This Service Manual covers

Nostalgic Floor Models with Coin-Acceptor

This document contains information proprietary to Rock-Ola Manufacturing Corporation and may not be reproduced, published or distributed in any form or disclosed in whole or in part without written authorization.
# Table of Contents

## Section A  Jukebox Specifications

## Section B  Set-up and Preparation

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Component Location</td>
<td>B - 2</td>
</tr>
<tr>
<td>Unpacking the Phonograph</td>
<td>B - 3</td>
</tr>
<tr>
<td>Power Up</td>
<td>B - 3</td>
</tr>
<tr>
<td>Loading Program Pages</td>
<td>B - 4</td>
</tr>
<tr>
<td>Loading Compact Discs</td>
<td>B - 5</td>
</tr>
<tr>
<td>Repacking/Moving</td>
<td>B - 6</td>
</tr>
</tbody>
</table>

## Section C  Connecting Speakers, Telephone Adaptor Kit, I.R. Remote Detector and Paging Microphone

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>External Speaker Connections</td>
<td>C - 2</td>
</tr>
<tr>
<td>Speaker Loading</td>
<td>C - 2</td>
</tr>
<tr>
<td>Connection Examples</td>
<td>C - 3</td>
</tr>
<tr>
<td>Installation of the Telephone Adaptor Kit for Removable Volume Control</td>
<td>C - 6</td>
</tr>
<tr>
<td>Installation of the I.R. Remote Detector and Harness Assembly</td>
<td>C - 7</td>
</tr>
<tr>
<td>Connecting A Paging Microphone</td>
<td>C - 8</td>
</tr>
<tr>
<td>Installation of the iPod® Dock Kit</td>
<td>C - 9</td>
</tr>
</tbody>
</table>

## Section D  Amplifier Description and Operation

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amplifier Description</td>
<td>D - 2</td>
</tr>
<tr>
<td>Indicator LED's</td>
<td>D - 3</td>
</tr>
<tr>
<td>Signal Inputs and Outputs</td>
<td>D - 3</td>
</tr>
<tr>
<td>Amplifier Feature Description</td>
<td>D - 4</td>
</tr>
<tr>
<td>Setting The Amplifier</td>
<td>D - 4</td>
</tr>
</tbody>
</table>

## Section E  Operation and Programming Overview

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Operation</td>
<td>E - 2</td>
</tr>
<tr>
<td>Control Computer Buttons</td>
<td>E - 3</td>
</tr>
</tbody>
</table>

### Programming, Service and Diagnostics Features Overview

- Suspend Mode                                                        | E - 4|
- Service Mode                                                        | E - 4|
- Setup Mode                                                          | E - 5|

### Diagnostic and Error Reporting Features                            | E - 6|

### Quick Find Reference Programming Chart                              | E - 7|

### Quick Find Reference Programming Definitions

- Disc Mapping                                                        | E - 8|
- Page Options                                                        | E - 8|
- Play Options                                                        | E - 9|
- Auto Play                                                          | E - 9|
- Free Play                                                          | E - 10|
- Pricing                                                            | E - 11|
- Set-up 1                                                            | E - 12|
- Set-up 2                                                            | E - 13|
- Set-up 3                                                            | E - 14|
Section F  Routine Service
Accounting.................................................................F - 2
Popularity ...............................................................F - 4
Disc Changing ..........................................................F - 5
Appearance and Preventative Maintenance .................F - 5
Checking For Errors ..................................................F - 6

Section G  Maintenance
Maintenance .............................................................G - 2
General Maintenance Considerations .........................G - 2
Preventative Maintenance ..........................................G - 2

Mechanical Adjustments
  Magazine Adjustments ...........................................G - 4
  CD Player Adjustments ...........................................G - 5
  Title Page Adjustments ..........................................G - 6
Coin Mechanism Cleaning .........................................G - 6
Replacing Fluorescent Lamps ......................................G - 6
Section H  Troubleshooting and Repair
Troubleshooting and Repair Overview.......................................................... H - 2

Troubleshooting Charts
  Power and Start up Problems.......................................................... H - 3
  Credit Problems ....................................................................... H - 4
  Play Problems ........................................................................ H - 4
  Page Problems ........................................................................ H - 5

Fuse and LED Locations
  Power Supply Fuses.................................................................... H - 6
  Keyboard LEDs ....................................................................... H - 6
  Digital Amplifier & Power Supply LEDs & Connections............. H - 6

Block Diagrams
  Amplifier Block Diagram .......................................................... H - 7
  CPU Block Diagram .................................................................. H - 8
  CD Player Start-Up and Run Diagram ................................... H - 9
  Power Distribution Block Diagram .................................... H - 10
  Start up and Diagnostic Mode Operation......................... H - 11
  Test Mode ............................................................................... H - 12
  Viewing Error Codes .............................................................. H - 12

Using Error Codes
  CPU (Input) Error Codes .......................................................... H - 13
  Keyboard Error Codes .............................................................. H - 14
  Mechanism Error Codes .......................................................... H - 15
  Page Unit Error Codes ............................................................. H - 15

Running Tests
  CPU Tests ................................................................................ H - 16
  Keyboard Test ....................................................................... H - 18
  Display Test ........................................................................... H - 18
  Pages Test ............................................................................... H - 19
  Mechanism Tests ..................................................................... H - 19

Amplifier Troubleshooting .............................................................. H - 21

Section I  Major Component Schematics
CPU................................................................................................. I - 2
Amplifier/Power Supply ............................................................... I - 8
Audio Output Panel ........................................................................ I - 20
Keyboard/Display .......................................................................... I - 21
Removable Volume Control ....................................................... I - 23
Crossover ...................................................................................... I - 24
Transformer ................................................................................... I - 25
Lighting Wiring Diagram ............................................................. I - 26
Primary Power Block Diagram .................................................. I - 27

Section J  Common Accessories (optional)

Section K  Parts Catalog
Jukebox Specifications
# Jukebox Specifications

<table>
<thead>
<tr>
<th>Dimensions:</th>
<th>CD-8 BUBBLER</th>
<th>CD-4 MODELS CD-6 PEACOCK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncrated:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td>61”</td>
<td>64 1/4”</td>
</tr>
<tr>
<td>Width</td>
<td>33 1/2”</td>
<td>33 1/2”</td>
</tr>
<tr>
<td>Depth</td>
<td>26 3/4”</td>
<td>26 3/4”</td>
</tr>
<tr>
<td>Crated:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td>73”</td>
<td>73”</td>
</tr>
<tr>
<td>Width</td>
<td>39”</td>
<td>39”</td>
</tr>
<tr>
<td>Depth</td>
<td>32”</td>
<td>32”</td>
</tr>
<tr>
<td>Weight:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncrated</td>
<td>284 Lbs.</td>
<td>287 Lbs.</td>
</tr>
<tr>
<td>Crated</td>
<td>341 Lbs.</td>
<td>344 Lbs.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Amplifier:</th>
<th>Main amplifier 450 peak music power</th>
<th>External amplifier 450 peak music power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Power:</td>
<td>Speaker overload</td>
<td>Automatic, self resetting</td>
</tr>
<tr>
<td>Protection:</td>
<td>High temperature</td>
<td></td>
</tr>
<tr>
<td>Frequency:</td>
<td>30 - 20,000 Hz</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Input Power:</th>
<th>Domestic / Export</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage:</td>
<td>115V / 230V</td>
</tr>
<tr>
<td>Frequency:</td>
<td>60 Hz / 50 Hz</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Maximum Power Consumption:</th>
<th>Watts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standby / Max</td>
<td>225 / 800</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Speakers:</th>
<th>(2) Tweeter 3”</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(2) Midrange 6-1/2”</td>
</tr>
<tr>
<td></td>
<td>(1) Woofer 10” dual voice coil</td>
</tr>
</tbody>
</table>
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  
7. Service Switch  
8. Crossover  
9. Speaker 10” dual voice coil  
10. Scan/Cancel Switch  
11. Power Cut Off Switch  
12. Power Transformer

---

**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.

---

**Figure 1B**
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.
- 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.”
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.

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

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

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

**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.
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

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.

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.
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

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.
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.

<table>
<thead>
<tr>
<th>Number of Pairs</th>
<th>8-Ohm Speakers</th>
<th>Ext Speakers Connected to Terminal No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>NA</td>
<td>1</td>
</tr>
</tbody>
</table>

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

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.

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.
   
<table>
<thead>
<tr>
<th>Color</th>
<th>Pin #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLU</td>
<td>Pin 1</td>
<td>Internal Common</td>
</tr>
<tr>
<td>YEL</td>
<td>Pin 2</td>
<td>External Common</td>
</tr>
<tr>
<td>GRN</td>
<td>Pin 3</td>
<td>Cancel &amp; Mute Common</td>
</tr>
<tr>
<td>RED</td>
<td>Pin 4</td>
<td>Mute, Int Down, Ext Down</td>
</tr>
<tr>
<td>BLK</td>
<td>Pin 5</td>
<td>Cancel, Int Up, Ext Up</td>
</tr>
<tr>
<td>WHT</td>
<td>Pin 6</td>
<td>Not used</td>
</tr>
</tbody>
</table>

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


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 may be 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 cannot 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.
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.

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)

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.*
Section C  Connecting Speakers & Optional Hardware

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” fluorescent lamp** in its sockets.
Section C
Connecting Speakers & Optional Hardware

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

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>No power to the iPod®</td>
<td>Power connector or Power Cube is not connected</td>
<td>Re-check connections.</td>
</tr>
<tr>
<td>No audio from the iPod®</td>
<td>Audio not programmed</td>
<td>See programming instructions.</td>
</tr>
<tr>
<td>iPod® remote not working</td>
<td>Paper battery protector not removed</td>
<td>Remove protector.</td>
</tr>
<tr>
<td>Noise from speakers without iPod® in dock</td>
<td>Dock power on without iPod® in dock</td>
<td>Turn dock off with dock remote control.</td>
</tr>
</tbody>
</table>
Amplifier Description and Operation

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

- **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 annullerait la garantie.

*iPod® is a trademark of Apple Computer Corp.*
**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 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 amplifier's 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-
contains specific instructions for accessing and using the SETUP MODE. Section E also contains “flow charts” which give a graphical representation of the SETUP MODE functions. The following section will only give the Quick Find programming number and what to expect when changing/adjusting features.

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

**Automatic Volume Control (AVC)** - AVC is controlled in software.

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

![AMP SETUP 231
AVC current setting](image)

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](image)

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](image)

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](image)

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](image)

If EQ Join is chosen the display will show:

![AMP SETUP 213
Internal EQ](image)

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

![INT Low * EQ Hi](image)

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](image)

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

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

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

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

![AMP SETUP 218 Int LTMLWP current setting]

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

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

![AMP SETUP 219 Int RT MLWP current setting]

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

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

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

![AMP SETUP 220 Int Lt Loud current setting]

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

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

![AMP SETUP 221 Int Rt Loud current setting]

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

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

**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:

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

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:

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

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 left external channel. Pushing an external volume button will change the volume for a speaker(s) connected to the right 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:

Press the HITS button again and the display will show:

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

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:

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:

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:

Press the HITS button again and the display will show:

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:

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:
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 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
Min Vol
```

Press the HITS button 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.
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:

```
Rock-Ola Jukebox
Press the Hits button...
```

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.

```
Insert Money
Credits: 0
```

- Credits in jukebox.

```
Make Selection
Credits: 3
```

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

```
Top Hit #01 0305
Credits: 3
```

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

```
Your Choice 0305
Credits: 2
```

- Customer has started making a normal selection via keyboard.

```
Your Choice 01--
Credits: 3
```

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

```
Remote Sel. 36--
Credits: 3
```
• 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.

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 button 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.”

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.)

Service Mode

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

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.

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:

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:

<table>
<thead>
<tr>
<th>Key(s)</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>MENU buttons</td>
<td>View Menu</td>
</tr>
<tr>
<td>#1 Button</td>
<td>Toggle Choice/Load Disc/Up</td>
</tr>
<tr>
<td>#2 Button</td>
<td>Return Disc/Down</td>
</tr>
<tr>
<td>RESET Button</td>
<td>Reset/Escape/Clear</td>
</tr>
<tr>
<td>HITS Button</td>
<td>Enter</td>
</tr>
</tbody>
</table>

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
- SETUP MODE
- Disc Mapping

**AUTO TEST**

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

To use the Menu Navigation method of programming and auditing, first make sure that the phonograph is in the SETUP MODE, then use the Menu keys to find the Main Menu item that you want.

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

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

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

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

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

To get out of a menu item, simply hit Reset. This will move you backward one menu level. Continue to hit Reset until you get back to the beginning of the menu structure.
To exit the Service or Setup Mode, simply close the dome/door.

**Quick Find Reference Programming**

This method provides *direct access* to a specific operating feature or audit capability. To use it, get into the SETUP MODE and type in the Quick Find number for the item you want then press HITS.

![Setup Mode](image)

The display will change to the selected programming feature.

![Disc Mapping](image)

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](image)

“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 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 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**
- 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 Disc

**AU TOPLAY**
- 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

**P R IC I N G**
- 60 Unit Price
- 61 Input Rates
- 62 Pricing Levels
- 63 Credits Spec.
- 64 Recirculate Lv.
- 65 Acct. Unit
- 66 Timed Bonus

**T E S T M O D E**
- 130 View Errors
- 131 View CPU Tests
- 132 Run Keybrd. Test
- 133 Run Display Test

**SET-UP 1**
- 70 Remote Power
- 71 Serv. Credits
- 72 Clear Selections
- 73 Clear Credits
- 74 Set Clock/Date
- 75 Message

**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

**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

**RE MOTE 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

**REMOTE SETUP**
- 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 Reset Outputs Test
- 145 Run Index Test
- 146 Run Gripper Test
- 147 Run Short Test
- 148 Test All Disc
- 149 Run CD Tests

**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 re-map. 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

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 unless a jukebox 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, Czech, 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 SyberSonic System.

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

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

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

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

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

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

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

To stop this test press RESET on the keyboard.

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

This test stops automatically at the end of its routine.

135 View/Run Mech. Tests - Provides access to the five playing mechanism self test routines. These are Index Test, Gripper Test, Short Test, Test All Discs and CD Tests.
See the explanations for Quick Find 145 - 149 for further mechanism test information.

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

See the Error Codes chart for further information.

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

See the Error Codes chart for further information.

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

See the Error Codes chart for further information.

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

See the Error Codes chart for further information.

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

See the Error Codes chart for further information.

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

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

See the Power Up Test Results chart for further information.

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

See the Test Input Codes chart for further information.

**144 Run Outputs Test** - This routine tests the 14 output lines from the CPU. The display will cycle through each output, indicating its voltage level (Gnd or Vcc).

See the Test Output Codes chart for further information.

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

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

**147 Run Short Test** - Will cause the mechanism to pick up 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 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 capital 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.

**Important!** 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: 5554567PPP where 5554567 is the pager number and PPP 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#nnnnnnn#PPPP

In the above example, 18007598888 is the access number, PPPP 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.

**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.

NOTE: 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.
* 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.
* 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.

*To set Specials, scroll to disc number, press Hits, press #1 to display desired setting, press Hits to lock in.
PLAY OPTIONS

HITS

PLAY OPTIONS 30
Track Limit 02
RT MENU

PLAY OPTIONS 31
Track Time 00
RT MENU

PLAY OPTIONS 32
Album Select Off
RT MENU

PLAY OPTIONS 33
Play Order Fifo
RT MENU

PLAY OPTIONS 35
Bd Trac Lock No
RT MENU

PLAY OPTIONS 36
Bd Disc Lock Yes
RT MENU

PLAY OPTIONS 37
Clear Select Yes
RT MENU

PLAY OPTIONS 38
Clear Credit Yes
RT MENU

PLAY OPTIONS 39
Priority Dsc Off/On

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.
Off = No Aux. BGM Input
One = No BGM input between JB selections
Two = BGM input live between JB selections

V/T = View and turn to page
FREE PLAY  52
Password FP No

RT MENU

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

FREE PLAY  53
Free Special No

RT MENU

FREE PLAY  53
Free Special No/Yes

FREE PLAY  54
Free Albums No

RT MENU

FREE PLAY  54
Free Albums No/Yes

FREE PLAY  55
Remote Crdt  Off

RT MENU

FREE PLAY  55
Remote Crdt  Off/On

If ON is selected
FREE PLAY  55
Day None/Every/SMTWTFS

RT MENU

FREE PLAY  55
Credits 00-99

If used, quick find #125 (Cancel Disc) must be off.
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

Possible Values for All Input Rates
001 - 999

RT MENU

PRICING 61
Input 1 Rate 001

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

E - 36
Possible Values for All 4 Pricing Levels

**00-000 - 99-999**

**Pricing Levels**

- **Credits / $ 01-050**
- **Credits / $ 02-100**
- **Credits / $ 05-200**
- **Credits / $ 15-500**

- **Credits Spec. 02**
  - Possible Values: 01 - 99

- **Recirculate Lv. 1**
  - Possible Values: 1 - 4

- **Acct. Unit 20**
  - Possible Values: 01 - 99

- **Timed Bonus Off/On**
  - (if on)

- **Free/Paid 01/03**
- **Stop Time 00:00 - 23:59**
- **Start Time 00:00 - 23:59**
- **None/Every/SMTWTF**

- **Action Done**
- **Are You Sure?**
- **Clear Settings**
- **View Settings**

**Timed Bonus - 01-21**

**E - 37**
If HITS

Program

RT MENU

RT MENU

HITS

HITS

HITS

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”

Possible Values

01 - 14

RT MENU

RT MENU

HITS

HITS

HITS

RESET WHEN FINISHED

SET-UP 1 76
Message Factory

SET-UP 1 75
Message Off/Factory/Prog

SET-UP 1 75
Clear Message

SET-UP 1 75
Are You Sure?

SET-UP 1 75
Action Done

SET-UP 1 75
Change Message

SET-UP 1 75
Scroll Rate 05

SET-UP 1 77
Auto Clean No

SET-UP 1 77
CD Cleaner 99

If Yes

If Yes
If setting is OK press RESET
Else press HITS then #1 to toggle choice.
See Section D for Volume Control option details.
SET-UP 2

Must have a security level "3" set before setting another security Level to "1" or "2"
Choose from All / Kybd

Choose from Comm or Home

Choose from English, Spanish, German, Portuguese, French, Czech or Finnish.

Fade will cause the song’s volume to increase to set level. Norm will cause song to start at the set volume level.
Range is 000-999. If an invalid “hotkey” is entered, menu entry will default to normal entry point: “Disc Mapping”
Choose from:
Least Pop, Most Pop or CD Order
(Will print and view popularity based upon this setting).

To change displayed CD, press button #1.
To return disc to magazine, press button #2.
More detail available in “Routine Service” section.
REMOTE CONTROL

SETUP MODE
Remote Cntrl

REMOTE CNTRL 120
Pause/Mute

REMOTE CNTRL 120
Pause Time 00/99

REMOTE CNTRL 121
Select Type Off/Any/Free

REMOTE CNTRL 120
Pause Suspend Op/Mute Music

REMOTE CNTRL 122
Rem Playlist Off/On

REMOTE CNTRL 122
View Nxt Discs

REMOTE CNTRL 122
Disc 00 Disabled/Enabled

REMOTE CNTRL 122
Clear Nxt Discs

REMOTE CNTRL 122
Disc 01 Disabled/Enabled

REMOTE CNTRL 122
Are You Sure?

REMOTE CNTRL 122
Disc … Disabled/Enabled

REMOTE CNTRL 122
Action Done

REMOTE CNTRL 122
Disc 99 Disabled/Enabled

REMOTE CNTRL 123
Surround Snd On/Off

REMOTE CNTRL 122
Disc … Disabled/Enabled

REMOTE CNTRL 122
Action Done

REMOTE CNTRL 122
Disc 99 Disabled/Enabled

REMOTE CNTRL 122
Disc … Disabled/Enabled

REMOTE CNTRL 122
Action Done

REMOTE CNTRL 122
Disc 99 Disabled/Enabled

REMOTE CNTRL 122
Disc … Disabled/Enabled

REMOTE CNTRL 122
Action Done

REMOTE CNTRL 122
Disc 99 Disabled/Enabled

REMOTE CNTRL 122
Disc … Disabled/Enabled

REMOTE CNTRL 122
Action Done

REMOTE CNTRL 122
Disc 99 Disabled/Enabled

REMOTE CNTRL 122
Disc … Disabled/Enabled

REMOTE CNTRL 122
Action Done

REMOTE CNTRL 122
Disc 99 Disabled/Enabled

REMOTE CNTRL 122
Disc … Disabled/Enabled

REMOTE CNTRL 122
Action Done

REMOTE CNTRL 122
Disc 99 Disabled/Enabled
If set to **On**, quick find #55 (Remote Credits) must be off.
*NOTE: To change a song entry: scroll to the entry, press hits, type in the selection number, then press hits.
To add an entry: scroll to the end of the list, press hits type in the selection number, then press hits.

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

See Troubleshooting and Repair Section for Test Mode Details and Code Charts.
Will display which key is pressed. Cycle Service Switch to exit.

Will cycle through all available characters.

Keyboard Test: No Key Pressed

Pages Test: Turning Pages…

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.
Servo Test: Turntable Off

Play Test: Playing Track 01

#5

Servo Test: Arm Out/In
Enter the desired number of hours and press HITS to start the test. 00 is continuous test
AUTO TEST 157
View Kybd Errors

AUTO TEST 157
K06 12/25 16:11
End Kybd Errors

AUTO TEST 158
View Mech Errors

AUTO TEST 158
M04 12/25 16:15
End Mech Errors

AUTO TEST 159
View Page Errors

AUTO TEST 159
P02 12/25 16:20
End Page Errors

AUTO TEST 152
Print Report

AUTO TEST 152
Printing...

AUTO TEST 153
Clear Report

AUTO TEST 153
Are You Sure?

AUTO TEST 153
Action Done
TCM SETUP

1. **SETUP MODE**
   - TCM Setup

2. HITS
   - If Prog and HITS
     - TCM SETUP 170
       - Day None/Every/SMTWTSF

3. If Yes and HITS
   - RT MENU
     - TCM SETUP 170
       - Start Time 00:00 - 23:59

4. RT MENU
   - TCM SETUP 170
     - Num. of Rings 01-99

5. RT MENU
   - TCM SETUP 170
     - Clear Settings

6. HITS
   - TCM SETUP 170
     - Are You Sure?

7. HITS
   - TCM SETUP 170
     - Action Done
*Details regarding initialization strings can be found in your modem owners manual.

Choose from:
- Rock-Ola Zoom V3.4
- Rockwell 14.4
- US Robotics 28.8
- User Defined

Enter your modem Xmit Init String. See instructions for entering Custom Message.

Enter your modem Recv Init String. See instructions for entering Custom Message.
AMP SETUP

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

To Adjust EQ – Use L or R Pages to Move Asterisk
#1 Increases
#2 Decreases
AMP SETUP External Amp

AMP SETUP Ext Tone EQ Join or L/R
- If Join: HITS
- If L/R: HITS

AMP SETUP Ext Left EQ
- EXT: BOTH
- LOW | | | | | | HIGH

AMP SETUP Ext Right EQ
- EXT: * RIGHT
- LOW | | | | | | HIGH

AMP SETUP Ext Balance
- EXT: BAL
- LT . . . . . . . . . . . . RT

AMP SETUP Ext MLWP
- AMP SETUP Ext LT MLWP 50%
- AMP SETUP Ext RT MLWP 50%

AMP SETUP Int AVC
- AMP SETUP Int AVC Off/On

AMP SETUP Reset Int Amp
- AMP SETUP Action Done

AMP SETUP Are You Sure?

AMP SETUP Page Decay 02-99

To Adjust EQ – Use L or R Pages to Move Asterisk
#1 Increases
#2 Decreases

Use L or R Pages Buttons To Change Balance
AMP SETUP 225
Ext Loudness

AMP SETUP 226
Reset Ext Amp

AMP SETUP 225
Ext LT Loud Off/On

AMP SETUP 230
Ext RT Loud Off/On

AMP SETUP 232
Ext AVC Off/On

AMP SETUP 232
Ext AVC Off/On

AMP SETUP 226
Are You Sure?

AMP SETUP 226
Action Done
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 Spec** - 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.

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

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

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

Cleaning Supplies and Lubricants

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

- Ammoniated Glass Cleaner
- Spray Furniture Wax
- Mild Detergent Solution
- Isopropanol Alcohol (25%)
- Lint Free Cotton Swabs
- Lint Free Wiping Cloth
- 1¼" 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 not 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, do not scratch or damage. Clean carefully.

**ADVERTENCIA**

El Actuator es muy frágil. Su lente está hecho de un material especial cubierto por un film, no rayar ni dañar. Limpiar cuidadosamente.

**AVERTISSEMENT**

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

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.

Los Toca-discos CD son extremadamente sensivos a descargas de electricidad estática. Siempre haga “tierra” antes de tocar el Toca-discos CD, y nunca toque el ojo (lente). El Toca-discos en sí, no tienen ajustes. 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’œil. Le lecteur de disque compact ne présente aucun réglage. Le seul entretien nécessaire est un nettoyage régulier de la lentille.

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

---

• 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 extremely sensitive to static discharges. Always ground yourself before touching the player and never touch the eye.**

El Toca-discos CD es extremamente sensible a descargas de electricidad estática. Siempre toque “tierra” antes de tocar el Toca-discos, y nunca 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’œil.

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).

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).

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.

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 counterclockwise if it stops too late. Retighten screw “A” and test all 6 positions after adjusting.

CD Player Adjustments

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. There are no electronic adjustments on the CD player.


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’œil. 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.

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.
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 6G - Magazine Indexing Adjustment

Figure 7G - Gripper Assembly
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.

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 lampes, 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 power 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.
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

<table>
<thead>
<tr>
<th>Fault</th>
<th>Symptom</th>
<th>Possible Cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jukebox lamps not on.</td>
<td>12 VDC LED only on.</td>
<td>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.</td>
</tr>
<tr>
<td>Jukebox operational, but fluorescent lamp(s) will not ignite.</td>
<td>Check fuse in Power Supply. Defective lamp(s). Defective ballast. Lighting plug not seated. Defective lighting wiring. Defective Power Supply.</td>
<td></td>
</tr>
<tr>
<td>Fault</td>
<td>Symptom</td>
<td>Possible Cause</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>---------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Mechanism runs but display is blank.</td>
<td>All Power Supply LEDs are on.</td>
<td>Broken connection at &quot;Keyboard Connector&quot; on Control Computer.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Broken connection at &quot;phone&quot; connector on keyboard.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Defective Keyboard Cable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Defective Keyboard Assy.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Defective Control Computer.</td>
</tr>
<tr>
<td>Credit Problems</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fault</strong></td>
<td><strong>Possible Cause</strong></td>
<td></td>
</tr>
<tr>
<td>No credits given when coins are inserted.</td>
<td>Coins are jammed in coin acceptor.</td>
<td>Foreign object blocking coin path.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dirty coin acceptor.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Defective coin acceptor.</td>
</tr>
<tr>
<td>Coins fall into coin return cup.</td>
<td></td>
<td>Foreign object blocking coin path.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dirty coin acceptor.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Defective coin acceptor.</td>
</tr>
<tr>
<td>Coins clear coin acceptor and coin switch, but no credits are given.</td>
<td></td>
<td>Defective coin switch actuator.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Defective coin switch.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Defective coin switch wiring.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pricing not programmed correctly.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Defective Control Computer.</td>
</tr>
<tr>
<td>No credits given when bills are inserted.</td>
<td>Validator will not take bills.</td>
<td>Jammed bill.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stacker not seated correctly.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Defective Bill Validator.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Defective Bill Validator Harness.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Defective Control Computer.</td>
</tr>
<tr>
<td>Validator accepts bills, but gives no credits</td>
<td></td>
<td>Defective Bill Validator Harness.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Defective Bill Validator.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pricing not programmed correctly.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Defective Control Computer.</td>
</tr>
<tr>
<td>Play Problems</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Trouble</strong></td>
<td><strong>Possible Cause</strong></td>
<td></td>
</tr>
<tr>
<td>Not playing all songs.</td>
<td>Songs “Skipping”.</td>
<td>CD Mechanism not unbolted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dirty disc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dirty laser eye.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Disc not clamping properly.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Defective disc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Defective laser.</td>
</tr>
</tbody>
</table>
### Troubleshooting and Repair

#### 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

<table>
<thead>
<tr>
<th>Fault</th>
<th>Symptom</th>
<th>Possible Cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pages will not turn.</td>
<td>Pages will not turn at all.</td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pages not programmed properly. (See Page Options in section E).</td>
</tr>
<tr>
<td>Pages will only turn to a certain point.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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
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

- CD Player
- Display/Keyboard
- Amplifier
- Power Supply
- CPU
- Coin Unit
- Dollar Bill Acceptor
- Remote Keypad
- Misc. Cabinet Connections

22VAC

+12VDC
+123W
+24VDC

24VAC
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
```

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.

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

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**

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

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
<th>Cause and Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>C13</td>
<td>INT VOL UP pressed for longer than 1 minute.</td>
<td>Check Remote Volume Control wiring for a short circuit, Replace Control Computer.</td>
</tr>
<tr>
<td>C14</td>
<td>INT VOL DOWN Internal Volume Down key pressed for longer than 1 minute.</td>
<td>Check Internal Volume Down Switch, Replace Remote Volume Control, Check Remote Volume Control wiring for a short circuit, Replace Control Computer.</td>
</tr>
<tr>
<td>C15</td>
<td>MUTE Pause key depressed for longer than 1 minute.</td>
<td>Check Mute Switch, Replace Remote Volume Control, Check Remote Volume Control wiring for a short circuit, Replace Control Computer.</td>
</tr>
<tr>
<td>C16</td>
<td>CANCEL Cancel key depressed for longer than 1 minute.</td>
<td>Check Cancel Switch, Replace Remote Volume Control, Check Remote Volume Control wiring for a short circuit, Replace Control Computer.</td>
</tr>
</tbody>
</table>

### Keyboard Error Codes

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

<table>
<thead>
<tr>
<th>Error Value</th>
<th>Mechanism Error</th>
<th>Error Code Explanation</th>
<th>What To Do</th>
</tr>
</thead>
<tbody>
<tr>
<td>M01</td>
<td>MAGAZINE</td>
<td>Unable to locate a compact disc (slot number). Unable to find “Home”.</td>
<td>Run Index Test, Check/Replace Mech Opto Sensor, Check Mech Opto Sensor Wiring, Replace Control Computer. Check magazine motor. Check cam switch wiring.</td>
</tr>
<tr>
<td>M02</td>
<td>LOADING</td>
<td>Unable to load a compact disc.</td>
<td>Run Gripper Test, Check 24 VDC, Check Gripper Motor, Check Gripper Motor Wiring, Replace Control Computer. Check cam switches.</td>
</tr>
<tr>
<td>M03</td>
<td>UNLOADING</td>
<td>Unable to unload a compact disc.</td>
<td>Run Gripper Test, Check 24 VDC, Check Gripper Motor, Check Gripper Motor Wiring, Replace Control Computer. Check cam switches.</td>
</tr>
<tr>
<td>M04</td>
<td>COMMUNICATION</td>
<td>Unable to establish communication with CD player.</td>
<td>Check CD player wiring from Control Computer to Laser. Replace CD player. Replace Control Computer.</td>
</tr>
<tr>
<td>M05</td>
<td>CD RESPONSE</td>
<td>Unable to obtain the correct response from the CD player.</td>
<td>Check CD player wiring from Control Computer to Laser. Replace CD player. Replace Control Computer.</td>
</tr>
</tbody>
</table>

# Page Unit Error Codes

<table>
<thead>
<tr>
<th>Error Value</th>
<th>Page Unit Error</th>
<th>Error Code Explanation</th>
<th>What To Do</th>
</tr>
</thead>
<tbody>
<tr>
<td>P01</td>
<td>PAGE LEFT</td>
<td>Unable to flip the pages left.</td>
<td>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.</td>
</tr>
<tr>
<td>P02</td>
<td>PAGE RIGHT</td>
<td>Unable to flip the pages right.</td>
<td>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.</td>
</tr>
</tbody>
</table>
Running Tests

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

CPU Tests

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

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

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

PowerUp Test: No Failures

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

PowerUp Test: Ram Failure

PowerUp Test: E2prom Failure

PowerUp Test: Eprom Failure

PowerUp Test: Rtcc Failure

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:**

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

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:

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

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.

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 without 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 (-).
Major Component Schematics

- CPU
- Amplifier/Power Supply
- Audio Output Panel
- Keyboard/Display
- Volume Control
- Crossover
- Transformer
- Lighting Wiring Diagram (CD-8V)
- Primary Power Block Diagram
## Bill of Materials - PCB Assy, CPU, 58399-1A

<table>
<thead>
<tr>
<th>Reference</th>
<th>Part</th>
<th>Reference</th>
<th>Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>Back of board across 5V Supply</td>
<td>Diode, IN4733A</td>
<td>R10</td>
<td>Resistor: 180 ohm, 1/4W, 5%</td>
</tr>
<tr>
<td></td>
<td>R5, R6</td>
<td>Resistor: 2.2K ohm, 1/4W, 5%</td>
<td></td>
</tr>
<tr>
<td>Back of board across R12</td>
<td>Diode, IN5347A</td>
<td>R2, R20</td>
<td>Resistor: 4.7K ohm, 1/4W, 5%</td>
</tr>
<tr>
<td>BAT1</td>
<td>Battery, 3V Lithium</td>
<td>R3</td>
<td>Resistor: 75K ohm, 1/4W, 5%</td>
</tr>
<tr>
<td>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</td>
<td>Capacitor: .1uF, 50V, Mono R12</td>
<td>Resistor: 75 ohm, 3W, 5%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RN4, RN6, RN7, RN8, RN10, RN11</td>
<td>Resistor SIP Network, 10K ohm, 8 pin isolated</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RN1, RN2, RN12</td>
<td>Resistor SIP Network, 470 ohm, 8 pin isolated</td>
<td></td>
</tr>
<tr>
<td>C12, C18, C19, C42, C43</td>
<td>Capacitor: 2200pF, 50V Mono</td>
<td>RN14</td>
<td>Resistor SIP Network, 4.7K ohm, 8 pin isolated</td>
</tr>
<tr>
<td>C84, C85</td>
<td>Capacitor: 22pF, 100V, Mono</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C7, C8, C13, C14, C20-C27, C31-C34, C44, C45, C56, C57, C58, C60, C61, C62, C63, C64, C67, C68, C69, C73, C78</td>
<td>Capacitor: 330pF, 100V, Mono</td>
<td>RN5</td>
<td>Resistor SIP Network, 1.0K ohm, 10 pin common</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C4</td>
<td>Capacitor: 100uF, 25V</td>
<td>SP1</td>
<td>Spacer, 3/8&quot; for CR3</td>
</tr>
<tr>
<td>C5, C46</td>
<td>Capacitor: 10uF, 35V</td>
<td>SU1</td>
<td>28 pin Socket, low profile</td>
</tr>
<tr>
<td>C39, C40</td>
<td>Capacitor: 470uF, 35V</td>
<td>SU8</td>
<td>32 pin Socket, low profile</td>
</tr>
<tr>
<td>CR1</td>
<td>Diode, IN4002</td>
<td>SU3</td>
<td>Battery Holder 25mm dia.</td>
</tr>
<tr>
<td>CR2, CR6</td>
<td>Diode Bridge 1A</td>
<td>TP1</td>
<td>Test Point</td>
</tr>
<tr>
<td>CR3</td>
<td>Light Emitting Diode, IR</td>
<td>U15, U24</td>
<td>I.C. L293 - Quad Half-H Driver</td>
</tr>
<tr>
<td>CR4, CR5</td>
<td>Diode, IN4148</td>
<td>U4</td>
<td>I.C. MAX691A, Microprocessor</td>
</tr>
<tr>
<td>DP1</td>
<td>7 Segment Disp - com anode</td>
<td>U7</td>
<td>I.C. ULN2003A, H-V, H-C</td>
</tr>
<tr>
<td>HS1</td>
<td>Heatsink TO-220</td>
<td>U11</td>
<td>I.C. 62421B - CMOS real time clock</td>
</tr>
<tr>
<td>HW1</td>
<td>Screw, #6-32 x 3/8 Pan Hd</td>
<td>U16</td>
<td>I.C. 62421B - CMOS real time clock</td>
</tr>
<tr>
<td>HW2</td>
<td>Keps Nut #6-32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>J3</td>
<td>Connector: 4 pin .1</td>
<td>U17</td>
<td>I.C. 80C32 - 8 bit Microcomputer</td>
</tr>
<tr>
<td>J9, J10</td>
<td>Connector: 6 pin .1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>J14</td>
<td>Connector: 8 pin .1</td>
<td>U5</td>
<td>62256-CMOS-32,768 Word by 8 Bit LSI</td>
</tr>
<tr>
<td>J8</td>
<td>Connector: 9 pin .1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>J6</td>
<td>Connector: 10 pin .1</td>
<td>U1</td>
<td>I.C. 28C64 - EEPROM 8KX8</td>
</tr>
<tr>
<td>J4</td>
<td>Connector: 14 pin .1</td>
<td>U8</td>
<td>I.C. 27C020</td>
</tr>
<tr>
<td>J2</td>
<td>Connector: 4 pin .156</td>
<td>U19, U20</td>
<td>I.C. 75176 - Differential Bus Transceiver</td>
</tr>
<tr>
<td>J1</td>
<td>Connector: 8 pin .156</td>
<td></td>
<td></td>
</tr>
<tr>
<td>J5</td>
<td>Connector: 12 pin .156</td>
<td>U14</td>
<td>I.C. 74HC373 H-CMOS Octal</td>
</tr>
<tr>
<td>J13</td>
<td>Connector: 4 pin RJH side. entry L.P</td>
<td>U18</td>
<td>I.C. 74HC00 H-CMOS Quad 2 input and</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J7, J11, J12</td>
<td>Connector: 6 pin RJ12 side entry L.P</td>
<td>U23</td>
<td>74HC32 H-CMOS Quad 2 input or gate</td>
</tr>
<tr>
<td>JP5</td>
<td>Jumper Blk, 2 pin</td>
<td>U10, U13</td>
<td>I.C. 74HC138 H-CMOS 3/8 Decoder</td>
</tr>
<tr>
<td>JP1, JP2, JP3</td>
<td>Jumper Blk, 3 pin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JP4</td>
<td>Jumper Blk, 4 pin</td>
<td>U3, U6, U9</td>
<td>I.C. 74HC244 H-CMOS Octal Buffer</td>
</tr>
<tr>
<td>Q1</td>
<td>I.C. LM7805C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q2</td>
<td>I.C. LM7809C</td>
<td>U2, U12, U16</td>
<td>I.C. 74HC273 H-CMOS Octal</td>
</tr>
<tr>
<td>Q3</td>
<td>NPN Transistor PN2222</td>
<td>U21, U22</td>
<td>4051 CMOS 8 Channel Analog</td>
</tr>
<tr>
<td>R7, R8, R9</td>
<td>Resistor: 100 ohm, 1/4W, 5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R4, R21, R50</td>
<td>Resistor: 10K ohm, 1/4W, 5%</td>
<td>Y1</td>
<td>Crystal, 11.0592 Mhz</td>
</tr>
<tr>
<td>R1, R11</td>
<td>Resistor: 220 ohm, 1/4W, 5%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Digital Preamp

PCB Assy, Digital Preamp (DSP #1 & Inputs), 60441-1A
PCB Assy, Digital Preamp (CPU & Microphone Circuits), 60441-1A
Section I

Major Component Schematics

Rock-Ola® Mfg. Corp

Operation and Service Manual
Digital CD Nostalgic Models
# Bill of Materials, Digital Preamp, 60441-1A

<table>
<thead>
<tr>
<th>Reference</th>
<th>Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR2, CR3</td>
<td>LED, ORG</td>
</tr>
<tr>
<td>CR4</td>
<td>LED, RED</td>
</tr>
<tr>
<td>CR5, CR5</td>
<td>Diode, DL41, 1N4002</td>
</tr>
<tr>
<td>CR7</td>
<td>Zener Diode, DL51 1N5231</td>
</tr>
<tr>
<td>CR8</td>
<td>LED, GREEN</td>
</tr>
<tr>
<td>C1, C2, C5, C6, C9, C10, C32, C34, C58, C59, C61, C68</td>
<td>Capacitor, 0.47uF, 16VDC</td>
</tr>
<tr>
<td>C3, C4, C7, C8, C38, C39, C50, C51</td>
<td>Capacitor, 470pF, 50V</td>
</tr>
<tr>
<td>C11, C12, C23, C24</td>
<td>Capacitor, 1200pF, 50V</td>
</tr>
<tr>
<td>C13, C15, C17, C25, C27, C28, C29, C31, C48, C60, C67, C70, C71, C72, C73, C74, C75, C77, C95, C96, C97, C99, C100, C101</td>
<td>Capacitor, 0.1uF, 50V</td>
</tr>
<tr>
<td>C14, C26, C42, C54, C55, C63, C93, C94</td>
<td>Capacitor, 1.0uF, 16V, 0805</td>
</tr>
<tr>
<td>C16, C30, C45, C46, C47, C53, C56, C98, C102, C103, C104</td>
<td>Capacitor, 10uF 16V</td>
</tr>
<tr>
<td>C18, C19</td>
<td>Capacitor, 15pF</td>
</tr>
<tr>
<td>C20, C40</td>
<td>Capacitor, 1500pF, 50V</td>
</tr>
<tr>
<td>C22, C41</td>
<td>Capacitor, 0.068uF 16V</td>
</tr>
<tr>
<td>C37, C33</td>
<td>Capacitor, 15uF 16V</td>
</tr>
<tr>
<td>C35</td>
<td>Capacitor, 47uF, 16V</td>
</tr>
<tr>
<td>C36</td>
<td>Capacitor, 10uF, 16V</td>
</tr>
<tr>
<td>C49</td>
<td>Capacitor, 100uF, 16V</td>
</tr>
<tr>
<td>C43, C57, C96</td>
<td>Capacitor, 1.0uF 16V, Electrolytic</td>
</tr>
<tr>
<td>C44, C52</td>
<td>Capacitor, 47uF, 35V</td>
</tr>
<tr>
<td>C63, C64, C65, C66, C76, C78, C79</td>
<td>Capacitor, 10uF, 35V</td>
</tr>
<tr>
<td>C69</td>
<td>Capacitor, 0.001uF, 50V</td>
</tr>
<tr>
<td>C91, C105</td>
<td>Capacitor, 39 Ohm, 4A, 0805</td>
</tr>
<tr>
<td>FB1, FB3</td>
<td>Ferrite, 39 Ohm, 15.5A, 1206</td>
</tr>
<tr>
<td>J1, J2, J3, J4, J5, J6, J14, J15, J16, J17</td>
<td>RCA Jack</td>
</tr>
<tr>
<td>J7</td>
<td>RJ11 jack, 6 x 4 Modular</td>
</tr>
<tr>
<td>J8, J18</td>
<td>0.156 X 4 Receptacle, Bottom Entry</td>
</tr>
<tr>
<td>J9</td>
<td>0.156 X 4 Header, Straight</td>
</tr>
<tr>
<td>J10</td>
<td>M-N-L x 4</td>
</tr>
<tr>
<td>J11</td>
<td>DIN x 8</td>
</tr>
<tr>
<td>J12</td>
<td>DIN x 6</td>
</tr>
<tr>
<td>J13</td>
<td>0.100 x 7 Receptacle, Bottom Entry</td>
</tr>
<tr>
<td>Q1</td>
<td>12V Regulator, TO-220, LM7812 (mounted to chassis)</td>
</tr>
<tr>
<td>Q2</td>
<td>5V Regulator, TO-220, LM7805</td>
</tr>
<tr>
<td>Q3, Q4</td>
<td>3.3V Regulator, SM, TPS76433DBV</td>
</tr>
<tr>
<td>RN1, RN2, RN4</td>
<td>Resistor Network, 47K x 4</td>
</tr>
<tr>
<td>RN3</td>
<td>Resistor Network, 470x4</td>
</tr>
<tr>
<td>RN5, RN6</td>
<td>Resistor Network, 10K x 4 ISO</td>
</tr>
<tr>
<td>RN7</td>
<td>Resistor Network, 100 x 4</td>
</tr>
<tr>
<td>RN8</td>
<td>Resistor Network, 4.7K x 4</td>
</tr>
<tr>
<td>R1, R2, R3, R4</td>
<td>Resistor, 24.9K, 1/16W, 1%, 0603</td>
</tr>
<tr>
<td>R11, R10</td>
<td>Resistor, 27.4, 1/16W, 1%, 0603</td>
</tr>
<tr>
<td>R13, R14, R25, R26, R27, R28</td>
<td>Resistor, 1.00K, 1/10W, 1%, 0805</td>
</tr>
<tr>
<td>R15</td>
<td>Resistor, 100 Ohm, 1W, 5%, TH</td>
</tr>
<tr>
<td>R16, R17, R35, R36</td>
<td>Resistor, 15.0K, 1/16W, 1%, 0603</td>
</tr>
<tr>
<td>R18, R19, R21, R23, R24, R44, R45, R46</td>
<td>Resistor, 1.0, 1/8W, 5%, 1206</td>
</tr>
<tr>
<td>R20</td>
<td>Resistor, 4.99K, 1/16W, 1%, 0603</td>
</tr>
<tr>
<td>R22</td>
<td>Resistor, 15 Ohm, 5W</td>
</tr>
<tr>
<td>R29</td>
<td>Resistor, 1/8W, 5%, 1206</td>
</tr>
<tr>
<td>R30, R31, R32</td>
<td>Resistor, 10.0K, 1/16W, 1%, 0603</td>
</tr>
<tr>
<td>R33</td>
<td>Resistor, 391K, 1/16W, 1%, 0603</td>
</tr>
<tr>
<td>R34</td>
<td>Resistor, 71.5K, 1/16W, 1%, 0603</td>
</tr>
<tr>
<td>R37, R42</td>
<td>Resistor, 47.5K, 1/16W, 1%, 0603</td>
</tr>
<tr>
<td>R47, R48, R49, R50, R51, R52</td>
<td>Resistor, 100 Ohm, 1/8W, 1%, 0805</td>
</tr>
<tr>
<td>SW1, SW2</td>
<td>Switch, DPDT</td>
</tr>
<tr>
<td>SW3</td>
<td>Switch, Pushbutton</td>
</tr>
<tr>
<td>U1, U2</td>
<td>I.C., DSP, TI TAS3004PFB</td>
</tr>
<tr>
<td>U3</td>
<td>I.C., RS-485 Transceiver, 75176</td>
</tr>
<tr>
<td>U5</td>
<td>I.C., Quad Switch, MAX313</td>
</tr>
<tr>
<td>U6, U7, U8</td>
<td>I.C., Low Noise OP Amp, NE5532</td>
</tr>
<tr>
<td>VR1</td>
<td>Potentiometer, 10K, Vertical</td>
</tr>
<tr>
<td>Y1</td>
<td>Crystal, with capacitors, 8mHZ</td>
</tr>
<tr>
<td>Y2</td>
<td>Crystal, Parallel Cut, 12.288mHZ</td>
</tr>
<tr>
<td>Reference</td>
<td>Part</td>
</tr>
<tr>
<td>-----------</td>
<td>------</td>
</tr>
<tr>
<td>BR1</td>
<td>Bridge Rectifier, 100PIV, 8 AMP *</td>
</tr>
<tr>
<td>C1</td>
<td>Cap., 1uf 100V Thru-hole</td>
</tr>
<tr>
<td>C3,C8,C9,C27,C28,C42,C46,C47,C48</td>
<td>Cap, 0.1uf, 50V 0805</td>
</tr>
<tr>
<td>C4,C22,C25</td>
<td>Cap, 0.1uf, 50V Thru-hole</td>
</tr>
<tr>
<td>C5</td>
<td>Cap, 100 uF 35V Alum</td>
</tr>
<tr>
<td>C6,C10,C24,C35</td>
<td>Cap, 100pF, 50V 0805</td>
</tr>
<tr>
<td>C11,C12</td>
<td>Cap, 470uF 16V Alum</td>
</tr>
<tr>
<td>C13</td>
<td>Cap, 560pF, 50V 0805</td>
</tr>
<tr>
<td>C14</td>
<td>Cap, 330pF, 50V 0805</td>
</tr>
<tr>
<td>C15,C17</td>
<td>Cap, 3.3uF, 25V Alum</td>
</tr>
<tr>
<td>C16,C18,C19,C20</td>
<td>Cap, 0.22uF, 50V Thru-hole</td>
</tr>
<tr>
<td>C21,C26</td>
<td>Cap, 100 uF, 50V Alum</td>
</tr>
<tr>
<td>C31,C32,C33,C34</td>
<td>Cap, 1000pF, 50V 0805</td>
</tr>
<tr>
<td>C39,C38</td>
<td>Cap, 0.1uf, 100V 1210</td>
</tr>
<tr>
<td>C43,C45</td>
<td>Cap, 1.0uf 50V Alum</td>
</tr>
<tr>
<td>C44</td>
<td>Cap, 22uF 25V Alum</td>
</tr>
<tr>
<td>C51,C52</td>
<td>Cap, 10,000 uF, 35V Alum</td>
</tr>
<tr>
<td>D1,D2,D3</td>
<td>Diode, 11DQ09 *</td>
</tr>
<tr>
<td>D4</td>
<td>LED, Red Diffused, Hi-Eff, T-1 3/4</td>
</tr>
<tr>
<td>D5</td>
<td>Diode, 1N4736A Thru-hole</td>
</tr>
<tr>
<td>D6</td>
<td>Diode, 1N5243A Thru-hole</td>
</tr>
<tr>
<td>D7</td>
<td>Diode, 1N5235B Thru-hole</td>
</tr>
<tr>
<td>D8,D9,D11,D12</td>
<td>Diode, MUR120 Thru-hole</td>
</tr>
<tr>
<td>D10</td>
<td>Diode, 1N4148 Thru-hole</td>
</tr>
<tr>
<td>JP2,JP3</td>
<td>Header, 0.156 x 4 STR 0.625 in long (Note 5)*</td>
</tr>
<tr>
<td>J1</td>
<td>Header, 0.156 x 3 STR</td>
</tr>
<tr>
<td>J2</td>
<td>Header, 0.100 x 7 STR (Note 6) *</td>
</tr>
<tr>
<td>J7, J8</td>
<td>Screw Terminal *</td>
</tr>
<tr>
<td>K1</td>
<td>Relay, DPDT *</td>
</tr>
<tr>
<td>L1</td>
<td>Inductor, Shielded, 100 uH *</td>
</tr>
<tr>
<td>L2,L3</td>
<td>Inductor, Torroid, 11.3 uH (Note 7) *</td>
</tr>
<tr>
<td>L6</td>
<td>Ferrite Bead, 0603 *</td>
</tr>
<tr>
<td>Q1</td>
<td>Regulator, LM7805CT, 5VDC, 1A, TO-220</td>
</tr>
<tr>
<td>Q2,Q3,Q4</td>
<td>Transistor, MOSFET 2N7000, TO-92</td>
</tr>
<tr>
<td>Q5</td>
<td>Transistor, PNP, 2N3906, TO-92</td>
</tr>
<tr>
<td>R1,R3,R26,R27</td>
<td>Res, 20K, 1/8W, 1%, Thru-hole</td>
</tr>
<tr>
<td>R2,R9</td>
<td>Res, 10K, 1/8W, 5%, Thru-hole</td>
</tr>
<tr>
<td>R4</td>
<td>Res, 2K, 1/8W, 5%, Thru-hole</td>
</tr>
<tr>
<td>R5,R11,R12,R15,R18,R35,R36</td>
<td>Res, 1.0K, 1/8W, 1%, Thru-hole</td>
</tr>
<tr>
<td>R7,R8,R21,R25</td>
<td>Res, 9.1K, 1/8W, 1%, Thru-hole</td>
</tr>
<tr>
<td>R13,R10</td>
<td>Res, 6.2, 2W, 5%, MF, Thru-hole</td>
</tr>
<tr>
<td>R30,R14</td>
<td>Res, 243K, 1/8W, 1%, Thru-hole</td>
</tr>
<tr>
<td>R17</td>
<td>0 Ohm Jumper, 1206</td>
</tr>
<tr>
<td>R19</td>
<td>Res, 8.2K, 1/8W, 1%, Thru-hole</td>
</tr>
<tr>
<td>R20,R22,R23,R24</td>
<td>Res, 1.1K, 1/8W, 1%, Thru-hole</td>
</tr>
<tr>
<td>R34,R33</td>
<td>Res, 249 Ohm, 1/8W, 1%, Thru-hole</td>
</tr>
<tr>
<td>R37,R49,R52,R54,R56</td>
<td>Res, 51K, 1/10W, 5%, 0805</td>
</tr>
<tr>
<td>R38,R50</td>
<td>Res, 10K, 1/10W, 5%, 0805</td>
</tr>
<tr>
<td>R39,R51,R53</td>
<td>Res, 100K, 1/10W, 5%, 0805</td>
</tr>
<tr>
<td>R40</td>
<td>Res, 3K, 1/10W, 5%, 0805</td>
</tr>
<tr>
<td>R42</td>
<td>Res, 200K, 1/10W, 5%, 0805</td>
</tr>
<tr>
<td>R43</td>
<td>Res, 80.6K, 1/10W, 1% or better, 0805</td>
</tr>
<tr>
<td>R44</td>
<td>Res, 249K, 1/10W, 5%, 0805</td>
</tr>
<tr>
<td>R45</td>
<td>Res, 24.9K, 1/10W, 1% or better, 0805</td>
</tr>
<tr>
<td>R47</td>
<td>Res, 14.7K, 1/10W, 1% or better, 0805</td>
</tr>
<tr>
<td>R48</td>
<td>Res, 34.8K, 1/10W, 1%, 0805</td>
</tr>
<tr>
<td>R55</td>
<td>Res, 300 Ohm, 1/10W, 5%, 0805</td>
</tr>
<tr>
<td>U1</td>
<td>IC, Class T Power Amp Module *</td>
</tr>
<tr>
<td>U2</td>
<td>IC, OP Amp LM358 DIP-8</td>
</tr>
<tr>
<td>U3</td>
<td>IC, Comparator, LM339, DIP-14</td>
</tr>
<tr>
<td>HS1</td>
<td>Heat Sink, Custom to RMC Specifications *</td>
</tr>
</tbody>
</table>
## Bill of Materials, Digital CD Power Supply, 60435-A

<table>
<thead>
<tr>
<th>Reference</th>
<th>Part</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BR1</td>
<td>Bridge, 100V, 4A</td>
<td>Bridge, 100V, 4A</td>
</tr>
<tr>
<td>CR1</td>
<td>LED, GRN</td>
<td>LED, GRN</td>
</tr>
<tr>
<td>CR2</td>
<td>LED, YELLOW</td>
<td>LED, YELLOW</td>
</tr>
<tr>
<td>CR3</td>
<td>LED, Red</td>
<td>LED, Red</td>
</tr>
<tr>
<td>CR4</td>
<td>Diode, Schotkey, 1N5822</td>
<td>Diode, 1N5822</td>
</tr>
<tr>
<td>CR5,CR6,CR7</td>
<td>Diode, 1N4001</td>
<td>Diode, 1N4001</td>
</tr>
<tr>
<td>CR8</td>
<td>Diode, 1N5359B</td>
<td>Diode, 1N5359B</td>
</tr>
<tr>
<td>CR9</td>
<td>LED, ORG</td>
<td>LED, ORG</td>
</tr>
<tr>
<td>C1</td>
<td>Capacitor, 1000uf 25V</td>
<td>Capacitor, 1000uf 25V</td>
</tr>
<tr>
<td>C2,C3,C7,C9,C12</td>
<td>Capacitor, 0.1uf</td>
<td>Capacitor, 0.1uf</td>
</tr>
<tr>
<td>C4</td>
<td>Capacitor, 3300uf 35V</td>
<td>Capacitor, 3300uf 35V</td>
</tr>
<tr>
<td>C5</td>
<td>Capacitor, 2200uf 50V</td>
<td>Capacitor, 2200uf 50V</td>
</tr>
<tr>
<td>C6</td>
<td>Capacitor, 470uf 35V</td>
<td>Capacitor, 470uf 35V</td>
</tr>
<tr>
<td>F1</td>
<td>Polyfuse, 4A, RUE400</td>
<td>Polyfuse, 4A, RUE400</td>
</tr>
<tr>
<td>F2</td>
<td>Polyfuse, 4A, RUE400</td>
<td>Polyfuse, 4A, RUE400</td>
</tr>
<tr>
<td>F3</td>
<td>Polyfuse, 4A, RUE400</td>
<td>Polyfuse, 4A, RUE400</td>
</tr>
<tr>
<td>F4,F5</td>
<td>Polyfuse, 4A, RUE400</td>
<td>Polyfuse, 4A, RUE400</td>
</tr>
<tr>
<td>F6</td>
<td>Polyfuse, 4A, RUE400</td>
<td>Polyfuse, 4A, RUE400</td>
</tr>
<tr>
<td>J1</td>
<td>PC Header, M-N-L x 5</td>
<td>PC Header, M-N-L x 5</td>
</tr>
<tr>
<td>J2</td>
<td>PC Header, M-N-L 12p</td>
<td>PC Header, M-N-L 12p</td>
</tr>
<tr>
<td>J3</td>
<td>0.156 x 9 Header, Straight</td>
<td>0.156 x 9 Header, Straight</td>
</tr>
<tr>
<td>J4</td>
<td>0.156 x 9 Header, Straight</td>
<td>0.156 x 9 Header, Straight</td>
</tr>
<tr>
<td>J5,J9,J10</td>
<td>PC Header, M-N-L 3 Pl</td>
<td>PC Header, M-N-L 3 Pl</td>
</tr>
<tr>
<td>J12</td>
<td>0.156 x 9 Header, Straight</td>
<td>0.156 x 9 Header, Straight</td>
</tr>
<tr>
<td>L1</td>
<td>Inductor, 125uH</td>
<td>Inductor, 125uH</td>
</tr>
<tr>
<td>MOV1,MOV2</td>
<td>Metal Oxide Varistor, 140VAC, 1250SA</td>
<td>Metal Oxide Varistor, 140VAC, 1250SA</td>
</tr>
<tr>
<td>Q1</td>
<td>Regulator, 12V switching, LM2576</td>
<td>Regulator, 12V switching, LM2576</td>
</tr>
<tr>
<td>Q3</td>
<td>Transistor, 2N2907</td>
<td>Transistor, 2N2907</td>
</tr>
<tr>
<td>Q4</td>
<td>Transistor, TIP41</td>
<td>Transistor, TIP41</td>
</tr>
<tr>
<td>RY1</td>
<td>Relay DPDT, 12V Coil</td>
<td>Relay DPDT, 12V Coil</td>
</tr>
<tr>
<td>RY2</td>
<td>Relay DPDT, 24V Coil</td>
<td>Relay DPDT, 24V Coil</td>
</tr>
<tr>
<td>R1,R2</td>
<td>Resistor, 1K</td>
<td>Resistor, 1K</td>
</tr>
<tr>
<td>R5,R3</td>
<td>Resistor, 330</td>
<td>Resistor, 330</td>
</tr>
<tr>
<td>R4</td>
<td>Resistor, 47</td>
<td>Resistor, 47</td>
</tr>
<tr>
<td>RT10,R6</td>
<td>Resistor, 2.2K</td>
<td>Resistor, 2.2K</td>
</tr>
<tr>
<td>R11</td>
<td>Resistor, 15K</td>
<td>Resistor, 15K</td>
</tr>
</tbody>
</table>
Digital Auxiliary Amp

PCB Assy, Digital Auxiliary Amp, 60429-1A

Bill of Materials

<table>
<thead>
<tr>
<th>Reference</th>
<th>Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR1</td>
<td>LED, RED</td>
</tr>
<tr>
<td>CR2</td>
<td>LED, GREEN</td>
</tr>
<tr>
<td>J1</td>
<td>Connector, DIN x 6</td>
</tr>
<tr>
<td>J2</td>
<td>0.100 x 7, Receptacle, Bottom Entry</td>
</tr>
<tr>
<td>J3, J6</td>
<td>0.156 X 4, Receptacle, Bottom Entry</td>
</tr>
<tr>
<td>J4</td>
<td>M-N-L x 4, PCB Mount Header</td>
</tr>
<tr>
<td>J5</td>
<td>Terminal Block, 4 place</td>
</tr>
<tr>
<td>R1</td>
<td>Resistor, 2.2K, 1/4W</td>
</tr>
<tr>
<td>R2</td>
<td>Resistor, 4.7K, 1/4W</td>
</tr>
</tbody>
</table>
Audio Output Panel 70107-A

**Digital CD Nostalgic Models**

**Audio Output Panel 70107-A**

- **T1**: 11 4 ohm, 9 2 ohm, 7 1 ohm, 6 1 ohm, 4 0.5 ohm, 3 0.5 ohm, 1 COM
- **T2**: 11 4 ohm, 9 2 ohm, 7 1 ohm, 6 1 ohm, 4 0.5 ohm, 3 0.5 ohm, 1 COM

**J1**: INPUT

**J2**: JUKEBOX SPEAKERS

**J3**: Terminal Block

**J4**: LEFT

**J5**: Pad for 20 AWG stranded wire

**J6**: Terminal Block
Bill of Materials, PCB Assy, Keyboard/Display, 58926-A

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

PCB Assy, Volume Control, 58515-A

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

<table>
<thead>
<tr>
<th>Reference</th>
<th>Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>J1</td>
<td>Conn Jack RJ12 PCB Low Prof w/ Stops</td>
</tr>
<tr>
<td>S1 - S6</td>
<td>Switch SPST, Mom, PB NO</td>
</tr>
</tbody>
</table>
Crossover

PCB Assy, Crossover, 60717-A

All resistors 5 watt 10%
All capacitors 100 VDC

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

<table>
<thead>
<tr>
<th>Reference</th>
<th>Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1, C8</td>
<td>Capacitor 3.9 uf</td>
</tr>
<tr>
<td>C2, C7</td>
<td>Capacitor 47 uf</td>
</tr>
<tr>
<td>C6, C3</td>
<td>Capacitor 3.3 uf</td>
</tr>
<tr>
<td>J1</td>
<td>Header 12 pin</td>
</tr>
<tr>
<td>L1, L4</td>
<td>Coil 1.5 mh</td>
</tr>
<tr>
<td>L2, L3</td>
<td>Coil 8 mh</td>
</tr>
<tr>
<td>R1, R4</td>
<td>Resistor 62 ohm</td>
</tr>
<tr>
<td>R2, R3</td>
<td>Resistor 10 ohm</td>
</tr>
<tr>
<td>R5, R6</td>
<td>Resistor 39 ohm</td>
</tr>
</tbody>
</table>
**Transformer 60681-A**

- **Primary #1**: 115 VAC
  - SEC #1: 17VAC @ 4A
  - SEC #2: 22 VAC 3A
  - SEC #3: 44VCT @ 7A

- **Primary #2**: 115 VAC

**Connectors**:
- **Black/White**: WHT/BLU
- **Blue**: ORANGE
- **Green**: ORANGE/WHITE
- **Green/Yellow**: GREEN/WHITE
- **White**: ORANGE
- **Black**: ORANGE

**Note**: Attached to Frame. #10 Lug.
Primary Power Block Diagram, CD-4/6/8

115 VAC OPERATION (USA)

230 VAC OPERATION (CE)

* CORCOM WIRING:
115 VAC OPERATION, HAS THE TWO PRIMARY WINDINGS WIRED IN PARALLEL WITH A SHORTING BAR INSTALLED ON 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.
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.
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.


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.


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**

<table>
<thead>
<tr>
<th>Programming</th>
<th>120 Pause/Mute</th>
<th>121 Select Type</th>
<th>122 Rem Playlist</th>
<th>123 Surround Snd</th>
<th>124 Select Album</th>
<th>125 Cancel Disc</th>
<th>126 Clear Mem.</th>
<th>127 Random Sel.</th>
<th>128 Background</th>
<th>129 Play Lists</th>
</tr>
</thead>
</table>
Microphone Kit P/N 02379-02
(Yoga)

Parts List:

<table>
<thead>
<tr>
<th>QTY</th>
<th>P/N</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>59360-A</td>
<td>Yoga Microphone w/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>mtg brkt</td>
</tr>
<tr>
<td>1</td>
<td>59356-A</td>
<td>Cable Assembly, 75</td>
</tr>
<tr>
<td>1</td>
<td>ST-11474</td>
<td>DIN Socket, 3 Pin</td>
</tr>
<tr>
<td>1</td>
<td>ST-11244</td>
<td>Header, 0.156 X 4</td>
</tr>
<tr>
<td>3</td>
<td>ST-11245</td>
<td>Pin, 0.156 Tin</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Wire Function</th>
<th>DIN Socket</th>
<th>Header Socket</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red Power</td>
<td>Pin 3</td>
<td>Pin 4</td>
</tr>
<tr>
<td>Black Audio</td>
<td>Pin 1</td>
<td>Pin 2</td>
</tr>
<tr>
<td>Shield Ground</td>
<td>Pin 2</td>
<td>Pin 1</td>
</tr>
</tbody>
</table>

The cable wiring is as follows:

<table>
<thead>
<tr>
<th>Wire Function</th>
<th>DIN Plug</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red Power</td>
<td>Pin 3</td>
</tr>
<tr>
<td>Black Audio</td>
<td>Pin 1</td>
</tr>
<tr>
<td>Shield Ground</td>
<td>Pin 2</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>QTY</th>
<th>P/N</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>58844</td>
<td>Counter with staked leads (twisted)</td>
</tr>
<tr>
<td>2</td>
<td>ST-02541</td>
<td>4-40 x 3/8 Hex Flg Machine Screw</td>
</tr>
<tr>
<td>1</td>
<td>ST-11308</td>
<td>3M Connector</td>
</tr>
<tr>
<td>1</td>
<td>59812</td>
<td>Bracket, coin counter</td>
</tr>
<tr>
<td>2</td>
<td>ST-04062</td>
<td>8 x 1/2 Phil Pan Hd Type &quot;A&quot; Screw</td>
</tr>
<tr>
<td>1</td>
<td>58899-01</td>
<td>Instruction Sheet</td>
</tr>
</tbody>
</table>

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.

  ![Diagram](image1)

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

  ![Diagram](image2)

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

  ![Diagram](image3)

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**

<table>
<thead>
<tr>
<th>Designator</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>58808</td>
<td>PCB, Raw</td>
</tr>
<tr>
<td>R1</td>
<td>51293</td>
<td>Resistor 10K, 1/4W</td>
</tr>
<tr>
<td>R2, R7</td>
<td>51564</td>
<td>Resistor 1K ohm, 1/4W</td>
</tr>
<tr>
<td>R3, R5</td>
<td>53888</td>
<td>Resistor 180 ohm, 1/4W</td>
</tr>
<tr>
<td>R4, R6</td>
<td>53869</td>
<td>Resistor 4.3K, 1/4W</td>
</tr>
<tr>
<td>C2, C3, C8</td>
<td>54412</td>
<td>Capacitor, Tantalum 1uF, 35V</td>
</tr>
<tr>
<td>C1, C4, C7, C9, C11</td>
<td>52675</td>
<td>Capacitor, Mono 0.1uF, 50V</td>
</tr>
<tr>
<td>C5, C6</td>
<td>58968</td>
<td>Capacitor, Disc 22PF</td>
</tr>
<tr>
<td>C10</td>
<td>48036</td>
<td>Capacitor, Tantalum 10uF, 16V</td>
</tr>
<tr>
<td>Q1</td>
<td>53702</td>
<td>Regulator 7805 TO-220</td>
</tr>
<tr>
<td>Y1</td>
<td>58879</td>
<td>Crystal, 4 Mhz</td>
</tr>
<tr>
<td>U1</td>
<td>58871</td>
<td>IC 75176</td>
</tr>
<tr>
<td>U2</td>
<td>52723</td>
<td>Dip Socket, 18 pin</td>
</tr>
<tr>
<td>U2</td>
<td>58878</td>
<td>Microcontroller, Programmed</td>
</tr>
<tr>
<td>SW1</td>
<td>G-05108</td>
<td>Dip Switch, 4 Place</td>
</tr>
<tr>
<td>J3</td>
<td>58886</td>
<td>Terminal Block, 4 Place</td>
</tr>
<tr>
<td>J1, J2</td>
<td>58880</td>
<td>Connector, Modular, 6 Place</td>
</tr>
<tr>
<td>CR1</td>
<td>51994</td>
<td>LED</td>
</tr>
</tbody>
</table>
Audio Distribution Assembly, P/N 70046-1A

Bill of Materials

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

Door Assembly...........................................................2
Inside Door Assembly...........................................3
Inside Cabinet.......................................................7
Outside Cabinet...................................................9
Mechanism Assembly...........................................11 - 12
Electronic Components........................................13 - 14
Cables....................................................................15 - 20
Kits and Accessories..............................................21
## Door Assembly

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Part No.</th>
<th>Description</th>
<th>Item No.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>57380</td>
<td>Casting - Upper Trim LH</td>
<td>20</td>
<td>57316-01</td>
<td>Casting - Coin Entry</td>
</tr>
<tr>
<td>2</td>
<td>57381</td>
<td>Casting - Upper Trim RH</td>
<td>21</td>
<td>57317</td>
<td>Plastic - Coin Entry</td>
</tr>
<tr>
<td>3</td>
<td>57382</td>
<td>Casting - Side Trim (6 pl)</td>
<td>22</td>
<td>57716</td>
<td>Decal 25 Cents only</td>
</tr>
<tr>
<td>4</td>
<td>57383</td>
<td>Casting - Shell Trim (2 pl)</td>
<td>23</td>
<td>57457</td>
<td>Casting - Program Trim LH</td>
</tr>
<tr>
<td>5</td>
<td>57384</td>
<td>Plastic - Side Red (2 pl)</td>
<td>24</td>
<td>57458</td>
<td>Casting - Program Trim RH</td>
</tr>
<tr>
<td>6</td>
<td>57385</td>
<td>Plastic - Top Red</td>
<td>25</td>
<td>57472-19250</td>
<td>Grill Cloth Diamond Pattern 19-1/4&quot;</td>
</tr>
<tr>
<td>7</td>
<td>57386-01</td>
<td>Plastic - Pilaster Cream</td>
<td>26</td>
<td>57472-19250</td>
<td>Grill Cloth Diamond Pattern 19-1/4&quot;</td>
</tr>
<tr>
<td>8</td>
<td>57387</td>
<td>Plastic - Upper Curve Cream LH</td>
<td>27</td>
<td>SV-23826</td>
<td>Trim, Upper Display, Walnut</td>
</tr>
<tr>
<td>9</td>
<td>57388</td>
<td>Plastic - Upper Curve Cream RH</td>
<td>28</td>
<td>SV-23827</td>
<td>*</td>
</tr>
<tr>
<td>10</td>
<td>57452</td>
<td>Plastic - Inner Curve (2 pl)</td>
<td>29</td>
<td>SV-23828</td>
<td>Trim, Lower Display, Walnut</td>
</tr>
<tr>
<td>11</td>
<td>57453</td>
<td>Plastic - Inner Straight (2 pl)</td>
<td>30</td>
<td>SV-23829</td>
<td>*</td>
</tr>
<tr>
<td>12</td>
<td>57454</td>
<td>Plastic - Bill Entry</td>
<td>31a</td>
<td>53774-17500</td>
<td>Rubber Channel 17 1/2&quot;</td>
</tr>
<tr>
<td>13</td>
<td>57393</td>
<td>Casting - Large Grill</td>
<td>31b</td>
<td>SV-23850</td>
<td>Knee Assembly, RH, Walnut</td>
</tr>
<tr>
<td>14</td>
<td>57394</td>
<td>Star Logo</td>
<td>32</td>
<td>SV-23851-A</td>
<td>Knee Assembly, LH, Walnut</td>
</tr>
<tr>
<td>15</td>
<td>57455</td>
<td>Grill Support</td>
<td>33</td>
<td>SV-23849-A</td>
<td>*</td>
</tr>
<tr>
<td>16</td>
<td>57450</td>
<td>Grill Support</td>
<td>34</td>
<td>SV-23848-A</td>
<td>*</td>
</tr>
<tr>
<td>17</td>
<td>57454</td>
<td>Casting - Bill Entry</td>
<td>35</td>
<td>SV-58726-1A</td>
<td>Title Page Assembly (p. 6)</td>
</tr>
<tr>
<td>18</td>
<td>60772</td>
<td>Plastic, Bill Entry, &quot;Make Selections&quot;</td>
<td>36</td>
<td>558840-A</td>
<td>Small Grill Assembly (p. 4)</td>
</tr>
</tbody>
</table>
### Inside Door Assembly

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Part No.</th>
<th>Description</th>
<th>Item No.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a</td>
<td>57448</td>
<td>Bubble Tube, Long Curve (2 pl)</td>
<td>15</td>
<td>57464</td>
<td>Kick Plate</td>
</tr>
<tr>
<td>1b</td>
<td>57449</td>
<td>Bubble Tube, Short Curve (2 pl)</td>
<td>16</td>
<td>58251</td>
<td>Title Page Latch Spring (2 pl)</td>
</tr>
<tr>
<td>2</td>
<td>57447</td>
<td>Bubble Tube, Straight Long (2 pl)</td>
<td>17</td>
<td>57439-01</td>
<td>Light Arch Hanging Bracket (4 pl)</td>
</tr>
<tr>
<td>3</td>
<td>61888-LF</td>
<td>Horn Tweeter, 80W, 80HM (2 pl)</td>
<td>18</td>
<td>60702</td>
<td>Fluorescent Light Bracket (2 pl)</td>
</tr>
<tr>
<td>4</td>
<td>58936</td>
<td>Speaker 6&quot; Midrange (2 pl)</td>
<td>19</td>
<td>60757</td>
<td>Lamp Socket (2 pl)</td>
</tr>
<tr>
<td>5</td>
<td>58252</td>
<td>Shroud, CD Title Page</td>
<td>20</td>
<td>57467</td>
<td>Fluorescent Tube F6T5CW 9&quot;</td>
</tr>
<tr>
<td>6</td>
<td>60756</td>
<td>White Plastic, Title Page Diffuser</td>
<td>21</td>
<td>SV-60764-A</td>
<td>Bubble Tube Heater &amp; Mtg Assy (4 pl)</td>
</tr>
<tr>
<td>7</td>
<td>574661-A</td>
<td>Upper Coin Chute Assy</td>
<td>22</td>
<td>58617</td>
<td>Dual Lock Strike</td>
</tr>
<tr>
<td>8</td>
<td>57474</td>
<td>Light Diffuser Metal Frame</td>
<td>23</td>
<td>60054</td>
<td>Fluorescent Lamp 21&quot; F13T5 CW</td>
</tr>
<tr>
<td>9</td>
<td>57475</td>
<td>Door Light Diffuser</td>
<td>24</td>
<td>60747-A</td>
<td>Junction Box Assembly</td>
</tr>
<tr>
<td>10</td>
<td>60899</td>
<td>Grill Light Bracket</td>
<td>25</td>
<td>58802</td>
<td>Service Switch Bracket (2 pl)</td>
</tr>
<tr>
<td>11a</td>
<td>57431</td>
<td>Single Lamp Socket</td>
<td>26</td>
<td>58443</td>
<td>Mounting Bracket, Heater (4 pl)</td>
</tr>
<tr>
<td>11b</td>
<td>60894</td>
<td>Lamp, Incandescent, 4w</td>
<td>27</td>
<td>58444</td>
<td>Mounting Bracket, Bubble Tube (2 pl)</td>
</tr>
<tr>
<td>12</td>
<td>57433</td>
<td>Bulb 11 watt, Orange</td>
<td>28</td>
<td>60693-A</td>
<td>Bracket, Fluorescent Lamp, LH</td>
</tr>
<tr>
<td>13</td>
<td>57468-01</td>
<td>Lower Door Light Bracket</td>
<td>29</td>
<td>60694-A</td>
<td>Bracket, Fluorescent Lamp, RH</td>
</tr>
<tr>
<td>14</td>
<td>SV-57469-3A</td>
<td>Speaker Board Assembly</td>
<td>30</td>
<td>58845</td>
<td>Jukebox License Holder</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td>31</td>
<td>60701</td>
<td>Retainer Glass Frame (2pl)</td>
</tr>
</tbody>
</table>

*Rock-Ola® Mfg. Corp.*
### Keyboard/Display Trim Assembly

1. SV-23820-A Display/Keybd Trim, Walnut
2. 60695 Window Arch Diffuser Frame
3. 60723 Arch Light Diffuser
4. 58210 Window Glass
5. 57507-30000 Window Extrusion 30"
6. 57507-19938 Window Extrusion 19-15/16"
7. ST-04858 Flatwasher
8. ST-11303 Speed Nut 3/16"
9. ST-09728 4-40x1/4 Phil Pan Hd Screw
10. 57512 Clamp
11. ST-04666 6x1/2 Phil Pan Hd Screw
12. SV-58920-A Keyboard/Display Assembly
13. 60627 Keyboard Bezel
14. 59117 Keyboard Retainer Bracket
15. 59118-01 Pushbutton - Green
16. 59118-02 Pushbutton - Orange
17. 60758 Price and Instruction Bezel
18. 60686 Pricing Bezel Retainer
19. 60670-01 Insert, Price Card (Blank)
20. 60706 Light Arch Diffuser End Retainer (2 pl)

### Small Grill Assembly #SV-58840-A

*(CD-8 Bubbler)*

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**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>60696</td>
<td>Arch Light Frame</td>
</tr>
<tr>
<td>2</td>
<td>57429</td>
<td>Lamp Bracket, RH</td>
</tr>
<tr>
<td>3</td>
<td>57430-01</td>
<td>Lamp Bracket, LH</td>
</tr>
<tr>
<td>4</td>
<td>57434</td>
<td>Fluorescent Lamp F14T12CW</td>
</tr>
<tr>
<td>5</td>
<td>SV-57438-3A</td>
<td>Color Cylinder Assy, RH</td>
</tr>
<tr>
<td>6</td>
<td>SV-57435-3A</td>
<td>Color Cylinder Assy, LH</td>
</tr>
<tr>
<td>7</td>
<td>57415</td>
<td>Fluorescent bipin Socket</td>
</tr>
<tr>
<td>8</td>
<td>57433</td>
<td>Bulb 11W Orange</td>
</tr>
<tr>
<td>9</td>
<td>57431</td>
<td>Single Lamp Socket</td>
</tr>
<tr>
<td>10</td>
<td>60207</td>
<td>Ballast, Workhorse 3</td>
</tr>
<tr>
<td>11</td>
<td>57413</td>
<td>Terminal Strip, 2 pole</td>
</tr>
<tr>
<td>12</td>
<td>60739</td>
<td>Terminal Block</td>
</tr>
<tr>
<td>13</td>
<td>SV-58046-A</td>
<td>Motor Assy, RH</td>
</tr>
<tr>
<td>14</td>
<td>SV-58045-A</td>
<td>Motor Assy, LH</td>
</tr>
<tr>
<td>15</td>
<td>SV-60715-A</td>
<td>Arch Light Cable Assy</td>
</tr>
<tr>
<td>16</td>
<td>57440</td>
<td>Nylon Latch, 1/4 Turn</td>
</tr>
</tbody>
</table>

**Back View**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>60769-A</td>
<td>Light Bar Bracket, LH</td>
</tr>
<tr>
<td>2</td>
<td>60770-A</td>
<td>&quot; &quot; RH</td>
</tr>
<tr>
<td>3</td>
<td>SV-60748-A</td>
<td>Ballast &amp; Cable Assembly</td>
</tr>
<tr>
<td>4</td>
<td>SV-60709-A</td>
<td>Harness, Heater Power</td>
</tr>
<tr>
<td>5</td>
<td>SV-60714-A</td>
<td>Harness, Light Bar Power</td>
</tr>
<tr>
<td>6</td>
<td>SV-58045-A</td>
<td>Motor Assembly, LH</td>
</tr>
<tr>
<td>7</td>
<td>SV-58046-A</td>
<td>&quot; &quot; RH</td>
</tr>
<tr>
<td>8</td>
<td>60739</td>
<td>Terminal Block</td>
</tr>
<tr>
<td>9</td>
<td>SV-57416-2A</td>
<td>Color Cylinder Assembly, LH</td>
</tr>
<tr>
<td>10</td>
<td>SV-57425-2A</td>
<td>&quot; &quot; RH</td>
</tr>
<tr>
<td>11</td>
<td>36121</td>
<td>Fluorescent Lamp F20T12CW</td>
</tr>
<tr>
<td>12</td>
<td>57415</td>
<td>Fluorescent bipin socket</td>
</tr>
<tr>
<td>13</td>
<td>57413</td>
<td>Terminal Strip, 2 pole</td>
</tr>
</tbody>
</table>

---

**Light Bar Assembly**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>60769-A</td>
<td>Light Bar Bracket, LH</td>
</tr>
<tr>
<td>2</td>
<td>60770-A</td>
<td>&quot; &quot; RH</td>
</tr>
<tr>
<td>3</td>
<td>SV-60748-A</td>
<td>Ballast &amp; Cable Assembly</td>
</tr>
<tr>
<td>4</td>
<td>SV-60709-A</td>
<td>Harness, Heater Power</td>
</tr>
<tr>
<td>5</td>
<td>SV-60714-A</td>
<td>Harness, Light Bar Power</td>
</tr>
<tr>
<td>6</td>
<td>SV-58045-A</td>
<td>Motor Assembly, LH</td>
</tr>
<tr>
<td>7</td>
<td>SV-58046-A</td>
<td>&quot; &quot; RH</td>
</tr>
<tr>
<td>8</td>
<td>60739</td>
<td>Terminal Block</td>
</tr>
<tr>
<td>9</td>
<td>SV-57416-2A</td>
<td>Color Cylinder Assembly, LH</td>
</tr>
<tr>
<td>10</td>
<td>SV-57425-2A</td>
<td>&quot; &quot; RH</td>
</tr>
<tr>
<td>11</td>
<td>36121</td>
<td>Fluorescent Lamp F20T12CW</td>
</tr>
<tr>
<td>12</td>
<td>57415</td>
<td>Fluorescent bipin socket</td>
</tr>
<tr>
<td>13</td>
<td>57413</td>
<td>Terminal Strip, 2 pole</td>
</tr>
<tr>
<td>Item No.</td>
<td>Part No.</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>--------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>1</td>
<td>57083-02</td>
<td>Title Page Main Frame</td>
</tr>
<tr>
<td>2</td>
<td>57081-01</td>
<td>Top Bracket</td>
</tr>
<tr>
<td>3</td>
<td>57082</td>
<td>Bottom Bracket</td>
</tr>
<tr>
<td>4</td>
<td>57402-01</td>
<td>Catch Spring</td>
</tr>
<tr>
<td>5</td>
<td>57347</td>
<td>Spring</td>
</tr>
<tr>
<td>18</td>
<td>SV-57348-A</td>
<td>Drive Shaft Assembly</td>
</tr>
<tr>
<td>6</td>
<td>57349</td>
<td>Drive Shaft</td>
</tr>
<tr>
<td>7</td>
<td>57350-01</td>
<td>Brass Gear</td>
</tr>
<tr>
<td>8</td>
<td>57359</td>
<td>Nyliner Bearing 3/16&quot;</td>
</tr>
<tr>
<td>9</td>
<td>57351-01</td>
<td>Bottom Mounting Guide</td>
</tr>
<tr>
<td>10</td>
<td>57352</td>
<td>Nylon Gear</td>
</tr>
<tr>
<td>11</td>
<td>ST-02255</td>
<td>Set Screw 6-32 x 3/16</td>
</tr>
<tr>
<td>12</td>
<td>ST-09263</td>
<td>&quot;C&quot; Clip 3/16</td>
</tr>
</tbody>
</table>
### Inside Cabinet Assembly

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Part No.</th>
<th>Description</th>
<th>Item No.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SV-58689-3A</td>
<td>Mechanism Assembly (p. 11)</td>
<td>19</td>
<td>57365</td>
<td>Light Block</td>
</tr>
<tr>
<td>2</td>
<td>SV-70135-A</td>
<td>Dual Digital Amplifier (p. 13)</td>
<td>20</td>
<td>57288-02</td>
<td>Woofer Speaker</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>21</td>
<td>57377</td>
<td>Door Hinge</td>
</tr>
<tr>
<td>4</td>
<td>60681-A</td>
<td>Transformer</td>
<td>22</td>
<td>57477</td>
<td>Nylon Base Tack Glide</td>
</tr>
<tr>
<td>5</td>
<td>SV-70003-2A</td>
<td>Computer (p. 14)</td>
<td>23</td>
<td>61021</td>
<td>Door Stop</td>
</tr>
<tr>
<td>6</td>
<td>SV-70004-A</td>
<td>Volume Control</td>
<td>24</td>
<td>SV-23416-01</td>
<td>Mech Trim, RH, Walnut</td>
</tr>
<tr>
<td>7</td>
<td>58602</td>
<td>Service Switch</td>
<td>25</td>
<td>SV-23417-01</td>
<td>Mech Trim, LH, Walnut</td>
</tr>
<tr>
<td>8</td>
<td>58602</td>
<td>Switch Bracket</td>
<td></td>
<td>SV-23418</td>
<td>* * Oak</td>
</tr>
<tr>
<td>9</td>
<td>58602</td>
<td>Power Cut off Switch</td>
<td></td>
<td>SV-23823</td>
<td>* * Black</td>
</tr>
<tr>
<td>10</td>
<td>SV-60717-A</td>
<td>Speaker Crossover (p. 8)</td>
<td></td>
<td>SV-23419</td>
<td>* * Oak</td>
</tr>
<tr>
<td>11</td>
<td>57335</td>
<td>Coin Acceptor</td>
<td></td>
<td>SV-23824</td>
<td>* * Black</td>
</tr>
<tr>
<td>12</td>
<td>57334-A</td>
<td>Coin Acceptor Mfg Frame</td>
<td>26</td>
<td>46956</td>
<td>Cable Cover</td>
</tr>
<tr>
<td>13</td>
<td>SV-57366-A</td>
<td>Dual Lock Assy (p. 8 )</td>
<td>27</td>
<td>ST-01352</td>
<td>Wing Nut</td>
</tr>
<tr>
<td>14</td>
<td>SV-57336-A</td>
<td>Coin Chute Assy</td>
<td>28</td>
<td>60881-A</td>
<td>Pivot Plate, Lock</td>
</tr>
<tr>
<td>15</td>
<td>60596</td>
<td>Mural/Curtain</td>
<td>29</td>
<td>60699</td>
<td>Lock Arm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>30</td>
<td>60897-A</td>
<td>Cam Bolt</td>
</tr>
<tr>
<td>17</td>
<td>57373-24500</td>
<td>Gold Foil</td>
<td>31</td>
<td>60880-A</td>
<td>Lock Lever</td>
</tr>
<tr>
<td>18</td>
<td>57364</td>
<td>Mech Trim Bracket (2 pl)</td>
<td>32</td>
<td>57372</td>
<td>Extension Spring</td>
</tr>
</tbody>
</table>
Dual Lock Assembly SV- 57366-A

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>57368</td>
<td>Dual Lock Side</td>
</tr>
<tr>
<td>11</td>
<td>57369</td>
<td>Shoulder Screw</td>
</tr>
<tr>
<td>12</td>
<td>57367</td>
<td>Dual Lock Guide</td>
</tr>
</tbody>
</table>

Crossover PCB Assembly SV-60717-A

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

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>48982</td>
<td>Coin Return Cup</td>
</tr>
<tr>
<td>2</td>
<td>49041</td>
<td>Coin Return Flap</td>
</tr>
<tr>
<td>3</td>
<td>49040</td>
<td>Coin Cup Mtg Brkt</td>
</tr>
<tr>
<td>4</td>
<td>ST-04843</td>
<td>Flatwasher</td>
</tr>
<tr>
<td>5</td>
<td>ST-09722</td>
<td>Screw 8x3/4 Hex Flg</td>
</tr>
<tr>
<td>6</td>
<td>49062</td>
<td>Cash Bag</td>
</tr>
<tr>
<td>7</td>
<td>49060</td>
<td>Cash Door Frame</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>SV-51019-7A</strong> Cash Box Door Assy</td>
</tr>
<tr>
<td>8</td>
<td>49061</td>
<td>Cash Box Door</td>
</tr>
<tr>
<td>9</td>
<td>ST-10441</td>
<td>Lock (w/ key)</td>
</tr>
<tr>
<td>10</td>
<td>50796-01</td>
<td>Cam Bolt</td>
</tr>
<tr>
<td>11</td>
<td>43293</td>
<td>Button Bumper</td>
</tr>
<tr>
<td>12</td>
<td>57292-A</td>
<td>Reject Shaft Assembly</td>
</tr>
<tr>
<td>13</td>
<td>57237</td>
<td>Reject Shaft</td>
</tr>
<tr>
<td>14</td>
<td>ST-11320</td>
<td>Nylon Washer</td>
</tr>
<tr>
<td>15</td>
<td>ST-04565</td>
<td>Screw 8-32x1 Pan Hd</td>
</tr>
<tr>
<td>16</td>
<td>45474</td>
<td>Spring</td>
</tr>
<tr>
<td>17</td>
<td>ST-11352</td>
<td>Spacer</td>
</tr>
<tr>
<td>18</td>
<td>ST-03139</td>
<td>Washer</td>
</tr>
<tr>
<td>19</td>
<td>ST-07240</td>
<td>Screw 8-32x3/4 Flat Hd</td>
</tr>
<tr>
<td>20</td>
<td></td>
<td>See &quot;Kits and Accessories&quot; for items shipped in the cash box (page 21)</td>
</tr>
</tbody>
</table>
CD-8 Bubbler Base Assembly
SV-57322-A

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SV-49997-3A</td>
<td>Handle &amp; Bracket Assy</td>
</tr>
<tr>
<td>2</td>
<td>57376-18500</td>
<td>Mirror Strips 18 1/2&quot;</td>
</tr>
<tr>
<td>3</td>
<td>ST-11296</td>
<td>Lock &amp; Key</td>
</tr>
<tr>
<td>4</td>
<td>ST-11296-K</td>
<td>Key only</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>58317</td>
<td>Side Metal RH</td>
</tr>
<tr>
<td>2</td>
<td>58316</td>
<td>Side Metal LH</td>
</tr>
<tr>
<td>3</td>
<td>57323</td>
<td>Front Corner Metal RH</td>
</tr>
<tr>
<td>4</td>
<td>57324</td>
<td>Front Corner Metal LH</td>
</tr>
<tr>
<td>5</td>
<td>57325</td>
<td>Lower Front Corner Metal</td>
</tr>
<tr>
<td>6</td>
<td>57325</td>
<td>Front Center Base Metal</td>
</tr>
<tr>
<td>7</td>
<td>ST-06030-04</td>
<td>Caster, Double Wheel</td>
</tr>
</tbody>
</table>
Mechanism Assembly
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Part No.</th>
<th>Description</th>
<th>Item No.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SV-70003-2A</td>
<td>Computer Assy (See page 14)</td>
<td>30</td>
<td>SV-59241-3A</td>
<td>CD Pro 2M Player Assy</td>
</tr>
<tr>
<td>2</td>
<td>SV-57189-A</td>
<td>Gripper Assembly (See below)</td>
<td>31A</td>
<td>59954</td>
<td>Hub Insert</td>
</tr>
<tr>
<td>3</td>
<td>57062-2A</td>
<td>Mechanism Top Chassis Assy</td>
<td>31B</td>
<td>58639</td>
<td>Spring</td>
</tr>
<tr>
<td>4</td>
<td>58476</td>
<td>Main Chassis</td>
<td>31C</td>
<td>57051</td>
<td>Standoff</td>
</tr>
<tr>
<td>5</td>
<td>57161-01</td>
<td>Mech End Plate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>58677</td>
<td>Mechanism Base Frame</td>
<td>32</td>
<td>58540-A</td>
<td>Audio to CD Player Cable</td>
</tr>
<tr>
<td>7</td>
<td>SV-55941-1A</td>
<td>D.C. Gear Motor Assy</td>
<td>33</td>
<td>57063-1A</td>
<td>CD Player Mtg Bracket</td>
</tr>
<tr>
<td>8</td>
<td>57273</td>
<td>CD Hold Down Bracket</td>
<td>34</td>
<td>59071</td>
<td>Grommet</td>
</tr>
<tr>
<td>9</td>
<td>58544</td>
<td>Mounting Plate, RCA Jack</td>
<td>35</td>
<td>57156</td>
<td>Magazine Main Shaft</td>
</tr>
<tr>
<td>10</td>
<td>57167</td>
<td>Base Coil Spring</td>
<td>36</td>
<td>59140</td>
<td>Mech Warning label</td>
</tr>
<tr>
<td>11</td>
<td>57168</td>
<td>Nylon Spring Insert</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>57157</td>
<td>Gripper Arm Rest Bracket</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>57159</td>
<td>Opto Mounting Plate</td>
<td>M1</td>
<td>56016</td>
<td>Hub Front</td>
</tr>
<tr>
<td>14</td>
<td>57060-A</td>
<td>Opto Slide Bracket Assy</td>
<td>M2</td>
<td>56017</td>
<td>Hub Rear</td>
</tr>
<tr>
<td>15</td>
<td>58687-A</td>
<td>Mech Opto Cable Assy</td>
<td>M3</td>
<td>56348-1A</td>
<td>Separator Wire Assy</td>
</tr>
<tr>
<td>16</td>
<td>57154</td>
<td>Switch Mounting Bracket</td>
<td>M4</td>
<td>56283</td>
<td>Magazine Label</td>
</tr>
<tr>
<td>17</td>
<td>43414-01</td>
<td>Snap Switch</td>
<td>M5</td>
<td>57187-A</td>
<td>Cover Magazine Assy</td>
</tr>
<tr>
<td>18</td>
<td>57170</td>
<td>Steel Band</td>
<td>M6</td>
<td>50308-01</td>
<td>Main Bearing</td>
</tr>
<tr>
<td>19</td>
<td>57153</td>
<td>Gripper Motor Mtg Bracket</td>
<td>M7</td>
<td>ST-09264</td>
<td>Retaining Ring</td>
</tr>
<tr>
<td>20</td>
<td>55843</td>
<td>Mag. Motor Mtg Bracket</td>
<td>M8</td>
<td>ST-10561</td>
<td>10x1/2x Flg “B”</td>
</tr>
<tr>
<td>21</td>
<td>57071</td>
<td>Nylon Hole Plug</td>
<td>M9</td>
<td>57172</td>
<td>Spacer</td>
</tr>
<tr>
<td>22</td>
<td>58679</td>
<td>Momentary Switch</td>
<td>M10</td>
<td>55278-02</td>
<td>Encoder Disc</td>
</tr>
<tr>
<td>23</td>
<td>57165</td>
<td>Standoff</td>
<td>M11</td>
<td>ST-11282</td>
<td>10x1 1/4 Hex Flg “B”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M12</td>
<td>ST-04813</td>
<td>Flatwasher</td>
</tr>
<tr>
<td>25</td>
<td>57070</td>
<td>Clamper Spring</td>
<td>M13</td>
<td>ST-09194</td>
<td>Retaining Ring</td>
</tr>
<tr>
<td>26</td>
<td>57064-1A</td>
<td>CD Lifter Bracket Assy</td>
<td>M14</td>
<td>57293</td>
<td>Drive Gear</td>
</tr>
<tr>
<td>27</td>
<td>56076</td>
<td>Magnet Holder</td>
<td>M15</td>
<td>ST-02586</td>
<td>10-32x 1 1/2 Hex Flg MS</td>
</tr>
<tr>
<td>28</td>
<td>ST-00867</td>
<td>Rivet</td>
<td>M16</td>
<td>56114</td>
<td>Spacer</td>
</tr>
<tr>
<td>29</td>
<td>57166-02</td>
<td>Clamper Plate</td>
<td>M17</td>
<td>ST-08717</td>
<td>10-32 Hex Nut</td>
</tr>
</tbody>
</table>

**Item No.** | **Part No.**  | **Description** | **Item No.** | **Part No.**  | **Description** |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SV-57188-A</td>
<td>Gripper Assembly</td>
<td></td>
<td>23</td>
<td>56185-1A</td>
<td>Inner Gripper Assy</td>
</tr>
<tr>
<td>1</td>
<td>SV-45421-03</td>
<td>Gripper Housing</td>
<td>24</td>
<td>54768</td>
<td>Spring Gripper</td>
</tr>
<tr>
<td>2</td>
<td>45422</td>
<td>Gripper Housing Bearing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>52268-2A</td>
<td>Brkt Gripper Rev. Rivet Assy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>ST-09747</td>
<td>Screw 10-32x3/8 Hex Flg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>ST-09720</td>
<td>Screw 10-32x1/2 Hex Flg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>34315-07</td>
<td>Gripper Spider</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>34399</td>
<td>Trunnion Shaft</td>
<td>23</td>
<td>56185-1A</td>
<td>Inner Gripper Assy</td>
</tr>
<tr>
<td>8</td>
<td>34877</td>
<td>Trunnion Shaft Button</td>
<td>24</td>
<td>54768</td>
<td>Spring Gripper</td>
</tr>
<tr>
<td>9</td>
<td>34312-02</td>
<td>Gripper Turnover Gear</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>34311-04</td>
<td>Gripper Release Gear</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>ST-03150</td>
<td>Flatwasher</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>57169</td>
<td>Cam</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>ST-04881</td>
<td>Flatwasher</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>ST-06535</td>
<td>Screw 8-32x5/8 Phil Pan Hd</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>56434-A</td>
<td>Gripper Shaft Assy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>34310-01</td>
<td>Gripper Shaft Gear</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>ST-00534</td>
<td>Spiral Pin Medium duty</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>34929</td>
<td>Gripper Shaft Thrust Washer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>ST-04828</td>
<td>Spring Washer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>34323-8A</td>
<td>Cam Gripper Arm Rev. Assy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>56015-1A</td>
<td>Gripper Assy</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Electronic Components

Dual Digital Amplifier SV-70135-A

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>60621-A</td>
<td>Chassis, Dual Amp</td>
</tr>
<tr>
<td>2</td>
<td>40678-09500</td>
<td>Rubber Cushion 9.5”</td>
</tr>
<tr>
<td>3</td>
<td>58641</td>
<td>Switch, Corcom</td>
</tr>
<tr>
<td>4</td>
<td>ST-04346</td>
<td>Fuse, 8 Amp, 250v, fast blow (1 req) (Domestic)</td>
</tr>
<tr>
<td></td>
<td>ST-11141</td>
<td>Fuse, 5A, 250V, fast blow (2 req) (Export)</td>
</tr>
<tr>
<td>5</td>
<td>60438-A</td>
<td>Harness, Amp Main Power</td>
</tr>
<tr>
<td>6</td>
<td>60622-A</td>
<td>Cover, Dual Amp</td>
</tr>
<tr>
<td>7</td>
<td>SV-60435-A</td>
<td>PCB, Digital Power Supply</td>
</tr>
<tr>
<td>8</td>
<td>SV-60441-1A</td>
<td>PCB, Digital Pre Amp</td>
</tr>
<tr>
<td>9</td>
<td>SV-60429-1A</td>
<td>PCB, Digital Aux Amp</td>
</tr>
<tr>
<td>10</td>
<td>SV-60442-A</td>
<td>PCB, Digital Power Amp</td>
</tr>
<tr>
<td>11</td>
<td>ST-11549</td>
<td>Standoff, 4-40 x 1/4”</td>
</tr>
<tr>
<td>12</td>
<td>60647-A</td>
<td>Harness, Power Amp</td>
</tr>
<tr>
<td>13</td>
<td>60648-A</td>
<td>Harness, Audio Output Panel</td>
</tr>
<tr>
<td>14</td>
<td>60649-A</td>
<td>Harness, Aux Amp Input</td>
</tr>
<tr>
<td>15</td>
<td>60643</td>
<td>Transformer Support Audio</td>
</tr>
<tr>
<td>16</td>
<td>SV-60455-1A</td>
<td>Audio Output Panel PCB</td>
</tr>
<tr>
<td>17</td>
<td>ST-11429</td>
<td>Thumb Screw 6-32x3/8 (4 places)</td>
</tr>
</tbody>
</table>
**Computer Assembly SV-70003-2A**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>58668-01</td>
<td>Computer Cover</td>
</tr>
<tr>
<td>2</td>
<td>58597</td>
<td>Computer Chassis</td>
</tr>
<tr>
<td>3</td>
<td>SV-58399-2A</td>
<td>Computer PC Board Assy</td>
</tr>
<tr>
<td>4</td>
<td>ST-11429</td>
<td>Thumb Screw</td>
</tr>
<tr>
<td>5</td>
<td>ST-02557</td>
<td>6-32x3/8 Hex Flg Screw</td>
</tr>
</tbody>
</table>

**Volume Control Assembly SV-70004-A**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>58603</td>
<td>Volume Control Box</td>
</tr>
<tr>
<td>2</td>
<td>58604</td>
<td>Volume Control Plate</td>
</tr>
<tr>
<td>3</td>
<td>SV-58515-A</td>
<td>Volume Control PCB Assy</td>
</tr>
<tr>
<td>4</td>
<td>ST-04076</td>
<td>Tapping Screw 4 x 5/8 Pan Hd Type “B”</td>
</tr>
</tbody>
</table>
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)
## Kits and Accessories

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Items shipped in the cash box (I.R. Remote Control Package)</strong></td>
</tr>
<tr>
<td>61467- A</td>
<td>I.R. Remote Control, Deluxe</td>
</tr>
<tr>
<td>SV-60046-A</td>
<td>I.R. Remote Receiver Assembly</td>
</tr>
<tr>
<td>SV-59891-A</td>
<td>I.R. Receiving Interface PCB Assembly</td>
</tr>
<tr>
<td>58810</td>
<td>Remote Sensor Enclosure</td>
</tr>
<tr>
<td>ST-09728</td>
<td>Screw, 4-40 x 1/4 Phil Pan Hd Sw.</td>
</tr>
<tr>
<td>58789-A</td>
<td>I.R. Remote Harness</td>
</tr>
<tr>
<td>59164-03</td>
<td>Installation Instructions</td>
</tr>
</tbody>
</table>

**Service Envelope:** (contains the following:)

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>56202-02</td>
<td>Pricing Sheet</td>
</tr>
<tr>
<td>60753</td>
<td>Title Strips, Single (25)</td>
</tr>
<tr>
<td>57279-02</td>
<td>Title Strips, Double (34)</td>
</tr>
<tr>
<td>60761</td>
<td>Operation &amp; Service Manual with Parts Catalog</td>
</tr>
<tr>
<td>60511-02</td>
<td>Quick Find Reference Programming Sheet</td>
</tr>
<tr>
<td>60457-02</td>
<td>&quot; Spanish (for Mexico)</td>
</tr>
<tr>
<td>57022-03</td>
<td>Warranty Card (Domestic)</td>
</tr>
<tr>
<td>58180-02</td>
<td>&quot; (for Mexico)</td>
</tr>
<tr>
<td>59515</td>
<td>&quot; (for Export)</td>
</tr>
<tr>
<td>55004</td>
<td>Application Form</td>
</tr>
<tr>
<td>56141</td>
<td>Number Strip</td>
</tr>
<tr>
<td>60670-01</td>
<td>Price Card, Blank (Domestic)</td>
</tr>
<tr>
<td>60683</td>
<td>Decal, DBA $1 &amp; $1/2/5 (Domestic)</td>
</tr>
<tr>
<td>60685-A</td>
<td>Harness, Speaker Adaptor</td>
</tr>
<tr>
<td>60704-A</td>
<td>Terminal Kit</td>
</tr>
</tbody>
</table>

**Optional Kits:**

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>02379-02</td>
<td>Yoga Microphone Kit</td>
</tr>
<tr>
<td>02451</td>
<td>Serviceman’s Kit</td>
</tr>
<tr>
<td>02410</td>
<td>Counter Kit</td>
</tr>
<tr>
<td>02414</td>
<td>Volume Accessory Unit Kit</td>
</tr>
<tr>
<td>02450</td>
<td>Audio Distribution Package, Digital Amp</td>
</tr>
<tr>
<td>02417-02</td>
<td>Telecommunications Kit</td>
</tr>
<tr>
<td>02436</td>
<td>Mars Dollar Bill Acceptor Kit</td>
</tr>
<tr>
<td>02465</td>
<td>iPod® Kit</td>
</tr>
</tbody>
</table>

 iPod® is a trademark of Apple Computer Corp.