

*Service Manual*

# CD82

Issue 1.0

## DiVA CD82 Compact Disc Player (Text)



ARCAM

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# Service Guide

## Contents

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## CD82 Technical Specifications

### Digital to Analogue conversion

DAC	Dual mono 24 bit Wolfson
Laser pick-up	3 beam
Laser wavelength	780nm
Numeric aperture	0.45
Dynamic range	106dB
Signal to noise ratio (CCIR)	>100dB
Harmonic distortion (0dB, 1kHz)	<0.005%
Frequency response (+-0.5dB)	5Hz-20kHz
Output level (0dB)	2.3Vrms
Output impedance	50 ohm
Minimum recommended load	5k ohm

### General

Digital output connection	75 ohm co-axial
Power consumption	35VA
Dimensions (including feet)	W430 x D290 x H84mm
Weight (net)	5.5kg
Weight (packed)	7.0kg
Supplied accessories	Mains lead CR314 remote control 2 x AAA batteries

# DiVA CD82 UPGRADE FITTING INSTRUCTIONS

## Compatible with:

### Alpha 7, 7SE, 8, 8SE CD players DiVA CD72, CD72 (text) CD players

**Note – When converting from 8SE to CD82 you will no longer be able to decode the extra information on the few HDCD discs available, however the sound quality offered by the CD82 upgrade is significantly superior on all discs to that of the original 8SE.**

#### Kit Contents

1x CD82 DAC module	L951AY
1x Upgrade instruction sheet	E836UI
1x Silver CD82 drawer front assembly	E993AY
1x Black CD82 drawer front assembly	E993AYB
2x PCB support locking pillars	H037
5x Self tapping screws	HF4V09B
1x Product registration card	SH000
1x CD82 authentication label	E954SL
1x Surface cleaner wipe	F227

#### Upgrading an Alpha 7/7SE, 8/8SE to CD82 DAC

For 7/7SE follow steps 1,2,3A onwards (not 3B)

For 8/8SE follow steps 1,2,3B onwards (not 3A)

1. Disconnect the mains supply from the Alpha CD player.
2. Remove the top cover by taking out the 2 screws from the top edge of the rear panel marked ❶ (Pozi no.1 driver required and on each side marked ❷ (Pozi no.2 driver required).
- 3A. For Alpha 7/7SE to DiVA CD82 DAC upgrade only  
Pull off the sticky plastic gasket between the digital output socket and the audio output sockets to reveal the 4 audio output socket holes through which the DAC sockets will pass.

Any remnants of adhesive can be removed by rubbing it gently with your finger and rolling it off. We do not recommend the use of solvents.

Fit the 2 supplied PCB (printed circuit board) pillars to the holes in the main board on either side of the flex foil coming from the display board, these are marked ❸ in figure 1. The big end of each PCB pillar goes into the main PCB, these push in and clip home. Take great care not to damage the main circuit board.

Remove the Alpha 7/7SE Configuration Module (the small vertically mounted PCB in the centre of the main board). It will not be needed once the new DAC board is fitted.

Note: The original nickel-plated audio output sockets are no longer connected after the upgrade and cannot be used. However the digital output still functions.

- 3B. For Alpha 8/8SE to DiVA CD82 DAC upgrade only  
Remove the 5 screws holding the Alpha 8/8SE board in place. Squeeze the top of the two PCB pillars supporting the end of the aluminium extrusion and lift the extrusion up and out of the unit. If the flex foils do not come away with the DAC board then remove them as well.

4. Take static precautions first. With the aluminium extrusion of the CD82 DAC module uppermost fit the flex foils from the module into the appropriate sockets in the main board, ensuring they are pushed fully home. You may find it helps to slide the module into the unit so that the audio output sockets fit through the holes in the rear panel and angle the module slightly upwards to achieve this.
5. Push the module down firmly on to the support pillars, ensure it is latched in place.
6. Fit the supplied screws with integral washers to the 5 points marked ❹ in figure 1 (T10 Torq driver required) to hold the module in place.
7. Refit the top cover and attach the CD82 authentication label to the underside of the CD player

#### Upgrading a CD72 to CD82

1. Disconnect the mains supply from the DiVA CD player.
2. Remove the top cover by taking out the 3 screws from the top edge of the rear panel marked ❶ (T10 Torq driver required) and on each side marked ❷ (T20 Torq driver required) in figure 1.
3. Pull off the sticky plastic gasket between the digital output socket and the audio output sockets to reveal the 4 audio output socket holes through which the DAC board sockets will pass.
4. Any remnants of adhesive can be removed by rubbing it gently with your finger and rolling it off. We do not recommend the use of solvents.
5. Fit the 2 supplied PCB (printed circuit board) pillars to the holes in the main board on either side of the flex foil coming from the display board, these are marked ❸ in figure 1. The big end of each PCB pillar goes into the main PCB, these push in and clip home. Take great care not to damage the main circuit board.
6. Remove the Configuration Module (the small vertically mounted PCB in the centre of the main board). It will not be needed once the new DAC board is fitted.
7. Note: The original nickel-plated audio output sockets are no longer connected after the upgrade and cannot be used. However the digital output still functions.
8. Remove the following jumpers: - PL2, PL3, PL4, PL6  
Fit the following jumpers: - PL5, PL7
9. Take static precautions first. With the aluminium extrusion of the CD82 DAC module uppermost fit the flex foils from the module into the appropriate sockets in the main board, ensuring they are pushed fully home. If they are not pushed fully home, the unit may not read discs. You may find it helps to slide the module into the unit so that the audio output sockets fit through the holes in the rear panel and angle the module slightly upwards to achieve this.
10. Push the module down firmly on to the support pillars, ensure it is latched in place.
11. Fit the supplied screws with integral washers to the 5 points marked ❹ in figure 1 (T10 Torq driver required) to hold the module in place. Refit the top cover.

12. Removing the drawer front - connect a mains supply to the unit; press load and allow the tray to fully open; remove the mains supply from the unit. Hold the drawer tightly with one hand and with the other pull the drawer front forward away from the player (pull hard). Remove any remnants of tape from the drawer front mechanism; clean the drawer mechanism front using the 'surface cleaner' wipe provided.
  13. Fitting the new CD82 drawer front - connect a mains supply to the unit and allow the drawer to close automatically. Remove the backing from the tape attached to the new drawer front and carefully align the drawer front with the mechanism and press gently together; reposition the drawer front if necessary and press firmly to the unit.
10. Fit the supplied screws with integral washers to the 5 points marked ❶ on figure 1 (T10 Torq driver required) to secure the module in place. Refit the top cover.
  11. Removing the drawer front - connect a mains supply to the unit; press load and allow the tray to fully open; remove the mains supply from the unit. Hold the drawer tightly with one hand and with the other pull the drawer front forward away from the player (pull hard). Remove any remnants of tape from the drawer front mechanism; clean the drawer mechanism front using the 'surface cleaner' wipe provided.
  12. Fitting the new CD82 drawer front - connect a mains supply to the unit and allow the drawer to close automatically. Remove the backing from the tape attached to the new drawer front and carefully align the drawer front with the mechanism and press gently together; reposition the drawer front if necessary and press firmly to the unit.

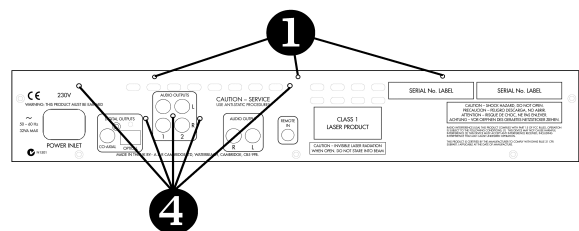
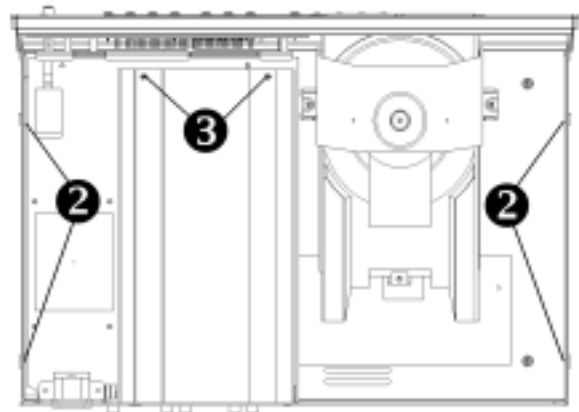
### Upgrading a CD72 (TEXT) to CD82 (TEXT)

1. Disconnect the mains supply from the DiVA CD player.
2. Remove the top cover by taking out the 3 screws from the top edge of the rear panel marked ❶ (T10 Torq driver required) and on each side marked ❷ (T20 Torq driver required) in figure 1.
3. Pull off the sticky plastic gasket between the digital output socket and the audio output sockets to reveal the 4 audio output socket holes through which the DAC board sockets will pass.
4. Any remnants of adhesive can be removed by rubbing it gently with your finger and rolling it off. We do not recommend the use of solvents.
5. Fit the 2 supplied PCB (printed circuit board) pillars to the holes in the main board on either side of the flex foil coming from the display board, these are marked ❸ in figure 1. The big end of each PCB pillar goes into the main PCB, these push in and clip home. Take great care not to damage the main circuit board.
6. Note: The original nickel-plated audio output sockets are no longer connected after the upgrade and cannot be used. However the digital output still functions.
7. Set the main board jumper settings as listed below: -

PL200	ON
PL201	ON
PL202	ON
PL203	OFF
PL204	ON
PL205	OFF
PL300	2 and 3
PL400	OFF
PL401	OFF
PL402	OFF

8. Take static precautions first. With the aluminium extrusion of the DAC module uppermost fit the flex foils from the module into the appropriate sockets in the main board, ensuring they are pushed fully home. If they are not pushed fully home, the unit may not read discs. You may find it helps to slide the module into the unit so that the audio output sockets fit through the holes in the rear panel and angle the module slightly upwards to achieve this.
9. Push the module down firmly on to the support pillars, ensure it is latched in place.

Figure 1



# **Main Board L934**

## **Contents**

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- **Circuit description**
- **Component overlay**
- **Parts list**
- **Circuit diagrams**

# CD72, CD82 & CD92 (text)

## Circuit Description

### Summary

The main Motherboard/Display PCBs for the Diva CD players may be assembled as three different versions:

- ❑ DiVA CD62 (text) - With alternate components fitted and the 92DAC upgrade connections omitted (L933AY).
- ❑ DiVA CD72 (text) - With the standard set of components fitted (L899AY).
- ❑ DiVA CD82/92 (text) - With analogue components and connectors omitted, for use as a host motherboard for the plug-in 82 or 92DAC (L934AY).

The CD72T version may be converted for use with an upgrade plug-in DAC board by changing on-board jumpers.

All systems are based on a Sony kit, comprising CDM14BL-5BD25 CD transport / loader / laser mechanism, micro-controller and fluorescent display.

### Power Supplies

The CD72, CD82 & CD92 transformers :-

- ❑ 230/115VAC - part number L866TX
- ❑ 100VAC only - part number L851TX

The mains transformer has three secondary windings:

1. 13.7V – 0V – 13.7V to provide  $\pm 12V(A)$  supplies (IC201 and IC205) for the audio output circuitry via regulators IC201 and IC205.
2. 9V-0V-32V to produce the digital, motor drive and fluorescent display grid supplies:
  - +11V(U) Unregulated supply for relay drive and +5V(D) supply
  - +7V (IC200) Mechanism and motor driver supply
  - +5V(D) (IC202) General digital logic supply
  - +5V(A) (IC203) Supply to DAC
  - 30V (IC204) Display grid voltage.
3. 0-5V to provide an AC supply for the display filament.

All of these supplies are delivered also to the optional CD82 or CD92DAC upgrade board via the DAC power connector SK203. The supplies are conventional and are linearly regulated by 3-terminal voltage regulators.

When the DAC upgrade board is used, analogue regulators IC201 and IC205 can be bypassed by removing JP203 and JP205, and fitting JP202 and JP204 since regulation is contained on the DAC board itself. Soft-charging resistors R204 and R205 are bypassed similarly.

### Relay Mute Control

This circuit drives a relay to un-mute the analogue output ~5 seconds after the unit is powered on, and quickly mutes the output when the unit is switched off. The circuit works effectively as an “AND” gate.

If AC is present on the transformer secondary winding and the 5-second timer composed of R222 and C221 has reached the threshold voltage ( $V_{be}$  of TR200 +  $V_{be}$  of TR201 -  $V_{ce}$  of TR202, or ~1.0V), the relay coil is connected to +11V (referenced to 0V\_3 as required by the DAC's internal circuitry) via TR204.

When AC is removed, C231 discharges quickly through R225, the base voltage of TR204 rises and the relay coil voltage is removed, muting the output.

TR203 resets the ‘timer’ by discharging C221 quickly at turn-off.

### Remote Control/PIC Micro

Remote control data is received from the IREye on the display PCB and buffered by TR300 and TR301. The Programmable Interrupt Controller converts the RC-5 format data into the NEC format required by the Sony micro. The PIC also controls the configuration of the digital filter/DAC on the DAC board.

### Motor Driver

The status of the drawer is indicated to the micro by two micro switches ‘INSW’ and ‘OUTSW’ on SK205. The micro controls the drawer motor via driver IC303.

### Clock Buffering

The clock and data signals LRCK, ADATA and BCLK from the mechanism connector SK300 are double buffered by IC300 before being delivered to the DAC.

### Power-On/Reset

The power-on reset signal XRST (or RESET) is generated by R409, C410 and IC404. When the power is turned on, C410 is initially uncharged and pin 11 of IC404 is at high voltage, and thus the output is low. After a short time, C410 is charged via R409; IC404 pin 11 is then low, and the output switches high (RESET is de-asserted).

### DAC & System Clock

The DAC is a Burr Brown PCM1716E, the DAC is configured for hardware control.

Digital audio is input on pins 1, 2 & 3 in standard Red Book Audio format, i.e. Word Clock, Bit Clock and Data.

The system clock is based around 16.9344 MHz crystal X400 and transistor TR402. This produces a stable clock with low jitter. IC404A & B buffer the clock as linear buffers. IC404C & D buffer the individual mech & DAC clock lines.

The CD82 & CD92 system clock is generated on the DAC board. The clock and data signals LRCK, ADATA and BCLK from the mechanism connector SK300 are double buffered by IC300 before being delivered to the DAC. The system clock is delivered to the mech via two-position jumper PL300. The clock source is selected to be either from the main board (CD62/72) or from the DAC board (CD82/CD92) by the position of JP300.

When the 82 or 92DAC is fitted as an upgrade to a CD72, removing JP400 disables the main board clock



## Analogue Output

Left channel:

IC400A and IC400B are cascaded 69kHz 2<sup>nd</sup> order low-pass Bessel filters. The output devices internal to both op-amps in IC400 are "pulled down" to the negative supply rail to force operation in class A (one output device is conducting at all times and crossover distortion is eliminated).

IC402A is a DC servo with a very low cut off frequency, acting to impose a non-zero voltage 'virtual earth' at the non-inverting input of IC400B, thus eliminating the offsets caused by the pull-down resistors and DC-coupling the output.

The right channel is the same as the left channel. IC401A & B are used as the buffer and filter.

## Microcontroller & Display Board

The system microcontroller IC100 serves the following functions:

- Control of the mechanism & decoder on the CDM14 mechanism
- Control of mute, attenuation and de-emphasis for the DAC
- Direct drive of the fluorescent display
- Remote control decoding
- Keyboard scanning
- 82/92DAC muting

The keyboard scanning works by connecting the keys to a resistor ladder on an ADC input to the micro. Pressing a key presents a unique voltage to this input, which the micro is pre-programmed to interpret accordingly.

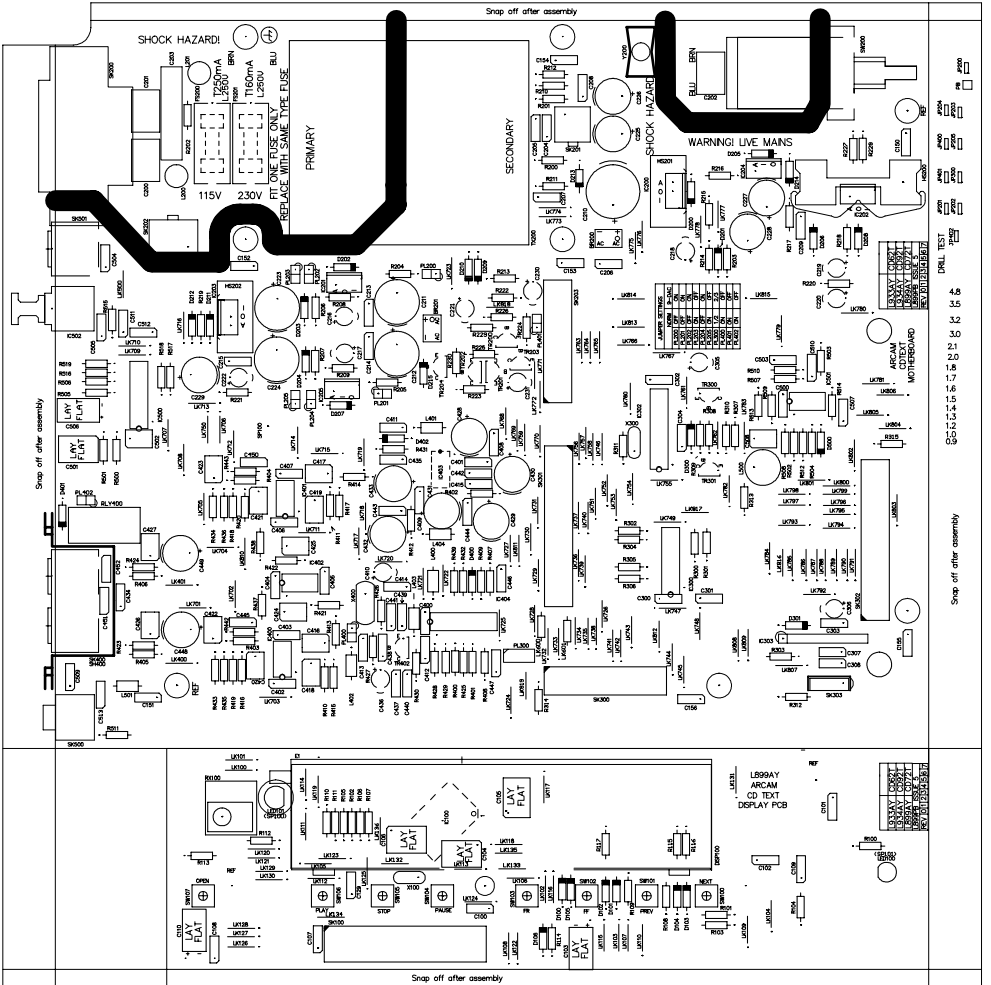
The remote control data contains a 'Customer Code' that identifies this as an Arcam product. The diode network D100 to D106 configures the micro to accept this code.

## Remote Bus Carrier Filter & Demodulator

Remote control commands can be delivered over wire to SK500 for multi-room applications. Incoming signals are attenuated and clipped by resistors and D500. L500 and C508 form a parallel resonant circuit at approximately 37kHz. This demodulates the incoming signal and the output is passed to IC501A where it is 'chopped', low pass filtered and fed to IC501B to provide the RC5 output signal.

## Digital Output

The decoder on the mechanism assembly generates an SPDIF format digital output signal. This is passed to buffer IC500A. IC500B through E are used in parallel to provide a transformer less 75-ohm source impedance to a single phono socket SK501. Optical digital output via IC502 is also tapped off the digital output signal via IC500F.



SHOCK HAZARD!

115V 230V

TIGON TAPE  
FIT ONE FUSE ONLY  
REPLACE WITH SAME TYPE FUSE

PRIMARY

Snap off after assembly

SECONDARY

SHOCK HAZARD!

WARNING! LIVE MAINS

REF	QTY	PART NO
1	1	1000
2	1	1000
3	1	1000
4	1	1000

DRILL TEST	4.8
	5.5
	3.2
	3.0
	2.1
	2.0
	1.7
	1.6
	1.8

MOTHERBOARD  
ARCAM  
C3 TEXT  
DISPLAY PCB

Snap off after assembly

Snap off after assembly

L9994Y

ARCAM  
C3 TEXT  
DISPLAY PCB

REF

## L934 Main Board Parts List Issue 4.1

Designator	Part	Description
BR200	3BDF01M	Bridge rectifier DF01M 1A 100V
BR201	3BDF01M	Bridge rectifier DF01M 1A 100V
C100	2A210	CERD 1N0 63V 20% RA
C101	2A210	CERD 1N0 63V 20% RA
C102	2A210	CERD 1N0 63V 20% RA
C103	2N710	ELST 100U 25V
C104	2A410	CERD 100N 63V 20% RA
C105	2A410	CERD 100N 63V 20% RA
C106	2A410	CERD 100N 63V 20% RA
C107	2A410	CERD 100N 63V 20% RA
C108	2A410	CERD 100N 63V 20% RA
C109	2A410	CERD 100N 63V 20% RA
C110	2N610	ELST 10U 50V
C129	2A310	CERD 10N 63V 20% RA
C151	2A210	CERD 1N0 63V 20% RA
C152	2A210	CERD 1N0 63V 20% RA
C153	2A210	CERD 1N0 63V 20% RA
C154	2A210	CERD 1N0 63V 20% RA
C155	2A210	CERD 1N0 63V 20% RA
C156	2A210	CERD 1N0 63V 20% RA
C200	2K233	SUPPR CAP 3N3 250V
C201	2K233	SUPPR CAP 3N3 250V
C202	2K233	SUPPR CAP 3N3 250V
C203	2D422	220NF CLASS X2 CAP 275VRMS
C204	2A410	CERD 100N 63V 20% RA
C205	2A410	CERD 100N 63V 20% RA
C206	2A410	CERD 100N 63V 20% RA
C207	2AB410	CERD 100N 100V -20% +80% RA
C208	2AB410	CERD 100N 100V -20% +80% RA
C209	2A410	CERD 100N 63V 20% RA
C210	2N833	ELST 3M3 25V
C211	2N810C	ELST 1M0 35V
C212	2N810C	ELST 1M0 35V
C215	2K410	PEST 100N 63V 10%
C218	2N710	ELST 100U 25V
C219	2N710	ELST 100U 25V
C220	2N710	ELST 100U 25V
C221	2N710	ELST 100U 25V
C222	2N710	ELST 100U 25V
C223	2N810	ELST 1M0 25V
C224	2N810	ELST 1M0 25V
C225	2N710B	ELST 100U 100V
C226	2N710B	ELST 100U 100V
C227	2N710B	ELST 100U 100V
C228	2N810A	ELST 1M0 10V
C229	2N810A	ELST 1M0 10V
C230	2N710	ELST 100U 25V
C231	2N610	ELST 10U 50V
C300	2A410	CERD 100N 63V 20% RA
C301	2A410	CERD 100N 63V 20% RA
C302	2A410	CERD 100N 63V 20% RA
C303	2A410	CERD 100N 63V 20% RA
C304	2A110	CERD 100P 50V -20% +80% RA
C305	2N710	ELST 100U 25V
C306	2N710	ELST 100U 25V
C307	2A310	CERD 10N 63V 20% RA
C308	2A410	CERD 100N 63V 20% RA
C400	2A410	CERD 100N 63V 20% RA
C410	2N710	ELST 100U 25V
C414	2A410	CERD 100N 63V 20% RA
C434	2A410	CERD 100N 63V 20% RA
C451	2AA210	CAP 1000PF 100V NPO CERD

## L934 Main Board Parts List Issue 4.1

Designator	Part	Description
C452	2AA210	CAP 1000PF 100V NPO CERD
C500	2A410	CERD 100N 63V 20% RA
C501	2A310	CERD 10N 63V 20% RA
C502	2K447	PEST 470N 63V 10%
C503	2A210	CERD 1N0 63V 20% RA
C504	2A310	CERD 10N 63V 20% RA
C505	2A410	CERD 100N 63V 20% RA
C506	2P622	ELST 22U 20V OSCON
C507	2A410	CERD 100N 63V 20% RA
C508	2D168	PPRO 680P 5% 63V RA
C509	2A410	CERD 100N 63V 20% RA
C510	2A110	CERD 100P 50V -20% +80% RA
C511	2A410	CERD 100N 63V 20% RA
C512	2A147	CERD 470P 50V -20% +80% RA
C513	2A110	CERD 100P 50V -20% +80% RA
CA1	L920CA	CD...T MAINS JUMPER CABLE
D100	3A4148	SSDIODE 1N4148 75V
D101	3A4148	SSDIODE 1N4148 75V
D102	3A4148	SSDIODE 1N4148 75V
D103	3A4148	SSDIODE 1N4148 75V
D104	3A4148	SSDIODE 1N4148 75V
D105	3A4148	SSDIODE 1N4148 75V
D106	3A4148	SSDIODE 1N4148 75V
D200	3A4148	SSDIODE 1N4148 75V
D201	3A4148	SSDIODE 1N4148 75V
D205	3A4148	SSDIODE 1N4148 75V
D206	3A4148	SSDIODE 1N4148 75V
D208	3A4148	SSDIODE 1N4148 75V
D209	3A4148	SSDIODE 1N4148 75V
D210	3A4148	SSDIODE 1N4148 75V
D211	3A4148	SSDIODE 1N4148 75V
D212	3A4148	SSDIODE 1N4148 75V
D213	3B4003	RECTIFIER 1N4003F 1A 200V
D214	3C05104	Diode 5V1 400mW
D215	3A4148	SSDIODE 1N4148 75V
D300	3A4148	SSDIODE 1N4148 75V
D301	3C04704	ZENER 4V7 400MW
D400	3A4148	SSDIODE 1N4148 75V
D500	3C04704	ZENER 4V7 400MW
DISP100	B1015	DISP CD SONY 14-ST-20GK
E1	E102AY	CDTEXT VFD SUPPORT
EL200	8M101	EARTH LEAD
FS200	F022	INS COVER PCB FUSEHOLDER
FS200	8S004	FUSEHOLDER 20mm PCB
FS201	C11166	FUSE 20mm 160mA T S504160mA
FS201	F022	INS COVER PCB FUSEHOLDER
FS201	8S004	FUSEHOLDER 20mm PCB
HS200	F006	HEATSINK CLIP TO220 13/8.6 DC/W
HS200	F008	HEATSINK TO220 8.6 DEGC/W
HS201	F007	HEATSINK TO220 CLIP 30
HS202	F007	HEATSINK TO220 CLIP 30
IC100	5G82832	IC CD CXP82832-031Q MICRO
IC200	5D1086A	IC VREG LM1086CT-ADJ
IC202	5D317T	IC VREG POS LM317T
IC203	5D317T	IC VREG POS LM317T
IC204	5D337	IC VREG POS LM337T
IC300	5J7404	IC HCMOS 74HCU04
IC302	5H16C54X	IC CMOS MICRO PIC16C54XT/P
IC302	8S018	IC SOCKET 18 PIN 0.3"
IC302SW	L825SW	A SOFTWARE
IC303	5Q1641	IC MOTOR DRIVER LB1641
IC404	5J7404	IC HCMOS 74HCU04

## L934 Main Board Parts List Issue 4.1

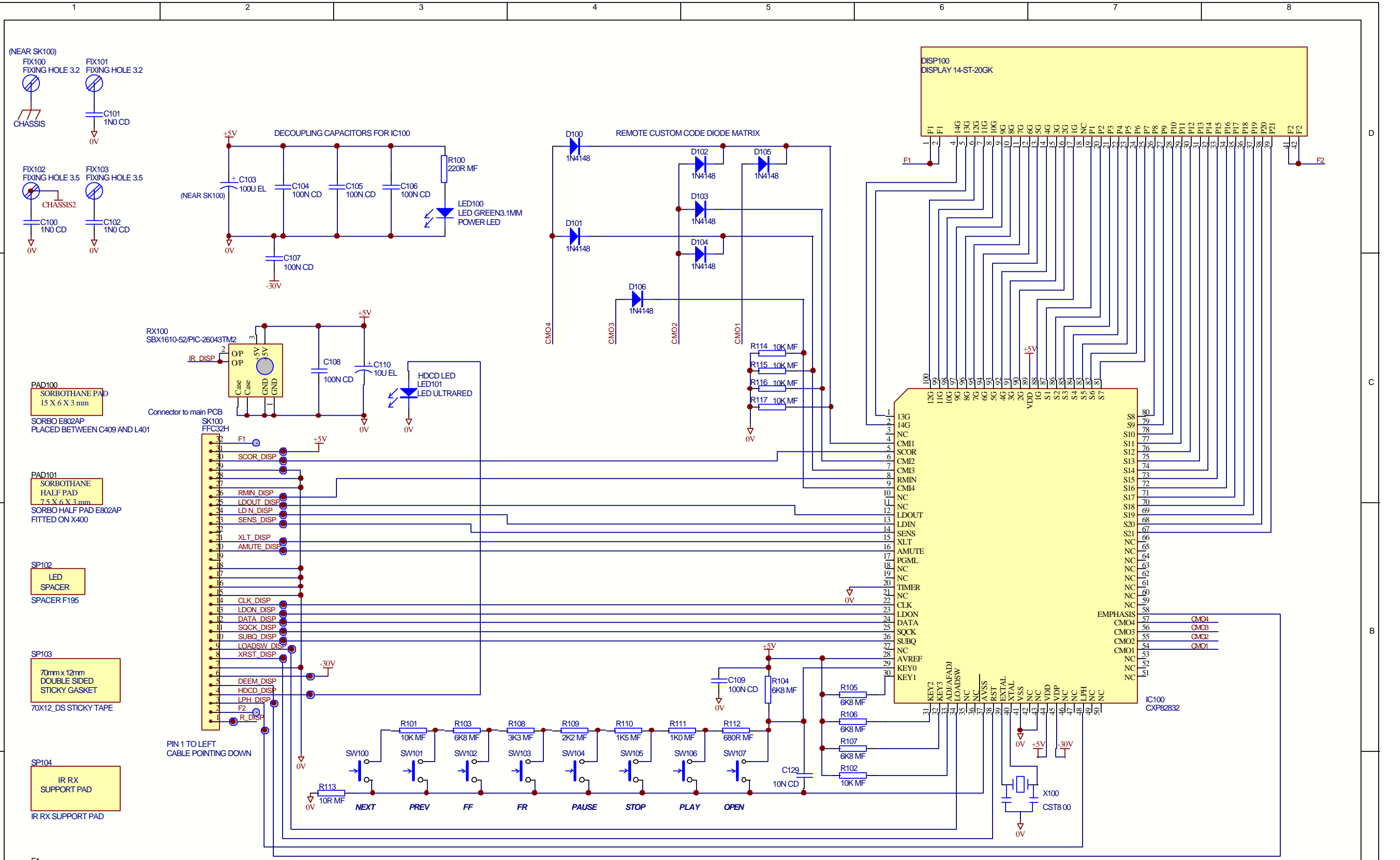
Designator	Part	Description
IC500	5J7404	IC HCMOS 74HCU04
IC501	5M393A	IC COMPARITOR DUAL LM393A
IC502	5TG550T	SPDIF OPTICAL TRANSMITTER
JP200	8K004	JUMPER SOCKET 0.1"
JP201	8K004	JUMPER SOCKET 0.1"
JP202	8K004	JUMPER SOCKET 0.1"
JP204	8K004	JUMPER SOCKET 0.1"
JP300	8K004	JUMPER SOCKET 0.1"
L200	7D968A	6U8H INDUCTOR
L201	7D968A	6U8H INDUCTOR
L400	7F003	FERRITE BEAD SINGLE AXIAL
L500	7D327	27mH INDUCTOR
L501	7F003	FERRITE BEAD SINGLE AXIAL
LED100	3D007	LED GREEN 3.1MM SLR-37MG3F
LED101	3D003	LED ULTRARED 5MM
LK600	1H000	RES MF W4 1% 0R0
LK601	1H000	RES MF W4 1% 0R0
MC200	E922MC	MAGNETIC SHIELD PLATE
MC201	E923MC	ADHESIVE PAD(ATTACH TO E922MC & TX)
PAD100	E802AP	SORBOTHANE PAD 15X6X3 mm
PAD101	E802AP	SORBOTHANE PAD 15X6X3 mm
PB	L899PB_4	BLANK PCB
PL200	8K6201	2WAY MOLEX VERT MALE CONNECTOR
PL201	8K6201	2WAY MOLEX VERT MALE CONNECTOR
PL202	8K6201	2WAY MOLEX VERT MALE CONNECTOR
PL204	8K6201	2WAY MOLEX VERT MALE CONNECTOR
PL300	8K2103	3WAY MOLEX VERT MALE CONNECTOR
R100	1H122	RES MF W4 1% 220R
R101	1H310	RES MF W4 1% 10K
R102	1H310	RES MF W4 1% 10K
R103	1H268	RES MF W4 1% 6K8
R104	1H268	RES MF W4 1% 6K8
R105	1H268	RES MF W4 1% 6K8
R106	1H268	RES MF W4 1% 6K8
R107	1H268	RES MF W4 1% 6K8
R108	1H233	RES MF W4 1% 3K3
R109	1H222	RES MF W4 1% 2K2
R110	1H215	RES MF W4 1% 1K5
R111	1H210	RES MF W4 1% 1K0
R112	1H168	RES MF W4 1% 680R
R113	1H010	RES MF W4 1% 10R
R114	1H310	RES MF W4 1% 10K
R115	1H310	RES MF W4 1% 10K
R116	1H310	RES MF W4 1% 10K
R117	1H310	RES MF W4 1% 10K
R200	1G810	RES MF FU W3 1R0 5% NFR25
R201	1G810	RES MF FU W3 1R0 5% NFR25
R202	1K515	RES W25 5% VR25 1M5
R203	1H133	RES MF W4 1% 330R
R210	1G810	RES MF FU W3 1R0 5% NFR25
R211	1G010	RES MF FU W3 10R 5% NFR25
R212	1G810	RES MF FU W3 1R0 5% NFR25
R213	1G010	RES MF FU W3 10R 5% NFR25
R214	1H216	RES MF W4 1% 1K6
R215	1H322	RES MF W4 1% 22K
R216	1H210	RES MF W4 1% 1K0
R217	1H333	RES MF W4 1% 33K
R218	1H127	RES MF W4 1% 270R
R219	1H127	RES MF W4 1% 270R
R220	1H182	RES MF W4 1% 820R
R221	1H182	RES MF W4 1% 820R
R222	1H447	RES MF W4 1% 470K

## L934 Main Board Parts List Issue 4.1

Designator	Part	Description
R223	1H310	RES MF W4 1% 10K
R224	1H310	RES MF W4 1% 10K
R225	1H222	RES MF W4 1% 2K2
R226	1H310	RES MF W4 1% 10K
R227	1H110	RES MF W4 1% 100R
R228	1H110	RES MF W4 1% 100R
R229	1H215	RES MF W4 1% 1K5
R230	1H310	RES MF W4 1% 10K
R300	1H133	RES MF W4 1% 330R
R303	1H268	RES MF W4 1% 6K8
R304	1H133	RES MF W4 1% 330R
R306	1H133	RES MF W4 1% 330R
R307	1H310	RES MF W4 1% 10K
R308	1H310	RES MF W4 1% 10K
R309	1H310	RES MF W4 1% 10K
R310	1H310	RES MF W4 1% 10K
R311	1H410	RES MF W4 1% 100K
R312	1H268	RES MF W4 1% 6K8
R313	1H410	RES MF W4 1% 100K
R314	1H310	RES MF W4 1% 10K
R315	1H310	RES MF W4 1% 10K
R409	1H310	RES MF W4 1% 10K
R432	1H310	RES MF W4 1% 10K
R439	1H510	RES MF W4 1% 1M0
R500	1H010	RES MF W4 1% 10R
R501	1H010	RES MF W4 1% 10R
R502	1H218	RES MF W4 1% 1K8
R503	1H218	RES MF W4 1% 1K8
R504	1H210	RES MF W4 1% 1K0
R505	1H112	RES MF W4 1% 120R
R506	1H212	RES MF W4 1% 1K2
R507	1H310	RES MF W4 1% 10K
R508	1H310	RES MF W4 1% 10K
R509	1H310	RES MF W4 1% 10K
R510	1H310	RES MF W4 1% 10K
R511	1H147	RES MF W4 1% 470R
R512	1H410	RES MF W4 1% 100K
R513	1H410	RES MF W4 1% 100K
R514	1H215	RES MF W4 1% 1K5
R515	1H310	RES MF W4 1% 10K
R516	1H212	RES MF W4 1% 1K2
R517	1H212	RES MF W4 1% 1K2
R518	1H212	RES MF W4 1% 1K2
R519	1H110	RES MF W4 1% 100R
RX100	B2107	REMOTE RX PIC-26043TM2 38KHZ
SH400	E821MC	PHONO EMC SHIELD
SK100	8K8132	32-WAY FFC CONN HORIZ
SK200	8A001	IEC MAINS CONN PCB INS PX
SK200	HP007	COPPER RIVET TCP/D48 BS
SK200	HP007	COPPER RIVET TCP/D48 BS
SK203	8K8023	23-WAY FFC CONN VERT
SK300	8K8023	23-WAY FFC CONN VERT
SK301	8K8032	32-WAY FFC CONN VERT
SK302	8K8032	32-WAY FFC CONN VERT
SK303	8K2005	5-WAY AMP CT CONN
SK500	8D228	MIN JACK SINGLE 3.5mm
SK501	8D220	PHONO SKT SINGLE EMC
SP102	F195	LED SPACER
SP103	F205	DS STICKY PAD 70 X 12mm
SP104	E822AP	IR RX SUPPORT PAD
SW100	A1511	TACT SWITCH 2-PIN LOW PROF 9.5mm
SW101	A1511	TACT SWITCH 2-PIN LOW PROF 9.5mm

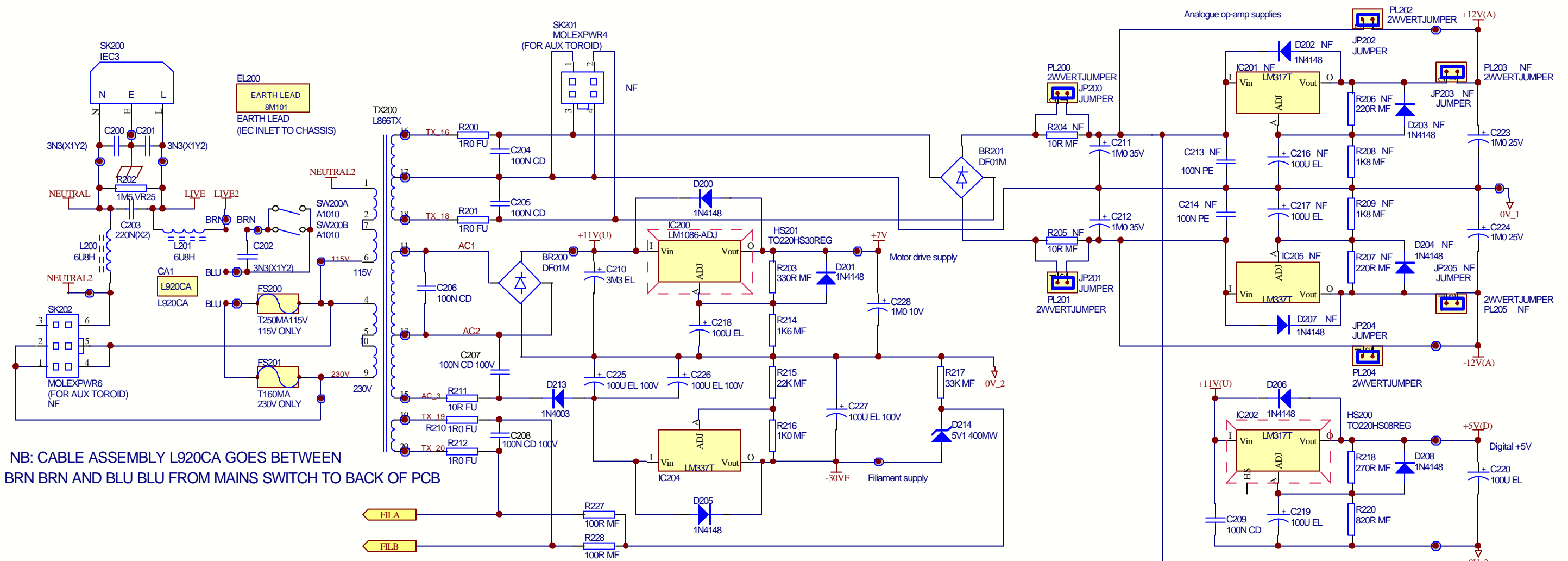
## L934 Main Board Parts List Issue 4.1

<b>Designator</b>	<b>Part</b>	<b>Description</b>
SW102	A1511	TACT SWITCH 2-PIN LOW PROF 9.5mm
SW103	A1511	TACT SWITCH 2-PIN LOW PROF 9.5mm
SW104	A1511	TACT SWITCH 2-PIN LOW PROF 9.5mm
SW105	A1511	TACT SWITCH 2-PIN LOW PROF 9.5mm
SW106	A1511	TACT SWITCH 2-PIN LOW PROF 9.5mm
SW107	A1511	TACT SWITCH 2-PIN LOW PROF 9.5mm
SW200	A1010	SWITCH PUSH MAINS DPST TV-8
TR200	4A549	TRANS LF SS N BC549B
TR201	4A549	TRANS LF SS N BC549B
TR202	4A549	TRANS LF SS N BC549B
TR203	4A549	TRANS LF SS N BC549B
TR204	4A557	TRANS LF SS P BC557B
TR300	4A549	TRANS LF SS N BC549B
TR301	4A549	TRANS LF SS N BC549B
TX200	L866TX	9 CD COOL FRAME TX MULTI-VOLTAGE
X100	7W008	CER RESON 8.00MHz
X300	7W005	CER RESON 4.00MHz
Y200	F185	TX WIRE RESTRAINT



DRAWING TITLE				
<b>CD92T - DISPLAY AND SYSTEM MICRO</b>				
23425 <b>A &amp; R Cambridge Ltd.</b> Pembroke Avenue Denny Industrial Centre Waterbeach Cambridge CB5 9PB		<b>Circuit Diagram</b>		
Notes:				
01_E007	WAF/TGP	13/12/01	DISPLAY CRADLE CHANGED TO NSULATED ASSY	4.1
01_1147	WAF	24/10/01	UPDATE FOR EMC AND W LSONS REQUESTS & UPDATE PCB TO AWA STD	4.0
01_1123	TGP		Up-Issue for PCB	2.1
	CW		Initial Release	1.0
ECO No.	INITIALS	DATE	DESCRIPTION OF CHANGE	ISSUE
		Date Printed 14-Dec-2001	Drawn by: JR	Sheet 1 of 7 DRAWING NO. L934CT

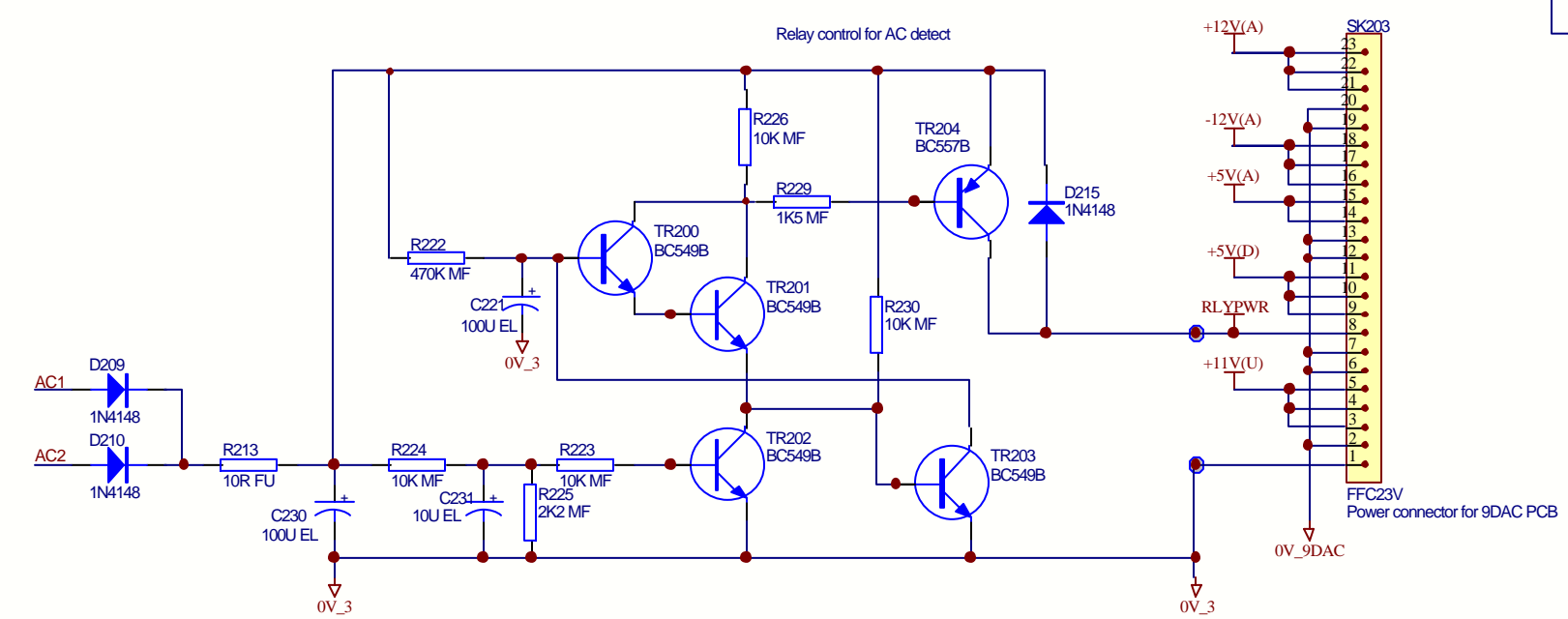




NB: CABLE ASSEMBLY L920CA GOES BETWEEN BRN BRN AND BLU BLU FROM MAINS SWITCH TO BACK OF PCB



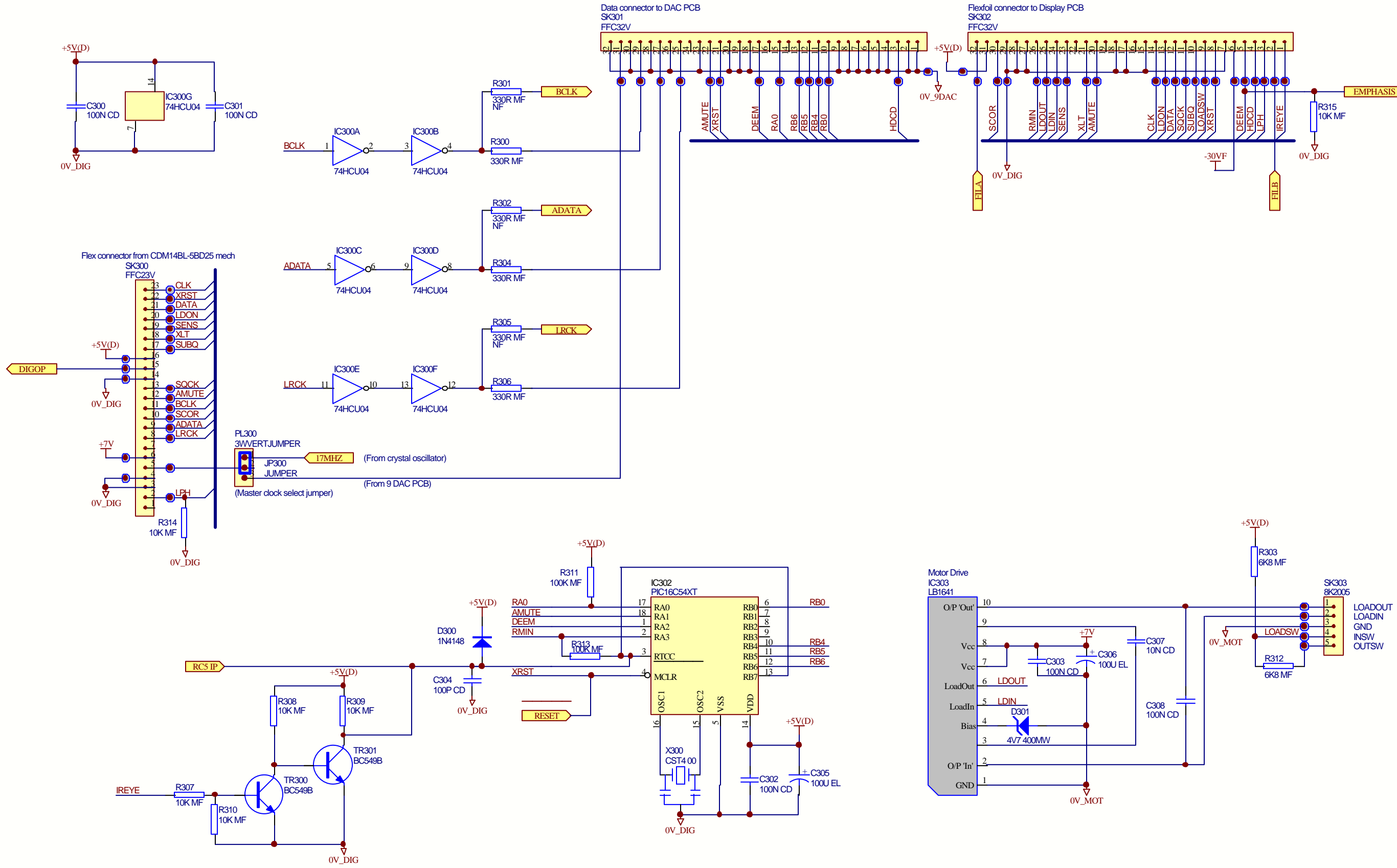
- TX FIXING SCREWS
- Y201 SCREW HF4V09B
  - Y202 SCREW HF4V09B
  - Y203 SCREW HF4V09B
  - Y204 SCREW HF4V09B



AFFIX TO TX BETWEEN ANALOGUE CIRCUITRY & TX

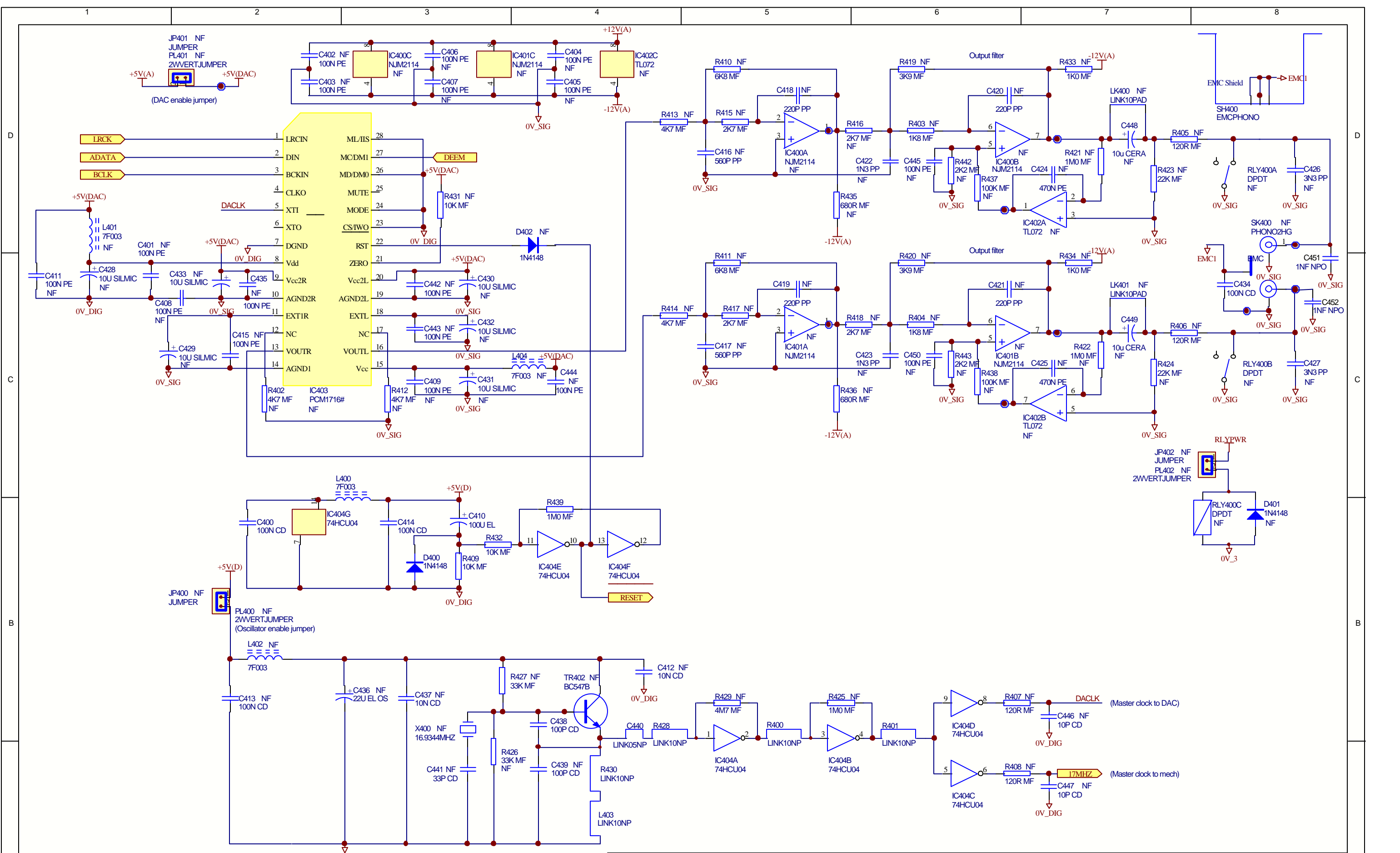
- MC200
- E922MC
  - E922MC
- MC201
- E923MC
  - E923MC

DRAWING TITLE								
CD92T - POWER SUPPLIES		01_E007	WAF/TGP	13/12/01	DISPLAY CRADLE CHANGED TO INSULATED ASSY		4.1	
<b>23425</b> A & R Cambridge Ltd. Pembroke Avenue Denny Industrial Centre Waterbeach Cambridge CB5 9PB		<b>Circuit Diagram</b>		01_1147	WAF	24/10/01	UPDATE FOR EMC AND WILSONS REQUESTS & UPDATE PCB TO AWA STD	4.0
		Notes:		01_1123	TGP		Up-Issue for PCB	2.1
				01_1123	TGP		L920CA ADDED TO SCM	
		ECO No.	INITIALS	DATE	DESCRIPTION OF CHANGE		ISSUE	
Filename		Date Printed		Drawn by:		Sheet 2 of 7		
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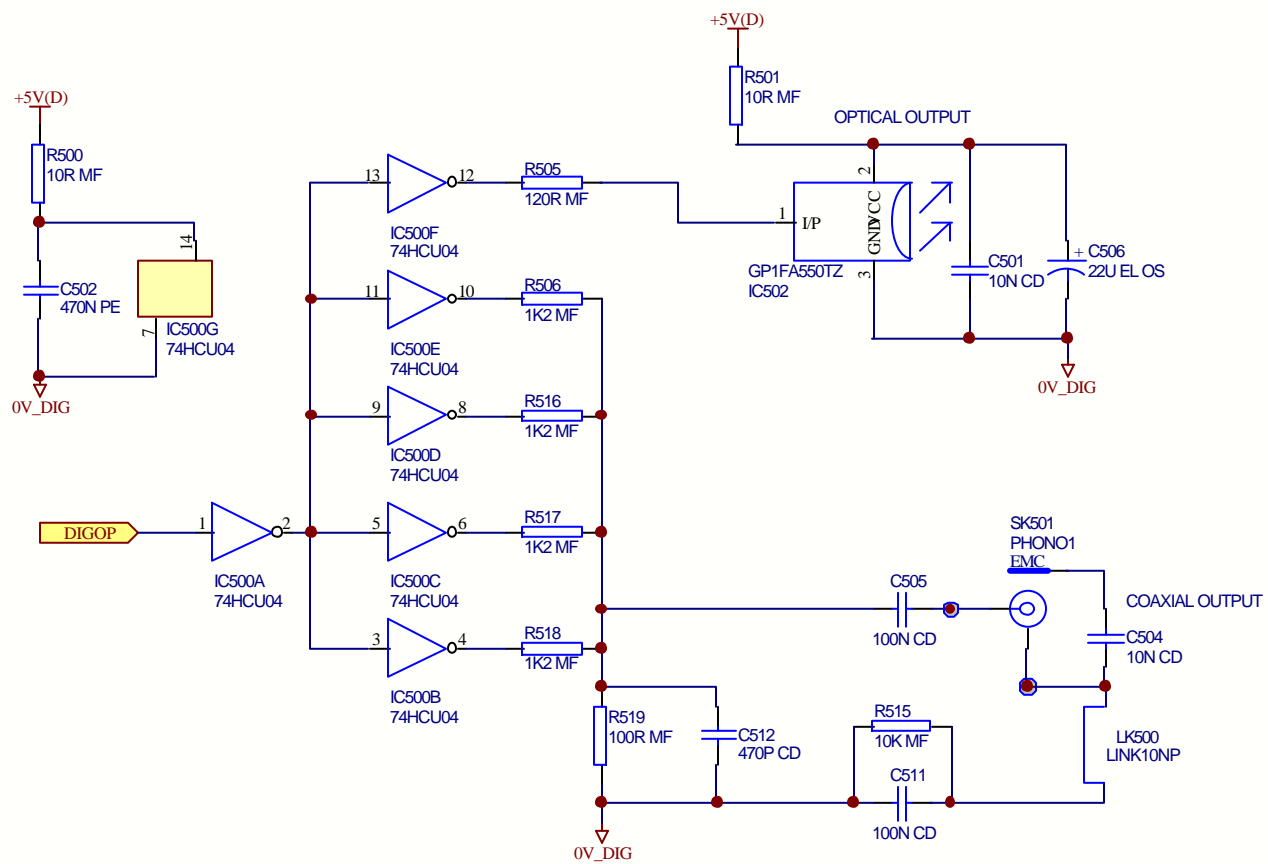
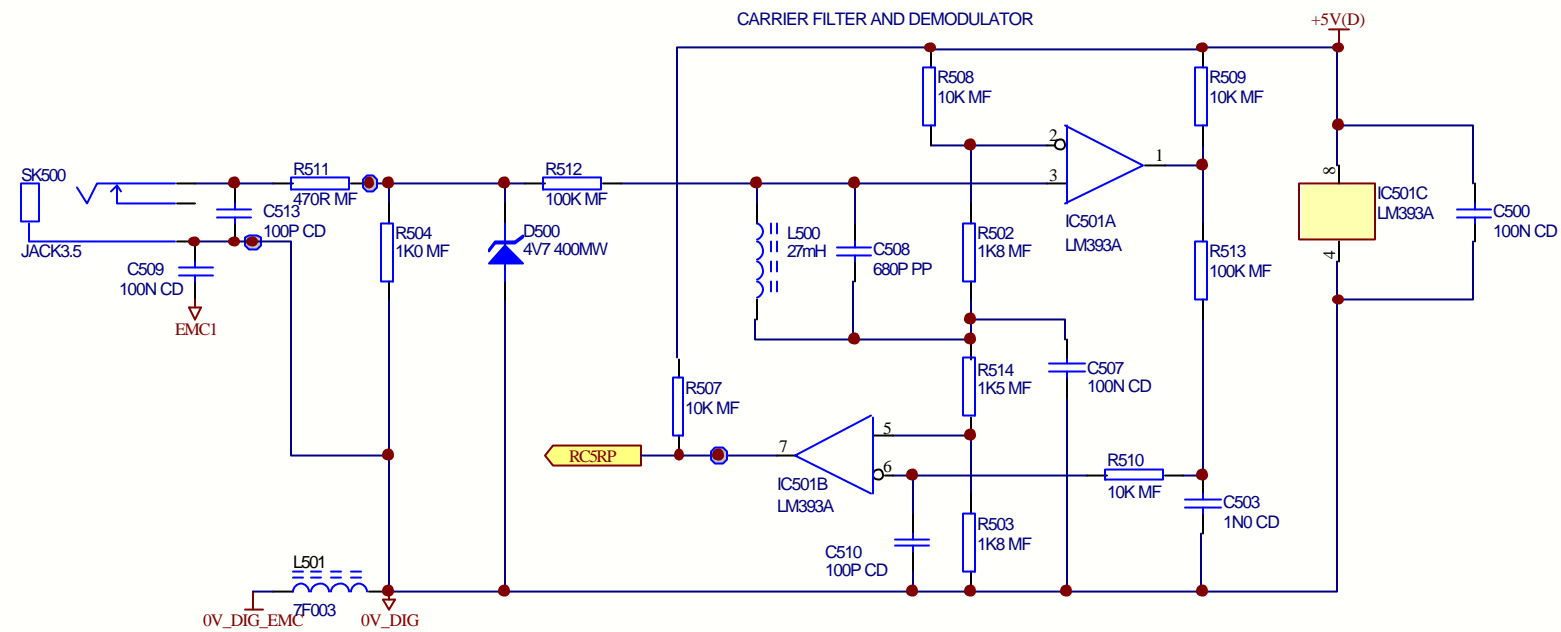


DRAWING TITLE				
<b>CD92T - MECH CONNECTS, MOTOR DRIVE AND IR MICRO</b>				
<b>23425</b> <b>A &amp; R Cambridge Ltd.</b> <b>Pembroke Avenue</b> <b>Denny Industrial Centre</b> <b>Waterbeach</b> <b>Cambridge CB5 9PB</b>		<b>Circuit Diagram</b>		
		Notes:		
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		Date Printed	Drawn by:	DESCRIPTION OF CHANGE
		14-Dec-2001	JR	Sheet 3 of 7
				DRAWING NO. L934CT

ECO No.	INITIALS	DATE	DESCRIPTION OF CHANGE	ISSUE
01_E007	WAF/TGP	13/12/01	DISPLAY CRADLE CHANGED TO INSULATED ASSY	4.1
01_1147	WAF	24/10/01	UPDATE FOR EMC AND W LSONS REQUESTS & UPDATE PCB TO AWA STD	4.0
01_1123	TGP		Up-Issue for PCB	2.1
	CW		Initial Release	1.0



DRAWING TITLE				
CD92T - DAC, OSCILLATOR AND ANALOGUE OUTPUTS				
23425				
A & R Cambridge Ltd. Pembroke Avenue Denny Industrial Centre Waterbeach Cambridge CB5 9PB				
Circuit Diagram				
Notes:				
01_E007	WAF/TGP	13/12/01	DISPLAY CRADLE CHANGED TO INSULATED ASSY	4.1
01_1147	WAF	24/10/01	UPDATE FOR EMC AND W LSONS REQUESTS & UPDATE PCB TO AWA STD	4.0
01_1123	TGP		Up-Issue for PCB	2.1
	CW		Initial Release	1.0
ECO No.	INITIALS	DATE	DESCRIPTION OF CHANGE	ISSUE
Date Printed				
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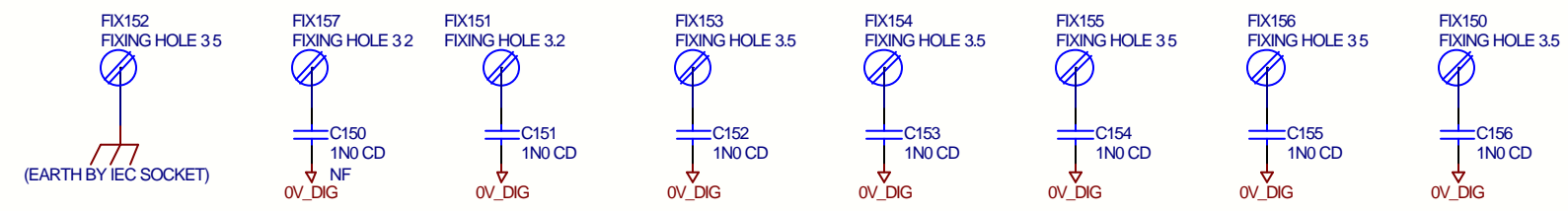
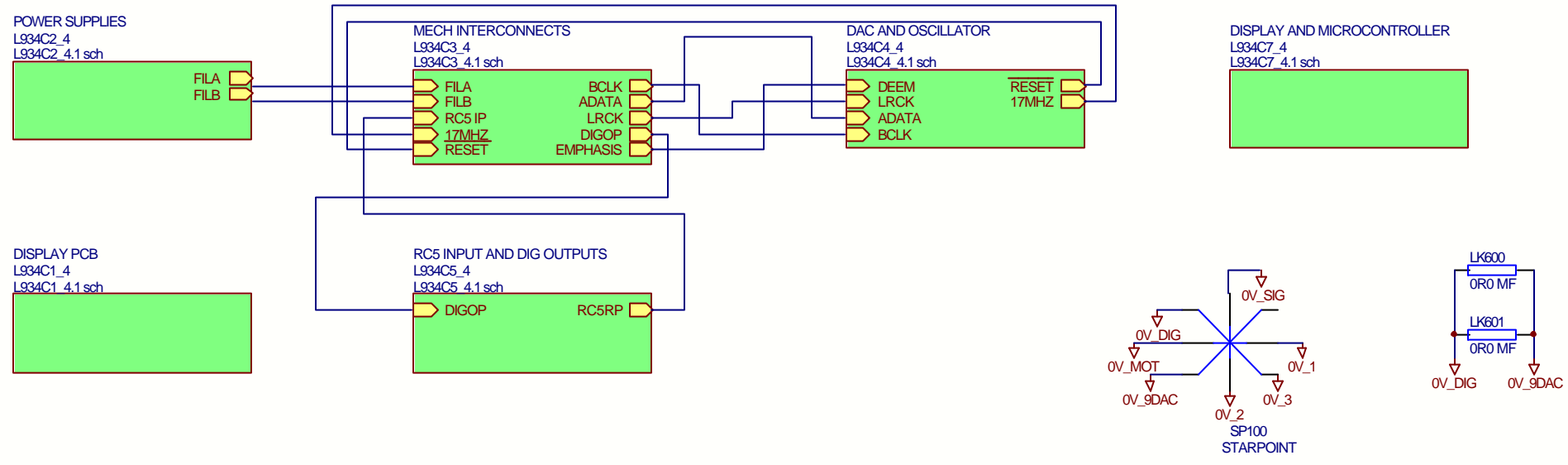
DRAWING TITLE					
CD92T - REAR PANEL RC5 & DIGITAL OUTPUT					
<b>23425</b> <b>A &amp; R Cambridge Ltd.</b> <b>Pembroke Avenue</b> <b>Denny Industrial Centre</b> <b>Waterbeach</b> <b>Cambridge CB5 9PB</b>				Circuit Diagram	
				Notes:	
Filename				Date Printed	
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Drawn by:				Sheet 5 of 7	
JR				DRAWING NO. L934CT	
ECO No.		INITIALS		DATE	
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01_1147		WAF		24/10/01	
01_1123		TGP			
CW				Up-Issue for PCB	
				Initial Release	
				10	
DESCRIPTION OF CHANGE				ISSUE	
DISPLAY CRADLE CHANGED TO INSULATED ASSY				4.1	
UPDATE FOR EMC AND W LSONS REQUESTS & UPDATE PCB TO AWA STD				4.0	

D

C

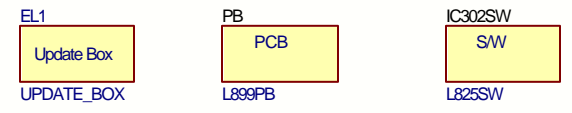
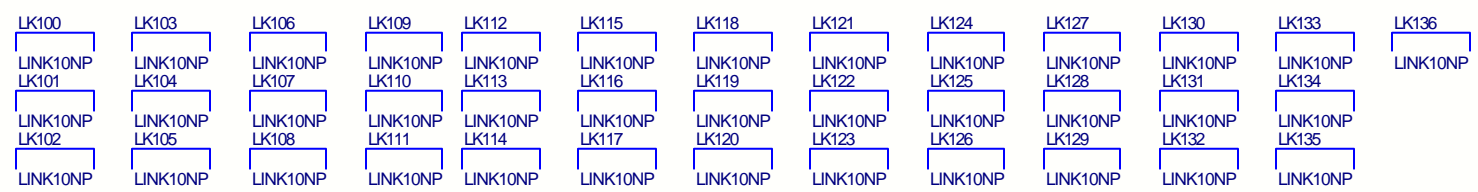
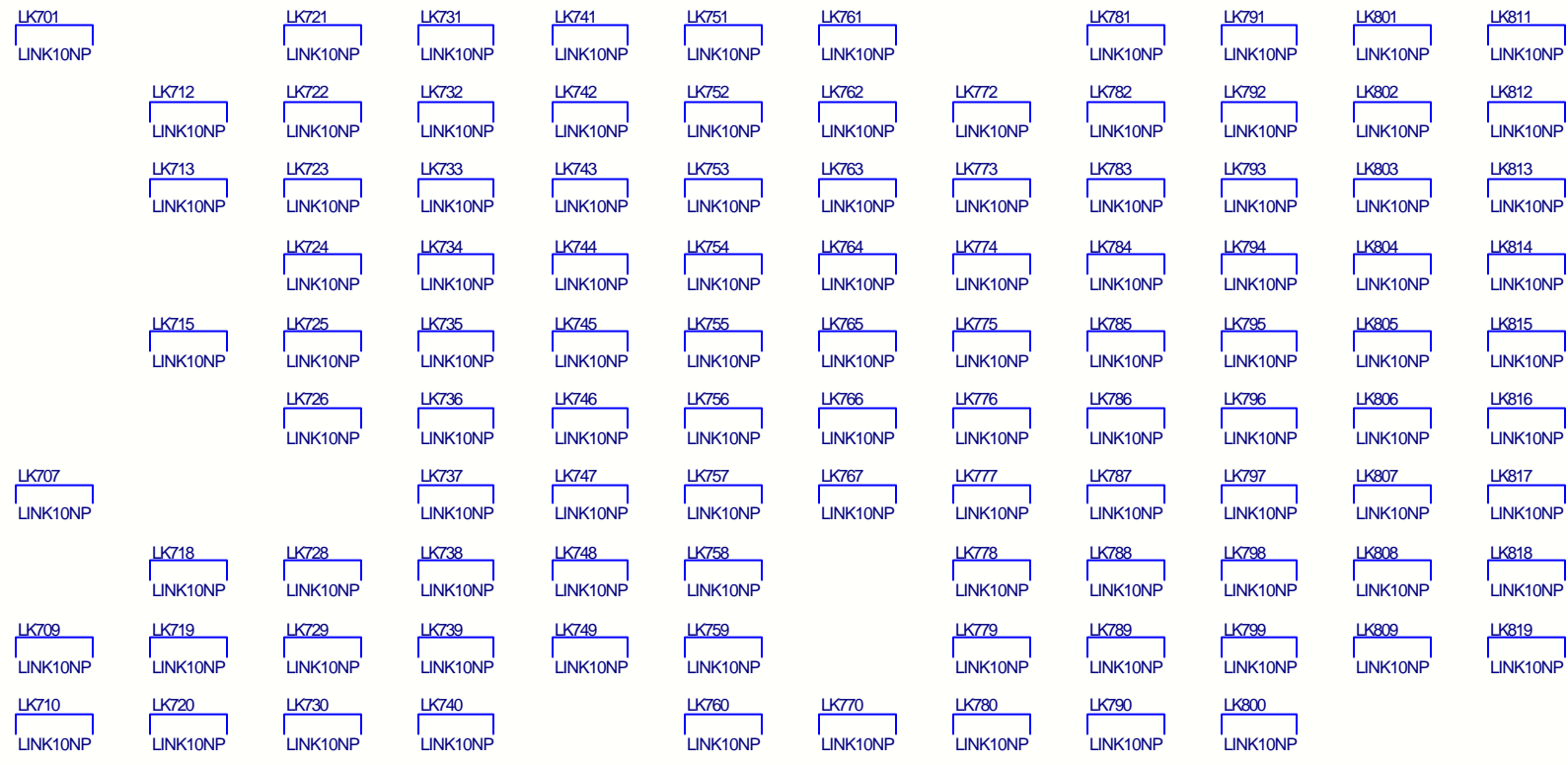
B

A



NB:- THIS SCHEMATIC MUST ONLY BE MODIFIED AS A SUB CIRCUIT OF L899CT (CD72T)  
USE EXCLUDE NF WHEN CREATING THE BOM

DRAWING TITLE							
CD92T - TOP LEVEL SCHEMATIC		01_E007	WAF/TGP	13/12/01	DISPLAY CRADLE CHANGED TO INSULATED ASSY		4.1
23425	Circuit Diagram	01_1147	WAF	24/10/01	UPDATE FOR EMC AND W LSONS REQUESTS & UPDATE PCB TO AWA STD		4.0
		01_1123	TGP		Up-Issue for PCB		2.1
			CW		Initial Release		1.0
A & R Cambridge Ltd. Pembroke Avenue Denny Industrial Centre Waterbeach Cambridge CB5 9PB		ECO No.	INITIALS	DATE	DESCRIPTION OF CHANGE		ISSUE
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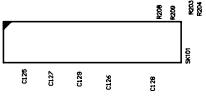
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<b>CD92T - LINKS AND MECH PARTS</b>				
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01_1147	WAF	24/10/01	UPDATE FOR EMC AND WILSONS REQUESTS & UPDATE PCB TO AWA STD	4.0
01_1123	TGP		Up-Issue for PCB	2.1
	CW		Initial Release	1.0
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Filename		Date Printed	Drawn by:	
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			Sheet 7 of 7	DRAWING NO. L934CT

# **DAC Board L949**

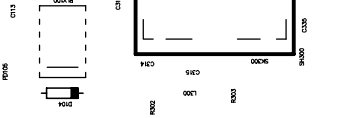
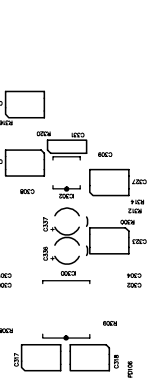
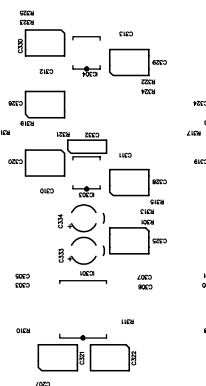
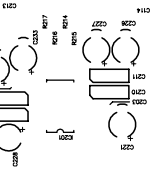
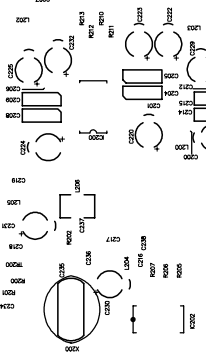
## **Contents**

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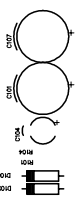
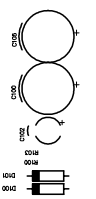
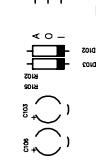
- **Component overlay**
- **Parts list**
- **Circuit diagrams**



- CL18
- CL19
- CL20
- CL21\*
- CL22



L949AY
CD82 DAC PCB
L949PB
REV 0 1 2 3 4 5
ISSUE 3





## L949 CD82 DAC Board Parts List Issue 3.05

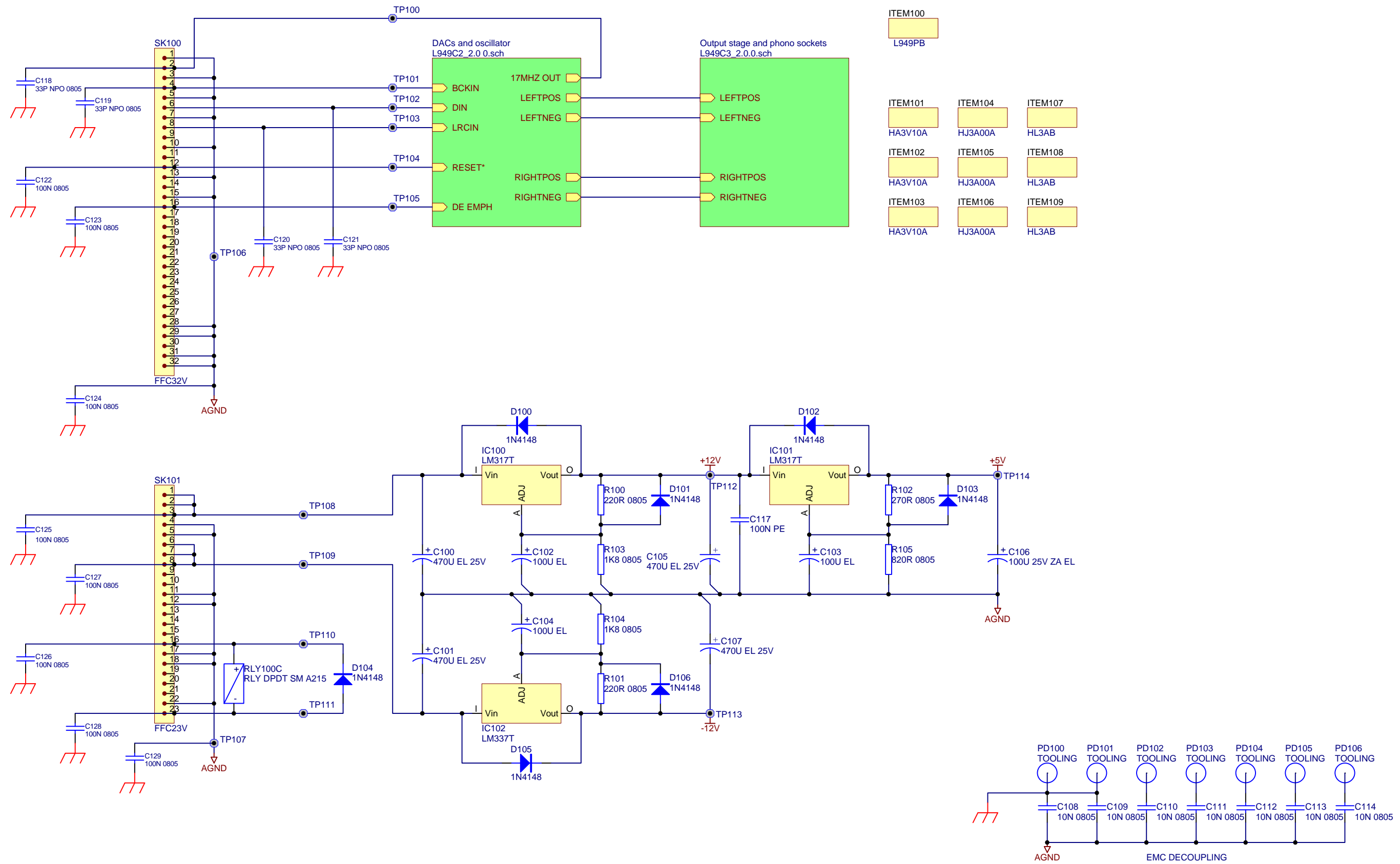
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C100	2N747	Capacitor Radial Electrolytic Dia 10mm Pitch 5mm 470UF 25V
C101	2N747	Capacitor Radial Electrolytic Dia 10mm Pitch 5mm 470UF 25V
C102	2N710	Capacitor Radial Electrolytic Dia 5mm Pitch 5mm 100UF 25V
C103	2N710	Capacitor Radial Electrolytic Dia 5mm Pitch 5mm 100UF 25V
C104	2N710	Capacitor Radial Electrolytic Dia 5mm Pitch 5mm 100UF 25V
C105	2N747	Capacitor Radial Electrolytic Dia 10mm Pitch 5mm 470UF 25V
C106	2P710ZA	Capacitor Radial Electrolytic Rubycon ZA Series 100UF 25V
C107	2N747	Capacitor Radial Electrolytic Dia 10mm Pitch 5mm 470UF 25V
C108	2J310	Capacitor SM 0805 X7R Ceramic 10% 50V 10N
C109	2J310	Capacitor SM 0805 X7R Ceramic 10% 50V 10N
C110	2J310	Capacitor SM 0805 X7R Ceramic 10% 50V 10N
C111	2J310	Capacitor SM 0805 X7R Ceramic 10% 50V 10N
C112	2J310	Capacitor SM 0805 X7R Ceramic 10% 50V 10N
C113	2J310	Capacitor SM 0805 X7R Ceramic 10% 50V 10N
C114	2J310	Capacitor SM 0805 X7R Ceramic 10% 50V 10N
C117	2KA410	Capacitor Boxed Polyester 5mm Pitch 5% 100VDC 100N
C118	2L033	Capacitor SM 0805 NPO Ceramic 5% 100V 33P
C119	2L033	Capacitor SM 0805 NPO Ceramic 5% 100V 33P
C120	2L033	Capacitor SM 0805 NPO Ceramic 5% 100V 33P
C121	2L033	Capacitor SM 0805 NPO Ceramic 5% 100V 33P
C122	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C123	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C124	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C125	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C126	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C127	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C128	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C129	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C200	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C201	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C202	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C203	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C204	2KA410	Capacitor Boxed Polyester 5mm Pitch 5% 100VDC 100N
C205	2KA410	Capacitor Boxed Polyester 5mm Pitch 5% 100VDC 100N
C206	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C207	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C208	2KA410	Capacitor Boxed Polyester 5mm Pitch 5% 100VDC 100N
C209	2KA410	Capacitor Boxed Polyester 5mm Pitch 5% 100VDC 100N
C210	2KA410	Capacitor Boxed Polyester 5mm Pitch 5% 100VDC 100N
C211	2KA410	Capacitor Boxed Polyester 5mm Pitch 5% 100VDC 100N
C212	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C213	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C214	2KA410	Capacitor Boxed Polyester 5mm Pitch 5% 100VDC 100N
C215	2KA410	Capacitor Boxed Polyester 5mm Pitch 5% 100VDC 100N
C216	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C217	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C218	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C219	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C220	2N610	Capacitor Radial Electrolytic Dia 5mm Pitch 5mm 10UF 50V
C221	2N610	Capacitor Radial Electrolytic Dia 5mm Pitch 5mm 10UF 50V
C222	2N610	Capacitor Radial Electrolytic Dia 5mm Pitch 5mm 10UF 50V
C223	2N610	Capacitor Radial Electrolytic Dia 5mm Pitch 5mm 10UF 50V
C224	2N610	Capacitor Radial Electrolytic Dia 5mm Pitch 5mm 10UF 50V
C225	2N610	Capacitor Radial Electrolytic Dia 5mm Pitch 5mm 10UF 50V
C226	2N610	Capacitor Radial Electrolytic Dia 5mm Pitch 5mm 10UF 50V
C227	2N610	Capacitor Radial Electrolytic Dia 5mm Pitch 5mm 10UF 50V
C228	2N610	Capacitor Radial Electrolytic Dia 5mm Pitch 5mm 10UF 50V
C229	2N610	Capacitor Radial Electrolytic Dia 5mm Pitch 5mm 10UF 50V
C230	2N610	Capacitor Radial Electrolytic Dia 5mm Pitch 5mm 10UF 50V
C231	2N610	Capacitor Radial Electrolytic Dia 5mm Pitch 5mm 10UF 50V
C232	2N610	Capacitor Radial Electrolytic Dia 5mm Pitch 5mm 10UF 50V
C233	2N610	Capacitor Radial Electrolytic Dia 5mm Pitch 5mm 10UF 50V
C234	2L047	Capacitor SM 0805 NPO Ceramic 5% 100V 47P

## L949 CD82 DAC Board Parts List Issue 3.05

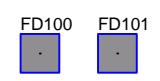
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C236	2L110	Capacitor SM 0805 NPO Ceramic 5% 100V 100P
C237	2J210	Capacitor SM 0805 X7R Ceramic 10% 50V 1N
C238	2L010	Capacitor SM 0805 NPO Ceramic 5% 100V 10P
C300	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C301	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C302	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C303	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C304	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C305	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C306	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C307	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C308	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C309	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C310	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C311	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C312	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C313	2J410	Capacitor SM 0805 X7R Ceramic 10% 50V 100N
C314	2L147	Capacitor SM 0805 NPO Ceramic 5% 100V 470P
C315	2L147	Capacitor SM 0805 NPO Ceramic 5% 100V 470P
C316	2L147	Capacitor SM 0805 NPO Ceramic 5% 100V 470P
C317	2D110N	Capacitor Boxed Polyprop 5mm Pitch 63V 5% 100P
C318	2D110N	Capacitor Boxed Polyprop 5mm Pitch 63V 5% 100P
C319	2D110N	Capacitor Boxed Polyprop 5mm Pitch 63V 5% 100P
C320	2D110N	Capacitor Boxed Polyprop 5mm Pitch 63V 5% 100P
C321	2D110N	Capacitor Boxed Polyprop 5mm Pitch 63V 5% 100P
C322	2D110N	Capacitor Boxed Polyprop 5mm Pitch 63V 5% 100P
C323	2D210	Capacitor Boxed Polyprop 5mm Pitch 63V 5% 1N0
C324	2D210	Capacitor Boxed Polyprop 5mm Pitch 63V 5% 1N0
C325	2D210	Capacitor Boxed Polyprop 5mm Pitch 63V 5% 1N0
C326	2D210	Capacitor Boxed Polyprop 5mm Pitch 63V 5% 1N0
C327	2D122	Capacitor Boxed Polyprop 5mm Pitch 63V 5% 220P
C328	2D122	Capacitor Boxed Polyprop 5mm Pitch 63V 5% 220P
C329	2K510	Capacitor Boxed Polyester 5mm Pitch 10% 63V 1U0
C330	2K510	Capacitor Boxed Polyester 5mm Pitch 10% 63V 1U0
C331	2KA410	Capacitor Boxed Polyester 5mm Pitch 5% 100VDC 100N
C332	2KA410	Capacitor Boxed Polyester 5mm Pitch 5% 100VDC 100N
C333	2P710ZA	Capacitor Radial Electrolytic Rubycon ZA Series 100UF 25V
C334	2P710ZA	Capacitor Radial Electrolytic Rubycon ZA Series 100UF 25V
C335	2L147	Capacitor SM 0805 NPO Ceramic 5% 100V 470P
C336	2P710ZA	Capacitor Radial Electrolytic Rubycon ZA Series 100UF 25V
C337	2P710ZA	Capacitor Radial Electrolytic Rubycon ZA Series 100UF 25V
D100	3A4148	Diode Small Signal 1N4148 DO-35 Package
D101	3A4148	Diode Small Signal 1N4148 DO-35 Package
D102	3A4148	Diode Small Signal 1N4148 DO-35 Package
D103	3A4148	Diode Small Signal 1N4148 DO-35 Package
D104	3A4148	Diode Small Signal 1N4148 DO-35 Package
D105	3A4148	Diode Small Signal 1N4148 DO-35 Package
D106	3A4148	Diode Small Signal 1N4148 DO-35 Package
IC100	5D317T	IC VOLTAGE REGULATOR ADJ LM317T TO-220 PACKAGE
IC101	5D317T	IC VOLTAGE REGULATOR ADJ LM317T TO-220 PACKAGE
IC102	5D337	IC VOLTAGE REGULATOR NEG ADJ LM337T TO-220 PACKAGE
IC200	5A8740	IC AUDIO DAC XWM8740EDS SSOP-28 PACKAGE
IC201	5A8740	IC AUDIO DAC XWM8740EDS SSOP-28 PACKAGE
IC202	5K7404	IC HEX INVERTER 74HCU04D SMT
IC300	5B103	IC Instrumentation Amp Burr Brown INA103KU SO-16W Package
IC301	5B103	IC Instrumentation Amp Burr Brown INA103KU SO-16W Package
IC302	5B2134	Opamp OPA2134UA SO-8 Package
IC303	5B2134	Opamp OPA2134UA SO-8 Package
IC304	5B2134	Opamp OPA2134UA SO-8 Package
L200	7F004	Ferrite Bead SM1206 70R@100MHz
L201	7F004	Ferrite Bead SM1206 70R@100MHz
L202	7F004	Ferrite Bead SM1206 70R@100MHz

## L949 CD82 DAC Board Parts List Issue 3.05

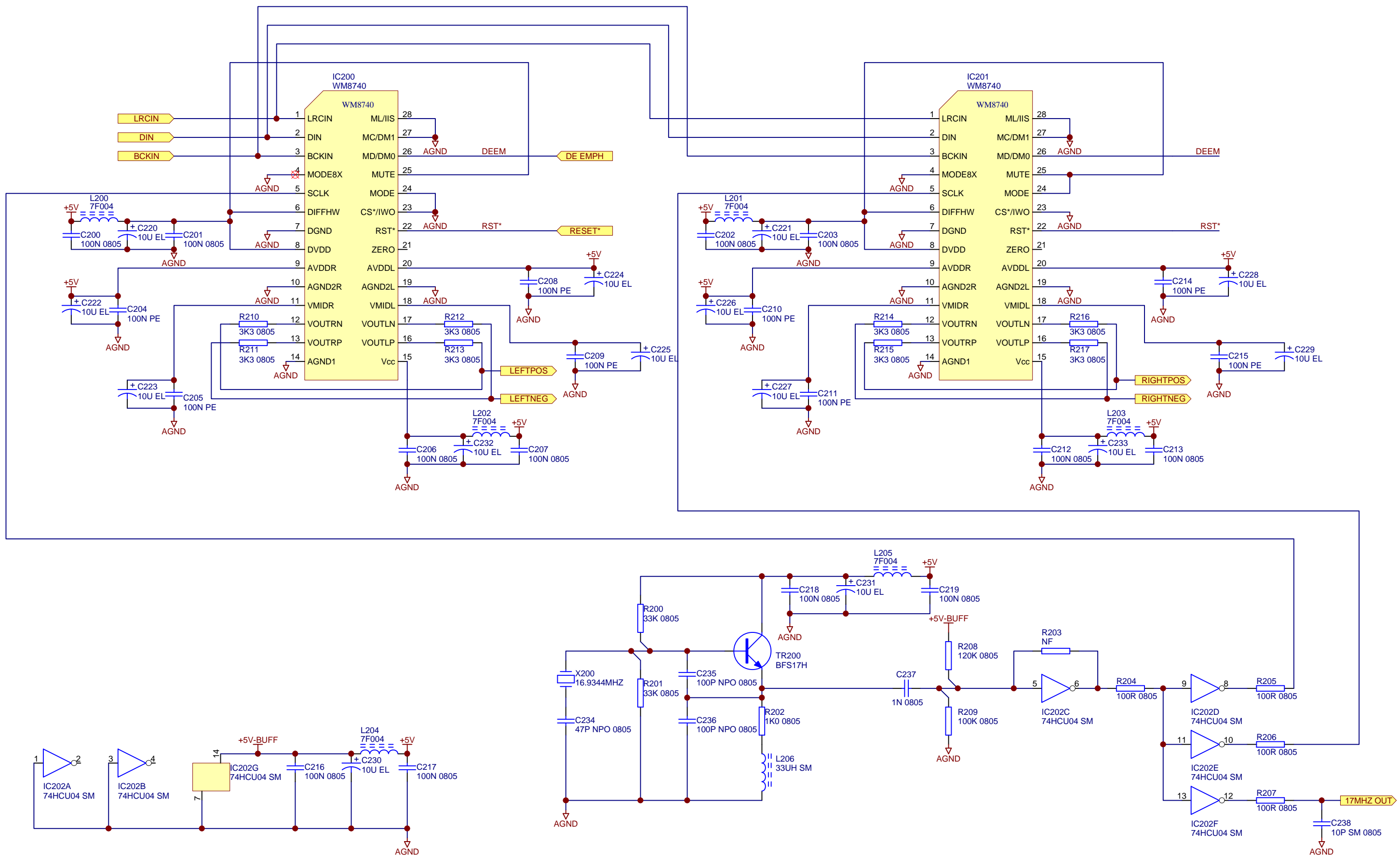
Designator	Part	Description
L203	7F004	Ferrite Bead SM1206 70R@100MHz
L204	7F004	Ferrite Bead SM1206 70R@100MHz
L205	7F004	Ferrite Bead SM1206 70R@100MHz
L206	7B033	Inductor Surface Mount 33U
L300	7F004	Ferrite Bead SM1206 70R@100MHz
R100	1M122	Resistor 0805 Surface Mount 0.125W 1% 220R
R101	1M122	Resistor 0805 Surface Mount 0.125W 1% 220R
R102	1M127	Resistor 0805 Surface Mount 0.125W 1% 270R
R103	1M218	Resistor 0805 Surface Mount 0.125W 1% 1K8
R104	1M218	Resistor 0805 Surface Mount 0.125W 1% 1K8
R105	1M182	Resistor 0805 Surface Mount 0.125W 1% 820R
R200	1M333	Resistor 0805 Surface Mount 0.125W 1% 33K
R201	1M333	Resistor 0805 Surface Mount 0.125W 1% 33K
R202	1M210	Resistor 0805 Surface Mount 0.125W 1% 1K0
R203	1M510	Resistor 0805 Surface Mount 0.125W 1% 1M0
R204	1M110	Resistor 0805 Surface Mount 0.125W 1% 100R
R205	1M110	Resistor 0805 Surface Mount 0.125W 1% 100R
R206	1M110	Resistor 0805 Surface Mount 0.125W 1% 100R
R207	1M110	Resistor 0805 Surface Mount 0.125W 1% 100R
R208	1M412	Resistor 0805 Surface Mount 0.125W 1% 120K
R209	1M410	Resistor 0805 Surface Mount 0.125W 1% 100K
R210	1M233	Resistor 0805 Surface Mount 0.125W 1% 3K3
R211	1M233	Resistor 0805 Surface Mount 0.125W 1% 3K3
R212	1M233	Resistor 0805 Surface Mount 0.125W 1% 3K3
R213	1M233	Resistor 0805 Surface Mount 0.125W 1% 3K3
R214	1M233	Resistor 0805 Surface Mount 0.125W 1% 3K3
R215	1M233	Resistor 0805 Surface Mount 0.125W 1% 3K3
R216	1M233	Resistor 0805 Surface Mount 0.125W 1% 3K3
R217	1M233	Resistor 0805 Surface Mount 0.125W 1% 3K3
R300	1M218	Resistor 0805 Surface Mount 0.125W 1% 1K8
R301	1M218	Resistor 0805 Surface Mount 0.125W 1% 1K8
R302	1M110	Resistor 0805 Surface Mount 0.125W 1% 100R
R303	1M110	Resistor 0805 Surface Mount 0.125W 1% 100R
R308	1M047	Resistor 0805 Surface Mount 0.125W 1% 47R
R309	1M047	Resistor 0805 Surface Mount 0.125W 1% 47R
R310	1M047	Resistor 0805 Surface Mount 0.125W 1% 47R
R311	1M047	Resistor 0805 Surface Mount 0.125W 1% 47R
R312	1M256	Resistor 0805 Surface Mount 0.125W 1% 5K6
R313	1M256	Resistor 0805 Surface Mount 0.125W 1% 5K6
R314	1M220	Resistor 0805 Surface Mount 0.125W 1% 2K0
R315	1M220	Resistor 0805 Surface Mount 0.125W 1% 2K0
R316	1M227	Resistor 0805 Surface Mount 0.125W 1% 2K7
R317	1M227	Resistor 0805 Surface Mount 0.125W 1% 2K7
R318	1M227	Resistor 0805 Surface Mount 0.125W 1% 2K7
R319	1M227	Resistor 0805 Surface Mount 0.125W 1% 2K7
R320	1M275	Resistor 0805 Surface Mount 0.125W 1% 7K5
R321	1M275	Resistor 0805 Surface Mount 0.125W 1% 7K5
R322	1M447	Resistor 0805 Surface Mount 0.125W 1% 470K
R323	1M447	Resistor 0805 Surface Mount 0.125W 1% 470K
R324	1M410	Resistor 0805 Surface Mount 0.125W 1% 100K
R325	1M410	Resistor 0805 Surface Mount 0.125W 1% 100K
RLY100	A215	Relay 2P2T 12V SM
SH300	E821MC	SHIELD EMC PHONO SOCKET TIN PLATE
SK100	8K8032	CON 1.25MM VERTICAL FFC 32WAY
SK101	8K8023	CON 1.25MM VERTICAL FFC 23WAY
SK300	8D225	PHONO SKT 4-WAY GOLD
TR200	4D17H	Transistor BFS17H SOT23 Package
X200	7X012	Crystal 16.9344MHz HC49
PCB	L949PB	BLANK PCB CD82 DAC
SCREW	HA3V10A	M SCREW TORX M3x10MM ST ZP
NUT	HJ3A00A	NUT M3 FULL STZP (1000)
WASHER	HL3AB	WASHER M3 PLAIN ST BLK



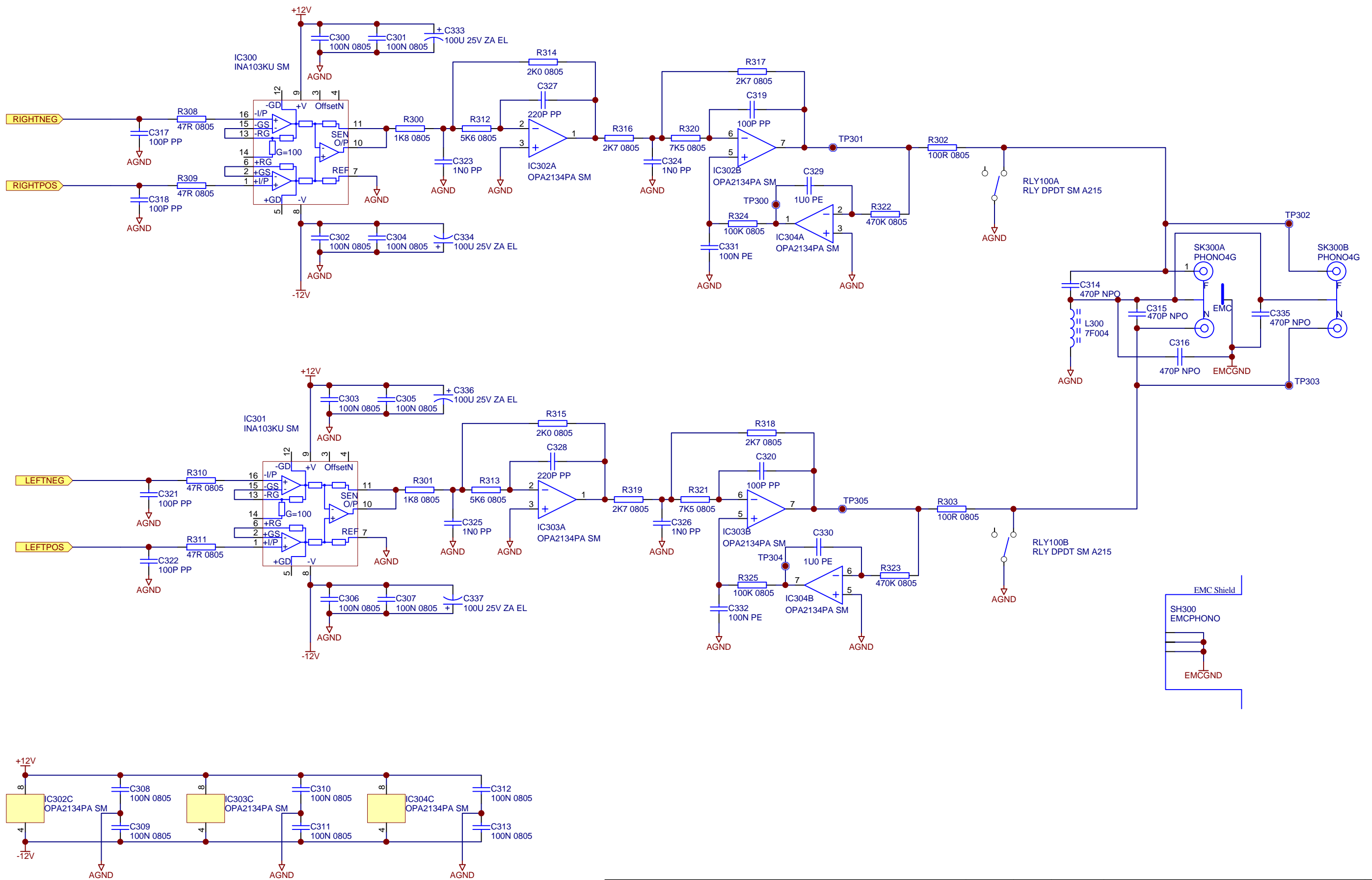
- ITEM100 L949PB
- ITEM101 HA3V10A
- ITEM102 HA3V10A
- ITEM103 HA3V10A
- ITEM104 HJ3A00A
- ITEM105 HJ3A00A
- ITEM106 HJ3A00A
- ITEM107 HL3AB
- ITEM108 HL3AB
- ITEM109 HL3AB



DRAWING TITLE							
<b>CD82 DAC - TOP SHEET AND PSU</b>							
<b>ARCAM</b> A & R Cambridge Ltd. Pembroke Avenue Waterbeach Cambridge CB5 9PB	Filename:	L949C1_3.0.0.sch	02_E154	WAF	25/07/02	PCB MODS ONLY	3.0.0
	Notes:		02_E125	AJD	27/06/02	ISSUE 2 backwards compatibility mods	2.0.0
			02_E121	AJD	25/06/02	UP ISSUE to V1 add EMC capacitors.	1.0.0
	ECO No.	INITIALS	DATE	DESCRIPTION OF CHANGE		ISSUE	
Contact Engineer:	Andrew Dutton	Contact Tel:	(01223) 203200	Printed:	24-Jul-2002	Sheet 1 of 2	DRAWING NO. L949CT



DRAWING TITLE							
<b>CD82 DAC - OSC AND DACs</b>							
<b>ARCAM</b> A & R Cambridge Ltd. Pembroke Avenue Waterbeach Cambridge CB5 9PB	Filename:	L949C2_3.0.0.sch	02_E154	WAF	25/07/02	PCB MODS ONLY	3.0.0
	Notes:		02_E125	AJD	27/06/02	ISSUE 2 backwards compatibility mods	2.0.0
			02_E121	AJD	25/06/02	UP ISSUE to V1 add EMC capacitors.	1.0.0
Contact Engineer:	Andrew Dutton	Contact Tel:	(01223) 203200	Printed:	24-Jul-2002	Sheet 2 of 3	DRAWING NO. L949CT



DRAWING TITLE							
<b>CD82 DAC - OUTPUT STAGE</b>							
<b>ARCAM</b> A & R Cambridge Ltd. Pembroke Avenue Waterbeach Cambridge CB5 9PB	Filename:	L949C3_3.0.0.sch	02_E154	WAF	25/07/02	PCB MODS ONLY	3.0.0
	Notes:		02_E125	AJD	27/06/02	ISSUE 2 backwards compatibility mods	2.0.0
			02_E121	AJD	25/06/02	UP ISSUE to V1 add EMC capacitors.	1.0.0
	ECO No.	INITIALS	DATE	DESCRIPTION OF CHANGE		ISSUE	
Contact Engineer:	Andrew Dutton	Contact Tel:	(01223) 203200	Printed:	24-Jul-2002	Sheet 2 of 2	DRAWING NO. L949CT

# **Mechanical Assembly**

## **Contents**

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- **General assembly  
parts list**

## CD82 General Assembly Parts List

ITEM	240V	115V	100V	SILVER	BLACK	DESCRIPTION	WHERE USED	QTY
	L815RC					REMOTE CONTROL CD DIVA SERIES CR314		
				E050AY	E050AYB	CD82T FRONT PANEL ASSEMBLY		1
				E840CP	E840CPB	COVER PLATE		1
				E993AY	E993AYB	CD82T DRAWER FRONT ASSEMBLY		1
				HA4V06S		M SCREW TORX M4X6MM STAINLESS STEEL	LID TO CHASSIS	4
					HAV406B	M SCREW TORX M4X6MM ST BLK		
	B2012					CD MECH SONY CDM14BL-5BD25		1
	C11166	C11256	C11316			FUSE 20MM	L899AY FS201	1
	E049AY					DIVA CD72T/92T REAR PANEL ASSEMBLY		1
	E061AY					DIVA CD72T/62T/92T CHASSIS ASSEMBLY		1
	E072AY					DIVA EXTENDED POWER BUTTON ASSEMBLY		1
	E800RS					MAINS IEC LEAD	REFER TO RUN-OUT SHEET FOR PART NO.	1
	E806PK					POLY BAG VENTILATED 415x535mm 350 GAUGE	TO PACKAGE UNIT	1
	E808MI					MAINS INSULATOR DIVA CDT		1
	E814PK					CARTON MULTI OUTER		0.33
	E817PK					PAIR OF LOW DIVA END CAPS		1
	E819BG					DIVA CD92T REAR PANEL BLANKING PLATE	REAR PANEL	1
	E836PK					CARTON DIVA LOW AMPS / CD / TUNER		1
	E838PK					BOX FITTING INNER DIVA	ACCESSORY CARD PARTITION	1
	E851MC					DAMPING PLATE DIVA CD72 / 92	BASE OF CHASSIS	1
	E879PM					FOOT		4
	E879SL					PRODUCT CONFIGURATION CONTROL LABEL	INSIDE CHASSIS NEXT TO SL115	1
	E897PM					CONFIRM BUTTON DT81 (MODIFIED SHANK)	IN FRONT PANEL	8
	E950SL					CARTON LABEL		1
	F022					FUSE HOLDER COVER	E899AY FS200 FS201	2
	F164					TAPE 3509 BK 3M TESA. 5MM WIDE	FRONT PANEL	400MM
	F214					WHITE 12MM DOUBLE SIDED STICKY TAPE	STICK ADAPTOR TO MECH FRONT	120MM
	F230					CLEAR RICHCO BUMPER	OUTSIDE FRONT FACE OF SUB-PANEL, TOP LEFT CORNER BEHIND DISPLAY PCB.	1
	H037					LOCKING SPACER LCBS44MM-01		2
	HA3V10A					M SCREW TORX M3X10MM ST ZP	PCB TO CHASSIS	8
	HA3V06A					M SCREW TORX P/H M3x6MM ST ZP	DISP PCB TO SUB PANEL (4), MECH BUSHES (3)	7





# ARCAM

All parts can be ordered via [spares@arcam.co.uk](mailto:spares@arcam.co.uk)

Pembroke Ave, Waterbeach, Cambridge, CB5 9PB, ENGLAND  
TEL: +44(0) 1223 203 203    FAX: +44(0) 1223 863 384