DiVA

Service Manual

Issue 1.0

CD73 Compact Disc player

ARCAM

Bringing music & movies to life

Diva CD73 Circuit description. By Andy Moore.

Overview

The **CD73** is a completely **new design** platform for Arcam although the circuit building blocks will show a passing resemblance to the earlier Diva designs; the main difference is that the mechanism control circuitry is now incorporated within the main circuit board design of the CD player.

Power supply and Power supply control.

The mains power supply enters the player via the IEC socket at location SK501 and is filtered by Y Caps C501 – C502 and X Cap C503, resistor R501 sits between the Neutral and Positive a.c supply rails. L501 and L502 filter electromagnetic noise and reduce stray E.M.F.

SW501 A/B is used to switch the primary feed to the transformer at location **TX501**, capacitors **C504** and **C505** help to prolong the life expectancy of the mains switch by reducing contact sparks.

The transformer at location **TX501** has multiple windings and allows for operation from **115v** or a **230v** mains supply, the mains select switch at location **SW502** connects the duel primaries in series or parallel depending on the supply requirements. For **100v** operation remove J504 and J503 and fit J502 and J501.

Please note: The Primary of the transformer is internally fused at 117 degrees C.

Fig 1. Power supply identification and related components.

Power supply name	Associated components
AC1 – AC2	On/Off mute circuit.
+11V(U) D.C	DAC card Option at SK203.
+8V D.C	U102 (tray control) U202 (laser optic – spindle motor). Relay RLY501 analogue supply switch.
-30VF	Filament display grid.
F1 – F2	Filament A.C supply.
+12V(A)	Audio output op-amps U403, U404, U405 and DAC card option at SK203.
- 12V(A)	Audio output op-amps U403, U404, U405 and DAC card option at SK203.
+5V(A)=(DAC)	DAC at location U401 and DAC card option at location SK203.
+5V(D)	Digital control devices U101, U301, U402, U406, U407, U701 and DAC card option at SK203.
+3.6V(D)	DSP at location U201, Focus/Tracking and sledge control at location U101.

We will now breakdown the power supplies down individually, please refer to **Fig 1** for information on key components driven by the individual power supply section.

Digital Power supplies

AC1 – AC2 are used to drive the **Audio mute** and fast power down control of the Audio output relay at location RLY 401, Diodes D518 and D519 rectify the A.C and the following R – C network and transistor switch stage Q501 – Q505 allowing for the delayed switch on (+ 4 secs) and instant power down of the Audio output relay the control line is seen as **RLYPWR** on the circuit diagram and should measure **+10v D.C** at Jumper **PL402.**

The **+11V(U)** supply rail is protected by fuse **FS501** and will only be used directly when an additional DAC card is added; we use this supply rail within the CD73 to derive the **+8V** using U502 and reservoir capacitor C513, the +8V supply feeds the **Tray control** and **Laser optic** drive packages at location **U102** and **U202**.

The **-30VF D.C** is derived from the regulator at location **U503** we should see **-44V D.C** at the input pin of this device. The power supply forms the **VFD** grid on the Display and is current limited by resistor package R722 (47k ohms).

F1 and **F2** provide a **1.5V AC** to drive the filament.

The +11v(U) rail is used to drive the **+5(D) power supply**, the supply is regulated by the LM317 at location **U502** and drives the master clock circuit built around U402 and the SPDIF circuit at location U407 we also power IR in stage and Display micro (U701) from this supply.

The +5V(D) rail is further regulated to provide the **+3.6V(D)** rail using the LM317 at location **U507**; this rail is used to power the DSP at location U201 and the R.F processor at location U101.

Please note: U507 has been changed to a LM1086 low dropout regulator, Arcam part number 5D1086A.

Please note: The above power supplies remain operational when the CD player is switched to standby mode from remote control

Analogue power supplies – Standby control

The Analogue audio supply is under relay control and has over-current protection on both + and – phases, this is provided by **FS503** and **FS504** the output sides of these fuses drive into bridge rectifier **BR502**, this bridge rectifier package intern supplies the unregulated +/- 18v D.C rails (these are used to drive an optional DAC board).

The **+/- 18v** unregulated D.C rails are regulated by **U504** (+) and **U505** (-) and provide the **+/- 12V(A)** supplies.

We use the unregulated +18v to create the clean **+5(A)** supply using regulator **U506**, this supply is fed to the DAC card option socket at location SK203 but within the CD73 this supply becomes known as the **+5(DAC)** on the audio stage circuit diagram and is used to power the DAC chip only.

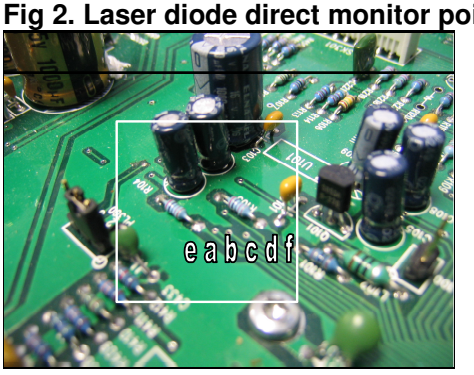
The **Relay** at location **RLY501** switches the low voltage A.C from the secondary to the bridge rectifier at location BR502 we will also see that relay **RLY502** switches the **F1** and **F2** rails to the display filament, both if these relays are switched on/off by the control line seen as **STANDBY** on the circuit diagrams. When in the **on** state we should see **-4.8V** D.C with respect to DGND on the Base of **Q309.**

Clock generation.

The clock circuit is based around the **16.9344MHz** crystal at location **X401** the clock from the crystal is amplified by transistor Q403 before being dived into two separate clock streams by the 74HCUO4 buffer at location U402**a**/**b**/**c**/**d**, the output of U402**c** is fed to the DAC (U401) and the output of U402**d** forms the master clock for the DSP at location U201.

The third clock within the circuit **(4MHz)** can be found at location **X701A** and is used to drive the Display – Control – Keyboard scan chip **U701.**

Fig 2. Laser diode direct monitor points



Mechanism and Micro engine.

Three chips have direct control over the Mechanism their locations and primary functions follow.

U201 CXD3017Q DSP

- 16k onboard RAM error correction
- Sub Q error data error detection
- CPU interface – **U701** display board
- CD text demodulator
- Auto gain for Servo loop
- Focus bias adjustment
- CPU interface
- Direct interface to DAC

U101 CXA2581N

- RF AC-DC summing
- Focus error amplifier
- Tracking error amplifier
- Centre error amplifier

U202 BA6392FP

- 4 channel BTL driver
- Direct turntable motor control (CH 4)
- Focus coil drive +/- (CH2)
- Focus coil drive +/- (CH3)
- Laser sledge drive (CH1)

We can simplify the circuit if we look at the signal path from the Laser optic this can be seen as laser optic output amplifier **U101** – DSP control micro **U201** – Laser tracking, Focus, Spindle, Sled control BTL **U202**.

The **CXA2581N** at location **U101** is fed 6 lines of R.F output from the laser optic these can be seen as inputs **A – F** on pins 6 – 11, the inputs on pins 10 and 11 are labelled **E** and **F** these are used the internal **tracking error** summing this signal is then seen as a VC output on **pin 27**.

We can directly monitor the **R.F output** from the Laser Photo diodes at location shown in **Fig 2**.

These can be seen as the focus outputs on resistors R103 and R104 these appear above the letters **e** and **f** on the diagram, between the two resistors the Laser diode outputs can be seen on the solder feed thru points labelled as **a, b, c, d.**

The **laser current** can be measured a voltage drop across **R101** this should directly relate to the Laser current as set by Sony and printed label on the side of the optical block, this will be seen as-

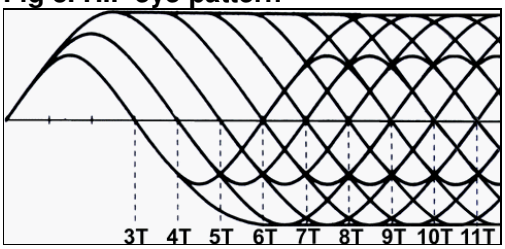
KS213C
18x21
dS**489**

The line of text at the bottom of the label that reads **dS489** indicates that this laser optic was set to 48.9mV and will read as a measurement across **R101** as **489mV** +/- 5% (the tolerance of R101 itself).

We can observe the operation of the **Focus control** circuit on **Pin 16** of **M102 (FCS)**, with no disc loaded, open and close the tray the player will now search for a disc, at this time we should se a **170 kHz** saw tooth that saw tooth should transverse through the **0V DIGGND** as the Focus coils moves the Laser lens up and down.

The **R.F** going in on pins 6 – 9 feed the internal R.F summing amplifier, we can then see the combined **R.F output** as **RFDC** on jumper link **R222.** The signal at this point should look very similar to the diagram in **Fig 3** when the scope is set to .2uS/Div we should see roughly **400mV pk-pk**.

Fig 3. H.F eye pattern



Please note: The R.F output will obviously differ from disc to disc use the Phillips SBC 444 playability disc if possible.

We can see the **FE error** output signal on **R107**, this will appear as a high frequency R.F stream of **200mV pk-pk** any excessive bounce or noise on the R.F may indicate a damaged or worn/borderline optic. The focus is correct when **(A+D) – (B+C)= 0**

The **tracking error (TE)** signal can be seen as a high frequency R.F stream on **R218** we should expect to see **150-200mV pk-pk,** under tracking error conditions the R.F will rise up **300-600mV pk-pk** dependent on the severity of the error. The tracking error is derived as **E - F = 0** when correct.

The **RFDC, RFAC, EF, TE, SE** are now fed into **U201.**

The **CXD3017Q** micro at location **U201** performs the majority of the Data processing and control tasks within the CD player, the micro receives the RFDC, RFAC for processing along with the EF, TE, SE flags these signals are fed into the micros A/D converter and into the Servo DSP and the **PWM** modulator from this point the mechanism control signals leave the micro and travel to the BTL driver at location U202 as **SFDR, SRDR, TFDR, TRDR, SFDR, SFD** PWM lines, the **turntable motor** control line leaves the micro as **MDP** and is filtered and referenced to VC to form a single **SPDR** line.

The presence of the +**3.6V(D)** power supply is crucial to the operation of the micro's internal **PLL**.

The micro initiates a programmed **Disc load procedure** when the Disc tray is operated i.e. the tray is closed. **<u>Do not look directly into the beam.</u>**

- **Tray Close**
- **Spin turntable motor**
- **Light laser**
- **Attempt focal alignment**
- **Read TOC**

- **If the player fails to read the disc check**.
  - **Movement of Laser lenses**.
  - **+5V (D) supply.**
  - **+3.6V (D) supply.**
  - **+8V supply.**
  - **Operation of the tray micro switches.**
  - **Laser current.**
  - **Focus control.**

The micro contains a **CPU interface**; this port sends and receives Data packages from the front panel CPU at location **U701**.

The active communication ports can be seen as inputs from the CPU on **DATA, XLAT, CLOK, SYSM** and **XRST** the output ports are **SQSO (CD text)**, **SENS** and **SCOR.** We should see active data streams on **SENS**, **DATA** and **SQCK** and all times when a disc is playing.

The CPU is located at component position **U701** and can be found on the front panel display board, the CPU contains a **Keyboard scan** this is driven from the resistive array powered by the **VREF** output at **Pin 98** the voltage drop sensed can be seen on **Pin 97 (AVSS)** and as **4.9 V** on **R701**.

The **CPU** also receives and decodes the **IR** from both the display board remote receiver and the rear panel remote input 3.5mm jack.

Please note: The **IR** from the from the display panel pickup device is not driven directly into the CPU it takes a path onto the main board and into the IR micro circuit the signal is mixed into the rear panel sourced IR signal by the circuit based around **Q301, Q302, Q303** the result is a signal called **RMIN** this signal is fed back to the display board and into **Pin 32** of the **CPU**.

IR RC5 electrical signals driven into the rear panel 3.5 mm jack passed thru the Opto-isolator package at location **OP301** the signal is then clamped to **3v9** by Zener diode **D301** before reaching R-C filter network provided by **C340, C341** and **R304** final drive is supplied by **U301(a)** and **U301(b)**.

Digital to Analogue conversion

The **BCK**, **PCMD** and **LRCK** lines from the DSP are buffered by **U406** (74HCU04) before arriving at the **D to A** converter at location **U401 (WM8740)** these lines are now labelled as BCLK**, ADATA** and **LRCKIN** (left, right clock in).

The **WMA740 DAC** is driven from its own 5 Volt supply, this can be seen on pin 8 as **DVDD**.
The de-emphasis flag arrives from the DSP on pin number 27 (high = on)

The master audio clock arrives at pin 5 labelled at **DACLK** and is supplied by the previously mentioned circuit built around **U402** (see page 2)

The **Audio outputs** from the DAC can be seen via an x10 probe on **R416** and **R414** Left channel and **R415** and **R417** Right channel, these are differential outputs and as such will have +/- offset respectively.

The differential Audio outputs from the DAC are summed by **U403a** and **U404a** before driving into the output Op-amps **U403b** and **U404b**, D.C errors are removed by servo Op-amps **U405a** and **U405b** providing a D.C coupled output.

Optional DAC stage notes

As previously mention the main board has been designed to provide a platform for other players within the Diva range and as such provisions have been made for the addition of optional D to A stages; these can be connected to the flexi foil sockets at locations **SK203** and **SK301** see **Fig 3a/b** for relevant pin information for these sockets.

When fitting an optional Audio stage we need to adjust the jumper settings on the existing main board information on jumper settings appear within **Fig 4**.

Fig 3a Pin connections for SK203.

Pin Number(s)	Power supply and function
1	Digital ground
2,6,7,12,13,19,20	Analogue ground
3,4,5	+11v unregulated
9,10,11	+5v Digital supply (DAC)
14,15	+5v Analogue supply
16,17,18	-12v Analogue supply
21,22,23	+12v Analogue supply

Fig 3b Pin connections for SK301.

Pin Number(s)	Function
1,2,5-9,18-20,23,26,28,30,32.	Analogue ground
17	Emphasis
21	Reset
22	Mute
25	Left/Right clock in (LRCKIN)
27	A DATA
29	B-Clock (BCLK)

Fig 4. Option jumper settings.

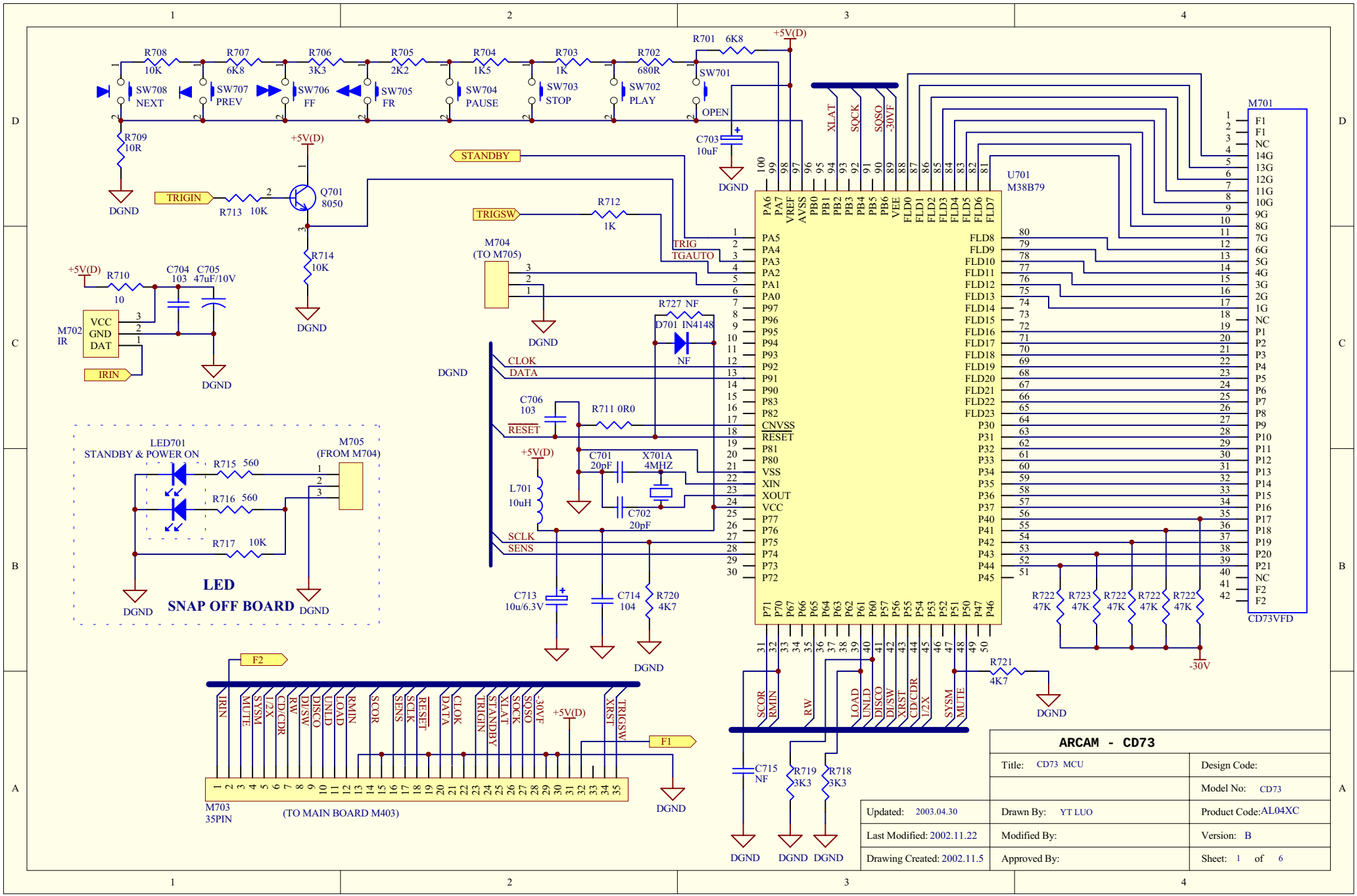
Location	CD73	Option
PL100	Open	Open
PL202	Open	Short
PL203	Short	Open
PL204	Open	Short
PL205	Short	Open
PL300	1/2 Short	1/2 Open
PL300	2/3 Open	2/3 Short
PL400	Short	Open
PL401	Short	Open
PL402	Short	Open
PL403	Open	Short

Resources

The Test disc mention in the **Mechanism and micro engine** section of this manual is available from Philips at the below address.

Philips Consumer Electronics
Co-ordination Office Optical and Magnetic Media Systems
Building SWA-112
PO Box 80002
5600 JB Eindhoven
The Netherlands

Fax +31 40 2732113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R707 6K8
R706 3K3
R705 2K2
R704 1K5
R703 1K
R702 680R
R701 6K8
+5V(D)
SW708 NEXT
SW707 PREV
SW706 FF
SW705 FR
SW704 PAUSE
SW703 STOP
SW702 PLAY
SW701
OPEN
R709 10R
DGND
C703 10uF
STANDBY
TRIGIN
R713 10K
Q701 8050
R714 10K
TRIGSW
R712 1K
TRIG
TGAUTO
M704 (TO M705)
R727 NF
D701 IN4148
NF
M702 IR
VCC
GND
DAT
IRIN
R710 10
C704 103
C705 47uF/10V
CLOK
DATA
RESET
SCLK
SENS
C706 103
R711 0R0
C701 20pF
X701A 4MHZ
C702 20pF
L701 10uH
C713 10u/6.3V
C714 104
R720 4K7
LED701
STANDBY & POWER ON
R715 560
R716 560
R717 10K
M705 (FROM M704)
LED
SNAP OFF BOARD
U701 M38B79
PA6 PA7 VREF AVSS PB0 PB1 PB2 PB3 PB4 PB5 PB6 VEE FLD0 FLD1 FLD2 FLD3 FLD4 FLD5 FLD6 FLD7
PA5 PA4 PA3 PA2 PA1 PA0 P97 P96 P95 P94 P93 P92 P91 P90 P83 P82 CNVSS RESET P81 P80 VSS XIN XOUT VCC P77 P76 P75 P74 P73 P72
FLD8 FLD9 FLD10 FLD11 FLD12 FLD13 FLD14 FLD15 FLD16 FLD17 FLD18 FLD19 FLD20 FLD21 FLD22 FLD23 P30 P31 P32 P33 P34 P35 P36 P37 P40 P41 P42 P43 P44 P45
P71 P70 P67 P66 P65 P64 P63 P62 P61 P60 P57 P56 P55 P54 P53 P52 P51 P50 P47 P46
XLAT SOCK SOSO -30VF
SCOR RMIN RW LOAD UNLD DISCO DISW XRST CD/CDR I/2X SYSM MUTE
R722 47K
R723 47K
-30V
R721 4K7
C715 NF
R719 3K3
R718 3K3
M701
F1 F1 NC 14G 13G 12G 11G 10G 9G 8G 7G 6G 5G 4G 3G 2G 1G NC P1 P2 P3 P4 P5 P6 P7 P8 P9 P10 P11 P12 P13 P14 P15 P16 P17 P18 P19 P20 P21 NC F2 F2
CD73VFD
F2
IRIN MUTE SYSM I/2X CD/CDR RW DI/SW DISCO UNLD LOAD RMIN SCOR SENS SCLK RESET DATA CLOK TRIGIN STANDBY XLAT SOCK SOSO -30VF +5V(D) XRST TRIGSW
F1
M703 35PIN
(TO MAIN BOARD M403)
ARCAM - CD73
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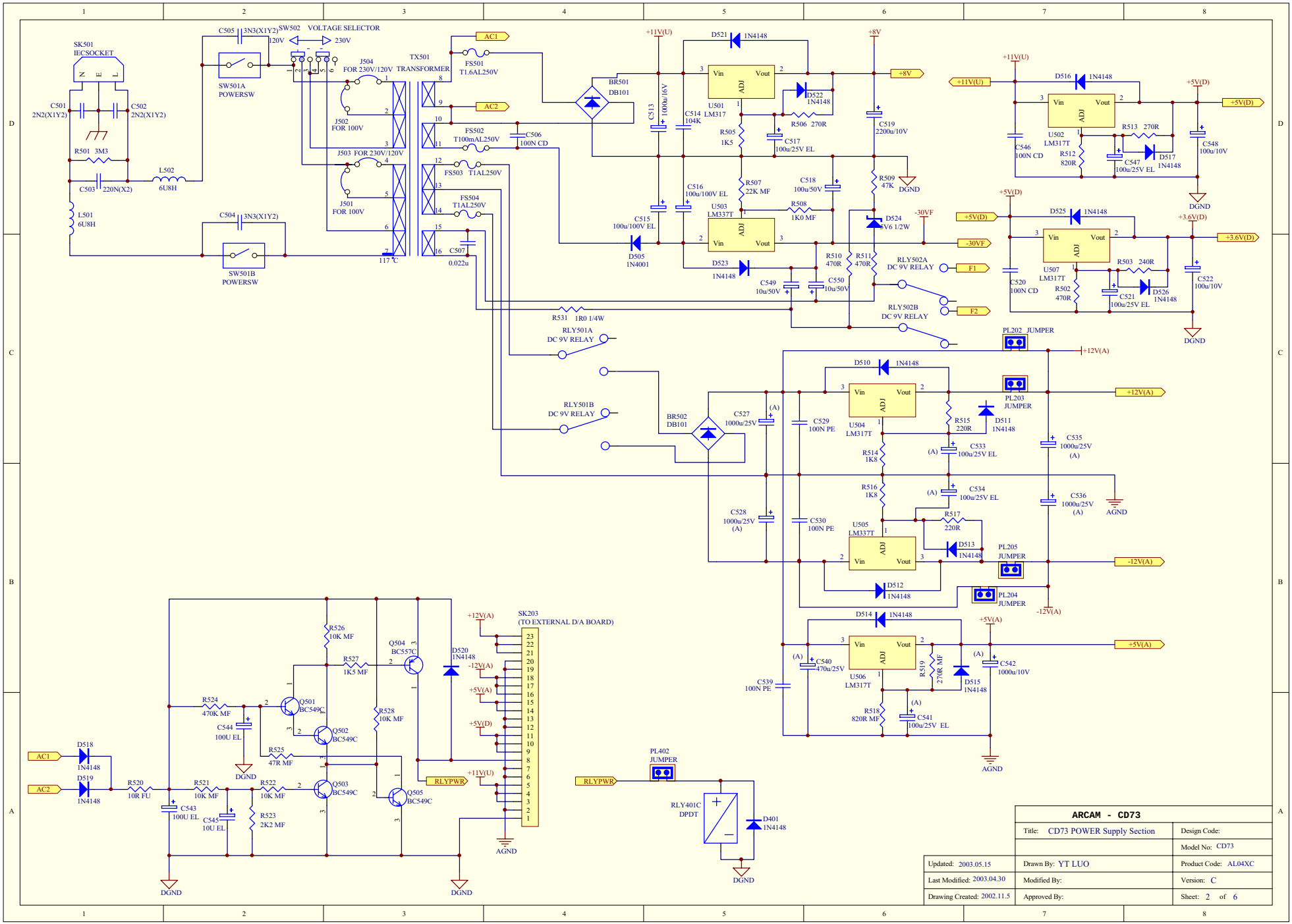
Design Code:
Model No: CD73
Product Code: AL04XC
Version: B
Sheet: 1 of 6
Updated: 2003.04.30
Drawn By: YT LUO
Last Modified: 2002.11.22
Modified By:
Drawing Created: 2002.11.5
Approved By:


SK501
IECSOCKET
C501
2N2(X1Y2)
C502
2N2(X1Y2)
R501 3M3
C503 220N(X2)
L502
6U8H
L501
6U8H
C505 3N3(X1Y2)
SW501A
POWERSW
C504 3N3(X1Y2)
SW501B
POWERSW
SW502 VOLTAGE SELECTOR
120V
230V
J504
FOR 230V/120V
J502
FOR 100V
J503 FOR 230V/120V
J501
FOR 100V
117 V
TX501
TRANSFORMER
AC1
FS501
T1.6AL250V
AC2
FS502
T100mAL250V
FS503 T1AL250V
FS504
T1AL250V
C507
0.022u
C506
100N CD
BR501
DB101
+11V(U)
C513
1000u/16V
D521 1N4148
U501
LM317
Vin
Vout
ADJ
C514
104K
R505
1K5
C517
100u/25V EL
D522
1N4148
R506 270R
+8V
C519
2200u/10V
R509
47K
DGND
R507
22K MF
C516
100u/100V EL
C518
100u/50V
R508
1K0 MF
U503
LM337T
C515
100u/100V EL
D505
1N4001
D523
1N4148
D524
6V6 1/2W
-30VF
R510
470R
R511
470R
C549
10u/50V
C550
10u/50V
RLY502A
DC 9V RELAY
F1
RLY502B
DC 9V RELAY
F2
R531 1R0 1/4W
RLY501A
DC 9V RELAY
RLY501B
DC 9V RELAY
BR502
DB101
C527
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(A)
C529
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U504
LM317T
D510
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R515
220R
D511
1N4148
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1K8
C535
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(A)
R516
1K8
C534
100u/25V EL
C536
1000u/25V
(A)
AGND
C528
1000u/25V
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220R
D513
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-12V(A)
D512
1N4148
PL204
JUMPER
PL202 JUMPER
+12V(A)
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JUMPER
D514
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+5V(A)
C540
470u/25V
C539
100N PE
U506
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270R MF
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100u/25V EL
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1N4148
U502
LM317T
C546
100N CD
R512
820R
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C547
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R502
470R
R503 240R
C521
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D526
1N4148
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C522
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R526
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Q504
BC557C
R527
1K5 MF
D520
1N4148
SK203
(TO EXTERNAL D/A BOARD)
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470K MF
Q501
BC549C
R528
10K MF
C544
100U EL
Q502
BC549C
R525
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AC2
D519
1N4148
R520
10R FU
R521
10K MF
R522
10K MF
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BC549C
Q505
BC549C
C543
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PL402
JUMPER
RLY401C
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DGND
ARCAM - CD73
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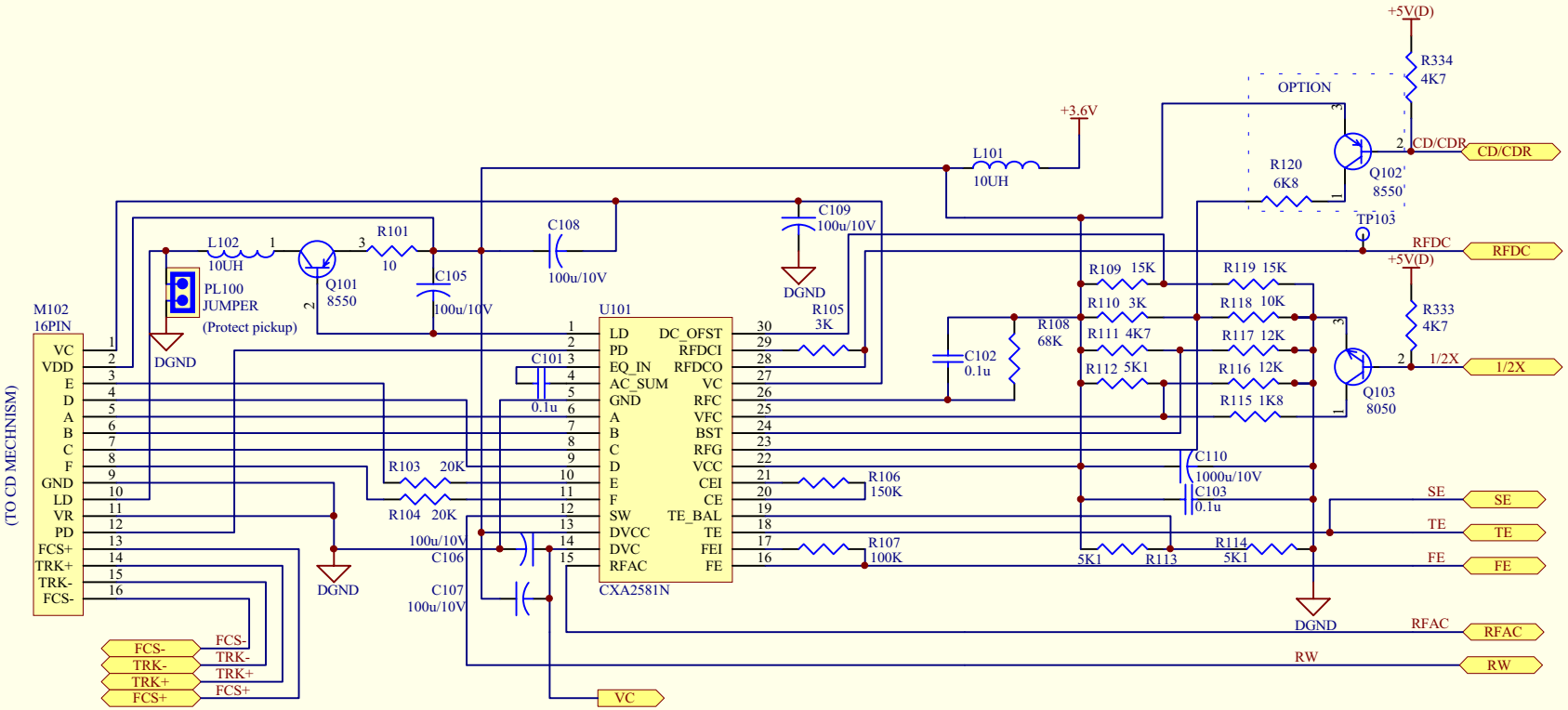
Design Code:
Model No: CD73
Product Code: AL04XC
Updated: 2003.05.15
Drawn By: YT LUO
Last Modified: 2003.04.30
Modified By:
Version: C
Drawing Created: 2002.11.5
Approved By:
Sheet: 2 of 6



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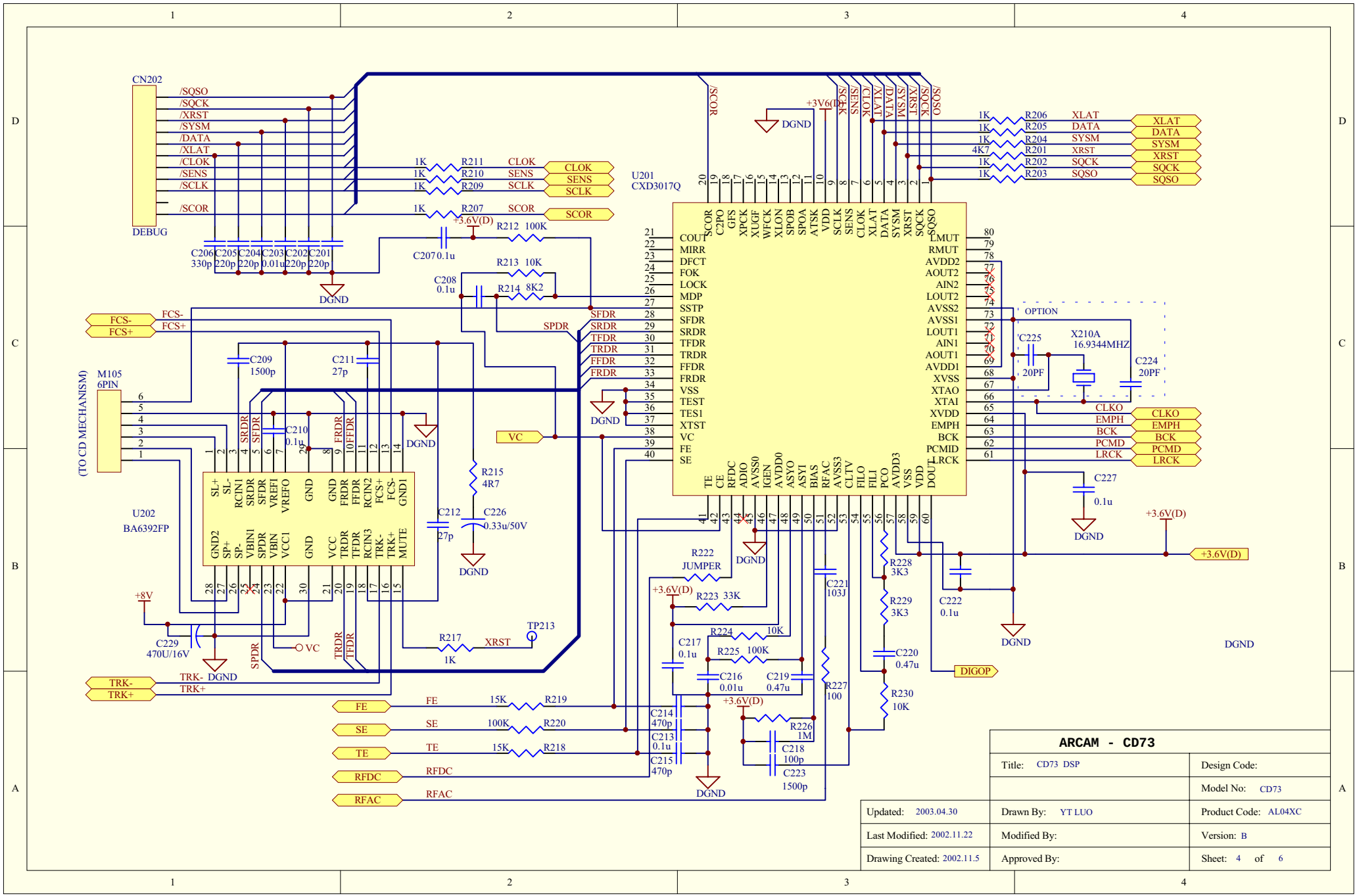
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/SCLK
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CXD3017Q
U202
BA6392FP
M105
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(TO CD MECHANISM)
DGND
+3V6(D)
+3.6V(D)
+8V
VC
SPDR
OPTION
X210A
16.9344MHZ
C225
20PF
C224
20PF
C206 330p
C205 220p
C204 220p
C203 0.01u
C202 220p
C201 220p
C207 0.1u
C208 0.1u
C209 1500p
C210 0.1u
C211 27p
C212 27p
C213 0.1u
C214 470p
C215 470p
C216 0.01u
C217 0.1u
C218 100p
C219 0.47u
C220 0.47u
C221 103J
C222 0.1u
C223 1500p
C227 0.1u
C229 470U/16V
R206 1K
R205 1K
R204 1K
R201 4K7
R202 1K
R203 1K
R211 1K
R210 1K
R209 1K
R207 1K
R212 100K
R213 10K
R214 8K2
R215 4R7
R217 1K
R218 15K
R219 15K
R220 100K
R222 JUMPER
R223 33K
R224 10K
R225 100K
R226 1M
R227 100
R228 3K3
R229 3K3
R230 10K
TP213
XLAT
DATA
SYSM
XRST
SQCK
SQSO
CLOK
SENS
SCLK
SCOR
FCS-
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TRK+
FE
SE
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RFDC
RFAC
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DIGOP
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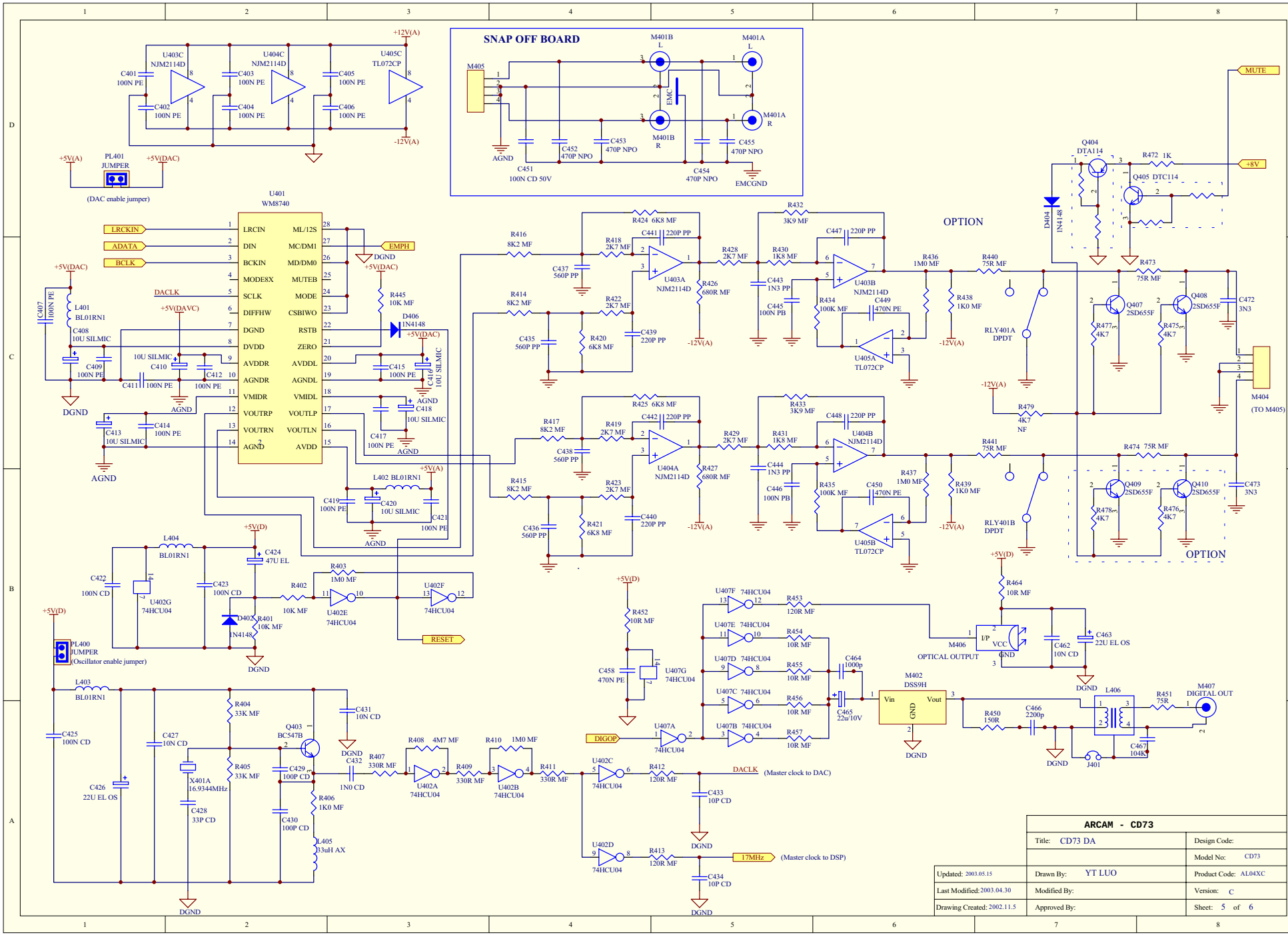
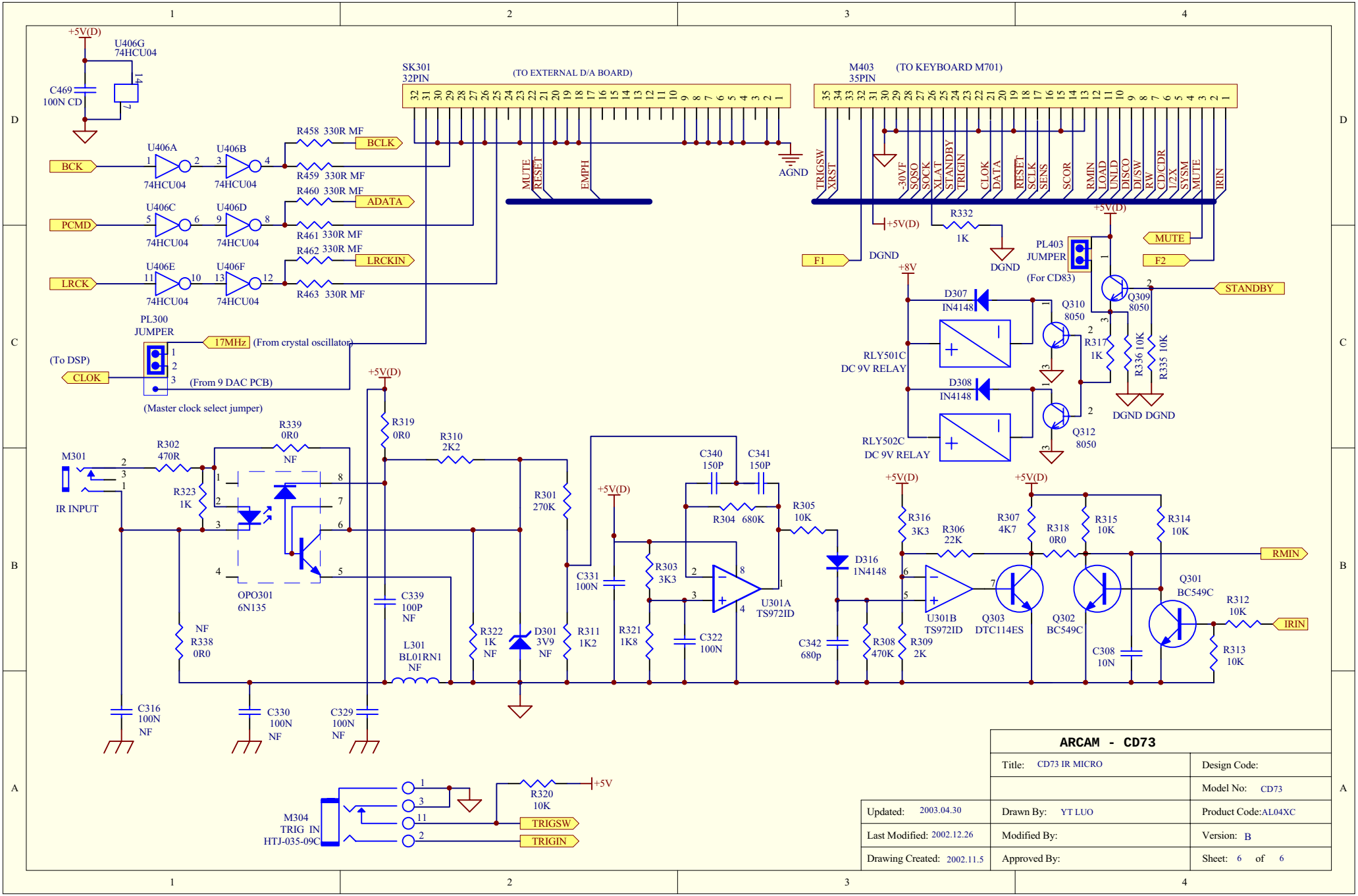
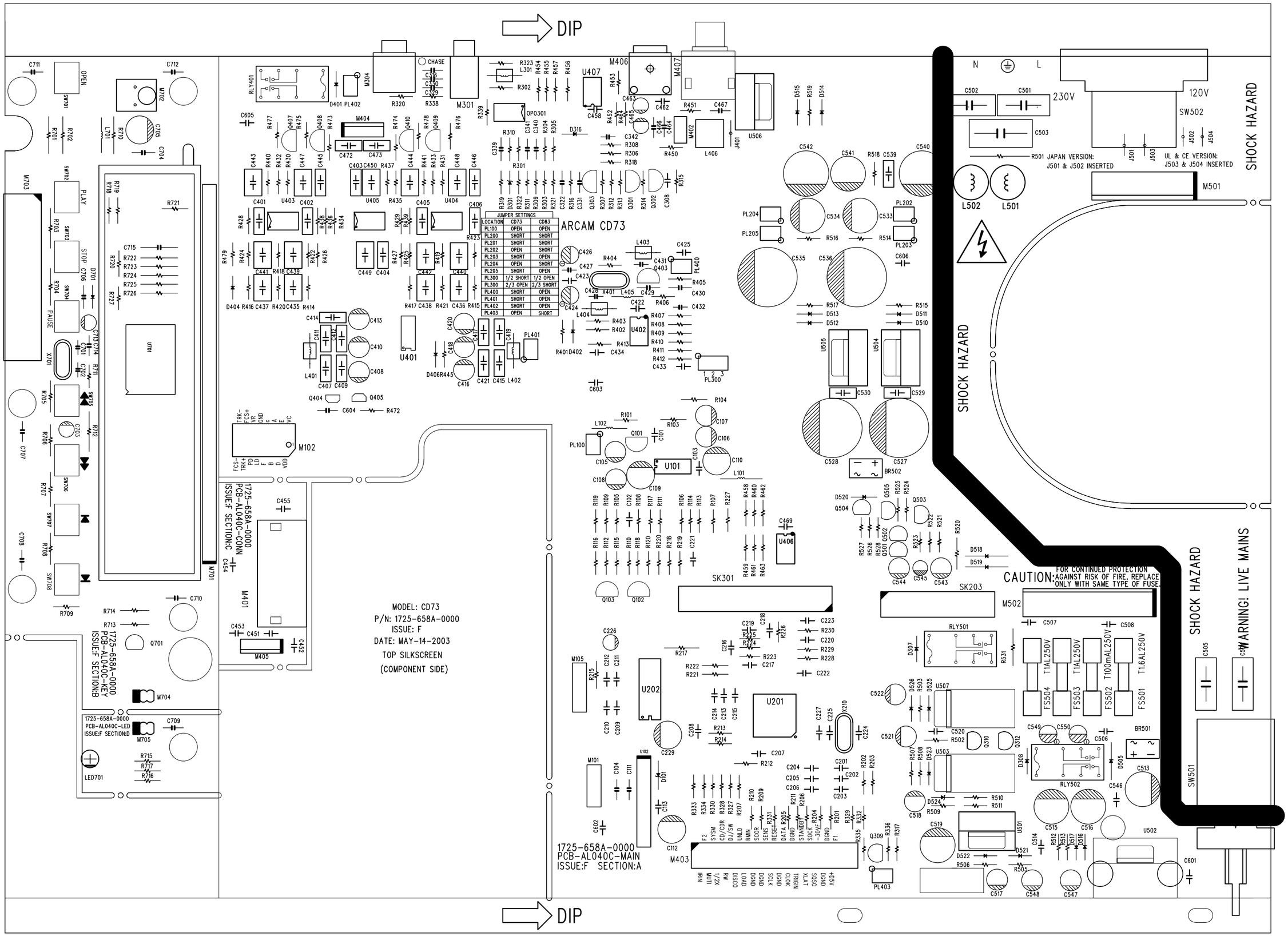
Design Code:
Model No: CD73
Product Code: AL04XC
Version: B
Sheet: 4 of 6
Updated: 2003.04.30
Drawn By: YT LUO
Last Modified: 2002.11.22
Modified By:
Drawing Created: 2002.11.5
Approved By:


SNAP OFF BOARD
M405
M401B L
M401A L
M401B R
M401A R
EMC
AGND
EMCGND
C451 100N CD 50V
C452 470P NPO
C453 470P NPO
C454 470P NPO
C455 470P NPO
U401 WM8740
LRCIN
DIN
BCKIN
MODE8X
SCLK
DIFFHW
DGND
DVDD
AVDDR
AGNDR
VMIDR
VOUTRP
VOUTRN
AGND
ML/12S
MC/DM1
MD/DM0
MUTEB
MODE
CSBIWO
RSTB
ZERO
AVDDL
AGNDL
VMIDL
VOUTLP
VOUTLN
AVDD
LRCKIN
ADATA
BCLK
DACLK
EMPH
+5V(DAC)
+5V(DAVC)
+5V(A)
-12V(A)
+12V(A)
+5V(D)
PL401 JUMPER
(DAC enable jumper)
PL400 JUMPER
(Oscillator enable jumper)
U403C NJM2114D
U404C NJM2114D
U405C TL072CP
U403A NJM2114D
U404A NJM2114D
U403B NJM2114D
U404B NJM2114D
U405A TL072CP
U405B TL072CP
OPTION
RLY401A DPDT
RLY401B DPDT
Q404 DTA114
Q405 DTC114
Q407 2SD655F
Q408 2SD655F
Q409 2SD655F
Q410 2SD655F
D404 1N4148
D406 1N4148
D402 1N4148
MUTE
+8V
M404 (TO M405)
M406 OPTICAL OUTPUT
M407 DIGITAL OUT
M402 DSS9H
U402A 74HCU04
U402B 74HCU04
U402C 74HCU04
U402D 74HCU04
U402E 74HCU04
U402F 74HCU04
U402G 74HCU04
U407A 74HCU04
U407B 74HCU04
U407C 74HCU04
U407D 74HCU04
U407E 74HCU04
U407F 74HCU04
U407G 74HCU04
X401A 16.9344MHz
DIGOP
RESET
DACLK
(Master clock to DAC)
17MHz
(Master clock to DSP)
ARCAM - CD73
Title: CD73 DA
Design Code:
Model No: CD73
Product Code: AL04XC
Updated: 2003.05.15
Drawn By: YT LUO
Version: C
Last Modified: 2003.04.30
Modified By:
Drawing Created: 2002.11.5
Approved By:
Sheet: 5 of 6



ARCAM - CD73		
	Title: CD73 IR MICRO	Design Code:
		Model No: CD73
Updated: 2003.04.30	Drawn By: YT LUO	Product Code: AL04XC
Last Modified: 2002.12.26	Modified By:	Version: B
Drawing Created: 2002.11.5	Approved By:	Sheet: 6 of 6


DIP
SHOCK HAZARD
WARNING! LIVE MAINS
CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE OF FUSE.
ARCAM CD73
MODEL: CD73
P/N: 1725-658A-0000
ISSUE: F
DATE: MAY-14-2003
TOP SILKSCREEN
(COMPONENT SIDE)
1725-658A-0000 PCB-AL040C-MAIN ISSUE:F SECTION:A
1725-658A-0000 PCB-AL040C-CONN ISSUE:F SECTION:C
1725-658A-0000 PCB-AL040C-KEY ISSUE:F SECTION:B
1725-658A-0000 PCB-AL040C-LED ISSUE:F SECTION:D
230V
120V
R501 JAPAN VERSION: J501 & J502 INSERTED
UL & CE VERSION: J503 & J504 INSERTED
JUMPER SETTINGS
LOCATION | CD73 | CD83
PL100 | OPEN | OPEN
PL200 | SHORT | SHORT
PL201 | SHORT | SHORT
PL202 | OPEN | SHORT
PL203 | SHORT | OPEN
PL204 | OPEN | SHORT
PL205 | SHORT | OPEN
PL300 | 1/2 SHORT | 1/2 OPEN
PL301 | 2/3 OPEN | 2/3 SHORT
PL400 | SHORT | OPEN
PL401 | SHORT | OPEN
PL402 | SHORT | OPEN
PL403 | OPEN | SHORT