UNIVERSAL HOME THEATER Remote control

Service
Service
Service

RC3200/A
RC3200/U1S
RC3200/M1S

Service Manual

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marantz

SPECIFICATIONS

Display	Monochrome touch screen LCD with 4 gray levels and digital contrast control. Resolution: 160 x 100 pixels Blue EL backlighting for LCD and hard buttons
Interface	3-wire (RS232) serial port connector
Software	Built-in Marantz RC codes Total number of devices limited only by memory
Infrared (IR)	Infrared sending LED and learning eye Operating distance of 33 feet (10 meters) Learning frequency up to 56 kHz and 455 kHz Learning distance 1 inch (2 cm) up to 4 inch (10 cm) 2-way communication with specific marantz equipment
Memory	1 MB non-volatile flash memory
Batteries	3 AA-batteries (3 x 1,5V): primary or rechargeable
Power management	Power on by tapping the LCD touch screen or by pressing the Backlight button Power off automatically
Dimensions	7.8 inch x 3 inch x 1.3 inch (177mm x 74mm x 33mm)
Operating temperature	41°F to 113°F (5°C to 45°C)

Accessories	only for RC3200/U1S/M1S	only RS3200/A
	RS232 cable for PC connection IFU RC3200 3 AA-batteries	None

SERVICE HINTS

-RC3200 information

Press and hold the **Mode** button for 3 seconds -Tap **SETUP** - go to page3/3 with page up or page down button.
This page contains following information:
Free memory :
Boot version :
System version :
Application version :
Configuration file :

-Cleaning RC3200

Use a soft, damp cloth to clean the RC3200
If the LCD touch screen is dirty, clean it with a soft cloth moistened with a diluted window-cleaning solution.
After a repair please make the LCD touch screen always clean !

-Update the RC3200

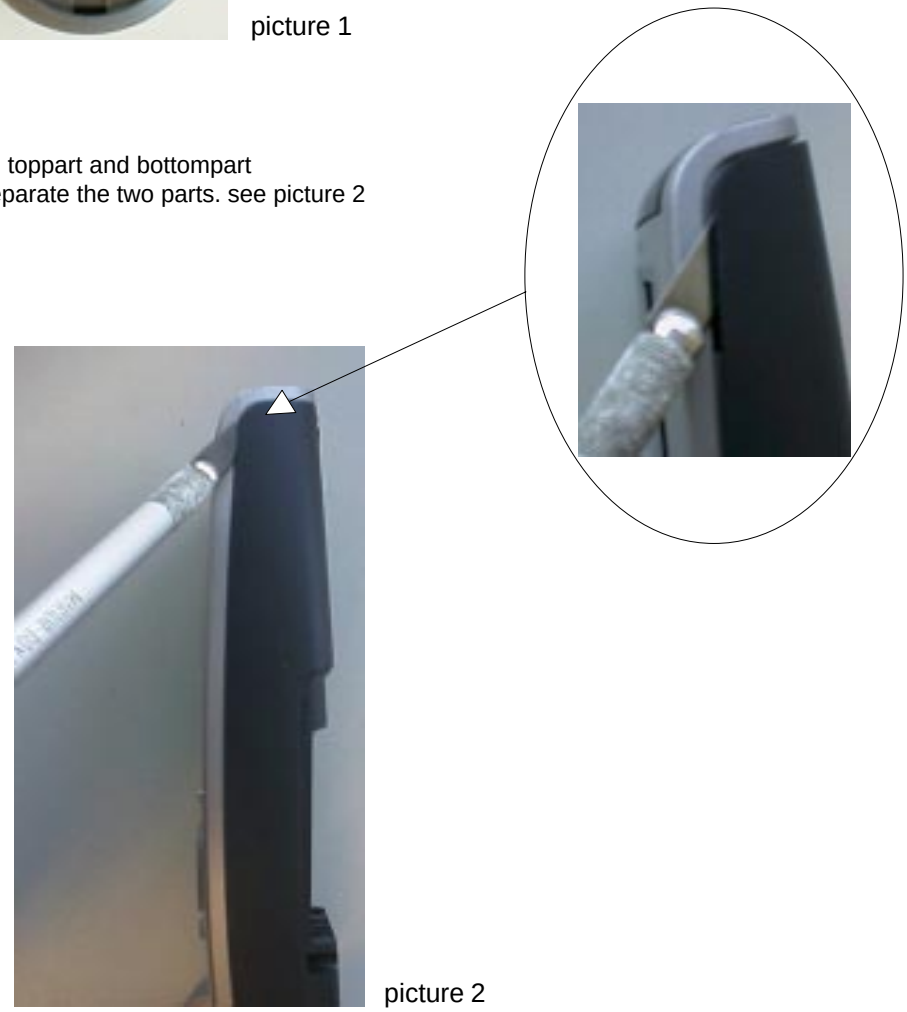
Please check after each repair the RC300 application version.
Check the version on the website. Is the version higher on the website, please download the new version from the Firmware.
You can find this on the Marantz website http://www.marantz.com

DISMANTLING HINTS

1. Remove battery lid
2. Remove label a little. see picture1
3. Remove 3 x screw as shown in picture 1

picture 1

4. Put a sharp knife between toppart and bottompart
   and use this as lever to separate the two parts. see picture 2



picture 2

CIRCUIT DESCRIPTION

1 Power supply

Components: 7201
The power supply makes use of the LT1761 low drop linear regulator of Linear Technologies. The output voltage is 3.3V.

2 Reset & delayed reset.

Components: -reset: 7202
-delayed reset: around 7203, 7204
The S-809 (Panasonic) detects the hardware reset level of the batteries. Below this level (2.8V) reset is passed to the "delayed reset" circuit.
The "delayed reset circuit" is activated by the S-809 or the reset switch 1203. It will delay the reset signal by approx. 80ms and has a hysteresis of 200mV

3 Battery level measurement

Components: around 7206, 7207
The battery voltage is measured via a 1:2 divider by the master microcontroller. This divider is switched on/off by the master by means of 7206 and 7207.

4 EL-foil driver

Components: around 7205
The EL-sheet is driven by the D371 (Durel). This component generates a high-voltage semi sinewave by switching a coil of 2.2mH. It contains 2 oscillators: a high-frequency oscillator switching into the inductor at approx. 17kHz. A low-frequency oscilator drives the EL-sheet at approx. 500Hz. The EL-sheet is driven with approx. 75Vpeak.
Zener diodes 6208 and 6209 limit the sinewave voltage when no sheet is attached (during repair of the unit).

5 +/- 17V generator

Components: around 7210
The + and - 17V are generated by the MC64063A, a DC-to-DC converter who is used in a step-up configuration.
The switching frequency ranges up to 150kHz (depending on the load) with ringing on the edges of approx. 3MHz.
The generator is switched on/off via 7208 and 7209 from the master microcontroller.

6 Master microcontroller & memories

Components: 7101, 7115, 7103, 7102
The master is the main microcontroller in the system (M30800, Mitsubishi). It uses external flash program memory (AM29LV800BT, AMD) and SRAM (CY62256V, Cypress). Address selection is performed with 74LV139.
The master runs from two crystals: 7.3728MHz, onlu runing when active. The other crystal of 32.768kHz is always running, even in sleep mode.

7 Buzzer

Components: around 1103
The sound function is made by a piezo-electric buzzer. The steering frequency range is 200Hz ~ 8kHz.

8 RS232 transmitter

Components: around 7105, 7106
This circuit converts the RS232 outgoing signal from the master between 0 and 3.3V to -15 and +15V levels.
RS232 communication is set at 115kBaud both directions.

9 RS232 receiver & detection.

Components: around 7107, 7108, 7109
Transistor 7107 converts the incoming RS232 signals between -/+15V into 0-3V levels towards the master.
Transistors 7108 and 7109 perform a RS232 incoming signal detection and interrupt the master during sleep mode when communication starts from a connected PC.

10 Touchscreen.

Components: around 7111, 7112, 7113, 7114
A resistive touchscreen is used, composed of two layers of resistive material. Pressing the screen causes a short-circuit between the two layers.
The touchscreen is operated in two steps:
1. detection of a touch
2. reading of the actual position of the touch
Detection is done by connecting one layer to ground and the second layer to 3.3V with a pull-up resistor. The voltage on the second layer will change from 3.3V to 0V when touching.

Readout is performed in 2 phases, each determining one coordinate.
First, layer 1 is connected between 3V3 and ground. The potentiometric position of the touch location can be read by measuring the voltage on the layer 2.
The other coordinate is read by interchanging the layers in previous procedure.

CIRCUIT DESCRIPTION

11 LCD

Components: 1101
The LCD module (Wintek) is a STN type 100x160 pixel including the driver HD66421 of Hitachi. The touchscreen is glued on top the the LCD module.
The LCD module uses a 8 bit bus directly iterfacing to the databus of the master.
It uses two voltages: 3.3V for the logic and 17V for the LCD glass drive.
The LCD driver uses a clock of approx. 190kHz to generate all timing.

12 Keyboard

Components: 0102, etc...
The keyboard is a matrix of 6 x 3 keys. It is static when no key is pressed, and scanned when a key is applied.

13 Slave microcontroller

Components: 7301
The slave microcontroller M37540M4 (Mitsubishi) takes most of the real-time functions: IR-sending, IR learning and steering the database microcontroller.
Sending IR is performed via pins 28 and 29, combining envelope and carrier with AND-gate 7302.
Transistors 7303 and 7304 combine the IR-sending signals from slave uC and database uC towards the IR-transmitter circuit.
The salve uC also switches on/off the power of the learing circuit via 7305.
Bidirectional communication to the master uC goes via a UART at 57kBaud.
Communication to the database uC goes via a 3-line dedicated bus.

14 Infrared transmitter

Components: around 7307, 7308
The IR-transmitter transmits any IR-code coming from slave or database uC.
It steers two IR-transmission diodes with a peak current of approx. 300mA in each of them.
The IR-diodes transmit invisible infrared light at 940 nm in an angle of 2 x 25 degr.
An electrolytic capacitor of 100uF smoothen-out the carrier frequency in order to have only the average current flowing from the batteries (envelope of the IR-code).
There are many many brands with each several IR-codes. Basically, all codes consist of a low bitrate burst (around 1kbit or slower) modulated on a carrier of 30 - 60kHz, and repeated at a rate of 5 - 20Hz.

15 Learning circuit

Components: around 7309, 7310
This circuit is used for learning IR-codes. It uses signals captured by the IR-transmission LEDs 6301and 6302. Transistor 7309 amplifies the signal. Opamp LM393-B puts a minimum threshold and amplifies further. The output of LM393-B contains the carrir frequency and is fed to the slave IC for carrier frequency measurement. The output is also fed onto a detector. This has a time constant suitable to detect to the envelope signal of the IR-code. Opamp LM393-A cleans up and its output is fed also into the slave uC for envelope recording.

16 IR - Receiver

Infrared receptor 6306 and surrounding components

17 Not impemented functions (in circuit diagram)

Some of the parts in the circuit diagram are actually not stuffed on the board.
RS transmitter module 1301

Overview of frequencies

EL-foil driver D371A: 17kHz, 500Hz (75Vpeak)
+/-17V generator: 150kHz, 3MHz ringing
crystals master uC: 7.3728MHz, 32.768kHz
resonator slave uC: 3.64MHz
resonator database uC: 4MHz
RS232 speed: 115kBaud
baudrate between master & slave uP: 57.6kBaud
LCD internal clock: 190kHz
IR-transmission: carrier frequencies: approx. 30 - 60kHz

List of EMC-critical components

Critical components for EMC are:
- The EL-foil generator (high voltage)
- All crystals
- The data & address busses of the master uC to the Flash, SRAM and LCD module
- The IR-transmitter (high current)

TROUBLESHOOTING

General Problems

The display stays blank or becomes black

• Make sure the batteries are properly installed.
• Press the Backlight button to make sure RC3200 and the backlight are turned on.See ‘Turning on the Display and the Backlight’
• Adjust the contrast using the Backlight button and the Page Up or Page Downbuttons on the left side of RC3200 See ‘Changing the LCD Contrast’

The display is too light or too dark

• Adjust the contrast using the Backlight button and the Page Up or Page Down buttons on the left side of RC3200. See ‘Changing the LCD Contrast’

RC3200 shuts off automatically

• This is a timeout feature of the RC3200 to save power. You can change the time RC3200 stays on in the Settings.See ‘Adjust the LCD Timeout’

Devices do not respond to commands from RC3200

• Make sure RC3200 is in Use mode. See ‘Working with Modes’
• Make sure RC3200’s sending LED is pointed towards the device you’re operating.
• Check if the battery level is low. If so, replace the batteries.
• Check that you have correctly learned the IR commands. See ‘Tricks for Remote Controls that are “Difficult”’
• If the button is programmed with a macro, and all other buttons are working correctly, reprogram the macro See‘Recording Macros’

RC3200 does not learn commands from an existing remote control

• Do not learn commands directly under fluorescent lights.
• Do not learn commands on a reflecting table surface.
• Check if the battery level is low. If so, replace the batteries.

RC3200 is not recognized by the RC3200 Setup Programmimg Software software

• Make sure the serial cable is properly connected. See ‘RC3200 Setup Programming Software’
• Disconnect other equipment connected to the serial ports, e.g. PDA’s.
• Plug the serial cable in another serial port.
• Try to connect multiple times.

Programming Problems

Buttons are not sending the correct commands

• Check whether the button of the device is learned properly. See ‘Learning From Other Remotes’
• Check whether the macro is recorded properly. See ‘Recording Macros’

RC3200 will not switch modes

• Replace the batteries. When the batteries are low RC3200 prevents you from switching to customizing modes so that no customization can get lost.

RC3200 is low on memory

• Revert the RC3200. See ‘Revert’

The configuration file is corrupted

• When this unlikely event occurs, you have to revert to the original configuration or use RC3200 Setup Programming Software to download a new configuration file. All your customized commands and devices will be lost and you will have to reprogram your RC3200. If you use RC3200 Setup Programming Software, it is advised to make backup copies of your customized configurations. See ‘Revert’ and ‘RC3200 Setup Programming Software’

RC3200 error message

If the error message ‘Invalid CF version or corrupt Flash!’ occurs:
• Use the Reset button on the back of the RC3200. See ‘How do I reset the RC3200?’
• Try to recover the RC3200 Configuration File (NCF) by downloading a backup copy or the default file from RC3200 Setup Programming Software. See ‘RC3200 Setup Programming Software’
• Go to the Marantz website http://www.marantz.com for more information.

- Turning on the Display and the Backlight

RC3200’s display can be activated in three different ways:
Tap the touch screen gently with your finger or a blunt, soft object like a pencil eraser.
The display is activated. Press any button on the RC3200.
The display is activated. Press the Backlight button on the left side of the RC3200.
The display and the backlight are activated.
If the LCD touch screen stays blank or becomes black when turning on the display, read the next section ‘Changing the LCD Contrast’ to adjust the contrast of the LCD touch screen.
Note: RC3200 has a timeout feature: the LCD touch screen and the backlight automatically turn off to save power. See ‘Adjusting the Settings’ to adjust the timeout for the LCD and the backlight.

TROUBLESHOOTING

- Changing the LCD Contrast

To adjust the LCD contrast on the touch screen:
1 Press and hold the **Backlight** button.
The screen lights up.
2 While still holding the Backlight button, press the **Page Up** button once to increase the LCD contrast one level.
The LCD contrast is adjusted one level up.
–or–
Press the **Page Down** button once to decrease the LCD contrast one level.
The LCD contrast is adjusted one level down.
3 Release the **Backlight button** when the contrast is satisfactory.
The LCD contrast can be adjusted 16 levels.
Note: To adjust the contrast multiple levels, you have press the Page Up or Page Down button multiple times. When you press and hold the Page Up or Page Down button, the LCD contrast will only change one level.

- Operating Devices

To operate devices on your RC3200 you have to switch to the Device overview. This screen displays the available devices like TV, VCR, DVD, PreAmp and so on.

- Adjusting the Settings

The RC3200 settings can be adjusted in the Setup mode.
Press and hold the **Mode** button for 3 seconds.

- Adjust the LCD Timeout

The LCD timeout indicates how long the LCD touch screen stays active before it turns off. The LCD will only time out when you don't touch any buttons. You can set the timeout between 1 second and 120 seconds.
Press '+' to increase or '-' to decrease the time the LCD stays active.
Tap '+' or '-' once to adjust the timeout 1 second up or down.
Press and hold '+' or '-' to adjust the timeout per 10 seconds up or down.

- Working with Modes

RC3200 starts up in Use mode. In this mode you operate your devices. For customizing the RC3200 (adjusting the settings, defining brands, learning buttons, labeling buttons and devices or recording macros) you have to switch to the appropriate mode via the menu that appears when you press and hold the mode button.
The RC3200 can be put into 4 different modes. These modes are:
Use mode: Normal operating. See 'Operating Devices'
Setup mode: For changing the RC3200 system settings. See 'Adjusting the Settings' for more details.
Learn mode: For learning commands from other remote controls. See 'Learning Commands' for more details.
Macro mode: For recording macros. You can assign multiple commands to one single button. See 'Recording Macros' for more details.
Note :Learning commands and recording macros is not possible from either of the Home pages. You must select a device or the Macro group first, then press and hold the Mode button perform.

- Learning From Other Remotes

If you own any non-Marantz components, you can program RC3200 to reproduce IR signals from your existing remote controls via RC3200's learning eye. To do this, place RC3200 and the device's remote control on a flat surface, 1 to 4 inches (2 to 10 cm) apart.
To learn commands from other remote controls, RC3200 has to be in Learn mode. Switching to Learn mode is only possible from a specific device, not from the Home Page. See 'Working with Modes'
Per device you can learn all soft and hard buttons on the RC3200, except for:
• the Backlight button;
• the Back and FWD buttons;
• the Page Up and Page Down buttons;
• the "S" (Status) button;
• the Home button.

The Learn Sequence

1 From the Home page, select the device, e.g. TV, with the buttons you want to teach new commands to.
2 Press and hold the **Mode** button for 3 seconds. The Mode screen appears.
3 Tap **Learn** on the Mode Menu. RC3200 is now in Learn Mode. 'Learn' and the label of the selected device appear at the top of the touch screen.
4 Use, if necessary, the Page Up or Page Down button to go to the next button you want to learn.
5 Press the soft or hard button you want to learn on theRC3200. The Learn label changes to Learning, which means RC3200 is ready to receive commands from an existing remote control. The RC3200 will wait for 3 seconds to receive an IR code from another remote control.
Note: When a hard button is pressed to learn, there is no on screen feedback to indicate which button is pressed.

TROUBLESHOOTING

6 Press and hold the button on the existing remote control you want to learn to the RC3200.When the RC3200 receives an IR code:
• You hear a confirmation beep;
• The label changes from Learning to OK. The Learn sequence has been successful. When the RC3200 does not receive an IR code in 3 seconds:
• You will hear an error beep;
• The label changes from Learning to Failed. The Learn sequence has failed.
• RC3200 will return to Learn mode. Return to step 5 of the Learn sequence to relearn the button.
Tip You do not have to wait for the OK or Failed to disappear. If you press another button (soft or hard button), the RC3200 Learn sequence immediately goes back to step 5.
7 Go to other pages of the selected device with the Page Up and Page Down buttons. Repeat steps 6 and 7 until you have copied all the commands of the existing remote control.
8 Press **Done** when you have finished learning commands to the buttons of your choice. RC3200 returns to Use Mode. You can try out the new IR codes or select another device to learn.

- Recording Macros

A macro allows you to send a sequence of commands using one single button. You can for instance, switch on your TV, turn to a movie channel and prepare your VCR for recording by rewinding the videotape. All this can be done be pressing a single button on your RC3200.
To record macros, RC3200 has to be in Macro mode.
1 Set the RC3200 in Use Mode. See ‘Working with Modes’
2 Select the device, e.g. TV, with the buttons you want to program as a macro.
The device screen appears.
Note Basically, you can assign any button as a macro button. However, it is recommended to assign only the reserved macro buttons on the last page of every device. Use the Page Up and Page Down buttons to go to the last page of the device.
3 Press and hold the **Mode** button for 3 seconds. The Mode screen appears.
4 Tap **Macro** on the Mode screen. A message screen appears. RC3200 is now in Macro Mode.
5 Tap Next. The device screen with the Macro label appears. With the Page Up and Page Down buttons you can go to other screens of the selected device.
6 Tap the soft or hard button you want to select as a macro. A message screen appears.
7 Tap Start. The Device Overview appears with the ‘Recording’ label at the top of the screen. The buttons you tap on this screen will not be recorded. From the Device Overview you can go to the different devices or you can press the Extra hard button to go to the Extra screen with delays and beeps.
8 Tap the button of the device you want to go to.The device screen appears.
9 Tap the soft or hard buttons with the commands you want to record.
10 Press the Page Up and Page Down buttons to go to different screens of the same device. –or– Press the Device button to go to the Device Overview again.
11 To add delays and beeps to the macro, press the Extra hard button on the Device Overview. The Extra screen appears.
— 1 To add a delay, tap one of the Delay buttons.By tapping several Delay buttons, the duration of the delay will be increased.
— 2 To add a beep, tap the Beep button.
— 3 Press the Device button to go to the Device Overview again.
12 Press Stop to stop recording. A message screen appears.
13 Press OK to save the macro and return to the Mode screen.The existing command of the selected button is replaced by the macro. –or– Press Cancel to return to the Mode screen without saving the macro.
The button retains its previous command.
14 Set the RC3200 in Use mode to test the recorded macro.

- Tricks for Remote Controles that are “Difficult”

• Replace the batteries in your original remote control. Poor battery charge in the original remote will still operate original component from long range, but will corrupt carrier frequency learning
• Change distance. Try increasing distance up to 4 feet. Start in the normal 1” to 4” , then double the distance to 8” and so on.
• Use a short “Tap” instead of a press and hold. A press and hold is only really necessary when you are learning a button that in actual operation you would sometimes press and hold (e.g. volume up and down, fast forward scan). If your system is large and you are concerned about memory, try teaching most commands as taps rather then extended press and holds.
• The “Flicker” technique - rapidly tap the button while learning (7x per sercond or faster). This is very useful for difficult volume up and volume down commands from some manufacturers.
• The “Swoop” - Start from 2’away and swoop the remote towards the learning remote. Use in absolute desperation, out of sight from anyone who might see you. Reportedly works occasionally.
• The “Flasher” - Hold an opaque object in front of the remote and remove it then quickly replace it. This is especially useful when you want to capture one part of a macro from another remote.

TROUBLESHOOTING

- RC3200 Information

This page contains information that may be important to the dealer in case of a defect. The following information is displayed on this screen:
• Free memory (in percentage), which gives you an indication on how much memory is left to (further) customize the RC3200;
• Boot version;
• Application version;
• Configuration file.

- Revert

Warning When you revert the RC3200, all customization is lost permanently. You loose all RC3200 settings, defined brands, learned codes and recorded macros.
By tapping the Revert button the RC3200 will be reverted to the default configuration. Reverting to the original configuration restores the RC3200 to its initial state. You might have to revert when you notice that scrolling through pages is slowing down. This might be the case when you have added a lot of commands to the RC3200.
1 Tap the **Revert** button. A message screen appears to confirm or cancel the revert process.
2 Press OK or Cancel.

- RC3200 Setup Programming Software

If you want to personalize your RC3200 even more beyond its standard programming features,RC3200 Setup Programming Software is the tool for you to use.
You can find more information and updates of the software on http://www.marantz.com.
RC3200 Setup Programming Software is the visual editor for creating and configuring RC3200 Configuration Files (windowes file extention NCF) on your computer. An NCF is a file that is used to define the RC3200 behaviour and look for the LCD touch screen.
Note It is advised to make backup copies of your own configurations. This can be done with RC3200 Setup Programming Software.
With RC3200 Setup Programming Software you can:
• define the types and brands of your devices;
• generate the Home Page;
• design the page layout and the appearance of buttons;
• configure the behavior of the hard buttons and soft buttons;
• save, duplicate and share NCFs, devices, buttons, bitmaps or codes with another RC3200;
• preview the NCF on the RC3200 emulator;
• download the new configurations to your RC3200 by means of the included serial cable;
1 Plug one end of the serial cable in the serial port on your computer. *see picture 1*
2 Plug the other end of the serial cable in the serial port on the RC3200.
Note When the RC3200 is connected to the PC, the battery lifetime may be reduced.

Minimum System Requirements

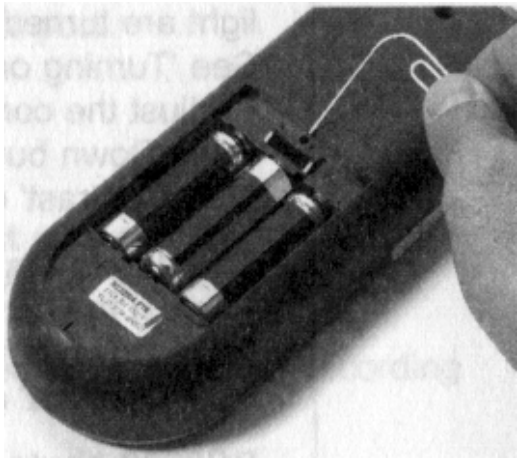
• PC with a Pentium 166 MHz or higher
• Windows 95/98/ME/XP or NT 4.0/2000
• 32 MB of RAM
• 16 MB of free hard disk space
• Free serial port

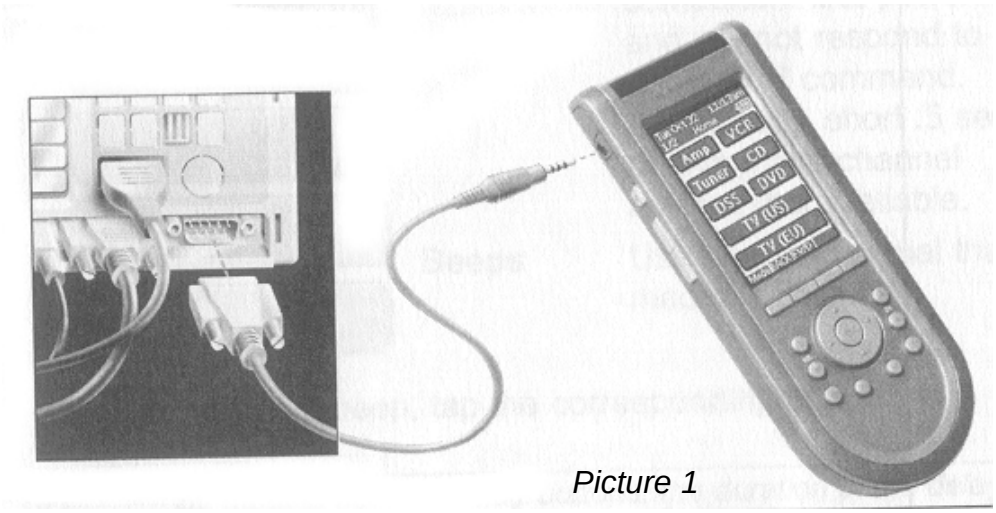
TROUBLESHOOTING

How do I reset the RC3200?

Under normal circumstances, you will never have to reset the RC3200.
However, on rare occasions, if the RC3200's touch screen freezes or if you notice unusual behavior, you need to perform a reset to get the RC3200 running again. All customized commands and devices are retained.
1 Slide the battery cover off the back of the RC3200.You will see the Reset button in the battery compartment.
2 Use an unfolded paperclip or a sharp pencil to carefully press the Reset button.
The RC3200 restarts and an Introduction screen appears.
The RC3200 beeps twice to indicate it is ready for use.

Reset button





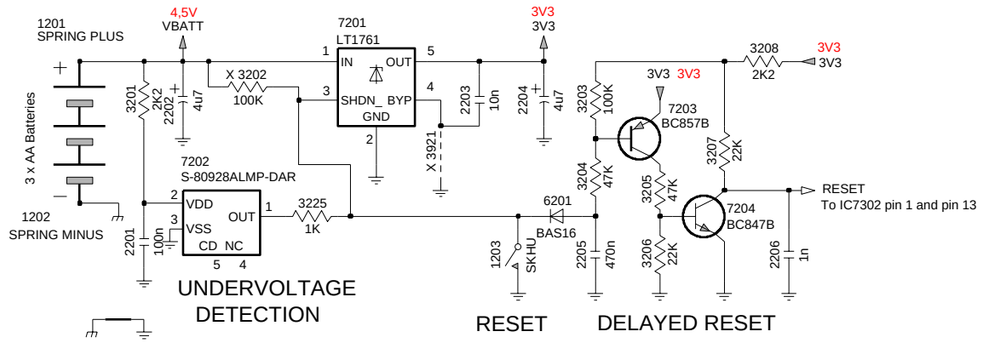
Picture 1

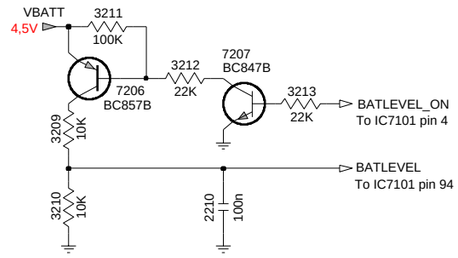
•For more information go to the Marantz website http://www.marantz.com

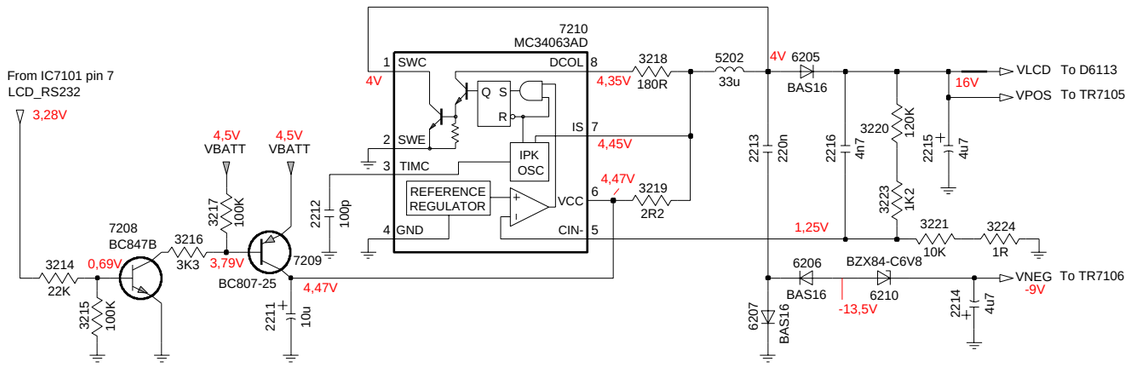
5-1

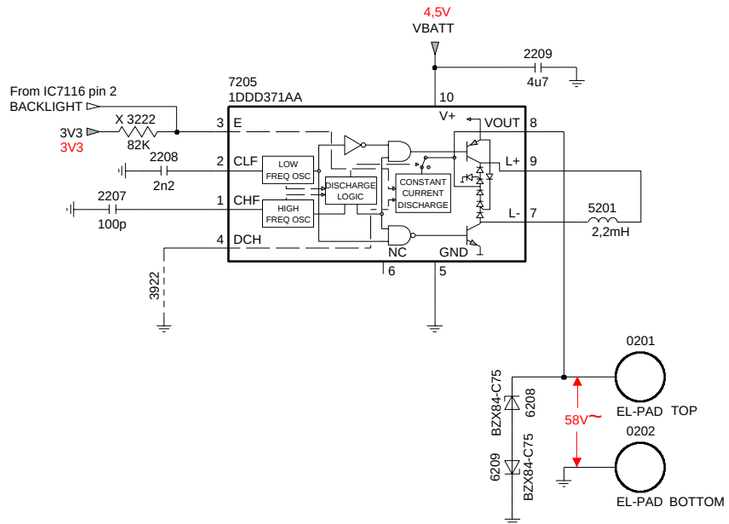
ELECTRICAL DIAGRAM - Power Supply

Power Supply









X not stuffed

Eco pronto Marantz
3104 2071271
mdi 22-03-02

2203 B5
2204 B6
2205 C6
2206 C7
2207 E10
2208 E10
2209 D12
2210 C11
2211 H4
2212 G4
2213 G7
2214 H8
2215 G8
2216 G7
3201 B3
3202 B4
3203 B6
3204 C6
3205 C7
3206 C7
3207 C7
3208 B7
3209 C10
3210 C10
3211 B11
3212 B11
3213 B12
3214 G2
3215 H2
3216 G3
3217 G3
3218 F6
3219 G6
3220 F7
3221 G8
3222 E10
3223 G7
3224 G8
3225 C4
3921 C5
3922 F10
5201 E13
5202 F6
6201 C6
6205 F7
6206 G7
6207 H7
6208 G12
6209 G12
6210 G7
7201 B5
7202 C4
7203 C6
7204 C7
7205 E11
7206 B10
7207 B11
7208 G3
7209 G3
7210 G5

5-2

ELECTRICAL DIAGRAM - Main Section

Main Section

X not stuffed

3104 207 1271
rndi 28-03-02

0111 L4
0112 L4
0113 L5
0114 L5
0115 L6
1101 D19
1102 J19
1103 I11
1104 L12
1105 K4
1106 K4
1107 B8
1108 G11
1109 K5
2101 B7
2102 B8
2103 B8
2104 B9
2106 F11
2107 G11
2108 C15
2109 C17
2110 K2
2111 L3
2112 L7
2113 K9
2114 L9
2115 L11
2116 L11
2117 L13
2118 I17
2119 K17
2120 C14
2121 C18
2122 C12
2123 J15
2124 L18
3101 B8
3102 F9
3104 I10
3105 I10
3106 K2
3107 K3
3108 K3
3109 K9
3110 L9
3111 K9
3112 L9
3113 K11
3114 K11
3115 J12
3116 J13
3117 K13
3118 L14
3119 J15
3120 K15
3121 K15
3122 L15
3123 I16
3124 G10
3125 C7
3126 J16
3127 J3
3128 G11
3129 I9
3130 I4
3131 I4
3901 B8
3902 B9
3903 B11
3904 C13
3905 C15
3906 C17
3908 K10
3909 L10
5101 K12
5102 L12
5103 L12
5104 B9
5105 C14
5106 C15
5107 C17
5108 B11
6101 K9
6102 L9
6103 L10
6104 L11
6105 K12
6106 J12
6107 K13
6108 J16
6109 I17
6110 K17
6111 I17
6112 K17
6113 C17
7101 F6
7102-A D13
7102-B E13
7103 E15
7104 I10
7105 K10
7106 L10
7107 J12
7108 J14
7109 K13
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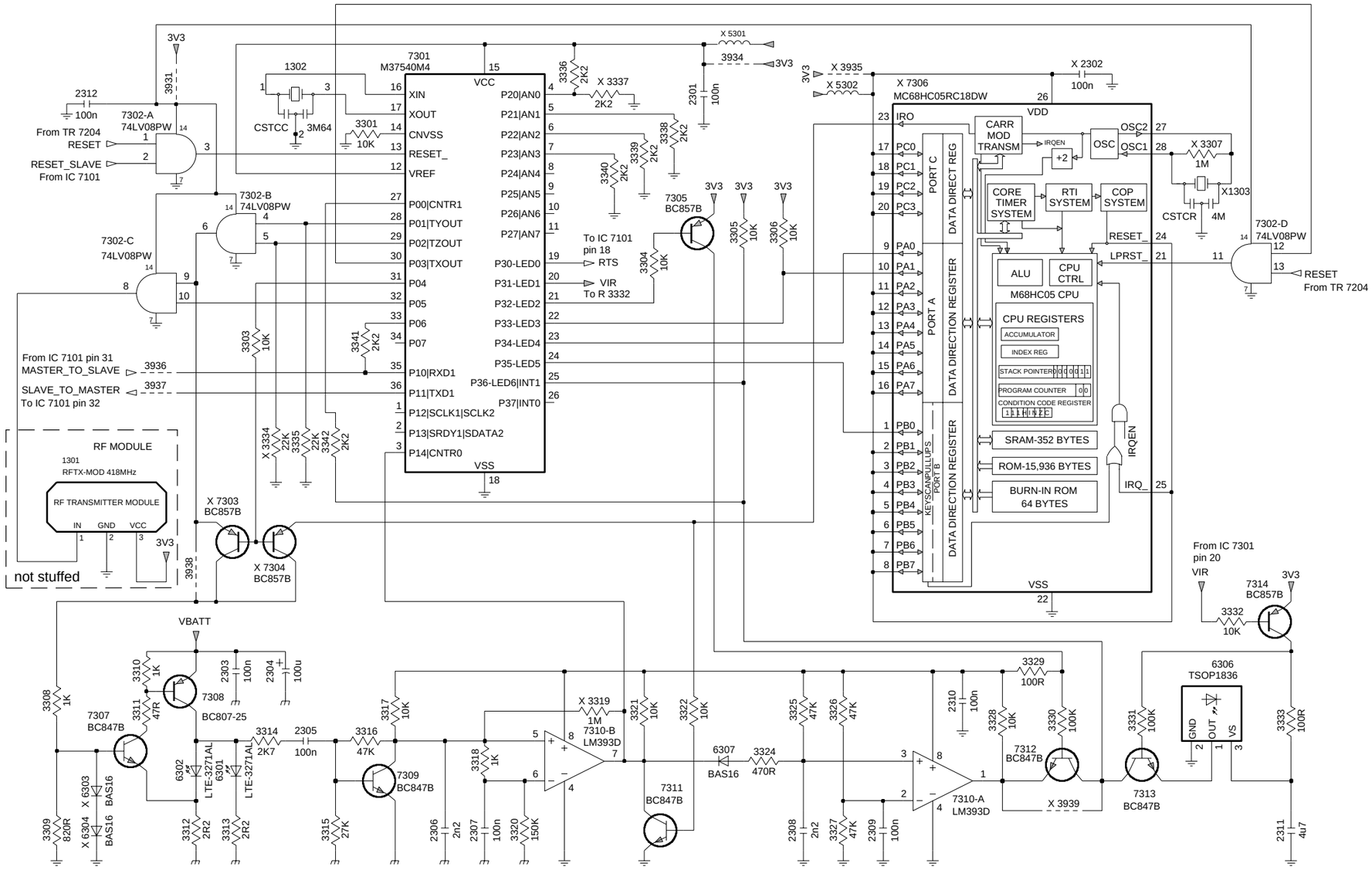
7112 K15
7113 K16
7114 L16
7115 D11
7116 F6

5-3

ELECTRICAL DIAGRAM - Slave Section

Slave Section



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2305 G4
2306 H5
2307 H6
2308 H8
2309 H9
2310 G10
2311 H13
2312 B2
3301 B5
3303 D4
3304 C7
3305 C8
3306 C8
3307 C12
3308 G2
3309 H2
3310 G3
3311 G3
3312 H3
3313 H4
3314 G4
3315 H5
3316 G5
3317 G5
3318 H6
3319 G7
3320 H6
3321 G7
3322 G8
3324 H8
3325 G8
3326 G9
3327 H9
3328 G10
3329 G10
3330 G11
3331 G11
3332 F12
3333 G13
3334 E4
3335 E4
3336 B7
3337 B7
3338 B7
3339 C7
3340 C7
3341 D5
3342 E5
3931 B3
3934 B8
3935 B9
3936 D3
3937 E3
3938 F3
3939 H11
5301 B8
5302 B9
6301 H4
6302 H3
6303 H3
6304 H3
6306 G12
6307 H8
7301 D6
7302-A C3
7302-B C4
7302-C D3
7302-D C12
7303 F4
7304 F4
7305 C8
7306 D10
7307 H3
7308 G3
7309 H5
7310-A H10

6-1

ASSEMBLY DIAGRAM

U1 B4	1302 A2	2114 A4	2203 A5	2301 A3	3104 A5	3118 A4	3201 A4	3215 A4	3305 A3	3319 A1	3334 A2	3906 A2	5103 A1	6105 A3	6209 A5	7107 A3	7206 B5	7310 A1
1101 A2	1303 A2	2115 A1	2204 A5	2302 A2	3105 A4	3119 B1	3202 A4	3216 A4	3306 A3	3320 A1	3335 A3	3908 A4	5104 A3	6106 A3	6210 A4	7108 A4	7207 B5	7311 A2
1102 B1	2101 B5	2116 A1	2205 A4	2303 B1	3106 A4	3120 B2	3203 A4	3217 A4	3307 A2	3321 A1	3336 A2	3909 A4	5105 B3	6107 A3	6301 A1	7109 A4	7208 A5	7312 A1
1103 A5	2102 B5	2117 A3	2206 A4	2304 B1	3107 A4	3121 B1	3204 A4	3218 A4	3308 B1	3322 A2	3337 A3	3921 A5	5106 B2	6108 B1	6302 B1	7111 B1	7209 A4	7313 B1
1104 A1	2103 B4	2118 B1	2207 A5	2305 A1	3108 A4	3122 B2	3205 A4	3219 A4	3309 B1	3324 A1	3338 A3	3922 A5	5107 A2	6109 B1	6303 B1	7112 B2	7210 A4	7314 A3
1105 A2	2104 B5	2119 B2	2208 A5	2306 A1	3109 A3	3123 B1	3206 A4	3220 A4	3310 B1	3325 A1	3339 A3	3931 A2	5108 B2	6110 B2	6304 A1	7113 B1	7301 A3	cXXX A4
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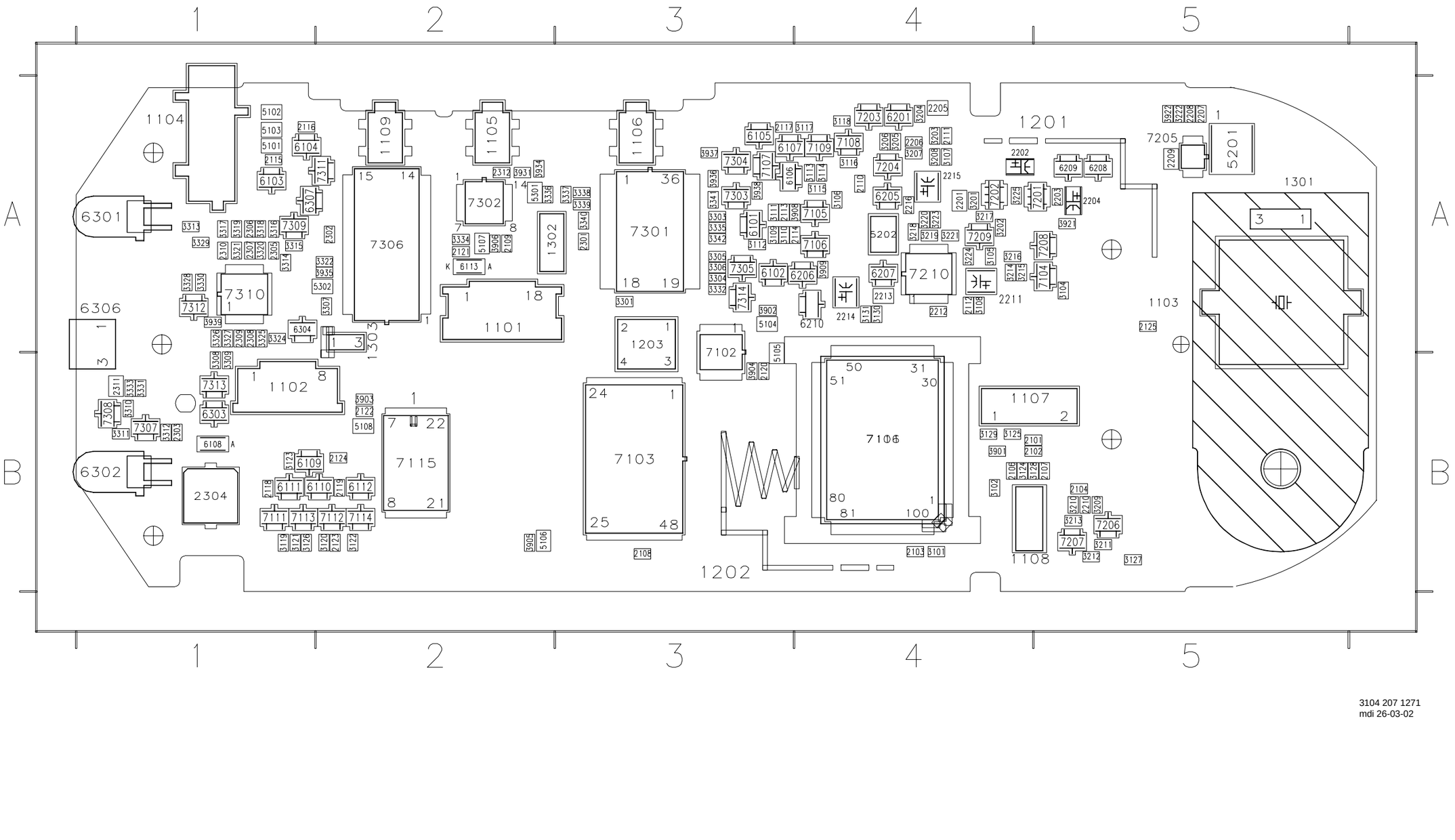
1107 B4	2107 B5	2121 A2	2210 B5	2308 A1	3111 A3	3125 B4	3208 A4	3222 A5	3312 B1	3327 A1	3341 A3	3935 A2	5202 A4	6112 B2	6307 A1	7115 B2	7303 A3	
1108 B4	2108 B3	2122 B2	2211 A4	2309 A1	3112 A3	3126 B1	3209 B5	3223 A4	3313 A1	3328 A1	3342 A3	3936 A3	5301 A2	6113 A2	7101 B4	7116 B4	7304 A3	
1109 A2	2109 A2	2123 B2	2212 A4	2310 A1	3113 A4	3127 B5	3210 B5	3224 A4	3314 A1	3329 A1	3901 B4	3937 A3	5302 A2	6201 A4	7102 A3	7201 A5	7305 A3	
1201 A4	2110 A4	2124 B2	2213 A4	2311 B1	3114 A4	3128 B5	3211 B5	3225 A4	3315 A1	3330 A1	3902 A3	3938 A3	6101 A3	6205 A4	7103 B3	7202 A4	7306 A2	
1202 B4	2111 A4	2125 A5	2214 A4	2312 A2	3115 A4	3129 B4	3212 B5	3301 A3	3316 A1	3331 B1	3903 B2	3939 A1	6102 A3	6206 A4	7104 A5	7203 A4	7307 B1	
1203 A3	2112 A4	2201 A4	2215 A4	3101 B4	3116 A4	3130 A4	3213 B5	3303 A3	3317 A1	3332 A3	3904 B3	5101 A1	6103 A1	6207 A4	7105 A4	7204 A4	7308 B1	
1301 A5	2113 A3	2202 A4	2216 A4	3102 B4	3117 A4	3131 A4	3214 A4	3304 A3	3318 A1	3333 B1	3905 B2	5102 A1	6104 A1	6208 A5	7106 A4	7205 A5	7309 A1	



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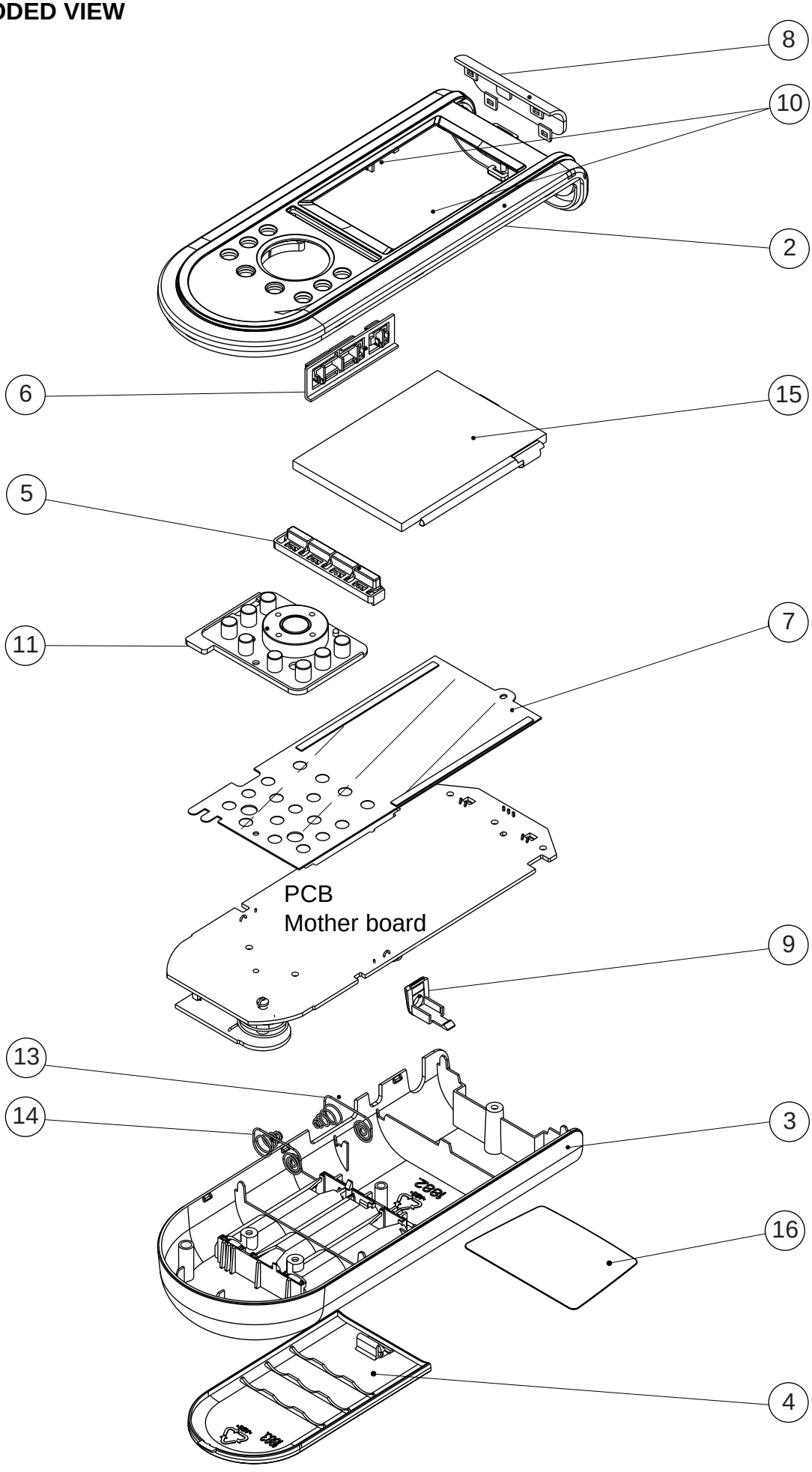
EXPLODED VIEW



PARTSLIST - EXPLODED VIEW

2	3104 207 79200	TOPPART ASSY
3	3104 204 18820	BOTTOMPART ASSY
4	3104 204 18830	BATTERYLID
5	3104 207 79180	LCD BUTTON ASSY
6	3104 207 79190	SIDE BUTTON ASSY
7	3104 204 18740	EL-FOIL
8	3104 204 18780	IR-WINDOW
9	3104 204 18870	JACK COVER
11	3104 207 79170	KEYMAT ASSY
15	3104 200 51640	LCD DISPLAY
16	3104 200 04550	LABEL
	3104 207 14360	PCB - MOTHER BOARD RC3200/A (3104 207 12710)
	3104 207 14370	PCB - MOTHER BOARD RC3200/U1S/M1S (3104 207 13330)

Note: Only the parts mentioned in this list are normal service parts

For more information:
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