

MARANTZ CD-63 KI MODS - ROWEMEISTER (2005/06)

PSU

THIS UNIT IS FITTED WITH 10X CUSTOM REGS + 7805 ORIGINAL

PARTS

DETAIL

DIGITAL + ANALOGUE PRE REG

1X NUVOTEM TOROIDAL TX (2X 12V)
8X HEXFRED DIODES
2X 10nF CAP
2X 100nF CAP
2X SILMIC 470uF 35V CAPS

THIS PSU SUPPLIES 2X 16V TO TWO REGULATORS
QPOWER AND INVISUS

2X NUVOTEM TOROIDAL TX (4X 9V)
4X AUDIOCOM SUPER REGS +5V
4X 220uF 16V ELNA SILMICS
16X SCHOTTKY DIODES (4X BRIDGE)
4X 10nF PLASTIC CAPS
4X 100nF PLASTIC CAPS

THESE PSU'S SUPPLY 4X 5V TO SERVO DIGITAL
ANALOGUE ,RF AND HF CIRCUITS
(R122 , R123 , R505 AND R107)

CLOCK PRE REG AND REG

4x HexFRED DIODES
2X 35V 470uF SILMIC
1X LM1086 ADJ
1X 1N4007
2X 16V 3300uF BLACK GATE
1X 65V 0.68uF EVOX RIFA CAP
1X 65V 4.7uF EVOX RIFA CAP
1X 65V 10uF EVOX RIFA CAP
1X 65V 22uF EVOX RIFA CAP
1X 10K POT
1X 1K RES
1X AUDIOCOM SUPER REG +12V
100uH COIL
2.2mH COIL
2X 16V 100uF BLACK GATE FK CAPS

THIS CUSTOM REG SUPPLIES THE AUDIOCOM SUPERCLOCK 2
AC COMES FROM AC 17.6V (X2) KI TX

1X AUDIOCOM SUPER REG +5V
1X 35V 470uF SILMIC CAP
1X 10nF CAP
1X 100nF CAP

THIS SUPPLIES THE XTAL 5V REF ON THE DAC
PIN 27 (RD01)

1X AUDIOCOM INVISUS REG +5V
2X 16V 1000uF BLACK GATE CAPS

THIS SUPPLIES DAC AND DECODER 5V ON THE ANALOGUE
RAILS (R511 AND U199) BG CAPS REPLACE CD15-16

1X AUDIOCOM QPOWER REG +5V
1X 16V 1000uF BLACK GATE CAP

THIS SUPPLIES DAC AND DECODER 5V ON THE DIGITAL
RAILS (RD04 AND R508)

1X AUDIOCOM SUPER REG +12V
1X AUDIOCOM SUPER REG -12V

SUPPLY OP AMPS DIRECT (CONNECTED @ R613 & R615)
POWER FROM C803 +/- 20V

GROUNDS TO STAR

ALL CUSTOM REG GROUNDS NOW GO TO A COMMON STAR GROUND NEAR IEC SOCKET AND CONNECTED TO EARTH

DAC

PIN2 = XVSS - USED U203 AND RUN TO STAR

PIN15 = DVSS - CUT TRACK NEAR PIN15 + CD06 ISOLATING IT AND RUN TO STAR

PIN19 + 24 = AVSS - U197 -198 RUN TO STAR

DECODER

PIN12 = VSSA - CUT TRACK ISOLATING IT BETWEEN PIN 11 & 12, WIRE TO STAR

PIN34 - 43 + 16 = VSS/VSS2 - USE TRACK BETWEEN PIN22 + 23 FOR GND TO STAR

SERVO

PIN3 = VSSA - U145 TO STAR

PIN21 = VSSD - CUT TRACK NEAR U145 THEN RUN GROUND FROM PIN15 TO STAR

REF	VALUE	LOCATION	CHANGED FOR
C815	6.3V 3300uF	7805 O/P	6.3V 10000uF PANA FC
C805	16V 470uF	12V O/P	REMOVED - NO LONGER NEEDED
C806	16V 470uF	12V O/P	REMOVED - NO LONGER NEEDED
Q801	7812	12V O/P	REMOVED - NO LONGER NEEDED
Q802	7912	12V O/P	REMOVED - NO LONGER NEEDED
C814	16V 1000uF	10V AND 5V RAIL	16V 3300uF BLACK GATE CAP
C813	16V 4700uF	5V REG I/P	16V 4700uF BLACK GATE CAP
C803	35V 470uF SILMIC	MAIN CAPS	25V 4700uF PANA FC WITH 0.1uF X7R BYPASS CAP
C804	35V 470uF SILMIC	MAIN CAPS	25V 4700uF PANA FC WITH 0.1uF X7R BYPASS CAP
D801 - D804		RECTIFIER DIODES	HEXFRED HFA08TB60
D811 - D814		RECTIFIER DIODES	HEXFRED HFA08TB60

OPAMPS

ADDED SOCKET LOW PROFILE DIL SOCKET WITH SPUN GOLD INNERS

IC605 - 606 NJM2114D OPA627 & OPA132 ON BROWND OG PCB + SILVER SOLDER

DECOUPLED OPAMPS
PIN 8 & 4 (+ / -) DECOUPLED WITH BLACK GATE
NX 0.22uF 50V BIPOLAR
SUPPLY RAILS (+ / -) DECOUPLED TO GND WITH 10uF 50V
BLACK GATES USING LOW Ω WIRE TO STAR & SILVER SOLDER

RD21-28	10K 5%	OPAMP FEED	10K 0.1% PRECISION
R601-604	27K 5%		27K 0.1% PRECISION
R613-616	10ohm		REMOVED FOR DIRECT REG INPUT
C601-604	120pF		SILVER MICA 120pF 1% TOL
CD21-24	120pF		SILVER MICA 120pF 1% TOL
C607-608	100pF		SILVER MICA 100pF 1% TOL
C659-660	100pF		SILVER MICA 100pF 1% TOL
R605-606	10K 5%		10K 0.1% PRECISION

R611-612	10K 5%	10K 0.1% PRECISION
R607-608	18K 5%	18K 0.1% PRECISION
R609-610	22K 5%	22K 0.1% PRECISION
C605-606	1000pF	SILVER MICA 1000pF 1% TOL
C611-614	25V 100uF CEREFANE	16V 470uF BLACK GATE

DAC & DECODER

FITTED 10000pF X7R CAPS TO DAC ACROSS 5V RAILS TO GND

FITTED 0.01uF X7R CAP ACROSS PIN 2 AND 7 OF DAC ON CLOCK REF RAIL

REMOVED LARGE TRACK BETWEEN PIN 2 OF DAC AND CD04 - TO STOP TRACE PICKUP

FITTED AUDIOCOM SUPERCLOCK II - RUN ON DEDICATED 12V REG

R508		DECODER	REMOVED FOR +5V DIGITAL I/P FROM QPOWER REG
R510		DECODER	REMOVED FOR +5V ANALOGUE I/P FROM INVISUS REG
RD01		DAC	REMOVED FOR +5V XTAL REF I/P FROM SUPER REG
RD04		DAC	REMOVED FOR +5V DIGITAL I/P FROM QPOWER REG
U209		DAC	REMOVED FOR +5V ANALOGUE I/P FROM INVISUS REG
CD07	16V 220uF	DAC	16V 1000uF BLACK GATE
CD04	10V 220uF	DAC	16V 1000uF BLACK GATE
CD15-16	10V 220uF	DAC	REMOVED. 2X BLACK GATE 16V 1000uF ON ANALOGUE REG
C510-511	10V 220uF	DECODER	16V 470uF BLACK GATE

HDAM

HDAM BYPASSED WITH SILVER WIRE

R617-618		REMOVED
R655-658		REMOVED
R659-660	100ohm	10ohm
C651-654		REMOVED
C655-658	O/P CAPS	BYPASSED

LINKED PIN 7 OF OP AMPS TO R659-660

SERVO HF RF MOTOR DRIVER

C120-122	16V 47uF	SERVO	16V 470uF BLACKGATE
C153-154	16V 47uF	MOTOR DRIVER	16V 220uF SILMIC
C111-116	220pF	SERVO	220pF SILVER MICA 1% TOL
C117	1500pF	SERVO	1500pF SILVER MICA 1% TOL
C118	560pF	SERVO	560pF SILVER MICA 1% TOL
R114-119	10K 5%	SERVO	10K 0.1% PRECISION
R122-123	4.7ohm	SERVO	REMOVED FOR REG I/P
C507	47pF	HF AMP	47pF SILVER MICA 1% TOL
C505	2200pF	HF AMP	2200pF SILVER MICA 1% TOL
C502	390pF	HF AMP	390pF SILVER MICA 1% TOL
C501	150pF	HF AMP	150pF SILVER MICA 1% TOL
C504	220uF	HF AMP	16V 220uF SILMIC
R501-502	470ohm	HF AMP	470 ohm 0.1% PRECISION
R504	1.8K	HF AMP	1.8K 0.1% PRECISION
R506	2.7K	HF AMP	2.7K 0.1% PRECISION
R507	3.3K	HF AMP	3.3K 0.1% PRECISION
R509	2.2K	HF AMP	2.2K 0.1% PRECISION
R503	8.2K	HF AMP	8.2K 0.1% PRECISION
R505	100ohm	HF AMP	REMOVED FOR REG I/P

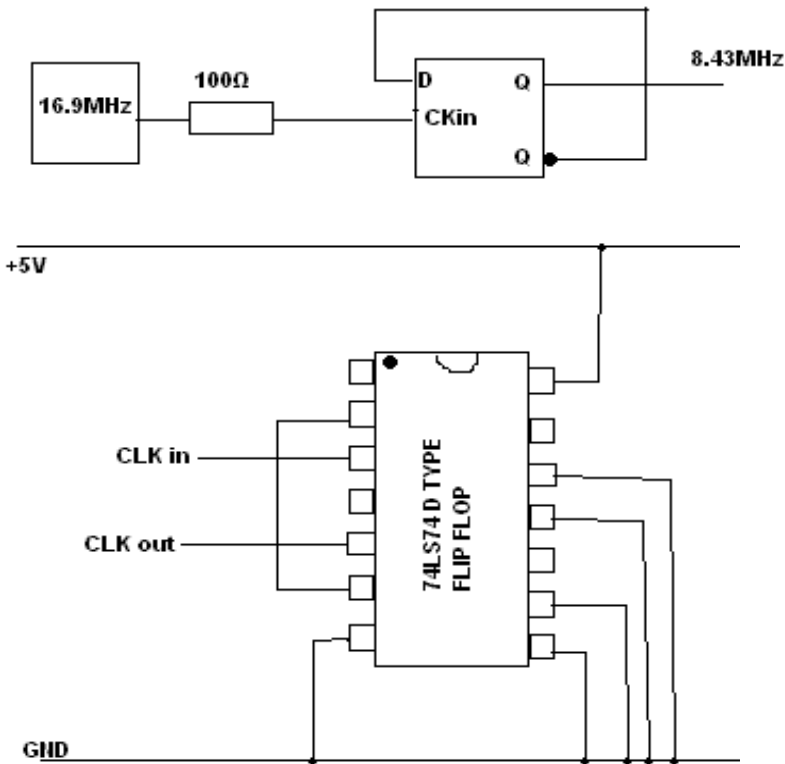
R110	470ohm	RF AMP	470ohm 0.1% PRECISION
R109	100ohm	RF AMP	100ohm 0.1% PRECISION
R103	330K	RF AMP	330K 0.1% PRECISION
R102	33K	RF AMP	33K 0.1% PRECISION
R108	1K	RF AMP	1K 0.1% PRECISION
R106	100ohm	RF AMP	100ohm 0.1% PRECISION
R105	1K	RF AMP	1K 0.1% PRECISION
R104	39K	RF AMP	39K 0.1% PRECISION
R111-112	120K	RF AMP	120K 0.1% PRECISION
R113	56K	RF AMP	56K 0.1% PRECISION
R107	330ohm	RF AMP	330ohm 0.1% PRECISION
C101	100pF	RF AMP	100pF SILVER MICA 1%
C102-103	47pF	RF AMP	47pF SILVER MICA 1% TOL
C105	150pF	RF AMP	150pF SILVER MICA 1% TOL
C108-109	150pF	RF AMP	150pF SILVER MICA 1% TOL
C104	18pF	RF AMP	18pF SILVER MICA 1% TOL
C110	330pF	RF AMP	330pF SILVER MICA 1% TOL
C106	10uF 25V	RF AMP	10uF 35V ELNA TARGET

R107 CONNECTED DIRECT TO REG

SERVO CLOCK

SN74LS74A IC
 7805
 16V 220uF SILMIC
 X7R 0.01uF
 COAX FROM AUDIOCOM CLOCK TO PIN 3 OF 74LS74. 100Ω RESISTOR @ CLOCK END.

THIS CIRCUIT DIVIDES THE 16.9MHz
 SUPERCLOCK FREQUANCY BY 2.
 NOW 8.46MHz



COAX MOD

REPLACED RF AND DIGITAL LINES AND REPLACED WITH COAX

U100 CONNECTED TO R501
U193 CONNECTED TO C521
U132 CONNECTED TO U188 AND THEN U171
U131 CONNECTED TO U189 AND THEN U172

RF TO HF
DAC CLOCK OUT TO DECODER CLOCK IN
SIDA DATA
SICK DATA

OTHER

Q851	7918	DISPLAY	7912	DIMMER DISPLAY
D852	6.8V ZENER	DISPLAY	BYPASSED	DIMMED FURTHER

FITTED 0.47uF CAP AND VDR ACROSS LIVE - NEUTRAL
REMOVED MUTING TRANSISTORS
ALL RIBBONS AND ICS SHEILDED AND GROUNDED
OUTPUT SOCKETS REPLACED WITH QUALITY ITEMS
STRUT BAR FITTED WITH DAMPING MATERIAL ON BOTH SIDES
CABINET FITTED WITH DAMPING MATERIAL
AUDIOCOM MAINS LEAD FITTED TO IEC SOCKET
BONDED BOTTOM PLATE WITH ALUMINIUM PASTE