

The worlds greatest CD63!probably!

Upgrades

- Anatek Acoustics
- Arcam
- Audiolab
- Beresford
- Bluenote
- Cambridge Audio
- Creek Audio
- DCS
- Denon
- Firestone Audio
- Graham Slee
- Harman Kardon
- Marantz
- Musical Fidelity
- Myryad
- NAD
- Naim
- Nakamichi
- Olive
- Onkyo
- Oppo
- Panasonic
- Pioneer
- QED
- Quad
- Rega
- Rotel
- Sonos
- Sony
- Squeezebox
- Stello
- Sugden
- Thule
- Wadia
- Yamaha

Information

2X C2 PREMIUM CLOCKS	DAC, SERVO & DECODER
26X LOW NOISE REGULATORS	+2X 7805 (cpu & ir)
10X TOROID TRANSFORMERS	
278.6VA TOTAL VA (118.6VA internally)	
11.64Kg TOTAL WEIGHT (EXTERNAL PSU NOT INCLUDED)	2X BOTTOM PLATE

TX INFO

AUDIO OUTPUT	160VA 18V (EXTERNAL)	TO DISCRETE OUTPUT
DRIVER ICs	60VA 12V	LASER & MOTOR DRIVE
CLOCK 1 16.934Mhz	7VA 12V	DAC
CLOCK 2 8.467Mhz	7VA 12V	SERVO
DAC	15VA 9V	ANALOGUE & DIGITAL
DECODER	7VA 9V	ANALOGUE & DIGITAL
SERVO	7VA 9V	ANALOGUE & DIGITAL
HF AMP	7VA 9V	
RF AMP	7VA 9V	
DISPLAY	1.6VA 12V	

OUTPUT SECTION

CUSTOM EXTERNAL PSU for DOS	20V +/- DC
1X 160VA 18V NUJOTEM TX	
8X HEXFRED HFA04TB60	
2X FIDELITY AUDIO SI CAPACITORS	25V 22000uF
2X 35V 2200uF BLACK GATE FK	
4X WIMA 0.1uF	
1X SPOWER +20V	
1X SPOWER -20V	

INTERNAL PSU for DOS	
2X INPUT V. DECOUPLING CAPACITORS	35V 2200uF BLACK GATE FK
2X S POWER +15V LOW NOISE REGS	L & R CHANNELS
2X S POWER -15V LOW NOISE REGS	L & R CHANNELS
4X DECOUPLING CAPACITORS	25V 220uF BLACK GATE FK

DOS WITH CFP (CCS removed)	SOLDERED WITH MUNDORF SUPREME SILVER/GOLD
4X 2.2K	WELWYN RC55Y 0.1%
4X 2.4K	WELWYN RC55Y 0.1%
4X 4.7K	TAKMAN RESISTOR
4X 910 OHM	TAKMAN RESISTOR
4X 6.8K	TAKMAN RESISTOR
2X 560 OHM	TAKMAN RESISTOR
2X 1K8	WELWYN RC55Y 0.1%
2X 10K	TAKMAN RESISTOR
4X 10mH INDUCTOR	TOKO 10RB
4X 4.7nF	SILVER MICA CAP
4X 680pF	SILVER MICA CAP
4X 2SA1085	PNP TRANSISTOR
8X 2SK170GR	FET
2X 2SC2240	NPN TRANSISTOR
2X 220nF	WIMA MKS 63V CAPACITOR
DC BLOCKING	1200V 2.2uF MUNDORF SUPREME SILVER / OIL
OUTPUT SOCKETS	CMC HIGH GRADE SILVER OVER COPPER RCA socket
KIMBER 'AGSS' HYPER PURE SILVER	FROM DAC TO DOS AND DOS TO RCA
GROUND WIRES RUN TO STAR EARTH	
TWIN RELAY MUTING CIRCUIT	A RELAY FOR EACH CHANNEL
CMC SILVER OVER COPPER RCA SOCKETS	

RIGHT AND LEFT CHANNELS

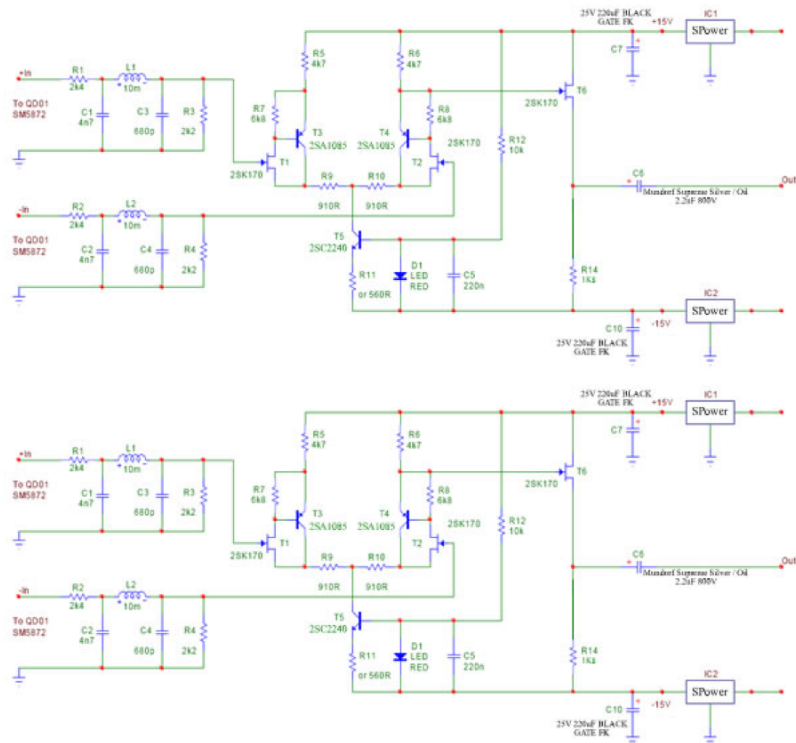
DIY Parts

Clocks - Timing is the essence of musicality & without an accurate clock in your player you w ill never hear the original performance..



SPower - Hearing is believing! Low noise, fast response voltage regulators. The SPow er benefits from a very low noise precision voltage reference point...





DAC SECTION

ANALOGUE

- 1X NUVOTEM TOROIDAL TX (7.5VA 1X 9V AC)
- 4X SCHOTTKY DIODES
- 1X 16V 3300uF BLACK GATE STD
- 1X SPOWER REG +5V Left channel VCC
- 1X SPOWER REG +5V Right channel VCC
- 1X 16V 220uF BLACK GATE STD
- 1X 16V 220uF BLACK GATE STD

THIS SUPPLIES
DAC 5V ON THE
ANALOGUE
RAILS (U199)

DIGITAL

- 1X NUVOTEM TOROIDAL TX (7.5VA 1X 9V AC)
- 4X SCHOTTKY DIODES
- 1X 16V 3300uF BLACK GATE STD
- 1X 16V 100uF BLACK GATE FK
- 1X SPOWER REG +5V
- 1X 16V 1000uF BLACK GATE CAP STD

THIS SUPPLIES
DAC 5V ON THE
DIGITAL
RAILS (R511)

DAC CLOCK 5V

- VCC FROM RAW 16V
- 1X SPOWER REG +5V
- 1x 16V 1000uF BLACK GATE STD

THIS SUPPLIES
THE XTAL 5V
REF ON THE
DAC
PIN 27 (RD01)
FROM THE
30VA 12V TX

DAC CLOCK

- 1X NUVOTEM TOROIDAL (7VA 18V TX)
- 4x SCHOTTKY DIODES
- 1X 35V 22000uF MUNDORF HC
- 1X SPOWER LOW NOISE REG +15V
- FIDELITY AUDIO C2 PREMIUM CLOCK 16.934Mhz
- 1x Wima 16V 22uF

TWEAKED!

BIT CLOCK RE-CLOCKING

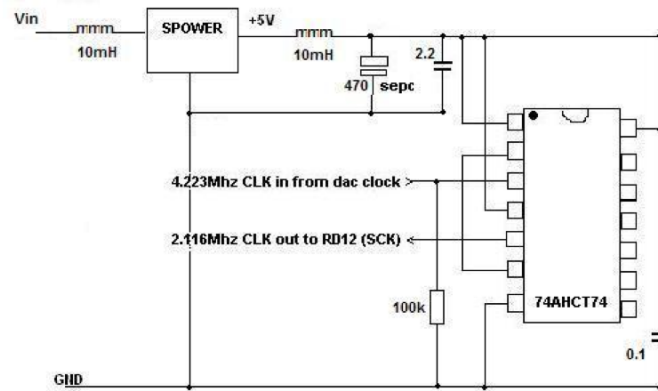
- 1X SPOWER REG +5V
- 1X DIVIDE by 2 PCB (2.116 Mhz OUTPUT)
- 1X OSCON SEPC
- 2x 10mH COILS

CLOCKS THE
SCK

FED FROM DAC
CLOCK PSU
FED FROM
SPOWER
5V
DECOUPLING

BIT CLOCK NOTE -

DIVIDE by 4
TAKEN FROM
DAC CLOCK
(4.233 Mhz)



OTHER

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

GROUNDING FOR 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

DIGITAL

1X NUVOTEM TOROIDAL TX (3.5VA 1X 9V AC) THIS SUPPLIES DECODER DIGITAL
4X SCHOTTKY DIODES
1X 16V 470uF BLACK GATE STD
1X SERCAL SPOWER REG +5V

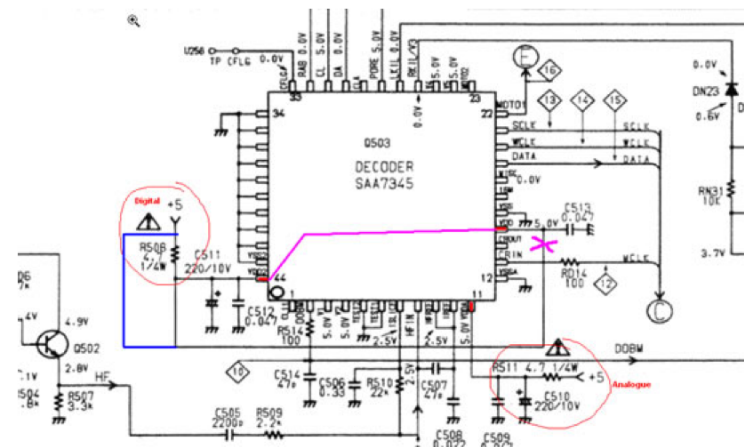
ANALOGUE

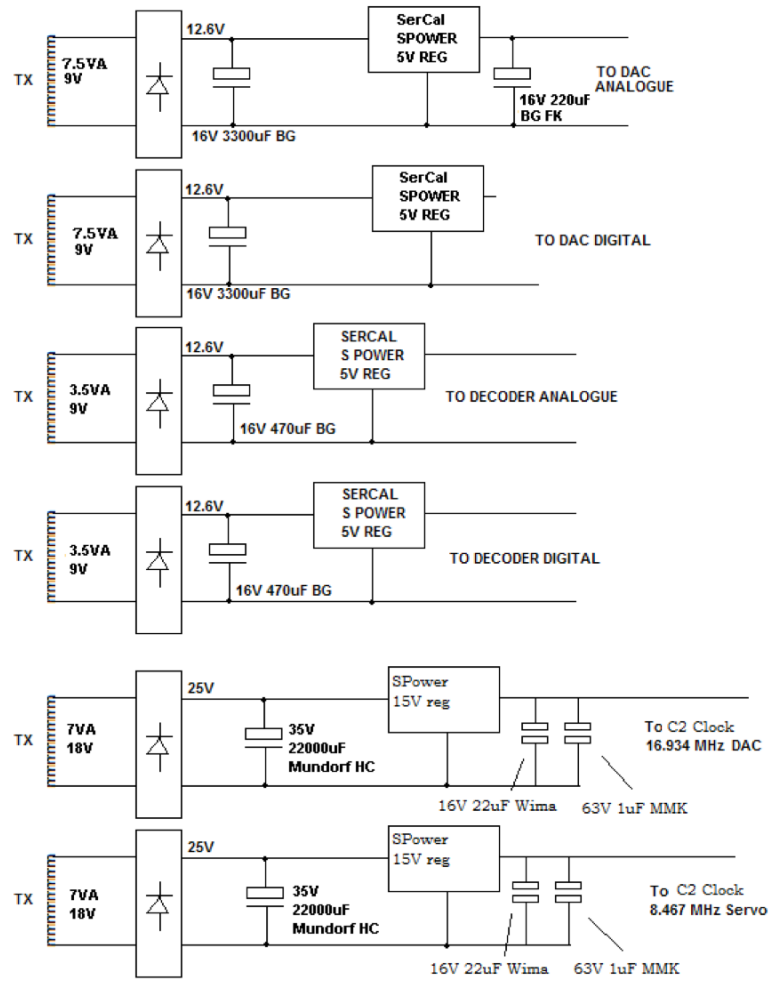
1X NUVOTEM TOROIDAL TX (3.5VA 1X 9V AC) THIS SUPPLIES DECODER ANALOGUE
4X SCHOTTKY DIODES
1X 16V 470uF BLACK GATE STD
1X SERCAL SPOWER REG +5V
C510-511 2X 16V 220uF BLACK GATE STD

DECODER CLOCKED DIRECT FROM BUFFERED OUTPUT OF DAC
CLOCK

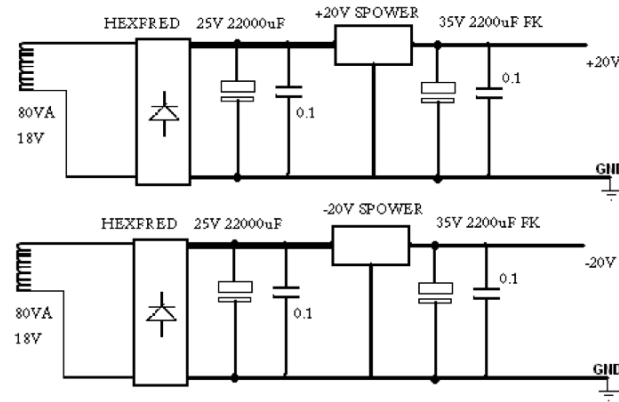
DECODER IC MOD

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

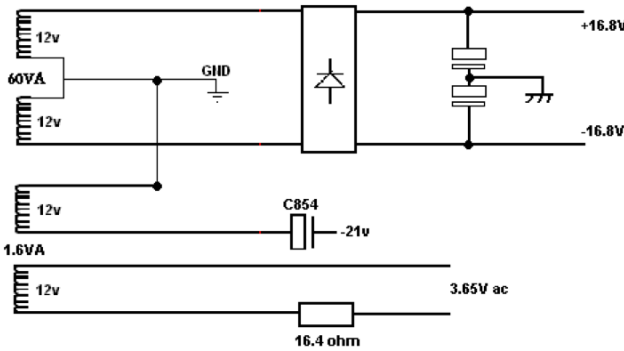




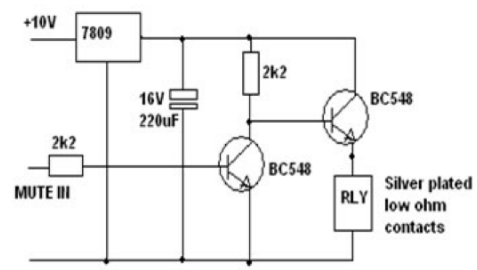
EXTERNAL PSU FOR DOS



SERVO SUPPLY



MUTING



1X SPOWER +5V LOW NOISE REG	MAIN 5V REG	VARIOUS 5V VREFS USE THIS RAIL
1x OSCON SEPC 6.3V 470uF	STD 5V RAIL	
1X 7805 + OSCON SEPC 6.3V 470uF	CPU	ISOLATED CPU 5V
C815	7805 O/P	6.3V 10000uF PANA FC
C805	12V O/P	REMOVED - NO LONGER NEEDED
C806	12V O/P	REMOVED - NO LONGER NEEDED
Q801	12V O/P	REMOVED - NO LONGER NEEDED
Q802	12V O/P	REMOVED - NO LONGER NEEDED
Q851	7912	DIMMER DISPLAY
D852	BYPASSED	DIMMED FURTHER

SERVO

DIGITAL

1X NUJOTEM TOROIDAL TX (3.5VA 1X 9V AC) THIS SUPPLIES 1X 5V TO SERVO DIGITAL
1X SERCAL SPOWER REG +5V
1X 470uF 16V RUBYCON ZA
4X SCHOTTKY DIODES (1X BRIDGE)

ANALOGUE

1X NUJOTEM TOROIDAL TX (3.5VA 1X 9V AC) THIS SUPPLIES 1X 5V TO SERVO ANALOGUE
1X SERCAL SPOWER REG +5V
1X 470uF 16V RUBYCON ZA
4X SCHOTTKY DIODES (1X BRIDGE)

SERVO RF

1X NUJOTEM TOROIDAL TX (3.5VA 1X 9V AC) THIS SUPPLIES 1X 5V TO SERVO RF
1X SERCAL SPOWER REG +5V
1X 220uF 16V BLACKGATE FK
4X SCHOTTKY DIODES (1X BRIDGE)

SERVO HF

1X NUJOTEM TOROIDAL TX (3.5VA 1X 9V AC) THIS SUPPLIES 1X 5V TO SERVO HF
1X SERCAL SPOWER REG +5V
1X 470uF 16V RUBYCON ZA
4X SCHOTTKY DIODES (1X BRIDGE)

SERVO CLOCK

1X 18V TX (7VA 1X 9V AC)
4x SCHOTTKY DIODES
1X 35V 22000uF MUNDORF HC
1X SERCAL S POWER LOW NOISE REGS +12V
AUDIOUPGRADES C2 PREMIUM CLOCK 8.46Mhz TWEAKED
WIMA 16V 22uF

SERVO COMPONENTS

D811 - D814	HEXFRED HFA08TB60	
C120-122	SERVO	2X 16V 470uF BLACKGATE STD
C153-154	MOTOR DRIVER	16V 220uF SILMIC
C124	V REF	16V 10uF BLACK GATE STD
C111-116	SERVO	220pF SILVER MICA 1% TOL
C117	SERVO	1500pF SILVER MICA 1% TOL
C118	SERVO	560pF SILVER MICA 1% TOL
R114-119	SERVO	10K 0.1% PRECISION
R122-123	SERVO	REMOVED FOR REG VP
C507	HF AMP	47pF SILVER MICA 1% TOL
C505	HF AMP	2200pF SILVER MICA 1% TOL
C502	HF AMP	390pF SILVER MICA 1% TOL
C501	HF AMP	150pF SILVER MICA 1% TOL
C504	HF AMP	16V 220uF SILMIC
R501-502	HF AMP	470 ohm 0.1% PRECISION
R504	HF AMP	1.8K 0.1% PRECISION
R506	HF AMP	2.7K 0.1% PRECISION
R507	HF AMP	3.3K 0.1% PRECISION
R509	HF AMP	2.2K 0.1% PRECISION
R503	HF AMP	8.2K 0.1% PRECISION
R505	HF AMP	REMOVED FOR REG VP
R110	RF AMP	470ohm 0.1% PRECISION
R109	RF AMP	100ohm 0.1% PRECISION
R103	RF AMP	330K 0.1% PRECISION
R102	RF AMP	33K 0.1% PRECISION
R108	RF AMP	1K 0.1% PRECISION

R108	RF AMP	100ohm 0.1% PRECISION
R109	RF AMP	1K 0.1% PRECISION
R104	RF AMP	39K 0.1% PRECISION
R111-112	RF AMP	120K 0.1% PRECISION
R113	RF AMP	56K 0.1% PRECISION
R107	RF AMP	330ohm 0.1% PRECISION
C101	RF AMP	100pF SILVER MICA 1%
C102-103	RF AMP	47pF SILVER MICA 1% TOL
C105	RF AMP	150pF SILVER MICA 1% TOL
C108-109	RF AMP	150pF SILVER MICA 1% TOL
C104	RF AMP	18pF SILVER MICA 1% TOL
C110	RF AMP	330pF SILVER MICA 1% TOL
C106	RF AMP	10uF 50V BLACKGATE STD
R107 CONNECTED DIRECT TO REG		
HARD WIRED RIBBON BETWEEN RF PCB AND MAIN PCB		

LASER & MOTOR DRIVE

1X NUVOTEM TOROIDAL (30VA 2X 12V TX)	THIS IS TO SUPPLY THE LASER & MOTOR DRIVER REGS + CPU	
C814	NEG 16V RAIL (RAW 10V)	16V 3300uF BLACK GATE STD
C813 - 26,700uF	POS 16V RAIL (RAW 10V)	16V 4700uF BLACK GATE STD
	MUNDORF HC 25V 22000uF across C813	
1X S POWER +12V LOW NOISE REG	FOR LASER DRIVE IC Q106	
1X S POWER -12V LOW NOISE REG		
2X 470uF 16V BLACK GATE STD		
2X S POWER +12V LOW NOISE REG	FOR DRIVER IC QM01 Q105	
2X S POWER -12V LOW NOISE REG		
4X 16V 470uF ZLH	FITTED TO SPOWER	

OTHER

1X S POWER +5V LOW NOISE REG	MAIN 5V REG	VARIOUS 5V VREFS USE THIS RAIL
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COAX MOD

REPLACED RF AND DIGITAL LINES AND REPLACED WITH COAX

KIMBER V21

KIMBER V21 USED FOR INTERNAL COAX



U100 CONNECTED TO R501	RF TO HF
U193 CONNECTED TO C521	REMOVED & REPLACED BY DIRECT CLOCKING
U132 CONNECTED TO U188 AND THEN U171	SIDA DATA
U131 CONNECTED TO U189 AND THEN U172	SICK DATA
GROUND5 TO STAR	

ALL CUSTOM REG GROUNDS NOW GO TO A COMMON STAR GROUND NEAR IEC SOCKET AND CONNECTED TO EARTH VIA A 27 OHM RESISTOR

MORE

TX FITTED FOR DISPLAY VOLTAGES	
3X TRANSORB DIODES ACROSS LN LE NE	
ALL RIBBONS AND ICS SHELDED AND GROUNDED	
STRUT BAR FITTED WITH DAMPING MATERIAL ON BOTH SIDES	
CABINET FITTED WITH TONNES OF DAMPING MATERIAL	
RUSS ANDREWS 'REFERENCE' MAINS LEAD	
BONDED BOTTOM PLATE WITH ALUMINIUM PASTE	
2ND BASE PLATE FITTED SANDWICHING BITUMIN	
GREEN / BLUE LEDS ON MECH	
HARD WIRED HF PCB TO MAIN PCB	
R160 NOW 9.64K BY ADDING 27K ACROSS 15K	
R161 NOW 8.72K BY ADDING 68K ACROSS 10K	
UPRATED DISC CLAMP WITH DAMPING	
TRACKING GEARS SWAPPED FOR VAM12.4 / 12.5 VERSION	QUICKER, SMOOTHER & QUIETER TRACKING

FIN!

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