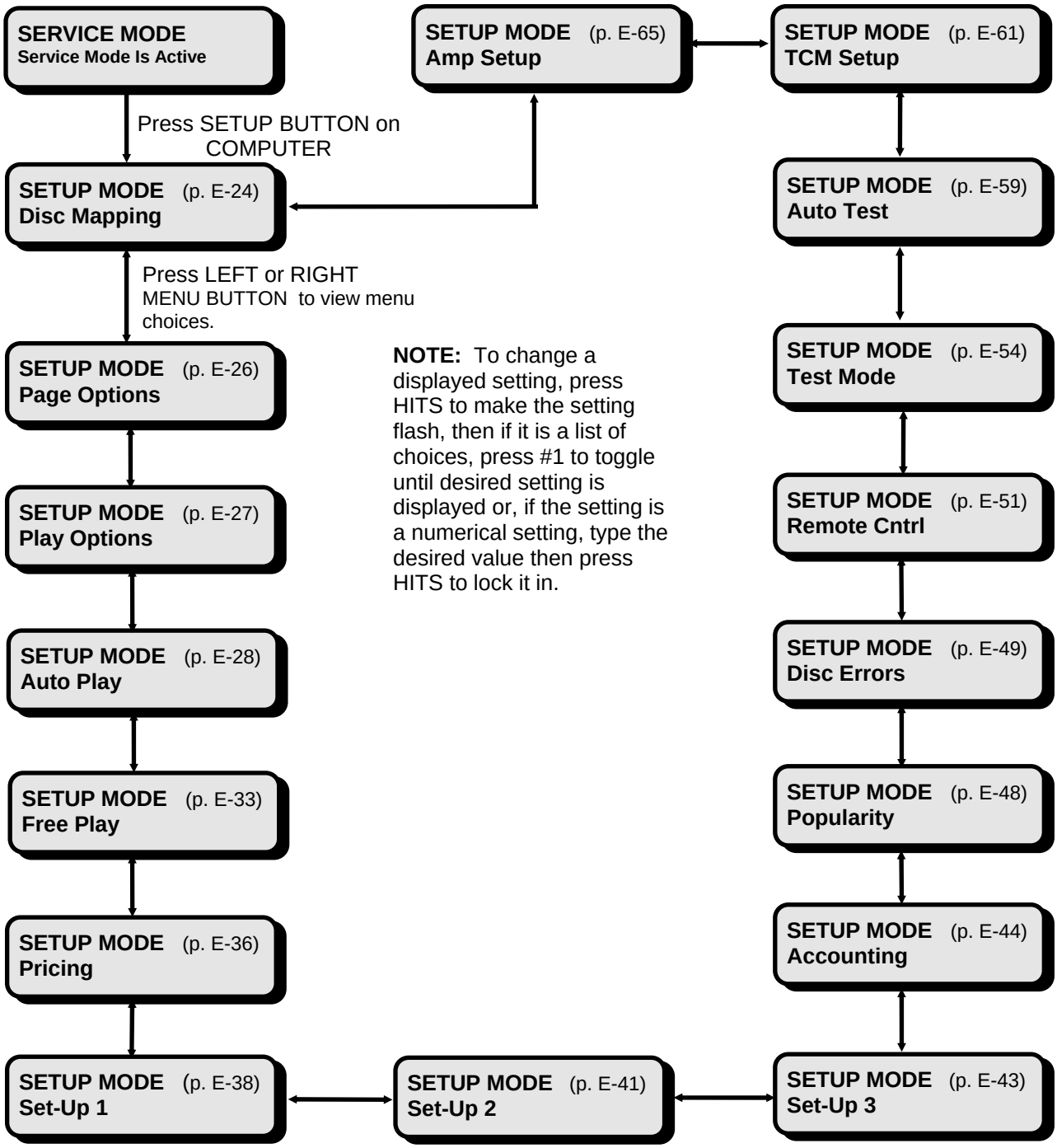
229 **External Left Loudness –** Turns the loudness contour on or off for the External Amplifier's Left Channel.

230 **External Right Loudness** – Turns the loudness contour on or off for the External Amplifier's Right Channel.

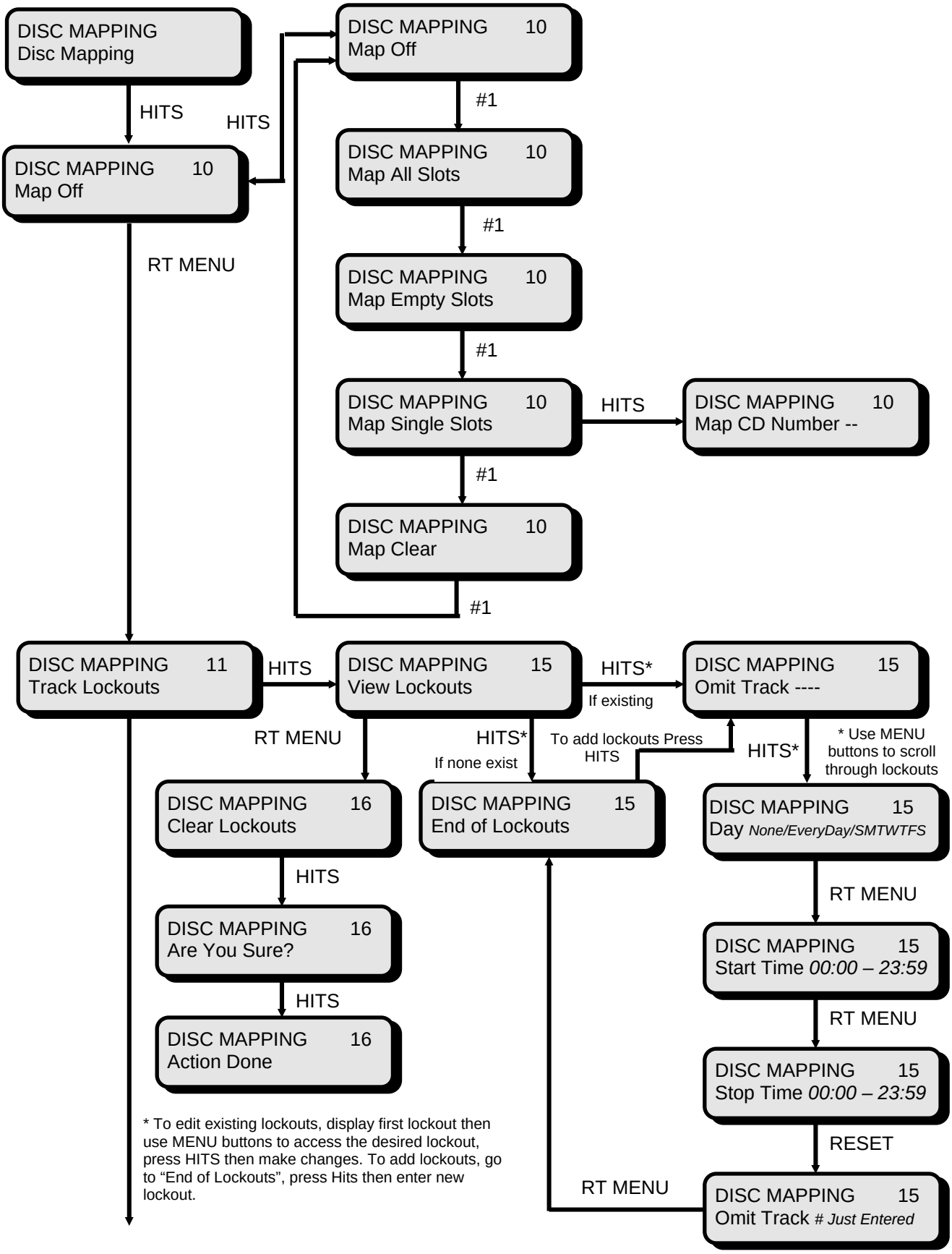
232 **External AVC** – Turns the Automatic Volume Control on or off for the External Amplifier.

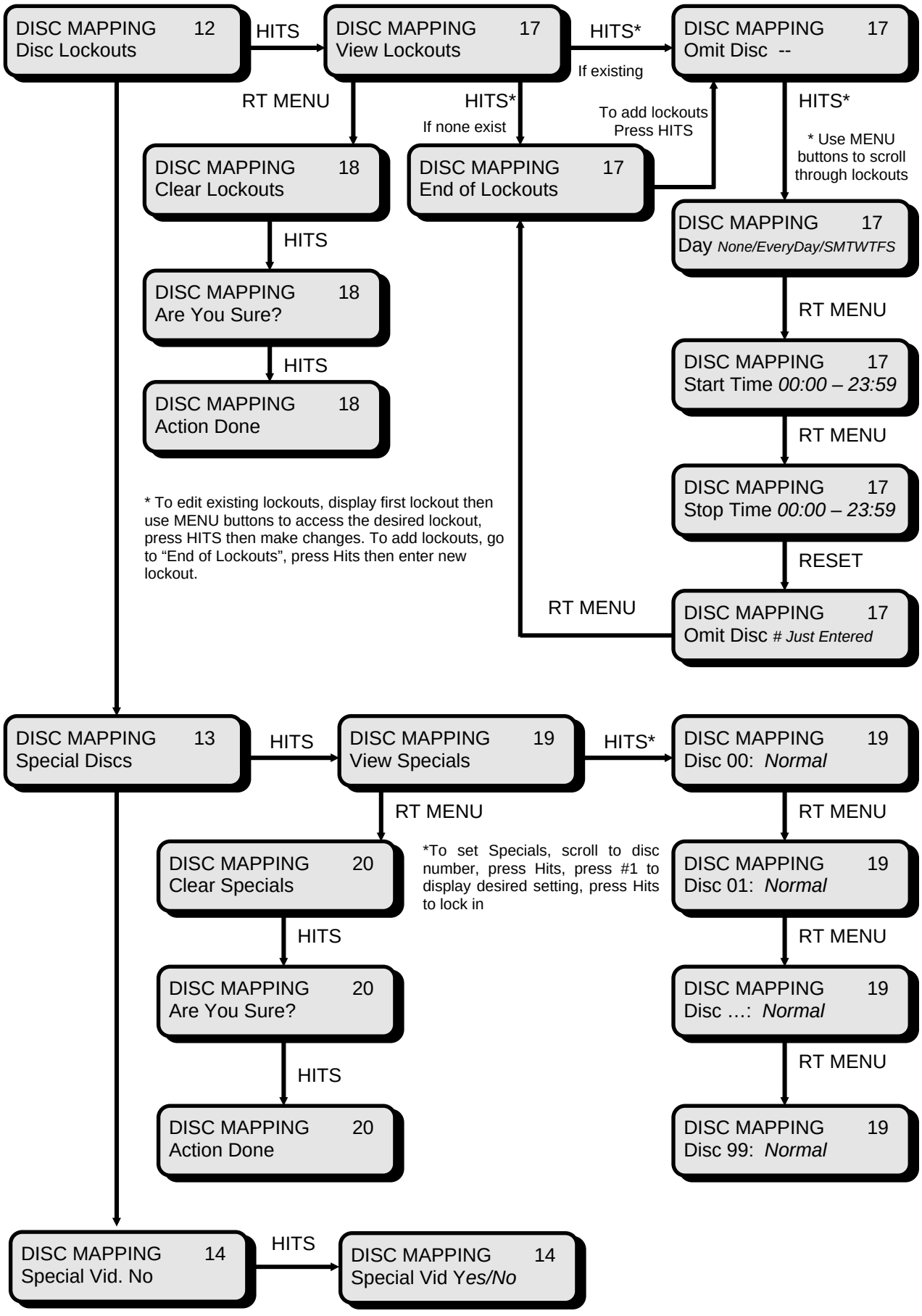
SETUP MODE FLOW CHART

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.

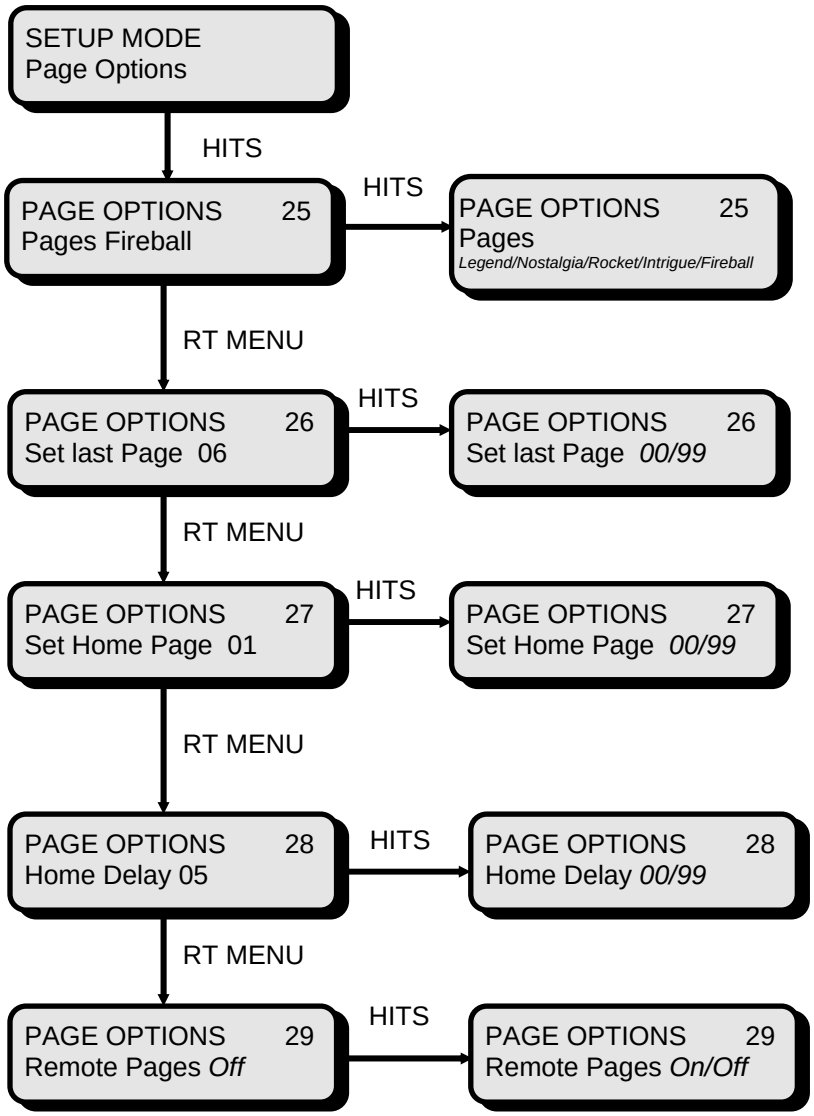


DISC MAPPING

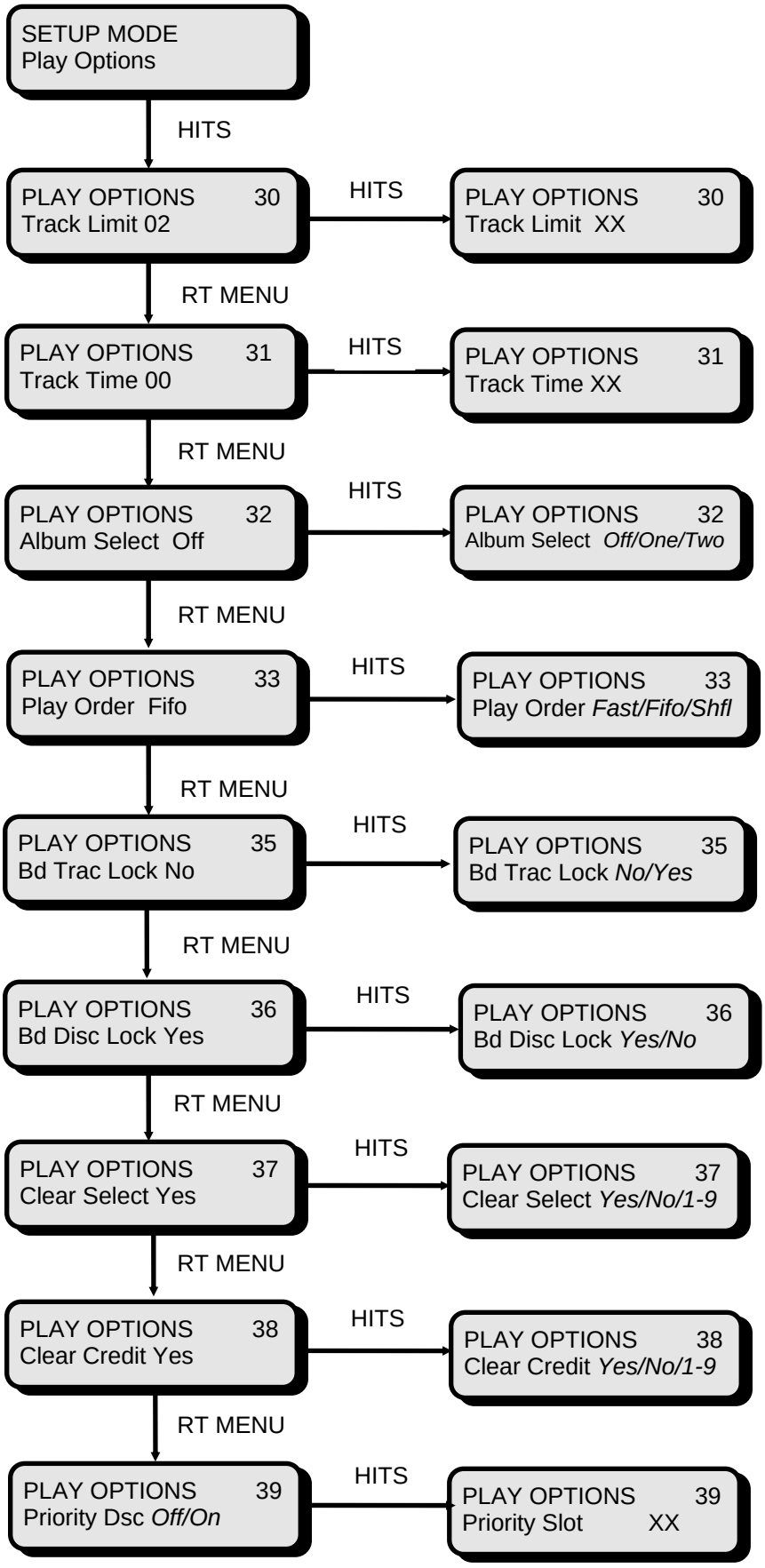



DISC MAPPING 12
Disc Lockouts
HITS
DISC MAPPING 17
View Lockouts
HITS*
If existing
DISC MAPPING 17
Omit Disc --
RT MENU
HITS*
If none exist
To add lockouts
Press HITS
HITS*
* Use MENU buttons to scroll through lockouts
DISC MAPPING 18
Clear Lockouts
DISC MAPPING 17
End of Lockouts
DISC MAPPING 17
Day None/EveryDay/SMTWTFS
HITS
RT MENU
DISC MAPPING 18
Are You Sure?
DISC MAPPING 17
Start Time 00:00 – 23:59
HITS
RT MENU
DISC MAPPING 18
Action Done
DISC MAPPING 17
Stop Time 00:00 – 23:59
RESET
* To edit existing lockouts, display first lockout then use MENU buttons to access the desired lockout, press HITS then make changes. To add lockouts, go to "End of Lockouts", press Hits then enter new lockout.
RT MENU
DISC MAPPING 17
Omit Disc # Just Entered
DISC MAPPING 13
Special Discs
HITS
DISC MAPPING 19
View Specials
HITS*
DISC MAPPING 19
Disc 00: Normal
RT MENU
RT MENU
DISC MAPPING 20
Clear Specials
*To set Specials, scroll to disc number, press Hits, press #1 to display desired setting, press Hits to lock in
DISC MAPPING 19
Disc 01: Normal
HITS
RT MENU
DISC MAPPING 20
Are You Sure?
DISC MAPPING 19
Disc …: Normal
HITS
RT MENU
DISC MAPPING 20
Action Done
DISC MAPPING 19
Disc 99: Normal
DISC MAPPING 14
Special Vid. No
HITS
DISC MAPPING 14
Special Vid Yes/No

PAGE OPTIONS



PLAY OPTIONS



The number of tracks in a row from 1 disc. 00 = unlimited

The amount of time in minutes 1 track is allowed to play. 00 = unlimited

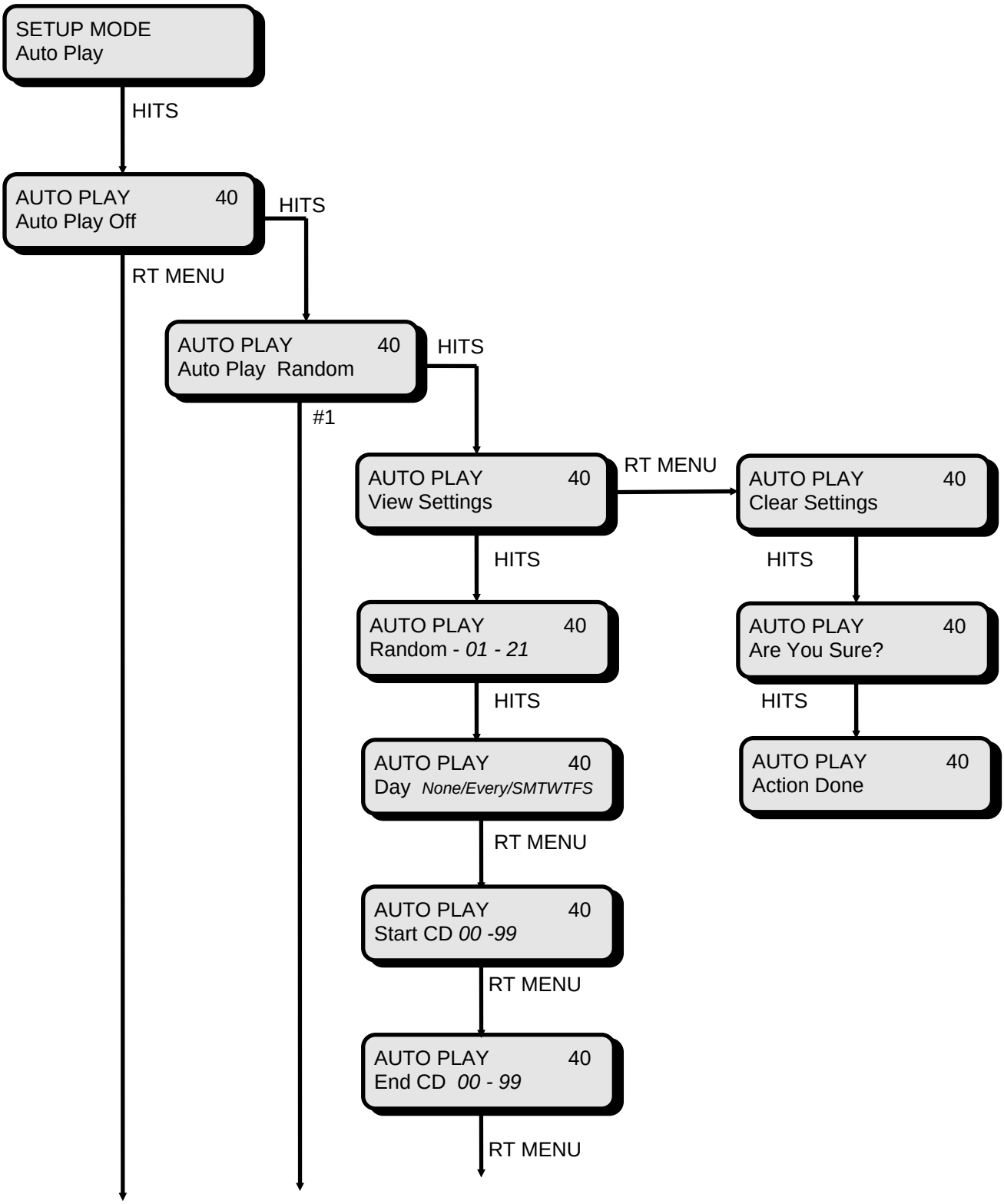
Off = disables album selections.
One = Must have enough credits
Two = Will play as many songs as credits.

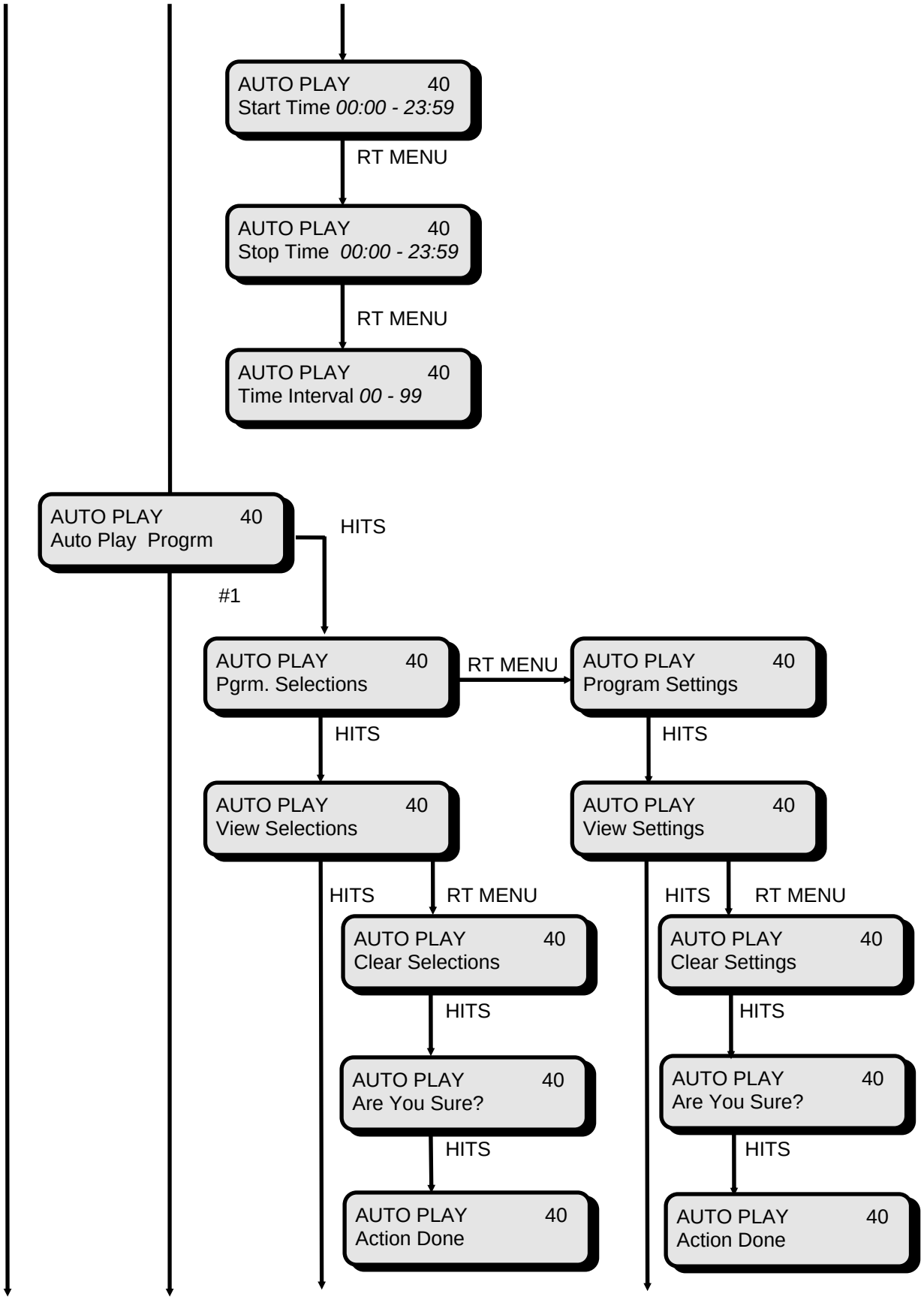
Fifo = First in First out
Fast = Numeric order
Shfl = Random order

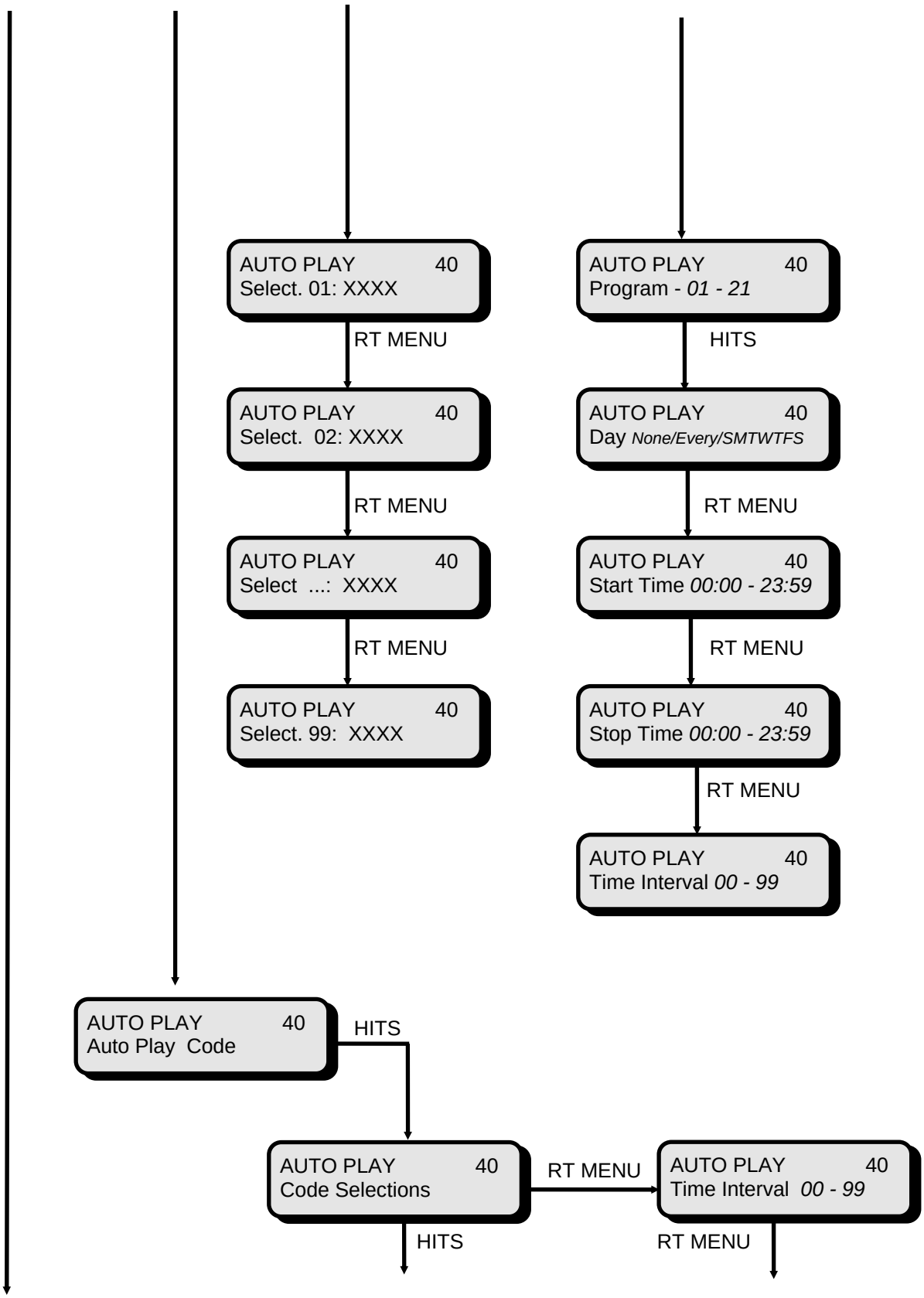
Choose from Yes, No or number of hours (1-9) with power off before selections in memory clear.

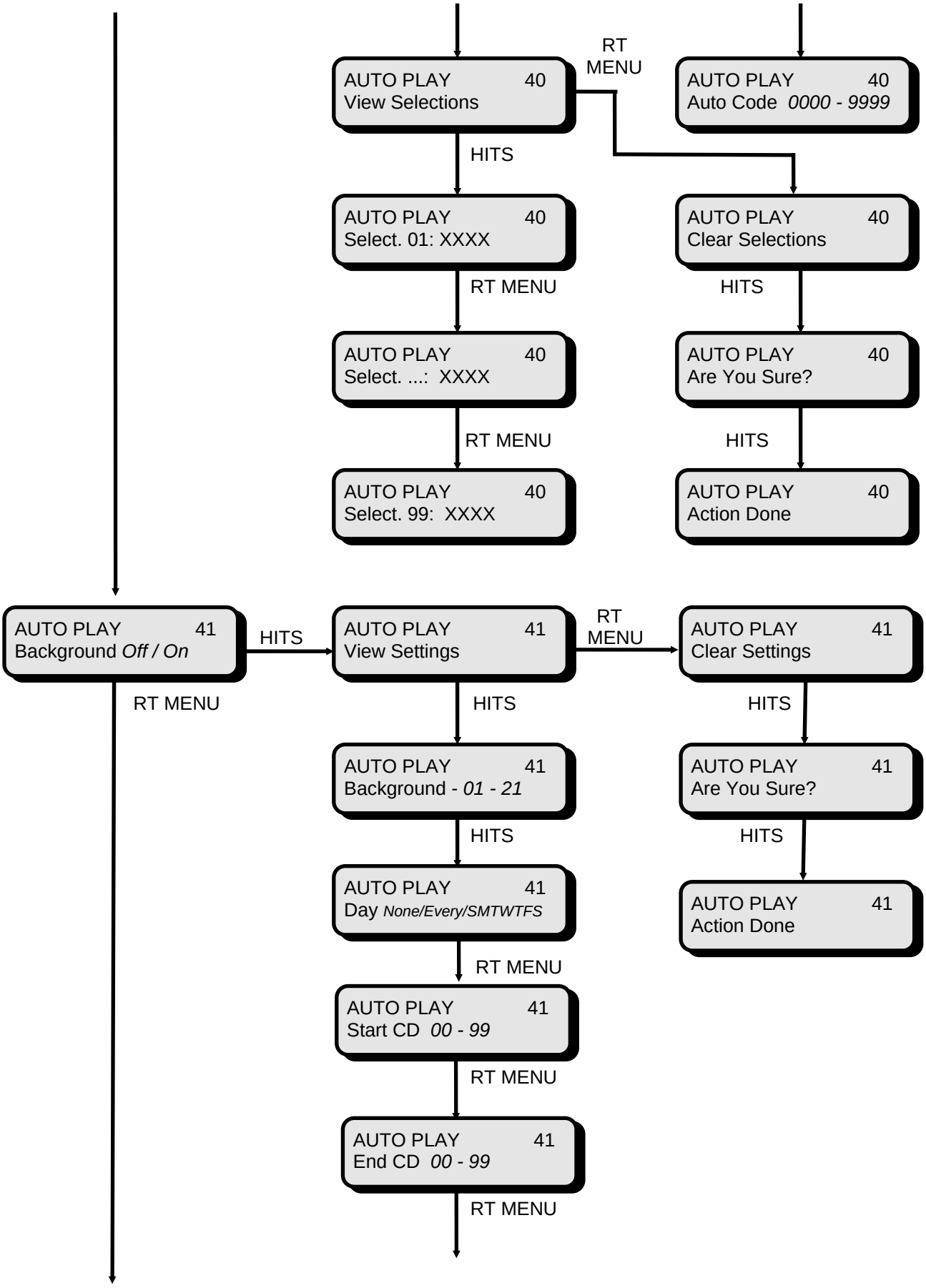
Choose from Yes, No or number of hours (1-9) with power off before credits in memory clear.

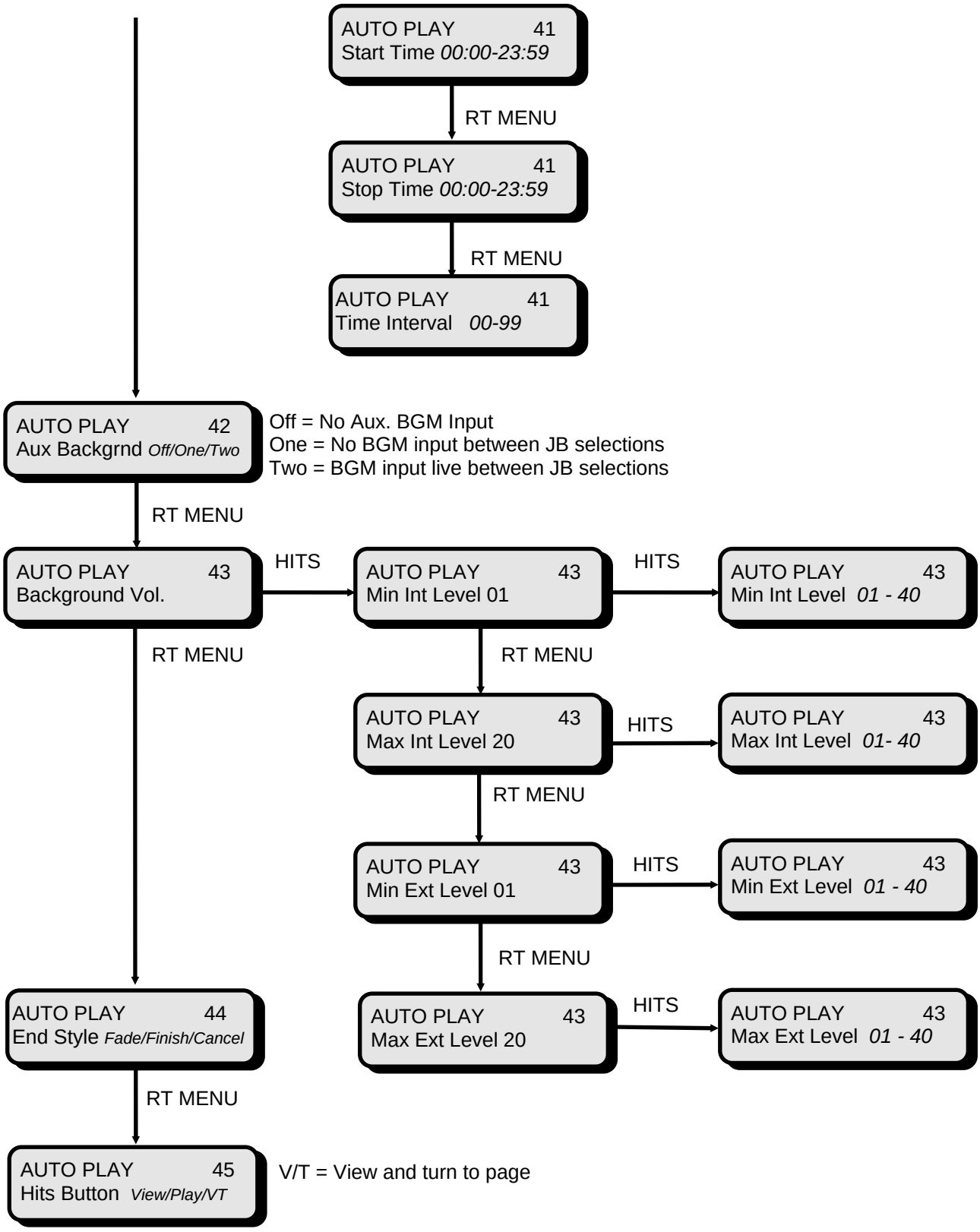
AUTO PLAY


SETUP MODE
Auto Play
HITS
AUTO PLAY 40
Auto Play Off
HITS
RT MENU
AUTO PLAY 40
Auto Play Random
HITS
#1
AUTO PLAY 40
View Settings
RT MENU
AUTO PLAY 40
Clear Settings
HITS
HITS
AUTO PLAY 40
Random - 01 - 21
AUTO PLAY 40
Are You Sure?
HITS
HITS
AUTO PLAY 40
Day None/Every/SMTWTFS
AUTO PLAY 40
Action Done
RT MENU
AUTO PLAY 40
Start CD 00 -99
RT MENU
AUTO PLAY 40
End CD 00 - 99
RT MENU

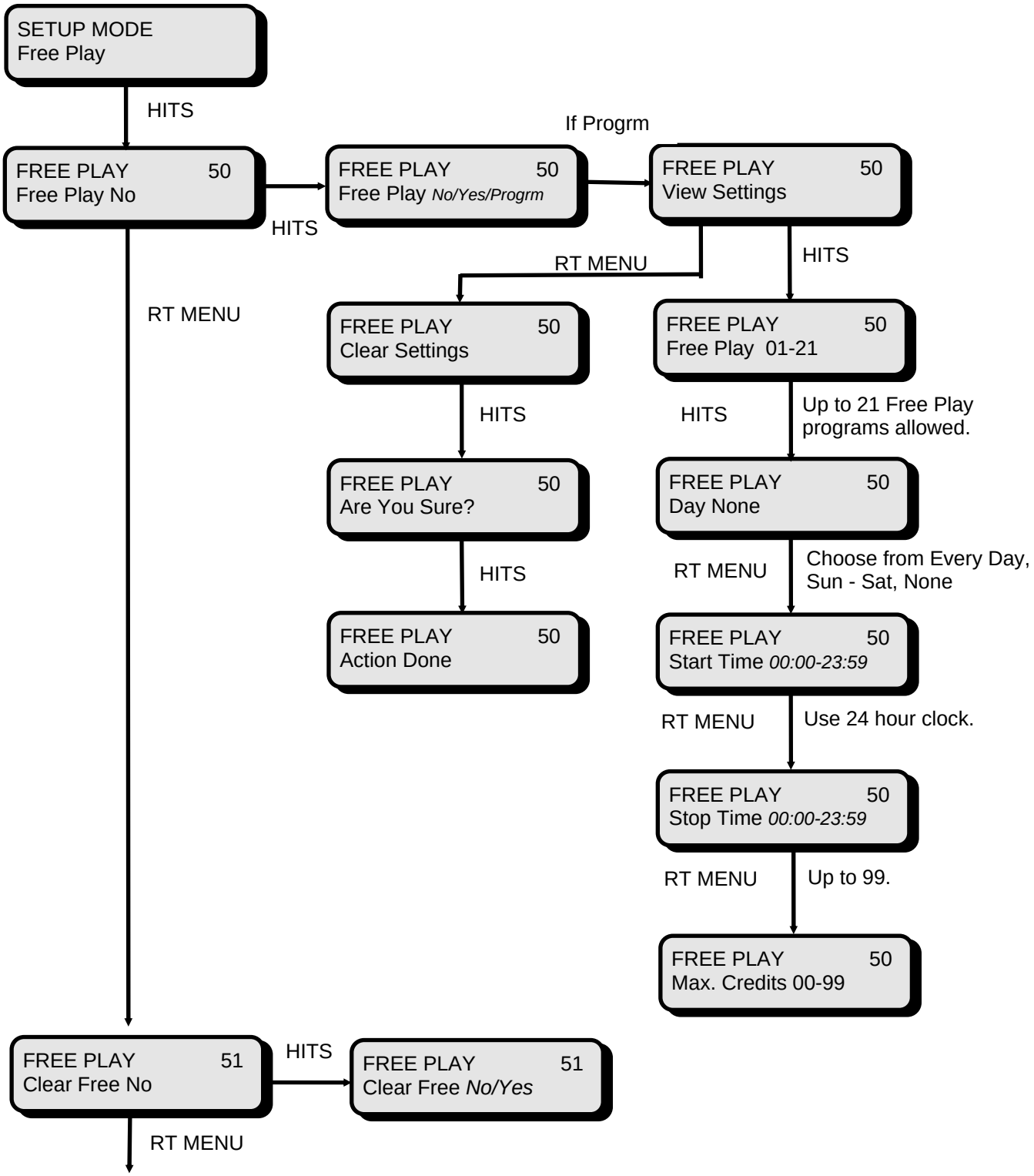

AUTO PLAY 40
Start Time 00:00 - 23:59
RT MENU
AUTO PLAY 40
Stop Time 00:00 - 23:59
RT MENU
AUTO PLAY 40
Time Interval 00 - 99
AUTO PLAY 40
Auto Play Progrm
HITS
#1
AUTO PLAY 40
Pgrm. Selections
RT MENU
AUTO PLAY 40
Program Settings
HITS
HITS
AUTO PLAY 40
View Selections
AUTO PLAY 40
View Settings
HITS
RT MENU
HITS
RT MENU
AUTO PLAY 40
Clear Selections
AUTO PLAY 40
Clear Settings
HITS
HITS
AUTO PLAY 40
Are You Sure?
AUTO PLAY 40
Are You Sure?
HITS
HITS
AUTO PLAY 40
Action Done
AUTO PLAY 40
Action Done

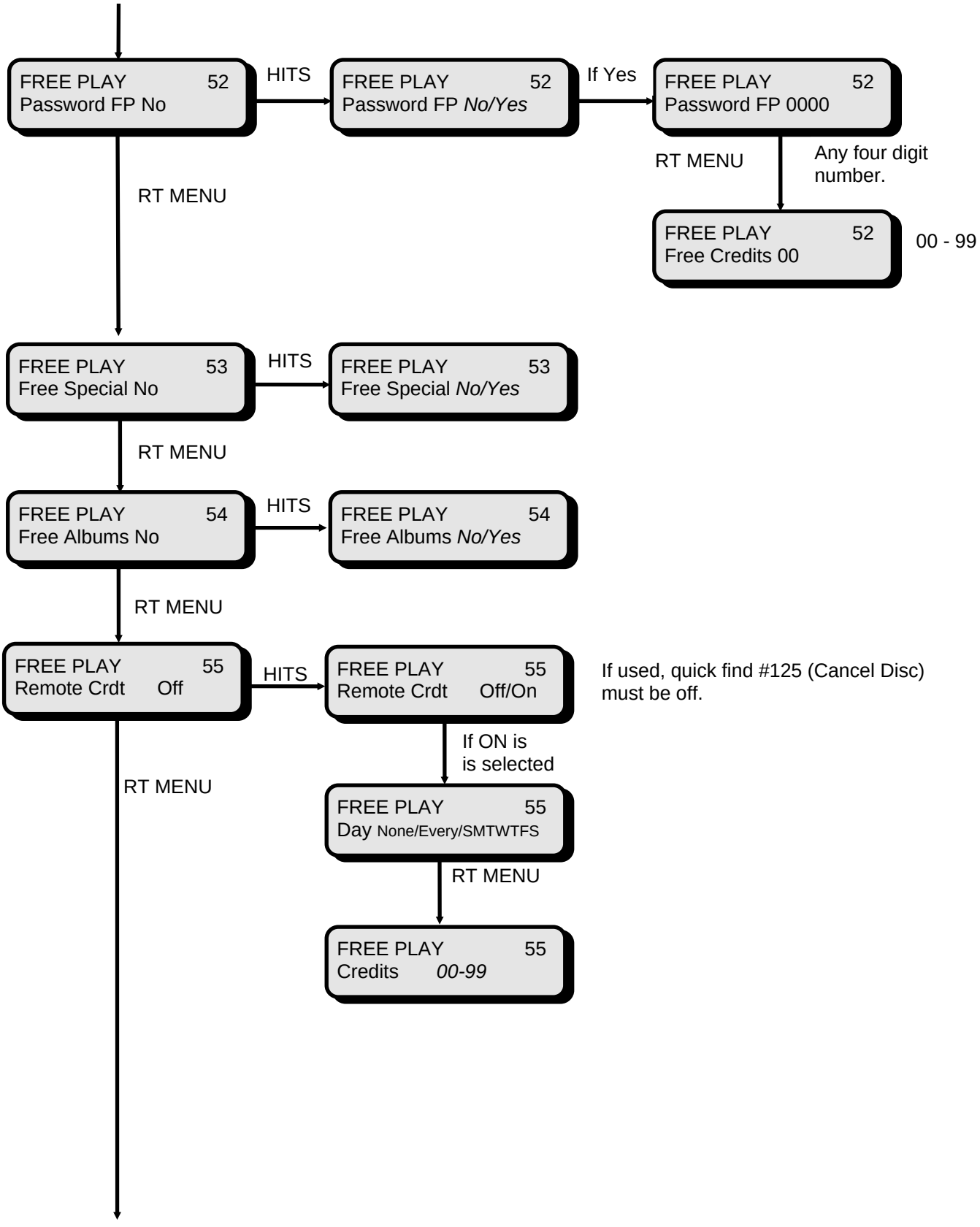

AUTO PLAY 40
Select. 01: XXXX
RT MENU
AUTO PLAY 40
Select. 02: XXXX
RT MENU
AUTO PLAY 40
Select ...: XXXX
RT MENU
AUTO PLAY 40
Select. 99: XXXX
AUTO PLAY 40
Program - 01 - 21
HITS
AUTO PLAY 40
Day None/Every/SMTWTFS
RT MENU
AUTO PLAY 40
Start Time 00:00 - 23:59
RT MENU
AUTO PLAY 40
Stop Time 00:00 - 23:59
RT MENU
AUTO PLAY 40
Time Interval 00 - 99
AUTO PLAY 40
Auto Play Code
HITS
AUTO PLAY 40
Code Selections
RT MENU
AUTO PLAY 40
Time Interval 00 - 99
HITS
RT MENU

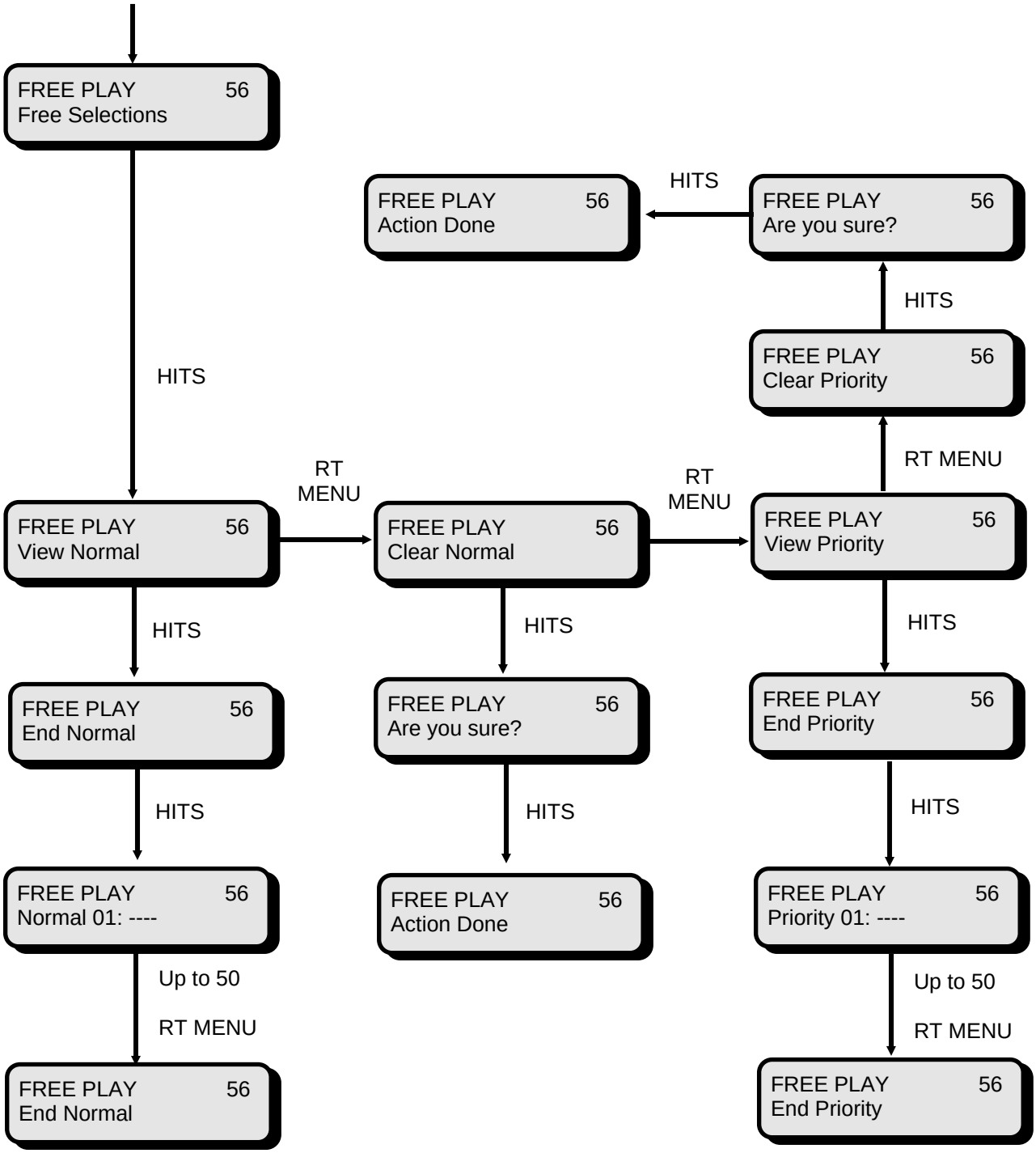

AUTO PLAY 40
View Selections
RT MENU
AUTO PLAY 40
Auto Code 0000 - 9999
HITS
AUTO PLAY 40
Select. 01: XXXX
AUTO PLAY 40
Clear Selections
RT MENU
HITS
AUTO PLAY 40
Select. ...: XXXX
AUTO PLAY 40
Are You Sure?
RT MENU
HITS
AUTO PLAY 40
Select. 99: XXXX
AUTO PLAY 40
Action Done
AUTO PLAY 41
Background Off / On
HITS
AUTO PLAY 41
View Settings
RT MENU
AUTO PLAY 41
Clear Settings
RT MENU
HITS
HITS
AUTO PLAY 41
Background - 01 - 21
AUTO PLAY 41
Are You Sure?
HITS
HITS
AUTO PLAY 41
Day None/Every/SMTWTFS
AUTO PLAY 41
Action Done
RT MENU
AUTO PLAY 41
Start CD 00 - 99
RT MENU
AUTO PLAY 41
End CD 00 - 99
RT MENU


AUTO PLAY 41
Start Time 00:00-23:59
RT MENU
AUTO PLAY 41
Stop Time 00:00-23:59
RT MENU
AUTO PLAY 41
Time Interval 00-99
AUTO PLAY 42
Aux Backgrnd Off/One/Two
Off = No Aux. BGM Input
One = No BGM input between JB selections
Two = BGM input live between JB selections
RT MENU
AUTO PLAY 43
Background Vol.
HITS
AUTO PLAY 43
Min Int Level 01
HITS
AUTO PLAY 43
Min Int Level 01 - 40
RT MENU
RT MENU
AUTO PLAY 43
Max Int Level 20
HITS
AUTO PLAY 43
Max Int Level 01- 40
RT MENU
AUTO PLAY 43
Min Ext Level 01
HITS
AUTO PLAY 43
Min Ext Level 01 - 40
RT MENU
AUTO PLAY 44
End Style Fade/Finish/Cancel
AUTO PLAY 43
Max Ext Level 20
HITS
AUTO PLAY 43
Max Ext Level 01 - 40
RT MENU
AUTO PLAY 45
Hits Button View/Play/VT
V/T = View and turn to page

FREE PLAY

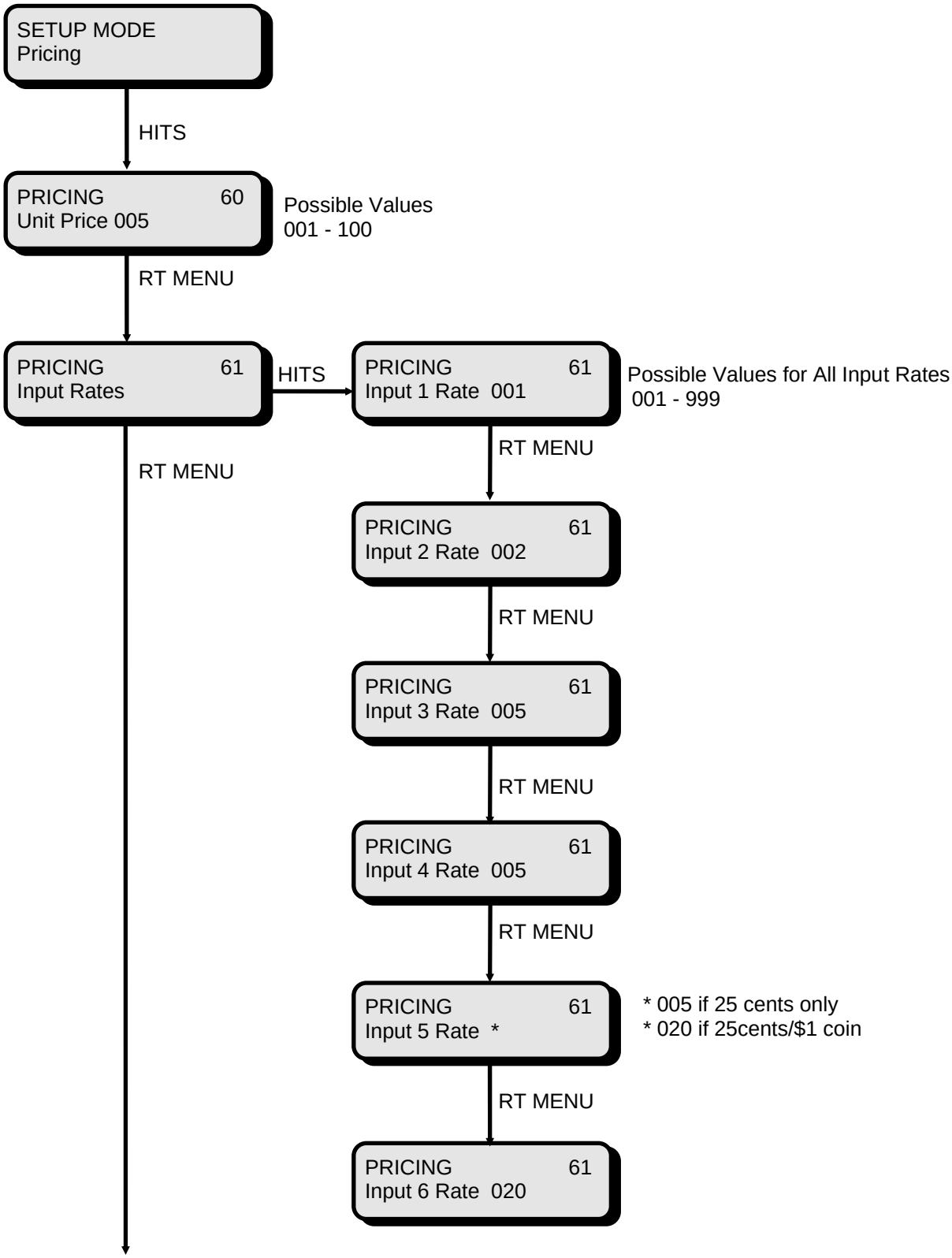

SETUP MODE
Free Play
HITS
FREE PLAY 50
Free Play No
HITS
FREE PLAY 50
Free Play No/Yes/Progrm
If Progrm
FREE PLAY 50
View Settings
RT MENU
HITS
RT MENU
FREE PLAY 50
Clear Settings
HITS
FREE PLAY 50
Are You Sure?
HITS
FREE PLAY 50
Action Done
FREE PLAY 50
Free Play 01-21
HITS
Up to 21 Free Play programs allowed.
FREE PLAY 50
Day None
RT MENU
Choose from Every Day, Sun - Sat, None
FREE PLAY 50
Start Time 00:00-23:59
RT MENU
Use 24 hour clock.
FREE PLAY 50
Stop Time 00:00-23:59
RT MENU
Up to 99.
FREE PLAY 50
Max. Credits 00-99
FREE PLAY 51
Clear Free No
HITS
FREE PLAY 51
Clear Free No/Yes
RT MENU

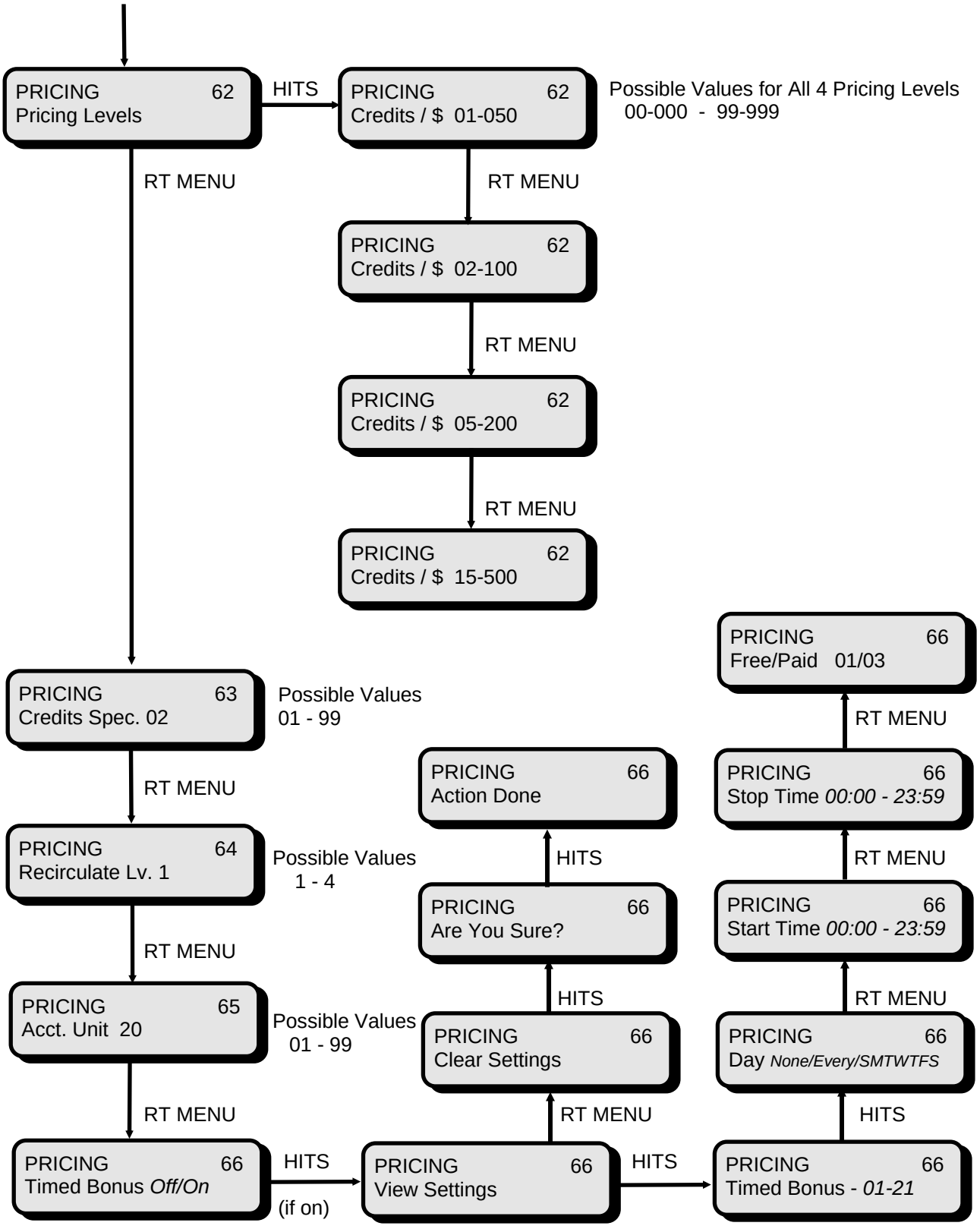

FREE PLAY 52
Password FP No
HITS
FREE PLAY 52
Password FP No/Yes
If Yes
FREE PLAY 52
Password FP 0000
RT MENU
Any four digit number.
FREE PLAY 52
Free Credits 00
00 - 99
RT MENU
FREE PLAY 53
Free Special No
HITS
FREE PLAY 53
Free Special No/Yes
RT MENU
FREE PLAY 54
Free Albums No
HITS
FREE PLAY 54
Free Albums No/Yes
RT MENU
FREE PLAY 55
Remote Crdt Off
HITS
FREE PLAY 55
Remote Crdt Off/On
If used, quick find #125 (Cancel Disc) must be off.
If ON is is selected
RT MENU
FREE PLAY 55
Day None/Every/SMTWTFS
RT MENU
FREE PLAY 55
Credits 00-99



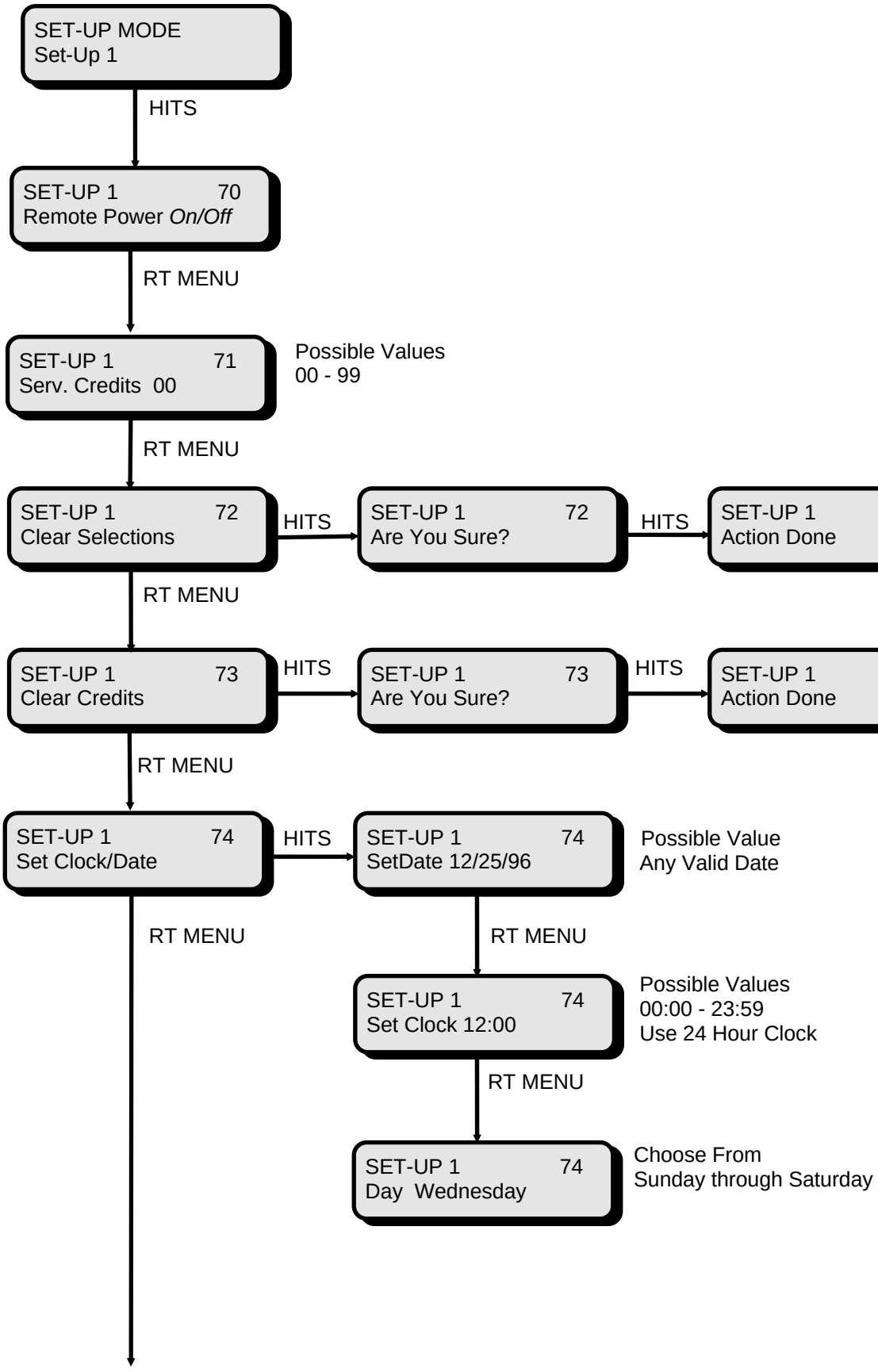
Clear priority repeats the same as clear normal.

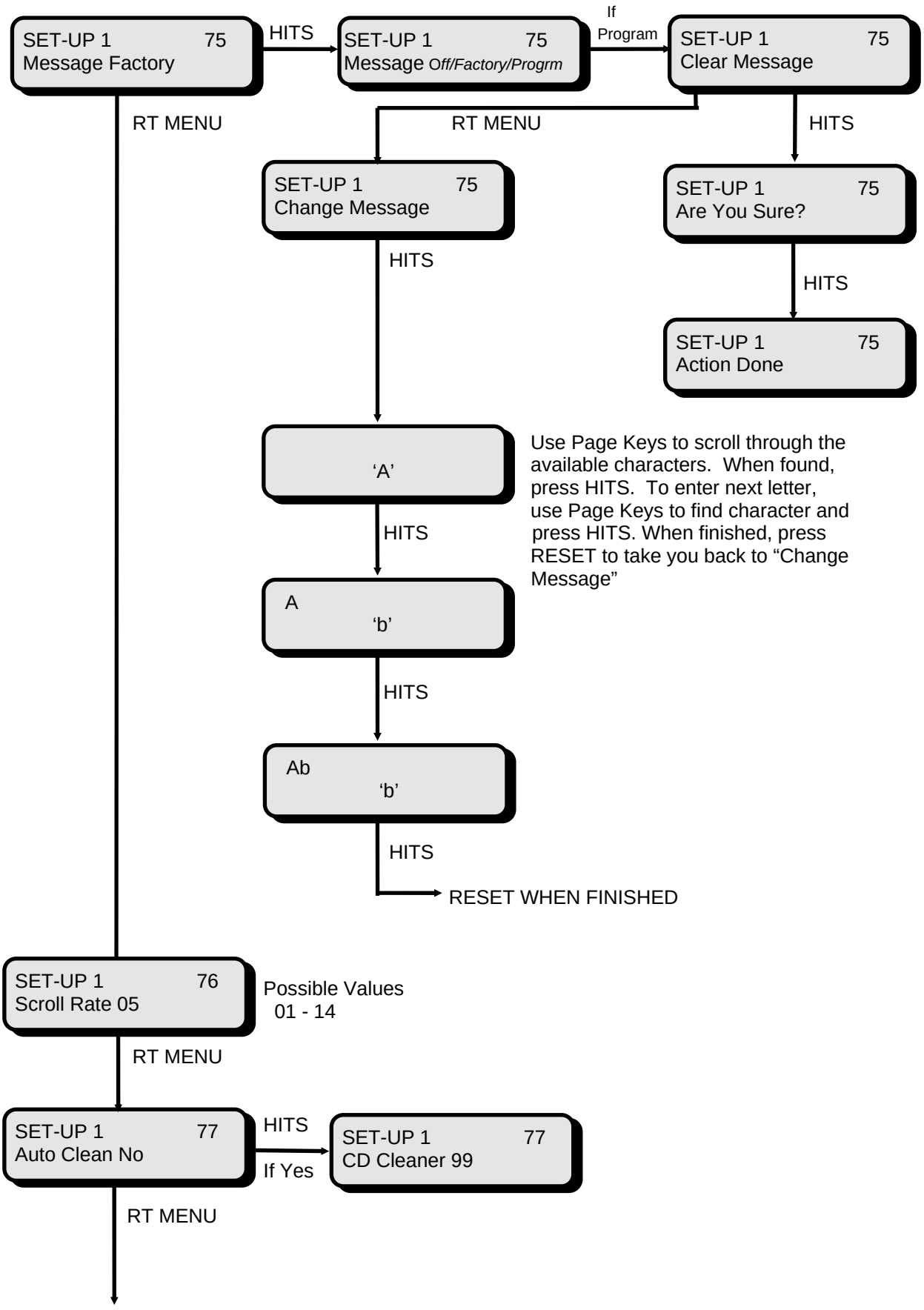
PRICING

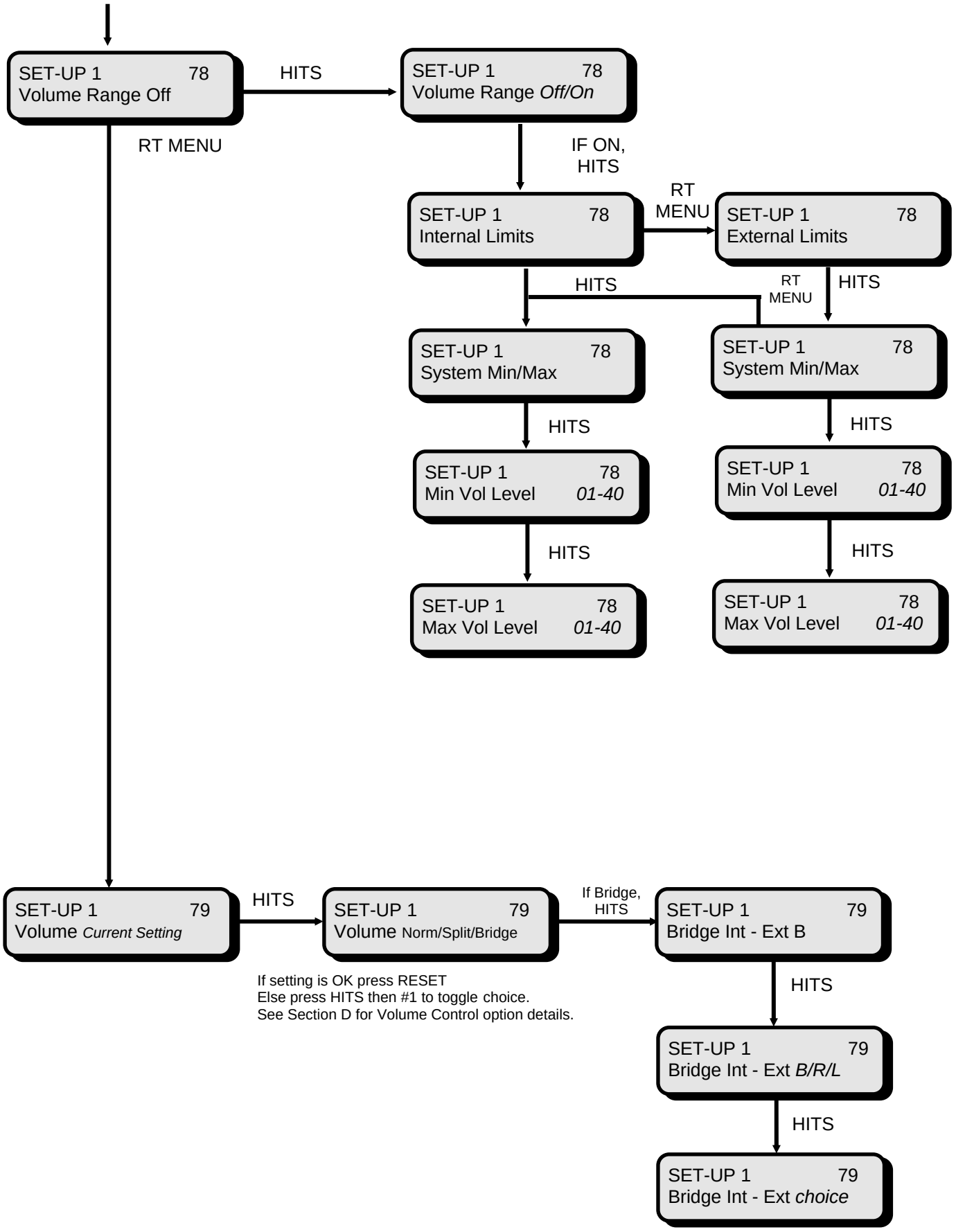

SETUP MODE
Pricing
HITS
PRICING 60
Unit Price 005
Possible Values
001 - 100
RT MENU
PRICING 61
Input Rates
HITS
PRICING 61
Input 1 Rate 001
Possible Values for All Input Rates
001 - 999
RT MENU
RT MENU
PRICING 61
Input 2 Rate 002
RT MENU
PRICING 61
Input 3 Rate 005
RT MENU
PRICING 61
Input 4 Rate 005
RT MENU
PRICING 61
Input 5 Rate *
* 005 if 25 cents only
* 020 if 25cents/$1 coin
RT MENU
PRICING 61
Input 6 Rate 020


PRICING 62
Pricing Levels
HITS
PRICING 62
Credits / $ 01-050
Possible Values for All 4 Pricing Levels
00-000 - 99-999
RT MENU
RT MENU
PRICING 62
Credits / $ 02-100
RT MENU
PRICING 62
Credits / $ 05-200
RT MENU
PRICING 62
Credits / $ 15-500
PRICING 63
Credits Spec. 02
Possible Values
01 - 99
RT MENU
PRICING 64
Recirculate Lv. 1
Possible Values
1 - 4
RT MENU
PRICING 65
Acct. Unit 20
Possible Values
01 - 99
RT MENU
PRICING 66
Timed Bonus Off/On
HITS
(if on)
PRICING 66
View Settings
HITS
PRICING 66
Timed Bonus - 01-21
HITS
PRICING 66
Day None/Every/SMTWTFS
RT MENU
PRICING 66
Start Time 00:00 - 23:59
RT MENU
PRICING 66
Stop Time 00:00 - 23:59
RT MENU
PRICING 66
Free/Paid 01/03
RT MENU
PRICING 66
Clear Settings
HITS
PRICING 66
Are You Sure?
HITS
PRICING 66
Action Done

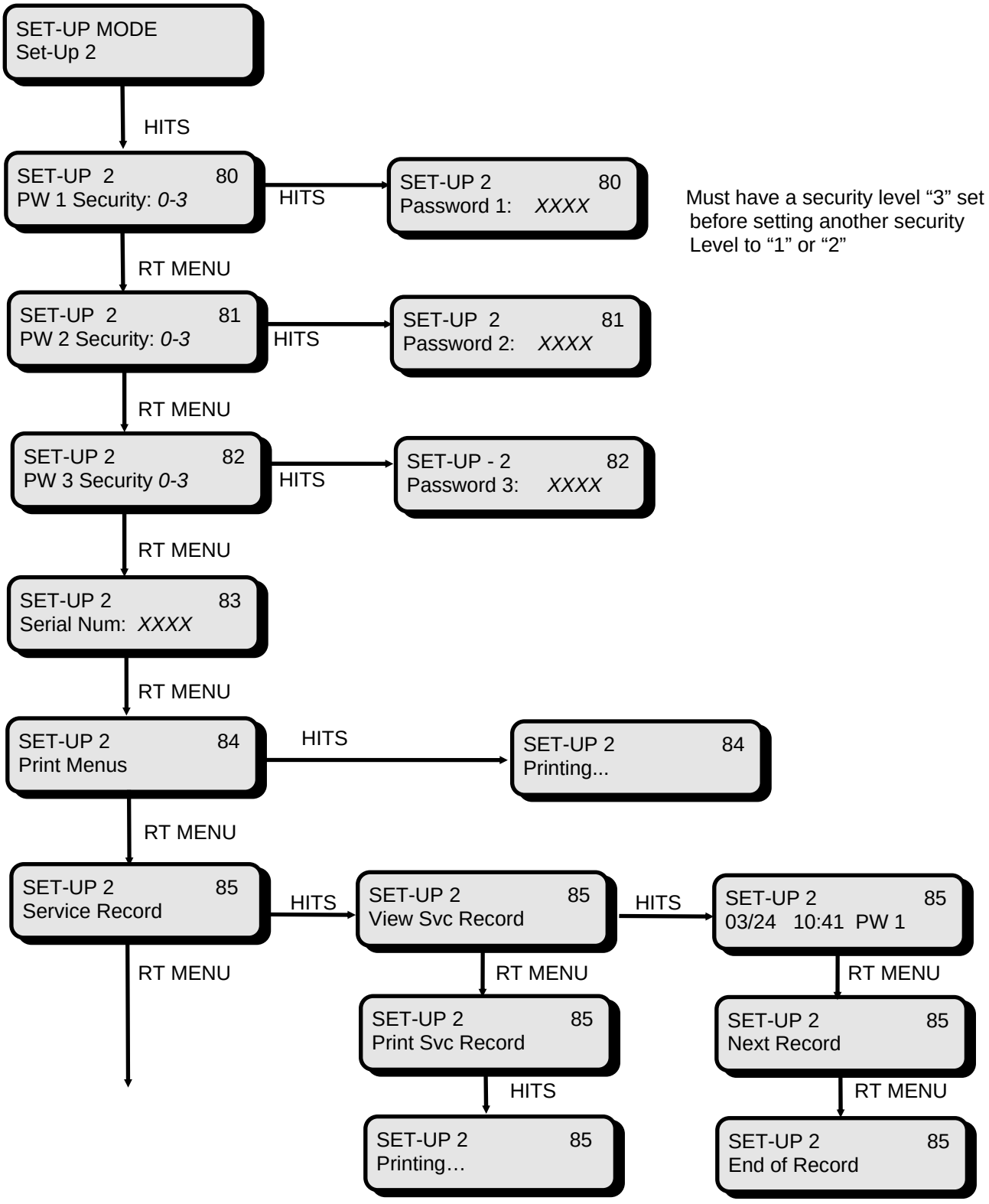
SET-UP 1


SET-UP MODE
Set-Up 1
HITS
SET-UP 1 70
Remote Power *On/Off*
RT MENU
SET-UP 1 71
Serv. Credits 00
Possible Values
00 - 99
RT MENU
SET-UP 1 72
Clear Selections
HITS
SET-UP 1 72
Are You Sure?
HITS
SET-UP 1 72
Action Done
RT MENU
SET-UP 1 73
Clear Credits
HITS
SET-UP 1 73
Are You Sure?
HITS
SET-UP 1 73
Action Done
RT MENU
SET-UP 1 74
Set Clock/Date
HITS
SET-UP 1 74
SetDate 12/25/96
Possible Value
Any Valid Date
RT MENU
RT MENU
SET-UP 1 74
Set Clock 12:00
Possible Values
00:00 - 23:59
Use 24 Hour Clock
RT MENU
SET-UP 1 74
Day Wednesday
Choose From
Sunday through Saturday

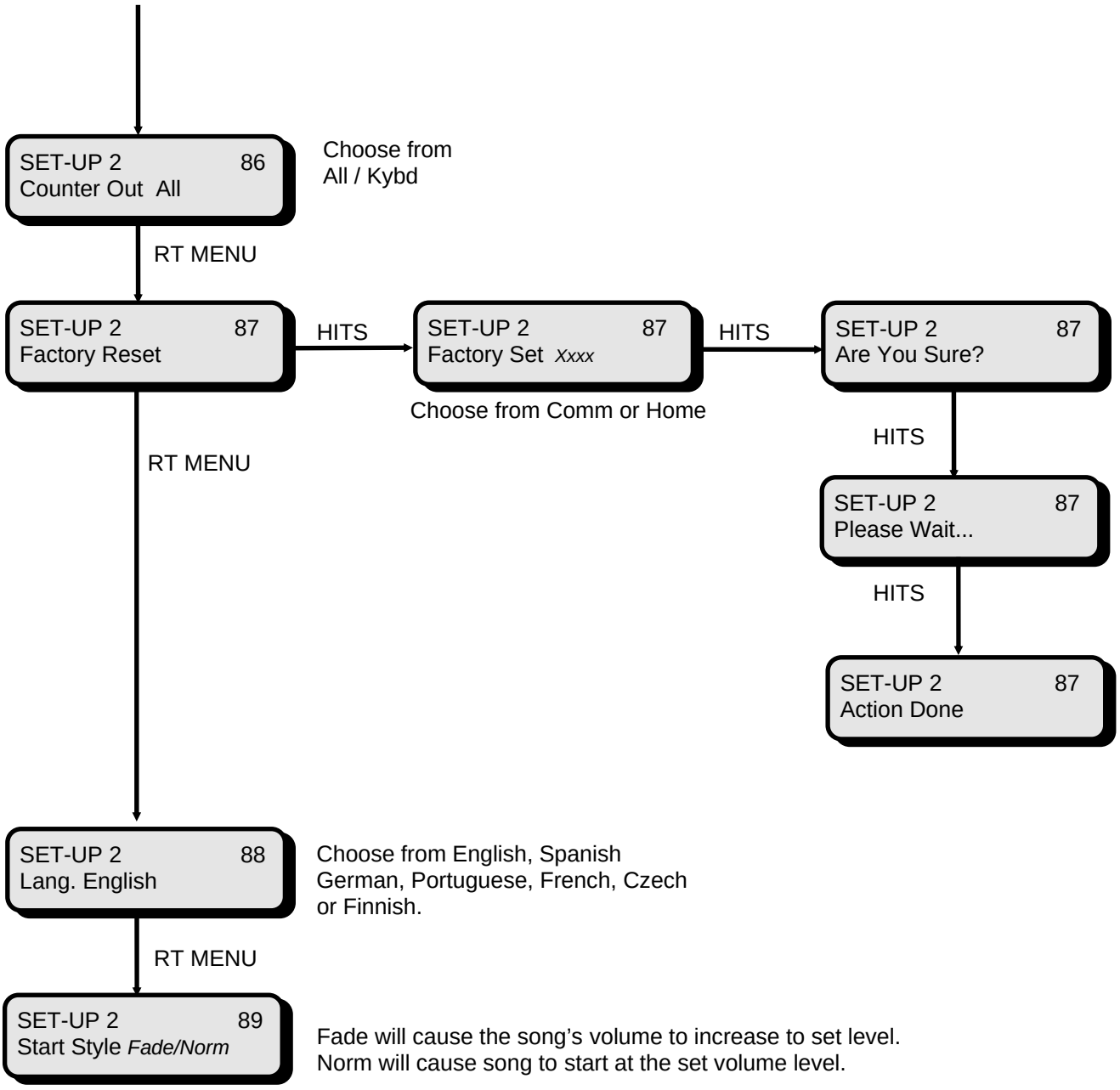

SET-UP 1 75
Message Factory
HITS
SET-UP 1 75
Message Off/Factory/Progrm
If Program
SET-UP 1 75
Clear Message
RT MENU
RT MENU
HITS
SET-UP 1 75
Change Message
SET-UP 1 75
Are You Sure?
HITS
HITS
SET-UP 1 75
Action Done
'A'
Use Page Keys to scroll through the available characters. When found, press HITS. To enter next letter, use Page Keys to find character and press HITS. When finished, press RESET to take you back to "Change Message"
HITS
A
'b'
HITS
Ab
'b'
HITS
RESET WHEN FINISHED
SET-UP 1 76
Scroll Rate 05
Possible Values
01 - 14
RT MENU
SET-UP 1 77
Auto Clean No
HITS
If Yes
SET-UP 1 77
CD Cleaner 99
RT MENU


SET-UP 1 78
Volume Range Off
HITS
SET-UP 1 78
Volume Range Off/On
RT MENU
IF ON, HITS
SET-UP 1 78
Internal Limits
RT MENU
SET-UP 1 78
External Limits
HITS
RT MENU
HITS
SET-UP 1 78
System Min/Max
SET-UP 1 78
System Min/Max
HITS
HITS
SET-UP 1 78
Min Vol Level 01-40
SET-UP 1 78
Min Vol Level 01-40
HITS
HITS
SET-UP 1 78
Max Vol Level 01-40
SET-UP 1 78
Max Vol Level 01-40
SET-UP 1 79
Volume Current Setting
HITS
SET-UP 1 79
Volume Norm/Split/Bridge
If Bridge, HITS
SET-UP 1 79
Bridge Int - Ext B
If setting is OK press RESET
Else press HITS then #1 to toggle choice.
See Section D for Volume Control option details.
HITS
SET-UP 1 79
Bridge Int - Ext B/R/L
HITS
SET-UP 1 79
Bridge Int - Ext choice

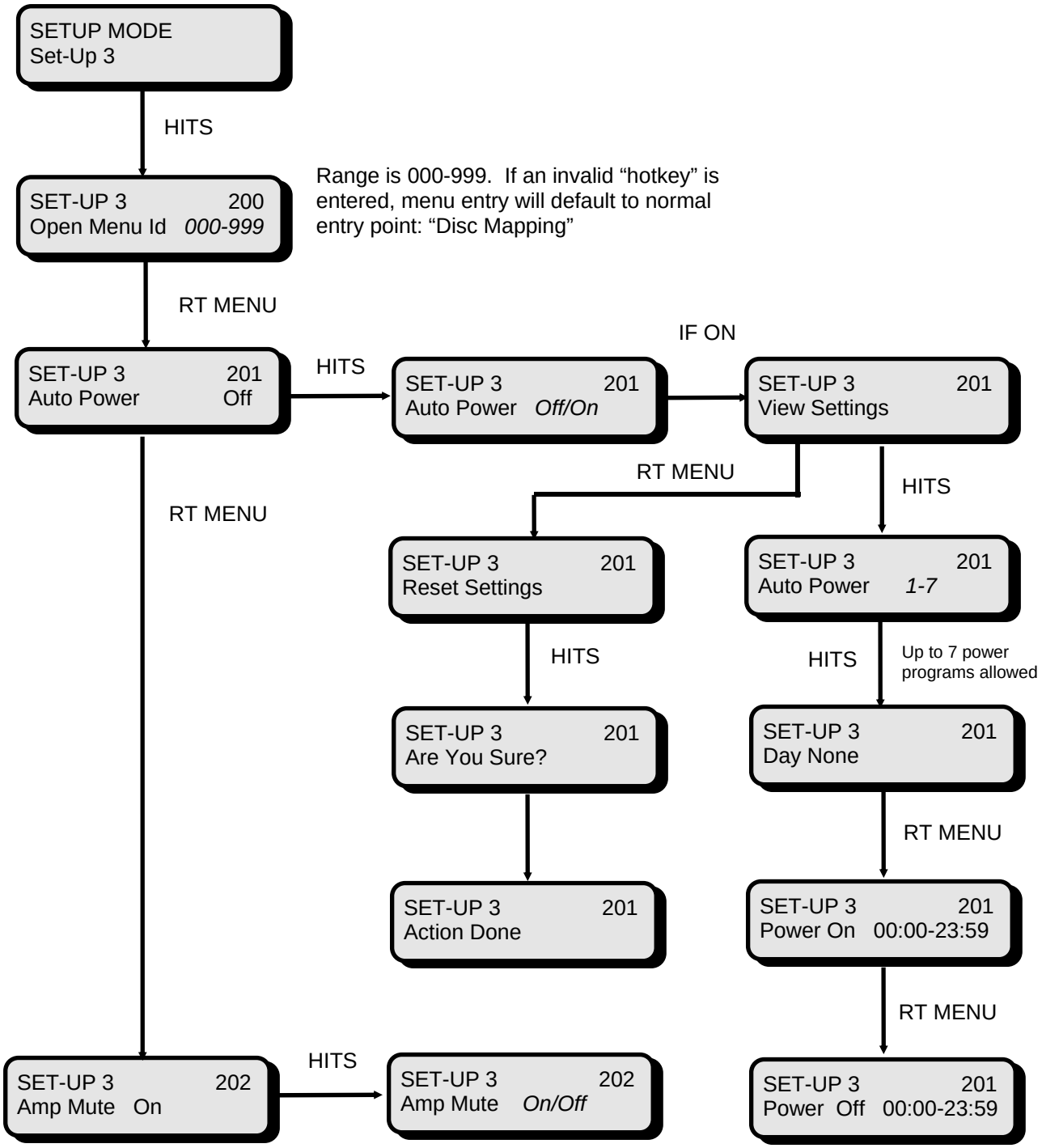
SET-UP 2



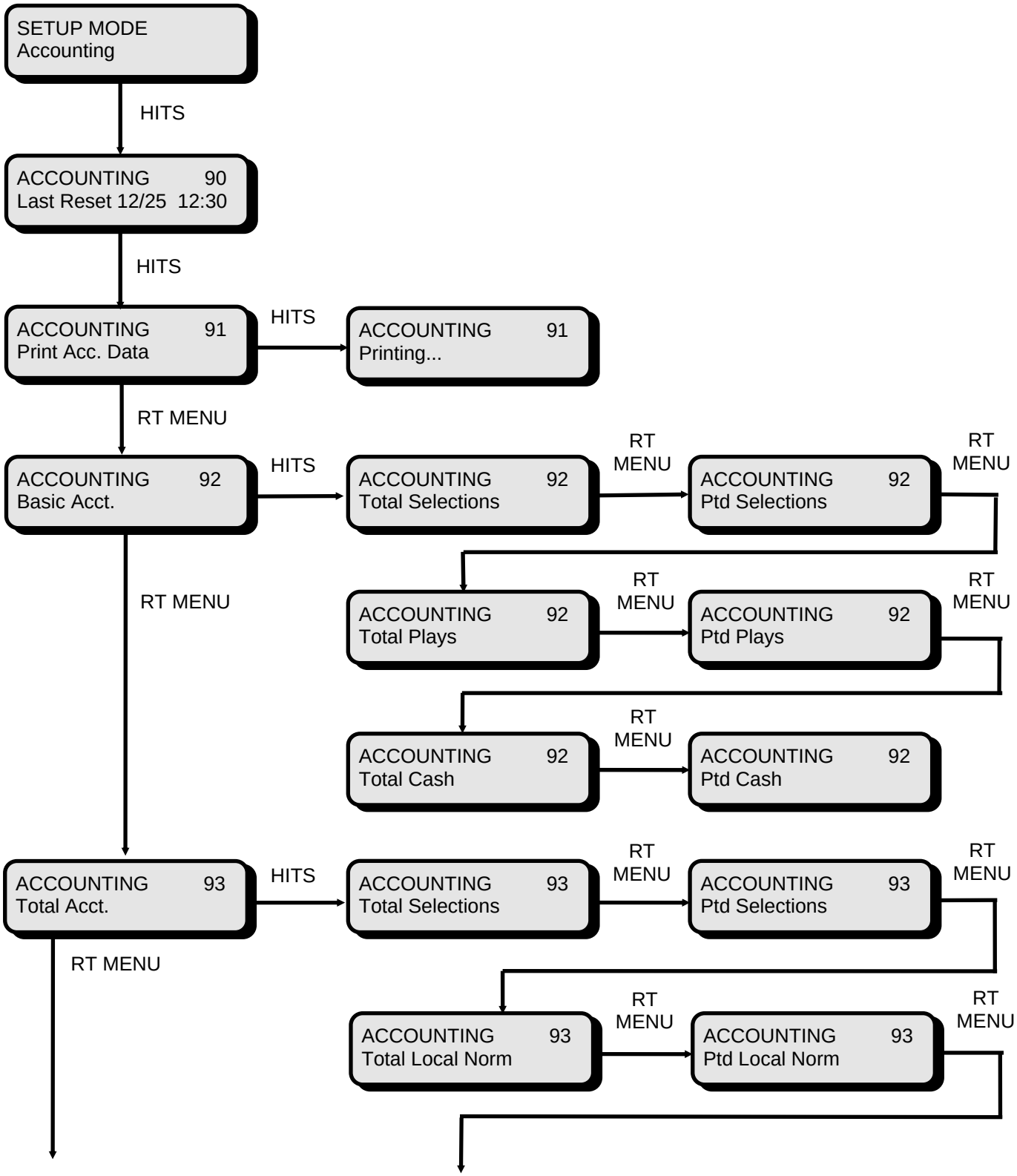
Must have a security level “3” set before setting another security Level to “1” or “2”

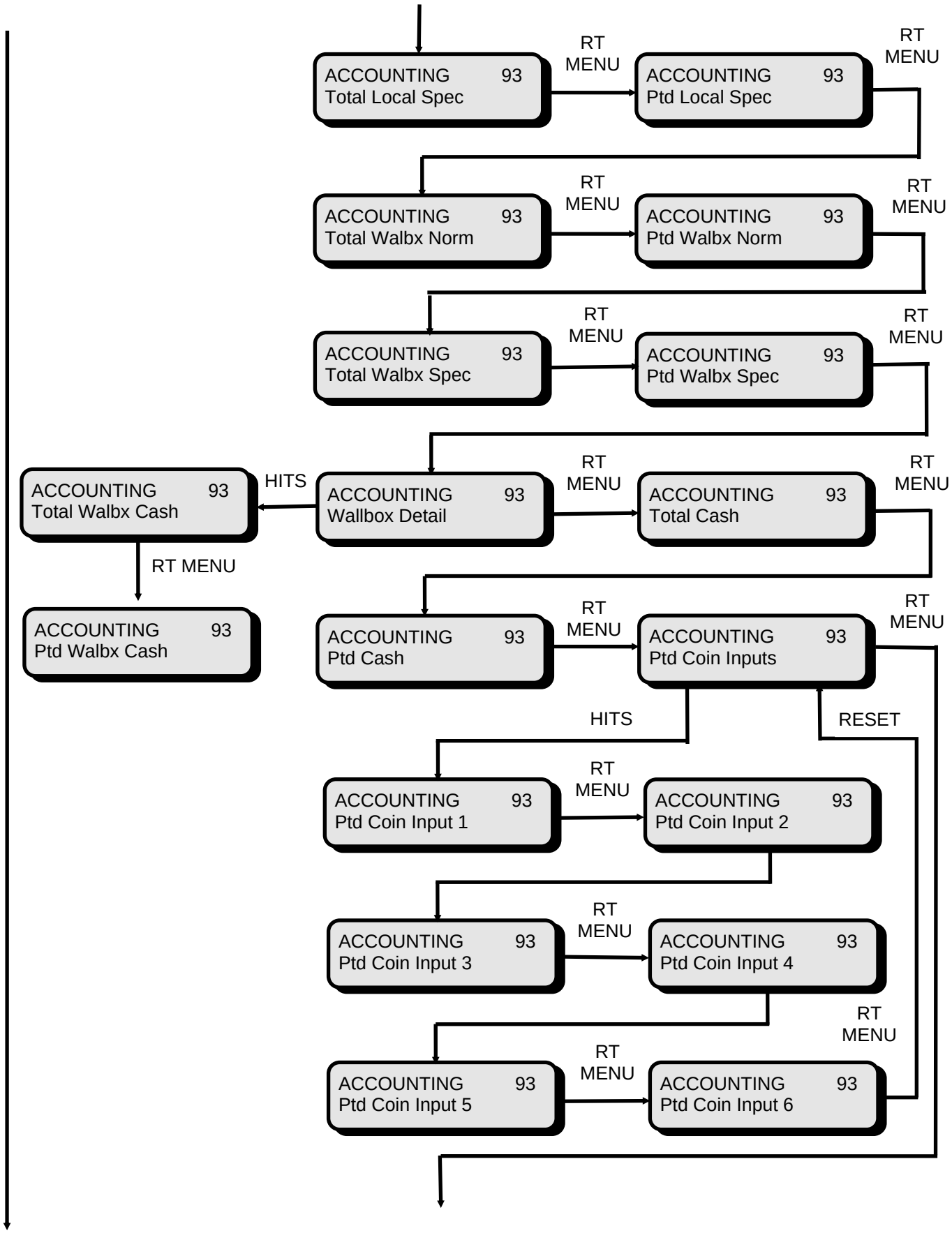

SET-UP 2 86
Counter Out All
Choose from
All / Kybd
RT MENU
SET-UP 2 87
Factory Reset
HITS
SET-UP 2 87
Factory Set Xxxx
HITS
SET-UP 2 87
Are You Sure?
Choose from Comm or Home
HITS
RT MENU
SET-UP 2 87
Please Wait...
HITS
SET-UP 2 87
Action Done
SET-UP 2 88
Lang. English
Choose from English, Spanish
German, Portuguese, French, Czech
or Finnish.
RT MENU
SET-UP 2 89
Start Style Fade/Norm
Fade will cause the song's volume to increase to set level.
Norm will cause song to start at the set volume level.

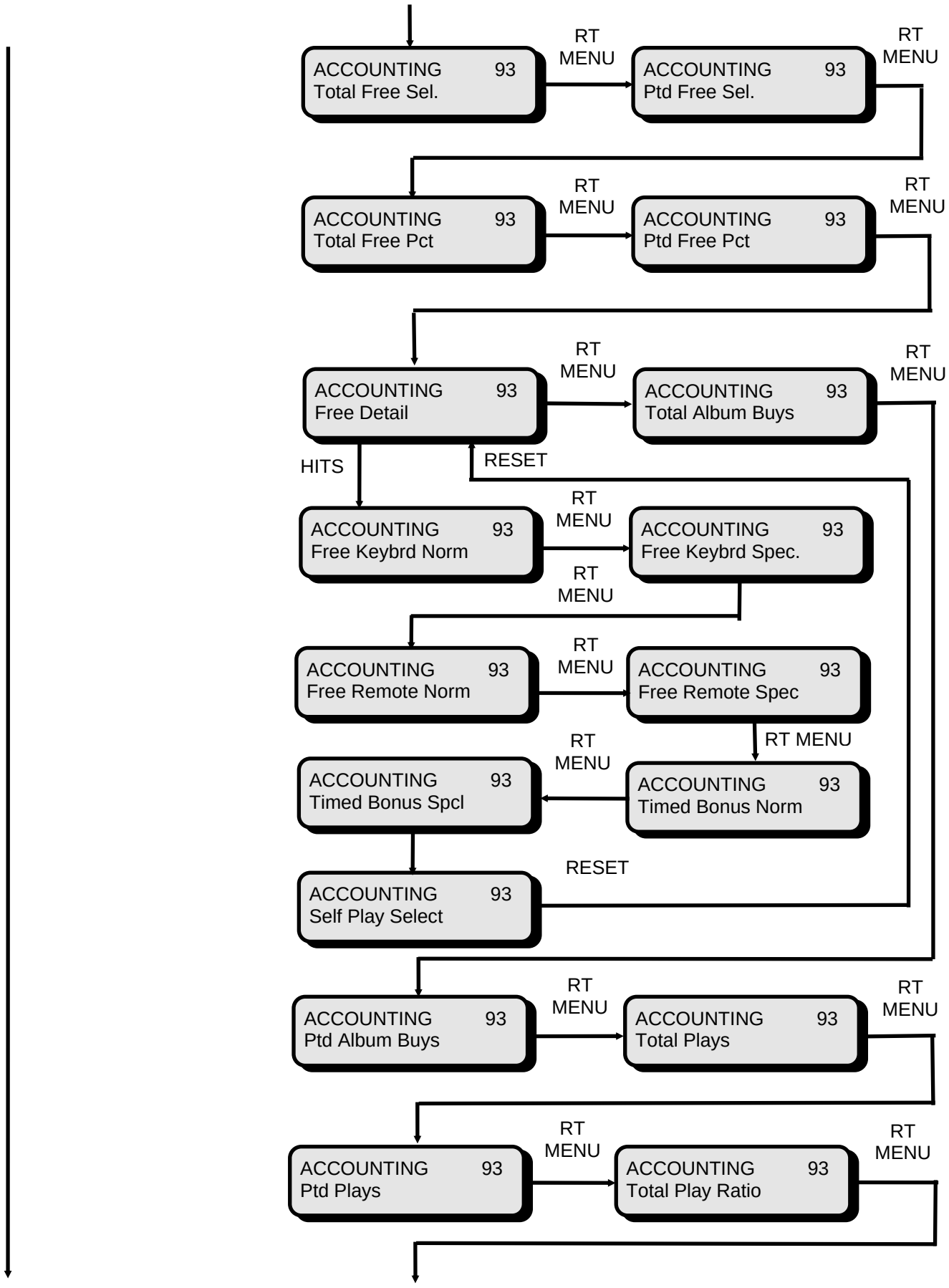
SET-UP 3

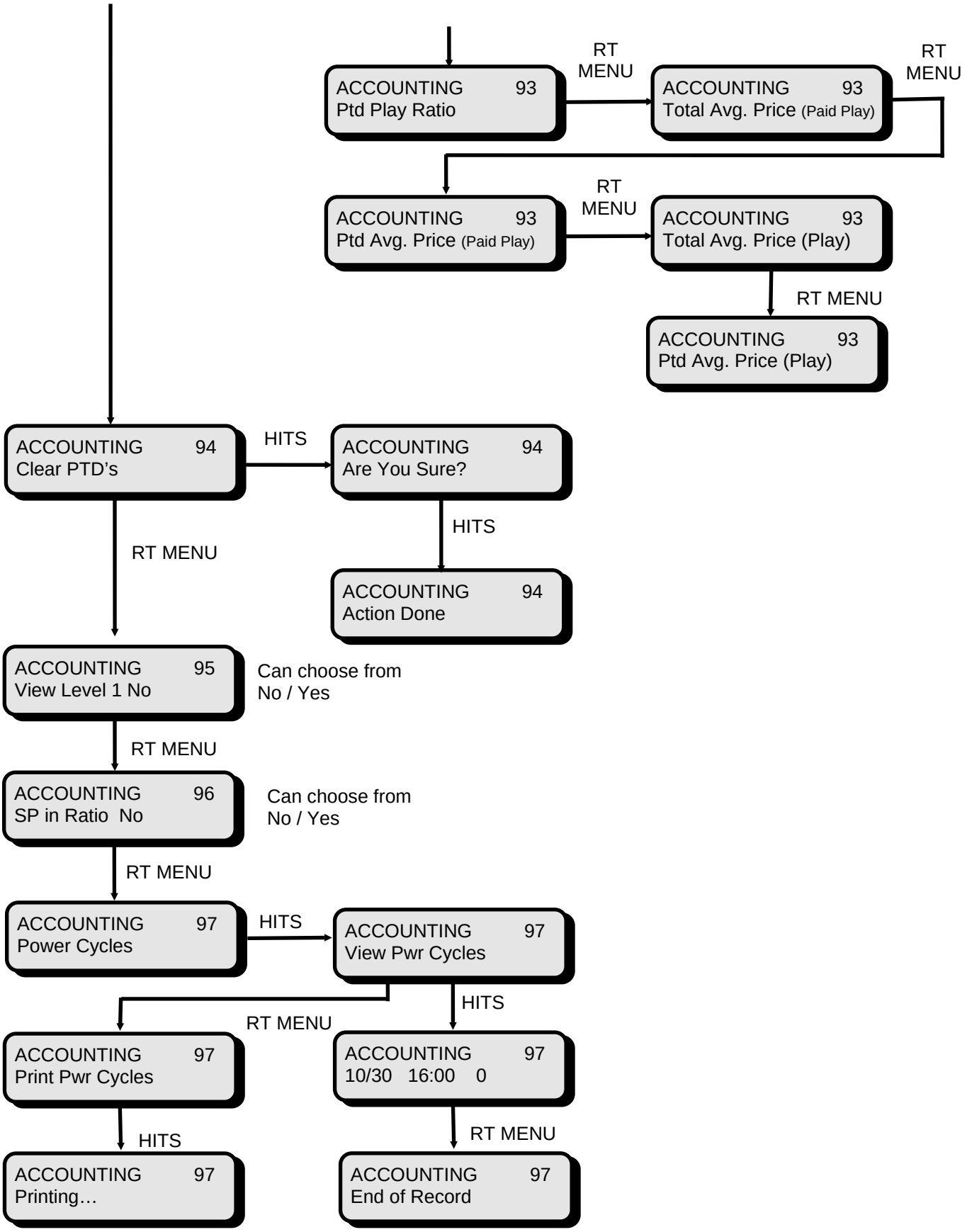

SETUP MODE
Set-Up 3
HITS
SET-UP 3 200
Open Menu Id 000-999
Range is 000-999. If an invalid "hotkey" is entered, menu entry will default to normal entry point: "Disc Mapping"
RT MENU
SET-UP 3 201
Auto Power Off
HITS
SET-UP 3 201
Auto Power Off/On
IF ON
SET-UP 3 201
View Settings
RT MENU
HITS
RT MENU
SET-UP 3 201
Reset Settings
SET-UP 3 201
Auto Power 1-7
HITS
HITS
Up to 7 power programs allowed
SET-UP 3 201
Are You Sure?
SET-UP 3 201
Day None
RT MENU
SET-UP 3 201
Action Done
SET-UP 3 201
Power On 00:00-23:59
RT MENU
SET-UP 3 202
Amp Mute On
HITS
SET-UP 3 202
Amp Mute On/Off
SET-UP 3 201
Power Off 00:00-23:59

ACCOUNTING

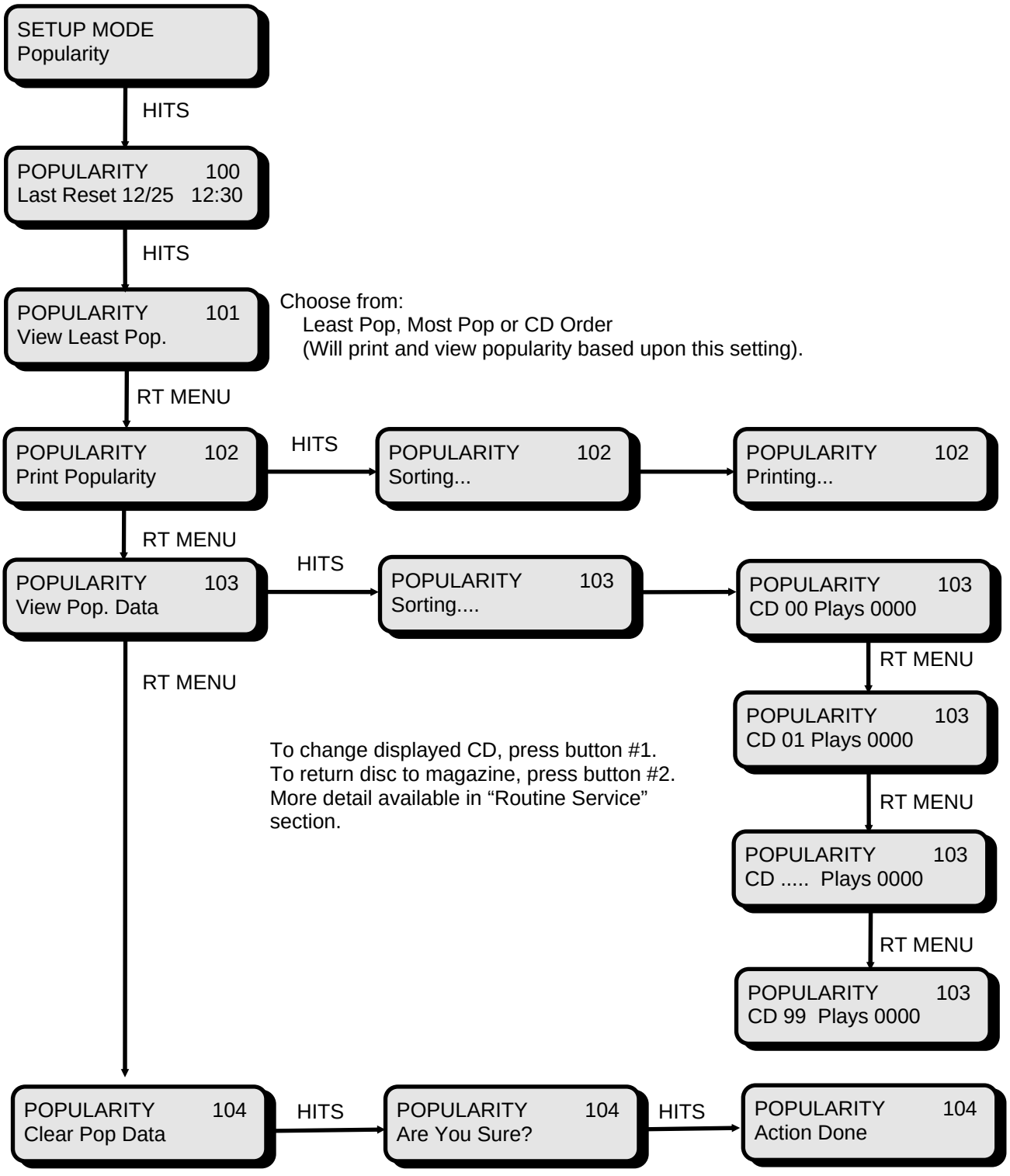

SETUP MODE
Accounting
HITS
ACCOUNTING 90
Last Reset 12/25 12:30
HITS
ACCOUNTING 91
Print Acc. Data
HITS
ACCOUNTING 91
Printing...
RT MENU
ACCOUNTING 92
Basic Acct.
HITS
ACCOUNTING 92
Total Selections
RT MENU
ACCOUNTING 92
Ptd Selections
RT MENU
RT MENU
ACCOUNTING 92
Total Plays
RT MENU
ACCOUNTING 92
Ptd Plays
RT MENU
ACCOUNTING 92
Total Cash
RT MENU
ACCOUNTING 92
Ptd Cash
ACCOUNTING 93
Total Acct.
HITS
ACCOUNTING 93
Total Selections
RT MENU
ACCOUNTING 93
Ptd Selections
RT MENU
RT MENU
ACCOUNTING 93
Total Local Norm
RT MENU
ACCOUNTING 93
Ptd Local Norm
RT MENU


ACCOUNTING 93
Total Local Spec
RT MENU
ACCOUNTING 93
Ptd Local Spec
RT MENU
ACCOUNTING 93
Total Walbx Norm
RT MENU
ACCOUNTING 93
Ptd Walbx Norm
RT MENU
ACCOUNTING 93
Total Walbx Spec
RT MENU
ACCOUNTING 93
Ptd Walbx Spec
RT MENU
ACCOUNTING 93
Total Walbx Cash
HITS
ACCOUNTING 93
Wallbox Detail
RT MENU
ACCOUNTING 93
Total Cash
RT MENU
RT MENU
ACCOUNTING 93
Ptd Walbx Cash
ACCOUNTING 93
Ptd Cash
RT MENU
ACCOUNTING 93
Ptd Coin Inputs
RT MENU
HITS
RESET
ACCOUNTING 93
Ptd Coin Input 1
RT MENU
ACCOUNTING 93
Ptd Coin Input 2
ACCOUNTING 93
Ptd Coin Input 3
RT MENU
ACCOUNTING 93
Ptd Coin Input 4
RT MENU
ACCOUNTING 93
Ptd Coin Input 5
RT MENU
ACCOUNTING 93
Ptd Coin Input 6

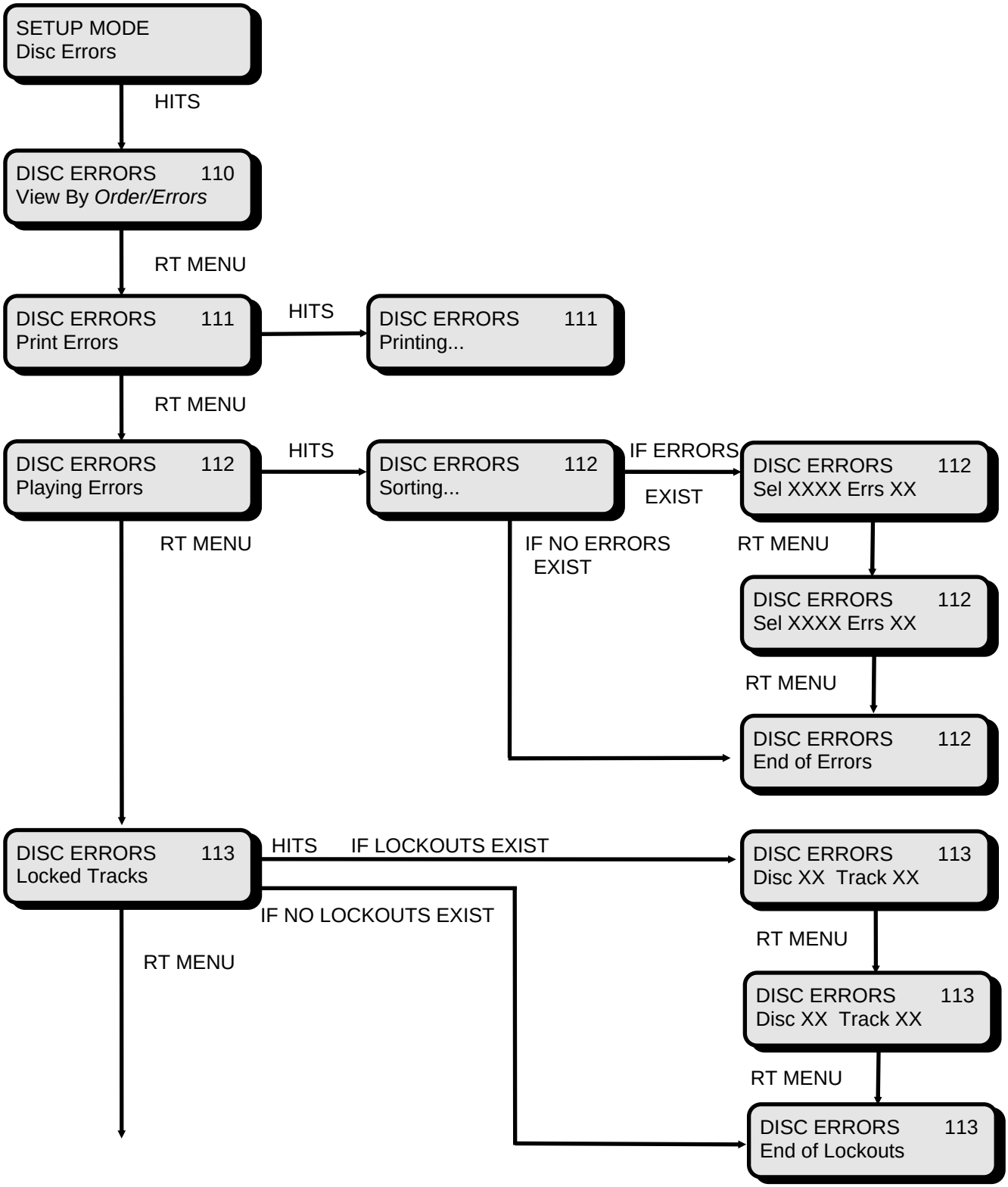

ACCOUNTING 93
Total Free Sel.
RT MENU
ACCOUNTING 93
Ptd Free Sel.
RT MENU
ACCOUNTING 93
Total Free Pct
RT MENU
ACCOUNTING 93
Ptd Free Pct
RT MENU
ACCOUNTING 93
Free Detail
RT MENU
ACCOUNTING 93
Total Album Buys
RT MENU
HITS
RESET
ACCOUNTING 93
Free Keybrd Norm
RT MENU
ACCOUNTING 93
Free Keybrd Spec.
RT MENU
ACCOUNTING 93
Free Remote Norm
RT MENU
ACCOUNTING 93
Free Remote Spec
RT MENU
RT MENU
ACCOUNTING 93
Timed Bonus Spcl
ACCOUNTING 93
Timed Bonus Norm
RESET
ACCOUNTING 93
Self Play Select
RT MENU
ACCOUNTING 93
Ptd Album Buys
RT MENU
ACCOUNTING 93
Total Plays
RT MENU
ACCOUNTING 93
Ptd Plays
RT MENU
ACCOUNTING 93
Total Play Ratio
RT MENU

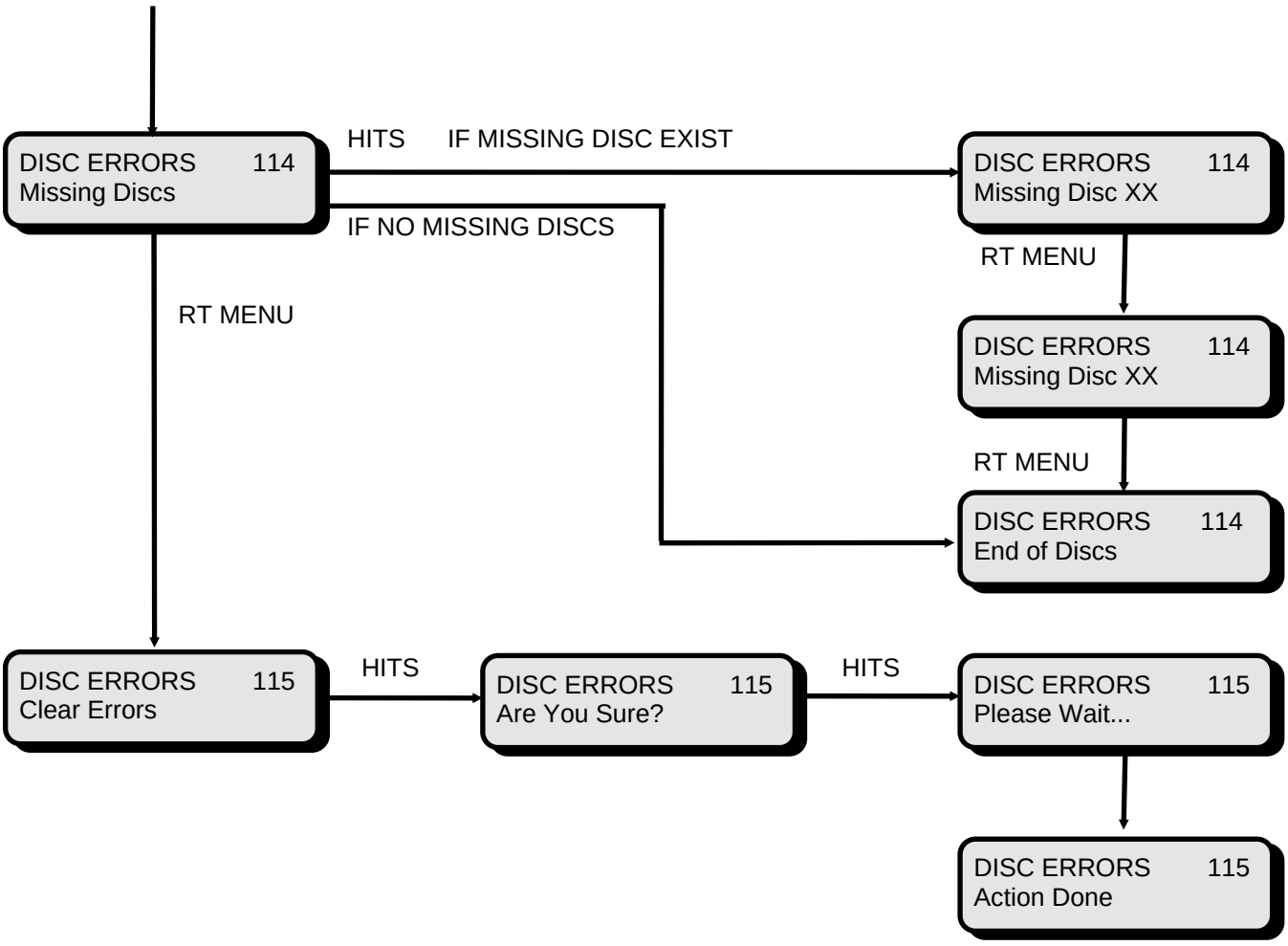

ACCOUNTING 93
Ptd Play Ratio
RT MENU
ACCOUNTING 93
Total Avg. Price (Paid Play)
RT MENU
ACCOUNTING 93
Ptd Avg. Price (Paid Play)
RT MENU
ACCOUNTING 93
Total Avg. Price (Play)
RT MENU
ACCOUNTING 93
Ptd Avg. Price (Play)
ACCOUNTING 94
Clear PTD's
HITS
ACCOUNTING 94
Are You Sure?
HITS
ACCOUNTING 94
Action Done
RT MENU
ACCOUNTING 95
View Level 1 No
Can choose from
No / Yes
RT MENU
ACCOUNTING 96
SP in Ratio No
Can choose from
No / Yes
RT MENU
ACCOUNTING 97
Power Cycles
HITS
ACCOUNTING 97
View Pwr Cycles
HITS
RT MENU
ACCOUNTING 97
Print Pwr Cycles
ACCOUNTING 97
10/30 16:00 0
HITS
RT MENU
ACCOUNTING 97
Printing…
ACCOUNTING 97
End of Record

POPULARITY

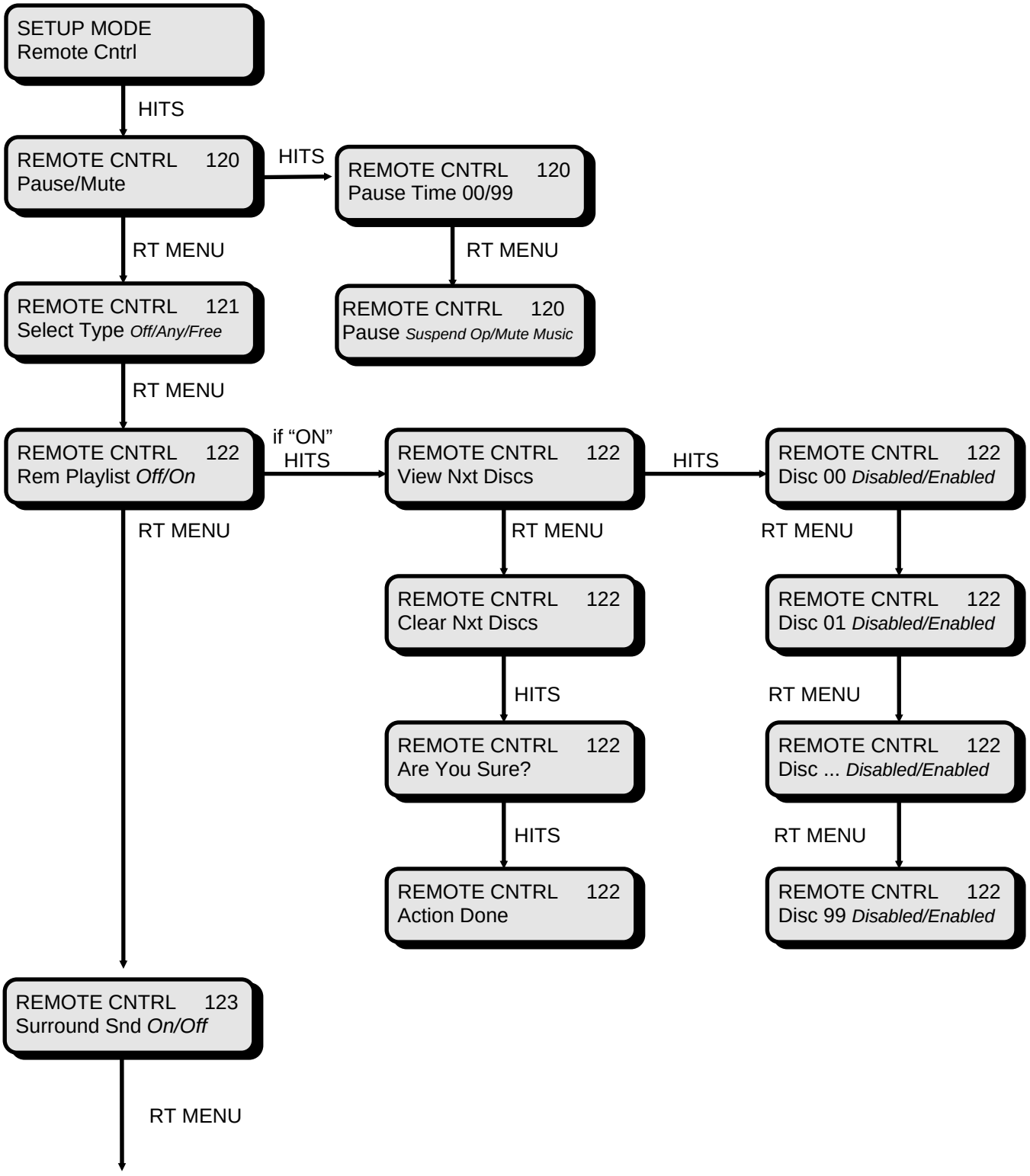

SETUP MODE
Popularity
HITS
POPULARITY 100
Last Reset 12/25 12:30
HITS
POPULARITY 101
View Least Pop.
Choose from:
Least Pop, Most Pop or CD Order
(Will print and view popularity based upon this setting).
RT MENU
POPULARITY 102
Print Popularity
HITS
POPULARITY 102
Sorting...
POPULARITY 102
Printing...
RT MENU
POPULARITY 103
View Pop. Data
HITS
POPULARITY 103
Sorting....
POPULARITY 103
CD 00 Plays 0000
RT MENU
POPULARITY 103
CD 01 Plays 0000
RT MENU
POPULARITY 103
CD ..... Plays 0000
RT MENU
POPULARITY 103
CD 99 Plays 0000
RT MENU
To change displayed CD, press button #1.
To return disc to magazine, press button #2.
More detail available in “Routine Service” section.
POPULARITY 104
Clear Pop Data
HITS
POPULARITY 104
Are You Sure?
HITS
POPULARITY 104
Action Done

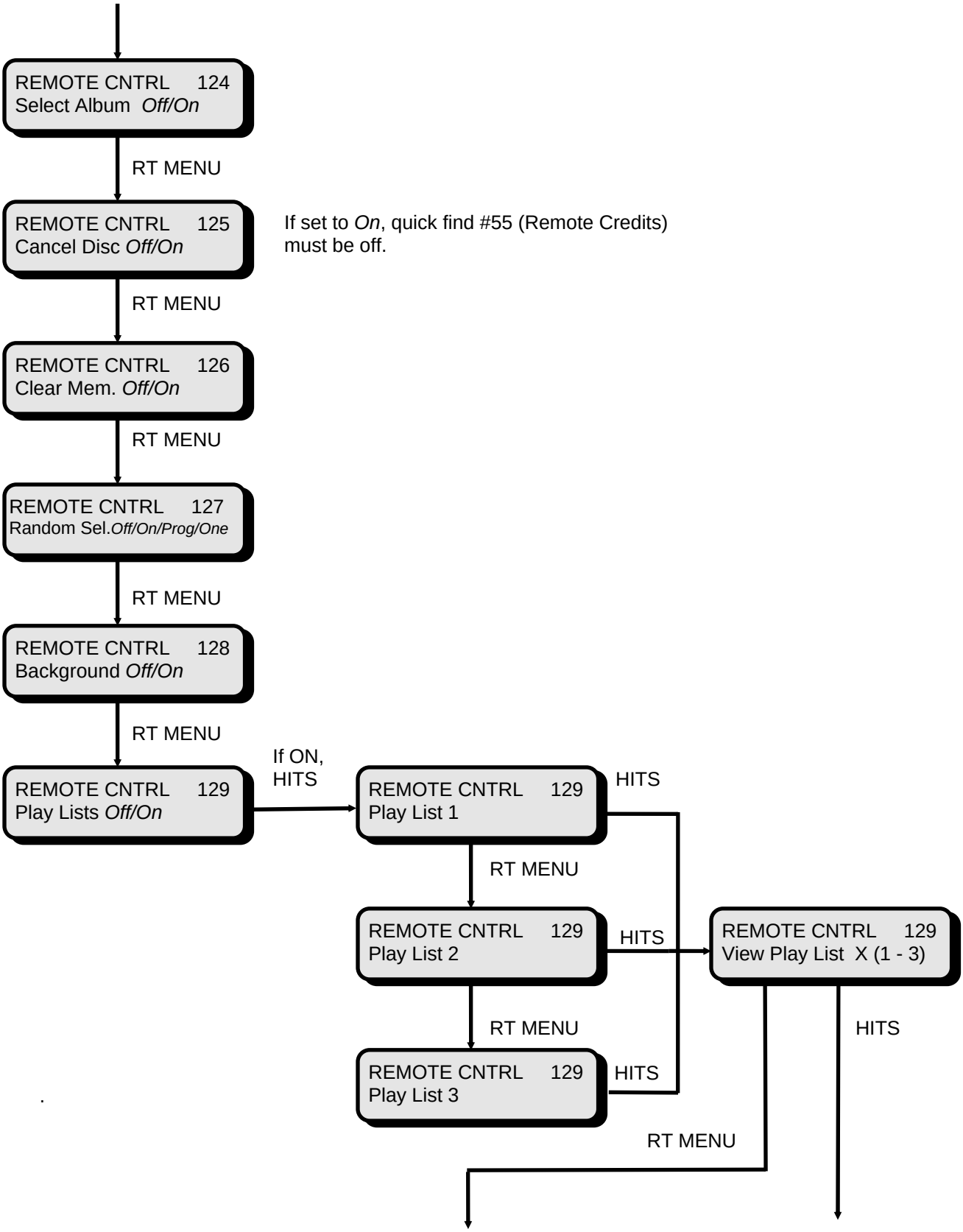
DISC ERRORS

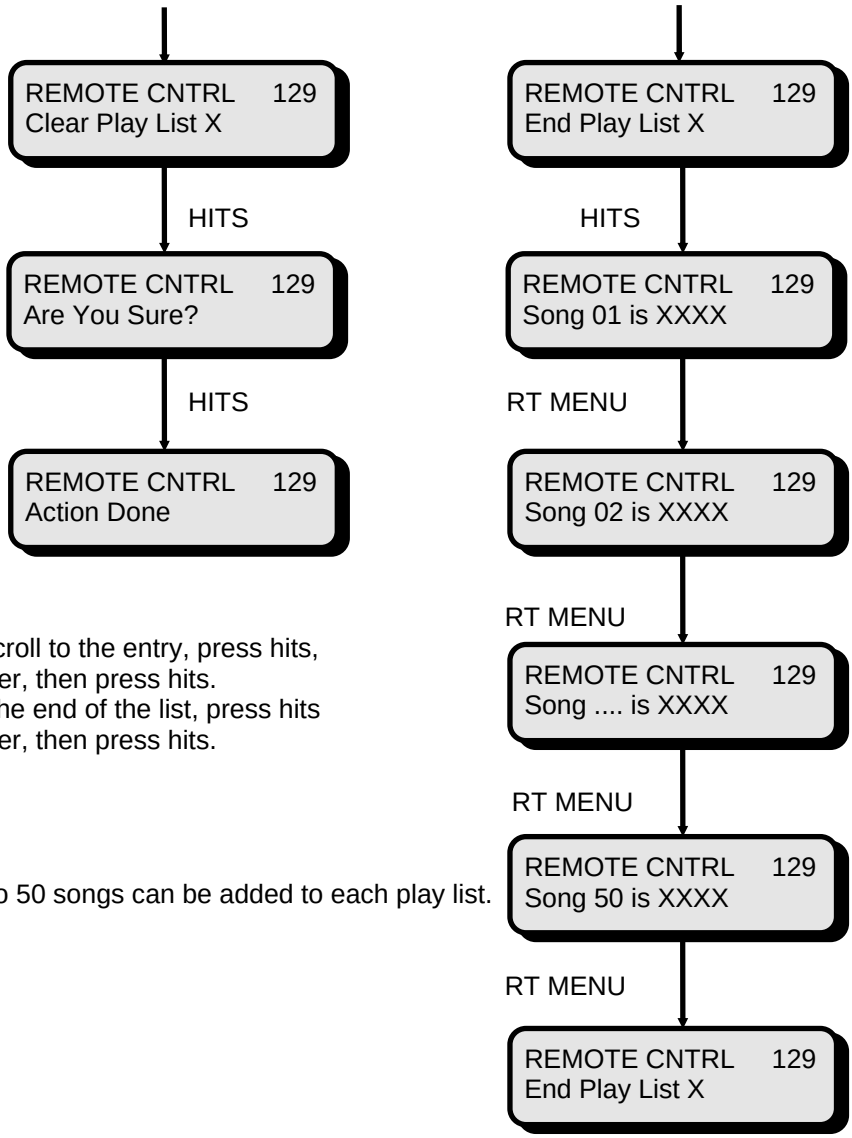

SETUP MODE
Disc Errors
HITS
DISC ERRORS 110
View By *Order/Errors*
RT MENU
DISC ERRORS 111
Print Errors
HITS
DISC ERRORS 111
Printing...
RT MENU
DISC ERRORS 112
Playing Errors
HITS
DISC ERRORS 112
Sorting...
IF ERRORS EXIST
DISC ERRORS 112
Sel XXXX Errs XX
RT MENU
IF NO ERRORS EXIST
RT MENU
DISC ERRORS 112
Sel XXXX Errs XX
RT MENU
DISC ERRORS 112
End of Errors
DISC ERRORS 113
Locked Tracks
HITS IF LOCKOUTS EXIST
DISC ERRORS 113
Disc XX Track XX
IF NO LOCKOUTS EXIST
RT MENU
RT MENU
DISC ERRORS 113
Disc XX Track XX
RT MENU
DISC ERRORS 113
End of Lockouts


DISC ERRORS 114
Missing Discs
HITS
IF MISSING DISC EXIST
DISC ERRORS 114
Missing Disc XX
IF NO MISSING DISCS
RT MENU
RT MENU
DISC ERRORS 114
Missing Disc XX
RT MENU
DISC ERRORS 114
End of Discs
DISC ERRORS 115
Clear Errors
HITS
DISC ERRORS 115
Are You Sure?
HITS
DISC ERRORS 115
Please Wait...
DISC ERRORS 115
Action Done

REMOTE CONTROL




REMOTE CNTRL 124
Select Album Off/On
RT MENU
REMOTE CNTRL 125
Cancel Disc Off/On
If set to On, quick find #55 (Remote Credits) must be off.
RT MENU
REMOTE CNTRL 126
Clear Mem. Off/On
RT MENU
REMOTE CNTRL 127
Random Sel.Off/On/Prog/One
RT MENU
REMOTE CNTRL 128
Background Off/On
RT MENU
REMOTE CNTRL 129
Play Lists Off/On
If ON, HITS
REMOTE CNTRL 129
Play List 1
HITS
RT MENU
REMOTE CNTRL 129
Play List 2
HITS
REMOTE CNTRL 129
View Play List X (1 - 3)
RT MENU
HITS
REMOTE CNTRL 129
Play List 3
HITS
RT MENU

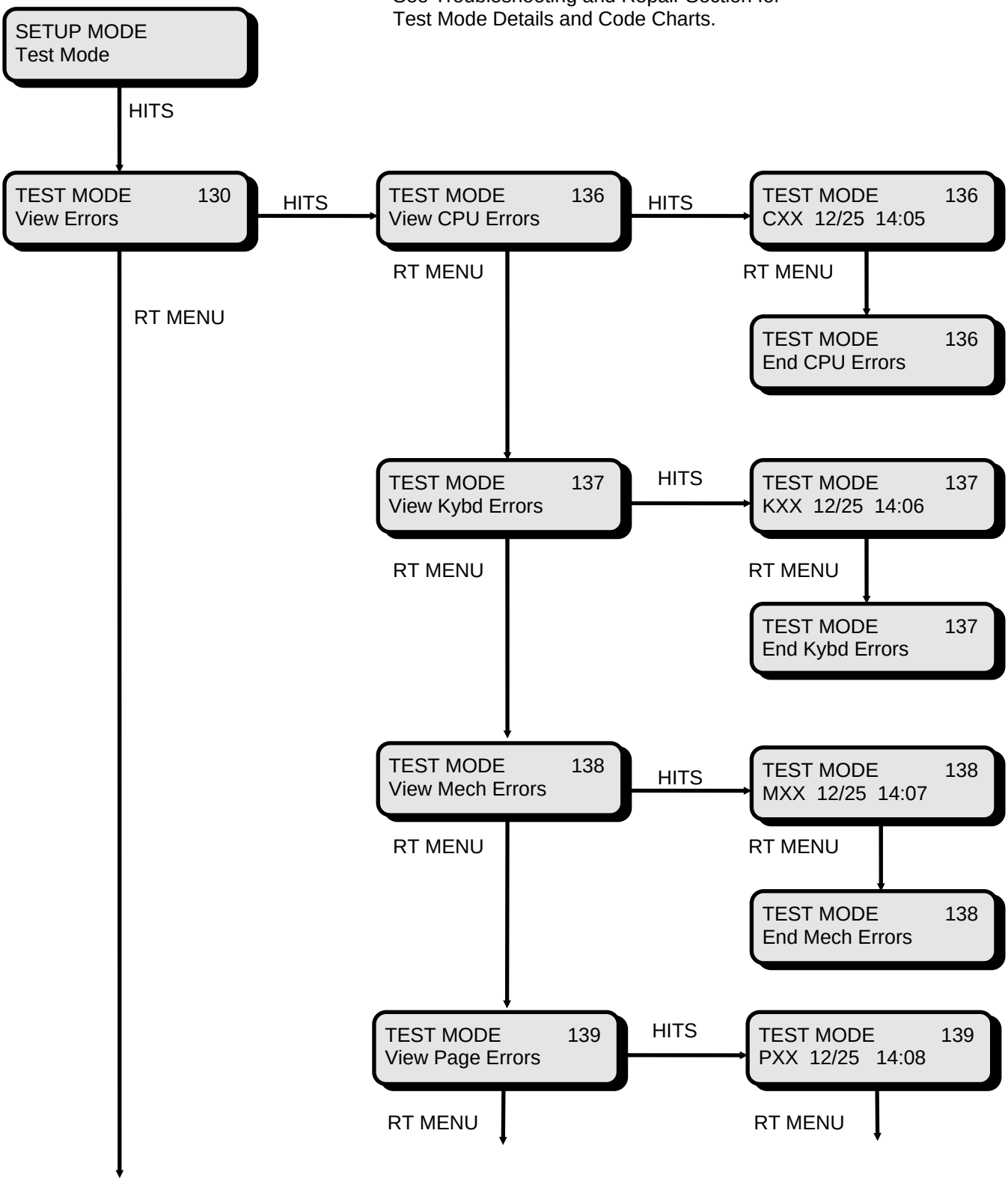


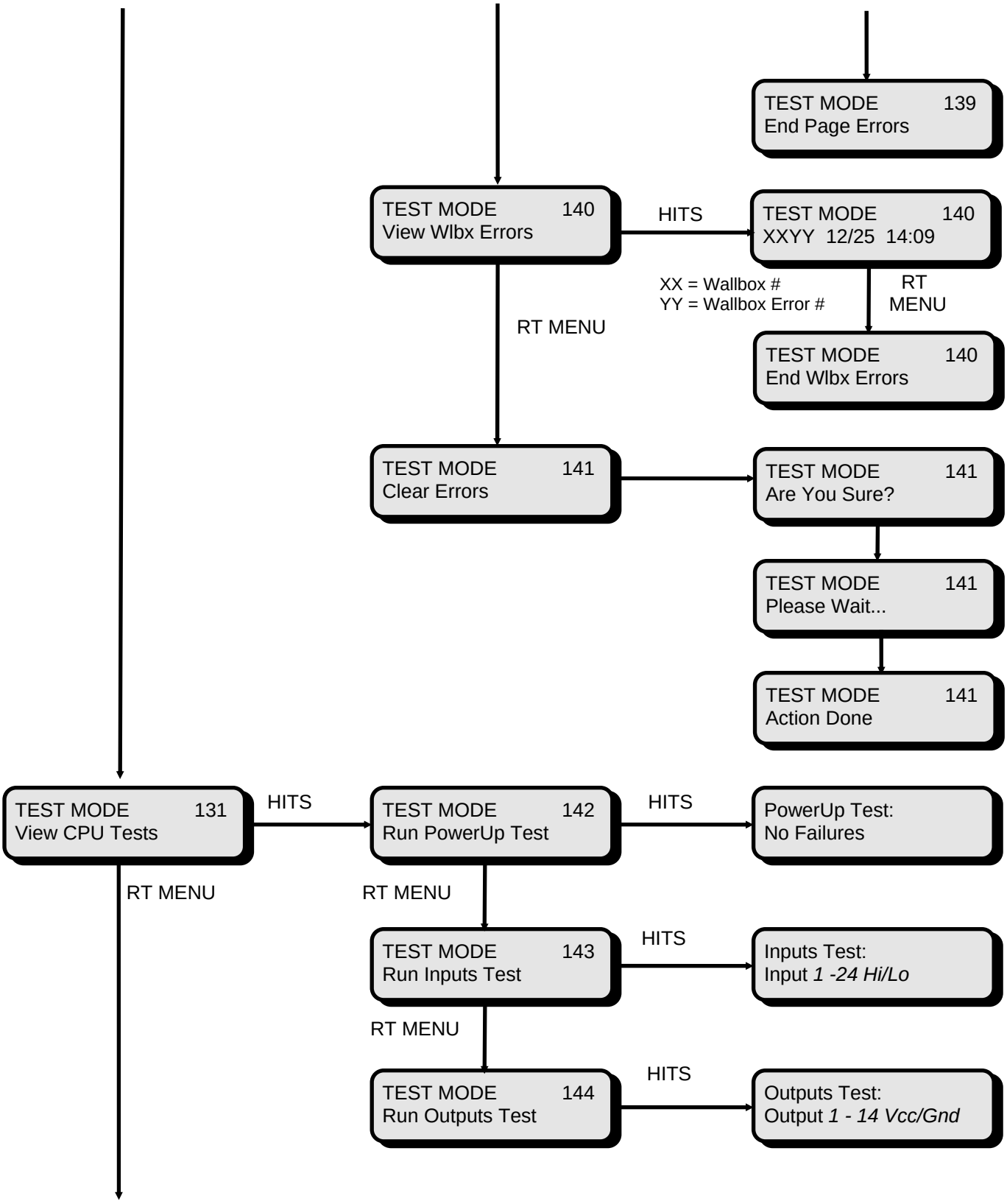
*NOTE: To change a song entry: scroll to the entry, press hits, type in the selection number, then press hits.
To add an entry: scroll to the end of the list, press hits type in the selection number, then press hits.

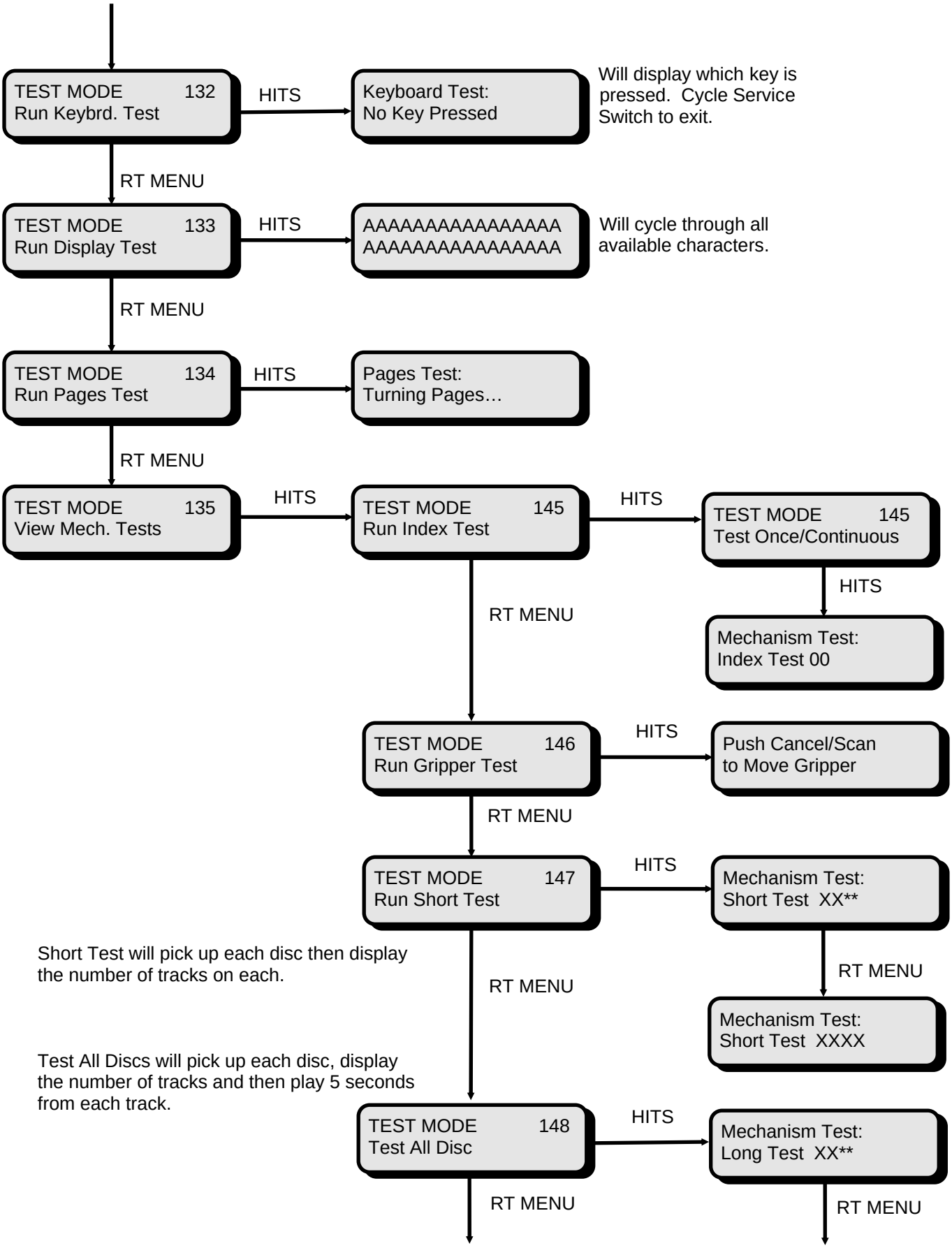
Up to 50 songs can be added to each play list.

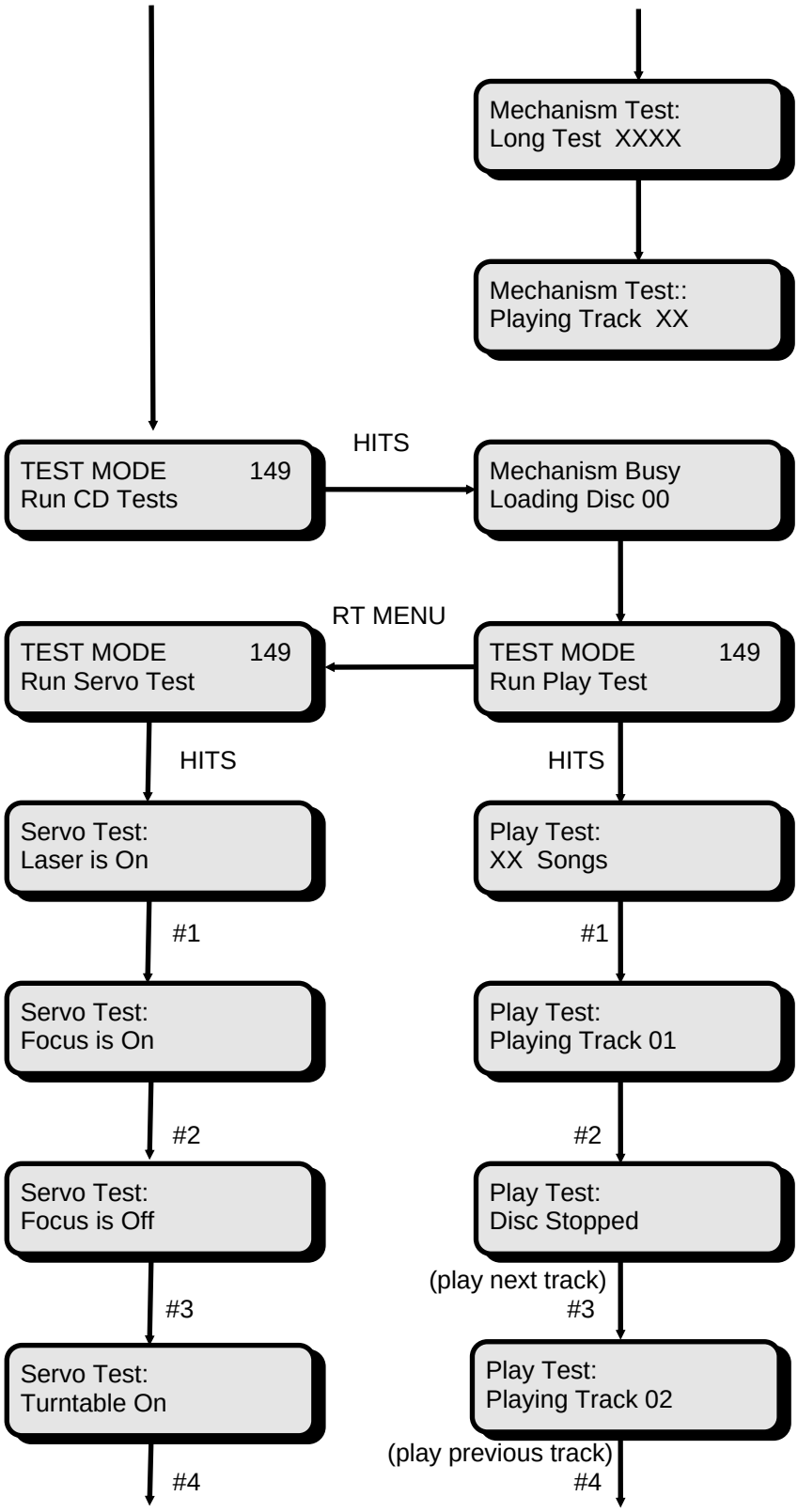
TEST MODE

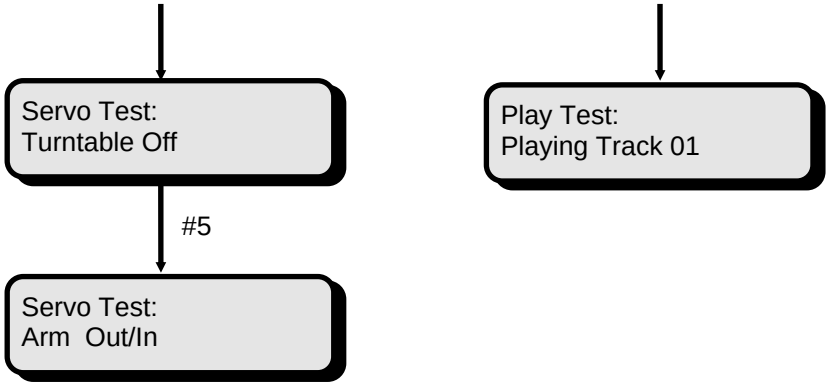
See Troubleshooting and Repair Section for Test Mode Details and Code Charts.



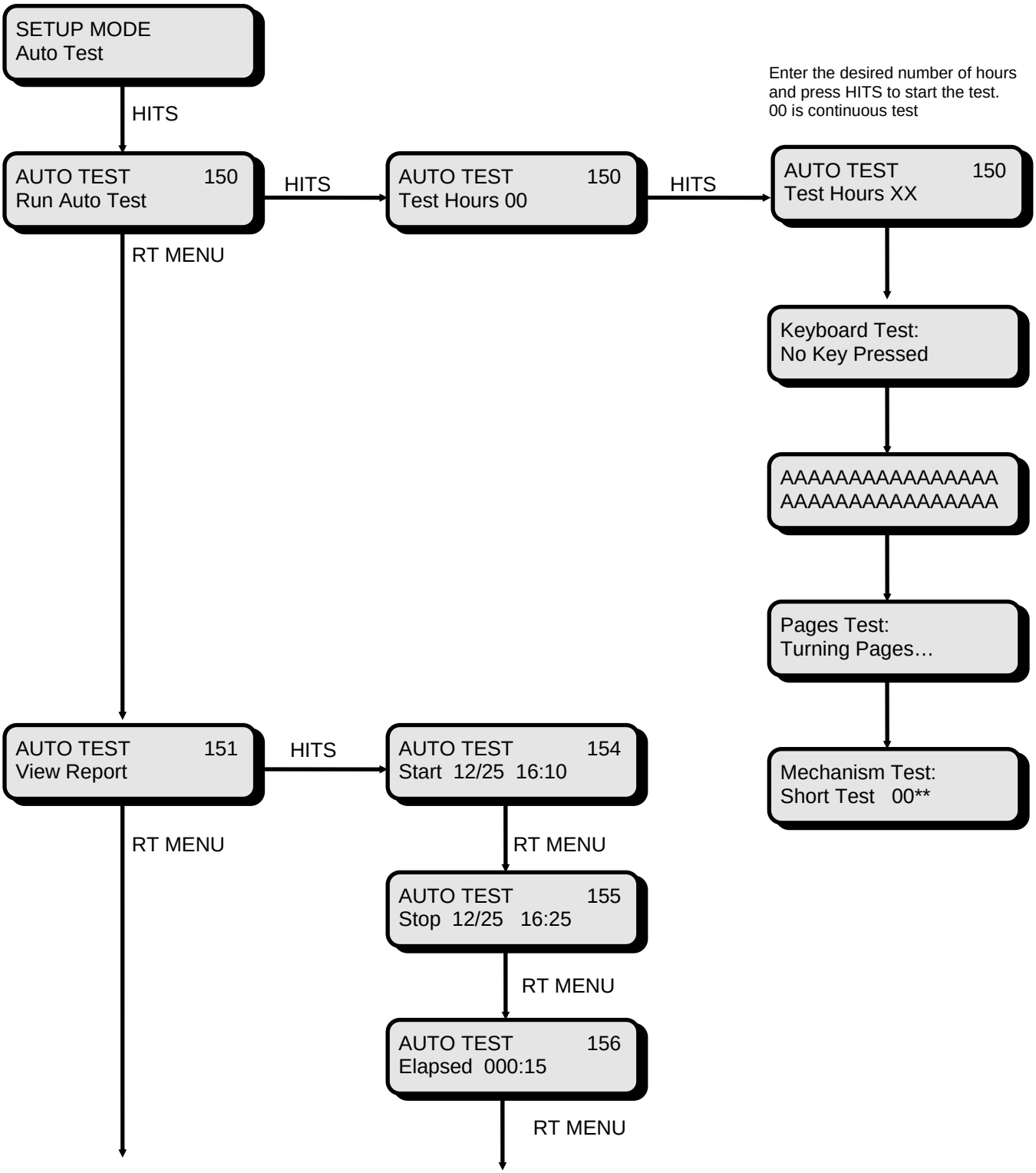

TEST MODE 139
End Page Errors
TEST MODE 140
View Wlbx Errors
HITS
TEST MODE 140
XXYY 12/25 14:09
XX = Wallbox #
YY = Wallbox Error #
RT MENU
RT MENU
TEST MODE 140
End Wlbx Errors
TEST MODE 141
Clear Errors
TEST MODE 141
Are You Sure?
TEST MODE 141
Please Wait...
TEST MODE 141
Action Done
TEST MODE 131
View CPU Tests
HITS
TEST MODE 142
Run PowerUp Test
HITS
PowerUp Test:
No Failures
RT MENU
RT MENU
TEST MODE 143
Run Inputs Test
HITS
Inputs Test:
Input 1 -24 Hi/Lo
RT MENU
TEST MODE 144
Run Outputs Test
HITS
Outputs Test:
Output 1 - 14 Vcc/Gnd

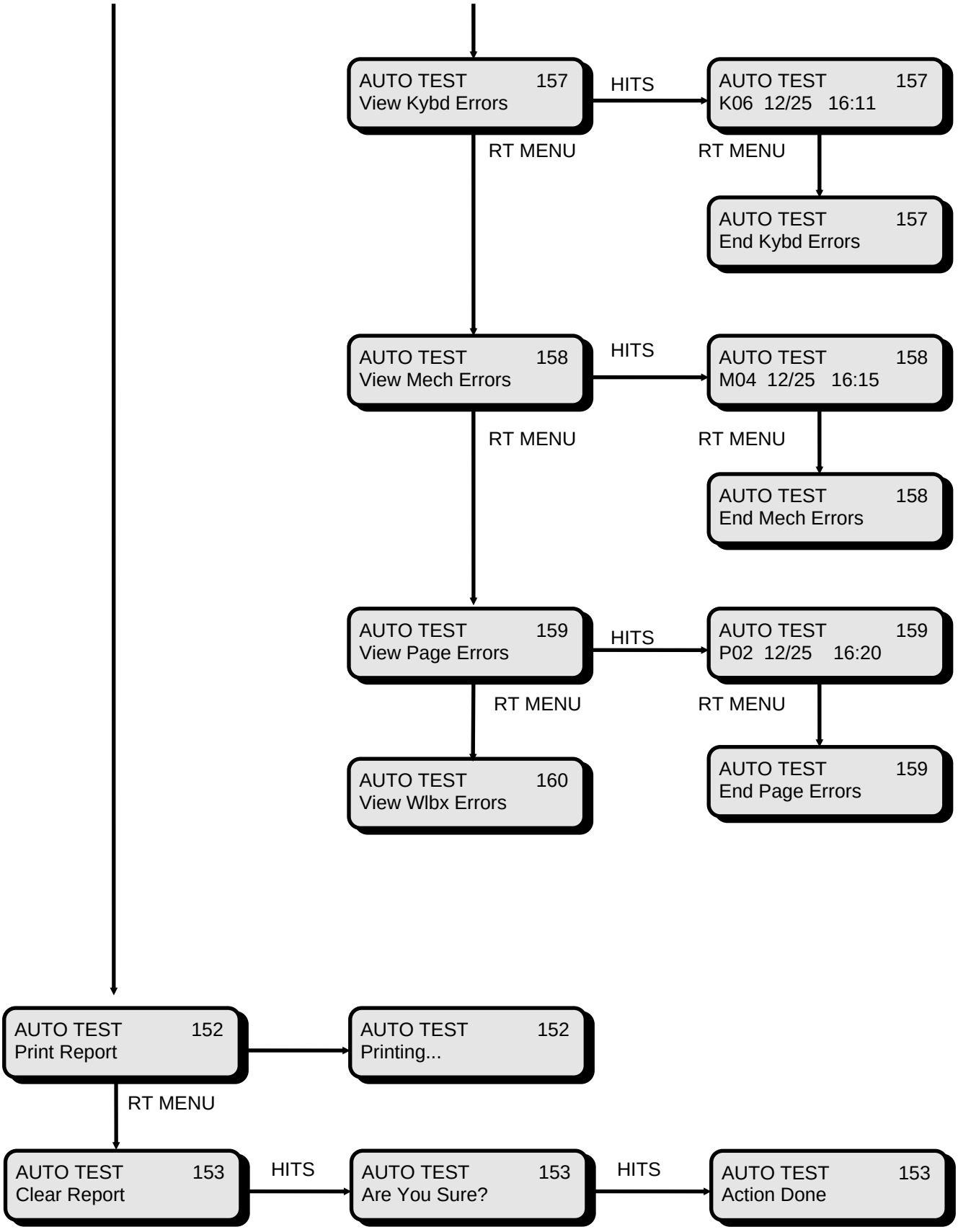

TEST MODE 132
Run Keybrd. Test
HITS
Keyboard Test:
No Key Pressed
Will display which key is pressed. Cycle Service Switch to exit.
RT MENU
TEST MODE 133
Run Display Test
HITS
AAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAA
Will cycle through all available characters.
RT MENU
TEST MODE 134
Run Pages Test
HITS
Pages Test:
Turning Pages…
RT MENU
TEST MODE 135
View Mech. Tests
HITS
TEST MODE 145
Run Index Test
HITS
TEST MODE 145
Test Once/Continuous
HITS
Mechanism Test:
Index Test 00
RT MENU
TEST MODE 146
Run Gripper Test
HITS
Push Cancel/Scan
to Move Gripper
RT MENU
TEST MODE 147
Run Short Test
HITS
Mechanism Test:
Short Test XX**
RT MENU
Mechanism Test:
Short Test XXXX
RT MENU
Short Test will pick up each disc then display the number of tracks on each.
Test All Discs will pick up each disc, display the number of tracks and then play 5 seconds from each track.
TEST MODE 148
Test All Disc
HITS
Mechanism Test:
Long Test XX**
RT MENU
RT MENU


Mechanism Test:
Long Test XXXX
Mechanism Test::
Playing Track XX
HITS
TEST MODE 149
Run CD Tests
Mechanism Busy
Loading Disc 00
RT MENU
TEST MODE 149
Run Servo Test
TEST MODE 149
Run Play Test
HITS
HITS
Servo Test:
Laser is On
Play Test:
XX Songs
#1
#1
Servo Test:
Focus is On
Play Test:
Playing Track 01
#2
#2
Servo Test:
Focus is Off
Play Test:
Disc Stopped
(play next track)
#3
#3
Servo Test:
Turntable On
Play Test:
Playing Track 02
(play previous track)
#4
#4

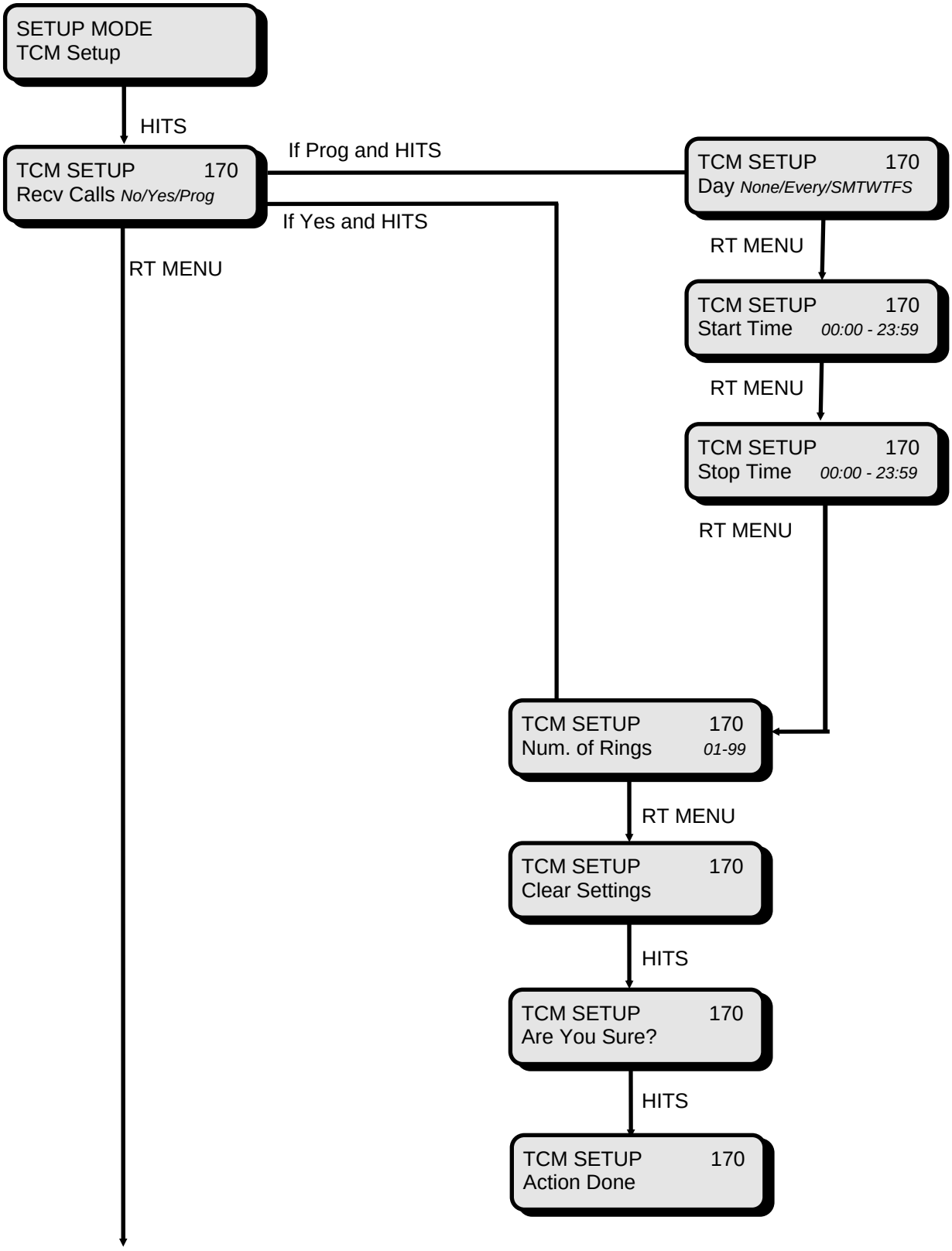

Servo Test:
Turntable Off
#5
Servo Test:
Arm Out/In
Play Test:
Playing Track 01

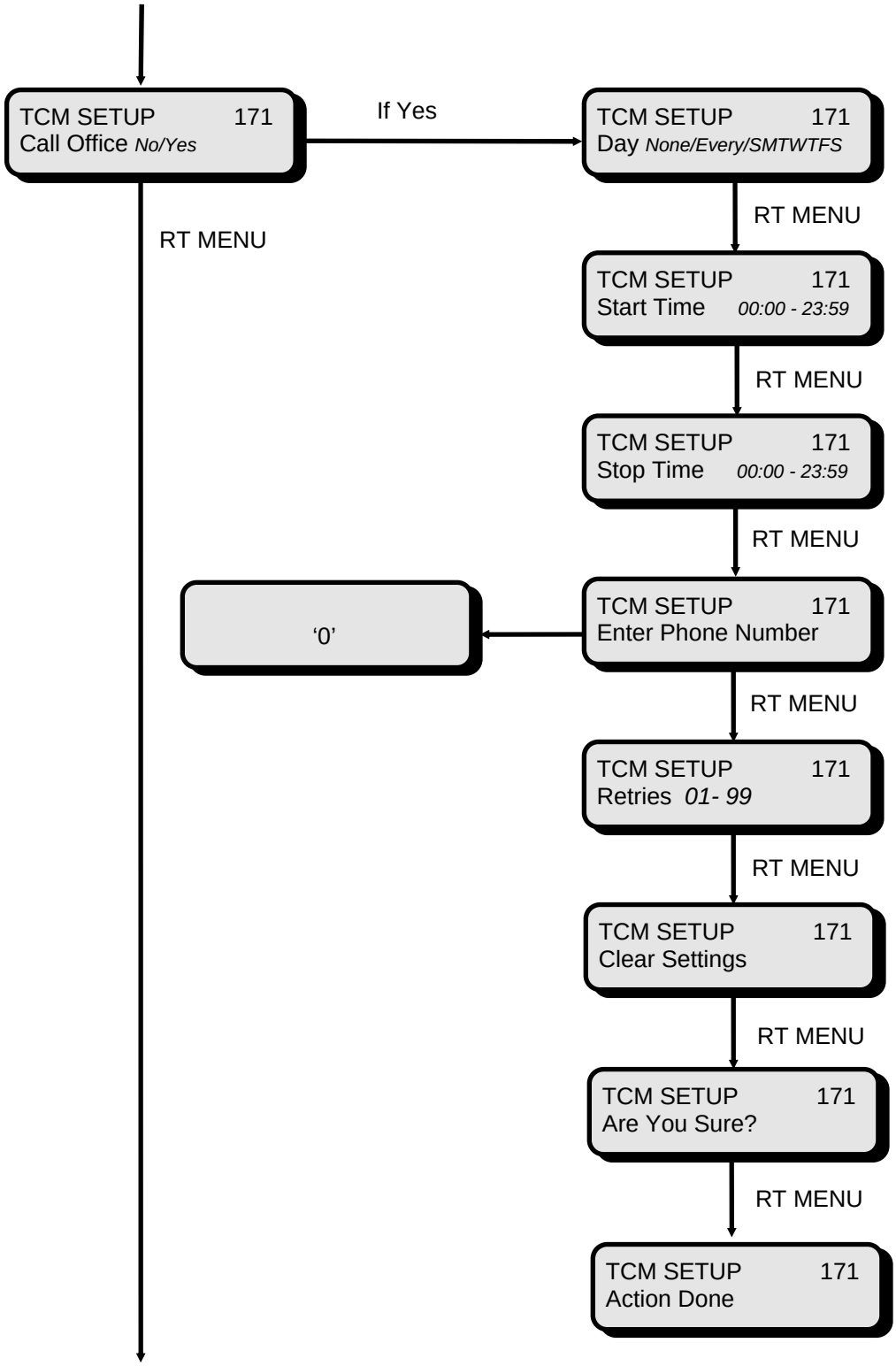
AUTO TEST

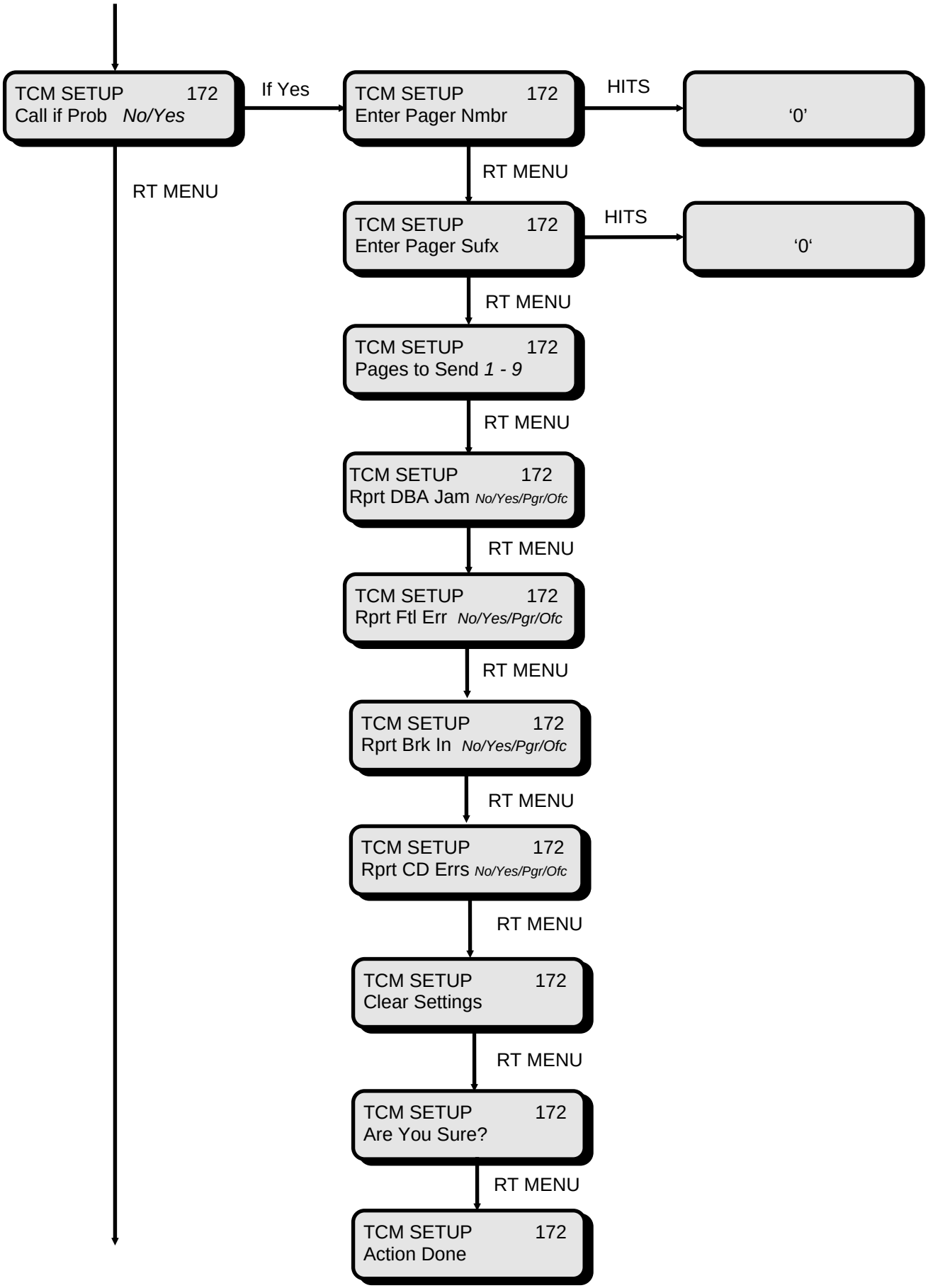

SETUP MODE
Auto Test
HITS
AUTO TEST 150
Run Auto Test
HITS
AUTO TEST 150
Test Hours 00
HITS
Enter the desired number of hours
and press HITS to start the test.
00 is continuous test
AUTO TEST 150
Test Hours XX
Keyboard Test:
No Key Pressed
AAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAA
Pages Test:
Turning Pages…
Mechanism Test:
Short Test 00**
RT MENU
AUTO TEST 151
View Report
HITS
AUTO TEST 154
Start 12/25 16:10
RT MENU
RT MENU
AUTO TEST 155
Stop 12/25 16:25
RT MENU
AUTO TEST 156
Elapsed 000:15
RT MENU

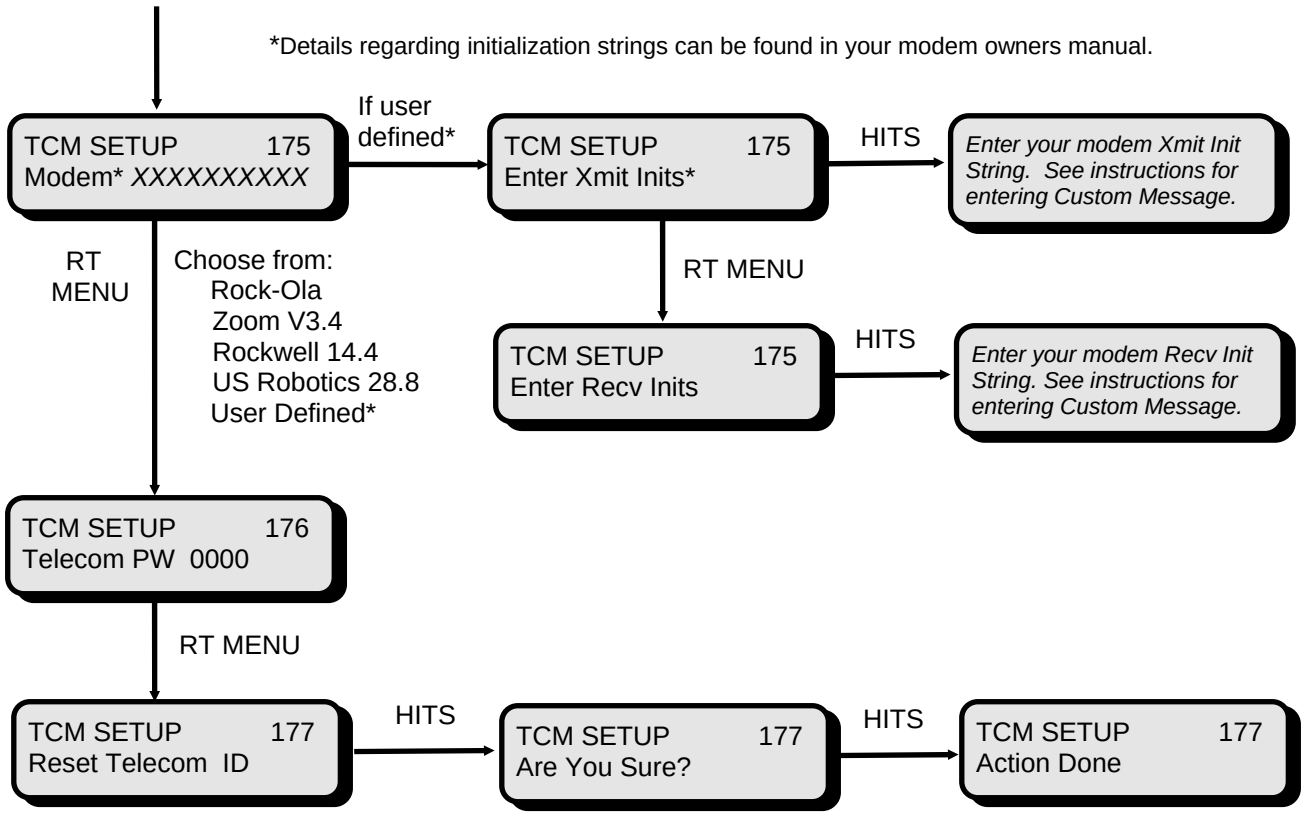

AUTO TEST 157
View Kybd Errors
HITS
AUTO TEST 157
K06 12/25 16:11
RT MENU
RT MENU
AUTO TEST 157
End Kybd Errors
AUTO TEST 158
View Mech Errors
HITS
AUTO TEST 158
M04 12/25 16:15
RT MENU
RT MENU
AUTO TEST 158
End Mech Errors
AUTO TEST 159
View Page Errors
HITS
AUTO TEST 159
P02 12/25 16:20
RT MENU
RT MENU
AUTO TEST 160
View Wlbx Errors
AUTO TEST 159
End Page Errors
AUTO TEST 152
Print Report
AUTO TEST 152
Printing...
RT MENU
AUTO TEST 153
Clear Report
HITS
AUTO TEST 153
Are You Sure?
HITS
AUTO TEST 153
Action Done

TCM SETUP


SETUP MODE
TCM Setup
HITS
TCM SETUP 170
Recv Calls No/Yes/Prog
If Prog and HITS
If Yes and HITS
RT MENU
TCM SETUP 170
Day None/Every/SMTWTFS
RT MENU
TCM SETUP 170
Start Time 00:00 - 23:59
RT MENU
TCM SETUP 170
Stop Time 00:00 - 23:59
RT MENU
TCM SETUP 170
Num. of Rings 01-99
RT MENU
TCM SETUP 170
Clear Settings
HITS
TCM SETUP 170
Are You Sure?
HITS
TCM SETUP 170
Action Done

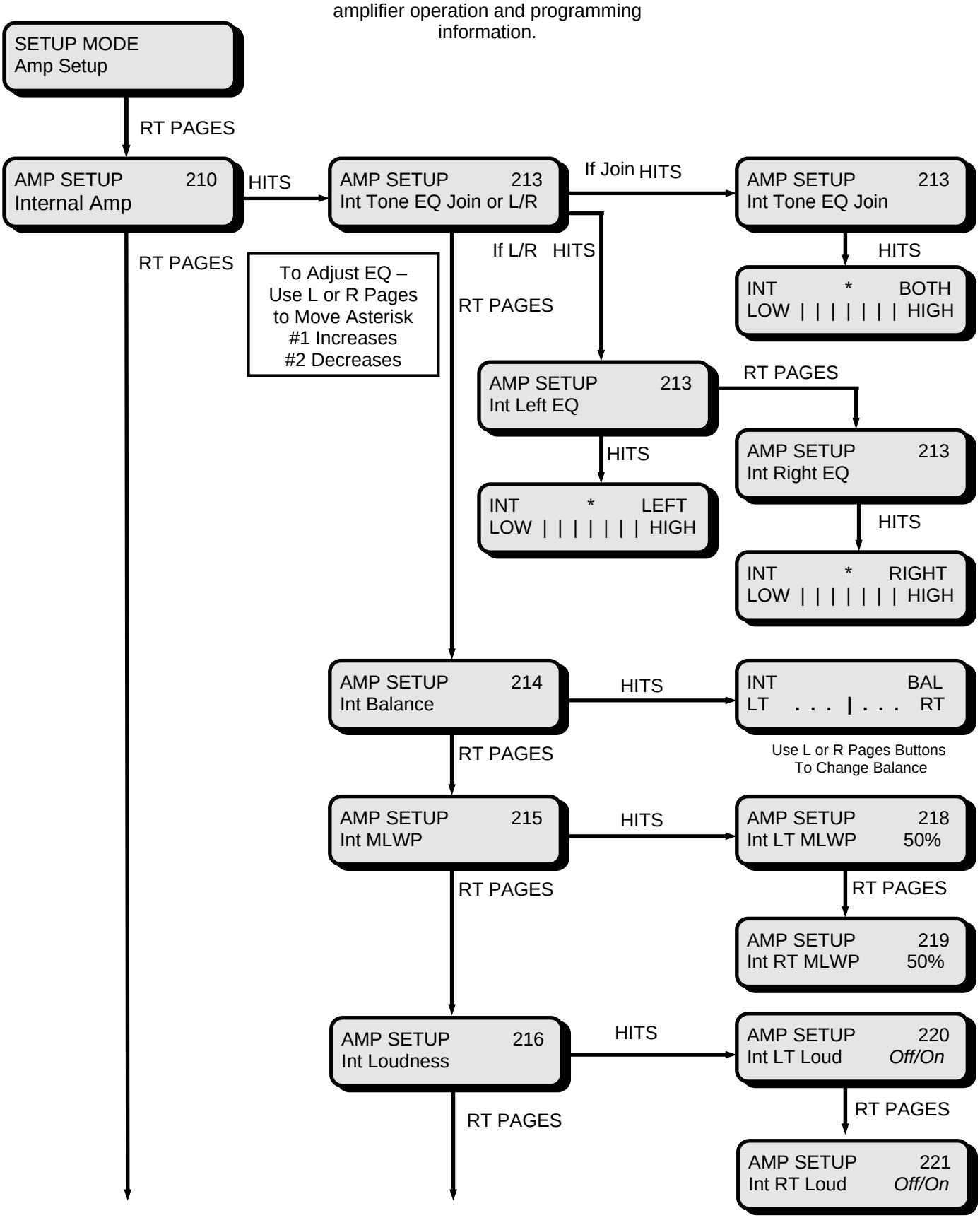

TCM SETUP 171
Call Office No/Yes
If Yes
TCM SETUP 171
Day None/Every/SMTWTFS
RT MENU
RT MENU
TCM SETUP 171
Start Time 00:00 - 23:59
RT MENU
TCM SETUP 171
Stop Time 00:00 - 23:59
RT MENU
'0'
TCM SETUP 171
Enter Phone Number
RT MENU
TCM SETUP 171
Retries 01- 99
RT MENU
TCM SETUP 171
Clear Settings
RT MENU
TCM SETUP 171
Are You Sure?
RT MENU
TCM SETUP 171
Action Done

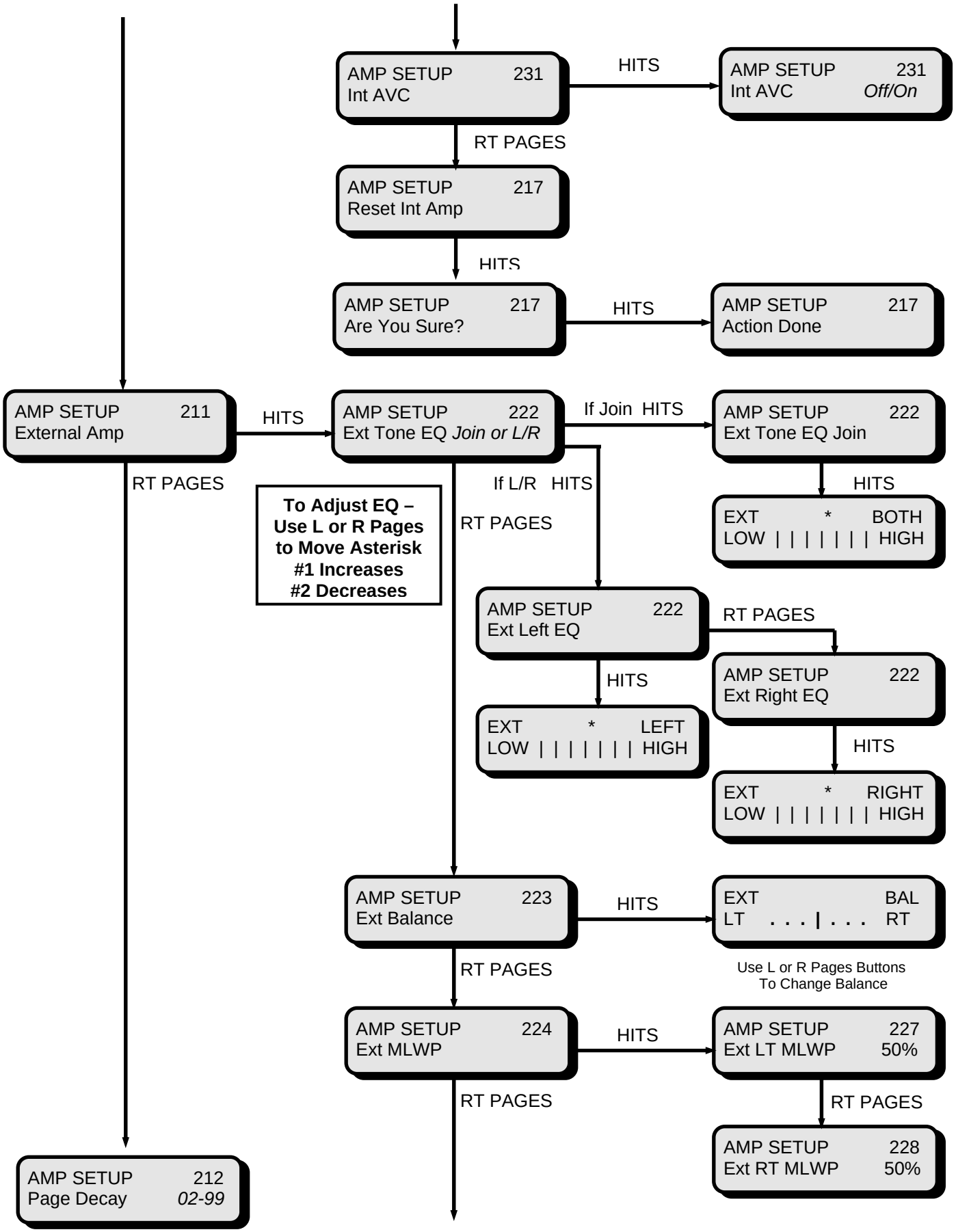

TCM SETUP 172
Call if Prob No/Yes
If Yes
TCM SETUP 172
Enter Pager Nmbr
HITS
'0'
RT MENU
RT MENU
TCM SETUP 172
Enter Pager Sufx
HITS
'0'
RT MENU
TCM SETUP 172
Pages to Send 1 - 9
RT MENU
TCM SETUP 172
Rprt DBA Jam No/Yes/Pgr/Ofc
RT MENU
TCM SETUP 172
Rprt Ftl Err No/Yes/Pgr/Ofc
RT MENU
TCM SETUP 172
Rprt Brk In No/Yes/Pgr/Ofc
RT MENU
TCM SETUP 172
Rprt CD Errs No/Yes/Pgr/Ofc
RT MENU
TCM SETUP 172
Clear Settings
RT MENU
TCM SETUP 172
Are You Sure?
RT MENU
TCM SETUP 172
Action Done

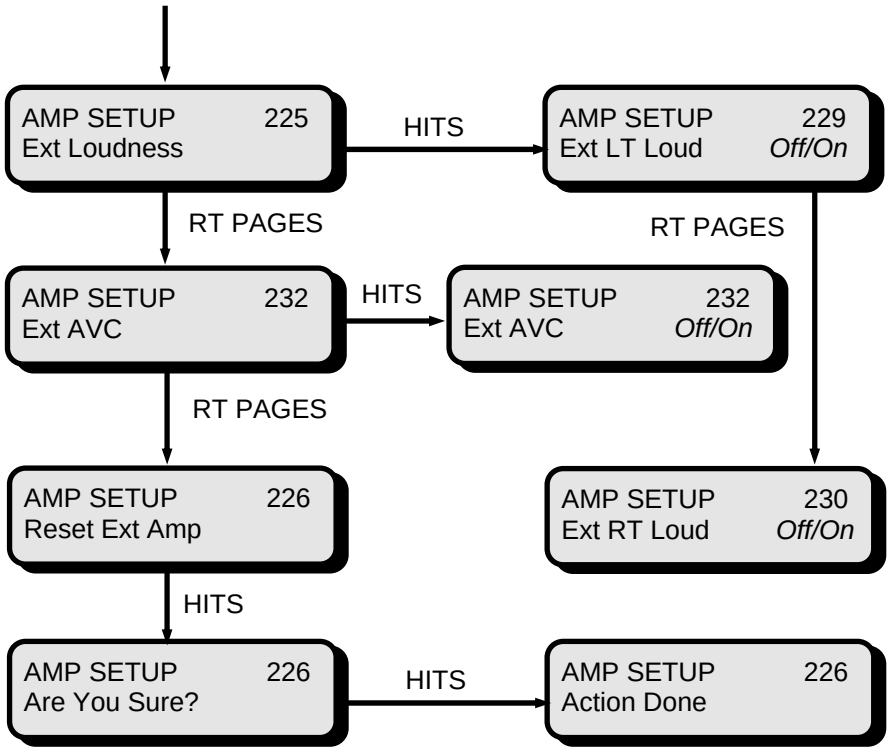

*Details regarding initialization strings can be found in your modem owners manual.
TCM SETUP 175
Modem* XXXXXXXXXX
If user defined*
TCM SETUP 175
Enter Xmit Inits*
HITS
Enter your modem Xmit Init String. See instructions for entering Custom Message.
RT MENU
RT MENU
Choose from:
Rock-Ola
Zoom V3.4
Rockwell 14.4
US Robotics 28.8
User Defined*
TCM SETUP 175
Enter Recv Inits
HITS
Enter your modem Recv Init String. See instructions for entering Custom Message.
TCM SETUP 176
Telecom PW 0000
RT MENU
TCM SETUP 177
Reset Telecom ID
HITS
TCM SETUP 177
Are You Sure?
HITS
TCM SETUP 177
Action Done

AMP SETUP

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




AMP SETUP 231
Int AVC
HITS
AMP SETUP 231
Int AVC Off/On
RT PAGES
AMP SETUP 217
Reset Int Amp
HITS
AMP SETUP 217
Are You Sure?
HITS
AMP SETUP 217
Action Done
AMP SETUP 211
External Amp
HITS
AMP SETUP 222
Ext Tone EQ Join or L/R
If Join HITS
AMP SETUP 222
Ext Tone EQ Join
HITS
EXT * BOTH
LOW | | | | | | | HIGH
RT PAGES
To Adjust EQ –
Use L or R Pages
to Move Asterisk
#1 Increases
#2 Decreases
If L/R HITS
RT PAGES
AMP SETUP 222
Ext Left EQ
RT PAGES
AMP SETUP 222
Ext Right EQ
HITS
EXT * LEFT
LOW | | | | | | | HIGH
HITS
EXT * RIGHT
LOW | | | | | | | HIGH
AMP SETUP 223
Ext Balance
HITS
EXT BAL
LT . . . | . . . RT
RT PAGES
Use L or R Pages Buttons
To Change Balance
AMP SETUP 224
Ext MLWP
HITS
AMP SETUP 227
Ext LT MLWP 50%
RT PAGES
RT PAGES
AMP SETUP 228
Ext RT MLWP 50%
AMP SETUP 212
Page Decay 02-99


AMP SETUP 225
Ext Loudness
HITS
AMP SETUP 229
Ext LT Loud Off/On
RT PAGES
RT PAGES
AMP SETUP 232
Ext AVC
HITS
AMP SETUP 232
Ext AVC Off/On
RT PAGES
AMP SETUP 226
Reset Ext Amp
AMP SETUP 230
Ext RT Loud Off/On
HITS
AMP SETUP 226
Are You Sure?
HITS
AMP SETUP 226
Action Done

Section 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.

Also included in this section are instructions for using Rock-Ola's exclusive automatic disc changing feature. 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 - Number of times a full album was selected (by typing 00 after entering the album number) over the lifetime of the jukebox. Non-resettable.

Ptd Album Buys - Number of times a full album was selected (by typing 00 after entering the album number) since the last reset. Resettable.

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 calculations. *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 disc popularity in ascending order from the least played CD to the most played CD.

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

Order - View the popularity by slot number beginning with slot 00. Can also be used with the automatic disc changing

feature for the initial loading of the CD's. **(For ease of use of the Automatic Disc Changing feature, we recommend leaving this feature set to Least after the discs have been loaded).**
Default Least.

102 Print Popularity - Sends the popularity data to the IR data port on the computer for use with Rock-Ola Data Printer Kit # 02977-01 (optional).

103 View Pop. Data - View the popularity data in the order based upon the setting in Quick Find 101. The automatic disc changing feature is also accessed from this menu. See the Disc Changing section below for a full explanation of the use of the automatic disc changing feature.

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.

Disc Changing

Rock-Ola's SyberSonic Jukebox will further enhance income with its capability of automatically selecting and providing an easy method for changing a disc. Using its advanced microprocessor technology, the machine will automatically display the least played CD (the one that should be changed... you don't want stale music in the jukebox!), and move the pages to the corresponding number so the album jacket and title strip can be changed. The jukebox will "remember" the disc number just changed so that it can be automatically mapped when the machine is returned to normal service.

It is best to load or change discs when the C21 Mechanism is idle (no disc in play and the lift arm down). The tower must ***not*** be *moved by hand. With power on, the lift cannot be pulled up by hand. If loading is done with power off, care must be taken to leave the arm down. If discs are changed with the unit in play, extra care must be taken to not install a disc into the slot the CD in play came from.*

Here's how to use this exclusive feature:

1. Make sure View CD Order (Quick Find 101) is set to "View Least Pop". Access Quick Find 103. (View Pop Data in the Popularity Menu.)

2. Press Hits. The SyberSonic computer will now sort the popularity data. When finished sorting, the least played CD number along with the number of times its played will be shown on the display.

3. Press #1 Button. The title pages will move to the corresponding position and the disc will be loaded on the player.

4. Remove the old CD and install the new CD on the player. Change the album cover and title strip.

5. Press #2 Button to have the jukebox put the CD away and "remember" the new CD for mapping.

To change another CD, press the Right Menu Button to view the next least popular disc and do steps 3 through 5 again.

- If for some reason the automatically selected CD is not the one you want to change (maybe an "all occasion" disc), simply press the Right Menu button again. Then do steps 3 through 5.

When finished changing CDs, put the machine back into the Normal Mode. It will automatically map the just changed discs.

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.*

Section G

Maintenance

- General Maintenance Considerations
- Preventative Maintenance
- Mechanical Adjustments
- Coin Mechanism Cleaning
- Replacing Fluorescent Lamps

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 posses 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
- Isopropanol Alcohol (25%)
- Lint Free Cotton Swabs
- Lint Free Wiping Cloth
- 1½" Paint Brush (For Dusting)
- Light Machine Oil
- White Grease

Spare Parts

Although the Rock-Ola SyberSonic Jukebox has proven to be one of the most reliable machines on the market, occasionally malfunctions do occur. Most of the time, the problem can be easily corrected with a simple adjustment or cleaning. However, the malfunction may be caused by a component which has failed. In order to prevent a loss of income due to a component failure, we recommend the following items be carried as spares. This list is recommended for 5 or more machines.

- 02451 Serviceman's Kit Includes CPU, Amplifier Boards and Fuses
- 55941-A DC Gear Motor Assy.
- 58687-A Mech Opto Cable Assy.
- 59241-2A CD Player Assembly
- 57335 Coin Acceptor, U.S. Quarter (Other countries, your local coin acceptor)

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 an interval of approximately three months. A few minutes spent on preventative maintenance will not only save many hours of "down time", it will help increase customer confidence.

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 CDs. Several influences from the outside can make a disc dirty.

    - Easy to remove are: smoke, dust & finger prints. These can be cleaned with a soft, lint free cloth soaked in a solution of water and detergent. **Wipe from the inside toward the outside and <u>not</u> in a circular motion !!** Rinse well and dry up with a dry soft, lint free cloth.

    - Minor scratches can be removed with a soft, lint free cloth and a soft polish.

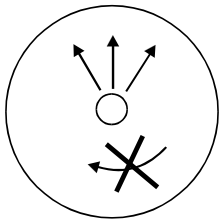


Figure 1G - Compact Disc

- Clean the laser eye.

WARNING

Actuator is very fragile. Lens is made of special material with a coating, <u>do not</u> scratch or damage. Clean carefully.

ADVERTENCIA

El *Actuator* es muy frágile. Su lente está hecho de un material especial cubierto por un film, <u>no rayar ní dañar</u>. Limpiar cuidadosamente.

AVERTISSEMENT

L'actionneur est très fragile. La lentille est fabriquée avec une matière spéciale enduite d'un revêtement. Faites attention de <u>ne pas</u> le rayer ou l'endommager. Nettoyez avec soin.

The CD player is <u>extremely</u> sensitive to static discharges. Always ground yourself before touching the player and <u>never</u> touch the eye. The CD player itself has no adjustments. The only maintenance required is occasional lens cleaning.

Los Toca-discos CD son <u>extremamente</u> sensitivos a descargas de electricidad estatica. Siempre haga "*tierra*" antes de tocar el Toca-discos CD, y <u>nunca</u> toque el ojo (lente). El Toca-discos en sí, no tiene ajustes. El único mantenimiento requerido es el limpiar el ojo ocasionalmente.

Le lecteur de disque compact est <u>extrêmement</u> sensible aux décharges statiques. Veuillez toujours vous mettre à la masse avant d'y toucher et ne touchez <u>jamais</u> à l'oeil. Le lecteur de disque compact ne présente aucun réglage. Le seul entretien nécessaire est un nettoyage régulier de la lentille.

- Moisten a clean Q-tip with a solution of 25% Isopropanol (IPA). Place the tip on the lens and press down carefully. Wipe carefully in the direction (perpendicular to the sledge direction) so that the actuator doesn't move. Dry up with a clean, dry Q-tip.

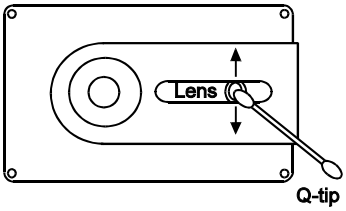


Figure 2G - CD Player

- Clean the Bill Validator (if installed) following the validator manufacturer's recommendations.

- Clean the coin acceptor using a mild detergent solution. Be sure to thoroughly dry before re-installing.

- 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.

The CD player is <u>extremely</u> sensitive to static discharges. Always ground yourself before touching the player and <u>never</u> touch the eye.

El Toca-discos CD es <u>extremamente</u> sensitivo a descargas de electricidad estática. Siempre toque "*tierra*" antes de tocar el Toca-discos, y <u>nunca</u> toque el ojo (lente).

Le lecteur de disque compact est extrêmement sensible aux décharges statiques. Veuillez toujours vous mettre à la masse avant d'y toucher et ne touchez jamais à l'oeil.

The CD player is not user serviceable. The only maintenance required is occasional lens cleaning.

Cleaning instructions can be found in the "Preventative Maintenance" section.

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).

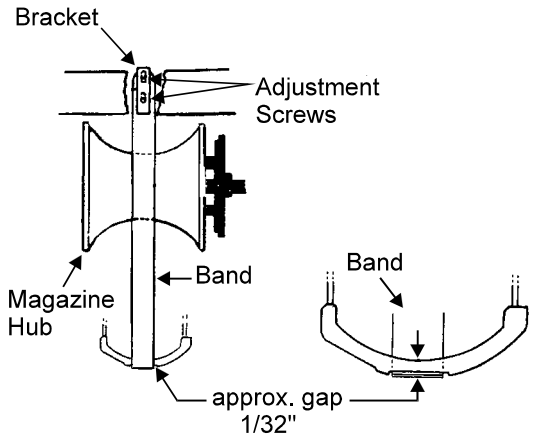


Figure 3G - Magazine Band Adjustment

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).

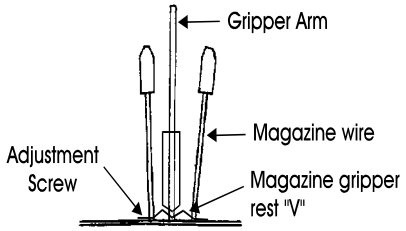


Figure 4G - Gripper Rest Adjustment

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.

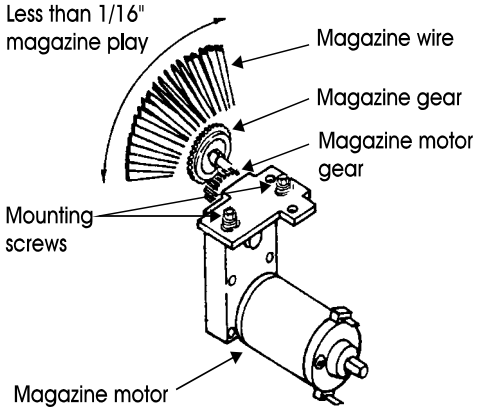


Figure 5G - Magazine Motor Gear

Magazine Indexing Adjustment

WARNING
Insert damaged discs in slots 00, 01, 49, 50, 98, 99 or leave empty.

ADVERTENCIA
Insertar discos dañados en compartimentos 00, 01, 49, 50, 98, 99 o dejar vacíos.

AVERTISSEMENT
Insérez les disques endommagés dans les fentes 00, 01, 49, 50, 98, 99 ou laissez vide.

Run Index Test (Quick Find #145): If the CD is not being gripped exactly between the magazine wires, the indexing needs to be adjusted. Loosen screw "A" and turn screw "B" clockwise if the magazine stops too soon or counter-clockwise if it stops too late. Re-tighten screw "A" and test all 6 positions after adjusting.

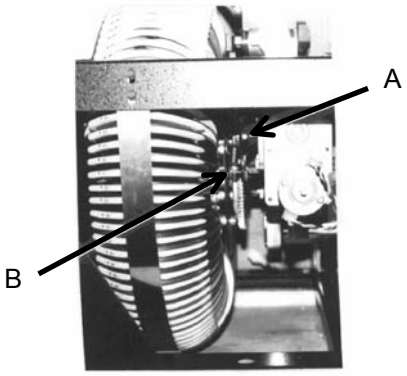


Figure 6G - Magazine Indexing Adjustment

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.

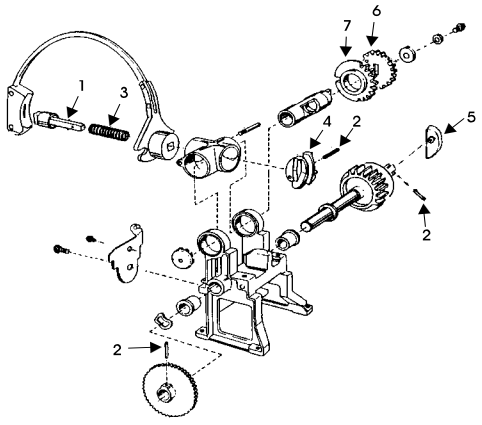


Figure 7G - Gripper Assembly

CD Player Adjustments

The CD player is <u>extremely</u> sensitive to static discharges. Always ground yourself before touching the player and <u>never</u> touch the eye. The CD player itself has no adjustments. The only maintenance required is occasional lens cleaning. There are no electronic adjustments on the CD player.

El Toca-discos CD es <u>extremamente</u> sensitivo a descargas de electricidad estática. Siempre toque "*tierra*" antes de tocar el Toca-discos y <u>nunca</u> toque el ojo (lente). El Toca-discos CD no tiene ajustes en sí. El único mantenimiento requerido es el limpiar el ojo ocasionalmente. El Toca-discos CD no tiene ajustes electrónicos.

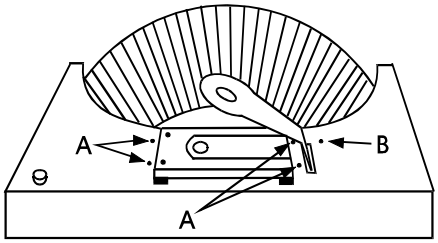
Le lecteur de disque compact est <u>extrêmement</u> sensible aux décharges statiques. Veuillez toujours vous mettre à la masse avant d'y toucher et ne touchez <u>jamais</u> à l'oeil. Le lecteur de disque compact ne présente aucun réglage. Le seul entretien nécessaire est un nettoyage régulier de la lentille. Le lecteur CD ne présente aucun réglage électronique.

CD Player Centering Adjustment

Select a disc. Turn the power switch off just before the CD is set on the turntable. If the hole in the disc is not centered over the turntable hub, loosen the 4 mounting screws (A) and reposition the player. Tighten the screws and test again.

Clamper Plate Height Adjustment

Select a disc. Turn the power switch off when the transfer cycle is finished. The magnet (shaded) should be centered within the clamper plate as shown in the diagram. Turn screw (B) as required to make the adjustment.



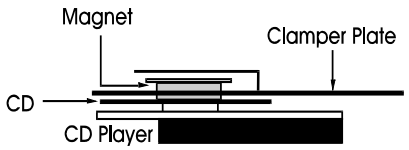


Figure 8G - CD Player and Clamper Plate

Title Display Adjustment

Rock-Ola's Legend and Rocket models utilize a title display assembly that has only one adjustment.

The opto assembly mounted at the top of the display assembly controls when the drive motor stops for each turn of the page.

Move the opto assembly (A) to the left or to the right until the pages seat against the previous one during a page turning cycle. Run the pages in both directions to ensure they seat properly.

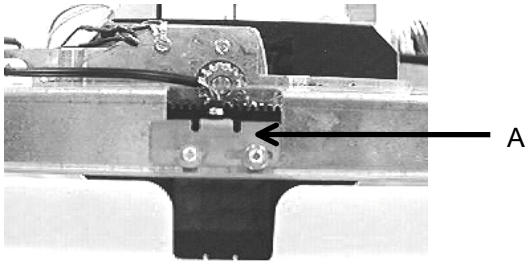


Figure 9G - Title Display

Coin Mechanism Cleaning

The coin mechanism cleaning procedure will depend on which type of coin mechanism is installed.

If an electric or electronic device is installed, follow the coin mechanism's manufacturers cleaning recommendations.

If a standard mechanical coin mechanism is installed, the following procedure can be followed.

- Remove coin acceptor from its mounting bracket.
- Using a soft brush, a mild detergent and water, thoroughly clean all surfaces of the coin acceptor making sure to remove all dirt and deposits.
- Thoroughly rinse and dry coin acceptor.
- Install coin acceptor back into its mounting bracket and test.

Replacing Fluorescent Lamps

CAUTION

The jukebox utilizes an electronic ballast to power the lamps. Always disconnect the power to the lighting when replacing lamps. Failure to do so may result in a shock hazard and/or damage to the ballast.

PRECAUCIÓN:

La rocola utiliza un estabilizador electrónico para energizar las lámparas. Siempre desconecte la energía al sistema de iluminación cuando cambie las lámparas. Si no lo hace puede sufrir una descarga eléctrica y/o causar daños al estabilizador.

MISE EN GARDE :

Pour allumer les lumières, le juke-box fait appel à un ballast électronique. Veillez à toujours couper le courant électrique alimentant l'éclairage avant de remplacer une ampoule. Le non-respect de cette précaution pourrait présenter un risque d'électrocution ou de dommages au ballast.

- Turn the power to the jukebox off via the main switch on the poewr entry module (Corcom).
- Open the door and unplug the ballast from the power supply "Lighting" socket (J8).
- 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.
- Replace the ballast connector into J8 on the power supply.
- Turn the main switch back on.

Section H

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

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 common service call is, "I put money in the machine and got nothing for it."

Where do you begin? The Bill Acceptor? The Coin Acceptor? The CD Player? The Mechanism? The Amplifier?

All of those components can cause the above statement to be made. But what are the *real symptoms*?

As far as the patron is concerned, the above statement is all that needs to be said for you to be able to know what's wrong. Unfortunately, that simply is not the case. *You need more information.* You need to ask questions. Things like:

- "When you put your money into the machine, did it give you credits?"
- "Did you use bills or coins?"
- "How much money did you put in?"
- "How many credits did you get?"
- "Did the machine allow you to make selections?"
- "Did you hear *any* of the songs you selected?"
- "Did you hear any music at all?"
- "Have other patrons had any problems?"

The answers given to those questions will determine which approach you will take toward solving the problem.

For instance, in response to your question, the patron tells you, "I put in a Dollar bill and got no credits, but Joe over there put in 4 quarters and got his music." Common Sense should immediately tell you that you may have a problem with the Bill Validator.

Now let's say the response to your questioning is, "I made my selections and saw the display showed them playing, but there was no sound." Totally different symptoms! Now you're dealing with an audio problem.

So ask questions! It is probably the most powerful tool you posses.

Another 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; today'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 fluorescent lamps not on.	Main (Corcom) Power Switch Off. Plug not in wall. Plug not seated in Corcom. Bad Power Cord. No power from wall outlet. Open fuse in Corcom. Bad Corcom Switch. Bad Transformer. Transformer not plugged in. Cutoff switch not plugged into Amp/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 fluorescent lamp(s) will not ignite.	Check fuse in Power Supply Defective lamp(s). Defective ballast Lighting plug not seated. 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.

Credit Problems (Coin-Operated models only)

Fault	Symptom	Possible Cause
No credits given when coins are inserted.	Coins are jammed in coin acceptor.	Foreign object blocking coin path. Dirty coin acceptor. Defective coin acceptor.
	Coins fall into coin return cup.	Foreign object blocking coin path. Dirty coin acceptor. Defective coin acceptor.
	Coins clear coin acceptor and coin switch, but no credits are given.	Defective coin switch actuator. Defective coin switch. Defective coin switch wiring. Pricing not programmed correctly. Defective Control Computer.
No credits given when bills are inserted.	Validator will not take bills.	Jammed bill. Stacker not seated correctly. Defective Bill Validator. Defective Bill Validator Harness. Defective Control Computer.
	Validator accepts bills, but gives no credits	Defective Bill Validator Harness. Defective Bill Validator. Pricing not programmed correctly. Defective Control Computer.

Play Problems

Trouble	Symptom	Possible Cause
Not playing all songs.	Songs “Skipping”. Songs “Cutting Out”.	CD Mechanism not unbolted. Dirty disc. Dirty laser eye. Disc not clamping properly. Defective disc. Defective laser.

	Mechanism picks up disc then puts it back into the magazine without spinning it.	Disc installed backwards. Dirty disc. Dirty laser eye. Defective disc. Disc not clamping properly. Defective disc. Defective laser. Defective Control Computer.
	Mechanism picks up disc, spins it, and then puts it back into the magazine without playing.	Dirty disc. Dirty laser eye. Disc not clamping properly. Defective disc. Defective laser. Defective Control Computer.
Playing wrong songs.	Patron selected a track other than track 1, but the machine played track 1.	Dirty disc. Dirty laser eye. Disc not clamping properly. Defective disc. Defective laser.
	Gripper picked up wrong disc.	Indexing adjustment. Dirty Mech Opto Sensor. Defective Mech Opto Sensor. Defective Opto Sensor wiring.
	Titles on disc and title strip do not match.	Correct/replace title strip. Replace disc.

Page Problems

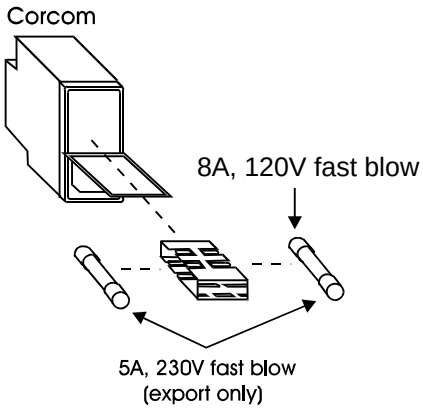
Fault	Symptom	Possible Cause
Pages will not turn.	Pages will not turn at all.	Pages not plugged in. Pages harness at computer not seated. Pages not programmed properly. (See Page Options in section E.) Defective pages detent switch. Defective pages motor. Defective computer.
	Pages will only turn to a certain point.	Pages not programmed properly. (See Pages Options in section E).

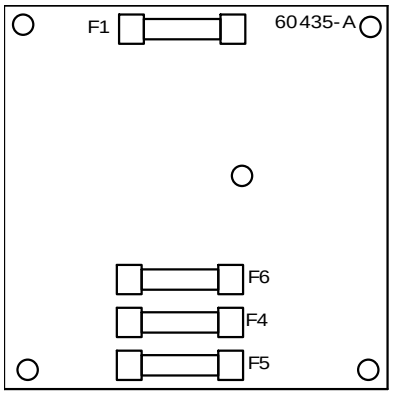
Fuse and LED Locations

Power Supply

(1) 8 Amp, 120V Fast Blow (Main Power In)
(For Domestic)
(2) 5 Amp, 230V Fast Blow (For Export)

Location: Inside Corcom

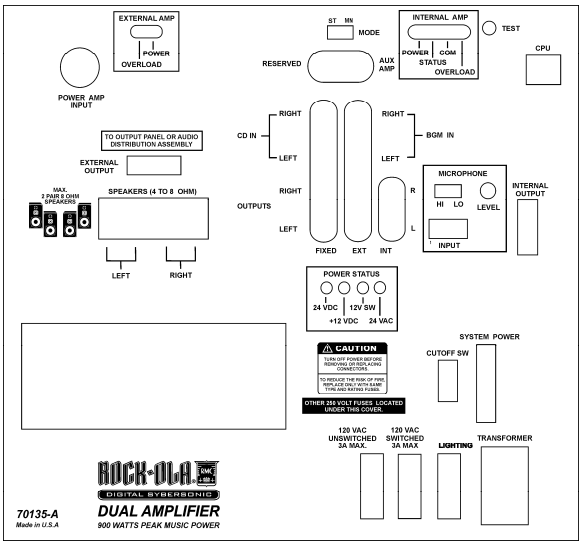




Keyboard LEDs

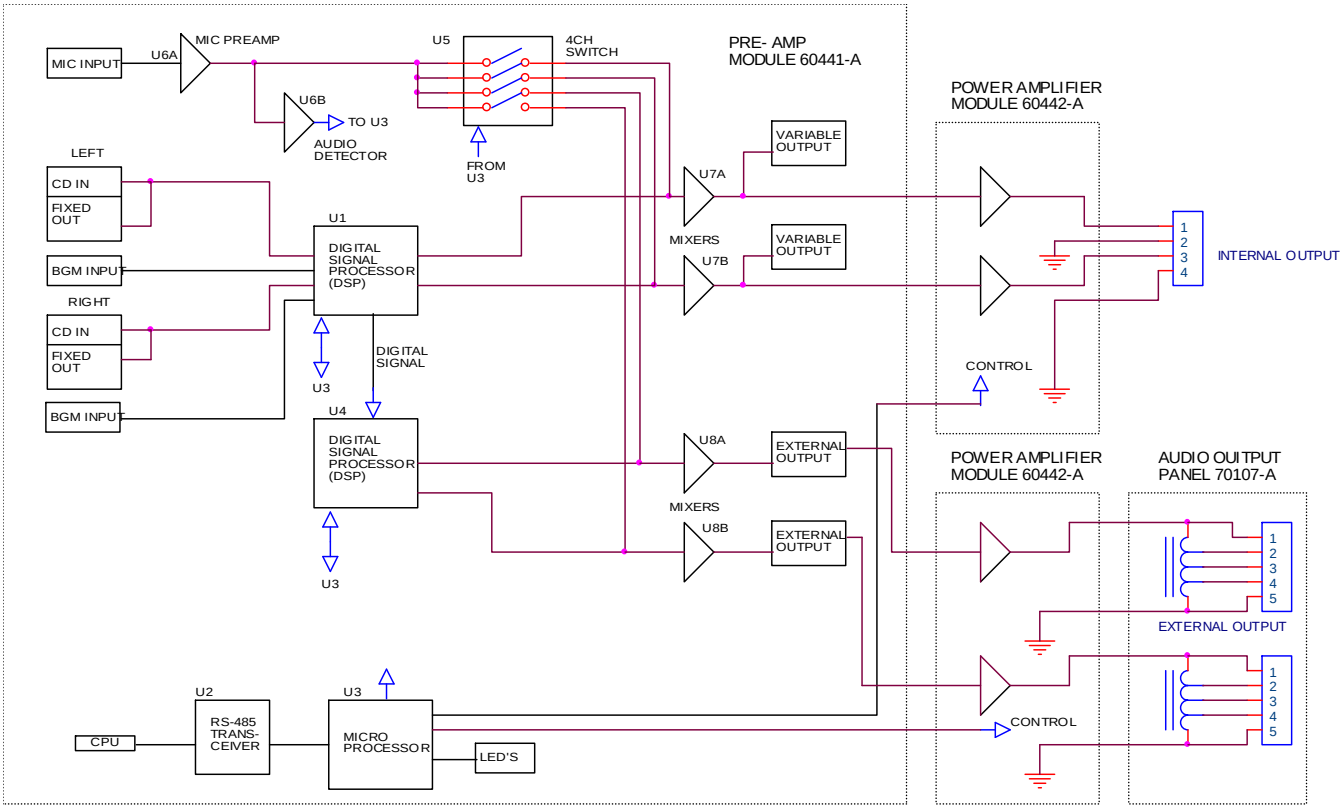
Data = Flashing
Power = Always ON

Digital Amplifier & Power Supply LEDs and Connections

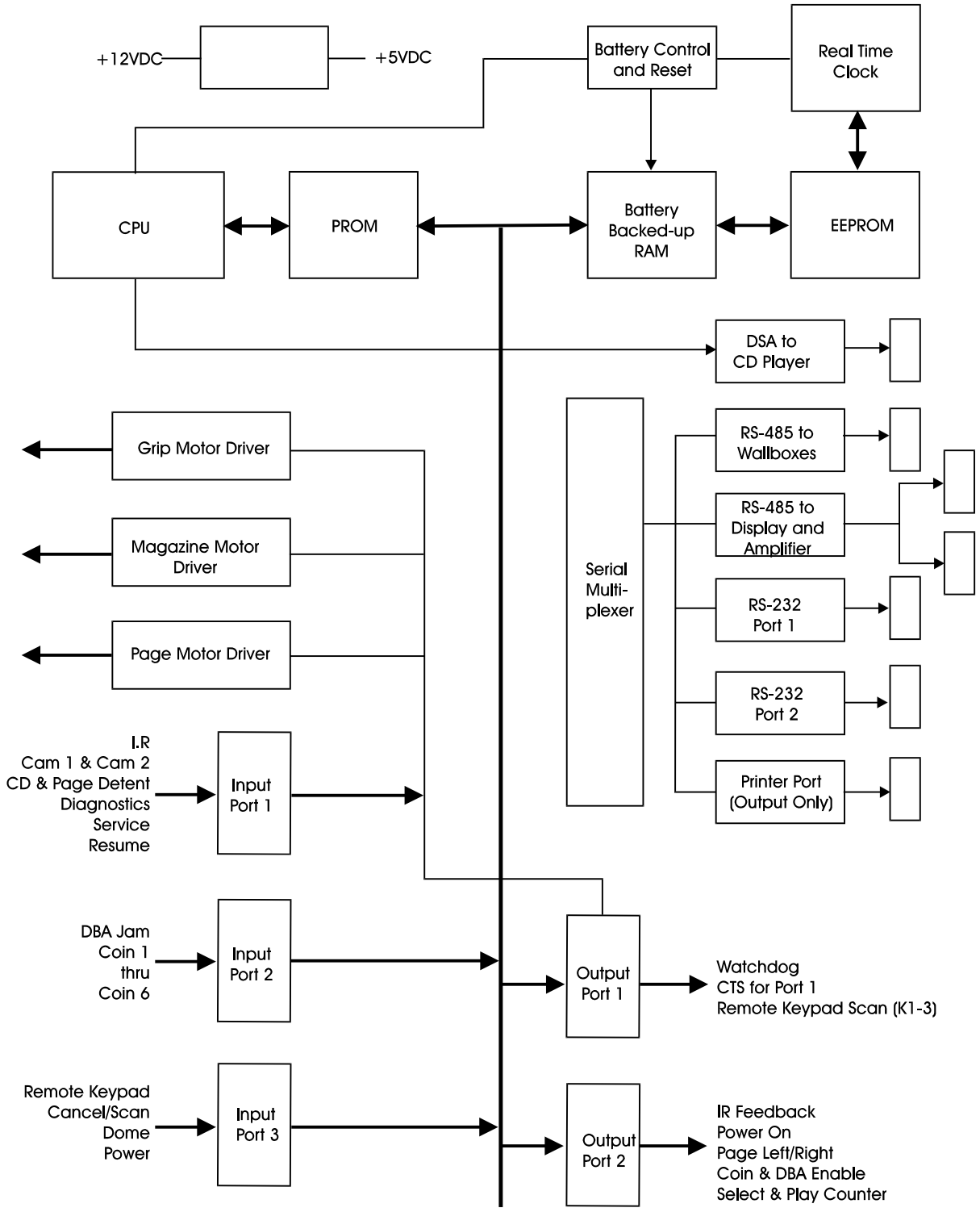


Block Diagrams

Amplifier Block Diagram

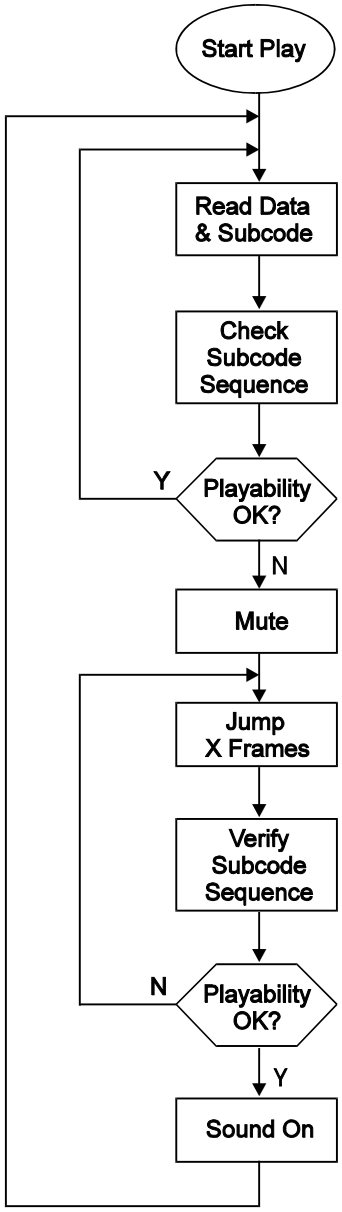


CPU Block Diagram

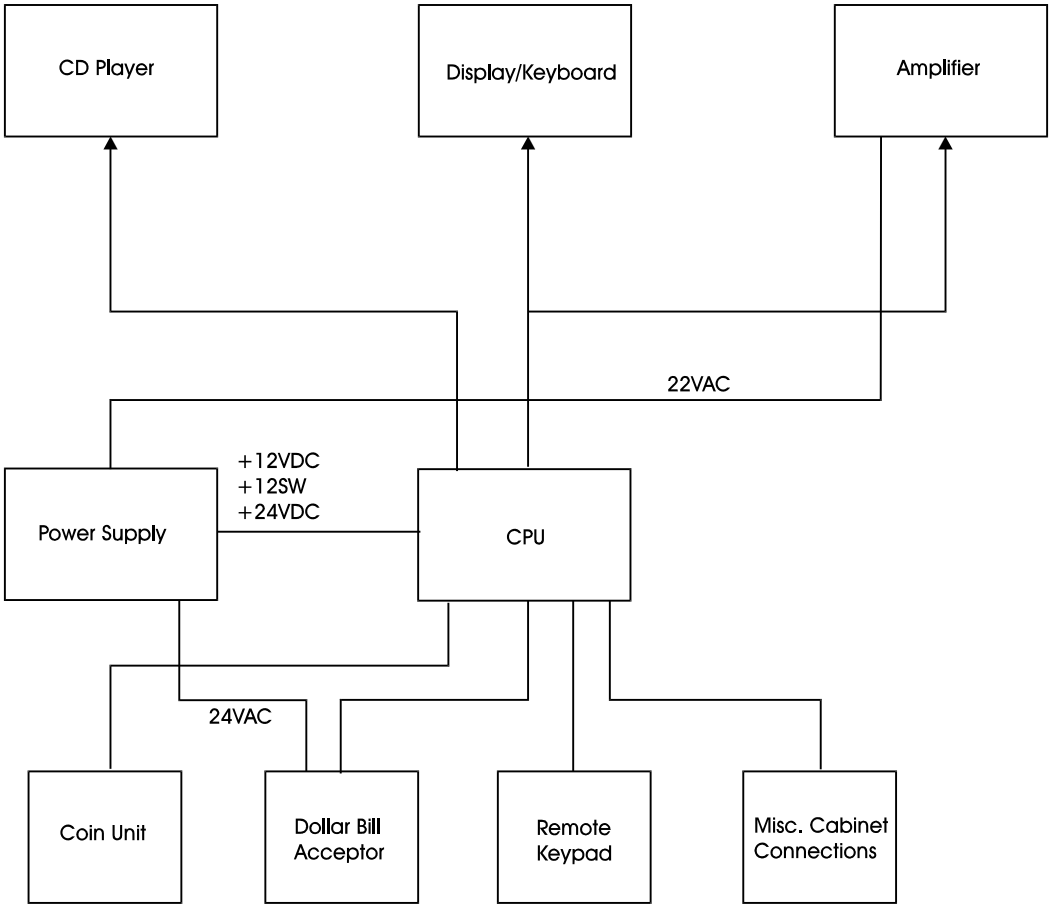


CD Start Up Procedure and Run Diagram

- Laser on
- Focus on and find focus
- Turntable start
- Internal DSICS optimization for radial and focus. (offset and gain)
- Radial tracking
- Read table of contents. (start and stop times of first 21 tracks)
- Jump to selected track. (or track 1 if selected track is not found).



Power Distribution Block Diagram



Start Up and Diagnostic Mode Operation

Start Up

The first thing the SyberSonic Computer does upon start up is to establish communication with the CD Player. 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

DIAGNOSTICS MODE
Testing CD Comm.

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

DIAGNOSTICS MODE
CD Comm. 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	CD PLAYER	Unable to establish communication with the CD Player.	Check connections and cables to CD player. Defective CD Player
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.

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).
- 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.

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

Error Value	Input Error	Error Code Explanation	What To Do
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.
		Internal Volume Up key de-	Check internal Volume Up Switch, Replace Remote Volume Control,

C13	INT VOL UP	pressed for longer than 1 minute.	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

Error Value	Mechanism Error	Error Code Explanation	What To Do
M01	MAGAZINE	Unable to locate a compact disc (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 compact disc.	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 compact disc.	Run Gripper Test, Check 24 VDC, Check Gripper Motor, Check Gripper Motor Wiring, Replace Control Computer. Check cam switches.
M04	COMMUNICATION	Unable to establish communication with CD player.	Check CD player wiring from Control Computer to Laser. Replace CD player. Replace Control Computer.
M05	CD RESPONSE	Unable to obtain the correct response from the CD player.	Check CD player wiring from Control Computer to Laser. Replace CD player. Replace Control Computer.

Page Unit Error Codes

Error Value	Page Unit Error	Error Code Explanation	What To Do
P01	PAGE LEFT	Unable to flip the pages left.	Run Pages Test, Check 24 VDC, Check wiring between Page Unit and Control Computer, Check Pages Motor, Check Pages Detent Switch and Wiring, Check Pages Left Switch on Keyboard, Replace Control Computer.
P02	PAGE RIGHT	Unable to flip the pages right.	Run Pages Test, Check 24 VDC, Check wiring between Page Unit and Control Computer, Check Pages Motor, Check Pages Detent Switch and Wiring, Check Pages Right Switch on keyboard, Replace Control Computer.

Running Tests

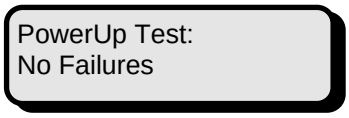
Rock-Ola's SyberSonic Electronics System has a set of built-in diagnostic tests that can be run via the keyboard. These tests are designed to eliminate guess work when troubleshooting a specific problem. You have the ability to test all inputs and outputs of the control computer, the electronics and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

CPU Tests

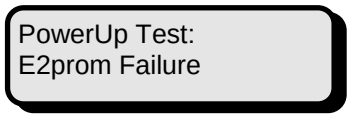
The CPU Tests consist of three (3) individual tests. The Power Up Test, Inputs Test and Outputs Test.

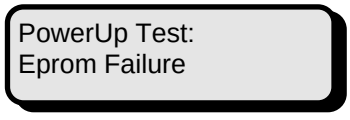
Power Up Test - This test checks the internal functions of the control computer and communication with the CD Player and keyboard.

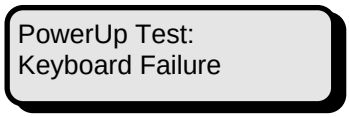
To run this test access "Run Power Up Test" (Quick Find 142) in the Test Mode Menu. Press HITS. The control computer will run the test. If all tests pass the display will indicate the following message:

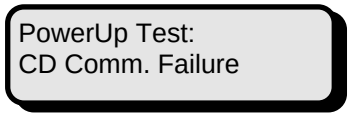


If a failure occurred one of the following messages will be displayed.









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	PLAY COUNTER 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 approximately 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 CD, read its table of contents and display the number of tracks on the CD.
- Test All Disc which causes the mechanism to pick up each CD, display the number of tracks on that CD then play five (5) seconds from each track on that CD.
- Run CD Tests which provides a testing tool for the CD Player. This includes a Play Test and a Servo Test. The Play Test allows the testing of the Play Functions of the CD Player. The Servo Test allows the Testing of the electro-mechanical functions of the CD Player.

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 disc 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 disc 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 Disc Magazine will rotate a full revolution and stop at position 00. The disc in slot 00 will be picked up and placed on the CD Player. It will then be spun to read its table of contents. Once the table of contents has been read, the number of tracks on that CD will be displayed and then the disc will be put back into 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 Disc (AKA Long Test)

Access “Test All Disc” (Quick Find 148) in the View Mech Tests area of the Test Mode Menu. Press HITS. The Disc Magazine will rotate a full revolution and stop at position 00. The disc in slot 00 will be picked up and placed on the CD Player. It will then be spun to read its table of contents. Once the table of contents has been read, the number of tracks on that CD will be displayed and then five (5) seconds of each song on that disc will be played. After all tracks from that disc have been played 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.

Run CD Tests

Access “Run CD Tests” (Quick Find 149) in the View Mech Tests area of the Test Mode Menu. Press HITS. The magazine will rotate a full revolution then stop and pick up the disc in position 00.

At this point you may choose “Run Play Test” by pressing HITS or you may choose “Run Servo Test” by pressing the RIGHT TURN PAGES button then pressing HITS.

Play Test

Four (4) play functions are available by using Keyboard Buttons 1 - 4.

- #1 Start play
- #2 Stop play
- #3 Next Track
- #4 Previous Track

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

Servo Test

Five (5) servo functions are available by using Keyboard Buttons 1 - 5.

- #1 Focus On
- #2 Focus Off
- #3 Turntable On
- #4 Turntable Off
- #5 Arm In/Out

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 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
* Overload	Red	Power Amp Muting	On - Amplifier muted* Blinking - Power Amp Overload Off - Normal

* The Power amplifier is muted whenever a CD 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 and power amp PCB's are properly mated.
	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) Defect in Power Amplifier
	Green LED On Orange LED's On Red LED Blinking	Amplifier Overload	Unplug speakers. If red LED stays off, check for speaker overload. If red LED still blinks, replace power amplifier PCB.

Amplifier Test Mode

The Digital SyberSonic Amplifier contains a test mode. This mode initializes the DSP's to a straight through, 0 gain signal path. This would be the same as EQ's flat, Balance center, CD Input, Volumes 40.

To use, power up the amplifier <u>without</u> the communication cable connected. Press the test button located under the LED's. CAUTION: If a live input is connected to the CD inputs, full volume output will appear at the speaker connections. Plug the audio output from a walkman or signal generator into the CD Input jacks. Audio should be present on all output jacks. If it does, the amplifier is working properly.

Bad or Distorted Sound

- Check Red LED's while a CD is in play.
- **Red LED on or flashing** - Indicates the channel is overloaded. Check the speakers and speaker wiring.
- **Red LED's all off** - Note which channel sound bad. Reverse the input connections. If the opposite channel now sounds bad,

the input source (CD Input or AUX BGM Input) is defective. If the same channel still sounds bad, replace the affected channel's power amplifier board.

- **Overload System Operation (Section D)**

Weak Bass From The External Speakers

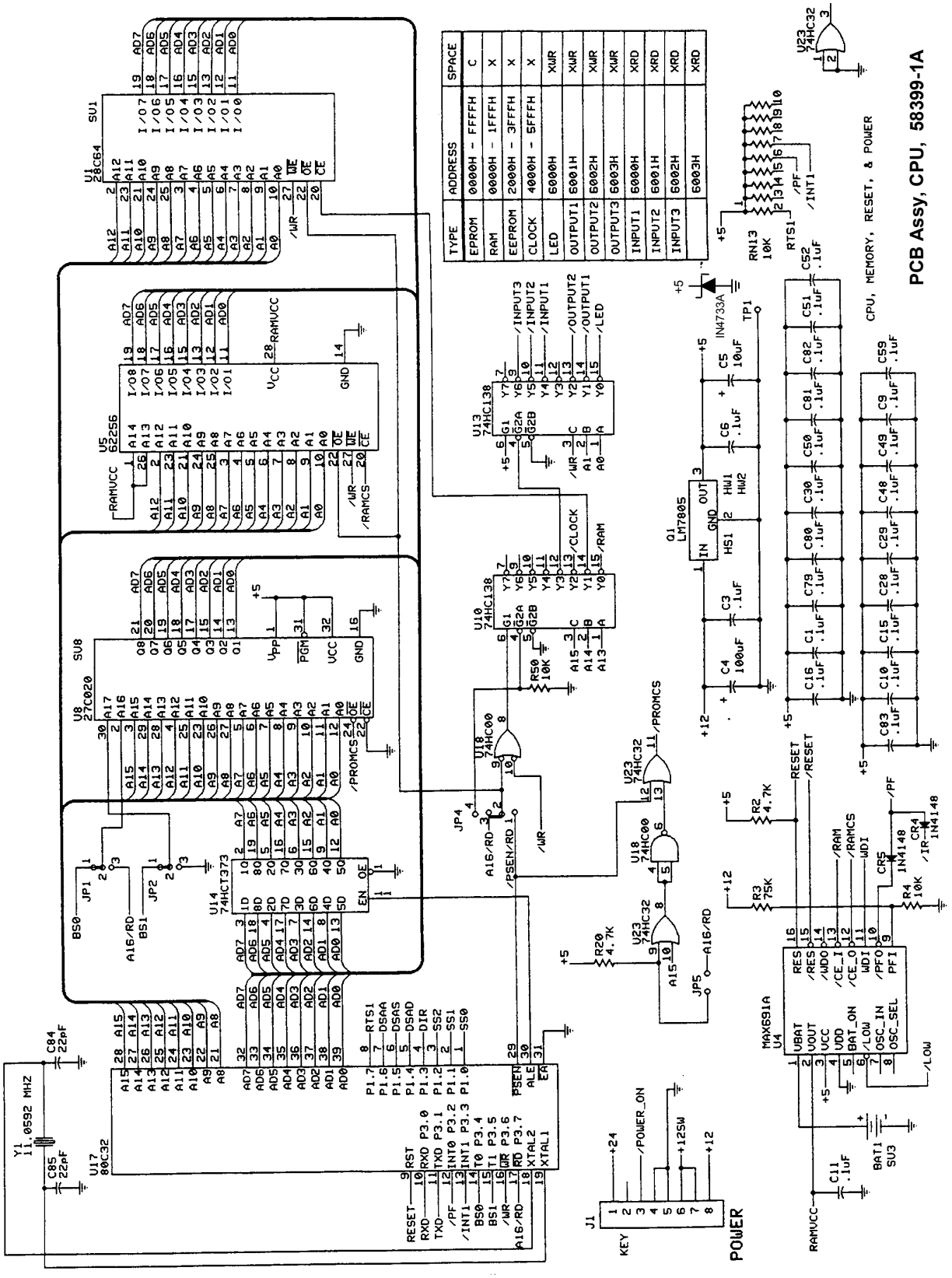
- Check speaker connections. All external speakers must be *wired in phase*. Positive (+) to positive (+) and negative (-) to negative (-).

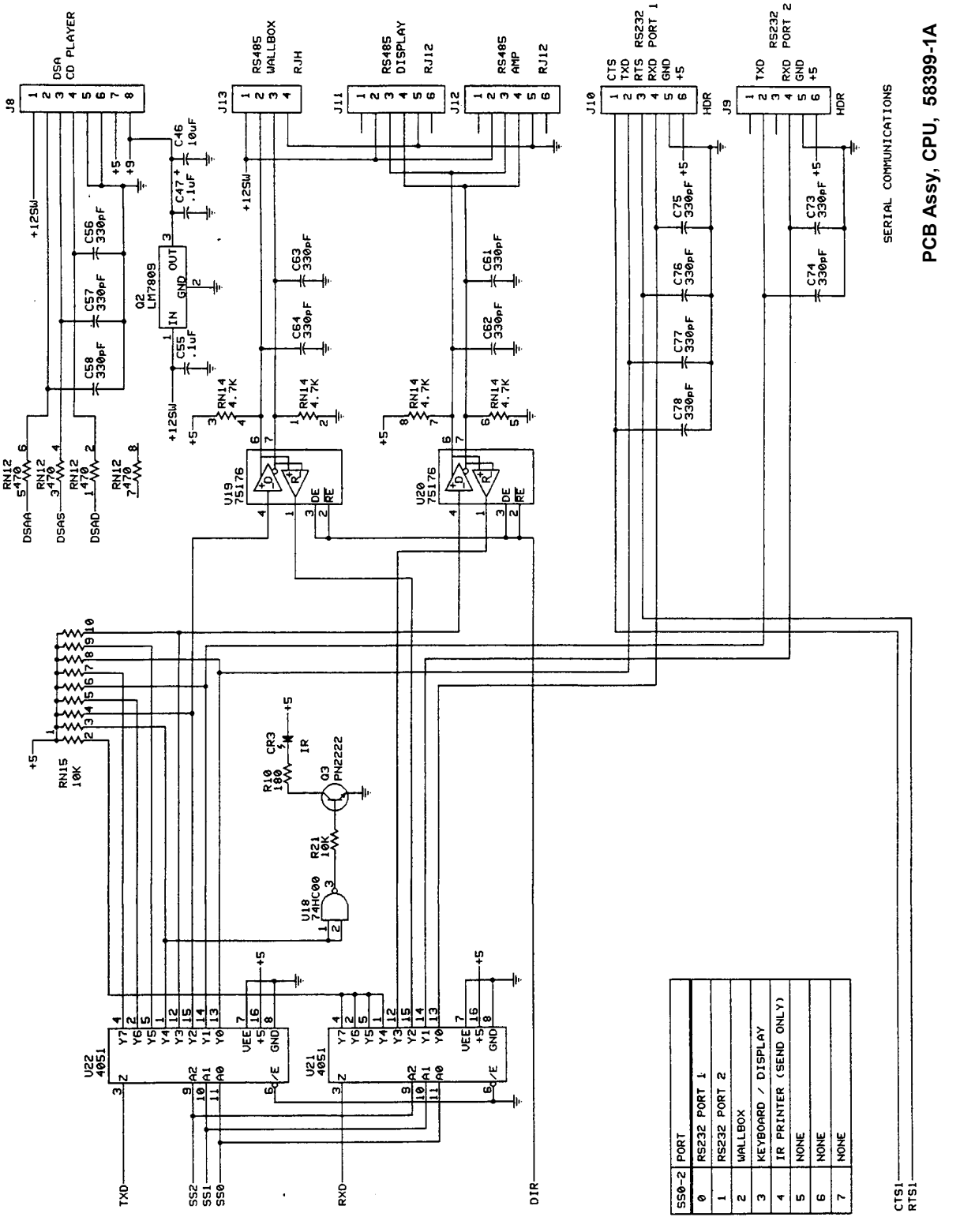
Section I

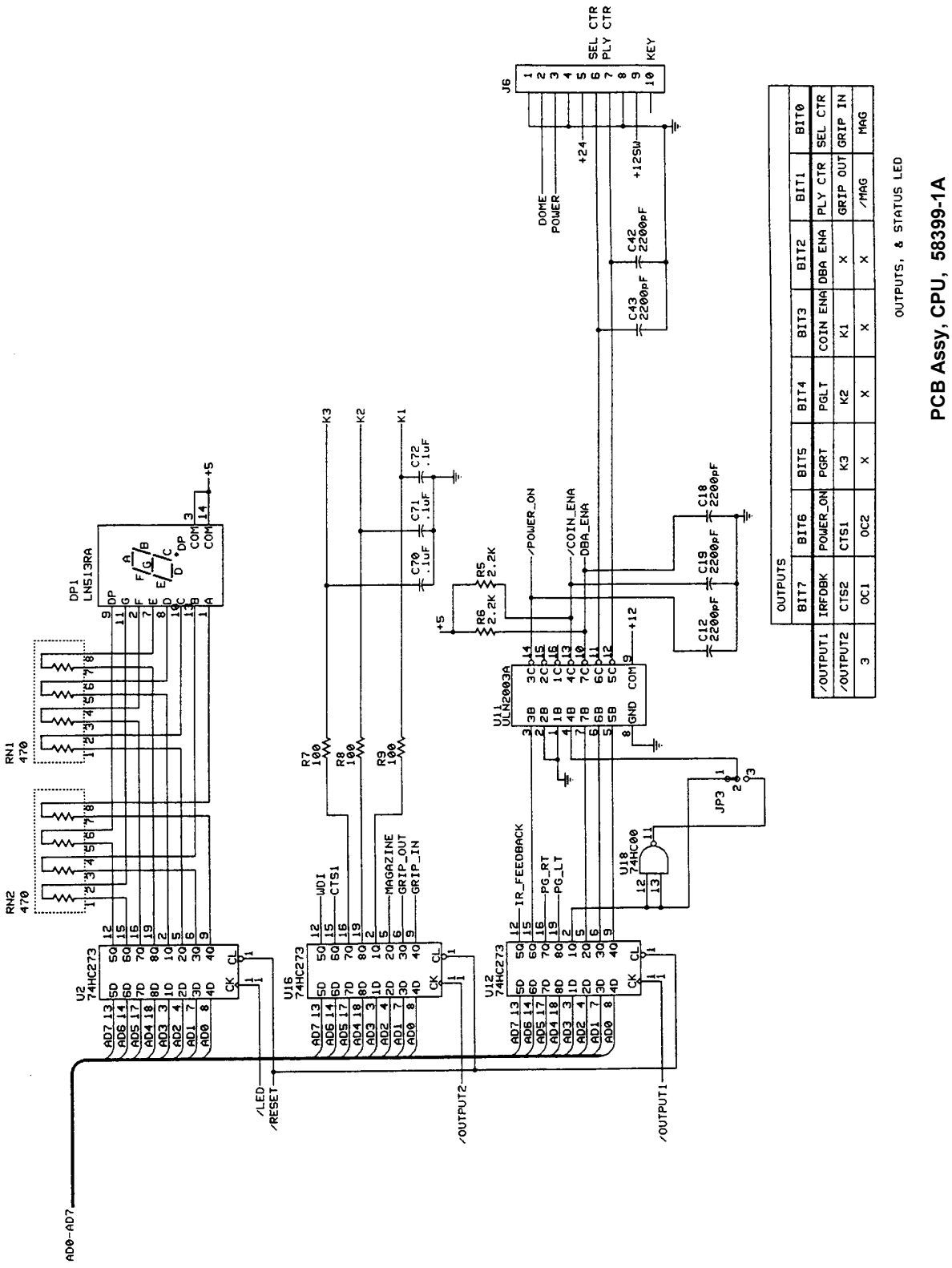
Major Component Schematics

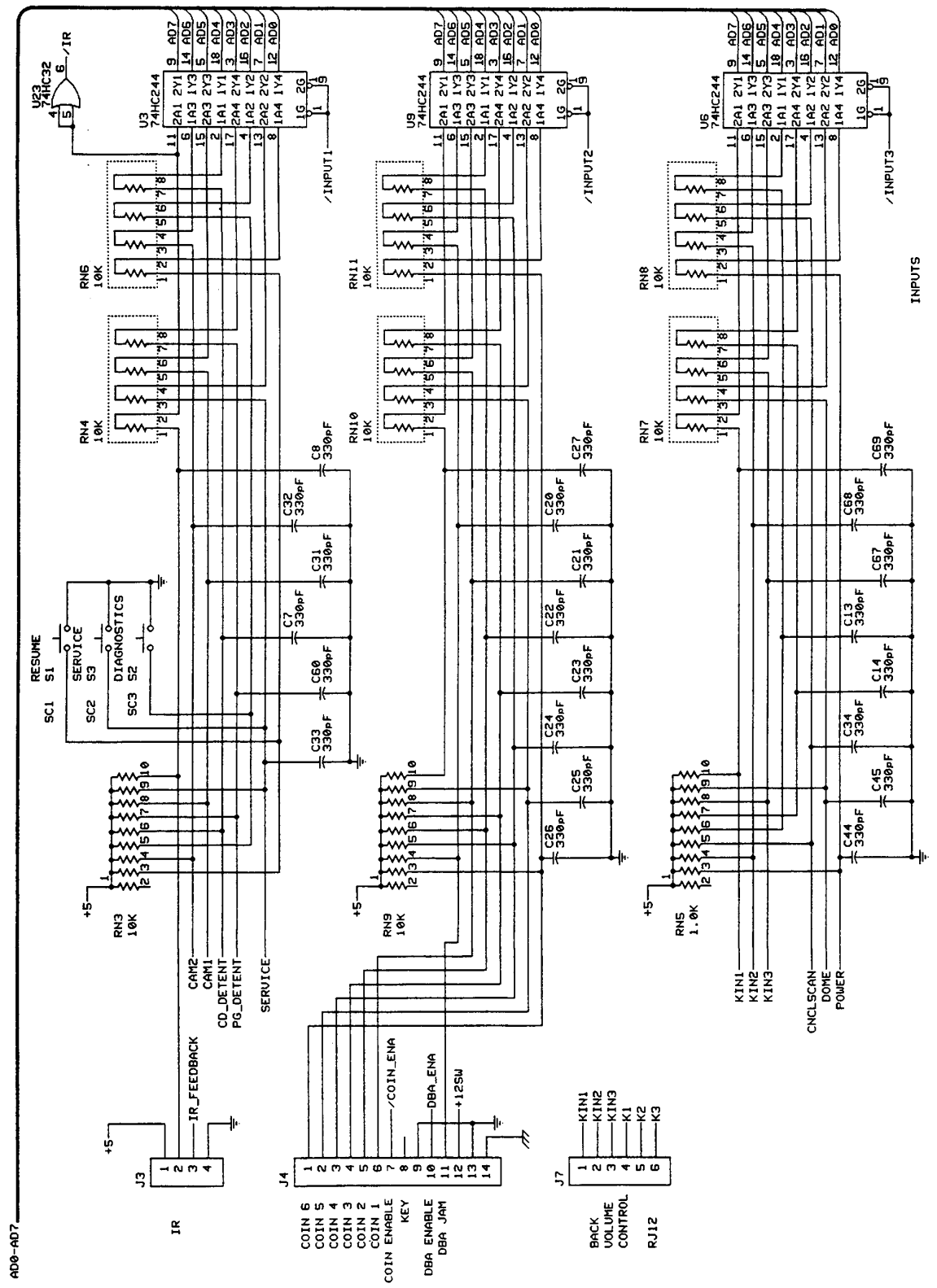
- CPU
- Amplifier/Power Supply
- Audio Output Panel
- Keboard/Display
- Volume Control
- Crossover
- Transformer
- Lighting Wiring Diagram (CD-8V)
- Primary Power Block Diagram

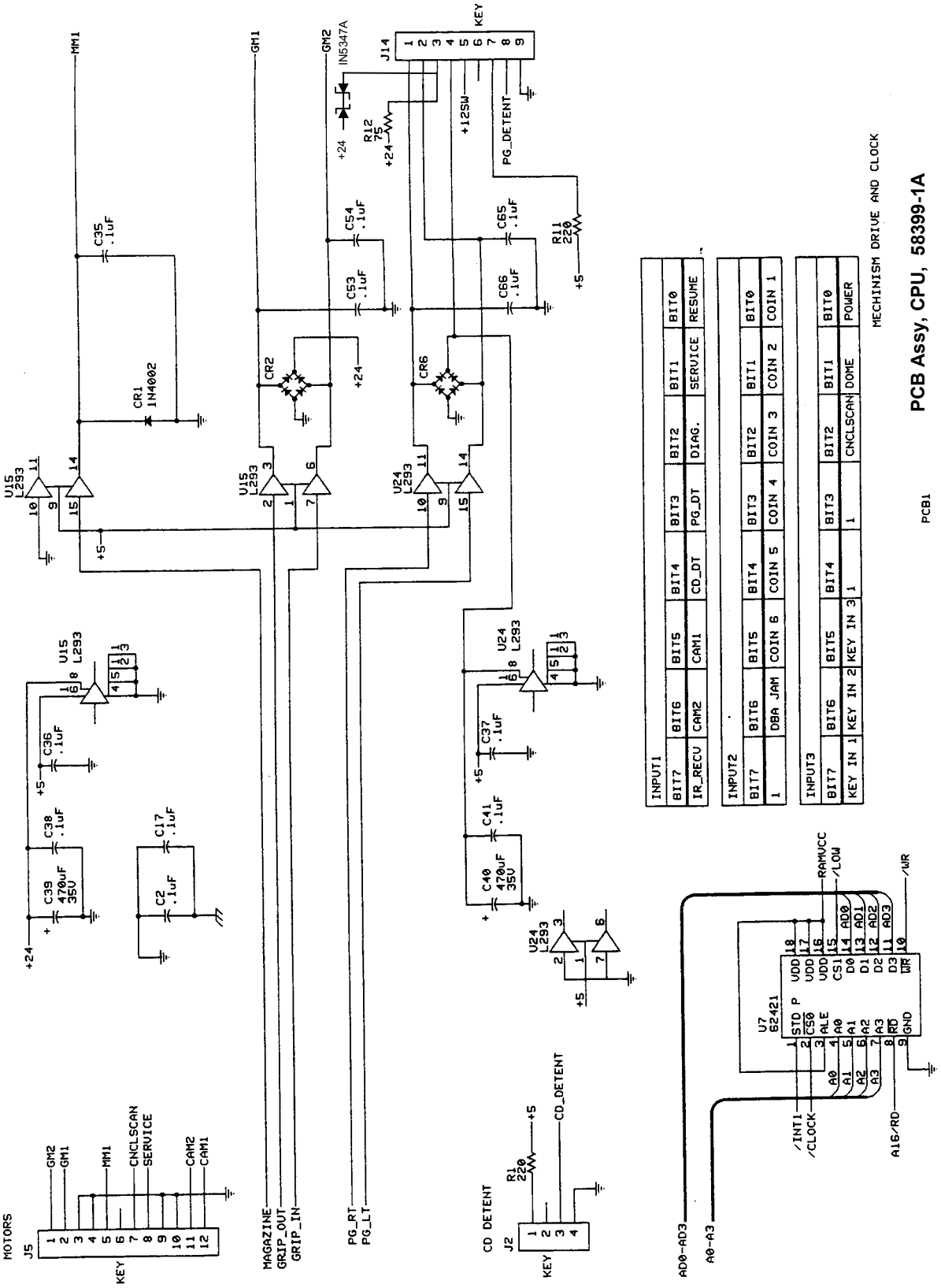
Computer (CPU)




PCB Assy, CPU, 58399-1A
SERIAL COMMUNICATIONS
J8 DSA CD PLAYER
J13 RS485 WALLBOX RJH
J11 RS485 DISPLAY RJ12
J12 RS485 AMP RJ12
J10 CTS TXD RTS RXD GND +5 RS232 PORT 1 HDR
J9 TXD RXD GND +5 RS232 PORT 2 HDR
+12SW
+5
+9
C46 10uF
C47 .1uF
C55 .1uF
C56 330pF
C57 330pF
C58 330pF
C53 330pF
C54 330pF
C61 330pF
C62 330pF
C73 330pF
C74 330pF
C75 330pF
C76 330pF
C77 330pF
C78 330pF
Q2 LM7809 IN GND OUT
RN12 470
RN14 4.7K
RN15 10K
DSAA
DSAS
DSAD
U19 75176
U20 75176
R10 180
CR3 IR
Q3 PN2222
R21 10K
U18 74HC00
U22 4051
U21 4051
TXD
RXD
DIR
SS2
SS1
SS0
CTS1
RTS1
SS0-2 PORT
0 RS232 PORT 1
1 RS232 PORT 2
2 WALLBOX
3 KEYBOARD / DISPLAY
4 IR PRINTER (SEND ONLY)
5 NONE
6 NONE
7 NONE


OUTPUTS
BIT7 BIT6 BIT5 BIT4 BIT3 BIT2 BIT1 BIT0
/OUTPUT1 IRFDBK POWER_ON PGRT PGLT COIN ENA DBA ENA PLY CTR SEL CTR
/OUTPUT2 CTS2 CTS1 K3 K2 K1 X GRIP OUT GRIP IN
3 OC1 OC2 X X X X /MAG MAG
OUTPUTS, & STATUS LED
PCB Assy, CPU, 58399-1A
AD0-AD7
/LED
/RESET
/OUTPUT2
/OUTPUT1
/POWER_ON
/COIN_ENA
DBA_ENA
IR_FEEDBACK
PG_RT
PG_LT
MAGAZINE
GRIP_OUT
GRIP_IN
WDI
CTS1
DOME
POWER
+24
+12SW
SEL CTR
PLY CTR
KEY
+5
+12
K1
K2
K3
U2 74HC273
U16 74HC273
U12 74HC273
U11 ULN2003A
U18 74HC00
DP1 LN513RA
RN1 470
RN2 470
R5 2.2K
R6 2.2K
R7 100
R8 100
R9 100
C70 .1uF
C71 .1uF
C72 .1uF
C12 2200pF
C18 2200pF
C19 2200pF
C42 2200pF
C43 2200pF
JP3
J6

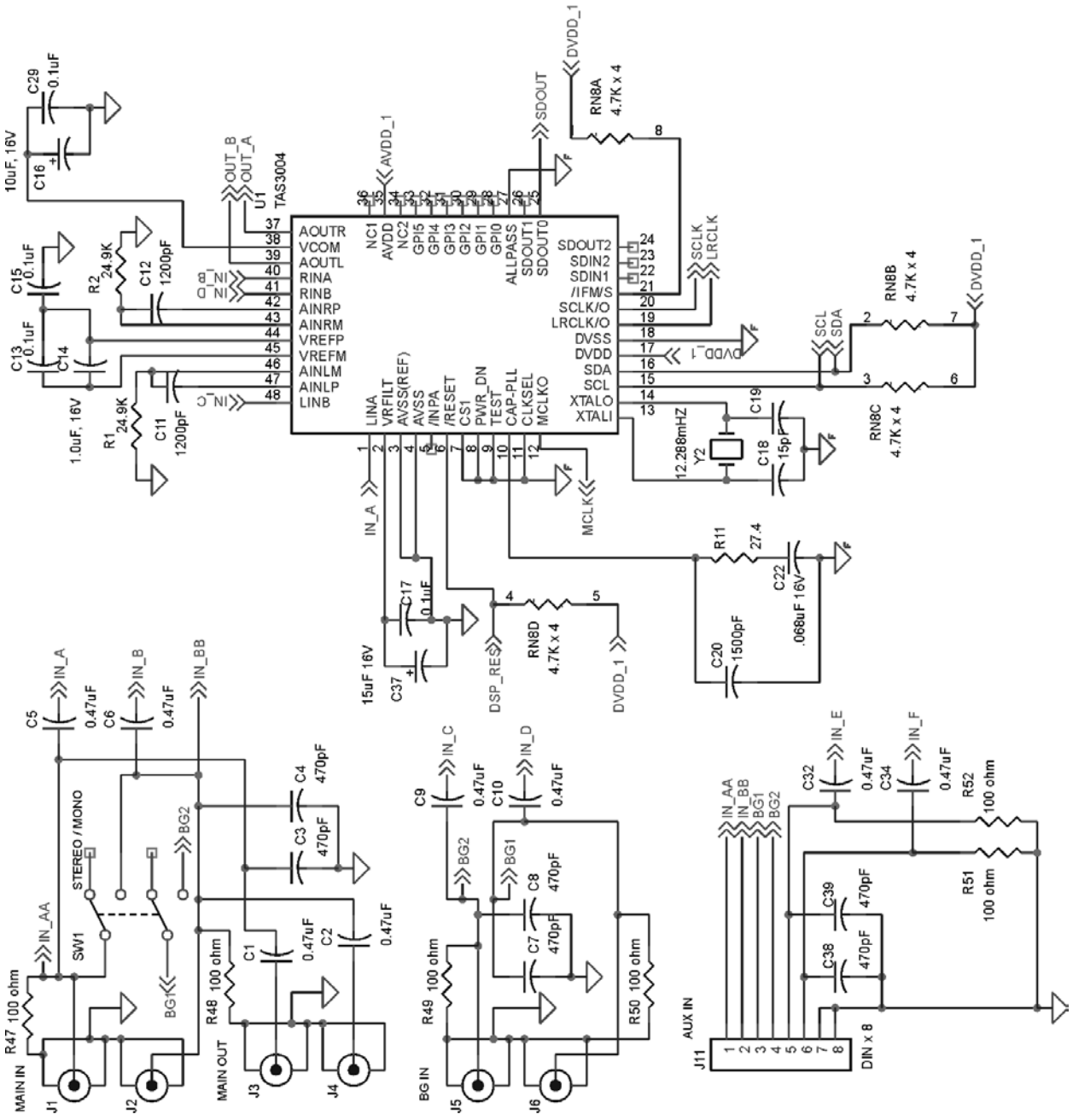

PCB Assy, CPU, 58399-1A
INPUTS
AD0-AD7
U23 74HC32
/IR
U3 74HC244
U9 74HC244
U6 74HC244
/INPUT1
/INPUT2
/INPUT3
RN4 10K
RN5 10K
RN10 10K
RN11 10K
RN7 10K
RN8 10K
RN3 10K
RN9 10K
RN5 1.0K
RESUME S1
SERVICE S3
DIAGNOSTICS S2
SC1
SC2
SC3
CAM2
CAM1
CD_DETENT
PG_DETENT
SERVICE
IR_FEEDBACK
+5
J3
IR
J4
COIN 6
COIN 5
COIN 4
COIN 3
COIN 2
COIN 1
COIN ENABLE
KEY
DBA ENABLE
DBA JAM
/COIN_ENA
DBA_ENA
+12SW
J7
BACK VOLUME CONTROL
RJ12
KIN1
KIN2
KIN3
K1
K2
K3
CNCLSCAN
DOME
POWER


PCB Assy, CPU, 58399-1A
PCB1
MECHINISM DRIVE AND CLOCK
INPUT1
BIT7 BIT6 BIT5 BIT4 BIT3 BIT2 BIT1 BIT0
IR_RECV CAM2 CAM1 CD_DT PG_DT DIAG. SERVICE RESUME
INPUT2
BIT7 BIT6 BIT5 BIT4 BIT3 BIT2 BIT1 BIT0
1 DBA JAM COIN 6 COIN 5 COIN 4 COIN 3 COIN 2 COIN 1
INPUT3
BIT7 BIT6 BIT5 BIT4 BIT3 BIT2 BIT1 BIT0
KEY IN 1 KEY IN 2 KEY IN 3 1 1 CNCLSCAN DOME POWER
MOTORS
KEY
GM2
GM1
MM1
CNCLSCAN
SERVICE
CAM2
CAM1
MAGAZINE
GRIP_OUT
GRIP_IN
PG_RT
PG_LT
CD DETENT
KEY
CD_DETENT
PG_DETENT
+125W
IN5347A
CR1 1N4002
CR2
CR6
U15 L293
U24 L293
U7 62421
RAMVCC
/LOW
/WR
/INT1
/CLOCK
A16/RD
AD0-AD3
A0-A3

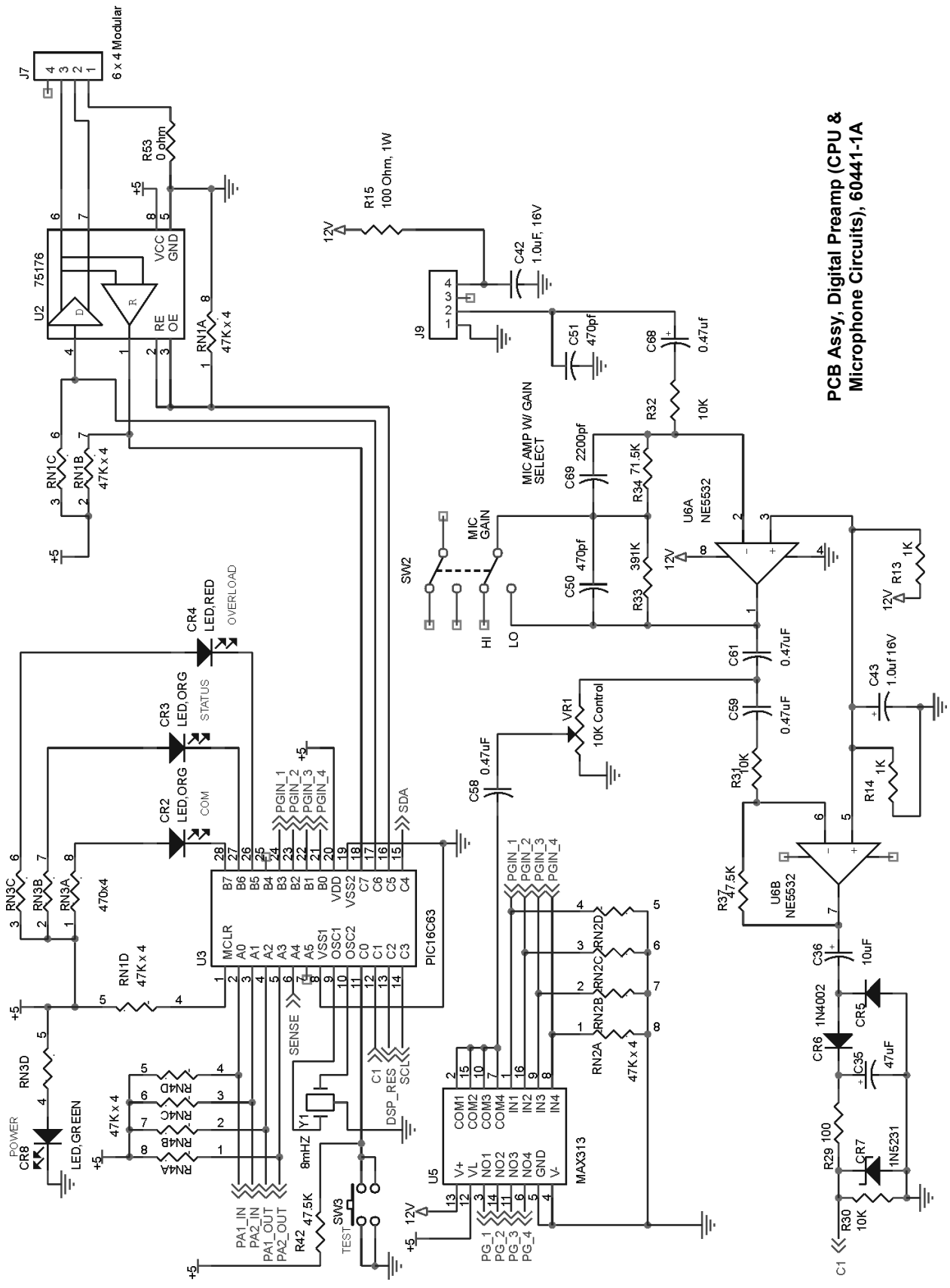
Bill of Materials - PCB Assy, CPU, 58399-1A

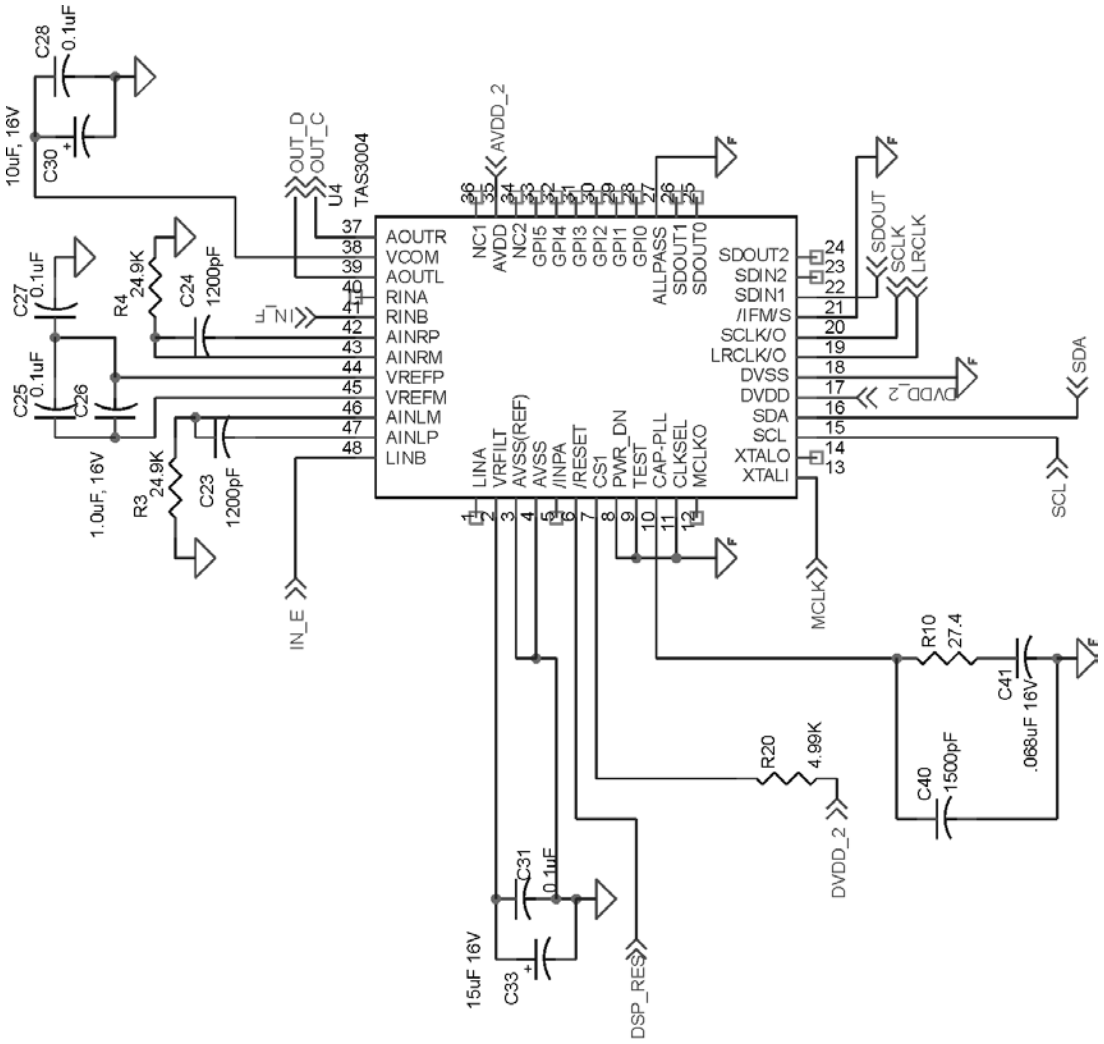
Reference	Part	Reference	Part
Back of board across 5V Supply	Diode, IN4733A	R10	Resistor: 180 ohm, 1/4W, 5%
		R5, R6	Resistor: 2.2K ohm, 1/4W, 5%
Back of board across R12	Diode, IN5347A	R2, R20	Resistor: 4.7K ohm, 1/4W, 5%
BAT1	Battery, 3V Lithium	R3	Resistor: 75K ohm, 1/4W, 5%
C1, C2, C3, C6, C9, C10,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

Digital Preamp

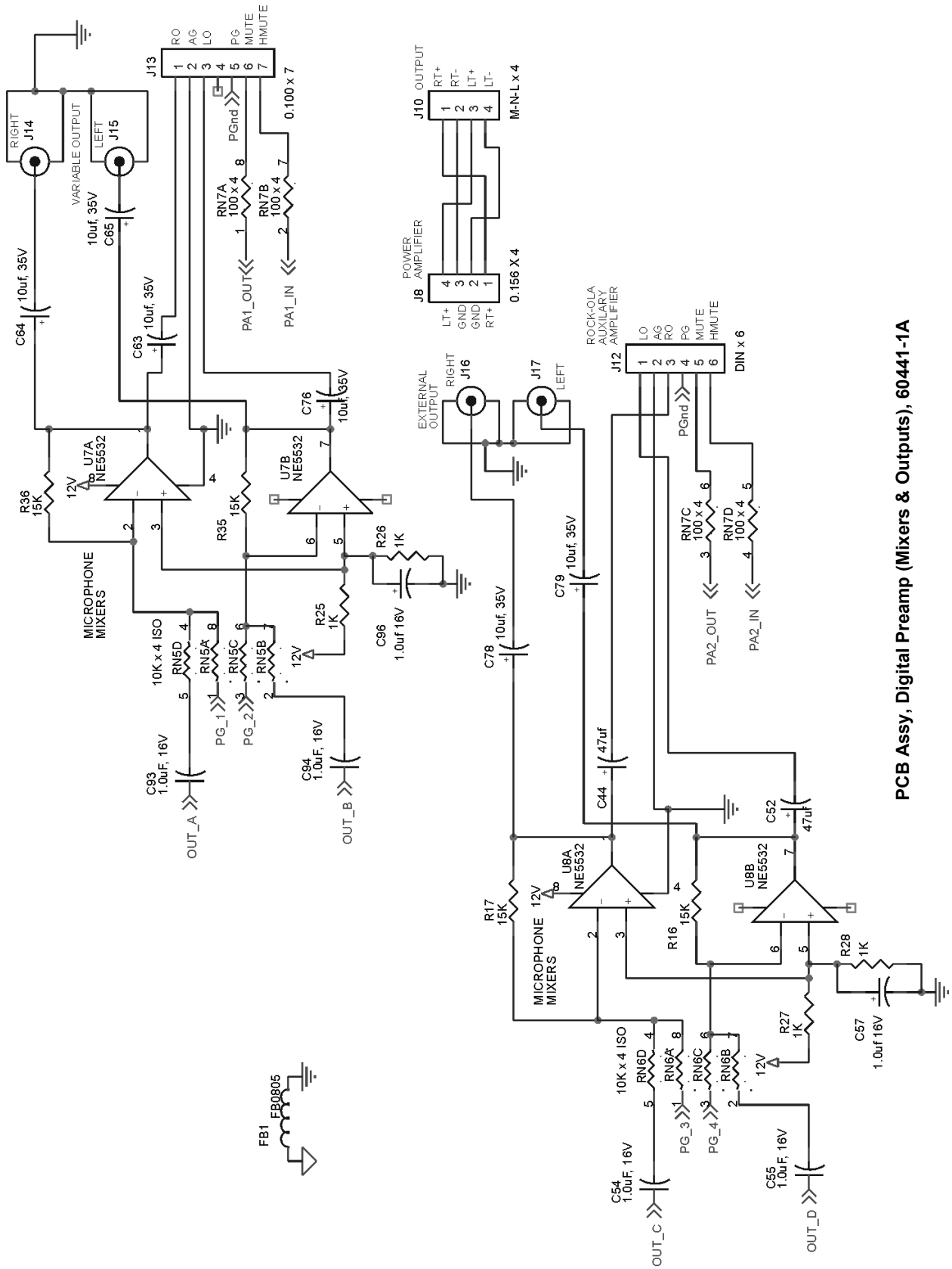


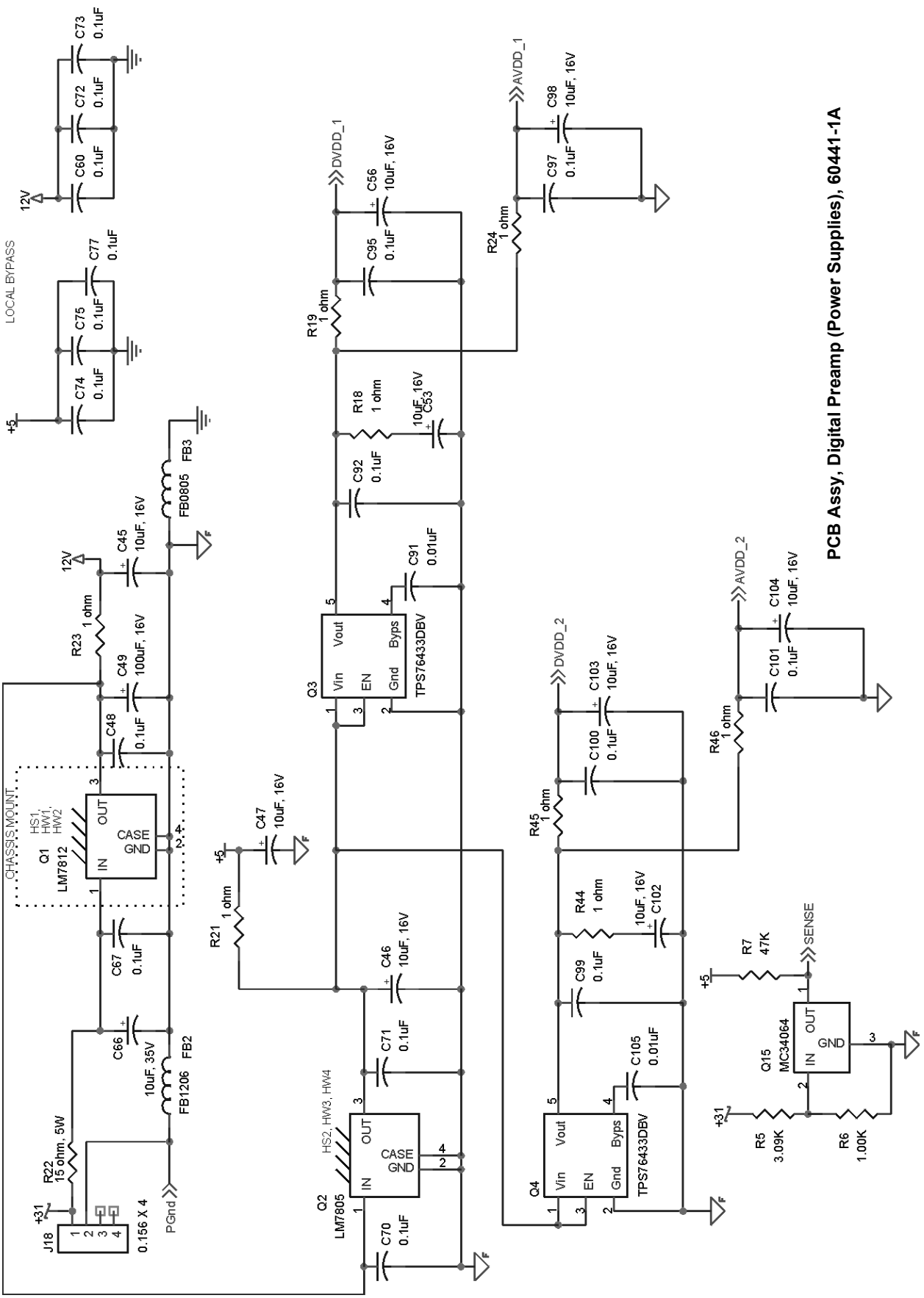
PCB Assy, Digital Preamp (DSP #1 & Inputs), 60441-1A


PCB Assy, Digital Preamp (CPU & Microphone Circuits), 60441-1A
J7
6 x 4 Modular
U2
75176
R53
0 ohm
R15
100 Ohm, 1W
C42
1.0uF, 16V
J9
C51
470pf
C68
0.47uf
R32
10K
MIC AMP W/ GAIN SELECT
C69
2200pf
R34
71.5K
C50
470pf
R33
391K
SW2
MIC GAIN
HI
LO
U6A
NE5532
R13
1K
C43
1.0uF16V
C61
0.47uF
C59
0.47uF
R31
10K
R14
1K
U6B
NE5532
R37
47.5K
C36
10uF
CR5
1N4002
CR6
1N4002
C35
47uF
R29
100
CR7
1N5231
R30
10K
VR1
10K Control
C58
0.47uF
RN1A
47K x 4
RN1C
RN1B
47K x 4
RN3C
RN3B
RN3A
470x4
RN1D
47K x 4
RN3D
RN4A
RN4B
RN4C
RN4D
47K x 4
CR4
LED,RED
OVERLOAD
CR3
LED,ORG
STATUS
CR2
LED,ORG
COM
CR8
LED,GREEN
POWER
U3
PIC16C63
MCLR
A0
A1
A2
A3
A4
A5
VSS1
OSC1
OSC2
VDD
VSS2
B7
B6
B5
B4
B3
B2
B1
B0
C7
C6
C5
C4
C0
C1
C2
C3
PGIN_1
PGIN_2
PGIN_3
PGIN_4
SDA
SCL
SENSE
DSP_RES
Y1
8mHZ
SW3
TEST
R42
47.5K
PA1_IN
PA2_IN
PA1_OUT
PA2_OUT
U5
MAX313
V+
VL
NO1
NO2
NO3
NO4
GND
V-
COM1
COM2
COM3
COM4
IN1
IN2
IN3
IN4
PG_1
PG_2
PG_3
PG_4
RN2A
RN2B
RN2C
RN2D
47K x 4
12V
+5
C1



PCB Assy, Digital Preamp (DSP #2), 60441-1A

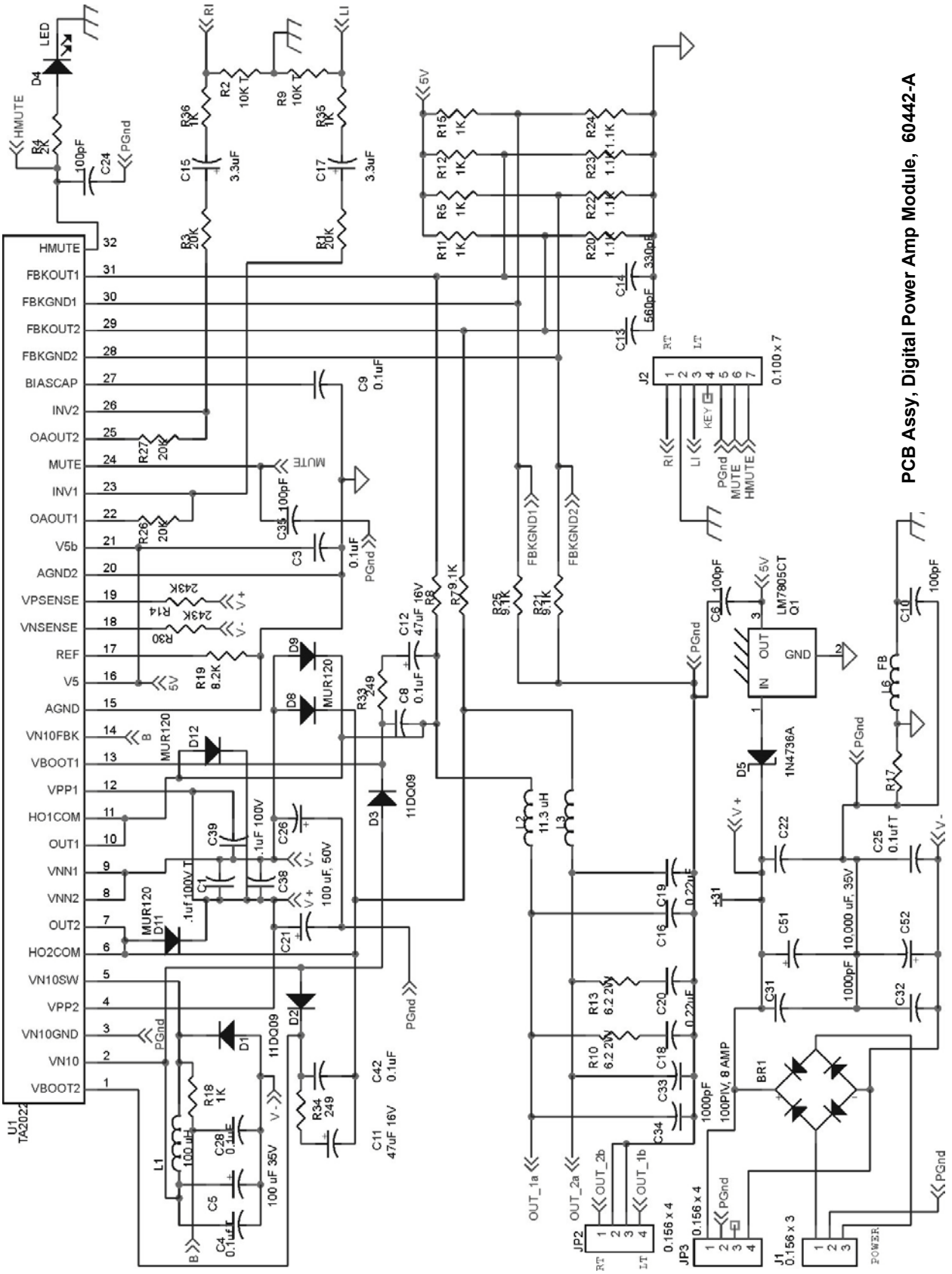

PCB Assy, Digital Preamp (Mixers & Outputs), 60441-1A
J13
RO
AG
LO
PG
MUTE
HMUTE
0.100 x 7
J10 OUTPUT
RT+
RT-
LT+
LT-
M-N-L x 4
J8
POWER AMPLIFIER
LT+
GND
GND
RT+
0.156 X 4
RIGHT J14
LEFT J15
VARIABLE OUTPUT
C64 10uf, 35V
C65 10uf, 35V
C63 10uf, 35V
C76 10uf, 35V
RN7A 100 x 4
RN7B 100 x 4
PA1_OUT
PA1_IN
PGnd
U7A NE5532
U7B NE5532
R36 15K
R35 15K
R26 1K
R25 1K
C96 1.0uf 16V
MICROPHONE MIXERS
10K x 4 ISO
RN5D
RN5A
RN5C
RN5B
PG_1
PG_2
C93 1.0uF, 16V
C94 1.0uF, 16V
OUT_A
OUT_B
EXTERNAL OUTPUT
RIGHT J16
LEFT J17
ROCK-OLA AUXILARY AMPLIFIER
J12
LO
AG
RO
PG
MUTE
HMUTE
DIN x 6
RN7C 100 x 4
RN7D 100 x 4
PA2_OUT
PA2_IN
C78 10uf, 35V
C79 10uf, 35V
C44 47uf
C52 47uf
U8A NE5532
U8B NE5532
R17 15K
R16 15K
R28 1K
R27 1K
C57 1.0uf 16V
10K x 4 ISO
RN6D
RN6A
RN6C
RN6B
PG_3
PG_4
C54 1.0uF, 16V
C55 1.0uF, 16V
OUT_C
OUT_D
FB1 FB0805

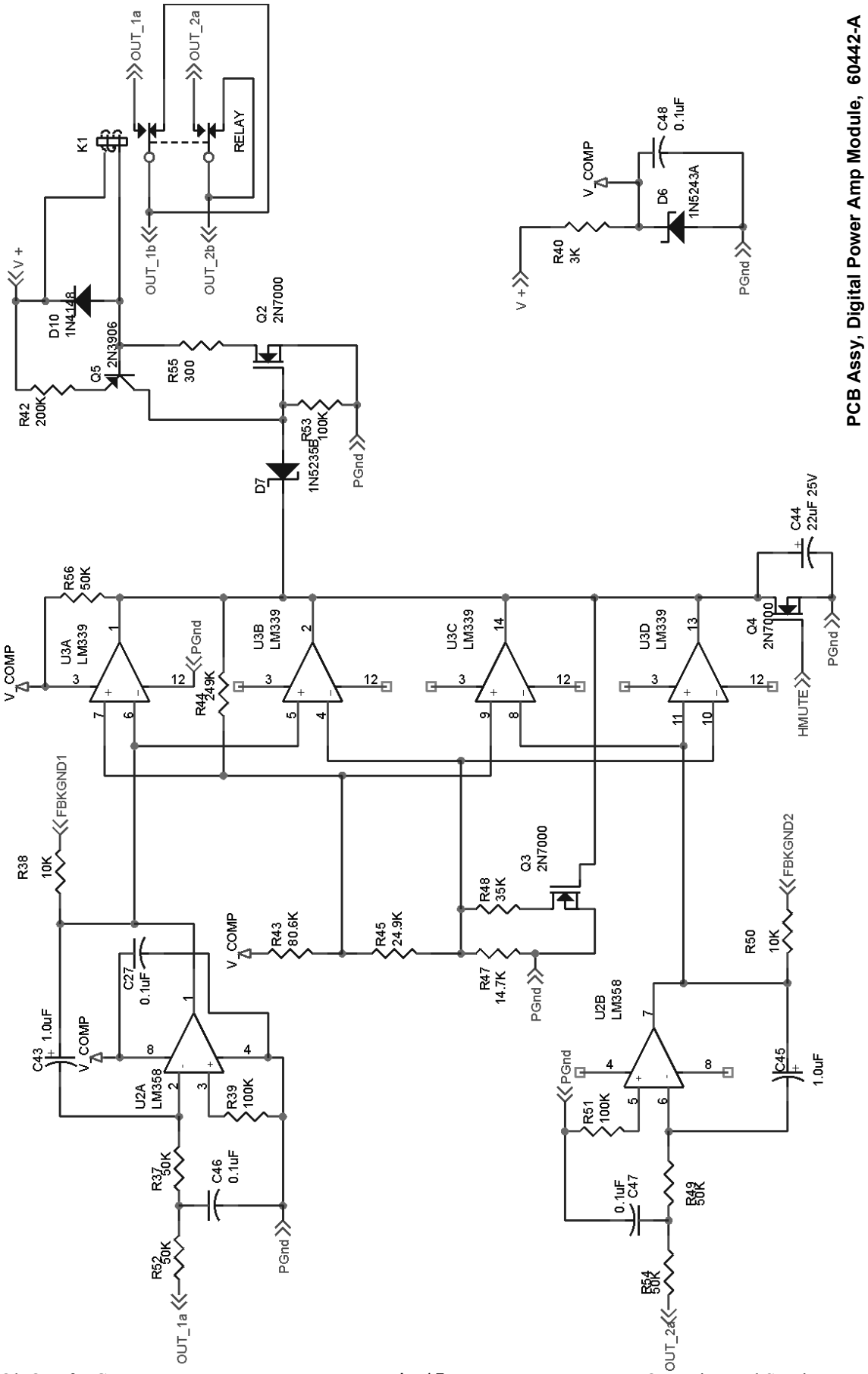

PCB Assy, Digital Preamp (Power Supplies), 60441-1A
LOCAL BYPASS
CHASSIS MOUNT
12V
+5
+31
PGnd
DVDD_1
DVDD_2
AVDD_1
AVDD_2
SENSE
Q1 LM7812
Q2 LM7805
Q3 TPS76433DBV
Q4 TPS76433DBV
Q15 MC34064
HS1, HW1, HW2
HS2, HW3, HW4
J18
0.156 X 4
R22 15 ohm, 5W
R23 1 ohm
R21 1 ohm
R19 1 ohm
R18 1 ohm
R24 1 ohm
R45 1 ohm
R44 1 ohm
R46 1 ohm
R7 47K
R5 3.09K
R6 1.00K
C45 10uF, 16V
C49 100uF, 16V
C48 0.1uF
C67 0.1uF
C66 10uF, 35V
C47 10uF, 16V
C46 10uF, 16V
C71 0.1uF
C70 0.1uF
C53 10uF, 16V
C92 0.1uF
C91 0.01uF
C56 10uF, 16V
C95 0.1uF
C97 0.1uF
C98 10uF, 16V
C100 0.1uF
C103 10uF, 16V
C99 0.1uF
C102 10uF, 16V
C105 0.01uF
C101 0.1uF
C104 10uF, 16V
C73 0.1uF
C72 0.1uF
C60 0.1uF
C77 0.1uF
C75 0.1uF
C74 0.1uF
FB3 FB0805
FB2 FB1206

Bill of Materials, Digital Preamp, 60441-1A

Reference	Part
CR2,CR3	LED,ORG
CR4	LED,RED
CR6,CR5	Diode, DL41, 1N4002
CR7	Zener Diode, DL35 1N5231
CR8	LED,GREEN
C1,C2,C5,C6,C9,C10,C32,C34,C58,C59,C61,C68	Capacitor, 0.47uF, 16VDC
C3,C4,C7,C8,C38,C39,C50,C51	Capacitor, 470pF, 50V
C11,C12,C23,C24	Capacitor, 1200pF, 50V
C13,C15,C17,C25,C27,C28,C29,C31,C48,C60,C67,C70, C71,C72,C73,C74,C75,C77,C92,C95,C97,C99,C100,C101	Capacitor, 0.1uF, 50V
C14,C26,C42,C54,C55,C93,C94	Capacitor, 1.0uF, 16V, 0805
C16,C30,C45,C46,C47,C53,C56,C98,C102,C103,C104	Capacitor, 10uF 16V
C18,C19	Capacitor, 15pF
C20,C40	Capacitor, 1500pF, 50V
C22,C41	Capacitor, .068uF 16V
C37,C33	Capacitor, 15uF 16V
C35	Capacitor, 47uf, 16V
C36	Capacitor, 10uf, 16V
C49	Capacitor, 100uF, 16V
C43,C57,C96	Capacitor, 1.0uf 16V, Electrolytic
C44, C52	Capacitor, 47uF, 35V
C63,C64,C65,C66C76,C78,C79	Capacitor, 10uF, 35V
C69	Capacitor, 2200pf, 50V
C91,C105	Capacitor, 0.01uF, 50V
FB1,FB3	Ferrite, 39 Ohm, 4A, 0805
FB2	Ferrite, 31 Ohm, 1.5A, 1206
J1,J2,J3,J4,J5,J6,J14,J15,J16,J17	RCA Jack
J7	RJ11 jack, 6 x 4 Modular
J8,J18	0.156 X 4 Receptacle, Bottom Entry
J9	0.156 x 4 Header, Straight
J10	M-N-L x 4
J11	DIN x 8
J12	DIN x 6
J13	0.100 x 7 Receptacle, Bottom Entry
Q1	12V Regulator, TO-220, LM7812 (mounted to chassis)
Q2	5V Regulator, TO-220, LM7805
Q3,Q4	3.3V Regulator, SM, TPS76433DBV
RN1,RN2,RN4	Resistor Network, 47K x 4
RN3	Resistor Network, 470x4
RN5,RN6	Resistor Network, 10K x 4 ISO
RN7	Resistor Network, 100 x 4
RN8	Resistor Network, 4.7K x 4
R1,R2,R3,R4	Resistor, 24.9K, 1/16W, 1%, 0603
R11,R10	Resistor, 27.4, 1/16W, 1%, 0603
R13,R14,R25,R26,R27,R28	Resistor, 1.00K, 1/10W, 1%, 0805
R15	Resistor, 100 Ohm, 1W, 5%, TH
R16,R17,R35,R36	Resistor, 15.0K, 1/16W, 1%, 0603
R18,R19,R21,R23,R24,R44,R45,R46	Resistor, 1.0, 1/8W, 5%, 1206
R20	Resistor, 4.99K, 1/16W, 1%, 0603
R22	Resistor, 15 Ohm, 5W
R29	Resistor, 1/8W, 5%, 1206
R30,R31,R32	Resistor, 10.0K, 1/16W, 1%, 0603
R33	Resistor, 391K, 1/16W, 1%, 0603
R34	Resistor, 71.5K, 1/16W, 1%, 0603
R37,R42	Resistor, 47.5K, 1/16W, 1%, 0603
R47,R48,R49,R50,R51,R52	Resistor, 100 Ohm, 1/8W, 1%, 0805
SW1,SW2	Switch, DPDT
SW3	Switch, Pushbutton
U1,U4	I. C. DSP, TI TAS3004PFB
U2	I.C., RS-485 Transceiver, 75176
U3	I.C., Programmed, PIC16C63A-20/SP
U5	I.C., Quad Switch, MAX313
U6,U7,U8	I.C. Low Noise OP Amp, NE5532
VR1	Potentiometer, 10K, Vertical
Y1	Crystal, with capacitors, 8mHZ
Y2	Crystal, Parallel Cut, 12.288mHZ

Digital Power Amp Module

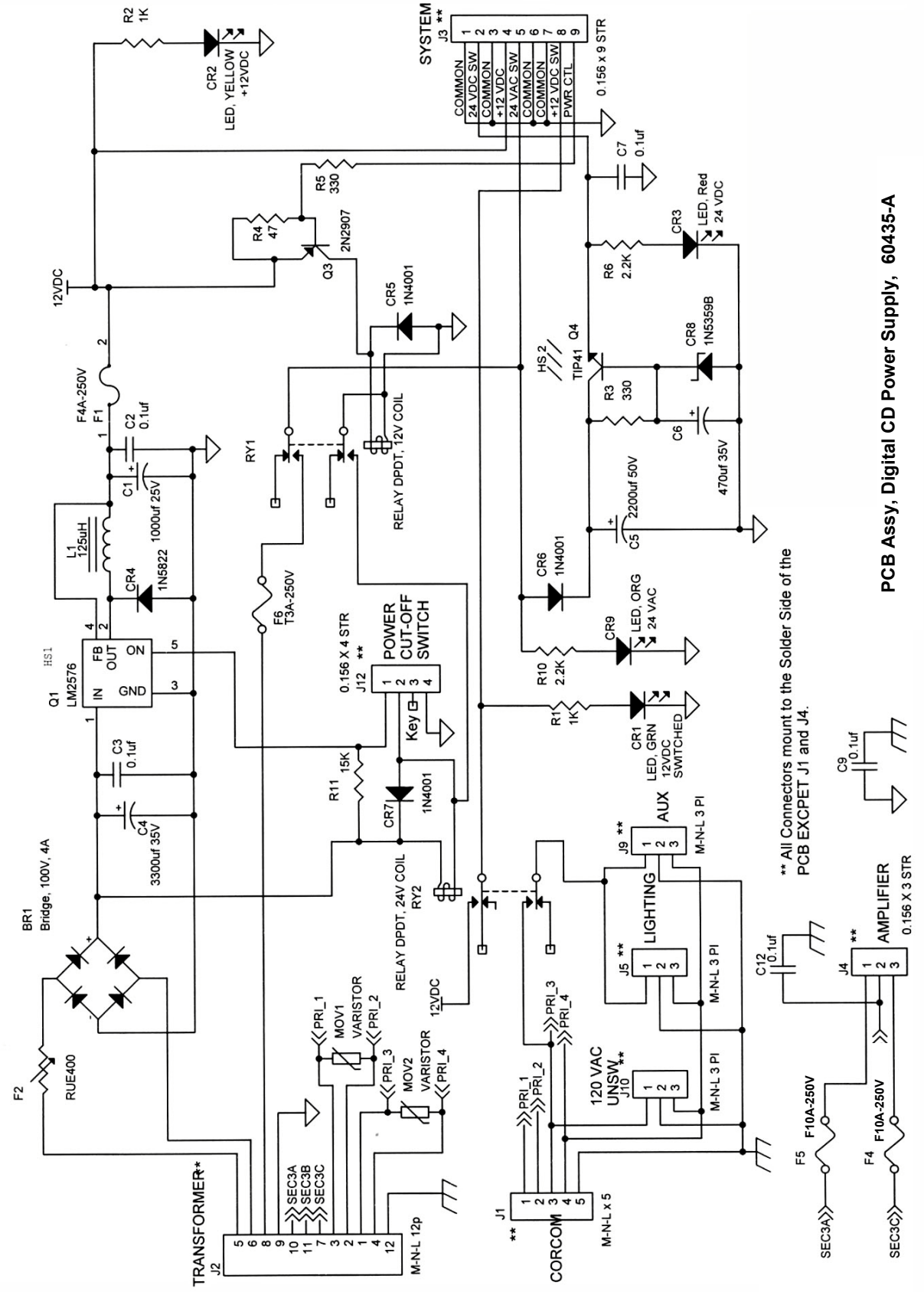



PCB Assy, Digital Power Amp Module, 60442-A
OUT_1a
OUT_2a
OUT_1b
OUT_2b
K1
RELAY
V +
D10 1N4148
Q5 2N3906
R42 200K
R55 300
Q2 2N7000
R53 100K
D7 1N5235B
PGnd
V_COMP
R40 3K
D6 1N5243A
C48 0.1uF
C44 22uF 25V
Q4 2N7000
HMUTE
R56 50K
U3A LM339
U3B LM339
U3C LM339
U3D LM339
R44 249K
FBKGND1
R38 10K
Q3 2N7000
R48 35K
R43 80.6K
R45 24.9K
R47 14.7K
FBKGND2
R50 10K
C27 0.1uF
C43 1.0uF
U2A LM358
R39 100K
R37 50K
C46 0.1uF
R52 50K
U2B LM358
R51 100K
C45 1.0uF
C47 0.1uF
R49 50K
R54 50K

Bill of Materials, Digital Power Amp Module, 60442-A

Reference	Part
BR1	Bridge Rectifier, 100PIV, 8 AMP *
C1	Cap, .1uf 100V Thru-hole
C3,C8,C9,C27,C28,C42,C46,C47,C48	Cap, 0.1uF, 50V 0805
C4,C22,C25	Cap, 0.1uf, 50V Thru-hole
C5	Cap, 100 uF 35V Alum
C6,C10,C24,C35	Cap, 100pF, 50V 0805
C11,C12	Cap, 47uF 16V Alum
C13	Cap, 560pF, 50V 0805
C14	Cap, 330pF, 50V 0805
C15,C17	Cap, 3.3uF, 25V Alum
C16,C18,C19,C20	Cap, 0.22uF, 50V Thru-hole
C21, C26	Cap, 100 uF, 50V Alum
C31,C32,C33,C34	Cap, 1000pF, 50V 0805
C39,C38	Cap, 0.1uF 100V 1210
C43,C45	Cap, 1.0uF 50V Alum
C44	Cap, 22uF 25V Alum
C51,C52	Cap, 10,000 uF, 35V Alum
D1,D2,D3	Diode, 11DQ09 *
D4	LED, Red Diffused, Hi-Eff, T-1 3/4
D5	Diode, 1N4736A Thru-hole
D6	Diode, 1N5243A Thru-hole
D7	Diode, 1N5235B Thru-hole
D8,D9,D11,D12	Diode, MUR120 Thru-hole
D10	Diode, 1N4148 Thru-hole
JP2,JP3	Header, 0.156 x 4 STR 0.625 in long (Note 5)*
J1	Header, 0.156 x 3 STR
J2	Header, 0.100 x 7 STR (Note 6) *
J7, J8	Screw Terminal *
K1	Relay, DPDT *
L1	Inductor, Shielded, 100 uH *
L2,L3	Inductor, Torroid, 11.3 uH (Note 7) *
L6	Ferrite Bead, 0603 *
Q1	Regulator, LM7805CT, 5VDC, 1A, TO-220
Q2,Q3,Q4	Transistor, MOSFET 2N7000, TO-92
Q5	Transistor, PNP, 2N3906, TO-92
R1,R3,R26,R27	Res, 20K, 1/8W, 1%, Thru-hole
R2,R9	Res, 10K, 1/8W, 5%, Thru-hole
R4	Res, 2K, 1/8W, 5%, Thru-hole
R5,R11,R12,R15,R18,R35,R36	Res, 1.0K, 1/8W, 1%, Thru-hole
R7,R8,R21,R25	Res, 9.1K, 1/8W, 1%, Thru-hole
R13,R10	Res, 6.2, 2W, 5%, MF, Thru-hole
R30,R14	Res, 243K, 1/8W, 1%, Thru-hole
R17	0 Ohm Jumper, 1206
R19	Res, 8.2K, 1/8W, 1%, Thru-hole
R20,R22,R23,R24	Res, 1.1K, 1/8W, 1%, Thru-hole
R34,R33	Res, 249 Ohm, 1/8W, 1%, Thru-hole
R37,R49,R52,R54,R56	Res, 51K, 1/10W, 5%, 0805
R38,R50	Res, 10K, 1/10W, 5%, 0805
R39,R51,R53	Res, 100K, 1/10W, 5%, 0805
R40	Res, 3K, 1/10W, 5%, 0805
R42	Res, 200K, 1/10W, 5%, 0805
R43	Res, 80.6K, 1/10W, 1% or better, 0805
R44	Res, 249K, 1/10W, 5%, 0805
R45	Res, 24.9K, 1/10W, 1% or better, 0805
R47	Res, 14.7K, 1/10W, 1% or better, 0805
R48	Res, 34.8K, 1/10W, 1%, 0805
R55	Res, 300 Ohm, 1/10W, 5%, 0805
U1	IC, Class T Power Amp Module *
U2	IC, OP Amp LM358 DIP-8
U3	IC, Comparator, LM339, DIP-14
HS1	Heat Sink, Custom to RMC Specifications *

Digital CD Power Supply

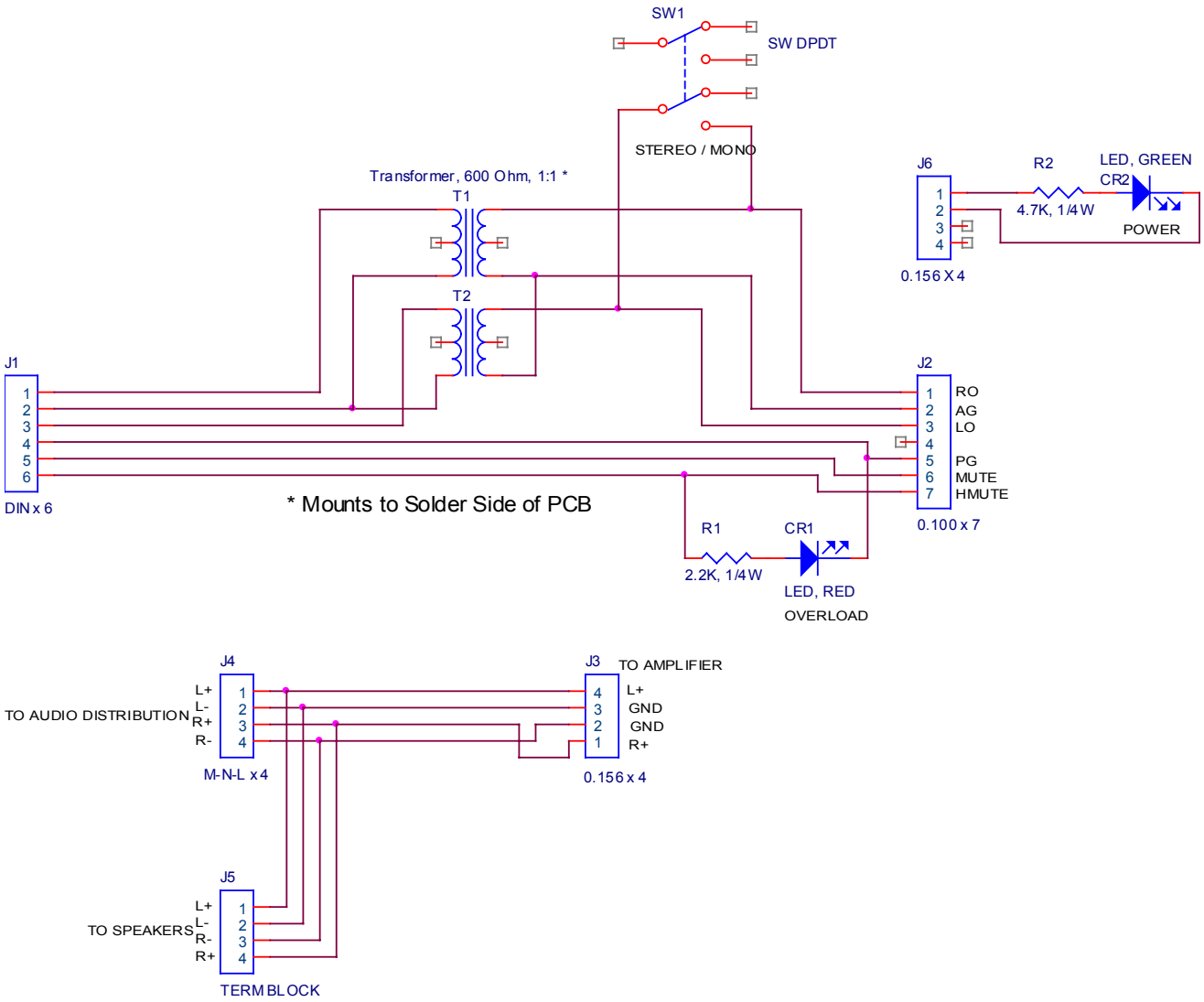


Bill of Materials, Digital CD Power Supply, 60435-A

Reference	Part
BR1	Bridge, 100V, 4A
CR1	LED, GRN
CR2	LED, YELLOW
CR3	LED, Red
CR4	Diode, Schotkey, 1N5822
CR5,CR6,CR7	Diode, 1N4001
CR8	Diode, 1N5359B
CR9	LED, ORG
C1	Capacitor, 1000uf 25V
C2,C3,C7,C9,C12	Capacitor, 0.1uf
C4	Capacitor, 3300uf 35V
C5	Capacitor, 2200uf 50V
C6	Capacitor, 470uf 35V
F1	Fuse, Fast Acting, 4A-250V
F2	Polyfuse, 4A, RUE400
F4,F5	Fuse, Fast Acting, 10A-250V
F6	Fuse, Time Delay, 3A-250V
J1	PC Header, M-N-L x 5
J2	PC Header, M-N-L 12p
J3	0.156 x 9 Header, Straight
J4	0.156 X 3 Header, Straight
J5,J9,J10	PC Header, M-N-L 3 Pl
J12	0.156 X 4 Header, Straight
L1	Inductor, 125uH
MOV1,MOV2	Metal Oxide Varistor, 140VAC, 1250SA
Q1	Regulator, 12V switching, LM2576
Q3	Transistor, 2N2907
Q4	Transistor, TIP41
RY1	Relay DPDT, 12V Coil
RY2	Relay DPDT, 24V Coil
R1,R2	Resistor, 1K
R5,R3	Resistor, 330
R4	Resistor, 47
R10,R6	Resistor, 2.2K
R11	Resistor, 15K

Digital Auxiliary Amp

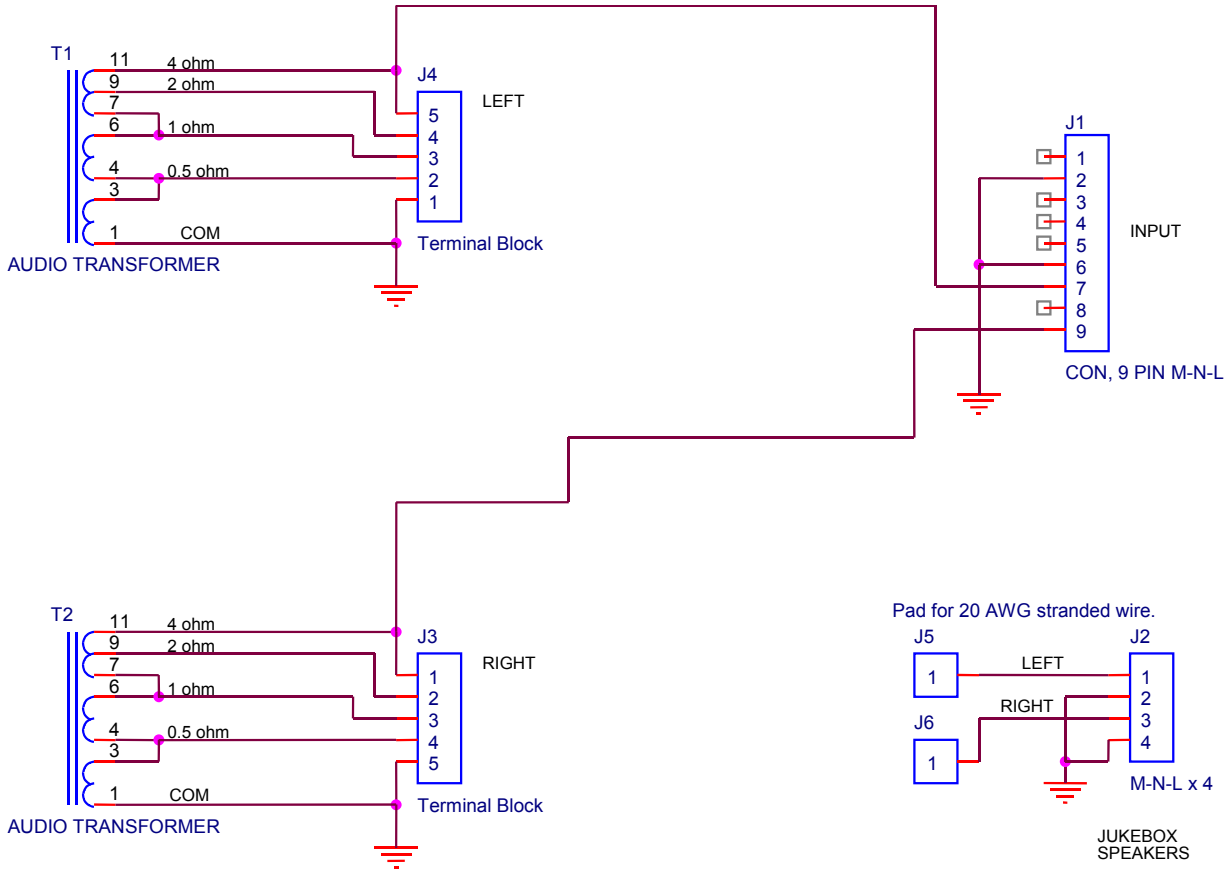
PCB Assy, Digital Auxiliary Amp, 60429-1A



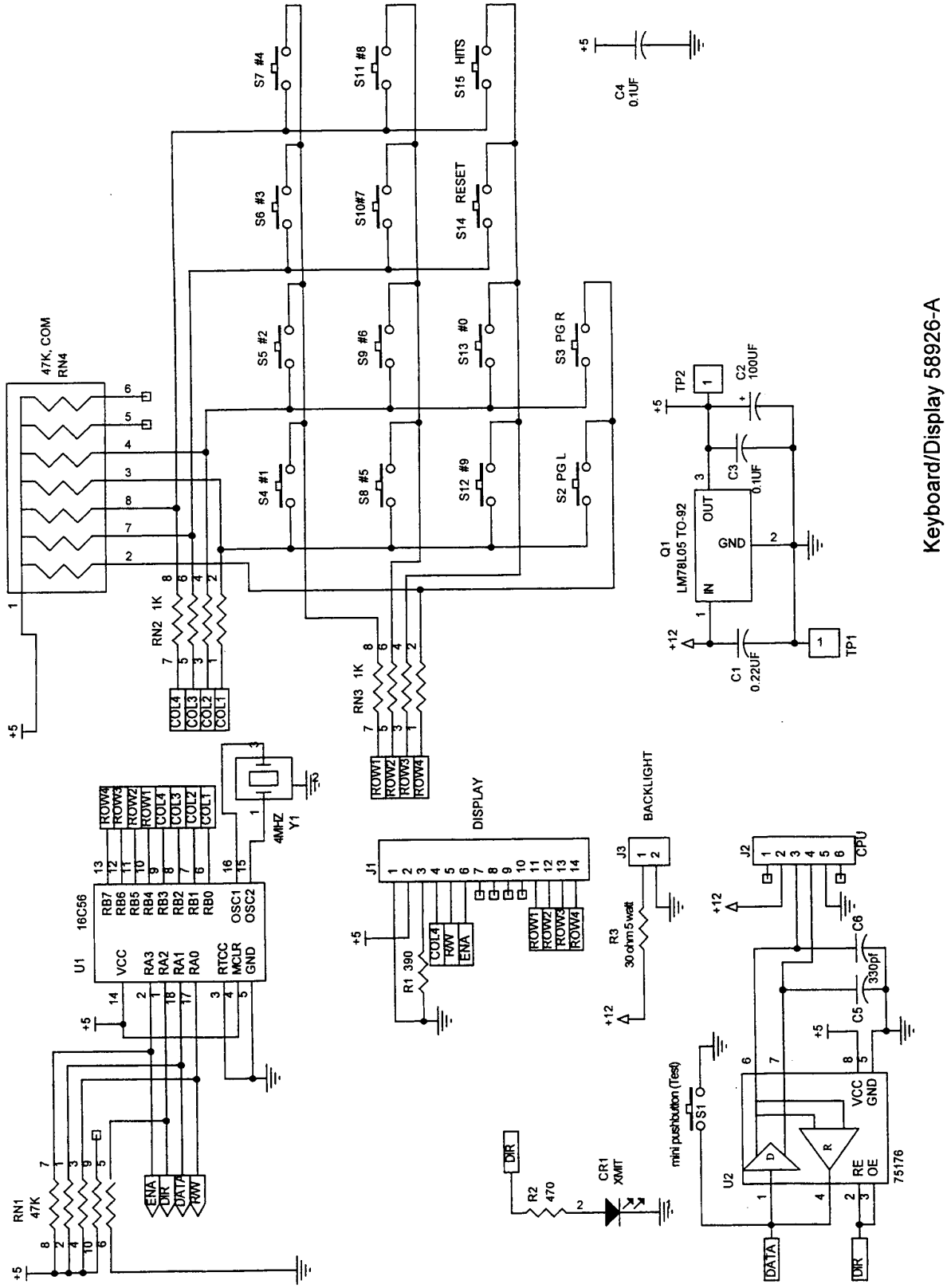
Bill of Materials

Reference	Part
CR1	LED, RED
CR2	LED, GREEN
J1	Connector, DIN x 6
J2	0.100 x 7, Receptacle, Bottom Entry
J3,J6	0.156 X 4, Receptacle, Bottom Entry
J4	M-N-L x 4, PCB Mount Header
J5	Terminal Block, 4 place
R1	Resistor, 2.2K, 1/4W
R2	Resistor, 4.7K, 1/4W

Audio Output Panel 70107-A



Keyboard/Display



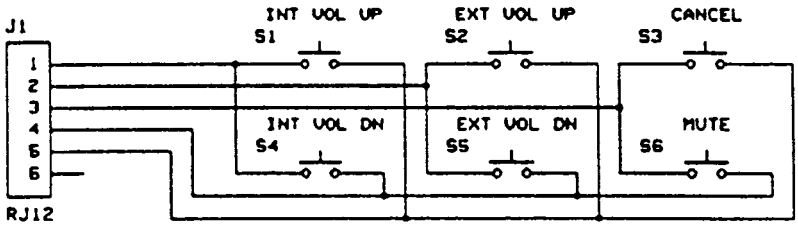
Bill of Materials, PCB Assy, Keyboard/Display, 58926-A

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

Removable Volume Control

(Back of Machine)

PCB Assy, Volume Control, 58515-A

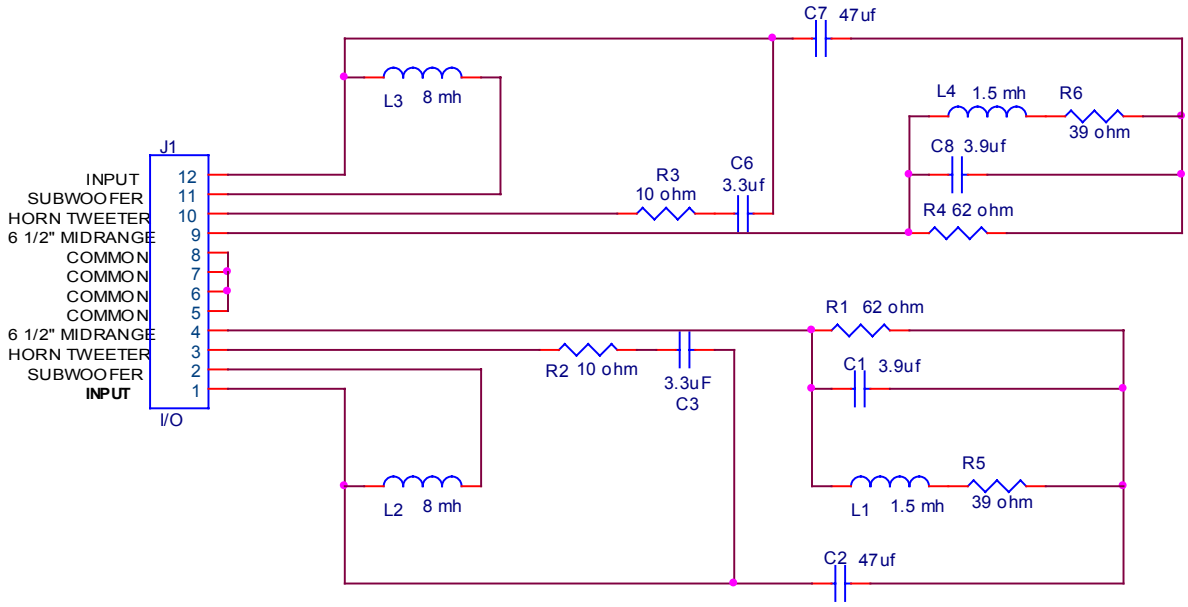


Bill of Materials - Volume Control PC Board Assembly, 58515-A

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

Crossover

PCB Assy, Crossover, 60717-A

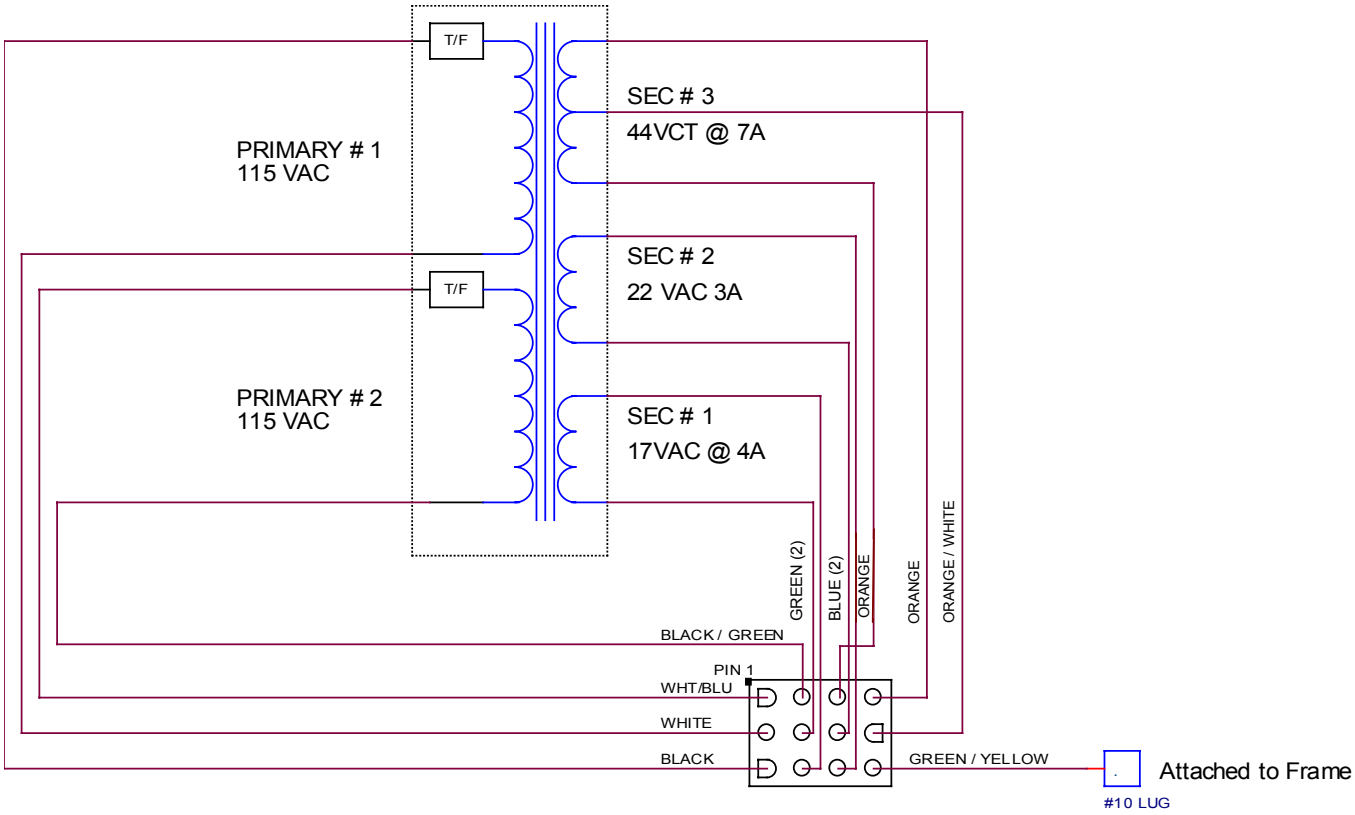


All resistors 5 watt 10%
All capacitors 100 VDC

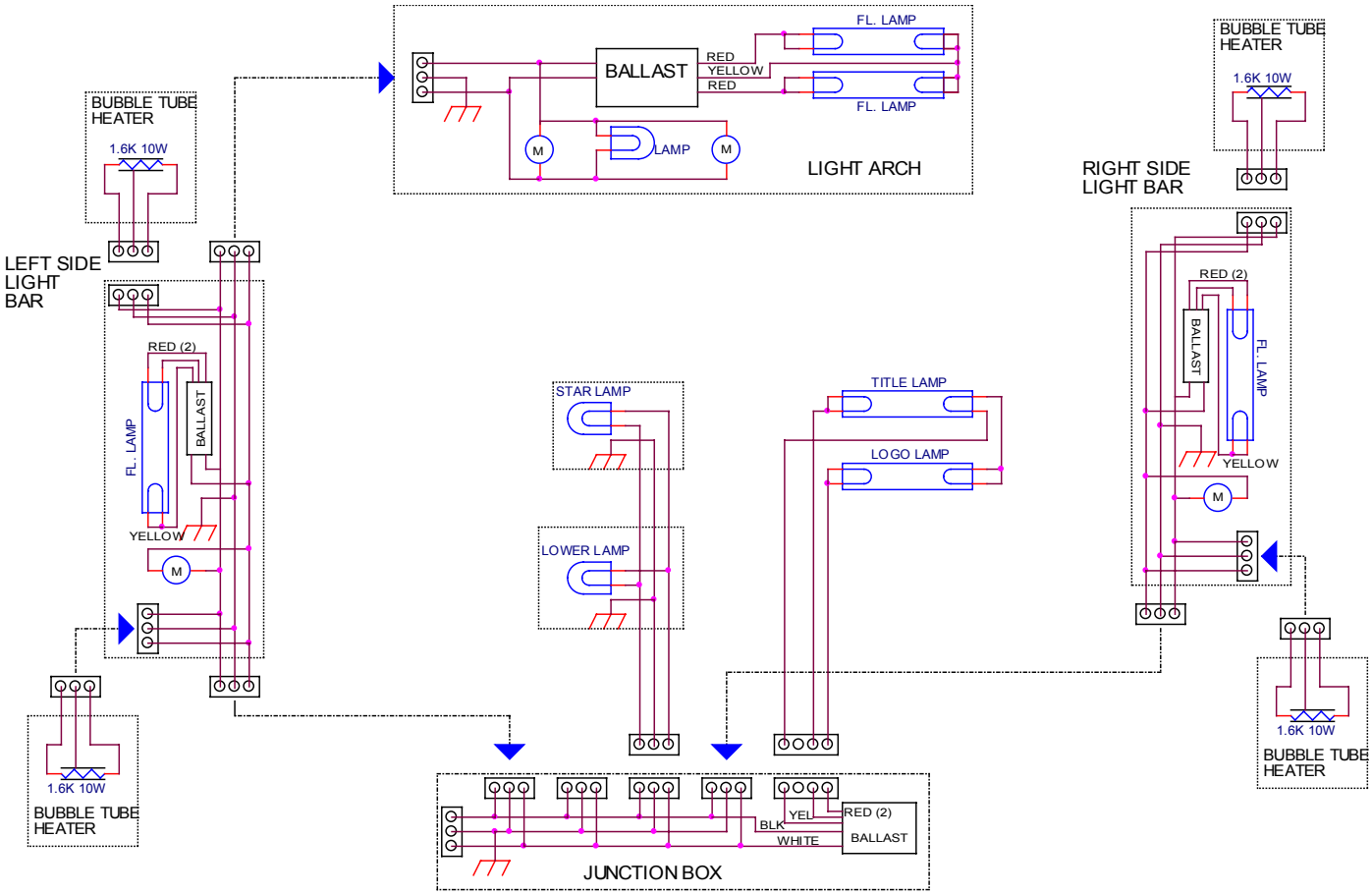
Bill of Materials, PCB Assy, Crossover, 60717-A

Reference	Part
C1, C8	Capacitor 3.9 uf
C2, C7	Capacitor 47 uf
C6, C3	Capacitor 3.3 uf
J1	Header 12 pin
L1, L4	Coil 1.5 mh
L2, L3	Coil 8 mh
R1, R4	Resistor 62 ohm
R2, R3	Resistor 10 ohm
R5, R6	Resistor 39 ohm

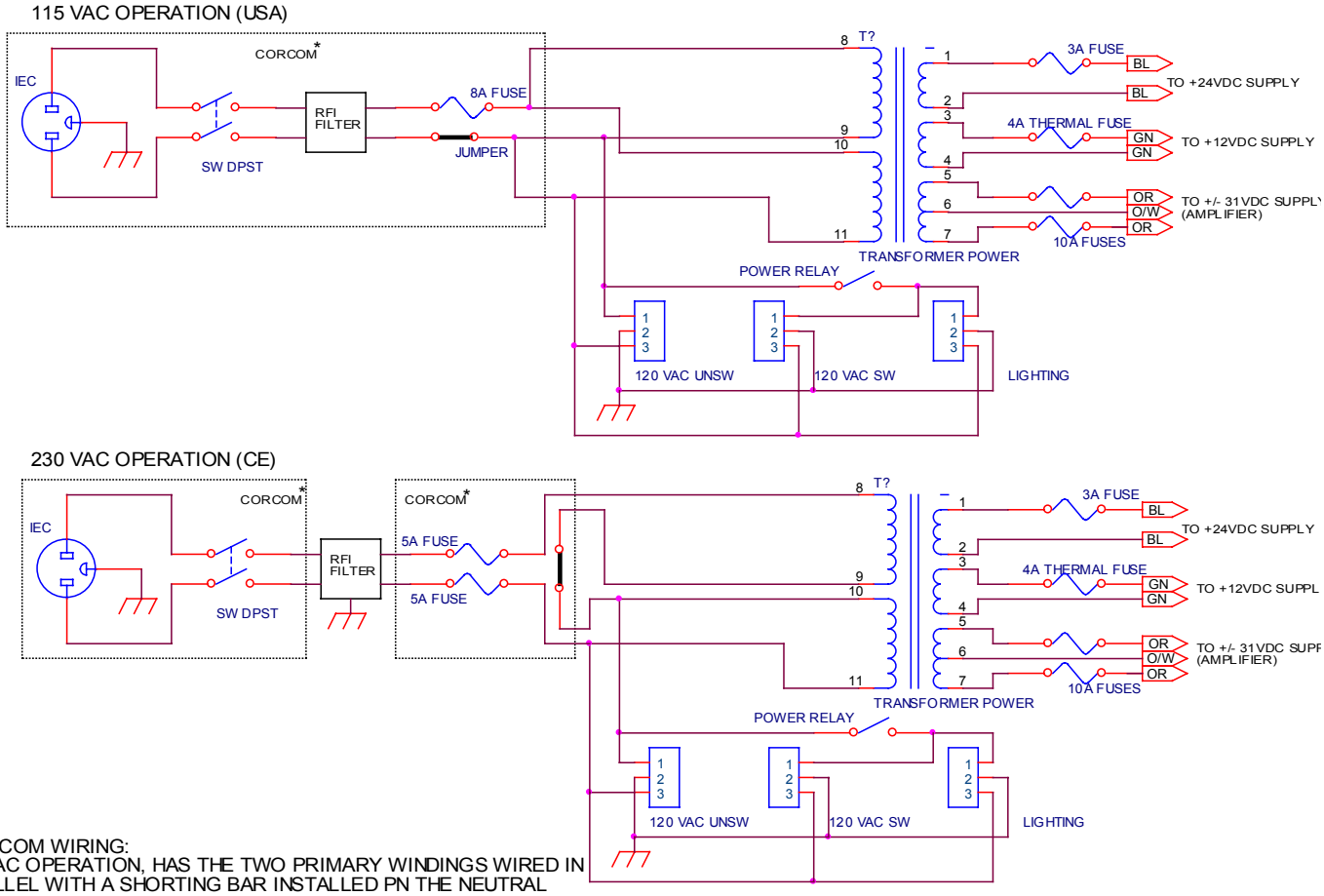
Transformer 60681-A



Lighting Wiring Diagram, CD-8



Primary Power Block Diagram, CD-4/6/8



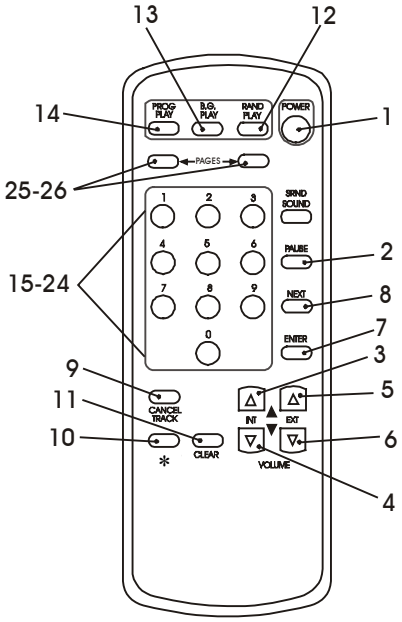
* CORCOM WIRING:
115 VAC OPERATION, HAS THE TWO PRIMARY WINDINGS WIRED IN PARALLEL WITH A SHORTING BAR INSTALLED PN THE NEUTRAL SIDE AND AN 8 AMP FUSE ON THE HOT SIDE.
230 VAC OPERATION HAS THE TWO PRIMARY WINDINGS WIRED IN SERIES WITH THE LIGHTING CONNECTED TO PRIMARY #2 SUCH THAT 115 VAC IS SUPPLIED. (2) 5 AMP FUSES ARE INSTALLED.

Section 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 Cancel Disc which stops the current selection, and clears any remaining selections from this disc out of the play queue. Set using Quick Find 125. Can also 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	Cancel Disc
121	Select Type	126	Clear Mem.
122	Rem Playlist	127	Random Sel.
123	Surround Snd	128	Background
124	Select Album	129	Play Lists

Microphone Kit P/N 02379-02 (Yoga)

Parts List:

QTY	P/N	Description
1	59360-A mtg brkt	Yoga Microphone w/
1 feet	59356-A	Cable Assembly, 75
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 adjusting the Music Level While Paging. See the jukebox service manual for setting instructions.

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.

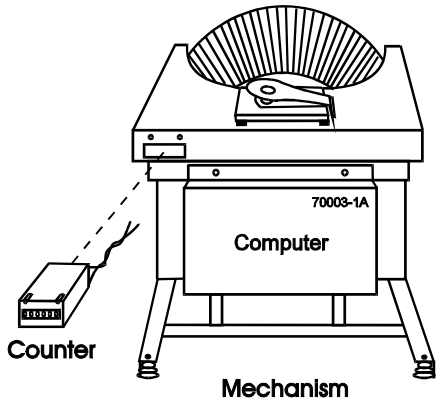
Counter Kit P/N 02410-01

Parts List:

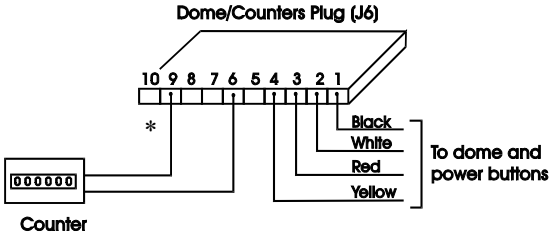
QTY	P/N	Description
1	58844	Counter with staked leads (twisted)
2	ST-02541	4-40 x 3/8 Hex Flg Machine Screw
1	ST-11308	3M Connector
1	59812	Bracket, coin counter
2	ST-04062	8 x 1/2 Phil Pan Hd Type “A” Screw
1	58899-01	Instruction Sheet

Instruction:

1. Mount the counter to the mechanism front with two (2) screws ST-02541 (4-40x3/8 Hex Flg).



2. Press wires from counter into the dome/ counters plug at pins 9 and 6 as shown:



* If J6 Pin 9 is occupied, use 3M connector ST-11308 to connect one wire from the counter to the blue/white wire at pin 7 of J1 on the computer.

Volume Accessory Unit Kit P/N 02414

The **Volume Accessory Unit (VAU)** was designed for locations that prefer rotary or slide remote volume controls or if it is not convenient to pull a new 6 wire cable.

With this kit any 3 wire potentiometer based remote volume/cancel control can be used with the new Syber Sonic electronics.

There can be one control to operate both internal and external amplifiers, or two controls (one for internal and one for external) wired to the unit.

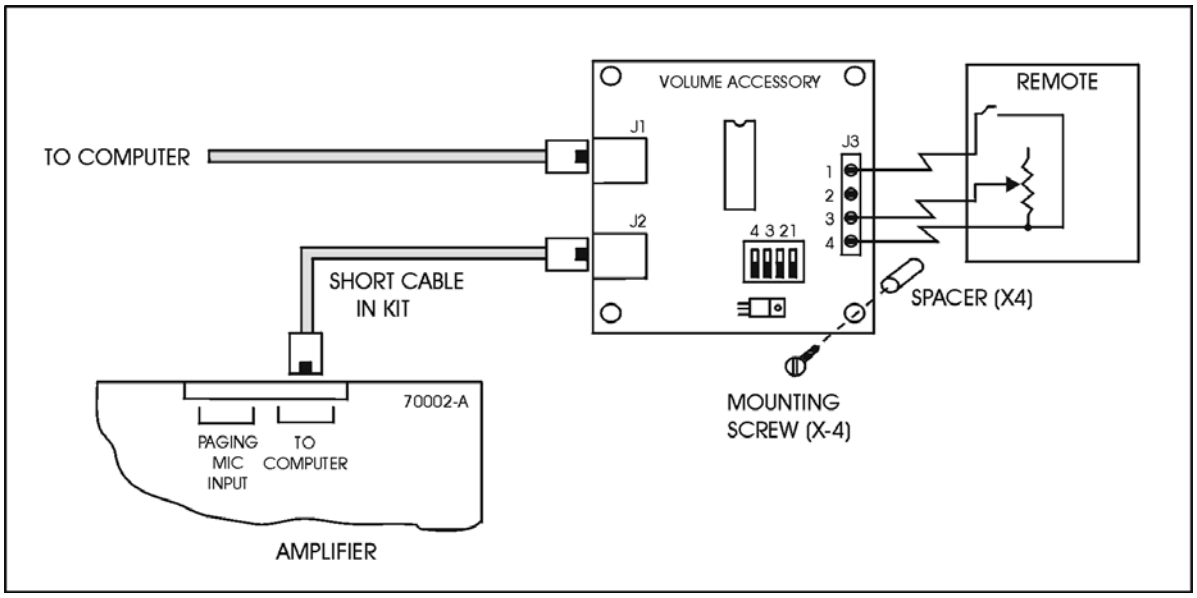
Kit Contents:

(1)	58809-A	VAU Printed Circuit Board
(1)	58876	12” Modular Cable
(4)	ST-11155	Nylon Standoffs
(4)	ST-09716	6 x 1 Hex Hd Screws
(1)	58877	Instruction sheet

Installation:

1. Turn off power to the jukebox.
2. Remove the title page unit (Legend and Rocket).
3. Mount the circuit board to the back of the cabinet near the amplifier and cable access hole.
4. Unplug the communication cable going to the computer from the amplifier.
5. Plug this into one of the modular connectors on the VAU.
6. Run the 12” cable furnished with the kit from the other connector on the VAU to the amplifier.
7. Connect the remote volume control(s) as follows:

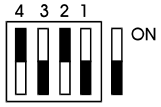
   Terminal 1 - Cancel button(s)
   Terminal 2 - Potentiometer for external amplifier control (see note).
   Terminal 3 - Potentiometer for internal amplifier control (see note).
   Terminal 4 - Common ground



Set up:

Set the dip switches as follows:

- One potentiometer connected to terminal 3 for internal amplifier control only or internal/ external bridged.



- One potentiometer connected to terminal 2 for external amplifier control only.

- Two potentiometers connected one to terminal 3 for internal control and one connected to terminal 2 for external control.

The IR and push button remote volume functions are disabled for the amplifier that is using a potentiometer. The display does not readout volume settings as they are easily seen by the position of the knob. The mute and cancel track buttons will continue to operate normally.

Note: *If you are using only one potentiometer to control both internal and external amplifiers, leave the VAU out of the loop until you have balanced and bridged the volume controls. Refer to your jukebox manual on setting the volume levels for the speaker systems. Connect the potentiometer to terminal 3 only and set the switches for internal control. After bridging the amplifiers, reconnect the VAU, cycle the power to initialize it and then the single potentiometer will raise and lower the levels together.*

Testing:

1. Apply power and look at the LED on the circuit board. It should be flashing. If it does not, see “Troubleshooting”.

2. Make a selection and adjust the volume control(s).

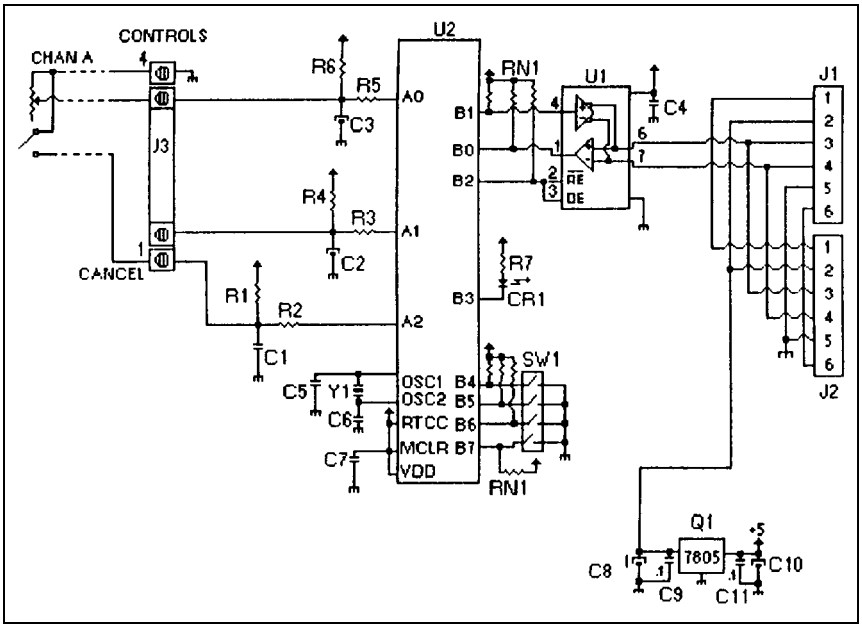
3. If the controls work backward i.e., turning the control down raises the volume, turn power off, flip switch 3 and try again.

Using:

It is important to remember that although you are turning or sliding a control, the levels are still digitally controlled so there is a small delay in responding to a new volume setting. This is normal. The volume control will be limited by the minimums and maximums established in the set up menu of the jukebox. If the background music system is enabled, the potentiometer(s) will adjust the volume with whatever limits are established in the set up menu as well.

Troubleshooting:

On power up, the LED should come on and start flashing. A regular heartbeat of approx. 10 per second is normal. If the LED comes on and stays on, remove all power from the jukebox and then reapply. Look at the display to see what software version is installed on the jukebox. If the LED still does not flash and the software is version 2.9 or higher, check the modular cable and connections. If the LED is dark, check for 5 volt power on the board. If the volume stays all the way up or down, check connections to the potentiometer(s).

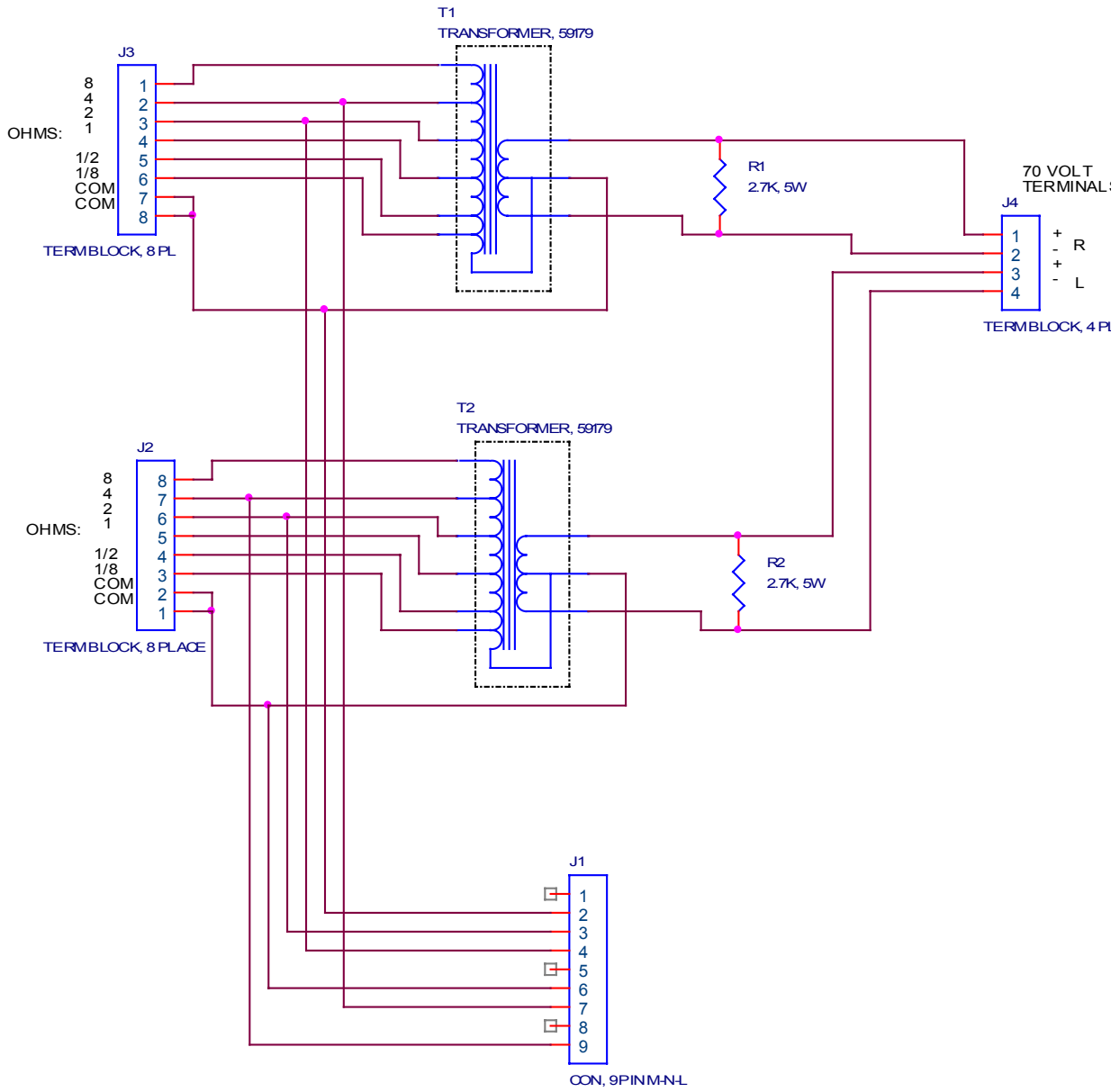


Parts List:

58809-A VAU PCB Assembly

Designator	Part No.	Description
-	58808	PCB, Raw
R1	51293	Resistor 10K, 1/4W
R2, R7	51564	Resistor 1K ohm, 1/4W
R3, R5	53888	Resistor 180 ohm, 1/4W
R4, R6	53869	Resistor 4.3K, 1/4W
C2, C3, C8	54412	Capacitor, Tantalum 1uF, 35V
C1, C4, C7, C9, C11	52675	Capacitor, Mono 0.1uF, 50V
C5, C6	58968	Capacitor, Disc 22PF
C10	48036	Capacitor, Tantalum 10uF, 16V
Q1	53702	Regulator 7805 TO-220
Y1	58879	Crystal, 4 Mhz
U1	58871	IC 75176
U2	52723	Dip Socket, 18 pin
U2	58878	Microcontroller, Programmed
SW1	G-05108	Dip Switch, 4 Place
J3	58886	Terminal Block, 4 Place
J1, J2	58880	Connector, Modular, 6 Place
CR1	51994	LED

Audio Distribution Assembly, P/N 70046-1A



Bill of Materials

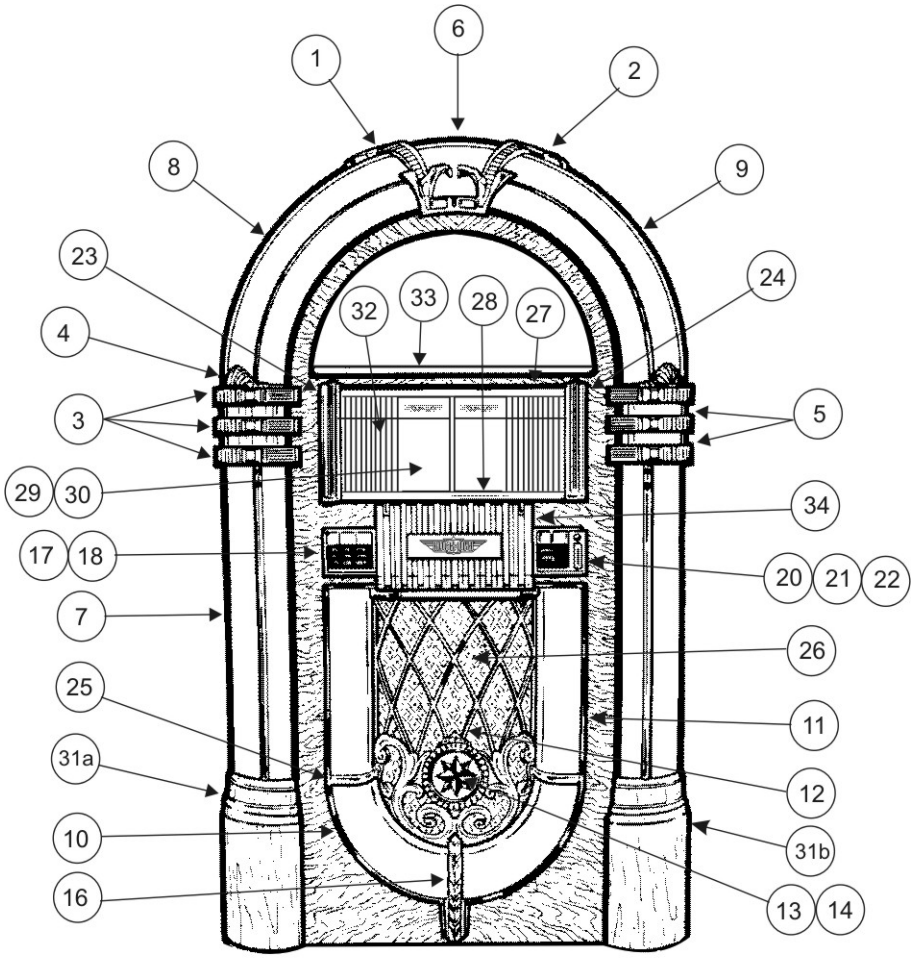
Reference	Part	Rock-Ola Part No.
J1	Connector, 9 pin MNL	ST-10584
J2, J3	Terminal Block, 8 pos, .375	59176
J4	Terminal Block, 4 pos, .375	59177
R1, R2	Resistor, 2.7k, 5W, wire wound	59138
T1, T2	Output Transformer	59179
-	Base Plate with pem studs	59178-A
-	Flange Nut, 8-32	

section

K

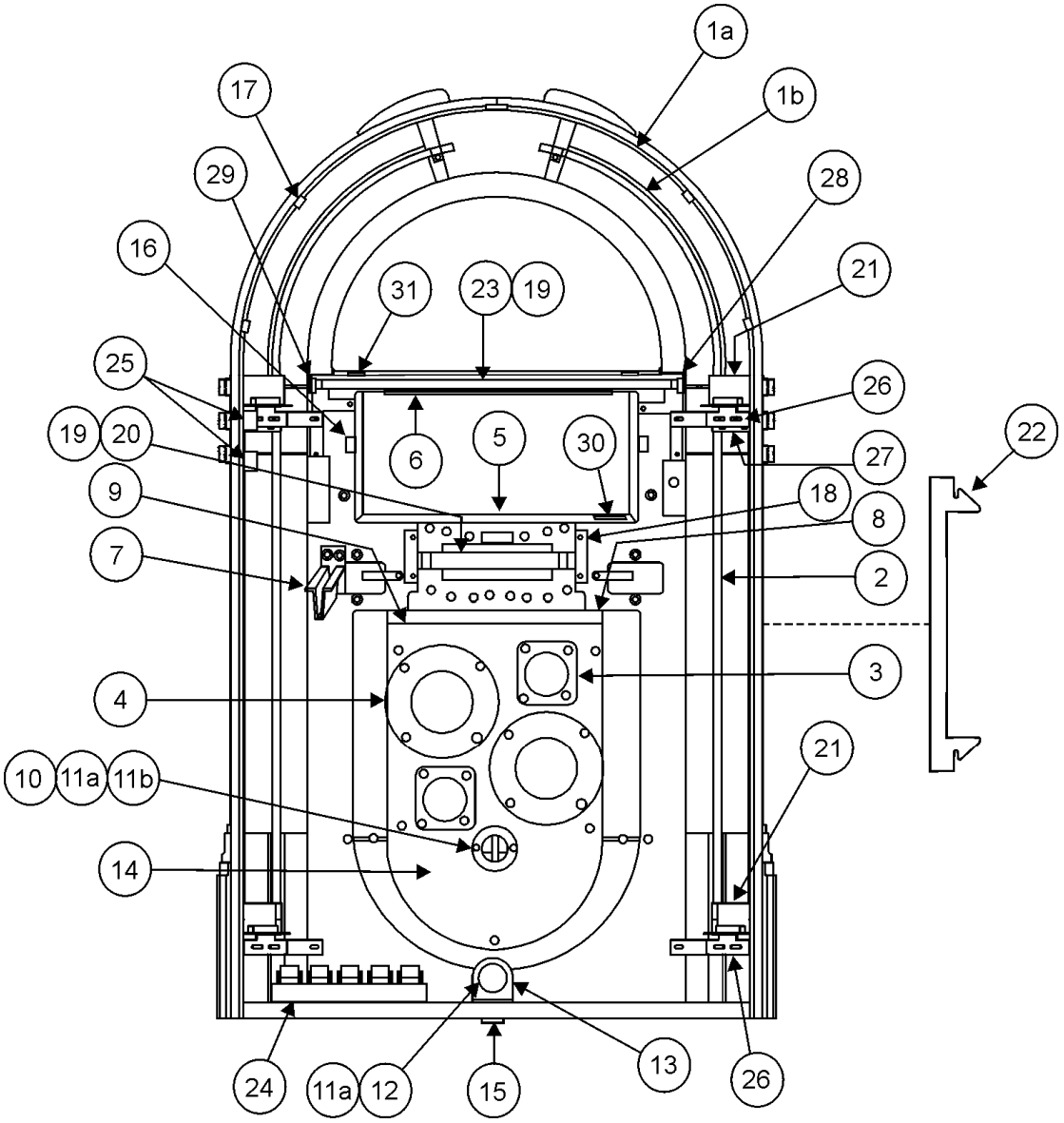
Parts Catalog

Door Assembly



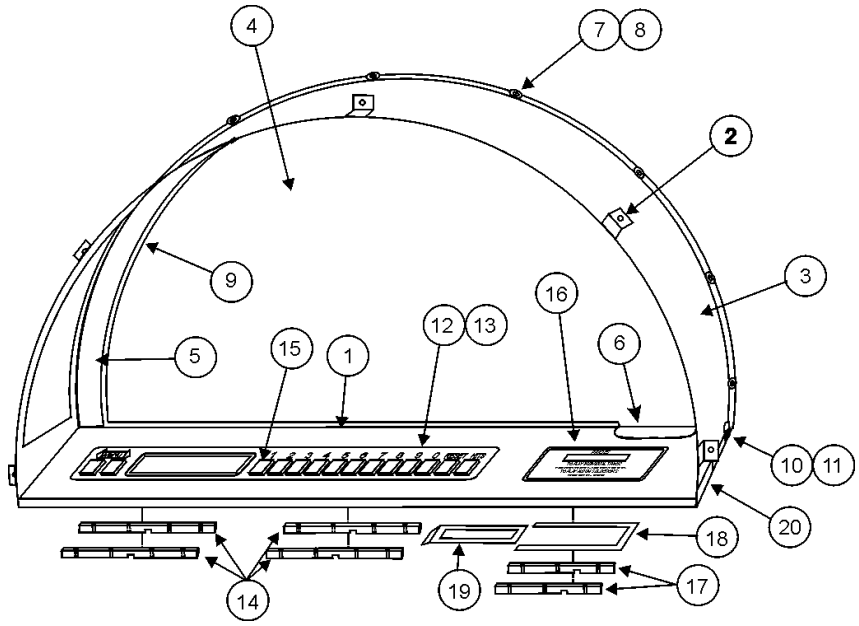
Item No.	Part No.	Description	Item No.	Part No.	Description
1	57380	Casting - Upper Trim LH	20	57316-01	Casting - Coin Entry
2	57381	Casting - Upper Trim RH	21	57317	Plastic - Coin Entry
3	57382	Casting - Side Trim *(6 pl)*	22	57716	Decal 25 Cents only
4	57383	Casting - Shell Trim *(2 pl)*	23	57457	Casting - 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
	SV-57392-A	**Large Grill Assembly**	30	53774-17500	Rubber Channel 17 1/2"
12	57393	Casting - Large Grill	31a	SV-23851-A	Knee Assembly, LH, Walnut
13	57394	Star Logo		SV-23849-A	" " " Oak
14	SV-60771-A	Grill Diffuser Plastic & Bracket Assy	31b	SV-23850-A	Knee Assembly, RH, Walnut
16	57450	Grill Support		SV-23848-A	" " " Oak
	Item Nos. 17 & 18 installed on CoinOp Models only		32	SV-58726-1A	Title Page Assembly *(p. 6)*
17	57454	Casting - Bill Entry	33	*See page 3*	Keyboard/Display Trim Assy
18	60772	Plastic, Bill Entry, "Make Selections"	34	SV-58840-A	Small Grill Assembly *(p. 4)*

Inside Door Assembly



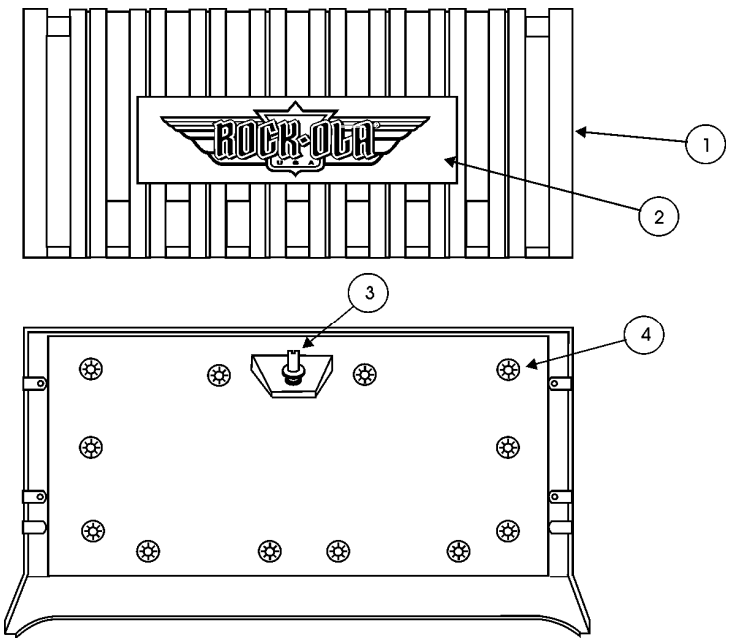
Item No.	Part No.	Description	Item No.	Part No.	Description
	See page 5	Light Arch Assembly (*not shown)*	14	SV-57469-3A	Speaker Board Assembly
	See page 5	Light Bar Assembly (*not shown)*	15	57464	Kick Plate
1a	57448	Bubble Tube, Long Curve *(2 pl)*	16	58251	Title Page Latch Spring *(2 pl)*
1b	57449	Bubble Tube, Short Curve *(2 pl)*	17	57439-01	Light Arch Hanging Bracket *(4 pl)*
2	57447	Bubble Tube, Straight Long *(2 pl)*	18	60702	Fluorescent Light Bracket *(2 pl)*
3	61888-LF	Horn Tweeter, 80W, 80HM *(2 pl)*	19	60757	Lamp Socket *(2 pl)*
4	58936	Speaker 6" Midrange *(2 pl)*	20	57467	Fluorescent Tube F6T5CW 9"
5	58252	Shroud, CD Title Page	21	SV-60764-A	Bubble Tube Heater & Mtg Assy *(4 pl)*
6	60756	White Plastic, Title Page Diffuser	22	58617	Dual Lock Strike
7	SV-62098-A	Upper Coin Chute Assy *(FreePlay)*	23	60054	Fluorescent Lamp 21" F13T5 CW
	SV-57661-A	Upper Coin Chute Assy *(CoinOp)*	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	58845	Jukebox License Holder
13	57468-01	Lower Door Light Bracket	31	60701	Retainer Glass Frame *(2pl)*

Keyboard/Display Trim Assembly



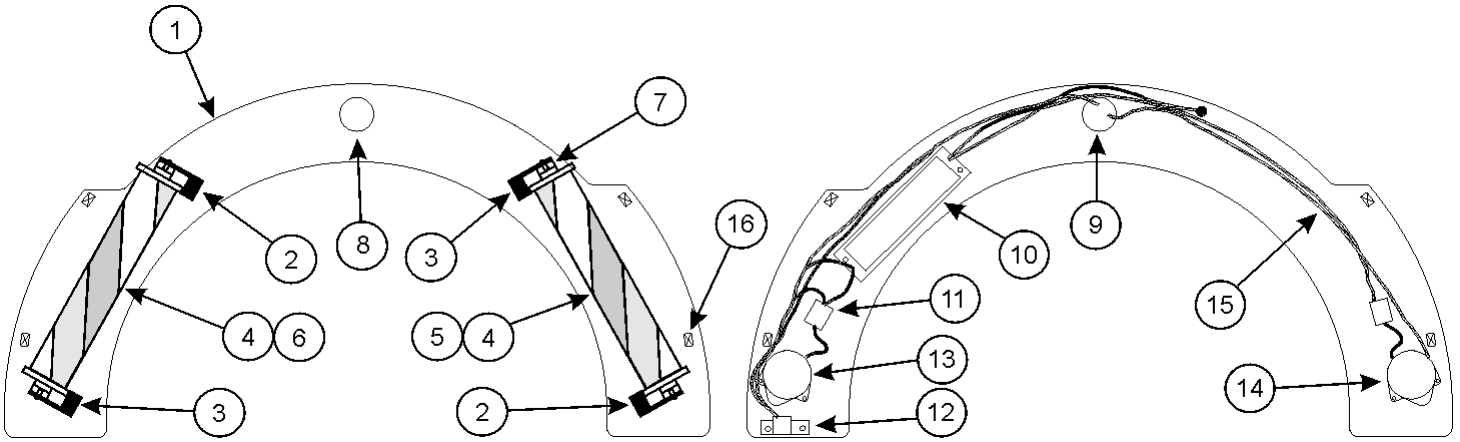
Item No.	Part No.	Description	Item No.	Part No.	Description
1	SV-23820-A	Display/Keybd Trim, Walnut	11	ST-04666	6x1/2 Phil Pan Hd Screw
	SV-23821-A	Display/Keybd Trim, Oak	12	SV-58926-A	Keyboard/Display Assembly
	SV-23822-A	Display/Keybd Trim, Black	13	60627	Keyboard Bezel
2	60695	Window Arch Diffuser Frame	14	59117	Keyboard Retainer Bracket
3	60723	Arch Light Diffuser	15	59118-01	Pushbutton - Green
4	58210	Window Glass		59118-02	Pushbutton - Orange
5	57507-30000	Window Extrusion 30”	16	60758	Price and Instruction Bezel
6	57507-19938	Window Extrusion 19-15/16”	17	60686	Pricing Bezel Retainer
7	ST-04858	Flatwasher	18	60349-01	Plastic Sleeve
8	ST-09728	4-40x1/4 Phil Pan Hd Screw	19	60670-01	Insert, Price Card (Blank)
9	57508	Window Glaze	20	60706	Light Arch Diffuser End Retainer *(2 pl)*
10	57512	Clamp			

Small Grill Assembly #SV-58840-A
(CD-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”

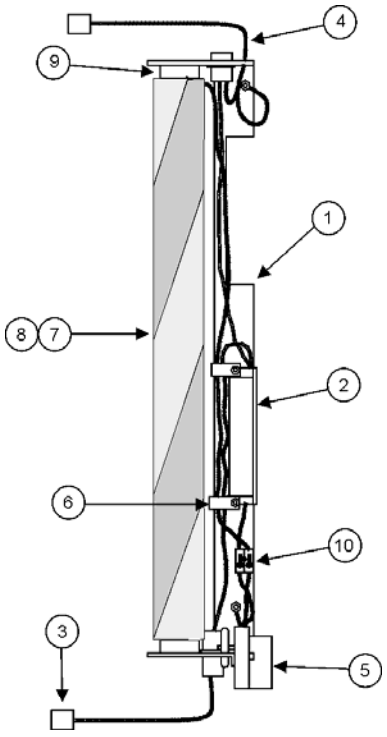
Arch Light Assembly # SV-60765-A



Front View *Back View*

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	60207	Ballast, Workhorse 3
3	57430-01	Lamp Bracket, LH	11	57413	Terminal Strip, 2 pole
4	57434	Fluorescent Lamp F14T12CW	12	60739	Terminal Block
5	SV-57438-3A	Color Cylinder Assy, RH	13	SV-58046-A	Motor Assy, RH
6	SV-57435-3A	Color Cylinder Assy, LH	14	SV-58045-A	Motor Assy, LH
7	57415	Fluorescent bipin Socket	15	SV-60715-A	Arch Light Cable Assy
8	57433	Bulb 11W Orange	16	57440	Nylon Latch, 1/4 Turn

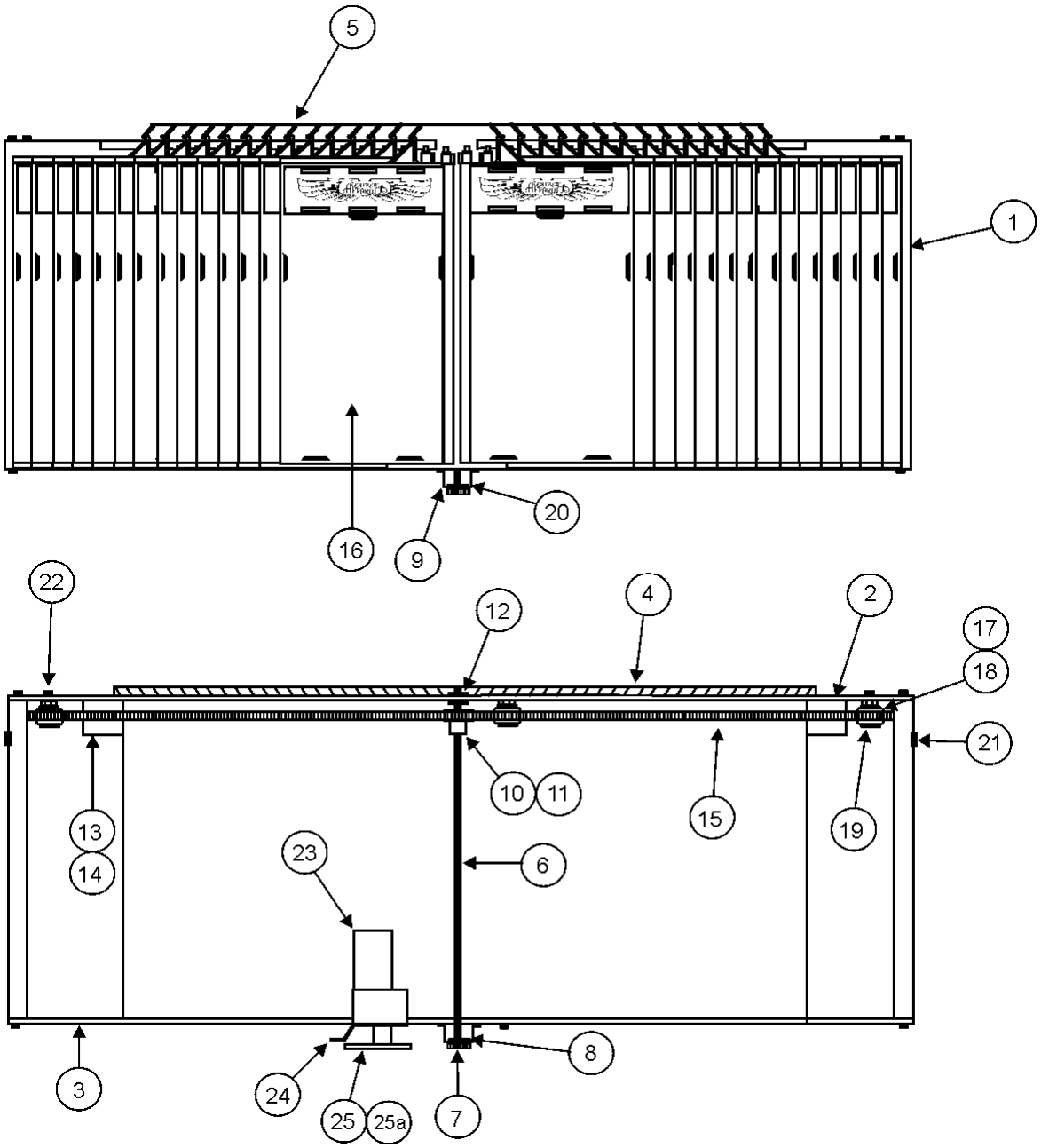
Light Bar Assembly



RH shown

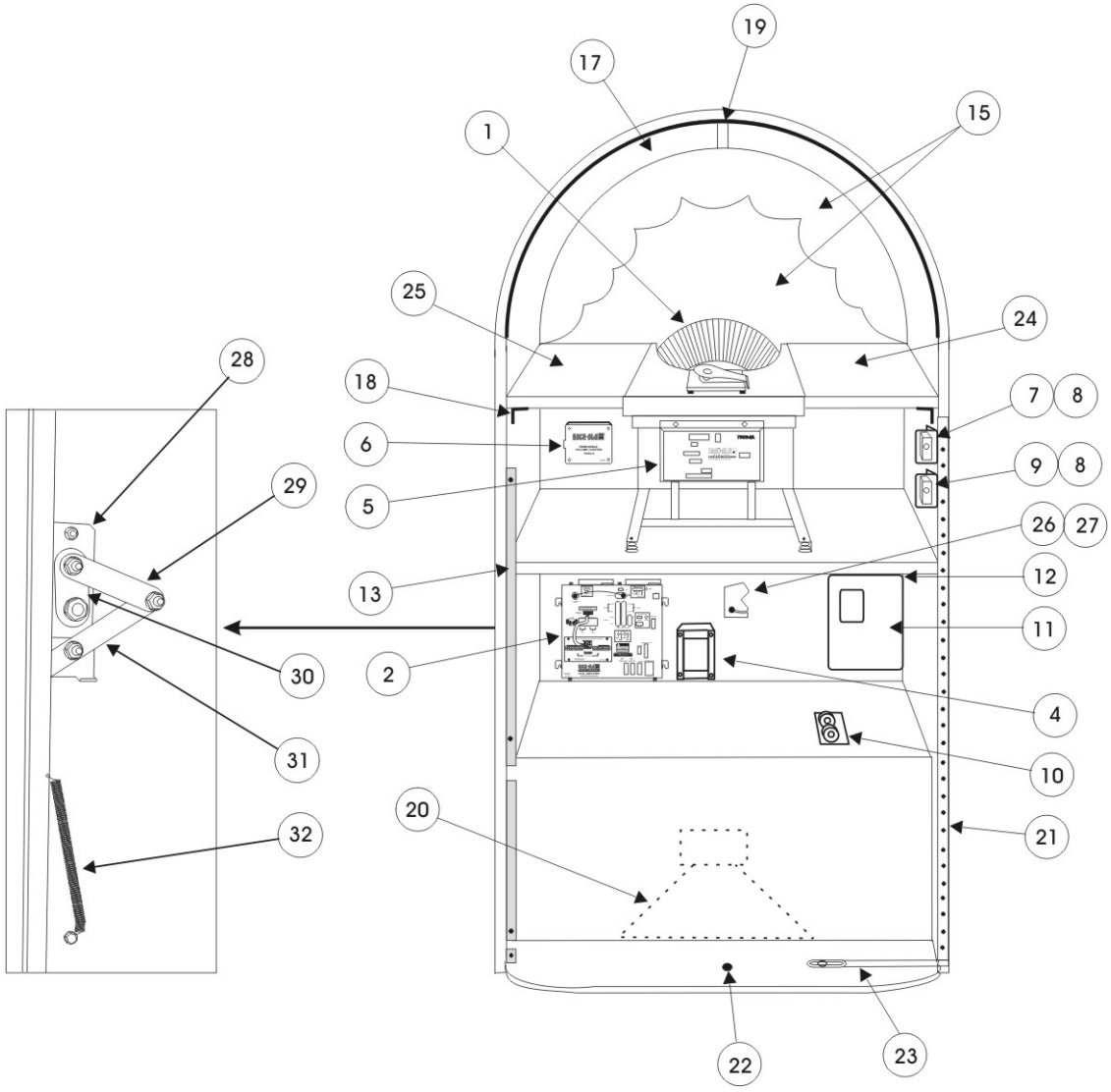
Item No.	Part No.	Description
1	60769-A	Light Bar Bracket, LH
	60770-A	" " " RH
2	SV-60748-A	Ballast & Cable Assembly
3	SV-60708-A	Harness, Heater Power
4	SV-60714-A	Harness, Light Bar Power
5	SV-58045-A	Motor Assembly, LH
	SV-58046-A	" " RH
6	60739	Terminal Block
7	SV-57416-2A	Color Cylinder Assembly, LH
	SV-57425-2A	" " " RH
8	36121	Fluorescent Lamp F20T12CW
9	57415	Fluorescent bipin socket
10	57413	Terminal Strip, 2 pole

Title Page Assembly #SV-58726-1A



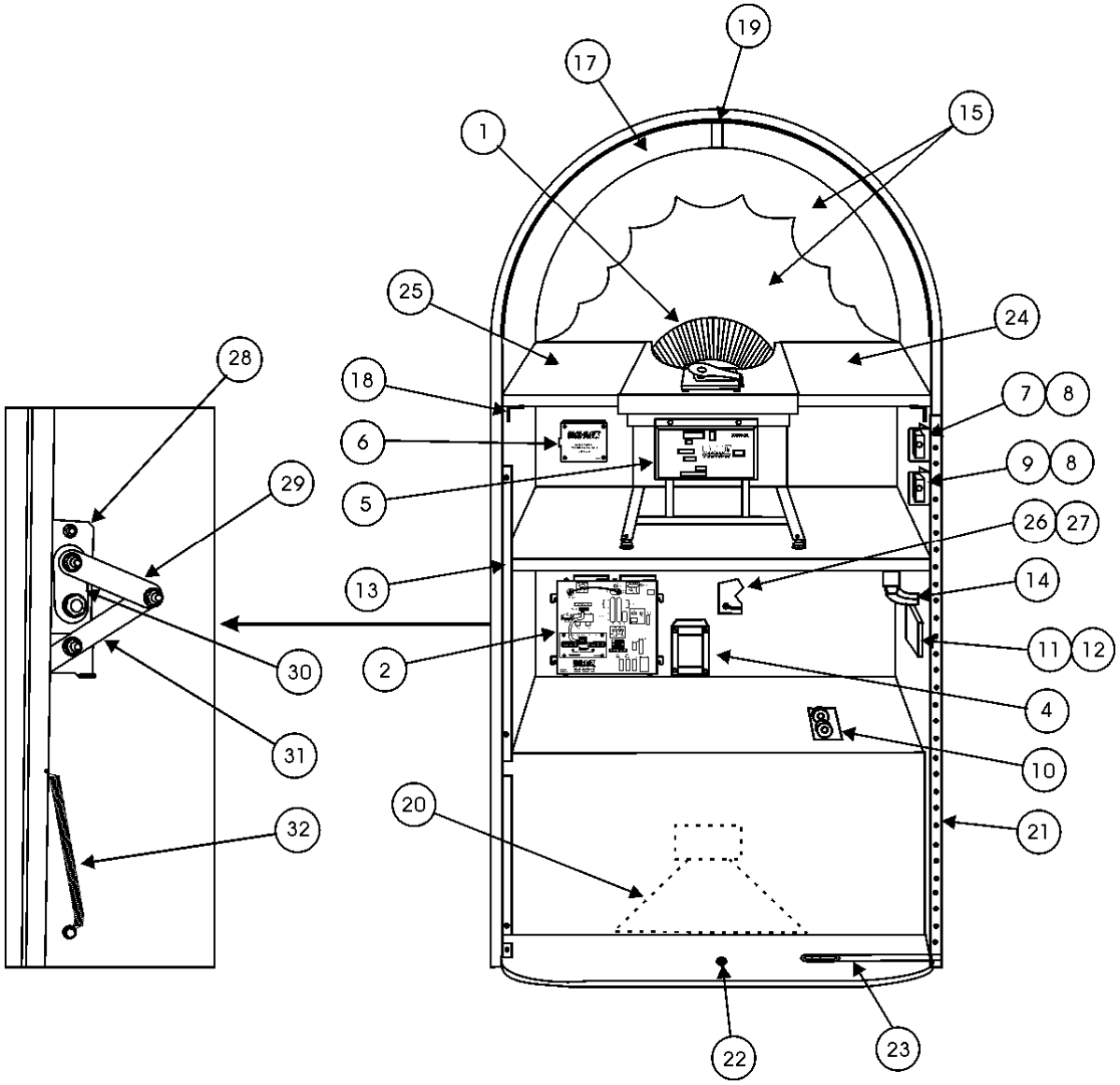
Item No.	Part No.	Description	Item No.	Part No.	Description
1	57083-02	Title Page Main Frame	13	57353	Channel
2	57081-01	Top Bracket	14	57493	Slide Actuator
3	57082	Bottom Bracket	15	57354	Title Page Belt
4	57402-01	Catch Spring	16	57356	Title Page, Black Plastic
5	57347	Spring	17	57357	Standoff
			18	57358	Roller
	SV-57348-A	**Drive Shaft Assembly**	19	ST-09245	"C" Clip ¼
6	57349	Drive Shaft	20	57360	Nyliner Bearing 5/16"
7	57350-01	Brass Gear	21	57072	Nyliner Bearing 1/4"
			22	ST-08268-D	8-32x5/16 Hex Hd Screw
8	57359	Nyliner Bearing 3/16"	23	59346-A	Title Page Motor
9	57351-01	Bottom Mounting Guide	24	59682	Motor Bracket
10	57352	Nylon Gear	25	59675	Page Drive Gear
11	ST-02255	Set Screw 6-32 x 3/16	25a	ST-11460	Set Screw
12	ST-09263	"C" Clip 3/16	26	43414-01	Snap Switch

Inside Cabinet Assembly – *Free Play Models*



Item No.	Part No.	Description	Item No.	Part No.	Description
1	SV-58689-3A	Mechanism Assembly *(p. 11)*	19	57365	Light Block
2	SV-70135-A	Dual Digital Amplifier *(p. 13)*	20	57288-02	Woofer Speaker
-			21	57377	Door Hinge
4	60681-A	Transformer	22	57477	Nylon Base Tack Glide
5	SV-70003-2A	Computer *(p. 14)*	23	61021	Door Stop
6	SV-70004-A	Volume Control	24	SV-23416-01	Mech Trim, RH, Walnut
7	58602	Service Switch		SV-23418	" " " Oak
8	58622	Switch Bracket		SV-23823	" " " Black
9	58602	Power Cut off Switch	25	SV-23417-01	Mech Trim, LH, Walnut
10	SV-60717-A	Speaker Crossover *(p. 8)*		SV-23419	" " " Oak
11	59934	Cashbox		SV-23824	" " " Black
12	62092-F	Bracket, Cashbox	26	46956	Cable Cover
-			27	ST-01352	Wing Nut
14	SV-57336-A	Coin Chute Assy	28	60881-A	Pivot Plate, Lock
15	60596	Mural/Curtain	29	60699	Lock Arm
-			30	60697-A	Cam Bolt
17	57373-24500	Gold Foil	31	60880-A	Lock Lever
18	57364	Mech Trim Bracket *(2 pl)*	32	57372	Extension Spring

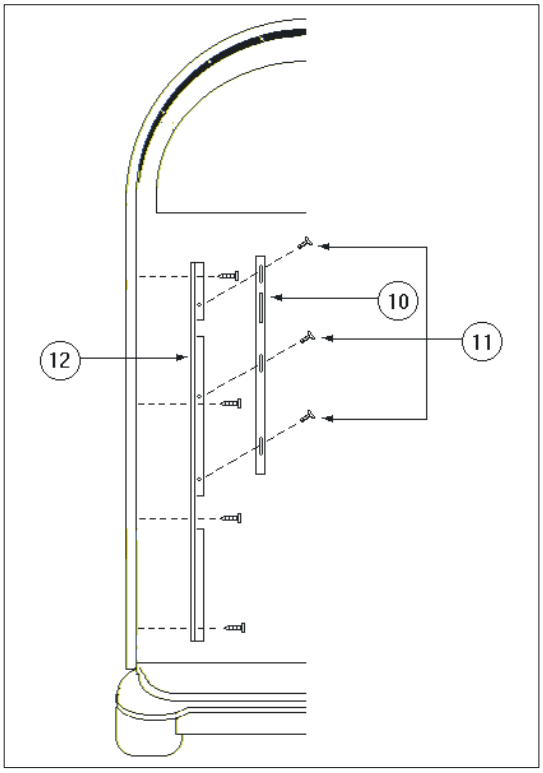
Inside Cabinet Assembly – *Coin Op Models*



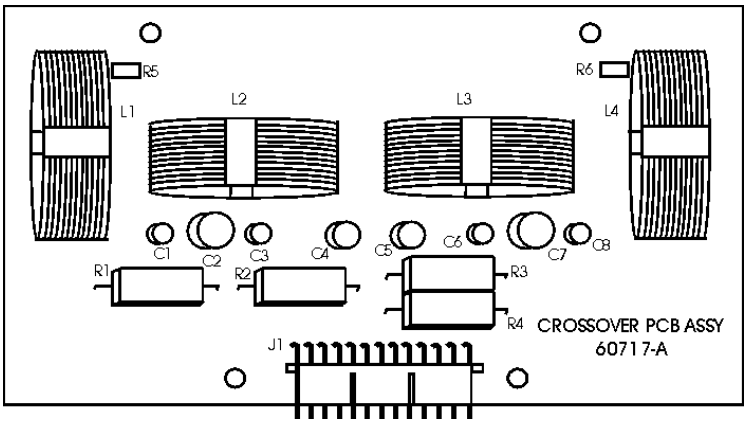
Item No.	Part No.	Description	Item No.	Part No.	Description
1	SV-58689-3A	Mechanism Assembly *(p. 11)*	19	57365	Light Block
2	SV-70135-A	Dual Digital Amplifier *(p. 13)*	20	57288-02	Woofer Speaker
-			21	57377	Door Hinge
4	60681-A	Transformer	22	57477	Nylon Base Tack Glide
5	SV-70003-2A	Computer *(p. 14)*	23	61021	Door Stop
6	SV-70004-A	Volume Control	24	SV-23416-01	Mech Trim, RH, Walnut
7	58602	Service Switch		SV-23418	" " " Oak
8	58622	Switch Bracket		SV-23823	" " " Black
9	58602	Power Cut off Switch	25	SV-23417-01	Mech Trim, LH, Walnut
10	SV-60717-A	Speaker Crossover *(p. 8)*		SV-23419	" " " Oak
11	57335	Coin Acceptor		SV-23824	" " " Black
12	57334-A	Coin Acceptor Mtg Frame	26	46956	Cable Cover
13	SV-57366-A	Dual Lock Assy *(p. 8)*	27	ST-01352	Wing Nut
14	SV-57336-A	Coin Chute Assy	28	60881-A	Pivot Plate, Lock
15	60596	Mural/Curtain	29	60699	Lock Arm
-			30	60697-A	Cam Bolt
17	57373-24500	Gold Foil	31	60880-A	Lock Lever
18	57364	Mech Trim Bracket *(2 pl)*	32	57372	Extension Spring

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



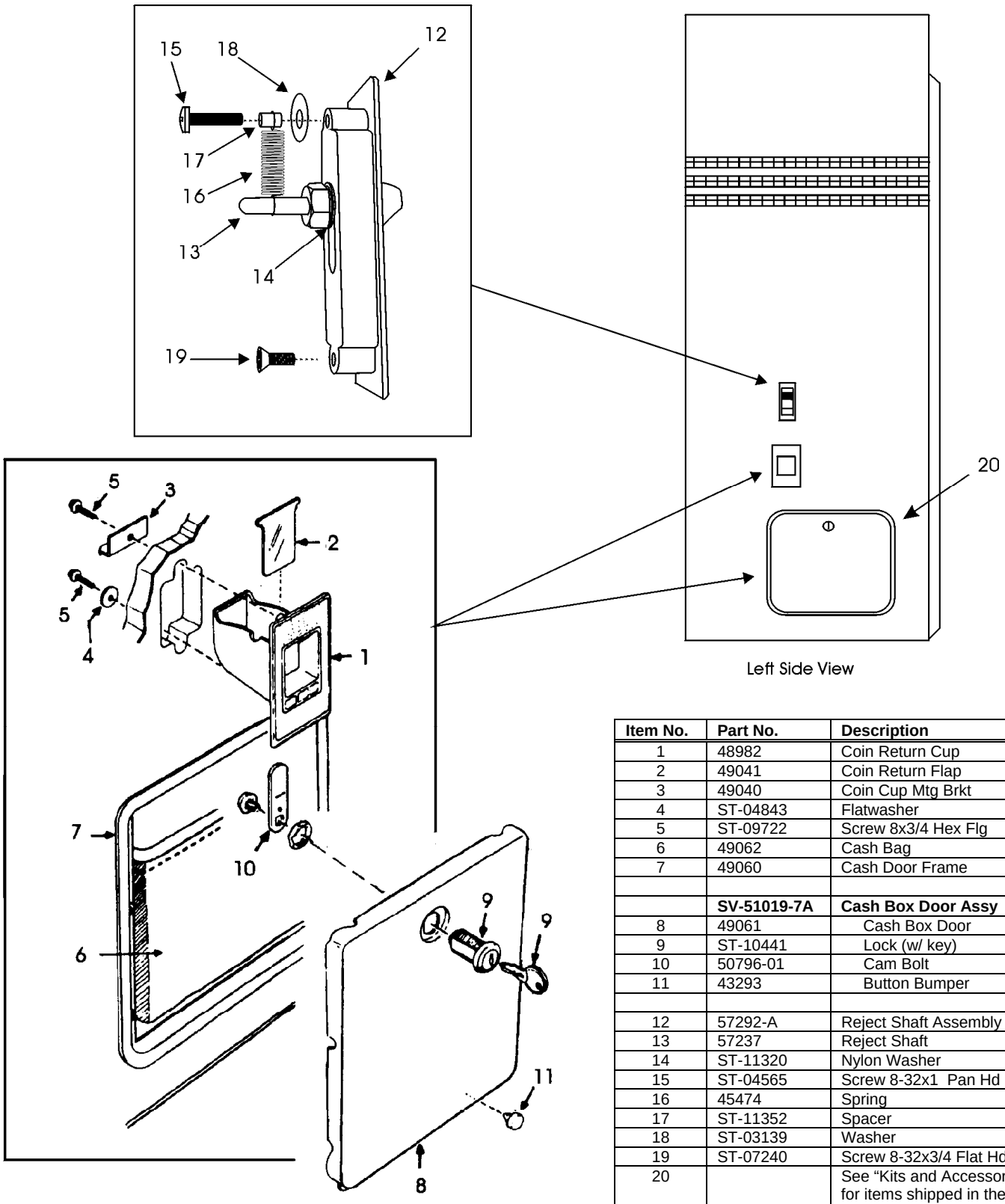
Crossover PCB Assembly SV-60717-A



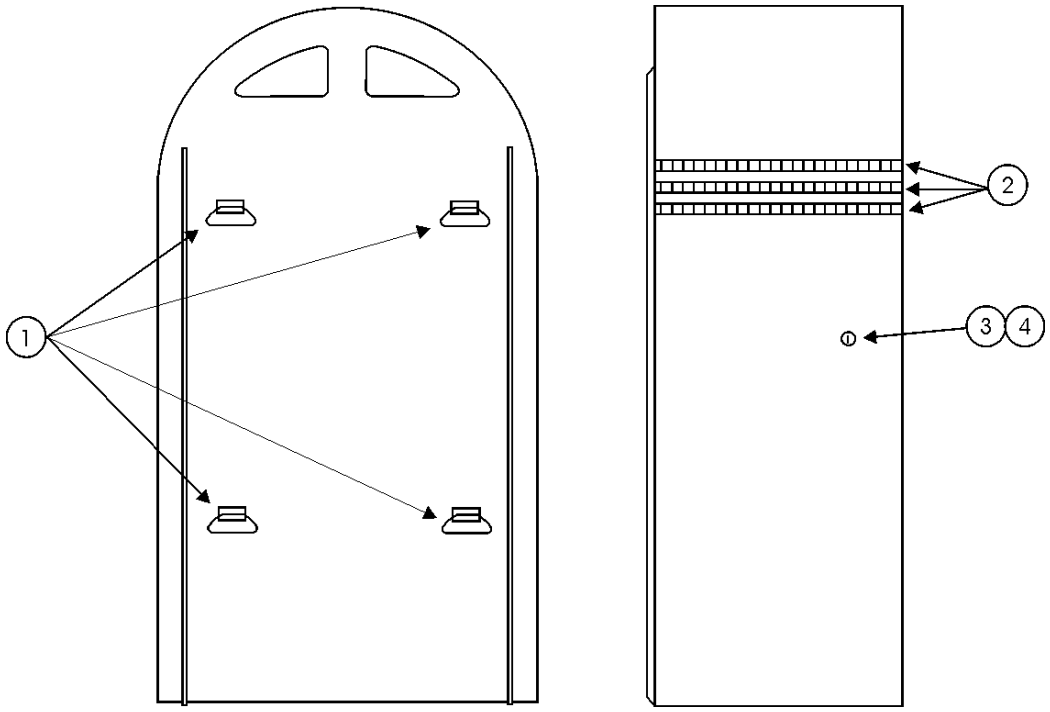
Qty	Part No.	Description	Ref. Des.
2	58942	Coil .8mH	L1, L4
2	58943	Coil 1.25mH	L2, L3
2	58948	Cap 47uf	C2, C7
2	58949	Cap 22uf	C4, C5
2	58950	Cap 5.6uf	C1, C8
2	58944	Cap 3.9uf	C3, C6
2	58933	Res 10 ohm, 5W, 10%	R2, R3
2	60767	Res 62 ohm, 5W, 10%	R1, R4
2	60766	Res 39 ohm, 5W, 10%	R5, R6
1	58947	Header 12 pin Right Angle	J1

Outside Cabinet Assembly

Parts itemized on this page are available on Coin Op models only.

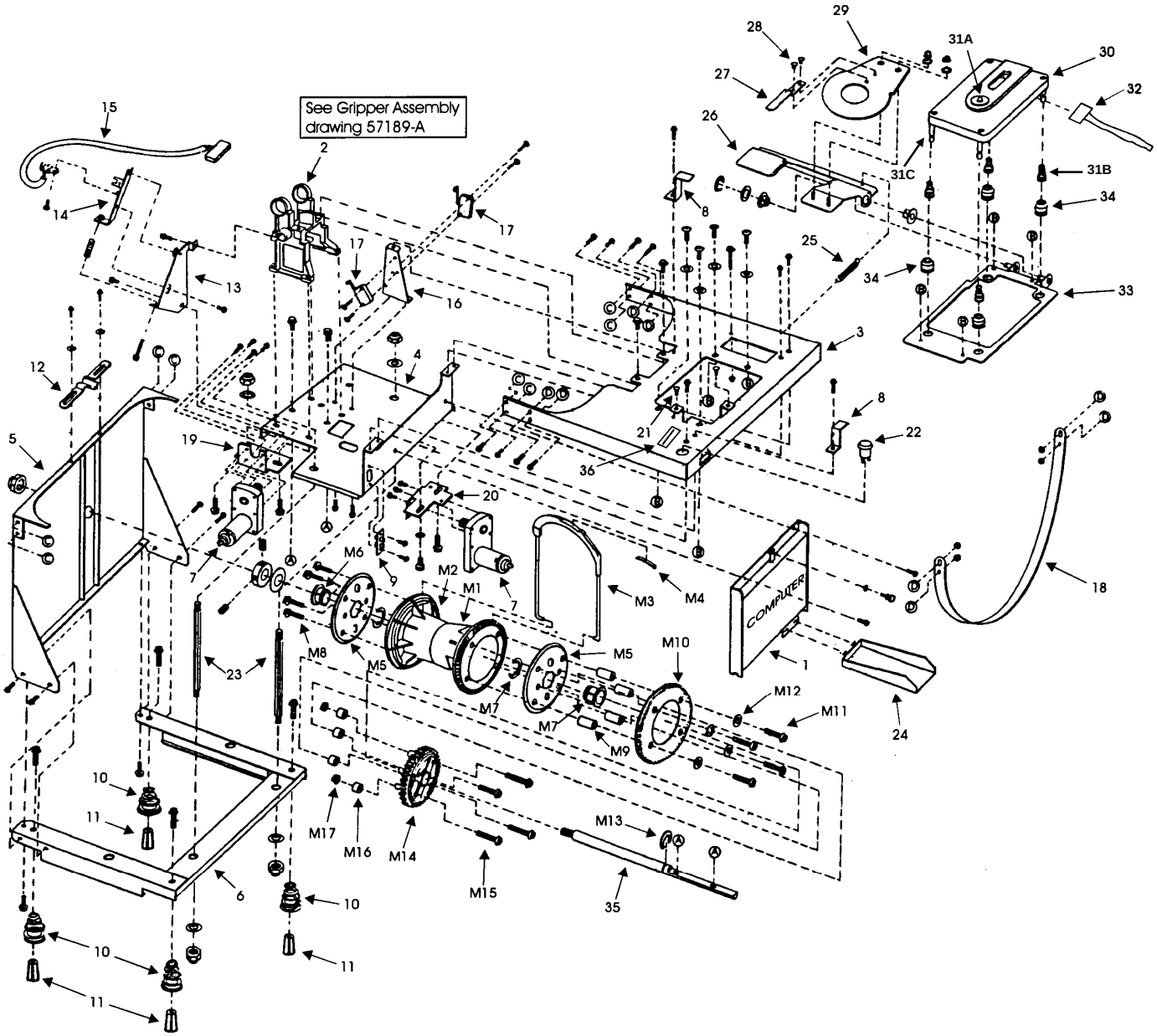


Item No.	Part No.	Description
1	48982	Coin Return Cup
2	49041	Coin Return Flap
3	49040	Coin Cup Mtg Brkt
4	ST-04843	Flatwasher
5	ST-09722	Screw 8x3/4 Hex Flg
6	49062	Cash Bag
7	49060	Cash Door Frame
	SV-51019-7A	**Cash Box Door Assy**
8	49061	Cash Box Door
9	ST-10441	Lock (w/ key)
10	50796-01	Cam Bolt
11	43293	Button Bumper
12	57292-A	Reject Shaft Assembly
13	57237	Reject Shaft
14	ST-11320	Nylon Washer
15	ST-04565	Screw 8-32x1 Pan Hd
16	45474	Spring
17	ST-11352	Spacer
18	ST-03139	Washer
19	ST-07240	Screw 8-32x3/4 Flat Hd
20		See “Kits and Accessories” for items shipped in the cash box *(page 21)*



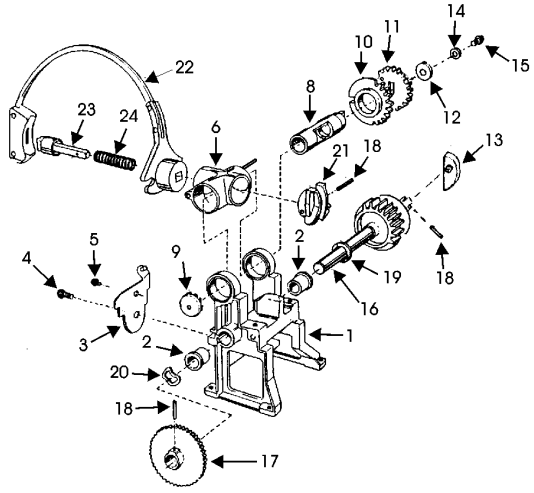
Item No.	Part No.	Description	Item No.	Part No.	Description
1	SV-49997-3A	Handle & Bracket Assy	3	ST-11296	Lock & Key
2	57376-18500	Mirror Strips 18 1/2”	4	ST-11296-K	Key only

Mechanism Assembly



Item No.	Part No.	Description	Item No.	Part No.	Description
1	SV-70003-2A	Computer Assy *(See page 14)*	30	SV-59241-3A	CD Pro 2M Player Assy
2	SV-57189-A	Gripper Assembly (*See below)*	31A	59954	Hub Insert
3	57062-2A	Mechanism Top Chassis Assy	31B	58639	Spring
4	58476	Main Chassis	31C	57051	Standoff
5	57161-01	Mech End Plate			
6	58677	Mechanism Base Frame	32	58540-A	Audio to CD Player Cable
7	SV-55941-1A	D.C. Gear Motor Assy	33	57063-1A	CD Player Mtg Bracket
8	57273	CD Hold Down Bracket	34	59071	Grommet
9	58544	Mounting Plate, RCA Jack	35	57156	Magazine Main Shaft
10	57167	Base Coil Spring	36	59140	Mech Warning label
11	57168	Nylon Spring Insert			
12	57157	Gripper Arm Rest Bracket		**SV-57188-A**	**Magazine Assembly**
13	57159	Opto Mounting Plate	M1	56016	Hub Front
14	57060-A	Opto Slide Bracket Assy	M2	56017	Hub Rear
15	58687-A	Mech Opto Cable Assy	M3	56348-1A	Separator Wire Assy
16	57154	Switch Mounting Bracket	M4	56283	Magazine Label
17	43414-01	Snap Switch	M5	57187-A	Cover Magazine Assy
18	57170	Steel Band	M6	50308-01	Main Bearing
19	57153	Gripper Motor Mtg Bracket	M7	ST-09264	Retaining Ring
20	55843	Mag. Motor Mtg Bracket	M8	ST-10561	10x1/2x Flg “B”
21	57071	Nylon Hole Plug	M9	57172	Spacer
22	58679	Momentary Switch	M10	55278-02	Encoder Disc
23	57165	Standoff	M11	ST-11282	10x1 1/4 Hex Flg “B”
-			M12	ST-04813	Flatwasher
25	57070	Clamper Spring	M13	ST-09194	Retaining Ring
26	57064-1A	CD Lifter Bracket Assy	M14	57293	Drive Gear
27	56076	Magnet Holder	M15	ST-02586	10-32x 1 1/2 Hex Flg MS
28	ST-00867	Rivet	M16	56114	Spacer
29	57166-02	Clamper Plate	M17	ST-08717	10-32 Hex Nut

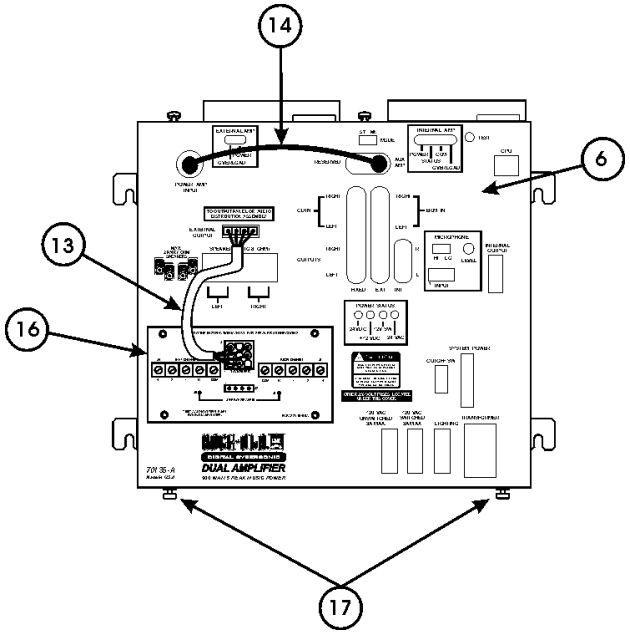
Item No.	Part No.	Description	Item No.	Part No.	Description
	SV-57189-A	**Gripper Assembly**	23	56185-1A	Inner Gripper Assy
1	SV-45421-03	Gripper Housing	24	54768-LF	Spring Gripper
2	45422	Gripper Housing Bearing			
3	52268-2A	Brkt Gripper Rev. Rivet Assy			
4	ST-09747	Screw 10-32x3/8 Hex Flg			
5	ST-09720	Screw 10-32x1/2 Hex Flg			
6	34315-07	Gripper Spider			
-					
8	34399	Trunnion Shaft			
9	34877	Trunnion Shaft Button			
10	34312-02	Gripper Turnover Gear			
11	34311-04	Gripper Release Gear			
12	ST-03150	Flatwasher			
13	57169	Cam			
14	ST-04881	Flatwasher			
15	ST-06535	Screw 8-32x5/8 Phil Pan Hd			
16	56434-A	Gripper Shaft Assy			
17	34310-01	Gripper Shaft Gear			
18	ST-00534	Spiral Pin Medium duty			
19	34929	Gripper Shaft Thrust Washer			
20	ST-04828	Spring Washer			
21	34323-8A	Cam Gripper Arm Rev. Assy			
22	56015-1A	Gripper Arm Assy			

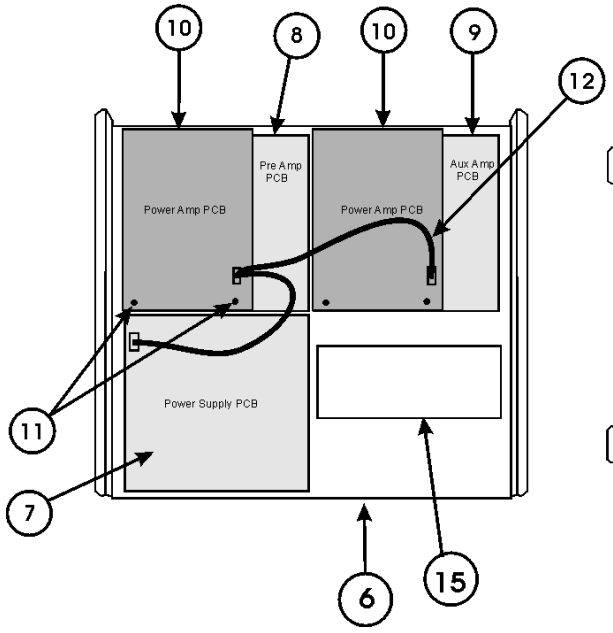


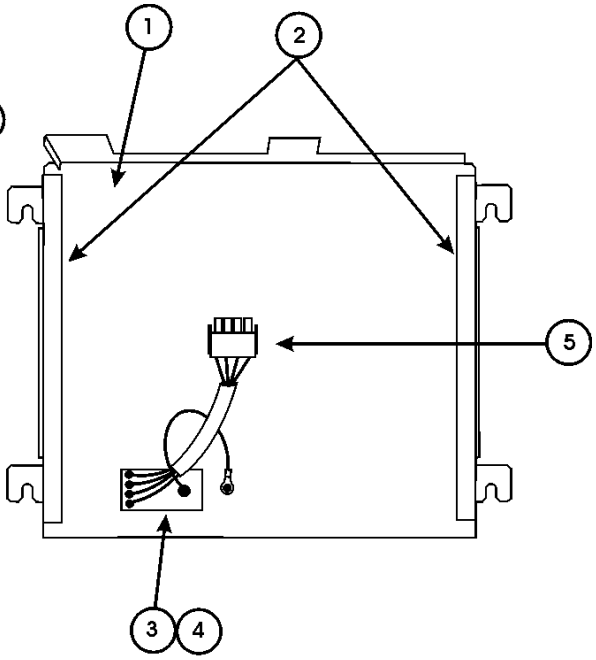
Electronic Components

Dual Digital Amplifier SV-70135-A

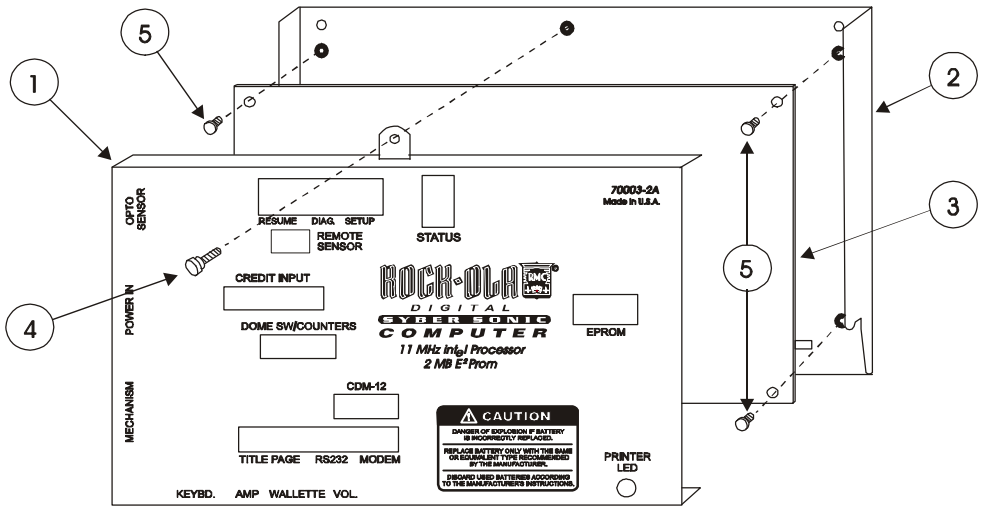
Item No.	Part No.	Description
1	60621-A	Chassis, Dual Amp
2	40678-09500	Rubber Cushion 9.5”
3	58641	Switch, Corcom
4	ST-04346	Fuse, 8 Amp, 250v, fast blow (1 req) *(Domestic)*
	ST-11141	Fuse, 5A, 250V, fast blow (2 req) *(Export)*
5	60438-A	Harness, Amp Main Power
6	60622-A	Cover, Dual Amp
7	SV-60435-A	PCB, Digital Power Supply
8	SV-60441-1A	PCB, Digital Pre Amp
9	SV-60429-1A	PCB, Digital Aux Amp
10	SV-60442-A	PCB, Digital Power Amp
11	ST-11549	Standoff, 4-40 x 1/4”
12	60647-A	Harness, Power Amp
13	60648-A	Harness, Audio Output Panel
14	60649-A	Harness, Aux Amp Input
15	60643	Transformer Support Audio
16	SV-60455-1A	Audio Output Panel PCB
17	ST-11429	Thumb Screw 6-32x3/8 *(4 places)*





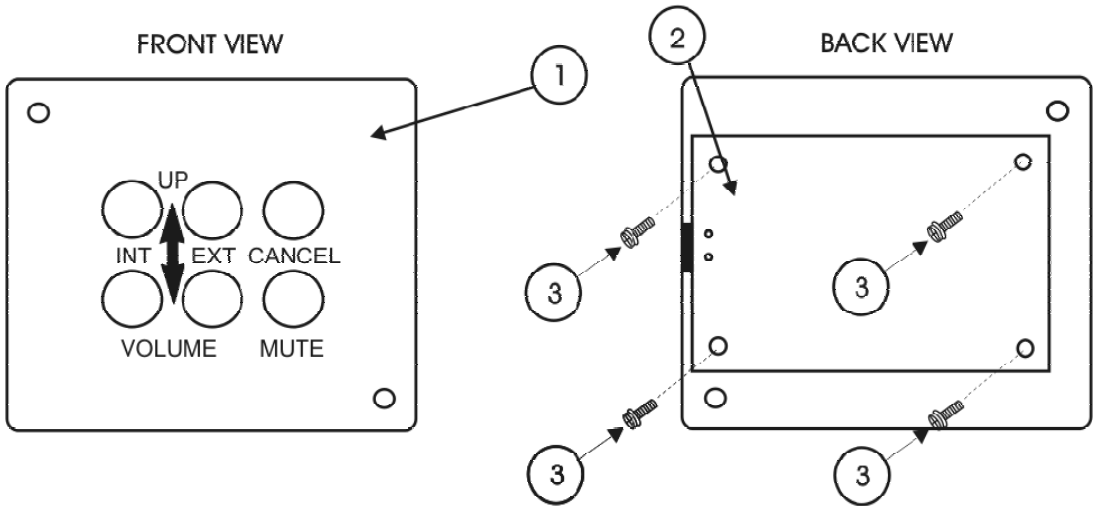


Computer Assembly SV-70003-2A



Item No.	Part No.	Description
1	58668-01	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

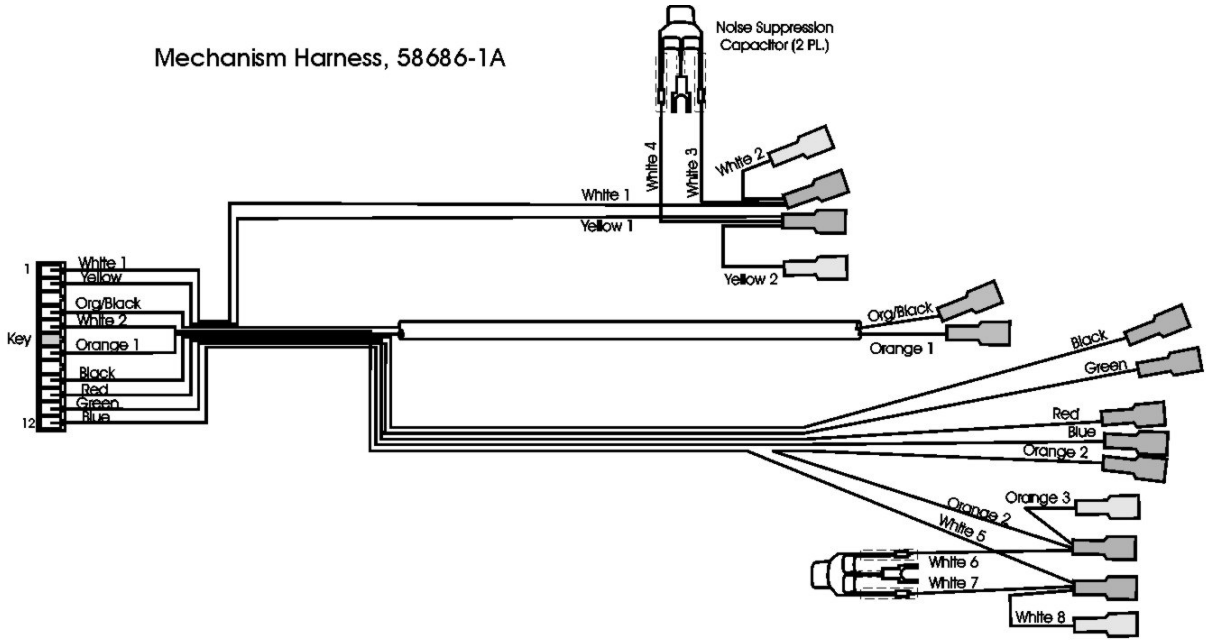
Volume Control Assembly SV-70004-A



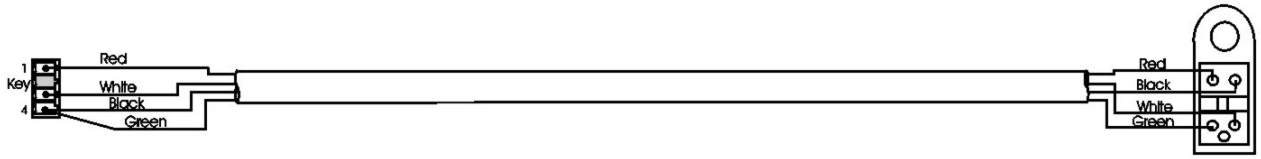
Item No.	Part No.	Description
1	61961-A-LF	Volume Control Plate
2	SV-58515-A	Volume Control PCB Assy
3	ST-04076	Tapping Screw 4 x 5/8 Pan Hd Type “B”

Cables

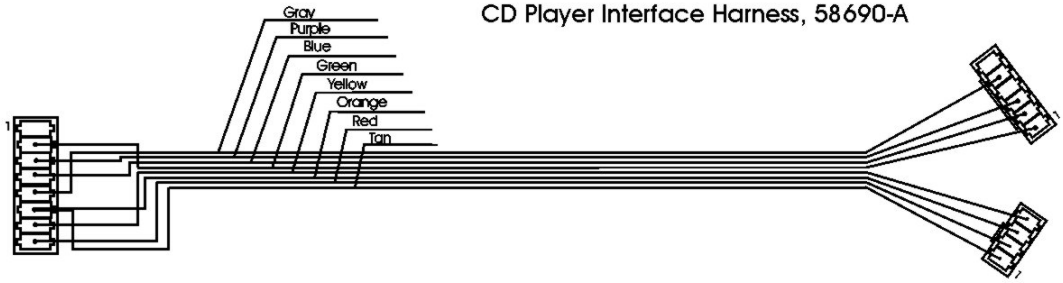
Mechanism Harness, 58686-1A



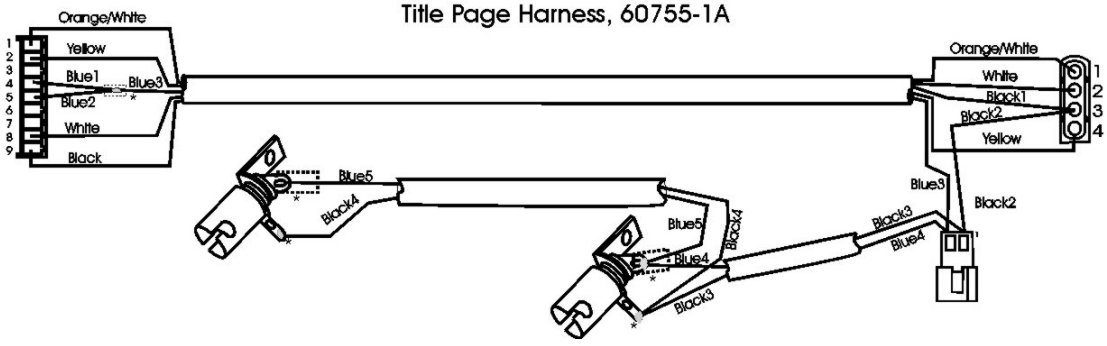
Mech Opto Harness, 58687-A



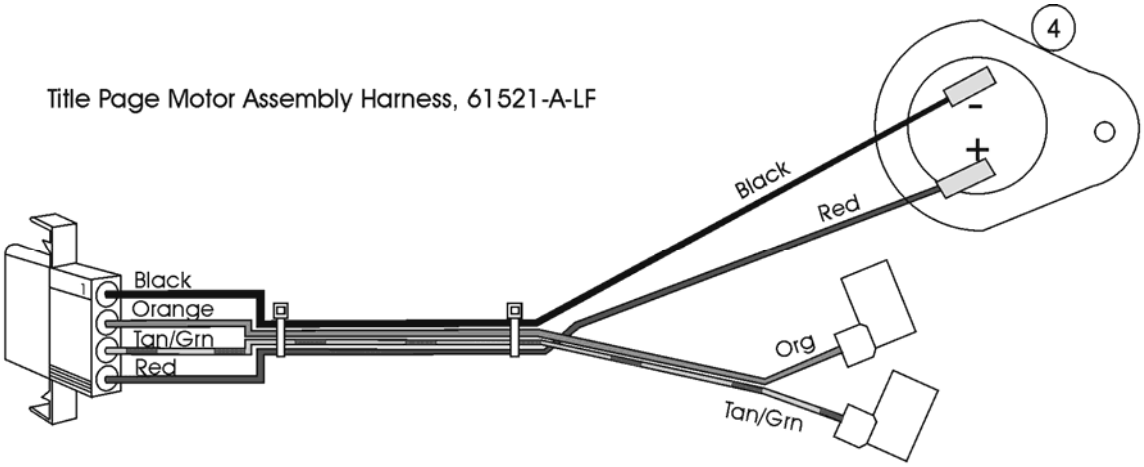
CD Player Interface Harness, 58690-A



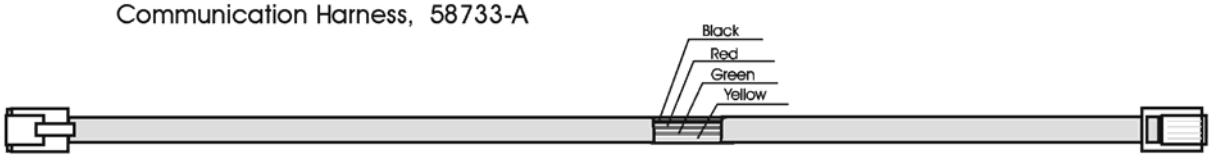
Title Page Harness, 60755-1A



Title Page Motor Assembly Harness, 61521-A-LF

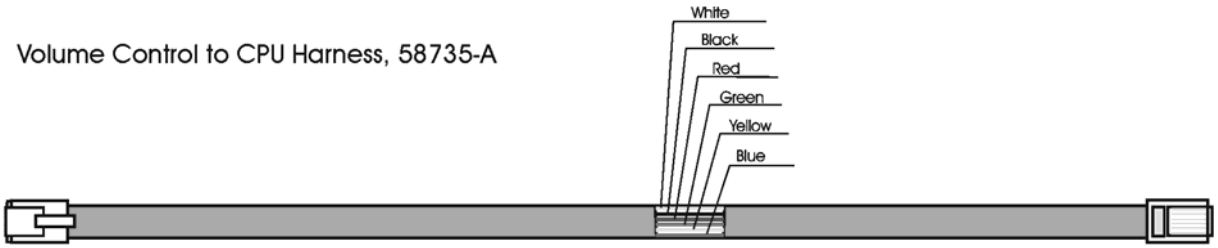


Communication Harness, 58733-A



(4 PIN SILVER)

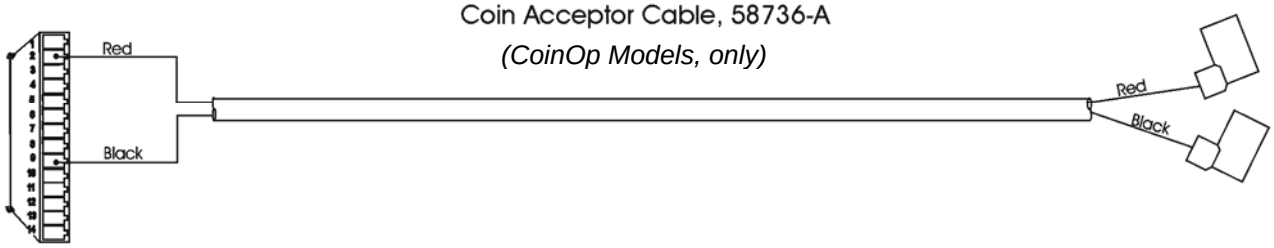
Volume Control to CPU Harness, 58735-A



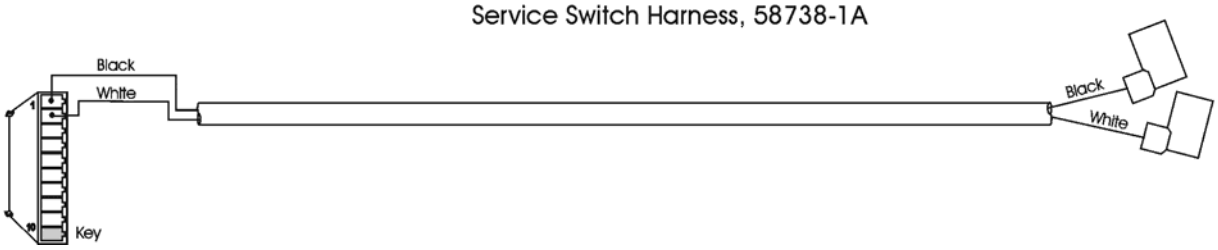
(6 PIN RED)

Coin Acceptor Cable, 58736-A

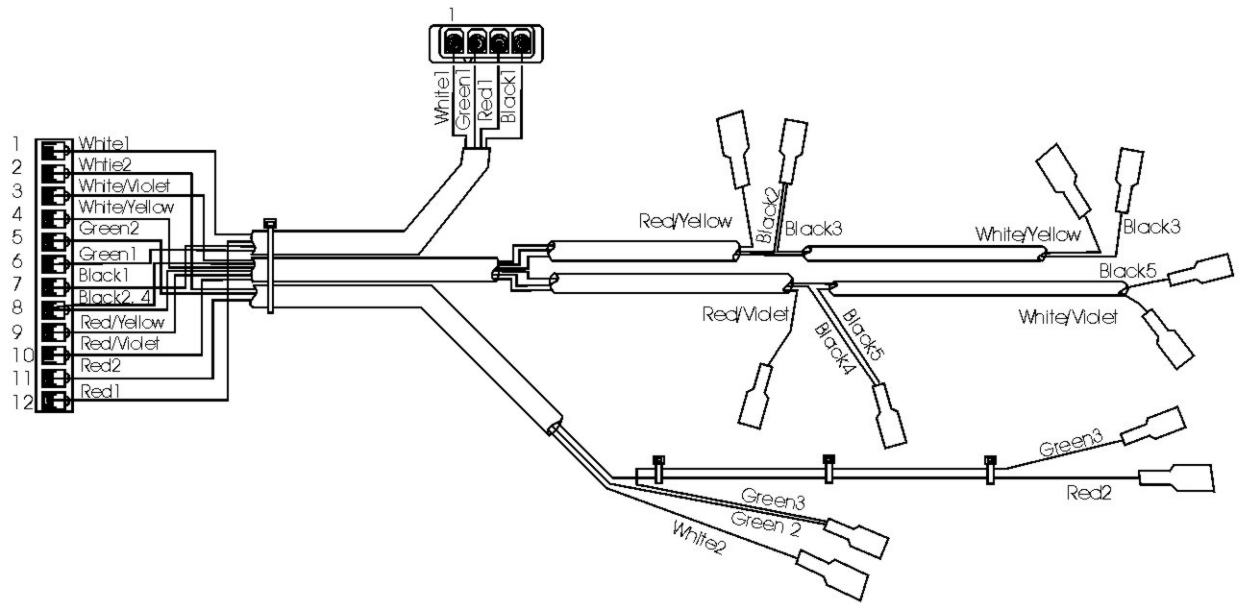
(CoinOp Models, only)



Service Switch Harness, 58738-1A



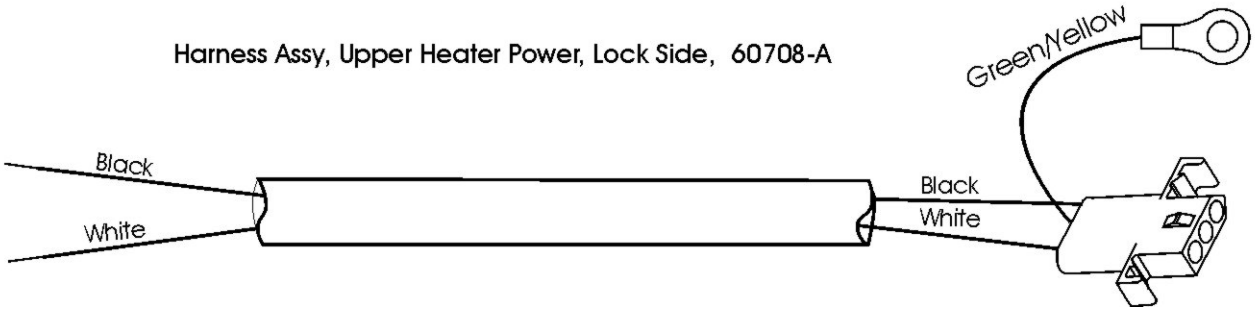
Speaker Harness, 61889-A-LF



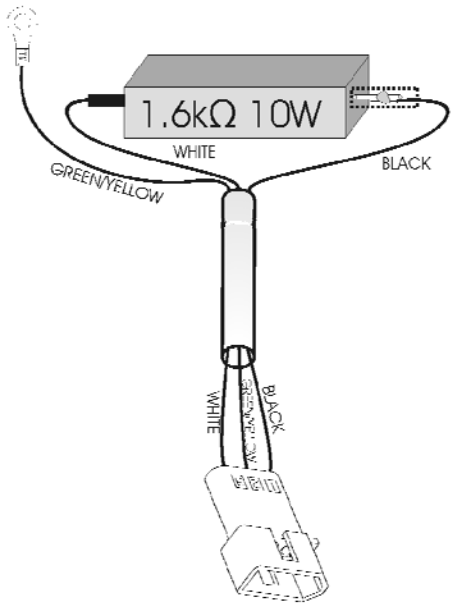
Audio Cable 48", 56670

Ground Strap Harness
38" - 59511-A
4-1/2" - 60742-1A

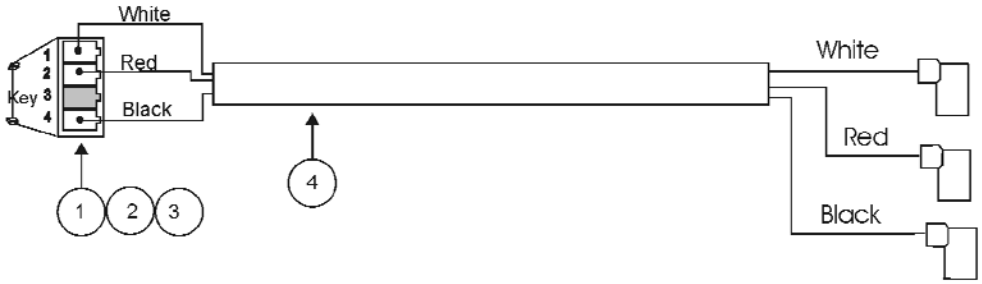
Harness Assy, Upper Heater Power, Lock Side, 60708-A



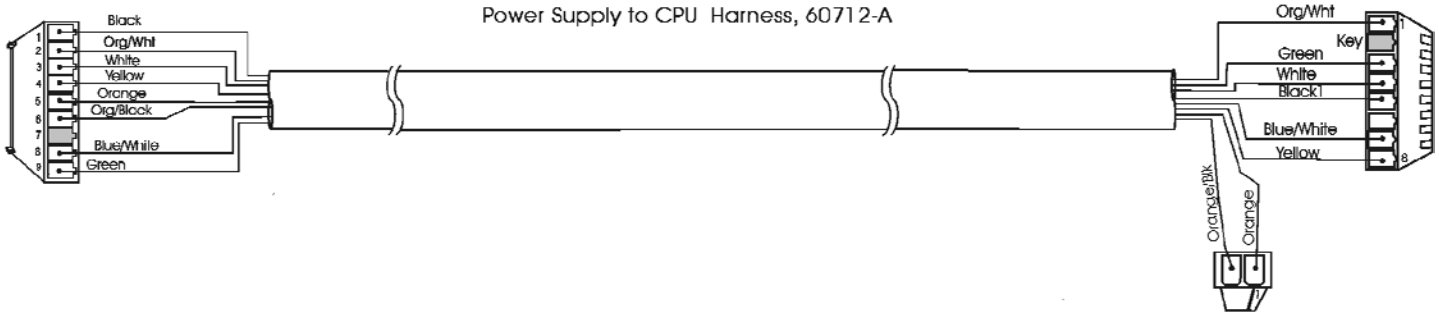
Heat Resistor Harness, 60710-A-LF

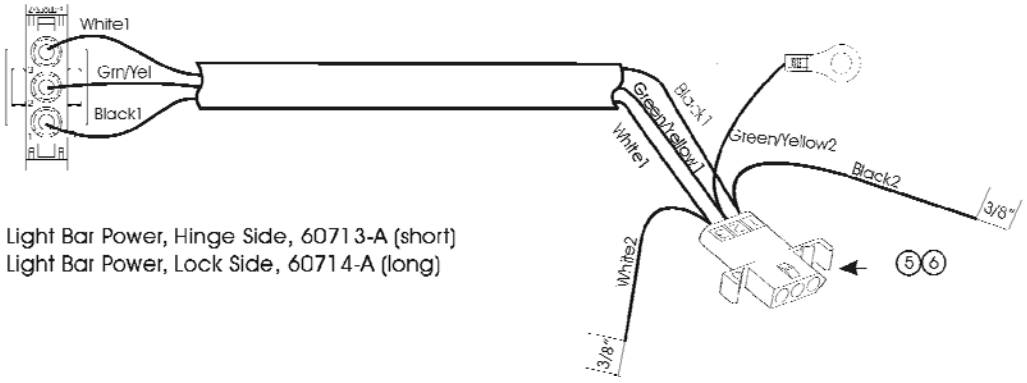


Power Cut-off Harness, 60711-A



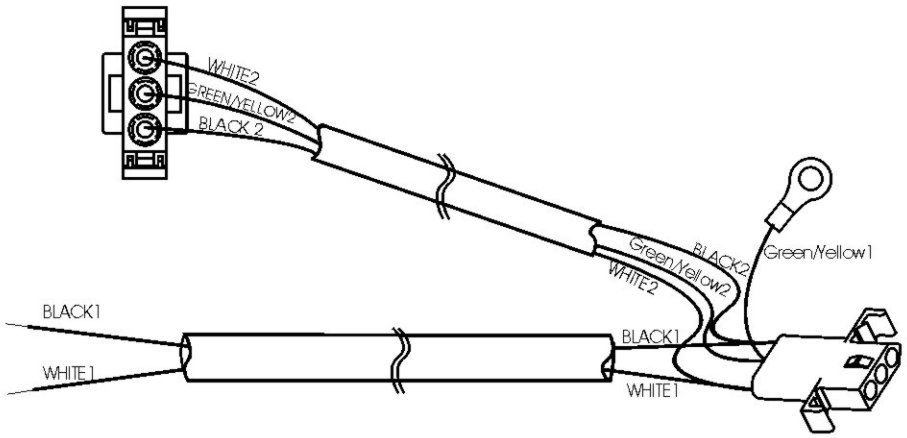
Power Supply to CPU Harness, 60712-A



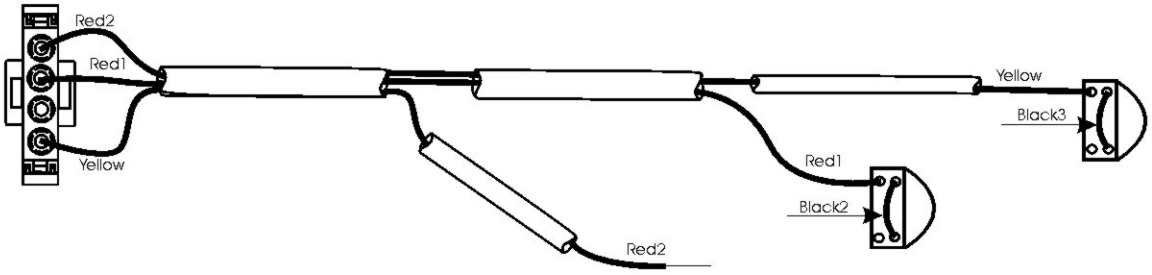


Harness Assy, Light Bar Power, Hinge Side, 60713-A (short)
Harness Assy, Light Bar Power, Lock Side, 60714-A (long)

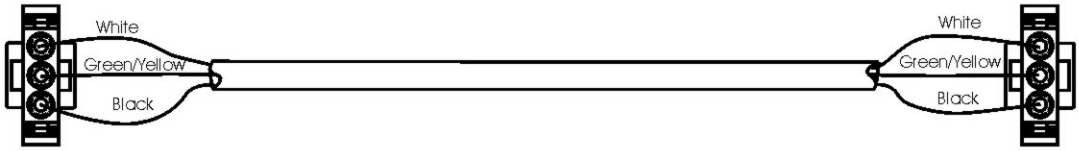
Light Arch Power Harness, 60715-A



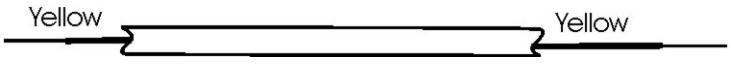
Title Page Lighting Harness, 60716-A



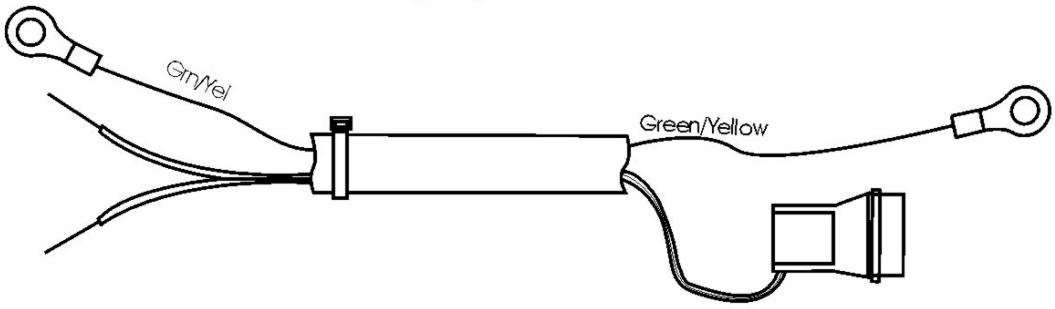
Power Supply to Junction Box Harness, 60729-A



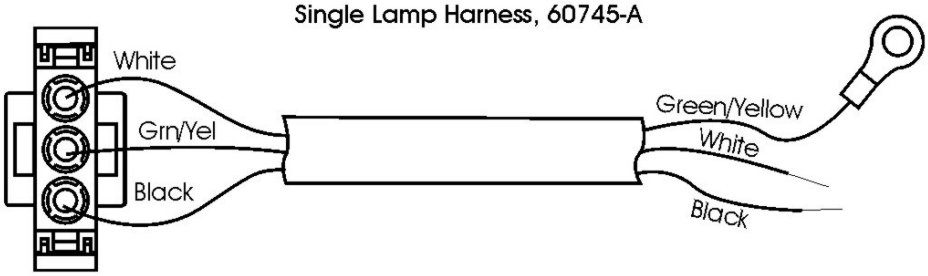
Logo Lighting Harness, 60735-A



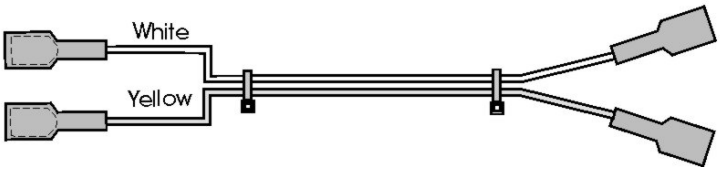
Star Lighting Harness, 60597-A



Single Lamp Harness, 60745-A



SPG Motor Adapter Harness, 61225-A



Kits and Accessories

PART NO.	DESCRIPTION
	Items shipped in the cash box (I.R. Remote Control Package)
61467- A	I.R. Remote Control, Deluxe
SV-60046-A	I.R. Remote Receiver Assembly
SV-59891-A	I.R. Receiving Interface PCB Assembly
58810	Remote Sensor Enclosure
ST-09728	Screw, 4-40 x 1/4 Phil Pan Hd Sw.
58789-A	I.R. Remote Harness
59164-03	Installation Instructions
	Service Envelope: (contains the following:)
56202-02	Pricing Sheet
60753	Title Strips, Single (25)
57279-02	Title Strips, Double (34)
60761	Operation & Service Manual with Parts Catalog
60511-02	Quick Find Reference Programming Sheet
60457-02	" Spanish (for Mexico)
57022-03	Warranty Card (Domestic)
58180-02	" (for Mexico)
59515	" (for Export)
55004	Application Form
56141	Number Strip
60670-01	Price Card, Blank (Domestic)
60683	Decal, DBA $1 & $1/2/5 (Domestic)
60685-A	Harness, Speaker Adaptor
60704-A	Terminal Kit
	Optional Kits:
02379-02	Yoga Microphone Kit
02410	Counter Kit
02450	Audio Distribution Package, Digital Amp
02436	Mars Dollar Bill Acceptor Kit ***(for Coin-Op models only)***
02465	iPod® Kit

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