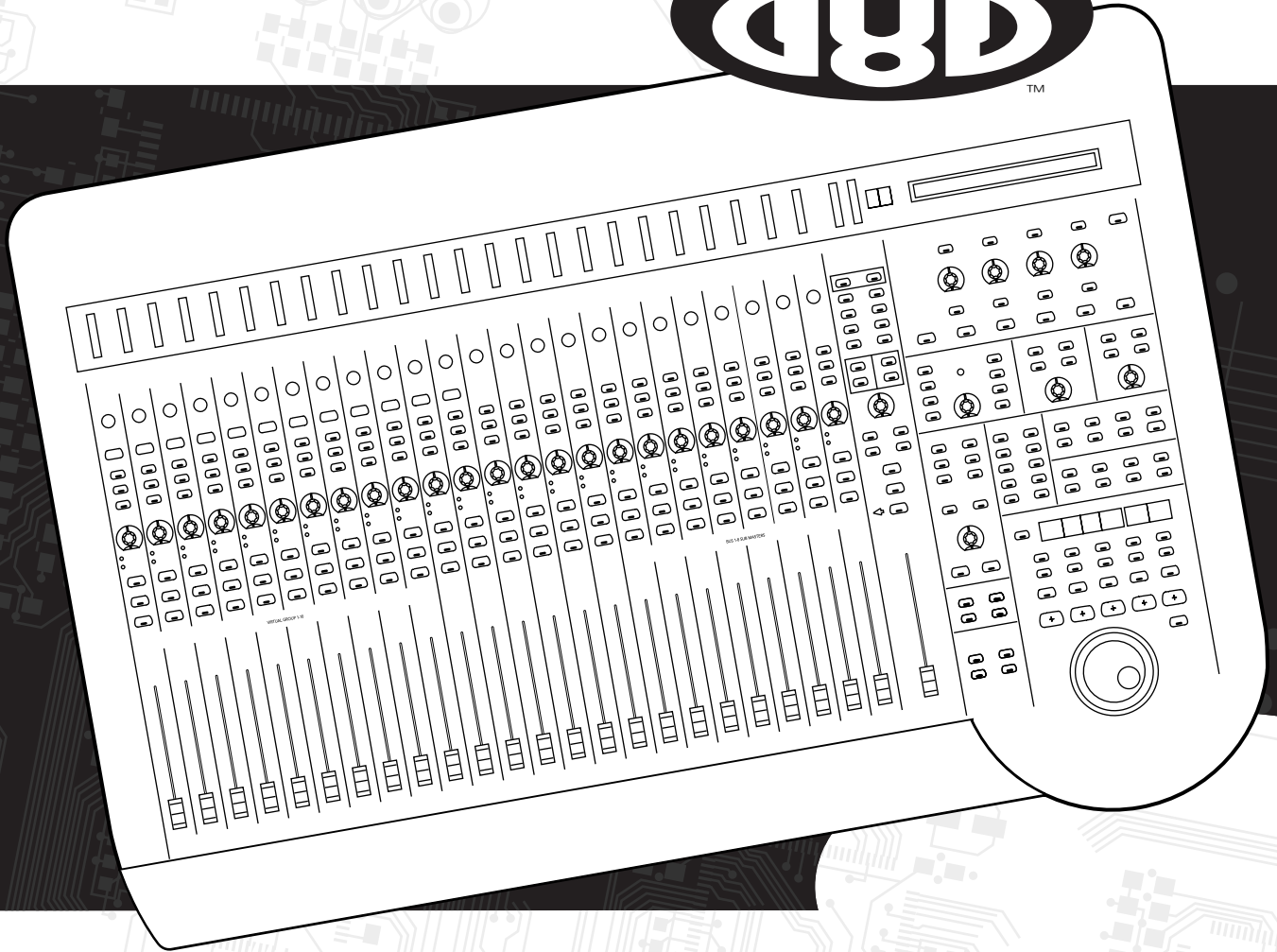

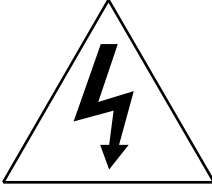


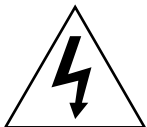
56 input, fully-automated digital mixing console.

# DIGITAL 8-BUS



# SERVICE MANUAL

	<h2 style="margin: 0;">CAUTION AVIS</h2> <p style="margin: 0;">RISK OF ELECTRIC SHOCK DO NOT OPEN <i>RISQUE DE CHOC ELECTRIQUE NE PAS OUVRIR</i></p>	
<p>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE THE COVER (OR BACK) NO USER SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED PERSONNEL</p> <p>WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE</p> <p>TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.</p>	<p><i>ATTENTION: POUR EVITER LES RISQUES DE CHOC ELECTRIQUE, NE PAS ENLEVER LE COUVERCLE. AUCUN ENTRETIEN DE PIECES INTERIEURES PAR L'USAGER. CONFIER L'ENTRETIEN AU PERSONNEL QUALIFIE.</i></p> <p><i>AVIS: POUR EVITER LES RISQUES D'INCENDIE OU D'ELECTROCUTION, N'EXPOSEZ PAS CET ARTICLE A LA PLUIE OU A L'HUMIDITE.</i></p> <p><i>POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR, UN PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS LAISSER AUCUNE PARTIE A DECOUVERT.</i></p>	
<p>This apparatus does not exceed the Class A/Class B (whichever is applicable) limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.</p> <p>ATTENTION :Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de class A/de class B (selon le cas) prescrites dans le règlement sur le brouillage radioélectrique édicté par les ministere des communications du Canada.</p> <p>This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio energy and, if not installed properly and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.</p>		



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure, that may be of sufficient magnitude to constitute a risk of electric shock to persons.

Le symbole éclair avec point de flèche à l'intérieur d'un triangle équilatéral est utilisé pour alerter l'utilisateur de la présence à l'intérieur du coffret de "voltage dangereux" non isolé d'ampleur suffisante pour constituer un risque d'électrocution.



The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Le point d'exclamation à l'intérieur d'un triangle équilatéral est employé pour alerter les utilisateurs de la présence d'instructions importantes pour le fonctionnement et l'entretien (service) dans le livret d'instruction accompagnant l'appareil.



**WARNING**  
 Service on the d8b must only be undertaken by experienced service technicians.



**! SMD !**  
 The d8b makes extensive use of surface mount components. Servicing technicians should have the tools, experience and patience to perform surface mount rework.

**! ESD !**  
 The d8b contains components that may be damaged by electrostatic discharge. All standard ESD precautions must be taken when servicing.

## Additional Safety Information

Mackie Designs' Digital 8•Bus has been tested and conforms to the following standards and directives of the European Council:

73/23/EEC	Low Voltage Directive with amendments 91/263/EEC, 89/392/EEC, and 89/336/EEC
89/336/EEC	EMC Directive
IEC 950(1991)/EN60950:1992	Electrical Safety Requirements
EN55103-1 and EN55103-2	Residential (E1) and Commercial (E2) Environments



Note: The following notice concerns the lithium battery located on the motherboard inside the Remote CPU.

**CAUTION:** DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER. DISPOSE OF USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.

**ATTENTION:** IL Y A DANGER D'EXPLOSION S'IL Y A REMPLACEMENT INCORRECT DE LA BATTERIE, REMPLACER UNIQUEMENT AVEC UNE BATTERIE DU MEME TYPE OU D'UN TYPE ÉQUIVALENT RECOMMANDÉ PAR LE CONSTRUCTEUR. METTRE AU REBUT LES BATTERIES USAGÉES CONFORMÉMENT AUX INSTRUCTIONS DU FABRICANT.

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# INTRODUCTION

This manual contains service information for the d8b digital audio mixer. To service the d8b, technicians should be familiar with op-amp based and discrete analog circuitry, digital troubleshooting, microprocessors, digital audio, DSP, ESD, ESP, and the operation/application of mixing consoles. Presentation of this manual does not constitute endorsement of qualifications by Mackie Designs.

This manual is available in Adobe® Portable Document Format (PDF), as part of Mackie Designs' Digital Service CD-ROM (part# 820-163-00). This is available to all Service centers authorized to repair the d8b. Also included on the CD-ROM are the schematics, PCB layouts, parts lists, assembly drawings, some IC data sheets and the owner's manual.



It is essential that you become familiar with the owner's manual as it contains all of the operational details, hookup diagrams, specifications and just about everything d8bwegian. It will be a great help for you to verify customers complaints, and to check for correct operation.

This service manual does not include an in-depth circuit analysis, rather it provides an overall guide to details not immediately obvious from the schematics alone. It is intended to help you troubleshoot down to board level and identify and swap out any bad circuit boards. Component level troubleshooting down to resistor or IC level, may be undertaken if time permits, or if there appears to be something obvious.

## SERVICE TECHNICAL ASSISTANCE

Mackie Designs, Service Technical Assistance, is available 8AM - 5PM PST, Monday through Friday for Authorized Mackie Service Centers, at 1-800-258-6883. Feel free to call with any questions and speak with a carefully-calibrated technician. If one is not available, leave a detailed message and a qualified Mackoid will return your call asap.

## DISCLAIMER

The information contained in this manual is proprietary to Mackie Designs, Inc. The entire manual is protected under copyright and may not be reproduced by any means without express written permission from Mackie Designs Inc.

## GETTING STARTED

Upon receiving a d8b for repair, your first impression may be to run screaming into the night. After reading this overview, checking the schematics, pcb layouts, assembly drawings, parts lists, having a good look at the owner's manual and inspecting the unit, you will probably realize that your first impression was correct.

Think of the remote CPU as a standard PC with extra power supplies for the console. Standard PC troubleshooting techniques and commercially available diagnostic DOS software can be applied to repair the remote CPU.

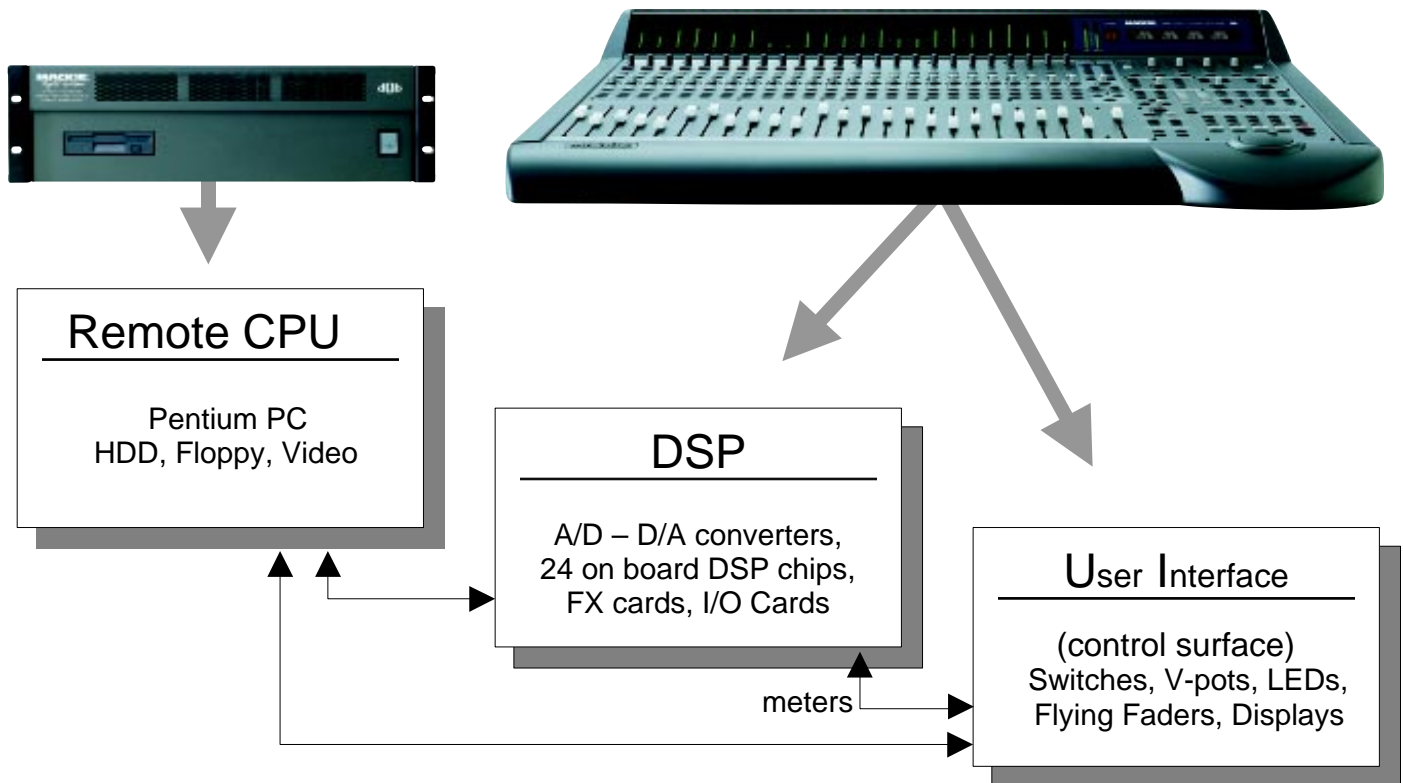
In its simplest form, the mixer and the remote CPU are two boxes full of circuit boards, all joined together with lots of connectors and ribbon cables. A preliminary inspection will often reveal a simple problem, such as a bad connection somewhere, a loose cable, a bad switch or control, or the CPU's CMOS settings may need to be reset.



Our technical support team are available to discuss any d8b problems and offer solutions. If you ever suspect that a customer's complaint is related to the version of Mackie software they are using, you should consult with your customer and Mackie Designs before downloading the latest software from our website: [www.mackie.com](http://www.mackie.com)

## OVERVIEW

The 'Digital' functions of the d8b can be broken down into 3 main systems; Computer, DSP, and User Interface. The computer is a Pentium system which is contained in the Remote CPU with the Power Supply . It communicates via standard com ports (RS-232) to the DSP and UI systems in the console.



The computer runs Mackie's real time operating system and handles functions normally associated with a PC such as keyboard, mouse, disk drives, video, etc. The DSP system controls all Digital Signal Processing functions in the console. The User Interface system reads and updates the control surface.

Commands from the UI are looped through the computer. For example, if the Mute button on channel 1 is pressed, the UI system detects it and communicates the event to the computer. The computer then tells the DSP system to mute CH-1, and tells the UI system to light CH-1's mute LED. Note that the LED is not lit by the UI system directly. Commands can also be issued by clicking on the monitor screen (GUI). Note: the DSP communicates the meter information directly to the UI, not looped through the computer.

# COMPUTER SYSTEM

## HARDWARE

The computer system within the Remote CPU chassis consists of the following hardware:

- Computer motherboard
- Computer microprocessor
- RAM
- HDD, FDD
- Ethernet® Card
- SVGA Video Card
- MIDI Card, SMPTE

These are all standard PC compatible parts. However, because the drivers are written into the Mackie OS, other similar devices may not be compatible. Also, it should be noted that 'upgrading' the processor, RAM, or HDD is of little value as the Mackie OS will not take advantage of it.

## EXTRA CIRCUITRY

Circuit boards inside the Remote CPU, which are not normally found inside a standard PC are: extra power supplies, AC line and fusing circuits, chicken soup machine etc.

- Mackie board 201 is the remote CPU's power distribution
- Mackie board 123 is a Linear power supply for the consoles analog functions
- An OEM 5V supply for the consoles digital functions

## SOFTWARE

The d8b's computer runs Mackie's real time operating system.

### **THERE IS NO MS-DOS OR WINDOWS IN THE SYSTEM!**

You will not find COMMAND.COM, CONFIG.SYS, or AUTOEXEC.BAT anywhere on the hard drive. After the BIOS starts, the system boots directly into the Mackie Operating System. CMOS setup can be accessed as in a regular PC.

The Mackie OS also contains the operating software for the DSP and UI systems. Most future upgrades can be done without swapping EPROMS.

Please talk to our technical support team to discuss the d8b problems you are experiencing. There is a good chance that a customer's complaint may be cured by upgrading to the latest software version. You will first need the customer's permission before downloading any upgrades from our website ([www.mackie.com](http://www.mackie.com)).

## TROUBLESHOOTING THE COMPUTER

A common error message you might see is "System Error 43 - Host did not boot."

The possible reason for this may be:

- The computer did not get through BIOS correctly.
- A static charge may have reset your BIOS CMOS settings.
- The data cable between the computer and the console is not connected, or is not a straight through 25 pin din connector.

Possible Solution:

- Connect a keyboard and monitor and press F1 to enter the computer's BIOS during a boot.
- Once inside the BIOS, use the AUTODETECT hard drive menu and this will likely fix the errors you are having, once the detected drive information is saved. (See also the notes on the following page).



## CMOS SETUP

If you encounter "System Error 43," Check the following CMOS setup which you can reach during bootup by pressing Del (or F1 depending on the age of the console).

- Enter the standard CMOS setup screen, change the Primary Master to AUTO (highlight and use PgUp/PgDn to modify).
- Next go to the Advanced CMOS setup and check the following:

1st Boot Device .....	Floppy	Bootup Num Lock .....	On
2nd Boot Device .....	IDE-0	Floppy Drive Swap .....	Disabled
3rd Boot Device .....	Disabled (CD-ROM)	Floppy Drive Seek .....	Enabled
4th Boot Device .....	Disabled	PS/2 Mouse support .....	Auto
Try other Boot Devices .....	Yes	System Keyboard .....	Absent
S.M.A.R.T for Hard Disks .....	Disabled	Primary Display .....	VGA/EGA
Quick Boot .....	Enabled	Password Check .....	Setup

When you have finished checking and/or making any corrections, press F10 to save the settings and exit. Then Reboot and see if this has done the trick, and the "System Error 43" has gone away.

**NOTE:** from November 1999 (serial numbers with prefix "BS11954" or higher), the motherboard changed to 480-039-00, and there are different CMOS settings:

- Press and Hold <Delete> key to go to BIOS Setup program
- Using the arrow keys, select STANDARD CMOS SETUP, Press <Enter> ("Page Up" and "Page Down" keys, and number pad can be used to change BIOS values).
- Change the Date to current day, month, year. Press <Enter>
- Change Time to current time (24-hour clock), Press <Enter>
- Make sure all HARD DRIVES on table are set to "AUTO" MODE
- Change "Halt On:" to "All, But Keyboard", Press <Enter>
- Back out to root menu by pressing <Esc>
- Select "BIOS FEATURE SETUP" and make sure "Boot Sequence" is "A,C,SCSI". <ESC>
- Select CHIPSET FEATURES SETUP, Press <Enter>
- Change "PCI 2.1 Compliance" to "Enabled".
- Change "Spread Spectrum" to "Enabled" and then <ESC> to main BIOS menu.
- Select INTEGRATED PERIPHERALS, <Enter>
- Change "Init Display First" to "PCI Slot", <Enter>
- Make sure "Onboard Serial Port 1" is set to "3F8/IRQ4" and "Onboard Serial Port 2" is set to "2F8/IRQ3", then press <ESC> to return to the main BIOS menu.
- Select SAVE & EXIT SETUP. Type "Y" for yes, <Enter>

## FURTHER TROUBLESHOOTING

If the CMOS setup is correct and a problem still remains, you will have to delve into the Remote CPU and troubleshoot the computer system.

The computer can be booted with a DOS system floppy for running all of your favorite DOS diagnostic programs. To do this:

- Find or make a bootable floppy, i.e. one which has the DOS system installed.
- Place the disc in the drive before turning on the Remote CPU.
- The computer should start up into DOS from this disc, rather than from the Mackie OS.
- Insert any standard DOS diagnostic software and run tests, for example on the hard drive, video card, mother board etc.

Check the extra Mackie power supply voltages are correct, as shown on the schematic chapters 201 (power distribution) and 123 (Linear power supply). Also check the voltages on the console end: see the console power distribution board chapter 111.



# DSP SYSTEM

A simplified block diagram of the DSP system is shown on the next page. At the heart of the system is an Analog Devices ADSP-2181. It acts as the console CPU, and controls all functions and communications within the DSP system. There are 24 proprietary DSP chips to handle the actual audio processing. Parallel processing with the 24 DSPs allows the d8b to complete all processing within one sample.

Operating instructions are loaded from the Remote CPU as the system boots. The EPROM does not contain operating firmware. Think of the EPROM as BIOS, it provides the system with basic instructions to make sure it powers up correctly and sets up to receive the operating software from the Remote CPU.

## CLOCKS

All audio clocks for the DSP system originate at the clock (sync) card. The master clock is 512 x sample rate. See page 24 for some more details.

## CODEC BOARD

The CODEC board contains 24 channels of A/D and D/A. Each ADC converts two analog audio signals into a two channel serial format which is sent to the DSP chips. All digital audio signals within the d8b are in this two channel format. The DACs convert this stream back to 2 channels of lovely analog audio.

## DSP BOARD

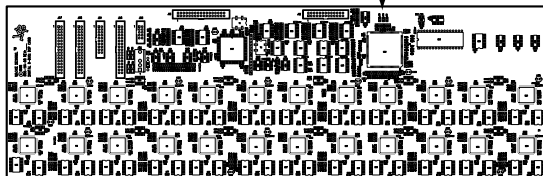
Each of the 24 DSP chips has two serial inputs, DR\_0 and DR\_1, and two serial outputs, DT\_0 and DT\_1, a total of 48 inputs and 48 outputs (remember that each serial input is 2 channels of audio, so that's 96 channels!, but they're not all used). Digital audio data comes from and is sent to the CODEC board, I/O cards, and FX cards. Y2 is the processor clock from which is derived CLK\_1, CLK\_2, CLK\_3, CLK\_4 and CLKIN. Y1 is a UART clock.

<u>DSP INPUTS</u>		<u>DSP OUTPUTS</u>	
12	Mic/Line Inputs	8	Subgroups
12	Line Inputs	2	L/R Mix
24	Tape Input Cards	24	Tape Returns Cards
16	FX Card Returns	16	FX Card Sends
2	Meter (monitor)	12	Aux sends
8	Alt Input Card	8	Alt Output Card
		2	Solo

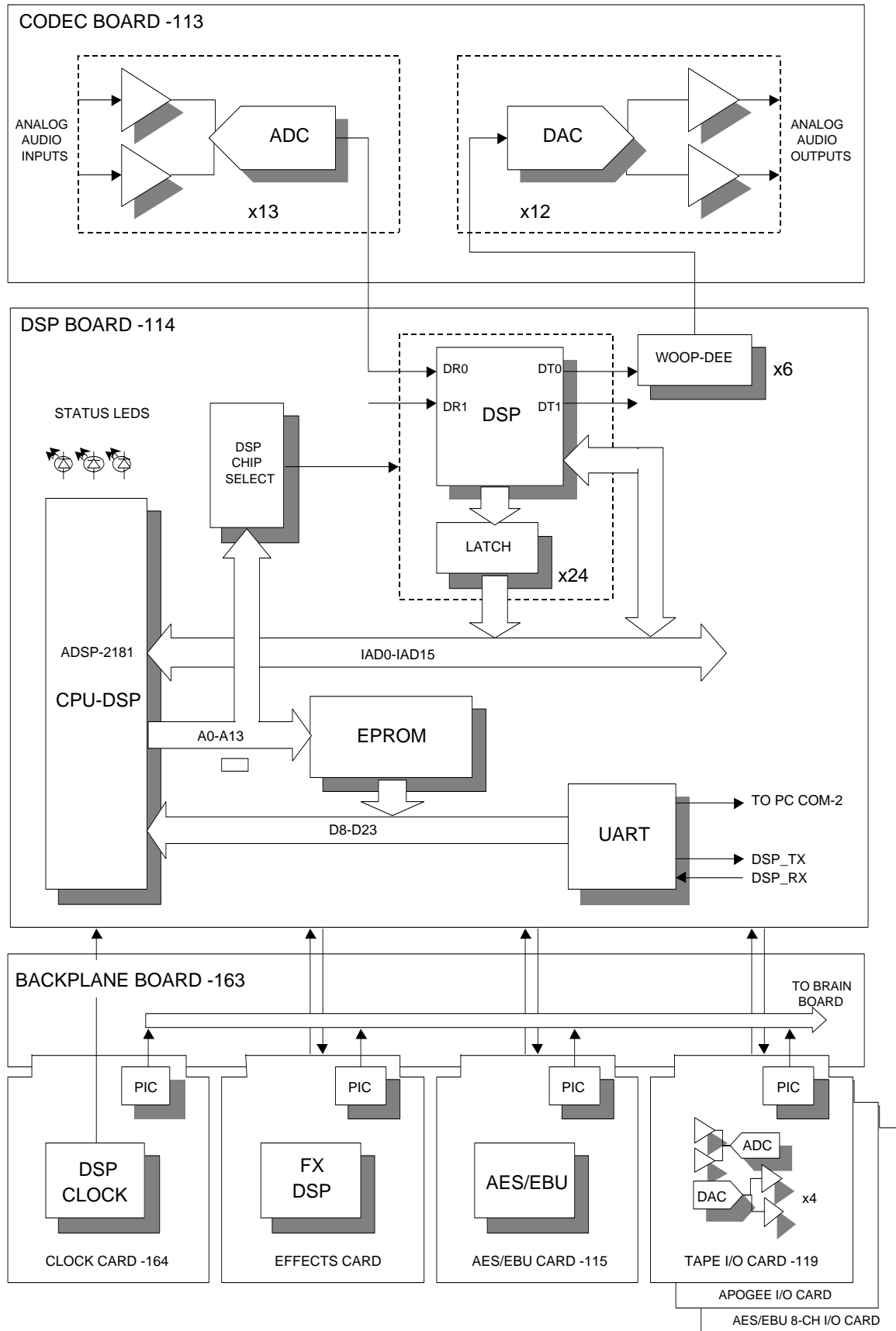
The processing algorithm works in such a way that each serial output consists of one mix and one direct output. In order to route mixes to the same DACs the serial data is juxtaposed in sync with the L/R clock.

There are three status indicators on the board: D2 (green), D3 (yellow), D1 (red).

- If all three are on, a fault has been detected.
- If the red LED is on solidly, then this is operating OK.



# MACKIE. d8b SERVICE MANUAL



## UI SYSTEM

A simplified block diagram of the User Interface system is shown on the next page. Like the DSP system, an Analog Devices ADSP-2181, is used as the CPU. It controls all functions and communications within the UI system. Also, like the DSP system, operating instructions are loaded from the Remote CPU as the system boots. If the UI system does not 'find' the Remote CPU, it will display 'ERROR 43 HOST COMPUTER NOT FOUND' in the VFD.

### CLOCKS

Unlike the DSP system, the UI system runs on its own clock. The Clock (Sync) card is for the DSP system only. Keep the clock's main spring wound up.

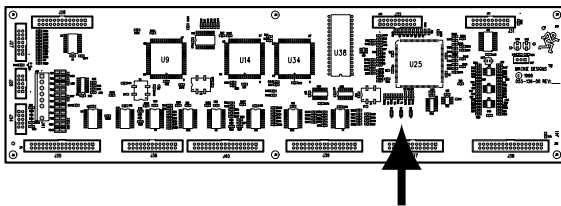
### BRAIN BOARD

The Brain Board reads in two types of information from the control surface. Switches are scanned in through PISO shift registers and transferred to the Brain as serial data. Analog voltages from faders and V-pots are multiplexed, then sent to an ADC on the Brain board.

The Brain Board also communicates via UART to all expansion cards. Every card used in the d8b has a PIC chip. The PIC chip outputs a copyrighted text string so that the d8b can verify the card is original and Mackie-authorized. Cards in which operating parameters can be varied are controlled via the Brain (UI System). The Brain Board also controls all functions on the DCA board.

X1 is the brain processor clock, X2 and X3 are UART clocks.

The Brain board has three status indicators: D3 (green), D2 (yellow), D1 (red).



- If they are all on, it did not read the EPROM.
- If only the green is on, then it read the EPROM but did not download the software.
- When it is running correctly, only the red LED should be on (and blinking).

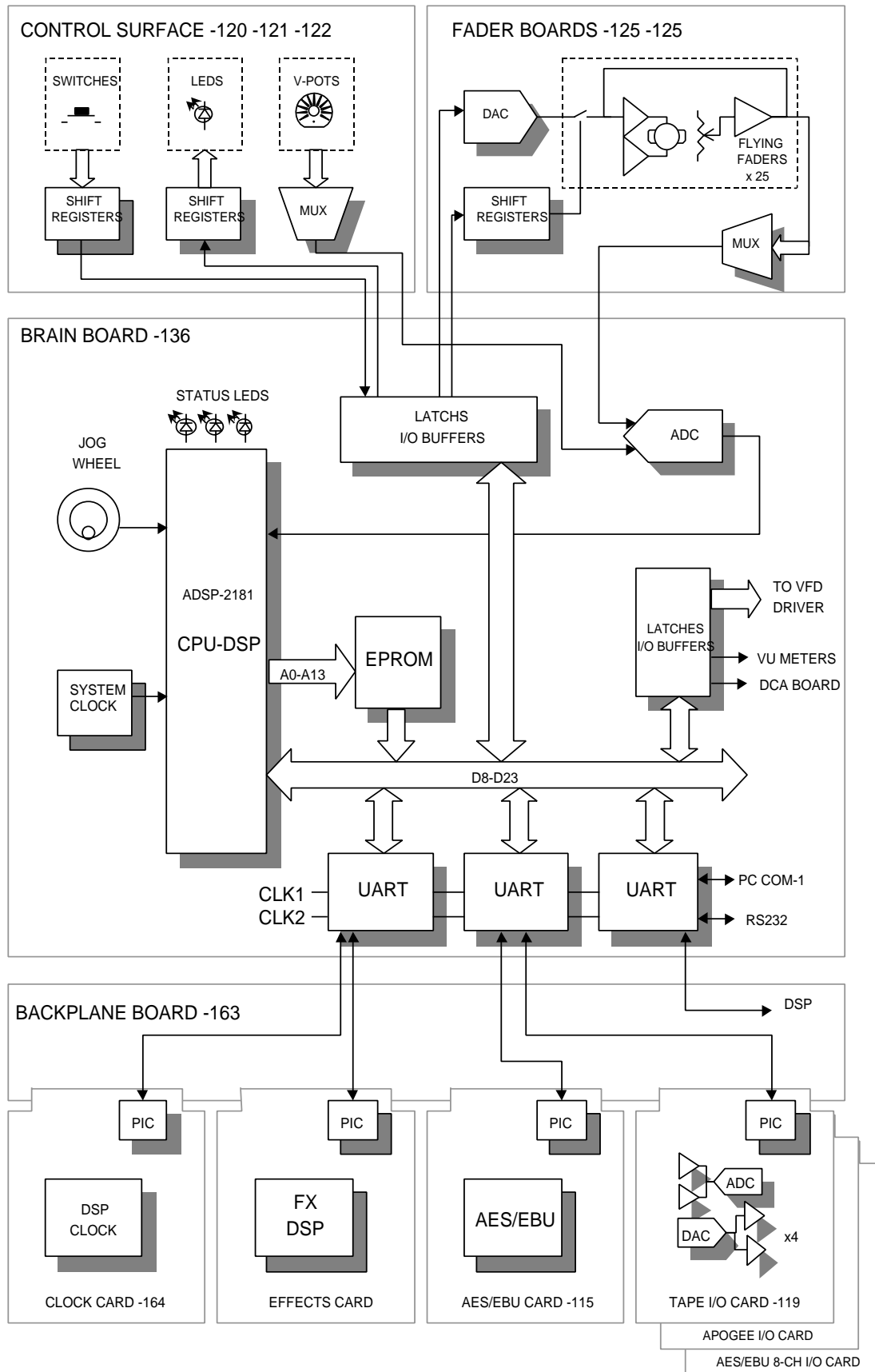
### CONTROL SURFACE

Control surface LEDs, including V-pot indicators, are updated via SIPO shift registers. To control the fader motors, serial data is sent from the Brain board to a DAC on the fader board.

### VU METERS

The VU meter LEDs are updated via shift registers but function differently than the control surface. Remember that the control surface commands are looped through the Remote CPU; VU meter information is not. The information for the VU meters comes directly from the DSP Board, and is communicated to the Brain Board via UART.

# MACKIE. d8b SERVICE MANUAL



# ANALOG SYSTEMS

The analog circuits used in the d8b should be familiar to anyone with experience servicing Mackie products. The 12 Mic Pre's are the same circuit which is used in the SR40•8. The line amps use Mackie's 'unity plus' architecture.

## DCA BOARD

As the name suggests, the DCA board contains Digital Controlled Amplifiers to control the level of analog signals in the console's monitor section. The DCA board also contains an analog switching matrix to select and route monitor signals. The Brain Board controls switching and level functions on the DCA Board. DCAs are controlled by a serial data line. Analog switches are controlled by SIPO shift registers, except for TALK and PUNCH which are controlled directly by the Brain board's CPU.

# POWER

## POWER SUPPLIES

There are three power supplies within the Remote CPU chassis. A standard PC power supply for the Pentium Motherboard, a +5V, 100W OEM switching supply for the console's digital functions, and an analog supply for the console's analog functions.

The PC supply and the OEM supply should be treated as 'black boxes' and swapped if bad. The analog supply is nearly identical to the design used in the SR24•4, troubleshooting should be fairly straightforward.

## POWER DISTRIBUTION

In the console, power is sent from the Power Distribution Board (111) to the Brain, DSP, Backplane, and Analog I/O boards. These boards then distribute power to the remaining boards.

Note: there are many bypass capacitors used throughout the console. If one of the power supply rails is low or intermittent, one of these may have shorted, but it not an easy thing to find which one. It will be a great help if you have a low impedance ohm meter. You should then be able to narrow in on the offending cap or ferrite.

# NOTE:

The d8b keeps the same jumper designations for all PCBs, Hurrah! So J35 on the output board is also J35 on the Brain board. See the connectors chapter for complete details of every connector and pinout used in the console.

If the d8b has optional I/O cards installed, use a slotted screwdriver to make sure the installation screws are tightly secured, and not just finger-tight.

## DSP SIGNAL FLOW

The DSP board is the central hub of the signal flow system, the digital signals must find their way to the DSP board, get DSP'd and make their way out again to the big audio ocean.

Please take a look at the Block diagrams chapter, especially the diagram on page D3, and the DSP map on the next page. Also see the connectors chapter for details of every connector and pinout.

### Signal names (golden rule)

Throughout the console, you will see digital signal names beginning with DR and DT. Anything which starts with DR is a digital signal on its way to the DSP board, any signal which starts with DT has come from the DSP board. Do not be surprised to see a few of the signals change name or number as they go from one board to the next, (but the DT or DR start part will not change).

### Analog input signals

Analog audio signals coming from the Line inputs or Mic inputs are converted to digital by the CODEC board. Each pair of analog signals is combined to form one digital serial stream (DR) sent to the DSP. There are a total of 12 digital signals (from 12 analog pairs)

Analog audio signals from the Tape cards are converted to digital by the Tape card's own D/A converters, and also paired to form digital data (DR) sent to the DSP board. Each Tape card has 8 audio inputs and this yields 4 digital signals per card, or a total of 12 digital signals from the three tape cards.

### Digital input signals

Digital input signals coming in from the standard Digital I/O card and the PDI•8 digital I/O card are passed to the DSP board (DR). The incoming signals are already in the 2 channel digital serial form. The standard Digital I/O card has 1 digital input, the PDI•8 card has 4.

### Digital input and output signals from the effects cards

There are slots for up to four effects cards. Each card can send and receive two digital signals to and from the DSP board.

### DR (data received by DSP)

Digital data received by the DSP board for processing is labelled starting with DR. Each of the 24 DSP ICs can receive two digital data streams, so you will see DR0\_ and DR1\_, followed by which DSP IC is used, such as U1 , U3 or U24.

### DT (data transmitted by DSP)

Digital data which is transmitted by the DSP board is labeled starting with DT. Each of the 24 DSP ICs can transmit two outputs DT0\_ and DT1\_.

12 digital signals go to the CODEC board to become these analog signals: 8 Buses, Mix L, Mix R, Solo L, Solo R and 12 Auxes.

12 digital signals go to the 3 Tape Cards (which have their own A/D convertors) to become 24 analog tape outputs.

8 digital signals go to the 4 Effects cards, 1 goes to the Digital I/O and 4 to the PDI•8 I/O card. The signals to the I/O cards are not converted to analog, but pass out of the digital output connectors on the rear panel of each card for digital recording. Note that each signal is still really a pair such as L/R.

# DSP map

This table shows the data received (DR) and data transmitted (DT) by the DSP board. On a scale of 1 to 10, you will find this table fairly useful.

INPUT	ADC	SIG	CABLE	DSP	JUXT	SIG NAME(DSP)	CABLE	SIG NAME	DAC	OUTPUT	
LINE 13+14	CODEC U3	DR1	J13-3	DR0_U1	DT0_U1	U46 (DT0_U2)	DT_1	J13-1	DT1	CODEC U52	BUS 1+2
		FX-1	J24-23	DR1_U1	DT1_U1			J24-1	DT1_U1	FX-1	
LINE 15+16	CODEC U103	DR2	J13-7	DR0_U2	DT0_U2	U46 (DT0_U1)	DT_2	J47-2	DT_2	TAPE I/O	TAPE 17+18
		FX-1	J24-25	DR1_U2	DT1_U2			J21-13	DT1_U2	FX-1	
LINE 17+18	CODEC U203	DR3	J13-11	DR0_U3	DT0_U3	U46 (DT0_U4)	DT_3	J13-5	DT2	CODEC U152	BUS 3+4
		FX-2	J24-7	DR1_U3	DT1_U3			J24-5	DT_3	FX-2	
LINE 19+20	CODEC U303	DR4	J13-15	DR0_U4	DT0_U4	U46 (DT0_U3)	DT_4	J47-6	DT_4	TAPE I/O	TAPE 19+20
		FX-2	J24-9	DR1_U4	DT1_U4			J21-15	DT1_U4	FX-2	
LINE 21+22	CODEC U403	DR5	J13-19	DR0_U5	DT0_U5	U86 (DT0_U6)	DT_5	J13-9	DT3	CODEC U252	BUS 5+6
		FX-3	J24-13	DR1_U5	DT1_U5			J24-11	DT_5	FX-3	
LINE 23+24	CODEC U503	DR6	J13-23	DR0_U6	DT0_U6	U86 (DT0_U5)	DT_6	J47-10	DT_6	TAPE I/O	TAPE 21+22
		FX-3	J24-15	DR1_U6	DT1_U6			J21-17	DT1_U6	FX-3	
RET 1+2	CODEC U603	DR7	J13-27	DR0_U7	DT0_U7	U86 (DT0_U8)	DT_7	J13-13	DT4	CODEC U352	BUS 7+8
		FX-4	J24-19	DR1_U7	DT1_U7			J24-17	DT_7	FX-4	
RET 3+4	CODEC U703	DR8	J13-31	DR0_U8	DT0_U8	U86 (DT0_U7)	DT_8	J47-14	DT_8	TAPE I/O	TAPE 23+24
		FX-4	J24-21	DR1_U8	DT1_U8			J21-19	DT1_U8	FX-4	
RET 5+6	CODEC U803	DR9	J12-3	DR0_U9	DT0_U9	U89 (DT0_U10)	DT_9	J13-17	DT5	CODEC U452	L/R MIX
		ALT I/O	J48-21	DR1_U9	DT1_U9			J48-19	DT1_U9	ALT I/O	
RET 7+8	CODEC U903	DR10	J12-7	DR0_U10	DT0_U10	U89 (DT0_U9)	DT_10	J47-19	DT_10	TAPE I/O	TAPE 9+10
		ALT I/O	J48-25	DR1_U10	DT1_U10			J48-23	DT1_U10	ALT I/O	
RET 9+10	CODEC U1003	DR11	J12-11	DR0_U11	DT0_U11	U89 (DT0_U12)	DT_11	J13-21	DT6	CODEC U552	L/R SOLO
		ALT I/O	J48-29	DR1_U11	DT1_U11			J48-27	DT1_U11	ALT I/O	
RET 11+12	CODEC U1103	DR12	J12-15	DR0_U12	DT0_U12	U89 (DT0_U11)	DT_12	J47-23	DT_12	TAPE I/O	TAPE 11+12
		ALT I/O	J48-33	DR1_U12	DT1_U12			J48-31	DT1_U12	ALT I/O	
TAPE IN 17+18	I/O CARD		J47-4	DR0_U13	DT0_U13	U92 (DT0_U14)	DT_13	J13-25	DT7	CODEC U652	AUX 1+2
				DR1_U13	DT1_U13						
TAPE IN 19+20	I/O CARD		J47-8	DR0_U14	DT0_U14	U92 (DT0_U13)	DT_14	J47-27	DT_14	TAPE I/O	TAPE 13+14
				DR1_U14	DT1_U14						
TAPE IN 21+22	I/O CARD		J47-12	DR0_U15	DT0_U15	U92 (DT0_U16)	DT_15	J13-29	DT8	CODEC U752	AUX 3+4
				DR1_U15	DT1_U15						
TAPE IN 23+24	I/O CARD		J47-16	DR0_U16	DT0_U16	U92 (DT0_U15)	DT_16	J47-31	DT_16	TAPE I/O	TAPE 15+16
				DR1_U16	DT1_U16						
TAPE IN 9+10	I/O CARD		J47-21	DR0_U17	DT0_U17	U95 (DT0_U18)	DT_17	J12-1	DT9	CODEC U852	AUX 5+6
				DR1_U17	DT1_U17						
TAPE IN 11+12	I/O CARD		J47-25	DR0_U18	DT0_U18	U95 (DT0_U17)	DT_18	J48-2	DT_18	TAPE I/O	TAPE 1+2
				DR1_U18	DT1_U18						
TAPE IN 13+14	I/O CARD		J47-29	DR0_U19	DT0_U19	U95 (DT0_U20)	DT_19	J12-5	DT10	CODEC U952	AUX 7+8
				DR1_U19	DT1_U19						
TAPE IN 15+16	I/O CARD		J47-33	DR0_U20	DT0_U20	U95 (DT0_U19)	DT_20	J48-6	DT_20	TAPE I/O	TAPE 3+4
				DR1_U20	DT1_U20						
TAPE IN 1+2	I/O CARD		J48-4	DR0_U21	DT0_U21	U98 (DT0_U22)	DT_21	J12-9	DT11	CODEC U1052	AUX 9+10
				DR1_U21	DT1_U21						
TAPE IN 3+4	I/O CARD		J48-8	DR0_U22	DT0_U22	U98 (DT0_U21)	DT_22	J48-10	DT_22	TAPE I/O	TAPE 5+6
				DR1_U22	DT1_U22						
TAPE IN 5+6	I/O CARD		J48-12	DR0_U23	DT0_U23	U98 (DT0_U24)	DT_23	J12-13	DT12	CODEC U1152	AUX 11+12
				DR1_U23	DT1_U23						
TAPE IN 7+8	I/O CARD		J48-16	DR0_U24	DT0_U24	U98 (DT0_U23)	DT_24	J48-14	DT_24	TAPE I/O	TAPE 7+8
				DR1_U24	DT1_U24						

This is data going into the DSP board.

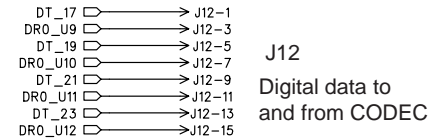
This is Data on the DSP board, showing which DSP does what.

This is Data transmitted by the DSP  
NOTE: some of the signal names completely change name at the connectors, especially J12 and J13. See the CODEC map

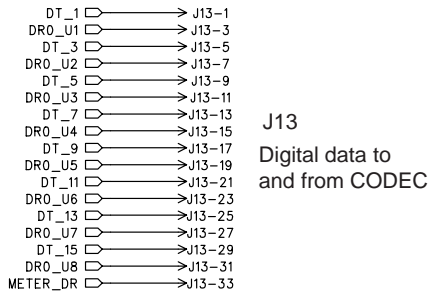


## DSP CONNECTORS

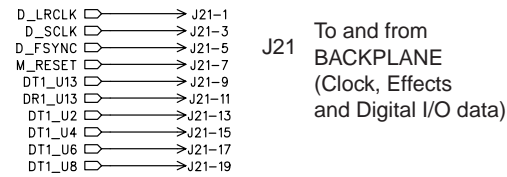
This is a compilation of all the DSP board's connectors, mainly showing the data received and transmitted, and clocks. The power and ground pins are not shown here, to make things a little clearer. These can be found in the connectors chapter, or on the schematics.



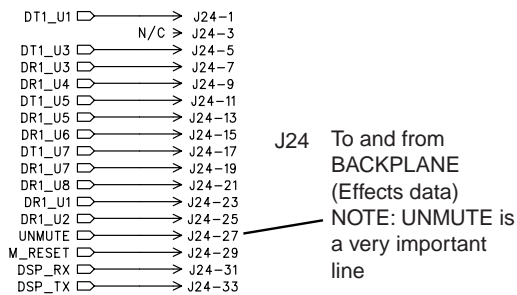
**J12**  
Digital data to  
and from CODEC



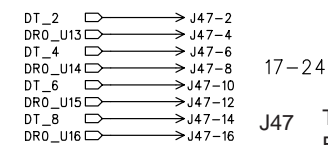
**J13**  
Digital data to  
and from CODEC



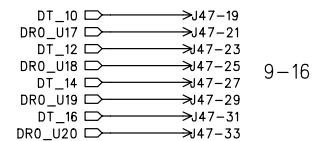
**J21** To and from  
BACKPLANE  
(Clock, Effects  
and Digital I/O data)



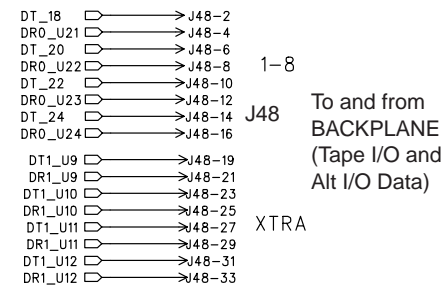
**J24** To and from  
BACKPLANE  
(Effects data)  
NOTE: UNMUTE is  
a very important  
line



**J47** To and from  
BACKPLANE  
(Tape I/O data)

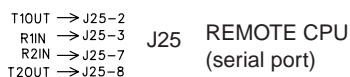


**9-16**

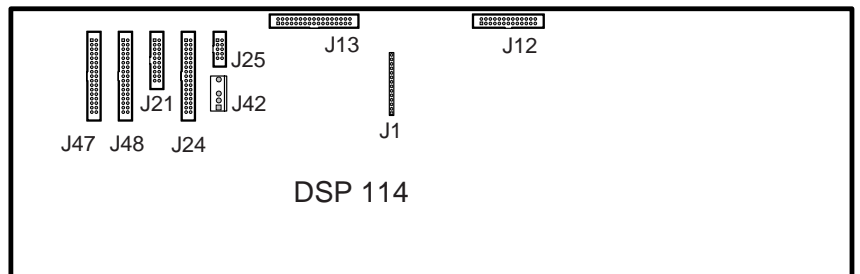


**J48** To and from  
BACKPLANE  
(Tape I/O and  
Alt I/O Data)

**XTRA**



**J25** REMOTE CPU  
(serial port)



# CODEC BOARD

IC	Analog OUT	Analog OUT	DT from DSP	How it is labeled out of DSP board	Connector/pin
U52	BUS-1	BUS-2	DT1	DT_1	J13-1
U152	BUS-3	BUS-4	DT2	DT_3	J13-5
U252	BUS-5	BUS-6	DT3	DT_5	J13-9
U352	BUS-7	BUS-8	DT4	DT_7	J13-13
U452	MIX-L	MIX-R	DT5	DT_9	J13-17
U552	SOLO-L	SOLO-R	DT6	DT_11	J13-21
U652	AUX-1	AUX-2	DT7	DT_13	J13-25
U752	AUX-3	AUX-4	DT8	DT_15	J13-29
U852	AUX-5	AUX-6	DT9	DT_17	J12-1
U952	AUX-7	AUX-8	DT10	DT_19	J12-5
U1052	AUX-9	AUX-10	DT11	DT_21	J12-9
U1152	AUX-11	AUX-12	DT12	DT_23	J12-13

The Data transmitted (DT) from the DSP board is converted to Analog and split out into its two component signals. For example, DT\_1 comes off the DSP board to the CODEC (using J13 pin 1), where it is renamed DT1. U52 converts DT1 into analog signals BUS-1 and BUS-2. The analog signals, such as Bus, Aux, Mix and Solo then go off to the DCA board via J11

IC	Analog IN	Analog IN	DR to DSP	How it is labeled into DSP board	Connector /pin
U3	LINE-13	LINE-14	DR1	DRO_U1	J13-3
U103	LINE-15	LINE-16	DR2	DRO_U2	J13-7
U203	LINE-17	LINE-18	DR3	DRO_U3	J13-11
U303	LINE-19	LINE-20	DR4	DRO_U4	J13-15
U403	LINE-21	LINE-22	DR5	DRO_U5	J13-19
U503	LINE-23	LINE-24	DR6	DRO_U6	J13-23
U603	RET-1	RET-2	DR7	DRO_U7	J13-27
U703	RET-3	RET-4	DR8	DRO_U8	J13-31
U803	RET-5	RET-6	DR9	DRO_U9	J12-3
U903	RET-7	RET-8	DR10	DRO_U10	J12-7
U1003	RET-9	RET-10	DR11	DRO_U11	J12-11
U1103	RET-11	RET-12	DR12	DRO_U12	J12-15
U4	METER-L	METER-R	METER_DR	METER_DR	J13-33

Analog signals are converted to digital and combined in pairs. This gives the Data Received (DR) which goes off to the DSP board. For example, analog signals Line 13 and Line 14 are converted by U3 on the CODEC board to become digital signal DR1. This passes to the DSP board via J13 pin 3, where it is renamed DRO\_U1.

# CODEC connectors

This is a compilation of all the CODEC board's connectors, mainly showing the analog inputs, data received and transmitted. The power, ground and clocks are not shown, but they can be found in the connectors chapter, or on the schematics.

- J1-1 ← RET-1
- J1-2 ← RET-1-GND
- J1-3 ← RET-2
- J1-4 ← RET-2-GND
- J1-5 ← RET-3
- J1-6 ← RET-3-GND
- J1-7 ← RET-4
- J1-8 ← RET-4-GND
- J1-9 ← RET-5
- J1-10 ← RET-5-GND
- J1-11 ← RET-6
- J1-12 ← RET-6-GND
- J1-13 ← RET-7
- J1-14 ← RET-7-GND
- J1-15 ← RET-8
- J1-16 ← RET-8-GND
- J1-17 ← RET-9
- J1-18 ← RET-9-GND
- J1-19 ← RET-10
- J1-20 ← RET-10-GND
- J1-21 ← RET-11
- J1-22 ← RET-11-GND
- J1-23 ← RET-12
- J1-24 ← RET-12-GND

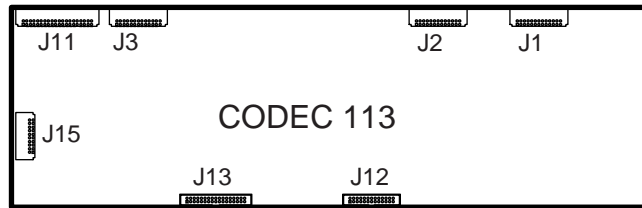
**J1**  
Analog signals coming in from Analog I/O

- J2-1 ← AUX-1
- J2-2 ← AUX-1-GND
- J2-3 ← AUX-2
- J2-4 ← AUX-2-GND
- J2-5 ← AUX-3
- J2-6 ← AUX-3-GND
- J2-7 ← AUX-4
- J2-8 ← AUX-4-GND
- J2-9 ← AUX-5
- J2-10 ← AUX-5-GND
- J2-11 ← AUX-6
- J2-12 ← AUX-6-GND
- J2-13 ← AUX-7
- J2-14 ← AUX-7-GND
- J2-15 ← AUX-8
- J2-16 ← AUX-8-GND
- J2-17 ← AUX-9
- J2-18 ← AUX-9-GND
- J2-19 ← AUX-10
- J2-20 ← AUX-10-GND
- J2-21 ← AUX-11
- J2-22 ← AUX-11-GND
- J2-23 ← AUX-12
- J2-24 ← AUX-12-GND

**J2**  
Analog signals going out to Analog I/O

- J3-1 ← LINE-13
- J3-2 ← LINE-13-GND
- J3-3 ← LINE-14
- J3-4 ← LINE-14-GND
- J3-5 ← LINE-15
- J3-6 ← LINE-15-GND
- J3-7 ← LINE-16
- J3-8 ← LINE-16-GND
- J3-9 ← LINE-17
- J3-10 ← LINE-17-GND
- J3-11 ← LINE-18
- J3-12 ← LINE-18-GND
- J3-13 ← LINE-19
- J3-14 ← LINE-19-GND
- J3-15 ← LINE-20
- J3-16 ← LINE-20-GND
- J3-17 ← LINE-21
- J3-18 ← LINE-21-GND
- J3-19 ← LINE-22
- J3-20 ← LINE-22-GND
- J3-21 ← LINE-23
- J3-22 ← LINE-23-GND
- J3-23 ← LINE-24
- J3-24 ← LINE-24-GND

**J3**  
Analog signals coming in from control surface



- J13-1 ← DT1
- J13-3 ← DR1
- J13-5 ← DT2
- J13-7 ← DR2
- J13-9 ← DT3
- J13-11 ← DR3
- J13-13 ← DT4
- J13-15 ← DR4
- J13-17 ← DT5
- J13-19 ← DR5
- J13-21 ← DT6
- J13-23 ← DR6
- J13-25 ← DT7
- J13-27 ← DR7
- J13-29 ← DT8
- J13-31 ← DR8
- J13-33 ← METER\_DR

**J13**  
Digital signals  
DT=from DSP  
DR=to DSP

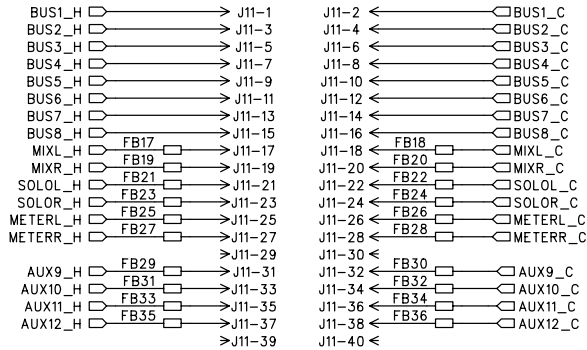
- J12-1 ← DT9
- J12-3 ← DR9
- J12-5 ← DT10
- J12-7 ← DR10
- J12-9 ← DT11
- J12-11 ← DR11
- J12-13 ← DT12
- J12-15 ← DR12

**J12**

- J11-1 ← BUS-1
- J11-2 ← BUS-1-GND
- J11-3 ← BUS-2
- J11-4 ← BUS-2-GND
- J11-5 ← BUS-3
- J11-6 ← BUS-3-GND
- J11-7 ← BUS-4
- J11-8 ← BUS-4-GND
- J11-9 ← BUS-5
- J11-10 ← BUS-5-GND
- J11-11 ← BUS-6
- J11-12 ← BUS-6-GND
- J11-13 ← BUS-7
- J11-14 ← BUS-7-GND
- J11-15 ← BUS-8
- J11-16 ← BUS-8-GND
- J11-17 ← MIX-LEFT
- J11-18 ← MIX-LEFT-GND
- J11-19 ← MIX-RIGHT
- J11-20 ← MIX-RIGHT-GND
- J11-21 ← SOLO-LEFT
- J11-22 ← SOLO-LEFT-GND
- J11-23 ← SOLO-RIGHT
- J11-24 ← SOLO-RIGHT-GND
- J11-25 ← METER-LEFT
- J11-26 ← METER-LEFT-GND
- J11-27 ← METER-RIGHT
- J11-28 ← METER-RIGHT-GND

**J11**  
Analog signals going out to DCA

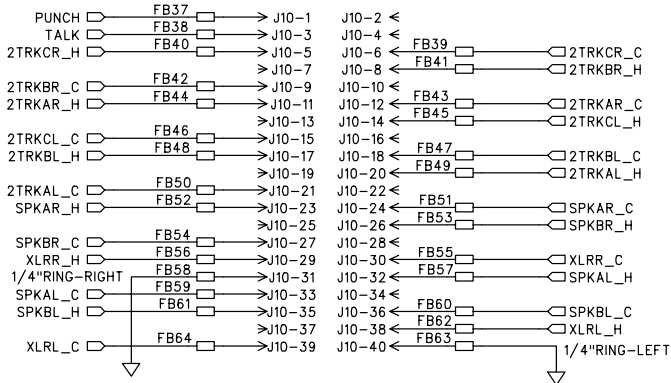
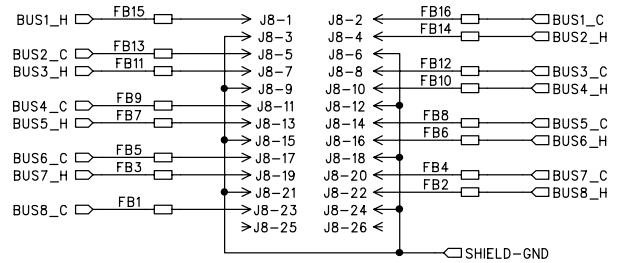
# DCA connectors



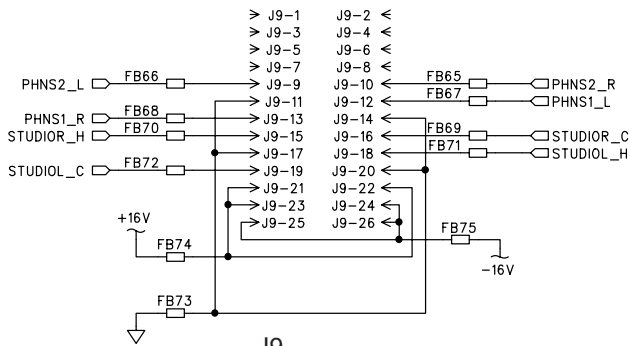
This is a compilation of all the DCA board's connectors, mainly showing the analog inputs, data received and transmitted.

The DCA board receives the analog Buses, Auxes, Mixes and Solos from the DSP board, then outputs (under control by the Brain board) to the Analog I/O board and Bus out.

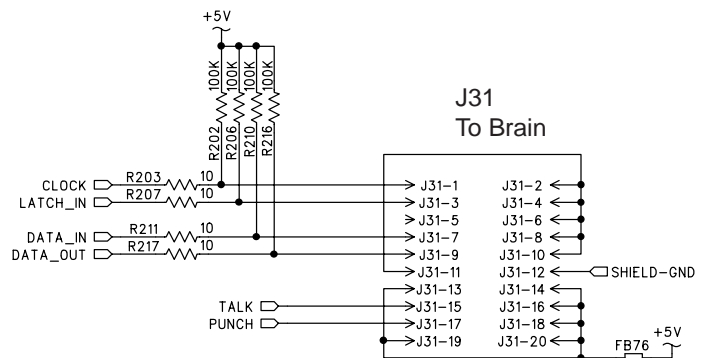
**J11**  
Analog signals coming in from CODEC board



**J10**  
Analog signals going out to Analog I/O



**J9**  
Analog signals going out to Analog I/O



# TAPE CARDS

This shows the analog inputs and outputs on the Tape cards. The analog signals go in and out of the rear panel DB25 connectors J101 and J102 respectively.

The Tape cards have their own D/A and A/D converters, therefore, only digital signals are passed to and from the DSP board.

Pairs of analog inputs are converted to digital form, for example, input 8 and 7 are combined to form digital signal DR4 which goes off to the DSP board. DT4 comes back from the DSP board, and is converted to analog outputs 7 and 8.

NOTE: the digital signals shown below are named as they appear on the Tape card only. The names are changed at the backplane board before going to the DSP board. See the next page for details.

This shows the digital signals from the DSP board, and the analog output signals they become after D/A conversion. For example, digital signal DT4 on the Tape card comes from the DSP board. This is converted, and becomes analog signal 8 and analog signal 7. These appear on the DB25 output connector J102 for recording.

ANALOG OUTPUT	DIGITAL NAME	DB25 Connector/pin
8_OUT_HOT	DT4	J102-1
8 GND		J102-2
7_OUT_COLD	DT4	J102-3
6_OUT_HOT	DT3	J102-4
6 GND		J102-5
5_OUT_COLD	DT3	J102-6
4_OUT_COLD	DT2	J102-7
4 GND		J102-8
3_OUT_COLD	DT2	J102-9
2_OUT_HOT	DT1	J102-10
2 GND		J102-11
1_OUT_COLD	DT1	J102-12
		J102-13
8_OUT_COLD	DT4	J102-14
7_OUT_HOT	DT4	J102-15
7 GND		J102-16
6_OUT_COLD	DT3	J102-17
5_OUT_HOT	DT3	J102-18
5 GND		J102-19
4_OUT_COLD	DT2	J102-20
3_OUT_HOT	DT2	J102-21
3 GND		J102-22
2_OUT_COLD	DT1	J102-23
1_OUT_HOT	DT1	J102-24
1 GND		J102-25

ANALOG INPUT	DIGITAL NAME	DB25 Connector/pin
8_IN_HOT	DR4	J101-1
8 GND		J101-2
7_IN_COLD	DR4	J101-3
6_IN_HOT	DR3	J101-4
6 GND		J101-5
5_IN_COLD	DR3	J101-6
4_IN_COLD	DR2	J101-7
4 GND		J101-8
3_IN_COLD	DR2	J101-9
2_IN_HOT	DR1	J101-10
2 GND		J101-11
1_IN_COLD	DR1	J101-12
		J101-13
8_IN_COLD	DR4	J101-14
7_IN_HOT	DR4	J101-15
7 GND		J101-16
6_IN_COLD	DR3	J101-17
5_IN_HOT	DR3	J101-18
5 GND		J101-19
4_IN_COLD	DR2	J101-20
3_IN_HOT	DR2	J101-21
3 GND		J101-22
2_IN_COLD	DR1	J101-23
1_IN_HOT	DR1	J101-24
1 GND		J101-25

This shows the analog signals coming in from a tape deck, and the digital signals they become after A/D conversion. For example, analog signals 8 and 7 come in on the tape card's DB25 input connector J101 and are converted to become digital signal DR4. This then goes to the DSP board for processing.

# TAPE CARDS continued

ANALOG TAPE OUTPUT PAIRS	DIGITAL SIG NAME ON TAPE BOARD	CARD TO BACKPLANE CONNECTOR AND PIN NO.	WHAT THE SIGNAL IS CALLED ON THE BACKPLANE AND DSP BOARD	BACKPLANE TO DSP CONNECTOR AND PIN NO.
23 AND 24	DT4	J20-7,56	DT_8	J47-14
21 AND 22	DT3	J20-5,58	DT_6	J47-10
19 AND 20	DT2	J20-3,60	DT_4	J47-6
17 AND 18	DT1	J20-1,62	DT_2	J47-2
15 AND 16	DT4	J19-7,56	DT_16	J47-31
13 AND 14	DT3	J19-5,58	DT_14	J47-27
11 AND 12	DT2	J19-3,60	DT_12	J47-23
9 AND 10	DT1	J19-1,62	DT_10	J47-19
7 AND 8	DT4	J18-7,56	DT_24	J48-14
5 AND 6	DT3	J18-5,58	DT_22	J48-10
3 AND 4	DT2	J18-3,60	DT_20	J48-6
1 AND 2	DT1	J18-1,62	DT_18	J48-2

NOTE: All three tape cards are identical, and the difference in signal name comes from where each card is fitted in the backplane slots. If a card is fitted into slot 1-8, it connects to the backplane's J18 and so for example, the card's DT2 becomes DT\_20 on the backplane and DSP board. If the card is in the 9-17 slot, it uses J19 and so the card's DT2 becomes DT\_12.

ANALOG TAPE INPUT PAIRS	DIGITAL SIG NAME ON TAPE BOARD	CARD TO BACKPLANE CONNECTOR AND PIN NO.	WHAT THE SIGNAL IS CALLED ON THE BACKPLANE AND DSP BOARD	BACKPLANE TO DSP CONNECTOR AND PIN NO.
23 AND 24	DR4	J20-8,55	DR0_U16	J47-16
21 AND 22	DR3	J20-6,57	DR0_U15	J47-12
19 AND 20	DR2	J20-4,59	DR0_U14	J47-8
17 AND 18	DR1	J20-2,61	DR0_U13	J47-4
15 AND 16	DR4	J19-8,55	DR0_U20	J47-33
13 AND 14	DR3	J19-6,57	DR0_U19	J47-29
11 AND 12	DR2	J19-4,59	DR0_U18	J47-25
9 AND 10	DR1	J19-2,61	DR0_U17	J47-21
7 AND 8	DR4	J18-8,55	DR0_U24	J48-16
5 AND 6	DR3	J18-6,57	DR0_U23	J48-12
3 AND 4	DR2	J18-4,59	DR0_U22	J48-8
1 AND 2	DR1	J18-2,61	DR0_U21	J48-4

These are the signals transmitted to the DSP board from the Tape inputs. What happens is this: Two analog signals are converted into digital and combined into one digital signal. For example, analog signals 23 and 24 (from the DB25 pin connector on the rear panel) are converted and combined to create a digital signal DR4 on the tape card. This is then given a new name of DR0\_U16 and sent to the DSP board using connector J47, pin 16.

## EFFECTS CARDS

There are four slots available on the backplane board for Effects cards. They can plug into the backplane connectors J51, J16, J14 and J17. The backplane connectors J21 and J24 transmit and receive data to and from the DSP board. In most cases, the digital signals have the same name on the backplane as appear on the DSP board, but there are a few exceptions, shown in the right hand column of the tables below.

EFFECTS CARD	CARD TO BACKPLANE CONNECTOR AND PIN #	WHAT THE SIGNAL IS CALLED ON THE BACKPLANE	BACKPLANE TO DSP BOARD CONNECTOR AND PIN NO.	WHAT THE SIGNAL IS CALLED ON THE DSP BOARD
FX1	J51-5,58	DT1_U2	J21-13	SAME
FX1	J51-10,53	DT1_U1	J24-1	SAME
FX2	J16-5,58	DT1_U4	J21-15	SAME
FX2	J16-10,53	DT_3	J24-5	DT1_3
FX3	J14-5,58	DT1_U6	J21-17	SAME
FX3	J14-10,53	DT_5	J24-11	DT1_5
FX4	J17-5,58	DT1_U8	J21-19	SAME
FX4	J17-10,53	DT_7	J24-17	DT1_7

These are the signals transmitted from the DSP board to the effects cards.

EFFECTS CARD	CARD TO BACKPLANE CONNECTOR AND PIN #	WHAT THE SIGNAL IS CALLED ON THE BACKPLANE	BACKPLANE TO DSP BOARD CONNECTOR AND PIN NO.	WHAT THE SIGNAL IS CALLED ON THE DSP BOARD
FX1	J51-11,52	DR1_U1	J24-23	SAME
FX1	J51-12,51	DR1_U2	J24-25	SAME
FX2	J16-11,52	DR1_U3	J24-7	SAME
FX2	J16-12,51	DR1_U4	J24-9	SAME
FX3	J14-11,52	DR1_U5	J24-13	SAME
FX3	J14-12,51	DR1_U6	J24-15	SAME
FX4	J17-11,52	DR1_U7	J24-19	SAME
FX4	J17-12,51	DR1_U8	J24-21	SAME

These are the signals transmitted from the effects cards to the DSP board.



## EXTRA CARD

One slot on the backplane is available for an extra digital I/O card, such as the PDI•8. It connects to backplane connector J22 (in the ALT I/O slot). The signals to and from the DSP board pass through backplane connector J48. There are 4 digital inputs and outputs, each carrying two data signals.

CARD TO BACKPLANE CONNECTOR AND PIN #	WHAT THE SIGNAL IS CALLED ON THE BACKPLANE AND DSP BOARD	BACKPLANE TO DSP BOARD CONNECTOR AND PIN NO.
J22-1,62	DT1_U9	J48-19
J22-3,60	DT1_U10	J48-23
J22-5,58	DT1_U11	J48-27
J22-7,56	DT1_U12	J48-31

These are the signals transmitted from the DSP board to the extra card.

CARD TO BACKPLANE CONNECTOR AND PIN #	WHAT THE SIGNAL IS CALLED ON THE BACKPLANE AND DSP BOARD	BACKPLANE TO DSP BOARD CONNECTOR AND PIN NO.
J22-2,61	DR1_U9	J48-21
J22-4,59	DR1_U10	J48-25
J22-6,57	DR1_U11	J48-29
J22-8,55	DR1_U12	J48-33

These are the signals transmitted from the extra card to the DSP board

## DIGITAL I/O CARD

One slot on the backplane is available for the standard digital I/O card. It connects to backplane connector J30. The signals to and from the DSP board pass through backplane connector J21. Note that once the digital signals reach the DSP board, they change name.

CARD TO BACKPLANE CONNECTOR AND PIN #	WHAT THE SIGNAL IS CALLED ON THE BACKPLANE	BACKPLANE TO DSP BOARD CONNECTOR AND PIN NO.	WHAT THE SIGNAL IS CALLED ON THE DSP BOARD
J30-1,62	DR	J21-11	DT1_U13
J30-2,61	DT	J21-9	DR1_U13

## The clock card

The clock card generates the main clock signals used throughout the console. On other boards there are a few local clocks used, for example, for the serial Rx and TX connection to the remote CPU.

This table shows the signal flow from the clock card to the various boards in the D8B. The clock card fits into connector J23 on the backplane board. From there, the signals are distributed to other boards either by ribbon connectors, or using the backplane's buses to the Tape cards, FX cards, and Digital IO.

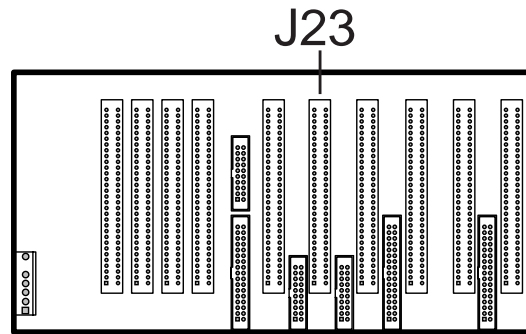
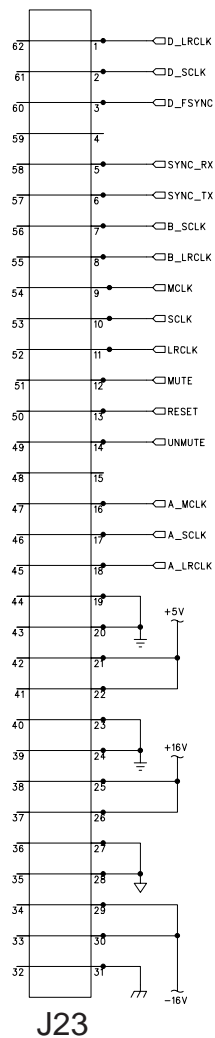
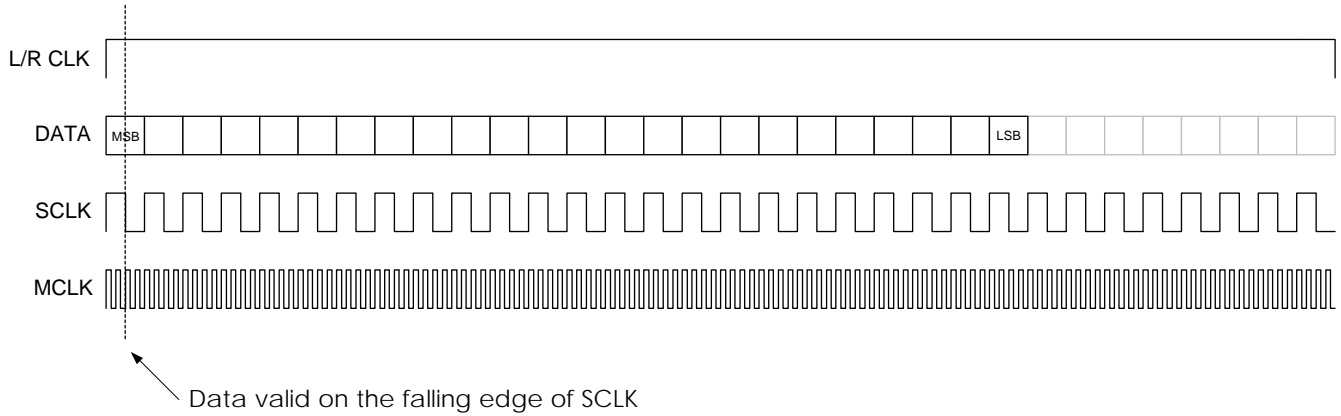
Have a look at the schematics/pcb layouts of the clock card. The last page of that chapter has a pcb layout with traces and some signals and voltages marked. Also refer to the connectors chapter for more details of each connector mentioned in the table below.

SIGNAL NAME	BACKPLANE CONNECTION	BACKPLANE OUTPUT	DESTINATION
D_LRCLK	J23, PINS 1+62	J21, PIN 1	TO DSP BOARD
D_SCLK	J23, PINS 2+61	J21, PIN 3	TO DSP BOARD
D_FSYNC	J23, PINS 3+60	J21, PIN 5	TO DSP BOARD
SYNC_RX	J23, PINS 5+58	J32, PIN 5	TO BRAIN BOARD
SYNC_TX	J23, PINS 6+57	J32, PIN 7	TO BRAIN BOARD
B_SCLK	J23, PINS 7+56	J17, PIN 8+55	TO ALL FX CARDS (J17, J14, J16 AND J51, ALL PIN 8+55)
B_LRCLK	J23, PINS 8+55	J17, PIN 13+50	TO ALL FX CARDS (J17, J14, J16 AND J51, ALL PIN 13+50)
MCLK	J23, PINS 9+54	J22, PIN 9+54	TO ALL TAPE CARDS AND EXTRA (J22, J20, J19, J18, ALL PIN 9+54)
SCLK	J23, PINS 10+53	J22, PIN 10+53	TO ALL TAPE CARDS AND EXTRA (J22, J20, J19, J18, ALL PIN 10+53)
LRCLK	J23, PINS 11+52	J22, PIN 11+52	TO ALL TAPE CARDS AND EXTRA (J22, J20, J19, J18, ALL PIN 11+52)
MUTE	J23, PINS 12+51	J15, PIN 1	TO CODEC BOARD AND ALL TAPE CARDS, EXTRA AND DIG IO (J22, J20, J19, J18 AND J30, ALL PINS 12+51)
RESET	J23, PINS 13+50	J15, PIN 3	TO CODEC BOARD AND ALL TAPE CARDS, EXTRA AND DIG IO (J22, J20, J19, J18 AND J30 ALL PINS 13+50) AND ALL FX CARDS (J17, J14, J16 AND J51, ALL PIN 6+57)
UNMUTE	J23, PINS 14+49	J24, PIN 27	TO DSP BOARD
A_MCLK	J23, PINS 16+47	J15, PIN 9	TO CODEC BOARD
A_SCLK	J23, PINS 17+46	J15, PIN 7	TO CODEC BOARD
A_LRCLK	J23, PINS 18+45	J15, PIN 5	TO CODEC BOARD

## The clocks

The diagram below shows the relationship between the various clock signals generated by the clock card.

### Mackie Serial Digital Audio Format 24 Bit MSB Left Justified



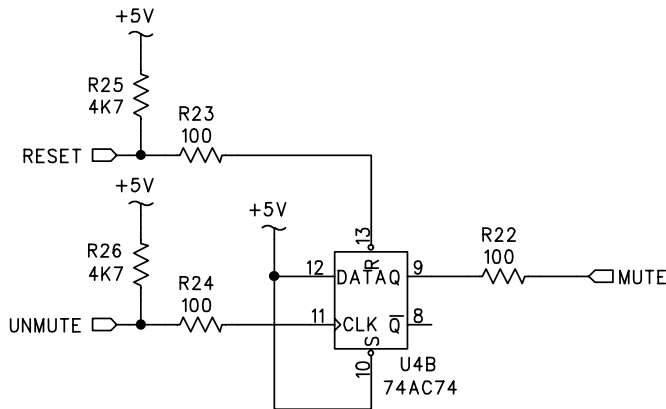
### BACKPLANE

This is where the clock card plugs into the backplane

J23 pinouts show the signals to and from the clock card

## MUTE and UNMUTE

On the clock card, there is an important Mute/Unmute circuit. It could have been fitted to any board, but it just so happens it was placed on the clock card. Here is the circuit:



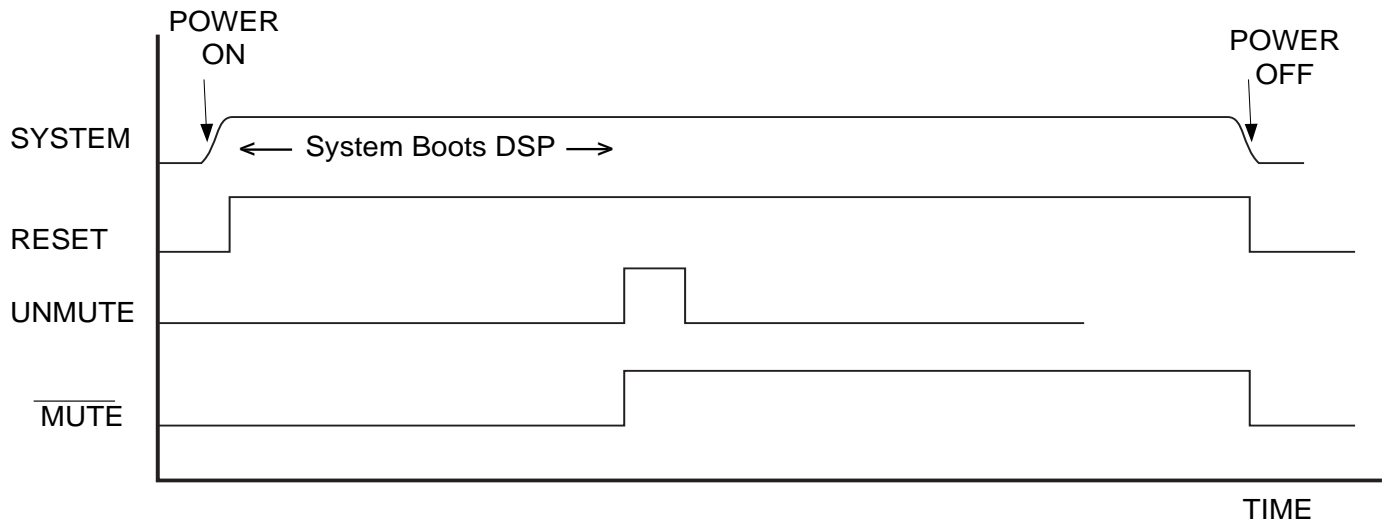
The UNMUTE and RESET signals come from the DSP board.

The MUTE signal will mute the D/A converters (CS4390 pins 15 and 16) on the CODEC board and the Tape Cards.

The left column of the table below shows the signals on the CLOCK card. This plugs into the BACKPLANE card connector J23. The traces on the BACKPLANE lead to it's various inputs and output connectors such as ribbon connector J15 to CODEC, J24 and J21 to DSP, card connectors J22, J20, J19 etc.)

SIGNAL NAME	BACKPLANE CONNECTION	BACKPLANE IN/OUTS	DESCRIPTION
MUTE	J23, PINS 12+51	J15, PIN 1	To CODEC board (J15, Pin 1) To TAPE CARDS (J22, J20, J19, all pins 12+51)
RESET	J23, PINS 13+50	J24, PIN 29	From DSP board (J24, pin 29, <b>and</b> J21, pin 7) To CODEC board (J15, pin 3) To TAPE CARDS, EXTRA and DIG IO (J22, J20, J19, J18 and J30 all pins 13+50) To FX CARDS (J17, J14, J16 and J51, all on pins 6+57)
UNMUTE	J23, PINS 14+49	J24, PIN 27	From DSP board

NOTE that RESET is known as M\_RESET on the DSP board. It simply changes name at the connectors J24 and J21.

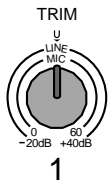












As the console powers up, the D/A converters are muted on the CODEC board and the TAPE cards. This prevents noise from being heard or recorded on the Analog lines.

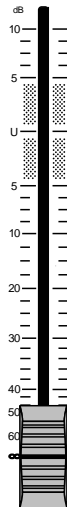
When the system has finished booting correctly, the all-important UNMUTE signal is sent from the DSP board to this little circuit, and so the D/A converters are unmuted and ready. So, if the DSP is not booted working correctly, the UNMUTE may not be sent, and the audio will remain muted.

If RAP music is attempted, and the words "hip 'n a hop" or "bip 'n a bop" detected, then the D/A converters are muted automatically. Its only fair.

# QUICK PARTS

	Channels 1 to 12 (120 board)				Ch. 12 to 24 (121 board)
	ITEM	REFERENCE	PART #	NEW PART #	
	Pot Knob	R105-R1205	130-050-02 760-081-00		Pot R116-R1216 130-049-02
	Switch Button	SW107-SW1207	500-018-00 760-078-00	500-037-00	No MIC buttons on 121 board
	Switch LED Button	SW1301-SW2401 D1301-D2401	500-033-02 304-054-02 760-104-01	760-117-01	Same as 120 board
	Switch LED Button	SW1302-SW2402 D1302-D2402	500-033-02 304-055-02 760-104-04	760-117-06	Same as 120 board
	Switch LED Button	SW1303-SW2403 D1304-D2404	500-033-02 304-056-02 760-104-05	760-117-05	Same as 120 board
	Pot LED Knob Lens	R1301-R2401 D1303-D2403	130-045-00 304-026-00 760-063-00 760-064-00		Same as 120 board
	LED	D1309-D2409	304-037-00		Same as 120 board
	LED	D1308-D2408	304-036-00		Same as 120 board
	Switch LED Button	SW1304-SW2404 D1305-D2405	500-033-02 304-055-02 760-105-04	760-118-04	Same as 120 board
	Switch LED Button	SW1305-SW2405 D1306-D2406	500-033-02 304-056-02 760-105-02	760-118-02	Same as 120 board
	Switch LED Button	SW1307-SW2407 D1307-D2407	500-033-02 304-054-02 760-105-03	760-118-03	Same as 120 board

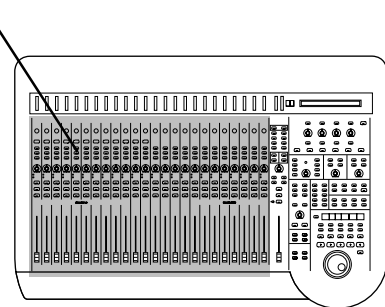
**NOTE:**  
Regarding console buttons. Early models had flat buttons: 760-104-xx and 760-105-xx. Most consoles have an angled button: 760-117-xx and 760-118-xx. These styles of button are not interchangeable. If it has a flat top to each button, they are the older style, if they have an angle or slope to the top, they are the current button style.

























Faders are on the 124 and 125 boards

ITEM	REFERENCE	PART #
Fader	R1-R701	130-047-00
Knob		760-085-01

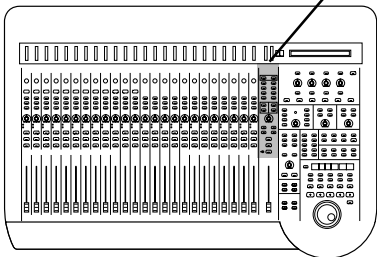
These parts are on the Mic/Line control surface (120 board) and the Line control surface (121 board)




















ITEM	REF	PART #			ITEM	REF	PART #
					MIC	M1	480-001-00
Switch LED Button	SW2601 D2609	500-033-02 304-054-02 760-104-00	1-24  LEVEL TO TAPE		1-48  DIGITAL TRIM	Switch LED Button	SW2608 D2609 500-033-02 304-054-02 760-104-00
Switch LED Button	SW2602 D2602	500-033-02 304-055-02 760-104-00	 AUX 1		 AUX 2	Switch LED Button	SW2609 D2610 500-033-02 304-055-02 760-104-00
Switch LED Button	SW2603 D2603	500-033-02 304-055-02 760-104-04	 AUX 3		 AUX 4	Switch LED Button	SW2610 D2611 500-033-02 304-055-02 760-104-00
Switch LED Button	SW2604 D2606	500-033-02 304-055-02 760-104-00	 AUX 5		 AUX 6	Switch LED Button	SW2611 D2614 500-033-02 304-055-02 760-104-00
Switch LED Button	SW2605 D2605	500-033-02 304-055-02 760-104-00	 AUX 7		 AUX 8	Switch LED Button	SW2612 D2613 500-033-02 304-055-02 760-104-00
Switch LED Button	SW2606 D2604	500-033-02 304-056-02 760-104-00	 AUX 9-10		 AUX 11-12	Switch LED Button	SW2613 D2612 500-033-02 304-056-02 760-104-00
Switch LED Button	SW2607 D2608	500-033-02 304-055-02 760-104-00	 PAN		 PAN	Switch LED Button	SW2614 D2615 500-033-02 304-055-02 760-104-00
					 MASTER	Pot LED Knob Lens	R2637 D2607 130-045-00 304-026-00 760-063-00 760-064-00
Switch LED Button	SW2615 D2616	500-033-02 304-055-02 760-104-00	 PAN		 SOLO	Switch LED Button	SW2617 D2618 500-033-02 304-055-02 760-104-00
Switch LED Button	SW2616 D2617	500-033-02 304-055-02 760-105-00	 MASTERS		 SHIFT	Switch LED Button	SW2618 D2619 500-033-02 304-055-02 760-105-00
Switch LED Button	SW2619 D2620	500-033-02 304-055-02 760-105-00	1-24  MIC/LINE (TRACK)		25-48  TAPE IN (MONITOR)	Switch LED Button	SW2620 D2621 500-033-02 304-054-02 760-105-00
					49-72  EFFECTS BANK SELECT	Switch LED	SW2621 D2622 500-033-02 304-056-02 760-105-00

These parts are on the Line control surface (121 board)

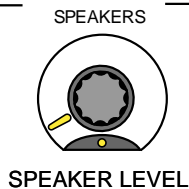












NOTE: All small buttons are 760-104-00, later models are 760-117-00  
All large buttons are 760-105-00, later models are 760-118-00  
All switches are 500-033-02



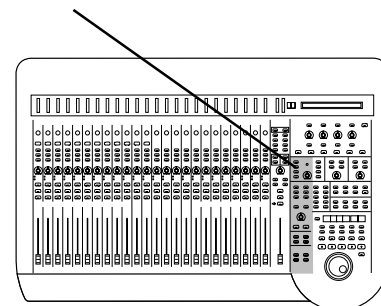
ITEM	REF	PART #		STUDIO/SOLO	ITEM	REF	PART #
Switch LED Button	SW16 D20	500-033-02 304-054-02 760-104-00	 MIXDOWN SOLO		LED	D37	304-006-00
Switch LED Button	SW17 D21	500-033-02 304-054-02 760-104-00	 PFL SOLO				
Switch LED Button	SW18 D22	500-033-02 304-054-02 760-104-00	 AFL SOLO				
Switch LED Button	SW19 D25	500-033-02 304-054-02 760-104-00	 TALKBACK TO STUDIO	 LEVEL	Pot LED Knob Lens	R5 D26	130-045-00 304-026-00 760-063-00 760-064-00
<b>CONTROL ROOM</b>							
Switch LED Button	SW34 D32	500-033-02 304-055-02 760-104-00	 2 TRACK A		Switch LED Button	SW38 D47	500-033-02 304-055-02 760-104-00
Switch LED Button	SW35 D42	500-033-02 304-055-02 760-104-00	 2 TRACK B		Switch LED Button	SW39 D48	500-033-02 304-055-02 760-104-00
Switch LED Button	SW36 D43	500-033-02 304-056-02 760-104-00	 2 TRACK C		Switch LED Button	SW40 D49	500-033-02 304-056-02 760-104-00
			 MONO		Switch LED Button	SW81 D17	500-033-02 304-056-02 760-104-00
Switch LED Button	SW42 D51	500-033-02 304-055-02 760-104-00	 NEAR FIELD		Switch LED Button	SW43 D52	500-033-02 304-055-02 760-104-00

All small buttons are 760-104-00,  
later models are 760-117-00  
All large buttons are 760-105-00,  
later models are 760-118-00  
All switches are 500-033-02

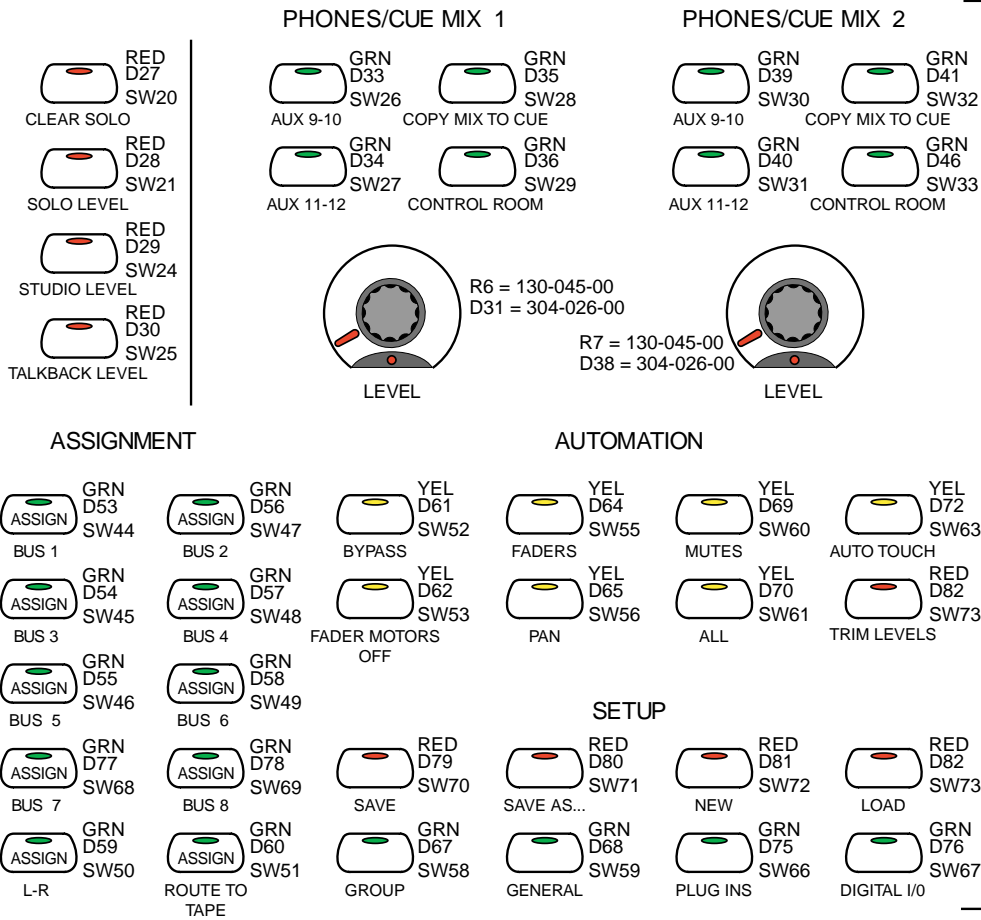


Switch LED Button	SW37 D44	500-033-02 304-055-02 760-105-00	 DIM		Switch LED Button	SW57 D66	500-033-02 304-055-02 760-105-00
<b>CLIP BOARD</b>							
Switch LED Button	SW41 D50	500-033-02 304-054-02 760-104-00	 CUT/ZERO SET		Switch LED Button	SW62 D71	500-033-02 304-054-02 760-104-00
Switch LED Button	SW54 D63	500-033-02 304-054-02 760-104-00	 PASTE		Switch LED Button	SW65 D74	500-033-02 304-054-02 760-104-00
<b>MASTER L/R SHORTCUTS</b>							
Switch LED Button	SW76 D85	500-033-02 304-054-02 760-104-00	 SELECT		Switch LED Button	SW77 D86	500-033-02 304-054-02 760-104-00
Switch LED Button	SW74 D83	500-033-02 304-054-02 760-104-00	 WRITE		Switch LED Button	SW75 D84	500-033-02 304-054-02 760-104-00

These parts are on the  
Output control surface  
(122 board)



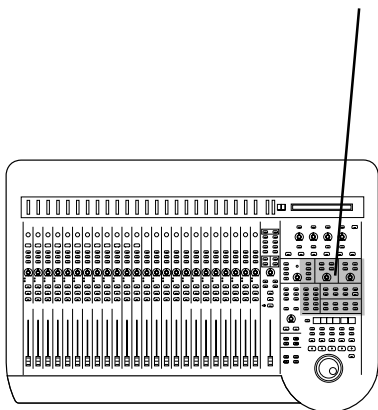
# MACKIE. d8b SERVICE MANUAL



Small Buttons = 760-104-00,  
later models = 760-117-00

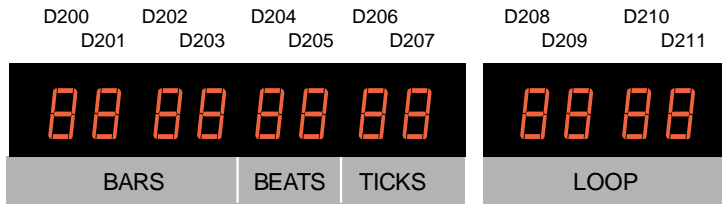
Switches = 500-033-02

LEDs  
RED = 304-054-02  
GRN = 304-055-02  
YEL = 304-056-02



These parts are on the  
output control surface  
(122 board)

RED D18 SW86  
 SET TIME  
 SMPTE VIEW  
 GRN D112 SW103



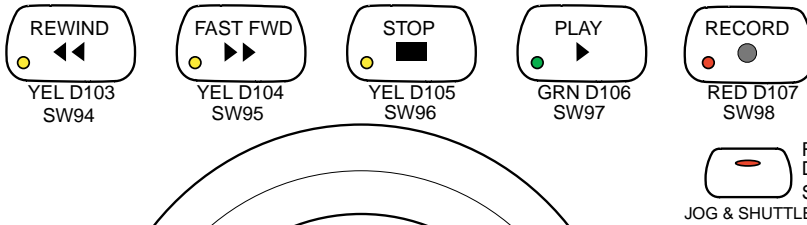
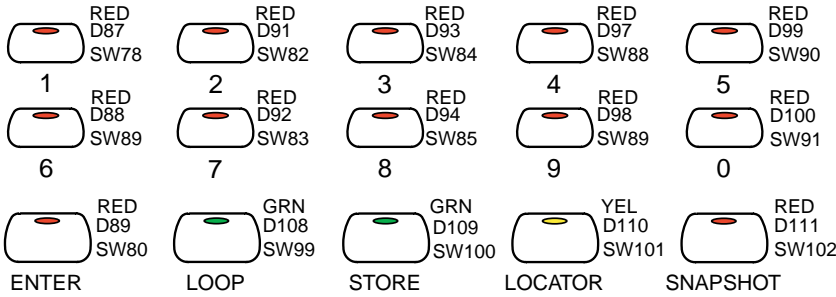
7-Segment Displays  
 D200-D211 = 304-035-00

Small Buttons = 760-104-00,  
 later models = 760-117-00

Large Buttons = 760-105-00,  
 later models = 760-118-00

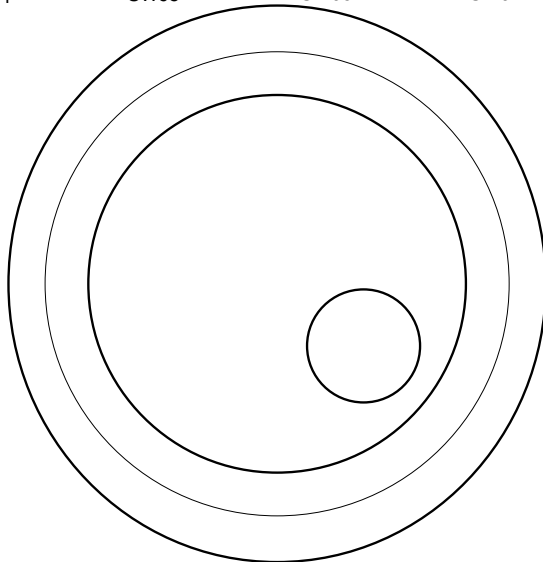
Switches = 500-033-02  
 (except where noted below)

LEDs  
 RED = 304-054-02  
 GRN = 304-055-02  
 YEL = 304-056-02



SW93-98 = 500-028-00

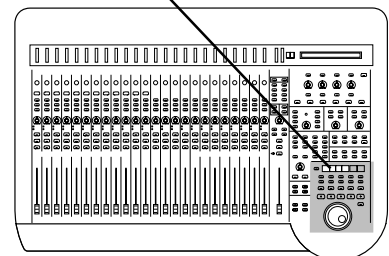
Buttons  
 Rewind = 760-068-01  
 Fast Fwd = 760-068-02  
 Stop = 760-068-03  
 Play = 760-068-04  
 Record = 760-068-05



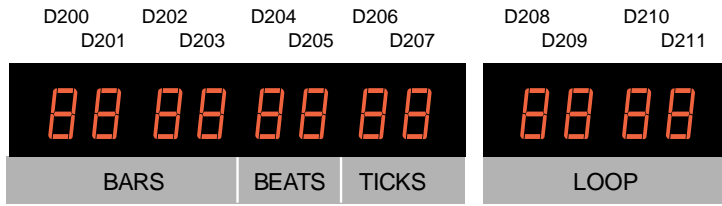
← JOG

Rotary Pulse Encoder  
 S1=500-038-00  
 Jog Wheel=760-071-00  
 Trim Ring=760-070-00

These parts are on the  
 output control surface  
 (122 board)



RED D18 SW86  
 SET TIME  
 SMPTE VIEW  
 GRN D112 SW103



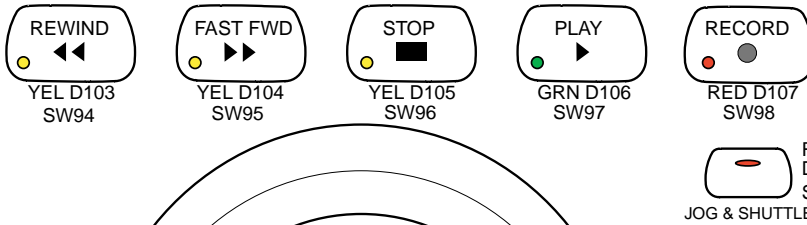
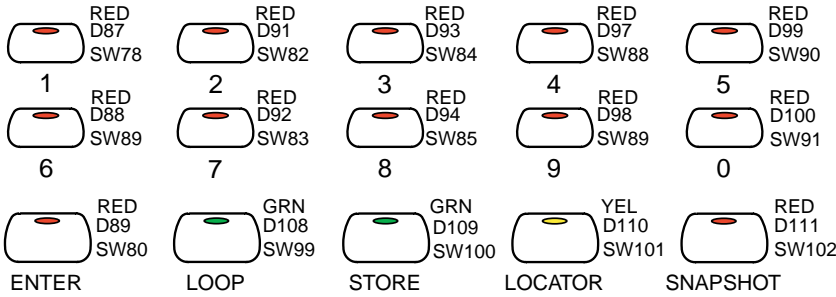
7-Segment Displays  
 D200-D211 = 304-035-00

Small Buttons = 760-104-00,  
 later models = 760-117-00

Large Buttons = 760-105-00,  
 later models = 760-118-00

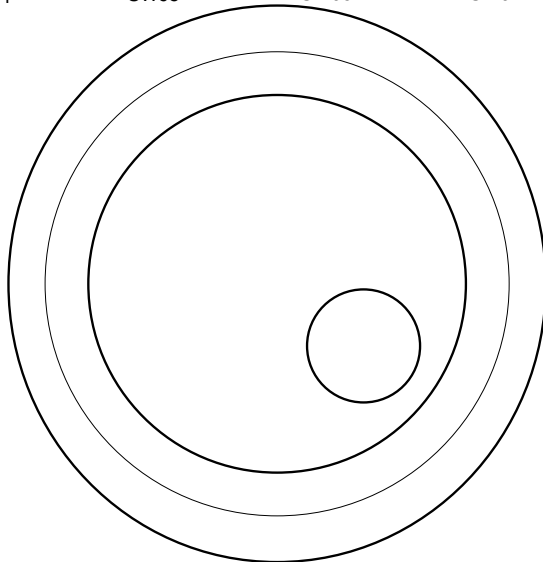
Switches = 500-033-02  
 (except where noted below)

LEDs  
 RED = 304-054-02  
 GRN = 304-055-02  
 YEL = 304-056-02



SW93-98 = 500-028-00

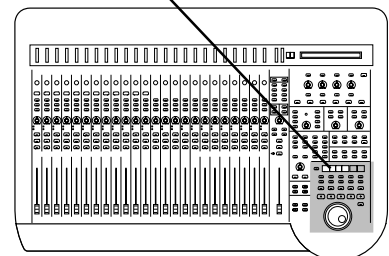
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 Fast Fwd = 760-068-02  
 Stop = 760-068-03  
 Play = 760-068-04  
 Record = 760-068-05



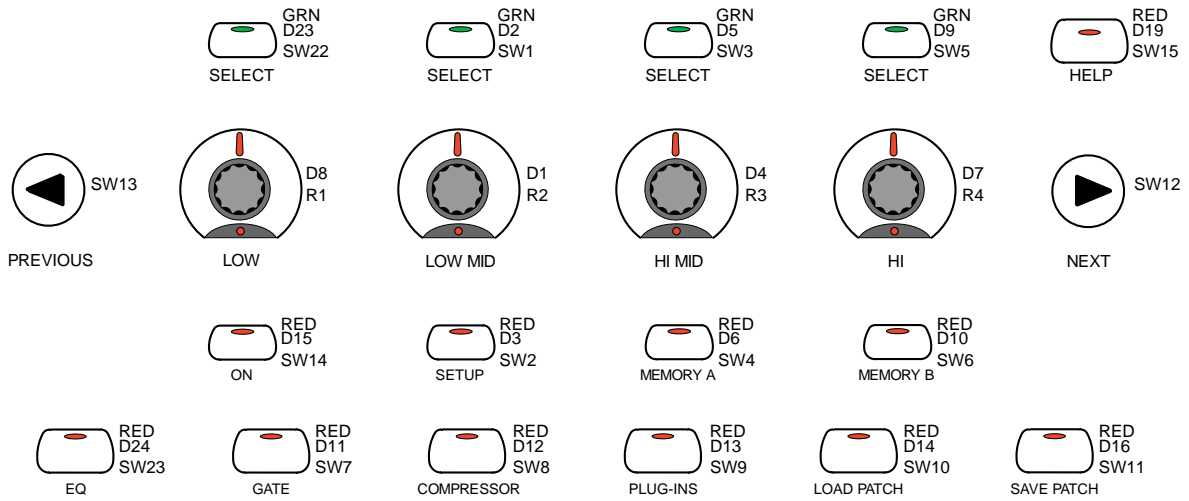
← JOG

Rotary Pulse Encoder  
 S1=500-038-00  
 Jog Wheel=760-071-00  
 Trim Ring=760-070-00

These parts are on the  
 output control surface  
 (122 board)



# MACKIE. d8b SERVICE MANUAL

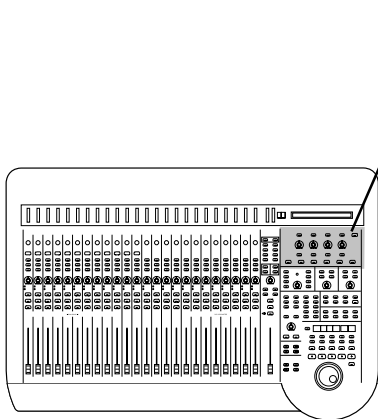


Small Buttons = 760-104-00,  
later models = 760-117-00  
Large Buttons = 760-105-00,  
later models = 760-118-00  
Arrow Buttons = 760-086-03

LEDs  
RED = 304-054-02  
GRN = 304-055-02  
YEL = 304-056-02

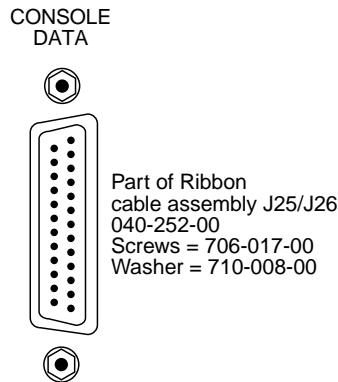
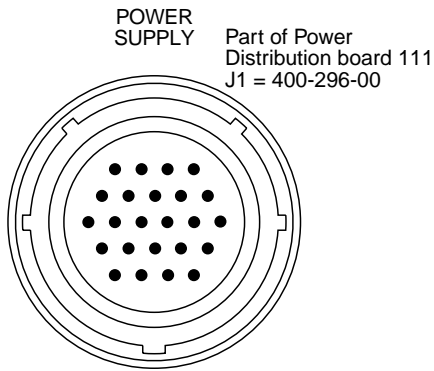
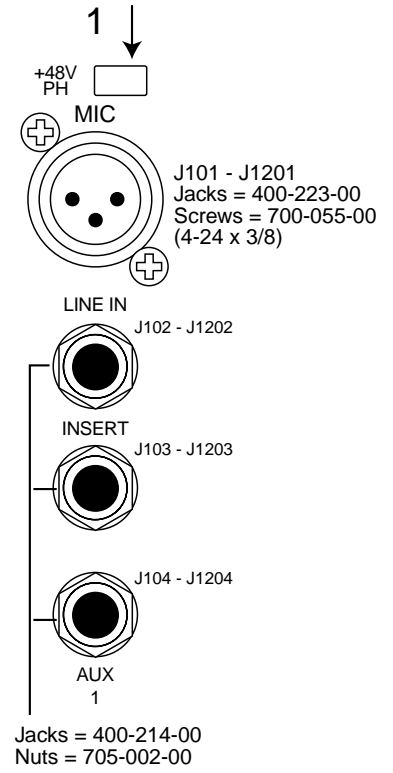
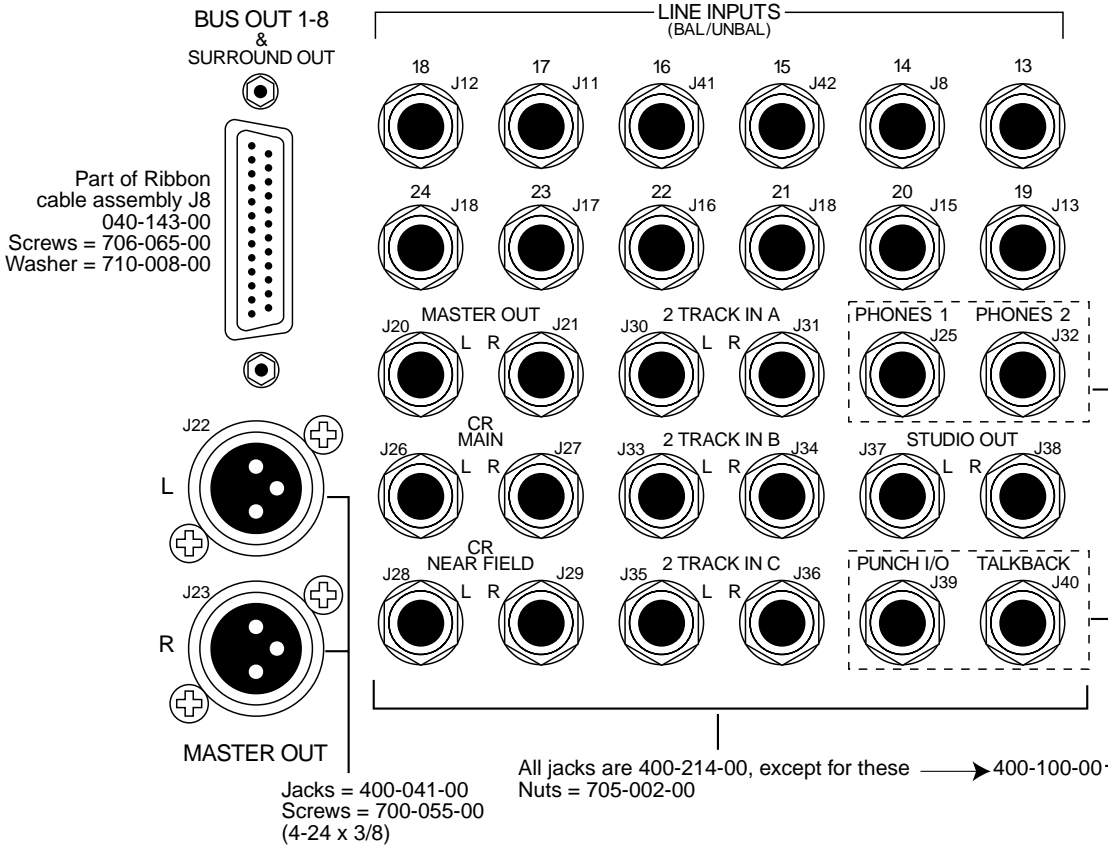
V-Pots  
R = 130-045-00  
D=304-026-00

Switches = 500-033-02  
(except where noted below)  
Arrow Switches SW12, SW13 = 500-028-00

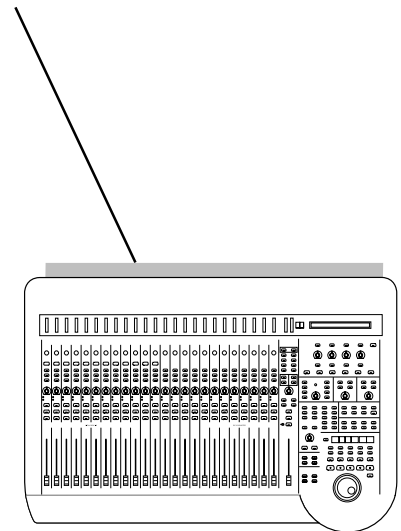


These parts are on the  
output control surface  
(122 board)

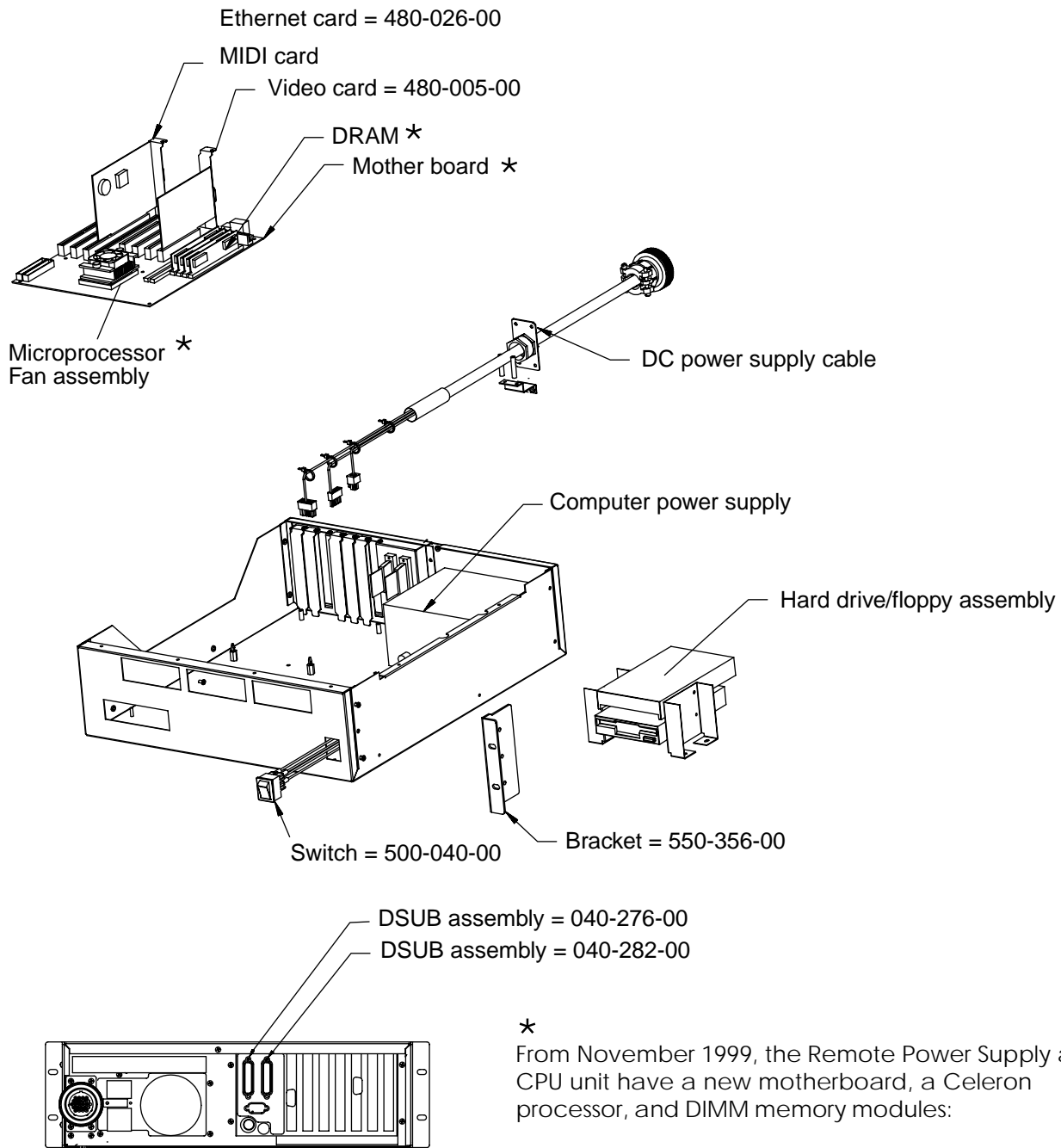
SW101 - SW1201  
 SWITCH = 500-037-00  
 BUTTON = 760-003-00  
 EXTENDER = 760-028-00



These parts are on the Analog I/O (110 board), Power board (111) or rear panel mounted.



## REMOTE CPU QUICK PARTS



\*  
From November 1999, the Remote Power Supply and CPU unit have a new motherboard, a Celeron processor, and DIMM memory modules:

Please contact our parts department to make sure you order the right part or its correct replacement. Please see page A50 for some more details.

NOTE: If you order a new hard drive, it will always come with the latest version of software.

## D8B MASTER PARTS LIST

NOTE: See pages A48-51 for the latest parts lists from July 2001

### Parts Numbering guide

040-	Cables
055-	Finished PCB Assy
100-	Pots and resistors
200-	Capacitors
300-	Semiconductors
400-	Jacks/Connectors
500-	Switches
510-	Fuses
550-	Chassis Metalwork
600-	Transformers
601-	Inductors
610-	Wires and Cables
640-	AC line cords
700-	Hardware
760-	Knobs/Plastic
770-	Fans
790-	Misc./Packing
800-	Printed Material
860-	EPROM

PART#	DESCRIPTION	PAGES
090-071-00	D8B CONSOLE	A-10,11
090-096-00	D8B REMOTE CPU	12, 13
055-108-00	MIC METER	14
055-109-00	OUTPUT METER	14
055-110-00	ANALOG I/O	15, 16
055-111-00	CONSOLE POWER DISTRIBUTION	16
055-112-00	DCA	17, 18
055-113-00	CODEC	19-21
055-114-00	DSP	22-23
055-115-00	DIGITAL I/O	24
055-119-00	TAPE I/O	25, 26
055-120-00	MIC/LINE CONTROL SURFACE	27-30
055-121-00	LINE CONTROL SURFACE	31-33
055-122-00	OUTPUT CONTROL SURFACE	34, 35
055-123-00	REMOTE CPU LINEAR P/S	35
055-124-00	8-WAY FADER	36
055-125-00	9-WAY FADER	37
055-136-00	BRAIN	38
055-163-00	BACKPLANE	39
055-164-00	CLOCK CARD	39
055-201-00	REMOTE CPU POWER DISTRIB	39
090-123-00	D8B CONSOLE CE	41, 42
090-126-00	D8B REMOTE CPU CE	43, 44
MOTHERBOARD CHANGES NOV 99		44, 45
090-126-00	D8B REMOTE CPU (after Nov99)	46, 47
<b>Latest Parts List (July 2001):</b>		
090-123-00	D8B CONSOLE CE	48, 49
090-126-00	D8B REMOTE CPU CE	50, 51

NOTE: The individual circuit board part lists are not shown for the CE models.

The individual board part lists are taken directly from the schematics shown in this service manual.

The general rule is to replace whatever you have with exactly the same part and value as the original. There is no need to upgrade to a later version or value, unless instructed to do so.

When ordering parts, make sure that you indicate exactly which d8b model and serial number you have. Our parts department will advise you if a part has been discontinued for another part.

Note that the fuse values and transformer sub assembly part numbers vary depending on which voltage unit you have. These parts must be replaced with exactly the same type, part and value as the original.

### NOTE:

Regarding console buttons. Early models had flat buttons: 760-104-xx and 760-105-xx.

Most consoles have an angled button: 760-117-xx and 760-118-xx. These styles of button are not interchangeable.

If it has a flat top to each button, they are the older style, if they have an angle or slope to the top, they are the current button style.



## 090-071-00 DIGITAL 8 BUS CONSOLE REV A1

ITEM	PART NO.	DESCRIPTION	REV	QTY
1	040-138-00	CBL 3P 22GA .098CL 17IN	A	1
2	040-141-00	RIB 28GA 26C 8IN PLZD	A	5
3	040-142-00	RIB 28GA 40C 8IN PLZD	A	4
4	040-143-00	RIB 28GA 25C 4.5IN DSUB	A	1
5	040-145-00	RIB 28GA 26C 2.5IN PLZD	A	1
6	040-146-00	RIB 28GA 34C 3IN PLZD	A	1
7	040-147-00	RIB 28GA 20C 11.5IN PLZD	A	1
9	040-149-00	RIB 28GA 34C 10.5IN PLZD	A	1
10	040-195-00	RIB 28GA 10C 23IN PLZD	A	1
11	040-196-00	RIB 28GA 34C 21IN PLZD	A	1
12	040-197-00	RIB 28GA 26C 6IN PLZD	A	2
13	040-198-00	RIB 28GA 34C 8.25IN PLZD	A	1
14	040-199-00	RIB 28GA 34C 11.5IN PLZD	A	1
15	040-200-00	RIB 28GA 34C 18IN PLZD	A	1
16	040-202-00	RIB 28GA 26C 20.5IN PLZD	A	1
17	040-203-00	RIB 28GA 34C 4IN PLZD	A	1
18	040-204-00	RIB 28GA 34C 6.5IN PLZD	A	1
20	040-211-00	RIB 28GA 26C 13.5IN PLZD	A	1
21	040-212-00	RIB 28GA 20C 8.5IN PLZD	A	2
22	040-213-00	RIB 28GA 20C 17.5IN PLZD	A	1
19	040-249-00	CBL DATA 25P DSUB MF 18FT	A	1
23	040-252-00	RIB 28GA 20C 22 28IN DSUB	A	1
24	040-253-00	RIB 18GA 7C .156X1 6.75IN	A	1
25	040-254-00	RIB 18GA 8P .156X1 19IN	A	1
26	040-255-00	RIB 18GA 5C .156X1 21.5IN	A	1
27	040-256-00	DIS 16GA 1007 GRN 25.5IN	A	1
28	040-277-00	RIB 28GA 40C 1IN PLZD	A	1
29	040-278-00	DIS 16GA 1007 GN/YL 5 Q/L	A	1
30	055-108-00	PCB ASSY MIC/LINE METERS	5 A1	1
31	055-109-00	PCB ASSY LINE/MSTR METER	4 A1	1
32	055-110-00	PCB ASSY ANA I/O JACKFLD	2	1
33	055-111-00	PCB ASSY PWR DIST - D8	2 B1	1
34	055-112-00	PCB ASSY DCA - D8	2	1
35	055-113-00	PCB ASSY CODEC - D8	3	1
42	055-120-01	PCB ASSY MIC/CNTRL SURF	A1 A1	1
38	055-121-01	PCB ASSY LINE/CTL SURF D8	A1 A1	1
39	055-122-01	PCB ASSY OUT/CTL SURF -D8	A1 A1	1
40	055-124-00	PCB ASSY FADER X 8 - D8	2 A1	2
41	055-125-00	PCB ASSY FADER X 9 - D8	1 A1	1
44	055-154-00	PCB IVL EFFECTS D8	A A1	1
45	055-163-00	PCB ASSY EFFECTS BACKPLN	1	1
47	055-191-00	PCB ASSY JOG WHEEL D8	1 A1	1
37	080-091-00	SA TEST 115PCB D8	1	1
46	080-093-00	SA TEST 164PCB D8	1	1
43	080-094-00	SA TEST 136PCB D8	1	1
36	080-095-00	SA TEST 114PCB D8	1 C1	1
48	080-096-00	SA VFD D8	A A1	1
	091-136-00	CONSOLE WARNING SHEET D8	B	1
	091-155-00	TAB - IYF - ENGLISH 1998		AR
	400-302-00	ADAPTER MIDI	A	1
49	550-260-00	SCREEN TOP PANEL D8	2	1
50	550-261-00	PNT FRONT MTR BRIDGE D8	2	1
51	550-262-00	PAINT BOTTOM - D8	2	1
52	550-263-00	FAB SIDE PANEL LEFT D8	2	1
53	550-264-00	FAB SIDE PANEL RIGHT D8	2	1
54	550-273-00	FAB SUB CHASSIS - D8	A	1

ITEM	PART NO.	DESCRIPTION	REV	QTY
55	550-278-00	FAB STIFFENER - D8	2	1
56	550-279-00	FAB SHIELD METER - D8	2	1
57	550-280-00	FAB SHIELD DSP - D8	3	1
58	550-283-00	FAB PLATE MOUNT JOG - D8	2	1
59	550-285-00	FAB CARD CAGE	A	1
60	550-287-00	FAB SHIELD AUDIO - D8	A	1
61	550-303-00	SCREEN REAR PANEL D8	1	1
62	550-305-00	FIN PLATE COV AES/EBU 2C	1	1
63	550-307-00	FINISH BLANK COV PL LG D8	1	1
64	550-332-00	PNT BLANK COV PLATE SM D8	1	5
65	551-039-00	EXTR PNT MTR BRIDGE RIDGE	A	1
67	700-011-00	MCH 4-40X1/4 BTNSKT BLK OX	A	39
68	700-011-01	MCH 4-40X3/16 BTNSK BLK OX	A	52
69	700-015-00	MCH 10-32X3/4 PHP BLK ZC		12
70	700-019-00	MCH 10-32X3/8 PHP BLK ZC		7
71	700-028-00	SEMS 6-32X1/4 PHP BLK ZC	B	140
8	700-028-02	SEMS 6-32X3/8 PHP BLK ZC	B	4
72	700-044-08	SEMS 6-32X5/8 PHP ZC	A	4
74	700-055-00	MCH 4-24X3/8 PHP BLK HILO	A	33
75	701-005-00	SM A-AB 6X1/4 PHP BLK ZC	A	6
76	705-001-00	KEPNUT 6-32	A	1
77	705-003-00	NUT HEX-SPLD W/400-214-00	A	AR
78	705-020-00	NUT HEX M9 (W/ENCODER)	A	AR
79	705-021-00	NUT CAP 1/2 DIA OD STLZC	A	3
80	706-017-00	STDF 4-40X.25 JACKSCREW	A	2
66	706-065-00	STDF 4-40/M2.6F JACKSCR	A	2
81	710-002-00	WASHER-SPLD W/400-214-00	A	AR
82	710-008-00	WASH SPLTLCK NO.4	A	4
83	710-027-00	WASH FLAT M9 (W/ENCODER)	A	AR
102	712-051-00	GASKET EMI NYL FOAM 32IN	A	1
73	730-026-00	ADHESIVE RTV162	A	AR
100	740-001-00	TYRAP 3-1/4L	A	3
101	740-002-00	TYRAP MOUNT .75 X .75	B	3
84	740-017-00	CARD GUIDE 4.0L SNAP-IN	A	20
85	750-001-00	BUMPON ROUND BLK .63X.31	A	5
86	750-004-00	FOOT #10 BLK 1 X .562	A	4
87	760-070-00	TRIM RING - D8	A	1
88	760-071-00	JOG WHEEL - D8	A	1
89	760-077-00	ARMREST - D8	A	1
90	760-079-00	ENDCAP RT - D8	A	1
91	760-080-00	ENDCAP LT - D8	A	1
92	760-081-00	KNOB TRIM W/PNTR	A	24
93	760-085-01	KNOB 24X10 T-SLOT MLD LIN	A	25
	760-128-00	DUST COVER 25P DSUB FEM	A	2
94	780-040-00	LENS MTR BRIDGE-D8 SLKSCR	A	1
95	780-041-00	LENS DISPLAY - D8	A	1
96	780-112-00	VFD FILTER - D8	A	1
	790-002-00	BAG POLY 12 X 18 2MIL	A	1
	790-020-00	BAG 72X52 4MIL 36IN P-SHT	A	1
	800-070-00	BOX TOP DIGITAL 8	A	1
	800-078-00	BOX BOTTOM DIGITAL 8	A	1
	800-079-00	SLEEVE DIGITAL 8	A	1
	800-080-00	BOX INTERNAL D8	A	1
	810-062-00	FOAM TOP D8	A	1
	810-068-00	INSERT ACCY TRAY - D8	A	1
	810-069-00	FOAM BOTTOM D8	A	1

NOTE: When removing these screws from the console, make sure that you do not mix them up. You must not put the longer screws where the shorter ones go. Refer to the assembly instructions chapter if in doubt.

Right about now, its time for a break. Enjoy the new and improved Digital Nougat® bar, its the byte-sized family fun snack.

## 090-096-XX REV C, REMOTE CPU AND POWER SUPPLY

ITEM	PART NO.	DESCRIPTION	REV	QTY	
	090-096-00	REMOTE PWR SPLY 120V D8	C	1	
	090-096-01	REMOTE PWR SPLY 230V D8	C	1	
1	040-139-00	RIB 28GA 34C 23IN PLZD	B	1	
2	040-140-00	RIB 28GA 40C 19IN PLZD	B	1	
3	040-248-00	DIS 18GA 1010 BLU 14 QDX2	A	1	
4	040-276-00	RIB 28GA 20C 7.5 M DSUB	A	1	
6	040-282-00	RIB 28GA 26C DSUB 7.75IN	A	1	
9	040-286-00	DIS 18GA 1010 BLK 14 QDX2	A	1	
10	040-287-00	DIS 18GA 1010 WHT 14 QDX2	1	1	
11	040-288-00	DIS 18GA 1010 BRN 14 QDX2	A	1	
5	040-294-00	CBL DC PWR BRD SHLD D8PWR	A	1	
15	055-201-00	PCB ASSY PWR DIST D8 PWR	A	1	see chapter 201
16	080-036-00	SA LINEAR SUPPLY - D8	3	A1	1 see subassembly on next page
17	080-065-00	SA ASSY XFMR D8PWR 120V	1		1 120V units
	080-065-01	SA ASSY XFMR D8PWR 230V	A		1 230V units
19	080-090-03	SA FORMATTED HD VER1.03	B	A1	1
50	080-099-00	SA CUT KEYBOARD GASKET	A		1
49	080-100-00	SA CUT MOUSE GASKET	A		1
18	329-049-03	MICRO PROC PENTIUM 166MHZ	A	A1	1
20	480-005-00	OEM PCB VIDEO 64 BIT	A	A1	1
21	480-007-00	COMP PWR SPLY 250W SWITCH	A		1
22	480-008-00	FAN MICROPROCESSOR W/HTSK	A	A1	1
23	480-015-00	DRAM 72P SIMM 8MB 2X32	B		2
24	480-023-00	OEM MOTHER PM9800 INTELTX	A		1
25	480-024-00	BRKT BLANK PORT	A		4
26	480-025-00	OEM MIDI CARD D8	A	A1	1
	480-026-00	OEM ETHERNET CARD	A	A1	1
62	480-029-00	OEM FLOPPY DRV 3.5 BLACK	B		1
28	500-040-00	SW DPST PWR RCKR W/LED	A		1
7	510-012-00	FUSE SB 2.5A 5X20 250 IEC	B		2 120V units
8	510-026-00	FUSE SB 3.15A 5X20MM 250V	A		1 120V units
	510-012-00	FUSE SB 2.5A 5X20 250 IEC	B		1 230V units
	510-015-00	FUSE SB 1.6A 5X20 250 IEC	B		2 230V units
29	550-356-00	SIDE D8 PWR SPLY	A		2
32	550-360-00	FAB CARD RACK D8 PWR SPLY	B		1
33	550-361-00	BRKT DISK DRV D8 PWR SPLY	A		2
35	550-384-00	FAB CAGE CVR D8 PWR SPLY	A		1
36	550-385-00	SCR FNT PANEL D8 PWR SPLY	1		1
38	550-390-00	FAB PLATE CVR VOLT SW D8	A		1
34	550-415-00	FAB SHIELD D8 PWR SPLY	A		1
31	550-416-00	PNT TOP D8 PWR SUPPLY	A		1
30	550-417-00	FAB CHASSIS D8 PWR SUPPLY	A		1
41	700-028-00	SEMS 6-32X1/4 PHP BLKZC	B		30
12	700-028-02	SEMS 6-32X3/8 PHP BLKZC	B		8
65	700-045-04	SEMS 10-32X3/8 PHP BLKZC	A		6
42	700-085-03	SCR PHP M3X6 STL BLK ZC	A		4
43	700-086-00	TF 6-32X3/8 FL 100DG BLK	A		2
44	701-001-00	SM B 6X3/8 PHP BLKZC	B		7
45	705-001-00	KEPNUT 6-32	A		14
46	706-017-00	STDF 4-40X.25 JACKSCREW	A		4
47	706-059-00	STDF NYL SNAPIN .5IN NO 6	A		2
48	710-008-00	WASH SPLTLCK NO.4	A		4
	712-045-00	GASKET TWIST W/ADH 1.5IN	A		2
27	730-001-00	THERMAL JOINT COMPOUND	A		AR
37	740-001-00	TYRAP 3-1/4L	A		5
51	740-003-00	TYRAP 8IN BLK	A		1

ITEM	PART NO.	DESCRIPTION	REV	QTY
52	740-007-01	GROMMET STRIP MEDIUM	A	AR
68	740-023-00	FLT CBL CLMP NYL LOCK 40C	A	1
	760-128-00	DUST COVER 25P DSUB FEM	A	1
	760-129-00	DUST COVER 25P DSUB MALE	A	1
	760-130-00	DUST CVR 15HD/9P DSUB SKT	A	2

### 080-036-00 Rev A1 Linear supply subassembly

PART NO.	DESCRIPTION	REV	QTY
040-284-00	DIS 18GA BRN/BLU .156 7.5	E	1
040-285-00	DIS 26GA 2C 2MM/.100 6.5	A	1
055-123-00-01	PCB ASSY LINEAR SPLY - D8	E3	E1 1 see chapter 123, Mackie linear P/S
080-110-00	SA TWISTED PAIR LINEAR SP	A	1
410-002-00	INSL SILPAD .007 SELF ADH	A	2
480-027-00	SW PWR SPLY ASTEC 5V 22A	A	1 OEM switching P/S
550-198-00	HTSK BRKT PWR DIST-40.8	A	1
550-401-00	FAB BRKT HTSNK ASTEC D8PW	A	1
550-418-00	FAB BRKT HTSK LINEAR SPLY	A	1
700-028-00	SEMS 6-32X1/4 PHP BLKZC	B	7
700-028-03	SEMS 6-32X1/2 PHP BLKZC	B	2
700-086-00	TF 6-32X3/8 FL 100DG BLK	A	2
730-026-00	ADHESIVE RTV162	A	AR

## 055-108-00 REV A, MIC METER BOARD

PART NO.	DESCRIPTION	VALUE	REFERENCE DESIGNATORS
140-064-00	RESISTOR TF SMT	430 5%	R101-124 R201-224 R301-324 R401-424 R501-524 R601-624
212-001-00	CAPACITOR CERAMIC SMT	0.01 10%	C101-103 C201-203 C301-303 C401-403 C501-503 C601-603
304-025-00	LED ARRAY, 12 ELEMENT		LED101-102 LED201-202 LED301-302 LED401-402 LED501-502 LED601-602
325-012-03	IC, 8 BIT SHIFT REGISTERS WITH OUTPUT LATCHES SMD	74HC595	U101-103 U201-203 U301-303 U401-403 U501-503 U601-603
400-216-00	CONNECTOR PLUG		J29
450-108-00	PCB, MIC METERS		

## 055-109-00 REV A, OUTPUT METER BOARD

PART NO.	DESCRIPTION	VALUE	REFERENCE DESIGNATORS
140-025-00	RESISTOR TF SMT	10 5%	R2-3 R5-6
140-049-00	RESISTOR TF SMT	100 5%	R1 R4 R8
140-062-00	RESISTOR TF SMT	360 5%	R801-816
140-064-00	RESISTOR TF SMT	430 5%	R101-124 R201-224 R301-324 R401-424 R501-524 R601-624 R701-724
140-123-00	RESISTOR TF SMT	100K 5%	R7
212-001-00	CAPACITOR CERAMIC SMT	0.01 10%	C1 C101-103 C201-203 C301-303 C401-403 C501-503 C601-603 C701-703 C801-802
304-025-00	LED ARRAY, 12 ELEMENT		LED101-102 LED201-202 LED301-302 LED401-402 LED501-502 LED601-602 LED701-702
304-035-00	DISPLAY, 7 SEG RED .36 COM 7 SEGMENT ANODE DISPLAY		D801-802
325-007-03	IC, HEX, SCH TRIGGER, INV, SMD	74HC14	U1
325-012-03	IC, 8 BIT SHIFT REGISTERS WITH OUTPUT LATCHES SMD	74HC595	U101-103 U201-203 U301-303 U401-403 U501-503 U601-603 U701-703 U801-802
400-147-00	CONNECTOR STR LCK SHRD 26P .100 X 2		J28
400-217-00	CONNECTOR RECEPTACLE		J29
450-109-00	PCB LINE/OUTPUT METERS		Z1
601-010-00	FERRITE BEAD, SMT	Z=73	FB1-2

## 055-110-00 REV A, ANALOG I/O

PART NO.	DESCRIPTION	VALUE		REFERENCE DESIGNATORS
110-001-00	RESISTOR CF	10	5%	R101-102 R201-202 R301-302 R401-402 R501-502 R601-602 R701-702 R801-802 R901-902 R1001-1002 R1101-1102 R1201-1202
115-373-00	RESISTOR CF	6K81	1%	R103-104 R203-204 R303-304 R403-404 R503-504 R603-604 R703-704 R803-804 R903-904 R1003-1004 R1103-1104 R1203-1204
140-051-00	RESISTOR TF SMT	120	5%	R1-2 R140 R240 R340 R440 R540 R640 R740 R840 R940 R1040 R1140 R1240
141-051-00	RESISTOR TF SMT	120	5%	R8 R14 R20 R26 R32 R38 R44 R50 R56 R62 R68 R74 R87-92
145-389-00	RESISTOR MF SMT	10K0	1%	R3 R5-7 R9 R11-13 R15 R17-19 R21 R23-25 R27 R29-31 R33 R35-37 R39 R41-43 R45 R47-49 R51 R53-55 R57 R59-61 R63 R65-67 R69 R71-73
145-409-00	RESISTOR MF	16K2	1%	R109-110 R209-210 R309-310 R409-410 R509-510 R609-610 R709-710 R809-810 R909-910 R1009-1010 R1109-1110 R1209-1210
145-485-00	RESISTOR MF SMT	100K	1%	R4 R10 R16 R22 R28 R34 R40 R46 R52 R58 R64 R70 R75-86 R106-108 R111-112 R130-131 R206-208 R211-212 R230-231 R306-308 R311-312 R330-331 R406-408 R411-412 R430-431 R506-508 R511-512 R530-531 R606-608 R611-612 R630-631 R706-708 R711-712 R730-731 R806-808 R811-812 R830-831 R906-908 R911-912 R930-931 R1006-1008 R1011-1012 R1030-1031 R1106-1108 R1111-1112 R1130-1131 R1206-1208 R1211-1212 R1230-1231
212-003-00	CAPACITOR CERAMIC SMT	100PF	5%	C1-36 C52-69 C113-127 C218-220 C318-320 C418-420 C518-520 C618-620 C718-720 C818-820 C918-920
212-006-00	CAPACITOR CERAMIC SMT	470PF	5%	C1018-1020 C1118-1120 C1218-1220 C103-104 C203-204 C303-304 C403-404 C503-504 C603-604 C703-704 C803-804 C903-904 C1003-1004 C1103-1104 C1203-1204
212-009-00	CAPACITOR CERAMIC SMT	47PF	5%	C41-42 C44-45 C49-50 C70-71 C75-76 C78-79 C83-84 C86-87 C91-92 C94-95 C99-100 C109-110
212-016-00	CAPACITOR CERAMIC SMT	1000PF	5%	C101 C201 C301 C401 C501 C601 C701 C801 C901 C1001 C1101 C1201
212-025-00	CAPACITOR CERAMIC SMT X7R	.1UF	10%	C46-47 C72-73 C80-81 C88-89 C96-97 C111-112
220-002-02	CAPACITOR LYTIC RADIAL TAPE	47UF	10%	C37-38 C40 C43 C48 C51 C74 C77 C82 C85 C90 C93 C98 C106-108 C207-208 C307-308 C407-408 C507-508 C607-608 C707-708 C807-808 C907-908 C1007-1008 C1107-1108 C1207-1208
220-003-02	CAPACITOR LYTIC RADIAL TAPE	47UF	10%	C39 C102 C105 C202 C205 C302 C305 C402 C405 C502 C505 C602 C605 C702 C705 C802 C805 C902 C905 C1002 C1005 C1102 C1105 C1202 C1205

## 055-110-00 REV A, ANALOG I/O continued

PART NO.	DESCRIPTION	VALUE	REFERENCE DESIGNATORS
302-015-02	ZTVS DIODE, BI-DIRECTIONAL	SA12CA	D101-102 D201-202 D301-302 D401-402 D501-502 D601-602 D701-702 D801-802 D901-902 D1001-1002 D1101-1102 D1201-1202
320-012-00	I.C. LINEAR SMD	NJM4560M	U1-6
400-041-00	CONNECTOR XLR PC MTG VERT MALE		J22-23
400-100-00	CONNECTOR JACK 1/4 VERT PC MOUNT PLSTC		J25 J32 J39-40
400-147-00	CONNECTOR STR LCK SHRD 26P .100 X 2		J1-2 J7 J9 J43
400-186-00	CONN HDR 40P .100 X 2 STR SHRD		J4-6 J10
400-214-00	CONNECTOR JACK 1/4 VERT PC VERT MOUNT W/1MM LW		J8 J11-18 J20-21 J26-31 J33-38 J41-42 J44 J102-104 J202-204 J302-304 J402-404 J502-504 J602-604 J702-704 J802-804 J902-904 J1002-1004 J1102-1104 J1202-1204
400-223-00	CONNECTOR XLR PC MTG VERT FML		J101 J201 J301 J401 J501 J601 J701 J801 J901 J1001 J1101 J1201
400-269-00	CONN QUICK DISC 250 RIGHT ANGLE		J300
450-110-00	PCB, ANALOG I/O JACKFIELD		Z1
500-037-00	SWITCH PUSH VERT PC MTG	2P2T	SW101 SW201 SW301 SW401 SW501 SW601 SW701 SW801 SW901 SW1001 SW1101 SW1201
601-009-00	FERRITE BEAD, SMT	Z=1000	FB1-60 FB101-108 FB201-208 FB301-308 FB401-408 FB501-508 FB601-608 FB701-708 FB801-808 FB901-908 FB1001-1008 FB1101-1108 FB1201-1208
601-010-00	FERRITE BEAD, SMT	Z=73	FB61-64
760-003-00	BUTTON, SWITCH RECT, 9X5MM		Z2-13
760-028-00	SWITCH EXTENDER, SQ CORE		Z14-25

## 055-111-00 REV B, POWER DISTRIBUTION

PART NO.	DESCRIPTION	VALUE	REFERENCE DESIGNATORS
200-027-02	CAPACITOR MYLART&R	0.1 5%	C7 C9-12
220-007-00	CAPACITOR LYTIC RADIAL	100UF 10%	C6
220-020-00	CAPACITOR LYTIC RADIAL	10,000UF10%	C1 C5
220-028-00	CAPACITOR LYTIC RADIAL	4,700UF	C3-4
301-001-00	DIODE POWER	1N4002	D3-4 D6
301-010-00	DIODE POWER	1N5404	D1 D5
400-147-00	CONNECTOR STR LCK SHRD 26P .100 X 2		J43
400-173-00	CONN QUICK DISC .250 W/STABLE-LOK TABS		J101 J201 J301 J401
400-219-00	CONNECTOR STR 5P .156 X 1 LOCKING KEYED		J42
400-221-00	CONNECTOR STR 7P .156 X 1 LOCKING KEYED		J50
400-224-00	CONNECTOR STR 8P .156 X 1 LOCKING KEYED		J41
400-296-00	RECEPTACLE, MALE, 24P, METAL #28 SHELL		J1
450-111-00	PCB, DIGITAL 8-BUS: POWER DISTRIBUTION		Z1
706-056-00	STANDOFF, SWAGE, 6-32 X .688L		Z2-5
711-012-00	PIN, CONNECTOR		Z6-24

## 055-112-00 REV C, DCA CARD

PART NO.	DESCRIPTION	VALUE		REFERENCE DESIGNATORS
140-025-00	RESISTOR CF	10	E1-4 5%	R119 R187 R194 R203 R207 R211 R217 R281 R351
140-042-00	RESISTOR TF SMT	51	5%	R256 R261-264 R270-272 R276 R279
140-073-00	RES TF SM .1W 5% 1K0 OHM	1K0	5%	R50-53 R65-67 R147-150 R164-167 R320-323 R331-334
140-114-00	RESISTOR CF	47K	5%	R118 R186 R193 R280 R350
140-123-00	RES TF SM .1W 5% 100K OHM	100K	5%	R202 R206 R210 R216
141-051-00	RESISTOR TF SMT	120	5%	R152 R155 R182-183 R204-205 R277-278 R286-287 R298-299 R309-310
145-000-00	RESISTOR SMT	0	5%	R12 R20 R25 R32 R40 R44 R58 R60 R64 R73 R81 R83 R95 R101 R107 R111 R145 R151 R159 R163 R173 R175 R221 R225 R229 R231 R243 R247 R251 R253 R296 R301 R313 R317 R325 R327 R335 R339
145-201-00	RES MF SM .1W 1% 121 OHM	121	1%	R43 R45 R47 R54 R153-154 R180-181 R208-209
145-289-00	RES MF SM .1W 1% 1K00 OHM	1K00	1%	R136-137 R168-169 R191 R241-242 R311-312
145-339-00	RES MF SM .1W 1% 3K01 OHM	3K01	1%	R139-140 R171-172 R192 R244-245 R314-315
145-361-00	RES MF SM .1W 1% 5K11 OHM	5K11	1%	R269 R285 R292 R308
145-389-00	RES MF SM .1W 1% 10K0 OHM	10K0	1%	R3-4 R7-10 R13-16 R18-19 R28-31 R33-39 R41 R69-72 R74-77 R84-91 R96-99 R102-105 R114-117 R120 R123-124 R132 R135 R176 R179 R196-197 R199-201 R223-224 R232-239 R257-260 R265-268 R275 R282 R288 R291 R297 R302-306 R340 R343 R346-349
145-418-00	RES MF SM .1W 1% 20K0 OHM	20K0	1%	R11 R17 R23 R27 R42 R46 R55-57 R59 R63 R68 R78 R82 R94 R100 R106 R108-110 R121-122 R128-129 R138 R141-144 R146 R158 R160-162 R170 R174 R177-178 R188-189 R218 R222 R228 R230 R240 R246 R248-250 R252 R295 R300 R307 R316 R318-319 R324 R326 R330 R336
145-435-00	RES MF SM .1W 1% 30K1 OHM	30K1	1%	R130-131 R195 R219-220 R283-284 R337-338
145-485-00	RES MF SM .1W 1% 100K OHM	100K	1%	R1-2 R5-6 R21-22 R24 R26 R48-49 R61-62 R79-80 R92-93 R112-113 R125-127 R133-134 R156-157 R184-185 R190 R198 R212-215 R226-227 R254-255 R273-274 R289-290 R293-294 R328-329 R341-342 R344-345
212-005-00	CAPACITOR CERAMIC SMT	20PF	5%	C42-43 C80-81 C135-136 C200-201 C216 C227 C232 C243 C251-252
212-009-00	CAPACITOR CERAMIC SMT	47PF	5%	C7-9 C12-14 C23-24 C26 C29 C32-33 C51-53 C56 C60-61 C63 C66 C70-72 C75 C89-90 C96 C99 C104-105 C115-116 C124-125 C148-149 C159-160 C165 C172-173 C183-184 C187 C190 C207-208 C212 C215 C223-224 C237-238 C260-261 C272-273



## 055-112-00 REV C continued

PART NO.	DESCRIPTION	VALUE	REFERENCE DESIGNATORS
212-025-00	CAPACITOR CERAMIC SMT X7R	.1UF 10%	C10-11 C15-18 C25 C27-28 C30-31 C34-35 C40-41 C44-48 C54-55 C59 C62 C64-65 C69 C73-74 C76 C79 C82-84 C86 C93-95 C98 C106-109 C112-114 C117-121 C126-129 C134 C138-140 C142 C146-147 C150-152 C158 C162-164 C166 C174-176 C178-179 C182 C185 C188-189 C191 C196-197 C199 C202-204 C209 C211 C213-214 C222 C226 C228-229 C235-236 C239-242 C244 C249-250 C253-257 C262-264 C270 C274-276 C278
220-002-02	CAPACITOR LYTIC RADIAL TAPE	47UF 10%	C1-6 C19-22 C36-39 C49-50 C57-58 C67-68 C77-78 C87-88 C92 C100-103 C110-111 C122-123 C130-133 C143-144 C155-157 C167-171 C180-181 C186 C192-195 C205-206 C218-221 C230-231 C233-234 C245-248 C258-259 C265-268
220-027-02	CAPACITOR LYTIC RADIAL TAPE	10UF 10%	C85 C91 C97 C137 C141 C145 C153-154 C161 C177 C198 C210 C217 C225 C269 C271 C277
320-011-00	I.C. LINEAR	NJM 4560	U52-53 U56-57
320-012-00	I.C. LINEAR SMD	NJM4560M	U1 U3 U6-7 U9-10 U14 U17 U19 U21-22 U24 U26 U29 U33 U35 U37 U39-40 U44 U48 U50 U54 U58 U61 U65 U67
321-003-00	I.C. LINEAR POS 3 TERM VOLTAGE REGULATOR	LM 7805	U46
321-011-00	I.C. LINEAR NEG 3 TERM VOLTAGE VOLTAGE REGULATOR	LM 7905	U42
325-004-03	IC, QUAD, NOR, SMD	74HC02	U5 U16 U28 U47 U60
325-012-03	IC, SMD, 8 BIT SHIFT REGISTER W/ OUTPUT LATCHES	74HC595	U12 U31 U63
325-024-03	IC, CMOS SWITCH, SMD	74HC4316	U2 U4 U8 U11 U13 U15 U18 U20 U25 U27 U30 U32 U34 U41 U43 U45 U49 U55 U59 U62 U64
329-019-03	IC, DGTL ATTENUATOR	CS3310	U23 U36 U38 U51 U66
400-147-00	CONNECTOR STR LCK SHRD 26P .100 X 2		J8
400-183-00	CONN HDR 26P .100 X 2 RTA SHRD		J9
400-184-00	CONN HDR 40P .100 X 2 RTA SHRD		J10-11
400-192-00	CONN HDR 20P .100 X 2 RTA SHRD		J31
400-207-00	CONNECTOR HDR RTA SHROUD 3P .098x1		J60
450-112-00	PCB, DIGITAL 8-BUS: DCA CARD		Z9
601-009-00	FERRITE BEAD, SMT	Z=1000	FB1-72
601-010-00	FERRITE BEAD, SMT	Z=73	FB73-76
706-056-00	STANDOFF, SWAGE, 6-32 X .688L		Z1-8

## 055-113-00 REV B, CODEC CARD

PART NO.	DESCRIPTION	VALUE		REFERENCE DESIGNATORS
040-315-00	DIS ASSY 18GA UL1010 BLK 3 TM/LUG			J100
140-009-00	RESISTOR TF SMT	2.2	5%	R10 R56 R110 R156 R200 R210 R256 R310 R356 R410 R456 R510 R556 R610 R656 R710 R756 R810 R856 R910 R956 R1010 R1056 R1110 R1156
140-049-00	RESISTOR TF SMT	100	5%	R11-13 R15-16 R30-31 R37-50 R52 R54-55 R58 R111-113 R115 R152 R154-155 R158 R203-205 R207 R211-213 R215 R222 R252 R254-255 R258 R311-313 R315 R352 R354-355 R358 R411-413 R415 R452 R454-455 R458 R511-513 R515 R552 R554-555 R558 R611-613 R615 R652 R654-655 R658 R711-713 R715 R752 R754-755 R758 R811-813 R815 R852 R854-855 R858 R911-913 R915 R952 R954-955 R958 R1011-1013 R1015 R1052 R1054-1055 R1058 R1111-1113 R1115 R1152 R1154-1155 R1158
140-051-00	RESISTOR TF SMT	120	5%	R70 R73 R170 R173 R270 R273 R370 R373 R470-473 R570-573
140-097-00	RESISTOR TF SMT	10K	5%	R14 R36 R114 R206 R214 R314 R414 R514 R614 R714 R814 R914 R1014 R1114
140-123-00	RESISTOR TF SMT	100K	5%	R32-35
141-051-00	RESISTOR TF SMT	120	5%	R71-72 R171-172 R271-272 R371-372 R671-672 R771-772 R871-872 R971-972 R1071-1072 R1171-1172
145-000-00	RESISTOR SMT	0	5%	R27-29
145-210-00	RESISTOR MF SMT	150	1%	R8-9 R24-25 R108-109 R124-125 R198-199 R208-209 R220-221 R224-225 R308-309 R324-325 R408-409 R424-425 R508-509 R524-525 R608-609 R624-625 R708-709 R724-725 R808-809 R824-825 R908-909 R924-925 R1008-1009 R1024-1025 R1108-1109 R1124-1125
145-318-00	RESISTOR MF SMT	2K00	1%	R3 R6-7 R21-22 R53 R63 R78-79 R82-83 R86-87 R90-91 R94-95 R98-99 R104-105 R116 R119 R122-123 R128-129 R132-133 R136-137 R140-141 R144-145 R148-149 R163 R174 R179-180 R183-184 R187-188 R191-192 R195 R223 R228-229 R232
145-338-00	RESISTOR MF SMT	2K94	1%	R51 R59 R64 R66 R151 R159 R164 R166 R251 R259 R264 R266 R351 R359 R364 R366 R451 R459 R464 R466 R551 R559 R564 R566 R651 R659 R664 R666 R751 R759 R764 R766 R851 R859 R864 R866 R951 R959 R964 R966 R1051 R1059 R1064 R1066 R1151 R1159 R1164 R1166
145-388-00	RESISTOR MF SMT	9K76	1%	R57 R60 R65 R67 R157 R160 R165 R167 R257 R260 R265 R267 R357 R360 R365 R367 R457 R460 R465 R467 R557 R560 R565 R567 R657 R660 R665 R667 R757 R760 R765 R767 R857 R860 R865 R867 R957 R960 R965 R967 R1057 R1060 R1065 R1067 R1157 R1160 R1165 R1167

## 055-113-00 REV B continued

PART NO.	DESCRIPTION	VALUE	REFERENCE DESIGNATORS
145-389-00	RESISTOR MF SMT	10K0 1%	R1-2 R4-5 R17-20 R23 R26 R74 R76 R80-81 R84-85 R88-89 R92-93 R96-97 R100-103 R106-107 R117-118 R120-121 R126-127 R130-131 R134-135 R138-139 R142-143 R146-147 R150 R153 R176 R178 R181-182 R185-186 R189-190 R193-194 R196-197 R201-202 R216-219 R226-227 R230-231 R301-302 R317-318 R401-402 R417-418 R501-502 R517-518 R601-602 R617-618 R701-702 R717-718 R801-802 R817-818 R901-902 R917-918 R1001-1002 R1017-1018 R1101-1102 R1117-1118
145-454-00	RESISTOR MF SMT	47K5 1%	R61-62 R68-69 R161-162 R168-169 R261-262 R268-269 R361-362 R368-369 R461-462 R468-469 R561-562 R568-569 R661-662 R668-669 R761-762 R768-769 R861-862 R868-869 R961-962 R968-969 R1061-1062 R1068-1069 R1161-1162 R1168-1169
145-485-00	RESISTOR MF SMT	100K 1%	R75 R77 R175 R177 R275 R277 R375 R377 R475 R477 R575 R577 R675 R677 R775 R777 R875 R877 R975 R977 R1075 R1077 R1175 R1177
212-003-00	CAPACITOR CERAMIC SMT	100PF 5%	C3-8 C13 C17-21 C28-50 C65-66 C68 C70-80 C87 C92-95 C113 C213 C313 C413 C513 C613 C713 C813 C913 C1013 C1113
212-006-00	CER 470PF 5% 50V NPO SM	470PF 5%	C108 C117-121 C125-126
212-012-00	CAP, CER, SMD, NPO/COG	2200PF 5%	C14 C22 C88 C91 C114 C122 C214 C222 C314 C322 C414 C422 C514 C522 C614 C622 C714 C722 C814 C822 C914 C922 C1014 C1022 C1114 C1122
212-016-00	CAPACITOR CERAMIC SMT	1000PF 5%	C59-60 C63-64 C98-100 C103-107 C159-160 C163-164 C259-260 C263-264 C359-360 C363-364 C459-460 C463-464 C559-560 C563-564 C659-660 C663-664 C759-760 C763-764 C859-860 C863-864 C959-960 C963-964 C1059-1060 C1063-1064 C1159-1160 C1163-1164
212-025-00	CAPACITOR CERAMIC SMT X7R	.1UF 10%	C11-12 C23-24 C27 C51-52 C55-56 C85-86 C96-97 C111-112 C123-124 C151-152 C155-156 C211-212 C223-224 C251-252 C255-256 C311-312 C323-324 C351-352 C355-356 C411-412 C423-424 C451-452 C455-456 C511-512 C523-524 C551-552 C555-556 C611-612 C623-624 C651-652 C655-656 C711-712 C723-724 C751-752 C755-756 C811-812 C823-824 C851-852 C855-856 C911-912 C923-924 C951-952 C955-956 C1011-1012 C1023-1024 C1051-1052 C1055-1056 C1111-1112 C1123-1124 C1151-1152 C1155-1156

055-113-00 REV B continued

PART NO.	DESCRIPTION	VALUE	REFERENCE DESIGNATORS
212-031-00	CAPACITOR CERAMIC SMT	68pF 5%	C57-58 C61-62 C157-158 C161-162 C257-258 C261-262 C357-358 C361-362 C457-458 C461-462 C557-558 C561-562 C657-658 C661-662 C757-758 C761-762 C857-858 C861-862 C957-958 C961-962 C1057-1058 C1061-1062 C1157-1158 C1161-1162
220-002-02	CAPACITOR LYTIC RADIAL TAPE	47UF 10%	C25-26 C67 C69 C167 C169 C267 C269 C367 C369 C467 C469 C567 C569 C667 C669 C767 C769 C867 C869 C967 C969 C1067 C1069 C1167 C1169
220-008-02	CAPACITOR LYTIC RADIAL TAPE	1UF 10%	C9-10 C53-54 C83-84 C109-110 C153-154 C209-210 C253-254 C309-310 C353-354 C409-410 C453-454 C509-510 C553-554 C609-610 C653-654 C709-710 C753-754 C809-810 C853-854 C909-910 C953-954 C1009-1010 C1053-1054 C1109-1110 C1153-1154
220-027-02	CAPACITOR LYTIC RADIAL TAPE	10UF 10%	C1-2 C15-16 C81-82 C89-90 C101-102 C115-116 C201-202 C215-216 C301-302 C315-316 C401-402 C415-416 C501-502 C515-516 C601-602 C615-616 C701-702 C715-716 C801-802 C815-816 C901-902 C915-916 C1001-1002 C1015-1016 C1101-1102 C1115-1116
320-012-00	IC LINEAR SMD	NJM4560M	U1-2 U6-7 U51 U101-102 U151 U201-202 U251 U301-302 U351 U401-402 U451 U501-502 U551 U601-602 U651 U701-702 U751 U801-802 U851 U901-902 U951 U1001-1002 U1051 U1101-1102 U1151 U5
325-053-03	IC, SMD, SCH TRIGGER HEX INV.	74AC14	U5
329-045-03	D/A CONV SM	CS4390	U52 U152 U252 U352 U452 U552 U652 U752 U852 U952 U1052 U1152
329-046-03	A/D CONV SM	CS5360	U3-4 U103 U203 U303 U403 U503 U603 U703 U803 U903 U1003 U1103
400-147-00	CONNECTOR STR LCK SHRD 26P .100 X 2		J12
400-152-00	CONNECTOR STR LCK SHRD 34P .100 X 2		J13
400-183-00	CONN HDR 26P .100 X 2 RTA SHRD		J1-3
400-184-00	CONN HDR 40P .100 X 2 RTA SHRD		J11
400-192-00	CONN HDR 20P .100 X 2 RTA SHRD		J15
450-113-00	PCB, CODEC CARD		Z9
601-009-00	FERRITE BEAD, SMT	Z=1000	FB1-4 FB12-15 FB18-27 FB101-104 FB201-204 FB301-304 FB401-408 FB501-508 FB601-608 FB701-708 FB801-808 FB901-908 FB1001-1008 FB1101-1108
601-010-00	FERRITE BEAD, SMT	Z=73	FB9-11 FB16-17
601-014-00	INDUCTOR 4.7UH 1206 SMT	4.7uH	L1-16
706-055-00	STANDOFF, SWAGE, 6-32 X .500L		Z1-8

## 055-114-00 REV C, DSP CARD

PART NO.	DESCRIPTION	VALUE	REFERENCE DESIGNATORS
140-025-00	RESISTOR TF SMT	10	E1-2 5%
140-042-00	RESISTOR TF SMT	51	5%
140-049-00	RESISTOR TF SMT	100	5%
140-065-00	RESISTOR TF SMT	470	5%
140-073-00	RESISTOR TF SMT	1K0	5%
140-097-00	RESISTOR TF SMT	10K	5%
140-123-00	RESISTOR TF SMT	100K	5%
145-000-00	RESISTOR SMT	0	5%
212-016-00	CAPACITOR CERAMIC SMT	1000PF	5%
212-027-00	CAPACITOR CERAMIC SMT	.1UF	10%
223-003-00	CAPACITOR LYTIC SMT	22UF	20%
301-001-00	DIODE POWER	1N4002	D4
304-064-03	LED, SMT, 0805	RED	D1
304-065-03	LED, SMT, 0805	GRN	D2
304-066-03	LED, SMT, 0805	YEL	D3
315-004-00	OSCILLATOR	7.3728 MHZ	Y1
315-012-00	OSC SMT 22.5792MHZ	22.5792 MHZ	Y2
324-004-03	HIGH SPEED CMOS RS-232 DRIVERS/RECEIVERS	ADM232A	U48
325-035-03	IC, SMD, HEX INVERTER	74AC04	U110
325-037-03	IC, SMD, DCDR/DEMUX	74AC138	U28-29 U40-42
325-038-03	IC, QUAD, OR, SMD	74AC32	U49 U53 U55 U59 U62 U65 U68 U71 U74 U77 U80 U83
325-039-03	IC, SMD, DUAL D F/F	74AC74	U107
325-042-03	IC, SMD, OCTAL D-TYPE FF	74AC574	U26 U30-35 U39 U44 U47 U50-51 U54 U56-58 U60-61 U63-64 U66-67 U69-70 U72-73 U75-76 U78-79 U81-82 U84-85 U87-88 U90-91 U93-94 U96-97 U99-100 U102-103 U105-106 U108-109 U111-112 U114-115 U117

## 055-114-00 REV C continued

PART NO.	DESCRIPTION	VALUE	REFERENCE DESIGNATORS
325-043-03	OCTAL 3-STATE NONINVERTING BUFFER	74AC241A	U46 U86 U89 U92 U95 U98
325-053-03	IC, SMD, SCH TRIGGER HEX INV.	74AC14	U27 U43 U52 U101 U104
325-054-03	IC, SMD, OCTAL, D-TYP, TRANS LATCH	74AC573	U36
335-001-00	IC, SMD, DIGITAL SIGNAL PROPRIETARY PROCESSOR		U1-24
335-002-00	IC, SMD, DIGITAL SIGNAL PROCESSOR	ADSP-2181	U25
335-003-00	IC, SMD, U/P SUPERVISORY CIRCUIT	ADM705	U37
335-004-00	IC, SMD, ASYNCHRONOUS COMMUNICATIONS	TL16C452	U45
400-057-00	CONNECTOR STR 14P .100 X 1		J1
400-077-00	HEADER STR LCK SHRD 20P .100 X 2		J21
400-078-00	CONNECTOR STR LCK SHRD 10P .100 X 2		J25
400-147-00	CONNECTOR STR LCK SHRD 26P .100 X 2		J12
400-152-00	CONNECTOR STR LCK SHRD 34P .100 X 2		J13 J24 J47-48
400-219-00	CONNECTOR STR 5P .156 X 1 LOCKING KEYED		J42
401-001-32	IC SOCKET, 32 PIN, DIP		U38
450-114-00	PCB, DIGITAL 8-BUS: DSP CARD		Z1
601-010-00	FERRITE BEAD, SMT	Z=73	FB1-4

## 055-115-00 REV E, DIGITAL I/O

PART NO.	DESCRIPTION	VALUE		REFERENCE DESIGNATORS
080-066-00	PIC PRGMD 115PCB D8			U3
140-025-00	RESISTOR TF SMT	10	5%	R34
140-049-00	RESISTOR TF SMT	100	5%	R15 R24 R33 R35-37
140-073-00	RESISTOR TF SMT	1K0	5%	R1 R3 R5-9 R11-14 R18 R21-22
140-097-00	RESISTOR TF SMT	10K	5%	R2 R4 R27-29
140-110-00	RESISTOR TF SMT	33K	5%	R10
145-162-00	RES MF SM .1W 1% 47R5 OHM	47R5	1%	R16-17
145-193-00	RES MF SM .1W 1% 100 OHM	100	1%	R19-20 R23 R30-32 R40-43 R50
145-289-00	RES MF SM .1W 1% 1K00 OHM	1K00	1%	R38-39
200-011-02	PLY .0022UF 10% 100V TR	0.0022	2.50%	C23
200-019-02	CAPACITOR MYLARTAPE	0.1	10%	C7-8 C10-11
212-001-00	CAPACITOR CERAMIC SMT	0.01	10%	C20 C24 C27
212-004-00	CER 220PF 5% 50V NPO SM	220PF	5%	C22 C25-26 C28-30 C32-40
212-007-00	CAPACITOR CERAMIC SMT	0.047	5%	C14
212-015-00	CAPACITOR CERAMIC SMT	33PF	5%	C3-4
212-025-00	CAP CER .1UF 50V 10% X7R	.1UF	10%	C1-2 C5-6 C9 C12-13 C15-19 C21 C31 C44 C50
212-032-00	CER 2200PF 10% 50V X7R	2200PF	10%	C41
311-005-00	X-SISTOR NPN SMD	IMBTA06		Q1
315-010-00	OSCILLATOR	16 MHZ		X3
315-015-00	CRYSTAL, SMD	20MHZ		X1
325-012-03	IC, SMD, 8 BIT SHIFT REGISTER W/ OUTPUT LATCHES	74HC595		U1-2
325-027-03	CMOS 74HC74A DUAL D FLPFL	74HC74A		U7
325-033-03	IC, SMD, EIA RS-485 TRANSCIEVER	ADM1485		U4-6 U15
329-021-03	TRANSMITTER CS8402A	CS8402A		U13
329-022-03	RECEIVER CS8412	CS8412		U19
329-023-03	IC, CONVERTER, SMT	AD1890		U12
400-131-00	CON XLR PC MTG HORIZ FML SML NC3FAH1O			J2
400-175-00	CONN XLR 3PIN MALE RTA, A-SERIES			J3
400-213-00	CON, RCA DUAL PCMT			J6
450-115-00	PCB,D8 BUS, DIGITAL I/O			Z1
601-009-00	FERRITE SMT SIG 1K OHM	Z=1000	5%	FB3-8
601-010-00	FERRITE BEAD, SMT	Z=73		FB1-2
601-016-02	EMI T FILTER 1000PF	1000PF		L3-8
712-020-00	BRKT ANG 6-32X.037THK STL			Z8

## 055-119-00 REV B, TAPE I/O

PART NO.	DESCRIPTION	VALUE		REFERENCE DESIGNATORS
080-067-00	PIC PRGMD 119PCB D8 PIC16C54S			J1 J2 U4
140-009-00	RESISTOR TF SMT	2.2	5%	R10 R56 R110 R156 R210 R256 R310 R356
140-049-00	RESISTOR TF SMT	100	5%	R11-13 R15-16 R35-42 R52 R54-55 R58 R111-113 R115 R152 R154-155 R158 R211-213 R215 R252 R254-255 R258 R311-313 R315 R352 R354-355 R358
140-051-00	RESISTOR TF SMT	120	5%	R70 R73 R170 R173 R270 R273 R370 R373
140-073-00	RESISTOR TF SMT	1K0	5%	R99 R103-104 R106-109
140-097-00	RESISTOR TF SMT	10K	5%	R14 R31 R100 R114 R116 R119-123 R214 R314
140-110-00	RESISTOR TF SMT	33K	5%	R105
140-123-00	RESISTOR TF SMT	100K	5%	R27-30
141-051-00	RESISTOR TF SMT	120	5%	R71-72 R171-172 R271-272 R371-372
145-000-00	RESISTOR SMT	0	5%	R32-34
145-210-00	RESISTOR MF SMT	150	1%	R83-98
145-318-00	RESISTOR MF SMT	2K00	1%	R3 R6-7 R19-20 R23-24 R43-44 R47-48 R53 R63 R78-79 R82
145-338-00	RESISTOR MF SMT	2K94	1%	R51 R59 R64 R66 R151 R159 R164 R166 R251 R259 R264 R266 R351 R359 R364 R366
145-388-00	RESISTOR MF SMT	9K76	1%	R57 R60 R65 R67 R157 R160 R165 R167 R257 R260 R265 R267 R357 R360 R365 R367
145-389-00	RESISTOR MF SMT	10K0	1%	R1-2 R4-5 R8-9 R17-18 R21-22 R25-26 R45-46 R49-50 R74 R76 R80-81 R101-102 R117-118 R201-202 R217-218 R301-302 R317-318
145-389-00	RES MF SM .1W 1%	10K0	1%	R132-139 R124-131
145-454-00	RESISTOR MF SMT	47K5	1%	R61-62 R68-69 R161-162 R168-169 R261-262 R268-269 R361-362 R368-369
145-485-00	RESISTOR MF SMT	100K	1%	R75 R77 R175 R177 R275 R277 R375 R377
212-003-00	CAPACITOR CERAMIC SMT	100PF	5%	C3-4 C13 C17-21 C26-38 C103-104 C113 C117-118 C203-204 C213 C217-218 C303-304 C313 C317-318
212-012-00	CAP, CER, SMD, NPO/COG	2200PF	5%	C14 C22 C114 C122 C214 C222 C314 C322
212-015-00	CAPACITOR CERAMIC SMT	33PF	5%	C5-6
212-016-00	CAPACITOR CERAMIC SMT	1000PF	5%	C59-60 C63-64 C159-160 C163-164 C259-260 C263-264 C359-360 C363-364
212-025-00	CAP CERAMIC SMT X7R	.1UF	10%	C7-8 C11-12 C23-25 C51-52 C55-56 C111-112 C123-124 C151-152 C155-156 C211-212 C223-224 C251-252 C255-256 C311-312 C323-324 C351-352
212-031-00	CAP CERAMIC SMT	68pF	5%	C57-58 C61-62 C157-158 C161-162 C257-258 C261-262 C357-358 C361-362
220-002-02	CAP LYTIC RADIAL TAPE	47UF	10%	C67 C69 C167 C169 C267 C269 C367 C369 C373-374
220-008-02	CAP LYTIC RADIAL TAPE	1UF	10%	C9-10 C53-54 C109-110 C153-154 C209-210 C253-254 C309-310 C353-354
220-027-02	CAP LYTIC RADIAL TAPE	10UF	10%	C1-2 C15-16 C101-102 C115-116 C201-202 C215-216 C301-302 C315-316
311-005-00	X-SISTOR NPN SMD	IMBTA06		Q1
315-015-00	CRYSTAL, SMD	20MHZ		Y1
320-012-00	I.C. LINEAR SMD	NJM4560M		U1-2 U51 U101-102 U151 U201-202 U251 U301-302 U351



055-119-00 REV B, TAPE I/O continued

PART NO.	DESCRIPTION	VALUE	REFERENCE DESIGNATORS
325-053-03	IC,SMD,SCH TRIG HEX INV.	74AC14	U5
329-045-03	D/A CONV SM	CS4390	U52 U152 U252 U352
329-046-03	A/D CONV SM	CS5360	U3 U103 U203 U303
400-140-00	CONN, DSUB, FEMALE 25P		J101-102
450-119-00	PCB, DIGITAL 8-BUS: TAPE I/O		Z1
601-009-00	FERRITE BEAD, SMT	Z=1000	FB1-32
601-010-00	FERRITE BEAD, SMT	Z=73	FB33-36 FB38

## 055-120-00 REV A, MIC/LINE CONTROL SURFACE

PART NO.	DESCRIPTION	VALUE		REFERENCE DESIGNATORS
130-045-00	POT 12MM ENDLESS ROT	50K		R1301 R1401 R1501 R1601 R1701 R1801 R1901 R2001 R2101 R2201 R2301 R2401
130-050-02	POT 12MM HORIZ, 25MM	10K		R105 R205 R305 R405 R505 R605 R705 R805 R905 R1005 R1105 R1205
140-025-00	RESISTOR TF SMT	10	5%	R2 R9-11
140-049-00	RESISTOR TF SMT	100	5%	R3-4 R12 R14 R19
140-051-00	RESISTOR TF SMT	120	5%	R139 R239 R339 R439 R539 R639 R739 R839 R939 R1039 R1139 R1239
140-059-00	RESISTOR TF SMT	270	5%	R1303-1304 R1317-1318 R1403-1404 R1417-1418 R1503-1504 R1517-1518 R1603-1604 R1617-1618 R1703-1704 R1717-1718 R1803-1804 R1817-1818 R1903-1904 R1917-1918 R2003-2004 R2017-2018 R2103-2104 R2117-2118 R2203-2204 R2217-2218 R2303-2304 R2317-2318 R2403-2404 R2417-2418
140-064-00	RESISTOR TF SMT	430	5%	R1302 R1305-1316 R1319 R1402 R1405-1416 R1419 R1502 R1505-1516 R1519 R1602 R1605-1616 R1619 R1702 R1705-1716 R1719 R1802 R1805-1816 R1819 R1902 R1905-1916 R1919 R2002 R2005-2016 R2019 R2102 R2105-2116 R2119 R2202 R2205-2216 R2219 R2302 R2305-2316 R2319 R2402 R2405-2416 R2419
140-068-00	RESISTOR TF SMT	620	5%	R1320-1321 R1420-1421 R1520-1521 R1620-1621 R1720-1721 R1820-1821 R1920-1921 R2020-2021 R2120-2121 R2220-2221 R2320-2321 R2420-2421
140-097-00	RESISTOR TF SMT	10K	5%	R1 R13 R1322-1329 R1422-1429 R1522-1529 R1622-1629 R1722-1729 R1822-1829 R1922-1929 R2022-2029 R2122-2129 R2222-2229 R2322-2329 R2422-2429
140-114-00	RESISTOR TF SMT	47K	5%	R21
140-123-00	RESISTOR TF SMT	100K	5%	R5-8
145-000-00	RESISTOR SMT	0	5%	R15 R18
145-051-00	RESISTOR MF	3.32	1%	R113 R213 R313 R413 R513 R613 R713 R813 R913 R1013 R1113 R1213
145-258-00	RESISTOR SMT	475	1%	R114-115 R214-215 R314-315 R414-415 R514-515 R614-615 R714-715 R814-815 R914-915 R1014-1015 R1114-1115 R1214-1215
145-314-00	RESISTOR CF	1K82	1%	R130-131 R230-231 R330-331 R430-431 R530-531 R630-631 R730-731 R830-831 R930-931 R1030-1031 R1130-1131 R1230-1231
145-331-00	RESISTOR CF	2K49	1%	R116-117 R124-128 R216-217 R224-228 R316-317 R324-328 R416-417 R424-428 R516-517 R524-528 R616-617 R624-628 R716-717 R724-728 R816-817 R824-828 R916-917 R924-928 R1016-1017 R1024-1028 R1116-1117 R1124-1128 R1216-1217 R1224-1228

## 055-120-00 REV A continued

PART NO.	DESCRIPTION	VALUE		REFERENCE DESIGNATORS
145-361-00	RESISTOR MF SMT	5K11	1%	R118 R121-123 R218 R221-223 R318 R321-323 R418 R421-423 R518 R521-523 R618 R621-623 R718 R721-723 R818 R821-823 R918 R921-923 R1018 R1021-1023 R1118 R1121-1123 R1218 R1221-1223
145-389-00	RESISTOR MF SMT	10K0	1%	R119-120 R219-220 R319-320 R419-420 R519-520 R619-620 R719-720 R819-820 R919-920 R1019-1020 R1119-1120 R1219-1220
145-418-00	RESISTOR MF	20K0	1%	R129 R229 R329 R429 R529 R629 R729 R829 R929 R1029 R1129 R1229
145-485-00	RESISTOR MF SMT	100K	1%	R104 R204 R304 R404 R504 R604 R704 R804 R904 R1004 R1104 R1204
212-003-00	CAPACITOR CERAMIC SMT	100PF	5%	C108-109 C208-209 C308-309 C408-409 C508-509 C608-609 C708-709 C808-809 C908-909 C1008-1009 C1108-1109 C1208-1209
212-006-00	CAPACITOR CERAMIC SMT	470PF	5%	C102 C202 C302 C402 C502 C602 C702 C802 C902 C1002 C1102 C1202
212-009-00	CAPACITOR CERAMIC SMT	47PF	5%	C104-105 C204-205 C304-305 C404-405 C504-505 C604-605 C704-705 C804-805 C904-905 C1004-1005 C1104-1105 C1204-1205
212-018-00	CAPACITOR CERAMIC SMT	10PF	5%	C106-107 C206-207 C306-307 C406-407 C506-507 C606-607 C706-707 C806-807 C906-907 C1006-1007 C1106-1107 C1206-1207
212-025-00	CAPACITOR CERAMIC SMT X7R	.1UF	10%	C1-2 C5-10 C110-111 C115-116 C210-211 C215-216 C310-311 C315-316 C410-411 C415-416 C510-511 C515-516 C610-611 C615-616 C710-711 C715-716 C810-811 C815-816 C910-911 C915-916 C1010-1011 C1015-1016 C1110-1111 C1115-1116 C1210-1211 C1215-1216 C1305-1308 C1405-1408 C1505-1508 C1605-1608 C1705-1708 C1805-1808 C1905-1908 C2005-2008 C2105-2108 C2205-2208 C2305-2308 C2405-2408 C2506-2507
220-002-02	CAP LYTIC RADIAL TAPE	47UF	10%	C3-4 C2514 C2517-2518
220-019-02	CAP LYTIC RADIAL KS TAPE	47UF	10%	C101 C201 C301 C401 C501 C601 C701 C801 C901 C1001 C1101 C1201
220-030-00	CAPACITOR LYTIC RADIAL	1000UF	10%	C103 C203 C303 C403 C503 C603 C703 C803 C903 C1003 C1103 C1203
300-003-00	DIODE SIGNAL SMD	DL4148		D107 D207 D307 D407 D507 D607 D707 D807 D907 D1007 D1107 D1207
304-026-00	LED DISPLAY, REFLECTOR			D1303 D1403 D1503 D1603 D1703 D1803 D1903 D2003 D2103 D2203 D2303 D2403
304-036-00	LED , TOWER 2MM	RED		D1308 D1408 D1508 D1608 D1708 D1808 D1908 D2008 D2108 D2208 D2308 D2408
304-037-00	LED, TOWER 2MM	GRN		D1309 D1409 D1509 D1609 D1709 D1809 D1909 D2009 D2109 D2209 D2309 D2409

055-120-00 REV A continued

PART NO.	DESCRIPTION	VALUE	REFERENCE DESIGNATORS
304-054-02	LED, T1, W/TIEBAR T&R	SUPER RED	D1301 D1307 D1401 D1407 D1501 D1507 D1601 D1607 D1701 D1707 D1801 D1807 D1901 D1907 D2001 D2007 D2101 D2107 D2201 D2207 D2301 D2307 D2401 D2407
304-055-02	LED, T1, W/TIEBAR T&R	HI EFF GRN	D1302 D1305 D1402 D1405 D1502 D1505 D1602 D1605 D1702 D1705 D1802 D1805 D1902 D1905 D2002 D2005 D2102 D2105 D2202 D2205 D2302 D2305 D2402 D2405
304-056-02	LED, T1, W/TIEBAR T&R	SUPER YEL	D1304 D1306 D1404 D1406 D1504 D1506 D1604 D1606 D1704 D1706 D1804 D1806 D1904 D1906 D2004 D2006 D2104 D2106 D2204 D2206 D2304 D2306 D2404 D2406
310-003-02	TRANSISTOR PNP, T&R	2SA1084	Q101-102 Q201-202 Q301-302 Q401-402 Q501-502 Q601-602 Q701-702 Q801-802 Q901-902 Q1001-1002 Q1101-1102 Q1201-1202
311-002-00	X-SISTOR PNP SMD	IMBT4403	Q103-105 Q203-205 Q303-305 Q403-405 Q503-505 Q603-605 Q703-705 Q803-805 Q903-905 Q1003-1005 Q1103-1105 Q1203-1205
320-006-00	I.C. LINEAR SMD	NJM 2068	U101-102 U201 U301-302 U401 U501-502 U601 U701-702 U801 U901-902 U1001 U1101-1102 U1201
320-012-00	I.C. LINEAR SMD	NJM4560M	U8
321-003-00	I.C. LINEAR POS 3 TERM VOLTAGE REGULATOR	LM 7805	U1
325-003-03	IC, ANALOG MUX, 8 CH SMD	4051B	U4-6
325-006-03	IC, DCDR/DEMUX SMD	74HC138	U3
325-012-03	IC, 8 BIT SHIFT REGISTERS WITH OUTPUT LATCHES SMD	74HC595	U1301-1303 U1401-1403 U1501-1503 U1601-1603 U1701-1703 U1801-1803 U1901-1903 U2001-2003 U2101-2103 U2201-2203 U2301-2303 U2401-2403
325-025-03	IC, 8 BIT SHIFT REGISTER WITH INPUT LATCHES SMD	74HC597	U1304 U1404 U1504 U1604 U1704 U1804 U1904 U2004 U2104 U2204 U2304 U2404
325-048-03	IC, SMD, 12-STAGE BINARY RIPPLE COUNTER	74HC4040	U7
325-053-03	IC, SMD, SCH TRIGGER HEX INV.	74AC14	U2
400-147-00	CONNECTOR STR LCK SHRD 26P .100 X 2		J37
400-183-00	CONN HDR 26P .100 X 2 RTA SHRD		J7
400-184-00	CONN HDR 40P .100 X 2 RTA SHRD		J4-5
450-120-00	PCB, MIC/LINE CONTROL SURFACE		Z37
500-018-00	SWITCH PUSH VERT PC MTG	2P2T	SW107 SW207 SW307 SW407 SW507 SW607 SW707 SW807 SW907 SW1007 SW1107 SW1207
500-033-02	SWITCH, TACT 6MM SQR 260GF	SPST	SW1301-1306 SW1401-1406 SW1501-1506 SW1601-1606 SW1701-1706 SW1801-1806 SW1901-1906 SW2001-2006 SW2101-2106 SW2201-2206 SW2301-2306 SW2401-2406
601-002-00	INDUCTOR, AXIAL	4.7UH	L101 L201 L301 L401 L501 L601 L701 L801 L901 L1001 L1101 L1201

## 055-120-00 REV A continued

PART NO.	DESCRIPTION	VALUE	REFERENCE DESIGNATORS
601-004-00	FERRITE BEAD SMB	MLB40-5	FB102-103 FB202-203 FB302-303 FB402-403 FB502-503 FB602-603 FB702-703 FB802-803 FB902-903 FB1002-1003 FB1102-1103 FB1202-1203
601-009-00	FERRITE BEAD, SMT	Z=1000	FB1-70 FB73 FB75
601-010-00	FERRITE BEAD, SMT	Z=73	FB71-72 FB74 FB76-78
706-032-00	LED SPACER, NYLON .300		Z32-36 Z39-57
706-033-01	STANDOFF, SWAGE, 4-40 X .542L		Z1-12
760-063-00	KNOB, V-POT		Z58-69
760-064-00	LENS, V-POT DISPLAY		Z70-81
760-078-00	BUTTON, .58 X .32 MIC/LINE		Z13-24
760-104-01	SM TACTILE BUTTON	REC/RDY	B1301 B1401 B1501 B1601 B1701 B1801 B1901 B2001 B2101 B2201 B2301 B2401
760-104-04	SM TACTILE BUTTON	ASSIGN	B1302 B1402 B1502 B1602 B1702 B1802 B1902 B2002 B2102 B2202 B2302 B2402
760-104-05	SM TACTILE BUTTON	WRITE	B1303 B1403 B1503 B1603 B1703 B1803 B1903 B2003 B2103 B2203 B2303 B2403
760-105-02	LG TACTILE BUTTON	SOLO	B1305 B1405 B1505 B1605 B1705 B1805 B1905 B2005 B2105 B2205 B2305 B2405
760-105-03	LG TACTILE BUTTON	MUTE	B1306 B1406 B1506 B1606 B1706 B1806 B1906 B2006 B2106 B2206 B2306 B2406
760-105-04	LG TACTILE BUTTON	SELECT	B1304 B1404 B1504 B1604 B1704 B1804 B1904 B2004 B2104 B2204 B2304 B2404

## 055-121-00 REV A, LINE CONTROL SURFACE

PART NO.	DESCRIPTION	VALUE		REFERENCE DESIGNATORS
130-045-00	POT 12MM ENDLESS ROT	50KG		R1301 R1401 R1501 R1601 R1701 R1801 R1901 R2001 R2101 R2201 R2301 R2401 R2637
130-049-02	POT 9MM HORIZ, 25MM SHAFT	50KG		R116 R216 R316 R416 R516 R616 R716 R816 R916 R1016 R1116 R1216
140-025-00	RESISTOR TF SMT	10	5%	R13-14 R21-22
140-049-00	RESISTOR TF SMT	100	5%	R15-16 R24 R26 R30
140-051-00	RESISTOR TF SMT	120	5%	R6 R9 R121 R221 R321 R421 R521 R621 R721 R821 R921 R1021 R1121 R1221
140-059-00	RESISTOR TF SMT	270	5%	R1303-1304 R1317-1318 R1403-1404 R1417-1418 R1503-1504 R1517-1518 R1603-1604 R1617-1618 R1703-1704 R1717-1718 R1803-1804 R1817-1818 R1903-1904 R1917-1918 R2003-2004 R2017-2018 R2103-2104 R2117-2118 R2203-2204 R2217-2218 R2303-2304 R2317-2318 R2403-2404 R2417-2418 R2638-2645 R2648-2650 R2652 R2654-2659
140-064-00	RESISTOR TF SMT	430	5%	R1302 R1305-1316 R1319 R1402 R1405-1416 R1419 R1502 R1505-1516 R1519 R1602 R1605-1616 R1619 R1702 R1705-1716 R1719 R1802 R1805-1816 R1819 R1902 R1905-1916 R1919 R2002 R2005-2016 R2019 R2102 R2105-2116 R2119 R2202 R2205-2216 R2219 R2302 R2305-2316 R2319 R2402 R2405-2416 R2419 R2646-2647 R2651 R2653 R2660-2661 R2669-2677
140-068-00	RESISTOR TF SMT	620	5%	R1320-1321 R1420-1421 R1520-1521 R1620-1621 R1720-1721 R1820-1821 R1920-1921 R2020-2021 R2120-2121 R2220-2221 R2320-2321 R2420-2421
140-097-00	RESISTOR TF SMT	10K	5%	R23 R25 R1322-1329 R1422-1429 R1522-1529 R1622-1629 R1722-1729 R1822-1829 R1922-1929 R2022-2029 R2122-2129 R2222-2229 R2322-2329 R2422-2429 R2678-2701
140-114-00	RESISTOR TF SMT	47K	5%	R31
140-117-00	RESISTOR TF SMT	62K	5%	R7
140-123-00	RESISTOR TF SMT	100K	5%	R17-20
145-000-00	RESISTOR SMT	0	5%	R12 R28
145-293-00	RESISTOR MF SMT	1K10	1%	R8
145-318-00	RESISTOR MF SMT	2K00	1%	R2 R10
145-346-00	RESISTOR MF SMT	3K57	1%	R118 R218 R318 R418 R518 R618 R718 R818 R918 R1018 R1118 R1218
145-361-00	RESISTOR MF SMT	5K11	1%	R4-5
145-389-00	RESISTOR MF SMT	10K0	1%	R1 R3 R104-105 R113-114 R204-205 R213-214 R304-305 R313-314 R404-405 R413-414 R504-505 R513-514 R604-605 R613-614 R704-705 R713-714 R804-805 R813-814 R904-905 R913-914 R1004-1005 R1013-1014 R1104-1105 R1113-1114 R1204-1205 R1213-1214

## 055-121-00 REV A continued

PART NO.	DESCRIPTION	VALUE	REFERENCE DESIGNATORS
145-435-00	RESISTOR MF SMT	30K1 1%	R115 R117 R215 R217 R315 R317 R415 R417 R515 R517 R615 R617 R715 R717 R815 R817 R915 R917 R1015 R1017 R1115 R1117 R1215 R1217
145-485-00	RESISTOR MF SMT	100K 1%	R11 R119-120 R219-220 R319-320 R419-420 R519-520 R619-620 R719-720 R819-820 R919-920 R1019-1020 R1119-1120 R1219-1220
200-004-02	CAPACITOR MYLARTAPE	0.047 10%	C1
212-003-00	CAPACITOR CERAMIC SMT	100PF 5%	C3-4
212-005-00	CAPACITOR CERAMIC SMT	20PF 5%	C102-103 C105 C202-203 C205 C302-303 C305 C402-403 C405 C502-503 C505 C602-603 C605 C702-703 C705 C802-803 C805 C902-903 C905 C1002-1003 C1005 C1102-1103 C1105 C1202-1203 C1205
212-025-00	CAPACITOR CERAMIC SMT X7R	.1UF 10%	C6-7 C9 C12-21 C107-108 C207-208 C307-308 C407-408 C507-508 C607-608 C707-708 C807-808 C907-908 C1007-1008 C1107-1108 C1207-1208 C1305-1308 C1405-1408 C1505-1508 C1605-1608 C1705-1708 C1805-1808 C1905-1908 C2005-2008 C2105-2108 C2205-2208 C2305-2308 C2405-2408 C2620-2626 C2651
220-002-02	CAPACITOR LYTIC RADIAL TAPE	47UF 10%	C2 C5 C8 C10-11 C101 C104 C106 C201 C204 C206 C301 C304 C306 C401 C404 C406 C501 C504 C506 C601 C604 C606 C701 C704 C706 C801 C804 C806 C901 C904 C906 C1001 C1004 C1006 C1101 C1104 C1106 C1201 C1204 C1206 C2506 C2518-2519
304-026-00	LED DISPLAY, REFLECTOR		D1303 D1403 D1503 D1603 D1703 D1803 D1903 D2003 D2103 D2203 D2303 D2403 D2607
304-036-00	LED , TOWER 2MM	RED	D1308 D1408 D1508 D1608 D1708 D1808 D1908 D2008 D2108 D2208 D2308 D2408
304-037-00	LED, TOWER 2MM	GRN	D1309 D1409 D1509 D1609 D1709 D1809 D1909 D2009 D2109 D2209 D2309 D2409
304-054-02	LED, T1, W/TIEBAR T&R	SUPER RED	D1301 D1307 D1401 D1407 D1501 D1507 D1601 D1607 D1701 D1707 D1801 D1807 D1901 D1907 D2001 D2007 D2101 D2107 D2201 D2207 D2301 D2307 D2401 D2407 D2601 D2609 D2621
304-055-02	LED, T1, W/TIEBAR T&R	HI EFF GRN	D1302 D1305 D1402 D1405 D1502 D1505 D1602 D1605 D1702 D1705 D1802 D1805 D1902 D1905 D2002 D2005 D2102 D2105 D2202 D2205 D2302 D2305 D2402 D2405 D2602-2603 D2605-2606 D2608 D2610-2611 D2613-2615 D2617 D2619-2620
304-056-02	LED, T1, W/TIEBAR T&R	SUPER YEL	D1304 D1306 D1404 D1406 D1504 D1506 D1604 D1606 D1704 D1706 D1804 D1806 D1904 D1906 D2004 D2006 D2104 D2106 D2204 D2206 D2304 D2306 D2404 D2406 D2604 D2612 D2616 D2618 D2622

## 055-121-00 REV A continued

PART NO.	DESCRIPTION	VALUE	REFERENCE DESIGNATORS
320-012-00	IC LINEAR SMD	NJM4560M	U1 U9 U101 U201 U301 U401 U501 U601 U701 U801 U901 U1001 U1101 U1201
321-003-00	IC LINEAR POS 3 TERM VOLTAGE REGULATOR	LM 7805	U3
325-003-03	IC, ANALOG MUX, 8 CH SMD	4051B	U5-7 U10
325-006-03	IC, DCDR/DEMUX SMD	74HC138	U4
325-012-03	IC, 8 BIT SHIFT REGISTERS WITH OUTPUT LATCHES, SMD	74HC595	U1301-1303 U1401-1403 U1501-1503 U1601-1603 U1701-1703 U1801-1803 U1901-1903 U2001-2003 U2101-2103 U2201-2203 U2301-2303 U2401-2403 U2613-2617
325-025-03	IC, 8 BIT SHIFT REGISTER WITH INPUT LATCHES, SMD	74HC597	U1304 U1404 U1504 U1604 U1704 U1804 U1904 U2004 U2104 U2204 U2304 U2404 U2618-2620
325-048-03	IC, SMD, 12-STAGE BINARY RIPPLE COUNTER	74HC4040	U8
325-053-03	IC, SMD, SCH TRIGGER HEX INV.	74AC14	U2
400-147-00	CONNECTOR STR LCK SHRD 26P .100 X 2		J36
400-183-00	CONN HDR 26P .100 X 2 RTA SHRD		J3
400-184-00	CONN HDR 40P .100 X 2 RTA SHRD		J6
400-207-00	CONNECTOR HDR RTA SHROUD 3P .098x1		J60
450-121-00	PCB, LINE CONTROL SURFACE		Z37
480-001-00	MICROPHONE ELEMENT		M1
500-033-02	SWITCH, TACT 6MM SQR 260GF	SPST	SW1301-1306 SW1401-1406 SW1501-1506 SW1601-1606 SW1701-1706 SW1801-1806 SW1901-1906 SW2001-2006 SW2101-2106 SW2201-2206 SW2301-2306 SW2401-2406 SW2601-2621
601-009-00	FERRITE BEAD, SMT	Z=1000	FB1-26
601-010-00	FERRITE BEAD, SMT	Z=73	FB27-33
706-032-00	LED SPACER, NYLON .300		Z13-36
706-033-01	STANDOFF, SWAGE, 4-40 X .542L		Z1-12
760-063-00	KNOB, V-POT		Z38-49
760-064-00	LENS, V-POT DISPLAY"		Z50-61
760-104-00	SM TACTILE BUTTON		B2601-2615 B2617
760-104-01	SM TACTILE BUTTON	REC/RDY	B1301 B1401 B1501 B1601 B1701 B1801 B1901 B2001 B2101 B2201 B2301 B2401
760-104-04	SM TACTILE BUTTON	ASSIGN	B1302 B1402 B1502 B1602 B1702 B1802 B1902 B2002 B2102 B2202 B2302 B2402
760-104-05	SM TACTILE BUTTON	WRITE	B1303 B1403 B1503 B1603 B1703 B1803 B1903 B2003 B2103 B2203 B2303 B2403 B2619-2623
760-105-00	LG TACTILE BUTTON		
760-105-02	LG TACTILE BUTTON	SOLO	B1305 B1405 B1505 B1605 B1705 B1805 B1905 B2005 B2105 B2205 B2305 B2405
760-105-03	LG TACTILE BUTTON	MUTE	B1306 B1406 B1506 B1606 B1706 B1806 B1906 B2006 B2106 B2206 B2306 B2406
760-105-04	LG TACTILE BUTTON	SELECT	B1304 B1404 B1504 B1604 B1704 B1804 B1904 B2004 B2104 B2204 B2304 B2404



## 055-122-00 REV A, OUTPUT CONTROL SURFACE

PART NO.	DESCRIPTION	VALUE	REFERENCE DESIGNATORS
130-045-00	POT 12MM ENDLESS ROT	50KG	E1 E3-5
140-025-00	RESISTOR TF SMT	10 5%	R1-8
140-049-00	RESISTOR TF SMT	100 5%	R413-416
140-059-00	RESISTOR TF SMT	270 5%	R421 R437-438 R440 R442
140-064-00	RESISTOR TF SMT	430 5%	R11 R23 R27-28 R35-36 R38 R50-54 R57 R60 R62 R64-80 R121 R136-139 R152 R154-155 R186 R195-199 R202-209 R9-10 R13-15 R17-19 R21-22 R25-26 R29-31 R33-34 R37 R39-49 R55-56 R58-59 R61 R63 R81-120 R122-135 R140-151 R153 R156-164 R166-185 R187-194 R200
140-064-00	RES TF SM .1W 5% 430 OHM	430 5%	R12 R20 R32 R24
140-068-00	RES TF SM .1W 5% 620 OHM	620 5%	R16
140-068-00	RESISTOR TF SMT	620 5%	R165 R313-408
140-097-00	RESISTOR TF SMT	10K 5%	R201 R210-312 R439 R441
140-114-00	RESISTOR TF SMT	47K 5%	R422
140-123-00	RESISTOR TF SMT	100K 5%	R409-412
145-000-00	RESISTOR SMT	0 5%	R417-420
212-010-00	CAPACITOR CERAMIC SMT	.1UF -400	C1-51 C65-68 C70-73
220-002-02	CAPACITOR LYTIC RADIAL TAPE	47UF 10%	C54 C61-64
304-006-00	DIODE LED T1-3/4	RED	D37
304-026-00	LED DISPLAY, REFLECTOR		D1 D4 D7-8 D26 D31 D38 D45
304-035-00	DISPLAY, 7 SEG RED .36 COM 7 SEGMENT ANODE DISPLAY		D200-211
304-054-02	LED SUPRED T1 TRANS W/TIE	SUPER RED	D3 D6 D10-16 D18-22 D24-25 D27-30 D50 D63 D71 D73 D79-82 D84 D86-89 D91-94 D97-100 D102 D107 D111
304-055-02	LED, T1, W/TIEBAR T&R	HI EFF GRN	D2 D5 D9 D23 D33-36 D39-41 D46 D53-60 D67-68 D74-78 D85 D108-109 D112
304-055-02	LED HI/GRN T1 TRANS W/TIE	HI EFF GRN	D106
304-056-02	LED SUPYEL T1 TRANS W/TIE	SUPER YEL	D17 D32 D42-44 D47-49 D51-52 D61-62 D64-66 D69-70 D72 D83 D103-105 D110
320-004-00	IC LINEAR SMD	NJM4560	U65
321-003-00	IC LINEAR POS 3 TERM VOLTAGE REGULATOR	LM 7805	U59
325-003-03	IC, ANALOG MUX, 8 CH SMD	4051B	U61-62
325-006-03	IC, DCDR/DEMUX SMD	74HC138	U60
325-007-03	IC, HEX, SCH TRIGGER, INV, SMD	74HC14	U51
325-012-03	IC, 8 BIT SHIFT REGISTERS WITH OUTPUT LATCHES, SMD	74HC595	U1-25 U39-50
325-025-03	IC, 8 BIT SHIFT REGISTER WITH INPUT LATCHES, SMD	74HC597	U26-38
325-048-03	IC, SMD, 12-STAGE BINARY RIPPLE COUNTER	74HC4040	U64
400-152-00	CONNECTOR STR LCK SHRD 34P .100 X 2		J35
400-182-00	CONN HDR 10P .100 X 2 RTA SHRD		J1
450-122-00	PCB, OUTPUT CTL SURFACE		Z14
500-028-00	SWITCH MOM SPST TACTILE PCMT SPST		SW12-13 SW94-98
500-033-02	SWITCH, TACT 6MM SQR 260GF SPST		SW1-11 SW14-86 SW88-91 SW93 SW99-103
500-038-00	ROTARY PULSE ENCODER, 16MM		S1
601-009-00	FERRITE BEAD, SMT	Z=1000	FB1 FB3
601-010-00	FERRITE BEAD, SMT	Z=73	FB2 FB4-6
706-009-00	LED SPACER, .385 (FOR D37)		Z13
706-033-01	STANDOFF, SWAGE, 4-40 X .542L		Z1-12

## 055-122-00 REV A continued

PART NO.	DESCRIPTION	VALUE	REFERENCE DESIGNATORS
706-052-00			Z19 Z24-27
760-063-00			Z21 Z36-42
760-064-00			Z22 Z29-35
760-068-01	BUTTON, TRANSPORT	REWIND	TB20
760-068-02	BUTTON, TRANSPORT	F FWD	TB15
760-068-03	BUTTON, TRANSPORT	STOP	TB16
760-068-04	BUTTON, TRANSPORT	PLAY	TB17
760-068-05	BUTTON, TRANSPORT	RECORD	TB18
760-086-00			Z23
760-086-03	GREY ARROW BUTTONS		Z28
760-104-00	BTN HINGE SMALL REAN		B1-37 B39-77 B93-96
760-105-00	BTN HINGE LARGE REAN		B78-91

## 055-123-00 REV E, LINEAR POWER SUPPLY

(THIS BOARD IS INSIDE THE REMOTE CPU)

PART NO.	DESCRIPTION	VALUE	REFERENCE DESIGNATORS
100-104-00	RESISTOR CF	200K 5%	R2
105-201-00	RESISTOR MF	121 1%	R9-10
105-335-00	RESISTOR MF	2K74 1%	R7-8
105-339-00	RESISTOR MF	3K01 1%	R11-12
110-001-00	RESISTOR CF	10 5%	R4
110-056-00	RESISTOR CF	2K 5%	R15
110-065-00	RESISTOR CF	4K7 5%	R3
110-069-00	RESISTOR CF	6K8 5%	R17
110-080-00	RESISTOR CF	20K 5%	R1
200-028-02	CAPACITOR MYLART&R	0.01 5%	C10-11 C15
220-002-02	CAPACITOR LYTIC RADIAL TAPE	47UF 10%	C1-2
220-003-02	CAPACITOR LYTIC RADIAL TAPE	47UF 10%	C4-5 C13
220-007-00	CAPACITOR LYTIC RADIAL	100UF 10%	C3
220-023-00	CAPACITOR LYTIC RADIAL	6,800UF 10%	C6-7
220-027-02	CAPACITOR LYTIC RADIAL TAPE	10UF 10%	C8-9
301-001-00	DIODE POWER	1N4002	D5-8 D10-13
301-003-00	DIODE POWER	1N5401	D1-4
302-014-00	DIODE ZENER	1N4756	D20
302-020-00	DIODE ZENER	1N4758A	D9
310-006-00	TRANSISTOR POWER NPN	TIP29C	Q1-2
321-008-00	I.C. ADJ POS 3 TERM VOLTAGE REGULATOR	LM317T	U2
321-009-00	I.C. ADJ NEG 3 TERM VOLTAGE REGULATOR	LM337T	U1
400-060-00	FUSE CLIP PCMT 5MM DIA		Z1-2 Z4-7
400-061-00	CONNECTOR HDR STR 2P .100 X 1 LOCK		J4
400-093-00	CONNECTOR STR 7P .156 X 1 LOCK		J1
400-163-00	HDR, VERT, 4P, .165X2, M, W/PEGS		J2
400-165-00	HDR, VERT, 5P, .165X1, M, W/PEGS		J3
400-173-00	CONN QUICK DISC .250 W/STABLE-LOK TABS		J5-6
400-206-00	HDR, STR, 4P .200 X 1		J200
400-231-00	HEADER, 2X5, MATE-N-LOCK		J20
400-290-00	HEADER, 12P .156X1 LOCK		J8
450-123-00	PCB, LINEAR POWER SUPPLY		Z3
510-015-00	FUSE 5X20mm	T1.6A	F1
510-026-00	FUSE 5X20	T-3.15A	F2-3

## 055-124-00 REV A, 8-WAY FADER

PART NO.	DESCRIPTION	VALUE	REFERENCE DESIGNATORS
130-047-00	FADER, 100MM MOTORIZED	10KB	E1 R1 R101 R201 R301 R401 R501 R601 R701
140-025-00	RESISTOR TF SMT	10 5%	R30 R37-39
140-049-00	RESISTOR TF SMT	100 5%	R12 R31-32 R45 R47 R56 R112 R212 R312 R412 R512 R612 R712
140-071-00	RESISTOR CF	820 5%	R11 R14-15 R18 R20 R22-23 R26-27 R43 R48-53
140-073-00	RESISTOR TF SMT	1K0 5%	R54
140-097-00	RESISTOR TF SMT	10K 5%	R2-5 R8-10 R13 R16-17 R19 R21 R24-25 R28 R44 R46 R55 R102-105 R108-110 R202-205 R208-210 R302-305 R308-310 R402-405 R408-410 R502-505 R508-510 R602-605 R608-610 R702-705 R708-710 R933-934
140-123-00	RESISTOR TF SMT	100K 5%	R33-36
140-139-00	RESISTOR TF SMT	470K 5%	R6-7 R106-107 R206-207 R306-307 R406-407 R506-507 R606-607 R706-707
145-000-00	RESISTOR SMT	0 5%	R29 R40-42
212-025-00	CAPACITOR CERAMIC SMT X7R	.1UF 10%	C1-2 C4-5 C8 C25-26 C32 C35 C37-38 C101-102 C201-202 C301-302 C401-402 C501-502 C601-602 C701-702 C904 C907 C914
220-002-02	CAPACITOR LYTIC RADIAL TAPE	47UF 10%	C6-7 C915-918
220-027-02	CAPACITOR LYTIC RADIAL TAPE	10UF 10%	C3 C103 C203 C303 C403 C503 C603 C703
300-003-00	DIODE SIGNAL SMD	DL4148	D1 D6-13 D101 D201 D301 D401 D501 D601 D701
301-004-00	DIODE POWER SMD	DL4002	D26-41
302-018-03	DIODE ZENER SMD	DL4736A	D2-5 D14-25
310-044-00	TRANSISTOR NPN POWER	2N6039	Q2 Q4 Q102 Q104 Q202 Q204 Q302 Q304 Q402 Q404 Q502 Q504 Q602 Q604 Q702 Q704
310-045-00	TRANSISTOR PNP POWER	2N6036	Q3 Q5 Q103 Q105 Q203 Q205 Q303 Q305 Q403 Q405 Q503 Q505 Q603 Q605 Q703 Q705
311-005-00	X-SISTOR NPN SMD	1MBTA06	Q1 Q6-13 Q101 Q201 Q301 Q401 Q501 Q601 Q701
320-004-00	I.C. LINEAR SMD	NJM4560	U1-2 U10 U101-102 U201-202 U301-302 U401-402 U501-502 U601-602 U701-702 U904
321-003-00	I.C. LINEAR POS 3 TERM VOLTAGE REGULATOR	LM 7805	U3
325-003-03	IC, ANALOG MUX, 8 CH SMD	4051B	U12
325-012-03	IC, 8 BIT SHIFT REGISTERS WITH OUTPUT LATCHES, SMD	74HC595	U903
325-048-03	IC, SMD, 12-STAGE BINARY RIPPLE COUNTER	74HC4040	U15
325-053-03	IC, SMD, SCH TRIGGER HEX INV.	74AC14	U4
329-015-03	IC, 8 CHANNEL DAC, SMD	AD8803	U908
400-187-00	CONN HDR 34P .100 X 2 RTA SHRD		J39
450-124-00	PCB, DIGITAL 8-BUS: 8-WAY FADER		Z1
601-010-00	FERRITE BEAD, SMT	Z=73	FB1-7

## 055-125-00 REV A, 9-WAY FADER

PART NO.	DESCRIPTION	VALUE	REFERENCE DESIGNATORS
130-047-00	FADER, 100MM MOTORIZED	10KB	E1 R1 R101 R201 R301 R401 R501 R601 R701 R801
140-025-00	RESISTOR TF SMT	10 5%	R38-41
140-049-00	RESISTOR TF SMT	100 5%	R12 R36-37 R42 R44 R57 R112 R212 R312 R412 R512 R612 R712 R812
140-071-00	RESISTOR CF	820 5%	R11 R13 R15 R17 R19 R21 R23 R25 R27 R29 R49-56
140-073-00	RESISTOR TF SMT	1K0 5%	R59-60
140-097-00	RESISTOR TF SMT	10K 5%	R2-5 R8-10 R14 R16 R18 R20 R22 R24 R26 R28 R30-31 R43 R58 R102-105 R108-110 R202-205 R208-210 R302-305 R308-310 R402-405 R408-410 R502-505 R508-510 R602-605 R608-610 R702-705 R708-710 R802-805 R808-810 R933-934
140-123-00	RESISTOR TF SMT	100K 5%	R32-35
140-139-00	RESISTOR TF SMT	470K 5%	R6-7 R106-107 R206-207 R306-307 R406-407 R506-507 R606-607 R706-707 R806-807
145-000-00	RESISTOR SMT	0 5%	R45-48
212-025-00	CAPACITOR CERAMIC SMT X7R	.1UF 10%	C1-2 C4-5 C8 C27-32 C101-102 C201-202 C301-302 C401-402 C501-502 C601-602 C701-702 C801-802 C904 C907 C909 C913-914 C922
220-002-02	CAPACITOR LYTIC RADIAL TAPE	47UF 10%	C6-7 C915-918
220-027-02	CAPACITOR LYTIC RADIAL TAPE	10UF 10%	C3 C103 C203 C303 C403 C503 C603 C703 C803
300-003-00	DIODE SIGNAL SMD	DL4148	D1 D6-14 D101 D201 D301 D401 D501 D601 D701 D801
301-004-00	DIODE POWER SMD	DL4002	D2-5 D15-28
302-018-03	DIODE ZENER SMD	DL4736A	D29-46
310-044-00	TRANSISTOR NPN POWER	2N6039	Q2 Q4 Q102 Q104 Q202 Q204 Q302 Q304 Q402 Q404 Q502 Q504 Q602 Q604 Q702 Q704 Q802 Q804
310-045-00	TRANSISTOR PNP POWER	2N6036	Q3 Q5 Q103 Q105 Q203 Q205 Q303 Q305 Q403 Q405 Q503 Q505 Q603 Q605 Q703 Q705 Q803 Q805
311-005-00	X-SISTOR NPN SMD	IMBTA06	Q1 Q6-14 Q101 Q201 Q301 Q401 Q501 Q601 Q701 Q801
320-004-00	I.C. LINEAR SMD	NJM4560	U1-2 U10 U101-102 U201-202 U301-302 U401-402 U501-502 U601-602 U701-702 U801-802 U904
321-003-00	I.C. LINEAR POS 3 TERM VOLTAGE REGULATOR	LM 7805	U3
325-003-03	IC, ANALOG MUX, 8 CHL SMD	4051B	U7-8
325-006-03	IC, DCDR/DEMUX SMD	74HC138	U6
325-012-03	IC, 8 BIT SHIFT REGISTERS WITH OUTPUT LATCHES, SMD	74HC595	U903 U915
325-048-03	IC, SMD, 12-STAGE BINARY RIPPLE COUNTER	74HC4040	U9
325-053-03	IC, SMD, SCH TRIGGER HEX INV	74AC14	U4
329-016-03	IC, 12 CHANNEL DAC, SMD	AD8804	U914
400-187-00	CONN HDR 34P .100 X 2 RTA SHRD		J40
450-125-00	PCB, DIGITAL 8-BUS: 9-WAY FADER		Z1
601-010-00	FERRITE BEAD, SMT	Z=73	FB1-7

## 055-136-00 REV A, BRAIN BOARD

PART NO.	DESCRIPTION	VALUE		REFERENCE DESIGNATORS
080-057-00	Programed Eprom U38			ZU38
140-042-00	RESISTOR TF SMT	51	5%	R97-98 R101 R103 R111-112 R142 R144-166 R168-170
140-049-00	RESISTOR TF SMT	100	5%	R18-19 R26-27 R39-43 R45 R47 R49-60 R62 R66-69 R71-73 R75-82 R84-90 R96 R99-100 R102 R108-110 R121-130 R171
140-060-00	RESISTOR TF SMT	300	5%	R174
140-065-00	RESISTOR TF SMT	470	5%	R113 R172-173
140-073-00	RESISTOR TF SMT	1K0	5%	R3 R6 R9 R12-13 R20-21 R28-29 R35 R44 R48 R74 R83 R91-94 R104-107 R131-132
140-080-00	RESISTOR TF SMT	2K	5%	R14-17 R22-25 R30-31 R64-65
140-089-00	RESISTOR TF SMT	4K7	5%	R70
140-097-00	RESISTOR TF	10K	5%	R1-2 R4-5 R7-8 R10-11 R32-34 R36-38 R46 R61 R63 R95 R119-120 R133 R143 R175-188
140-123-00	RESISTOR TF SMT	100K	5%	R134-141
212-001-00	CAPACITOR CERAMIC SMT	0.01	10%	C20-21 C40
212-010-00	CAPACITOR CERAMIC SMT	.1UF	-400	C1-19 C22-35 C38-39 C42 C44-45 C47-49 C59 C79
212-025-00	CAPACITOR CERAMIC SMT X7R	.1UF	10%	C36 C41
223-004-00	CAPACITOR LYTIC SMT	10UF	20%	C37 C43 C46
304-064-03	LED, SMT, 0805	RED		D1
304-065-03	LED, SMT, 0805	GRN		D3
304-066-03	LED, SMT, 0805	YEL		D2
311-005-00	X-SISTOR NPN SMD	IMBTA06		Q1
315-004-00	OSCILLATOR	7.3728 MHZ		X3
315-006-00	OSCILLATOR	20 MHZ		X1
315-010-00	OSCILLATOR	16 MHZ		X2
320-004-00	I.C. LINEAR SMD	NJM4560		U3 U7-8
321-003-00	I.C. LINEAR POS 3 TERM VOLTAGE REGULATOR	LM 7805		U17
324-004-03	HIGH SPEED CMOS RS-232 DRIVERS/RECEIVERS	ADM232A		U12
325-010-03	IC, OCTAL, D-TYP, TRANS LATCH,	74HC574		U2 U4-6 U13 U15 U33 U35
325-020-03	IC, HEX, INV, SMD	74HC04		U52
325-037-03	IC, SMD, DCDR/DEMUX	74AC138		U28-29
325-052-03	IC, OCTAL BUFFER/LINE DRIVER, 3 STATE OUTPUTS, SMD	74HC541		U1 U18
329-040-03	IC, SERIAL NUMBER	DS2401		U16
329-041-03	IC, 10 BIT ADC	AD7812		U11
335-002-00	IC, SMD, DIGITAL SIGNAL PROCESSOR	ADSP-2181		U25
335-003-00	IC, SMD, U/P SUPERVISORY CIRCUIT	ADM705		U10
335-004-00	IC, SMD, ASYNCHRONOUS COMMUNICATIONS	TL16C452		U9 U14 U34
400-077-00	CONNECTOR STR LCK SHRD 20P .100 X 2			J31-32
400-078-00	CONNECTOR STR LCK SHRD 10P .100 X 2			J26 J34
400-079-00	CONNECTOR STR LCK SHRD 14P .100 X 2			J27
400-147-00	CONNECTOR STR LCK SHRD 26P .100 X 2			J28 J36-37
400-152-00	CONNECTOR STR LCK SHRD 34P .100 X 2			J35 J38-40
400-224-00	CONNECTOR STR 8P .156 X 1 LOCKING KEYED			J41
401-001-32	IC SOCKET, 32 PIN, DIP			U38
450-136-00	PCB, BRAIN BOARD			Z1
601-010-00	FERRITE BEAD, SMT	Z=73		FB1-11

## 055-163-00 REV C, BACKPLANE

PART NO.	DESCRIPTION	VALUE	REFERENCE DESIGNATORS
400-077-00	HEADER STR LCK SHRD 20P .100 X 2		J15 J21 J32
400-152-00	CONNECTOR STR LCK SHRD 34P .100 X 2		J24 J47-48
400-200-00	I.S.A. EDGE CONNECTOR 2.54MM		J14 J16-20 J22-23 J30 J51
400-221-00	CONNECTOR STR 7P .156 X 1 LOCKING KEYED		J50
450-163-00	PCB, EFX BACKPLANE		

## 055-164-00 REV C, CLOCK CARD

PART NO.	DESCRIPTION	VALUE	REFERENCE DESIGNATORS
140-009-00	RES TF SM .1W 5% 2.2 OHM	2.2 5%	R51-56
140-025-00	RESISTOR TF SMT	10 5%	R20-21 R36-39
140-049-00	RES TF SM .1W 5% 100 OHM	100 5%	R13 R35 R40-43 R45-49
140-049-00	RESISTOR TF SMT	100 5%	R30-31 R33-34 R14-18 R44 R22-24 R28-29 R50
140-073-00	RESISTOR TF SMT	1K0 5%	R3 R5 R10 R12
140-089-00	RES TF SM .1W 5% 4K7 OHM	4K7 5%	R25-26
140-097-00	RESISTOR TF SMT	10K 5%	R1-2 R4 R9
140-110-00	RESISTOR TF SMT	33K 5%	R11
212-003-00	CER 100PF 5% 50V NPO SM	100PF 5%	C15-16
212-015-00	CAPACITOR CERAMIC SMT	33PF 5%	C7-8
212-025-00	CAPACITOR CERAMIC SMT X7R	.1UF 10%	C1-6 C9-13
311-005-00	X-SISTOR NPN SMD	IMBTA06	Q1
315-012-00	OSCILLATOR	22.5792 MHZ	Y1
315-014-00	OSCILLATOR	24.576 MHZ	Y2
315-015-00	CRYSTAL, SMD	20MHZ	Y3
325-035-03	IC, SMD, HEX INVERTER	74AC04	U3
325-036-03	IC, SMD, 12-STAGE BINARY RIPPLE COUNTER	74AC4040	U1
325-039-03	IC, SMD, DUAL D F/F	74AC74	U4
325-041-03	IC, SMD, OCTAL BUFFER/LINE DRIVER, 3 STATE OUTPUTS	74AC541	U6-8
325-042-03	IC, SMD, OCTAL D-TYPE FF	74AC574	U2
450-164-00	PCB, CLOCK CARD		Z1
601-009-00	FERRITE SMT SIG 1K OHM	Z=1000	FB3-5
601-010-00	FERRITE BEAD, SMT	Z=73	FB1-2

## 055-201-00 REV A, POWER DISTRIBUTION

(THIS BOARD IS INSIDE THE REMOTE CPU)

PART NO.	DESCRIPTION	VALUE	REFERENCE DESIGNATORS
FUSES	SEE FINAL ASSEMBLY	F1-3	
040-135-00	DIS 18ga. GRNYL 4" LGTH	N7	
200-023-00	CAPACITOR, POLY BOX	1000pF 20%	C1-2
200-024-00	CAPACITOR, POLY BOX	.01uF 20%	C3
400-060-00	FUSE CLIP 5X20	N1-6	
400-172-00	TERM SOLDER-IN 18AWG	E1	
400-173-00	CONN QUICK DISC .250 W/STABLE-LOK TABS	1-12	
450-201-00	FUSE BOARD REV.A	Z1	

## FINAL ASSEMBLY PARTS LIST FOR CE MODELS

**Parts Numbering guide**

- 040- Cables
- 055- Finished PCB Assy
- 100- Pots and resistors
- 200- Capacitors
- 300- Semiconductors
- 400- Jacks/Connectors
- 500- Switches
- 510- Fuses
- 550- Chassis Metalwork
- 600- Transformers
- 601- Inductors
- 610- Wires and Cables
- 640- AC line cords
- 700- Hardware
- 760- Knobs/Plastic
- 770- Fans
- 790- Misc./Packing
- 800- Printed Material
- 860- EPROM

PART#	DESCRIPTION	PAGES
090-123-00	D8B CONSOLE CE	41-42
090-126-00	D8B REMOTE CPU	43-45

**LATEST PARTS LISTS (JULY 2001)**

PART#	DESCRIPTION	PAGES
090-123-00	D8B CONSOLE CE	48-49
090-126-00	D8B REMOTE CPU	50-51

**090-123-00 DIGITAL 8 BUS CONSOLE CE REV A9**

PART NO.	DESCRIPTION	REV		QTY
090-123-00	DIGITAL 8 CONSOLE CE	A9	A3	1
040-138-00	CBL 3P 22GA .098CL 17IN	A		1
040-141-00	RIB 28GA 26C 8IN PLZD	A		5
040-142-00	RIB 28GA 40C 8IN PLZD	A		4
040-143-00	RIB 28GA 25C 4.5IN DSUB	B		1
040-145-00	RIB 28GA 26C 2.5IN PLZD	A		1
040-146-00	RIB 28GA 34C 3IN PLZD	A		1
040-147-00	RIB 28GA 20C 11.5IN PLZD	A		1
040-149-00	RIB 28GA 34C 10.5IN PLZD	A		1
040-195-00	RIB 28GA 10C 23IN PLZD	A		1
040-196-00	RIB 28GA 34C 21IN PLZD	A		1
040-197-00	RIB 28GA 26C 6IN PLZD	A		2
040-198-00	RIB 28GA 34C 8.25IN PLZD	A		1
040-199-00	RIB 28GA 34C 11.5IN PLZD	A		1
040-200-00	RIB 28GA 34C 18IN PLZD	A		1
040-202-00	RIB 28GA 26C 20.5IN PLZD	B		1
040-203-00	RIB 28GA 34C 4IN PLZD	A		1
040-204-00	RIB 28GA 34C 6.5IN PLZD	A		1
040-211-00	RIB 28GA 26C 13.5IN PLZD	A		1
040-212-00	RIB 28GA 20C 8.5IN PLZD	A		2
040-213-00	RIB 28GA 20C 17.5IN PLZD	A		1
040-252-00	RIB 28GA 20C 22 28IN DSUB	A		1
040-253-00	RIB 18GA 7C .156X1 6.75IN	A		1
040-254-00	RIB 18GA 8P .156X1 19IN	A		1
040-255-00	RIB 18GA 5C .156X1 21.5IN	A		1
040-277-00	RIB 28GA 40C 1IN PLZD	A		1
040-278-00	DIS 16GA 1007 GN/YL 5 Q/L	B		1
040-300-00	CBL DATA 25P EMI FRT D8	A		1
040-340-00	DIS 14GA BLK 6.5 LUG/LUG	A		1
055-108-00	PCB ASSY MIC/LINE METERS	52	A1	1
055-109-00	PCB ASSY LINE/MSTR METER	55	A1	1
055-110-00-01	PCB ASSY ANA I/O JACKFLD	B5	B1	1
055-111-00	PCB ASSY PWR DIST - D8	B1	B1	1
055-112-00-01	PCB ASSY DCA - D8	C	C1	1
055-113-00-01	PCB ASSY CODEC - D8	B	B1	1
055-114-00-01	PCB ASSY DSP - D8	C2	C1	1
055-115-00-03	PCB ASSY DIGITAL I/O - D8	E	E3	1
055-120-01	PCB ASSY MIC/CNTRL SURF	A1	A1	1
055-121-01	PCB ASSY LINE/CTL SURF D8	A1	A1	1
055-122-01	PCB ASSY OUT/CTL SURF -D8	A1	A1	1
055-124-00	PCB ASSY FADER X 8 - D8	31	A1	2
055-125-00	PCB ASSY FADER X 9 - D8	31	A1	1
055-136-00-01	PCB ASSY CNTRL BRAIN - D8	A7	A1	1
055-154-00	PCB IVL EFFECTS D8	A	A1	1
055-163-00-01	PCB ASSY EFFECTS BACKPLN	C1	C1	1
055-164-00-01	PCB ASSY CLOCK - D8	C	C1	1
055-191-00	PCB ASSY JOG WHEEL D8	1	A1	1
080-096-00	SA VFD D8	A	A1	1
091-136-00	CONSOLE WARNING SHEET D8	B		1
400-302-00	ADAPTER MIDI	A		1
550-260-00	SCREEN TOP PANEL D8	B		1
550-261-00	PNT FRONT MTR BRIDGE D8	A		1
550-262-00	PAINT BOTTOM - D8	A		1
550-263-00	FAB SIDE PANEL LEFT D8	A		1
550-264-00	FAB SIDE PANEL RIGHT D8	A		1



## 090-123-00 CE console, continued

PART NO.	DESCRIPTION	REV	QTY
550-273-00	FAB SUB CHASSIS - D8	A	1
550-278-00	FAB STIFFENER - D8	A	1
550-279-00	FAB SHIELD METER - D8	B	1
550-280-00	FAB SHIELD DSP - D8	B1	1
550-283-00	FAB PLATE MOUNT JOG - D8	A	1
550-285-00	FAB CARD CAGE	A1	1
550-287-00	FAB SHIELD AUDIO - D8	B	1
550-303-00	SCREEN REAR PANEL D8	C	1
550-307-00	FINISH BLANK COV PL LG D8	B	1
550-332-00	PNT BLANK COV PLATE SM D8	A1	5
551-039-00	EXTR PNT MTR BRIDGE RIDGE	A	1
700-011-00	MCH 4-40X1/4 BTNSKT BLKOX	A	39
700-011-01	MCH 4-40X3/16 BTNSK BLKOX	A	52
700-015-00	MCH 10-32X3/4 PHP BLKZC		12
700-019-00	MCH 10-32X3/8 PHP BLKZC		7
700-028-00	SEMS 6-32X1/4 PHP BLKZC	B	140
700-028-02	SEMS 6-32X3/8 PHP BLKZC	B	4
700-044-08	SEMS 6-32X5/8 PHP ZC	A	4
700-055-00	MCH 4-24X3/8 PHP BLK HILO	A	28
701-005-00	SM A-AB 6X1/4 PHP BLKZC	A	6
705-001-00	KEPNUT 6-32	A	2
705-003-00	NUT HEX-SPLD W/400-214-00	A	AR
705-020-00	NUT HEX M9 (W/ENCODER)	A	AR
705-021-00	NUT CAP 1/2 DIA OD STLZC	A	3
706-017-00	STDF 4-40X.25 JACKSCREW	A	2
706-065-00	STDF 4-40/M2.6F JACKSCR	A	2
710-002-00	WASHER-SPLD W/400-214-00	A	AR
710-008-00	WASH SPLTLCK NO.4	A	4
710-027-00	WASH FLAT M9 (W/ENCODER)	A	AR
712-051-00	GASKET EMI NYL FOAM 32IN	A	1
730-026-00	ADHESIVE RTV162	A	AR
740-001-00	TYRAP 3-1/4L	A	3
740-002-00	TYRAP MOUNT .75 X .75	B	3
740-017-00	CARD GUIDE 4.0L SNAP-IN	A	20
750-001-00	BUMPON ROUND BLK .63X.31	A	5
750-004-00	FOOT #10 BLK 1 X .562	A	4
760-070-00	TRIM RING - D8	A	1
760-071-00	JOG WHEEL - D8	A	1
760-077-00	ARMREST - D8	A	1
760-079-00	ENDCAP RT - D8	A	1
760-080-00	ENDCAP LT - D8	A	1
760-081-00	KNOB TRIM W/PNTR	A	24
760-085-01	KNOB 24X10 T-SLOT MLD LIN	A	25
760-128-00	DUST COVER 25P DSUB FEM	A	2
780-040-00	LENS MTR BRIDGE-D8 SLKSCR	A	1
780-041-00	LENS DISPLAY - D8	A	1
780-046-00	VFD SHLD FILTER - D8	A	1
790-002-00	BAG POLY 12 X 18 2MIL	A	1
790-020-00	BAG 72X52 4MIL 36IN P-SHT	A	1
800-070-00	BOX TOP DIGITAL 8	A	1
800-078-00	BOX BOTTOM DIGITAL 8	A	1
800-080-00	BOX INTERNAL D8	A	1
810-062-00	FOAM TOP D8	A	1
810-068-00	INSERT ACCY TRAY - D8	A	1
810-069-00	FOAM BOTTOM D8	A	1

NOTE: When removing these screws from the console, make sure that you do not mix them up. You must not put the longer screws where the shorter ones go. Refer to the assembly instructions chapter if in doubt.

## 090-126-xx REV 12, REMOTE CPU & POWER SUPPLY-CE

PART NO.	DESCRIPTION	REV	QTY		
090-126-00	D8 PWR SPLY 120V CE	12	A2	1	Pre- Nov 99 models
090-126-01	D8 PWR SPLY 230V CE	12	A2	1	
090-126-02	D8 PWR SPLY 100V CE	12	A2	1	
040-139-00	RIB 28GA 34C 23IN PLZD	B		1	
040-140-00	RIB 28GA 40C 19IN PLZD	B		1	
040-276-00	RIB 28GA 20C 7.5 M DSUB	A		1	
040-282-00	RIB 28GA 26C DSUB 7.75IN	A		1	
040-294-00	CBL DC PWR BRD SHLD D8PWR	A		1	
055-201-00-01	PCB ASSY PWR DIST D8 PWR	A2	A1	1	see chapter 201
080-036-00	SA LINEAR SUPPLY - D8	A1	A1	1	see subassembly on page A-47
080-099-00	SA CUT KEYBOARD GASKET	A		1	
080-100-00	SA CUT MOUSE GASKET	A		1	
080-107-00	SA XFMR 120V CE D8	A	A1	1	120V units-see page A-47
080-107-01	SA XFMR 230V CE D8	A	A1	1	230V units
080-107-02	SA XFMR 100V CE D8	A		1	100V units
080-108-00	SA PWR SW W/CBLS D8	A	A1	1	see subassembly on page A-47
080-109-00	SA HARD DR/FLOPPY DR D8	B1	B2	1	see subassembly on page A-47
080-113-00	SA MOTHER BOARD MOD D8	1	A1	1	
080-124-00	SA DC PWR SPLY D8	A		1	
091-161-00	COMPUTER WARNING SHT D8	B		1	
091-200-00	REAL TIME OS 2.0 LABEL	A	A1	1	
329-049-03	MICRO PROC PENTIUM 166MHZ	A	A1	1	
480-005-00	OEM PCB VIDEO 64 BIT	A	A1	1	
480-008-00	FAN MICROPROCESSOR W/HTSK	A	A1	1	
480-015-00	DRAM 72P SIMM 8MB 2X32	A		2	
480-024-00	BRKT BLANK PORT	A		4	
480-025-00	OEM MIDI CARD D8	A	A1	1	
480-026-00	OEM ETHERNET CARD	A	A1	1	
510-001-00	FUSE SB 1A 5X20MM 250V UL	B		1	120V units
510-026-00	FUSE SB 3.15A 5X20MM 250V	A		1	120V units
510-029-00	FUSE SB 2.5A 5X20 250V UL	A		1	120V units
510-002-00	FUSE SB .5A 5X20 250V IEC	C		1	230V units
510-012-00	FUSE SB 2.5A 5X20 250 IEC	B		1	230V units
510-015-00	FUSE SB 1.6A 5X20 250 IEC	B		1	230V units
510-011-00	FUSE SB 4A 5X20 250V IEC	B		1	100V units
510-025-00	FUSE SB 1.25A 5X20MM 250V	B		1	100V units
510-026-00	FUSE SB 3.15A 5X20MM 250V	A		1	100V units
550-356-00	SIDE D8 PWR SPLY	A		2	
550-384-00	FAB CAGE CVR D8 PWR SPLY	A		1	
550-385-00	SCR FNT PANEL D8 PWR SPLY	A		1	
550-390-00	FAB PLATE CVR VOLT SW D8	A		1	
550-415-00	FAB SHIELD D8 PWR SPLY	A		1	
550-451-00	FAB CHASSIS D8 PWR SUPPLY	B		1	
550-452-00	PNT TOP D8 PWR SUPPLY	A		1	
550-453-00	FAB CARDRACK D8 PWR SPLY	B		1	
700-028-00	SEMS 6-32X1/4 PHP BLKZC	B		39	
700-028-02	SEMS 6-32X3/8 PHP BLKZC	B		8	
700-045-04	SEMS 10-32X3/8 PHP BLKZC	A		6	
700-086-00	TF 6-32X3/8 FL 100DG BLK	A		2	
701-001-00	SM B 6X3/8 PHP BLKZC	B		7	
705-001-00	KEPNUT 6-32	A		14	
706-017-00	STDF 4-40X.25 JACKSCREW	A		4	
706-059-00	STDF NYL SNAPIN .5IN NO 6	A		2	
710-008-00	WASH SPLTLCK NO.4	A		4	
730-001-00	THERMAL JOINT COMPOUND	A		AR	

## 090-126-xx REV 12 continued

PART NO.	DESCRIPTION	REV	QTY
740-001-00	TYRAP 3-1/4L	A	10
740-003-00	TYRAP 8IN BLK	A	1
740-007-01	GROMMET STRIP MEDIUM	A	AR
740-023-00	FLT CBL CLMP NYL LOCK 40C	A	1
760-128-00	DUST COVER 25P DSUB FEM	A	1
760-129-00	DUST COVER 25P DSUB MALE	A	1
760-130-00	DUST CVR 15HD/9P DSUB SKT	A	2

## Motherboard Changes (see parts list on page A-46)

From November 1999, the Remote Power Supply and CPU unit have a new motherboard, Celeron processor, and DIMM memory modules. Changes in the motherboard format require changes to the CPU metal, labels, and small hardware. The CMOS settings also change, see page 8 in the main part of the manual.

Models 090-126-xx, serial number prefix "BS11954" or higher (that is, all models after Nov 1999), use the new 480-039-00 motherboard, and DC power cable, so you can replace with the same.

Models 090-096-xx, with serial number prefix "AW", and models 090-126-xx, serial number prefix "BS11953" or lower (i.e. before Nov '99), use the original 480-023-00 (CE-modded version is 080-113-00) motherboard. If you have to replace the motherboard and no originals are available, then follow these instructions:

Parts required:

1. qty. 1 329-087-03 "MICRO PROC CELERON 300MHZ"
2. qty. 1 480-016-00 "SDRAM DIMM 2MX64 4K 3.3V"
3. qty. 1 480-039-00 "OEM PCB MOTHER CB50-BX"
4. qty. 1 480-043-00 "OEM FAN MICROPROC"
5. qty. 1 550-391-00 "FAB PLATE CVR MOUSE D8PWR" cover plate for old PS/2 mouse hole
6. qty. 1 550-534-00 "PLATE CVR DB25" cover plate for old parallel port hole
7. qty. 3 700-011-00 "MCH 4-40X1/4 BTNSKT BLKOX" for attaching cover plates
7. qty. 3 706-059-00 "STDF NYL SNAPIN .5IN NO 6"
8. qty. 3 740-003-00 "TYRAP 8IN BLK"
9. qty. 1 840-375-00 "LBL KEYBOARD/CDATA D8" label with obsoleted port locations removed

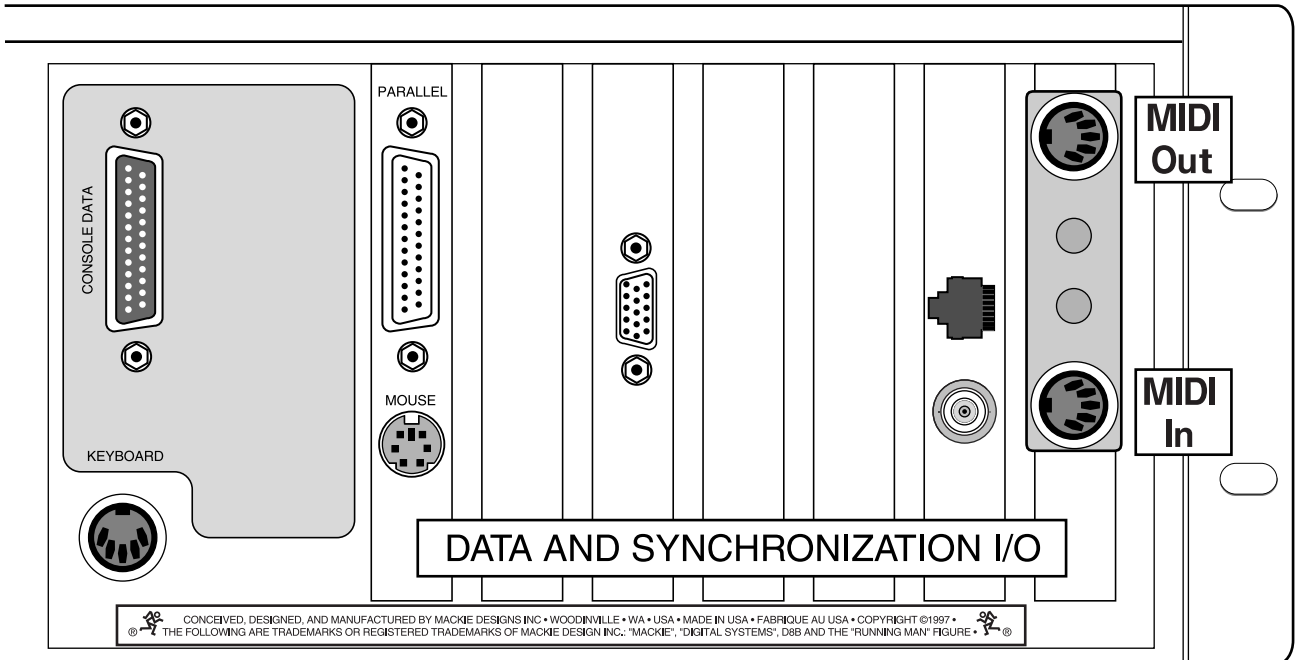
Note: The new motherboard uses a different BIOS with different CMOS settings. New position of headers on motherboard ends up leaving excess on ribbon cables, which can be bundled out of the way using tie-wraps. There were originally holes cut in the chassis for the mouse and parallel port on the old motherboard. The new motherboard uses a card-slot assembly with these ports on it. To reduce EMI radiation, the unused port holes must be covered up. Some metal pieces have been created for this purpose, and attach with screws.

NOTE: For models 090-096-xx, serial number prefix "AW":

If the 040-281-00 DC power cable (the "umbilical cord" between the CPU and the console) needs replacing on these old units, it will require major rework because the new cable (040-294-00) will not fit these old chassis. If you want to try:

1. qty. 1 040-294-00 "CBL DC PWR BRD SHLD D8PWR" New
2. qty. 1 329-087-03 "MICRO PROC CELERON 300MHZ" (can't use old one in new motherboard)
3. qty. 1 480-064-00 "SDRAM 32MB 4MX64 DIMM 3V" (can't use old memory in new mo'board)
4. qty. 1 480-039-00 "OEM PCB MOTHER CB50-BX"
5. qty. 1 480-043-00 "OEM FAN MICROPROC" use new fan
6. qty. 1 550-535-00 "FAB CRDRCK D8 CPU NO-PS2" card
7. qty. 1 550-542-00 "PNT TOP D8 CPSU"
8. qty. 1 550-543-00 "FAB CHASSIS D8 CPSU"
9. qty. 10 700-028-00 "SEMS 6-32X1/4 PHP BLKZC"
10. qty. 3 706-059-00 "STDF NYL SNAPIN .5IN NO 6"
11. qty. 3 740-003-00 "TYRAP 8IN BLK"
12. qty. 1 840-375-00 "LBL KEYBOARD/CDATA D8"

**Console  
Data**



**Keyboard**

**Mouse**

**Video**

**Ethernet**

**MIDI**

The rear panel looks like this, for those units with the new motherboard

## 090-126-00 REV 16, REMOTE CPU & POWER SUPPLY-CE

PART NO.	DESCRIPTION	REV		QTY	
090-126-00	D8 PWR SPLY 120V CE	16	A3	1	After Nov '99
040-139-00	RIB 28GA 34C 23IN PLZD	B		1	
040-140-00	RIB 28GA 40C 19IN PLZD	B		1	
040-276-00	RIB 28GA 20C 7.5 M DSUB	A		1	
040-294-00	CBL DC PWR BRD SHLD D8PWR	A		1	
055-201-00-01	PCB ASSY PWR DIST D8 PWR	A2	A1	1	See chapter 201
080-036-00	SA LINEAR SUPPLY - D8	B	A1	1	See subassembly on next page
080-107-00	SA XFMR 120V CE D8	A	A1	1	See subassembly on next page
080-108-00	SA PWR SW W/CBLS D8	A	A1	1	See subassembly on next page
080-109-00	SA HARD DR/FLOPPY DR D8	B1	B2	1	See subassembly on next page
091-161-00	COMPUTER WARNING SHT D8	B		1	
091-200-00	REAL TIME OS 2.0 LABEL	A	A1	1	
329-087-03	MICRO PROC CELERON 300MHZ	A		1	
480-005-00	OEM PCB VIDEO 64 BIT	A	A1	1	
480-016-00	SDRAM DIMM 2MX64 4K 3.3V	A		1	
480-024-00	BRKT BLANK PORT	A		4	
480-025-00	OEM MIDI CARD D8	A	A1	1	
480-026-00	OEM ETHERNET CARD	A	A1	1	
480-030-00	PC PWR SPLY 250W 90-240V	B	A1	1	
480-039-00	OEM PCB MOTHER CB50-BX	A		1	
480-043-00	OEM FAN MICROPROC	A		1	
510-001-00	FUSE SB 1A 5X20MM 250V UL	B		1	
510-026-00	FUSE SB 3.15A 5X20MM 250V	A		1	
510-029-00	FUSE SB 2.5A 5X20 250V UL	A		1	
550-356-00	SIDE D8 PWR SPLY	A		2	
550-384-00	FAB CAGE CVR D8 PWR SPLY	A		1	
550-385-00	SCR FNT PANEL D8 PWR SPLY	A		1	
550-390-00	FAB PLATE CVR VOLT SW D8	A		1	
550-415-00	FAB SHIELD D8 PWR SPLY	A		1	
550-535-00	FAB CARD RACK D8 PWR SPLY	A		1	
550-542-00	PNT TOP D8 CPSU	A		1	
550-543-00	FAB CHASSIS D8 CPSU	B		1	
700-028-00	SEMS 6-32X1/4 PHP BLKZC	B		39	
700-028-02	SEMS 6-32X3/8 PHP BLKZC	B		8	
700-045-04	SEMS 10-32X3/8 PHP BLKZC	A		6	
700-086-00	TF 6-32X3/8 FL 100DG BLK	A		2	
701-001-00	SM B 6X3/8 PHP BLKZC	B		7	
705-001-00	KEPNUT 6-32	A		14	
706-017-00	STDF 4-40X.25 JACKSCREW	A		4	
706-059-00	STDF NYL SNAPIN .5IN NO 6	A		5	
710-008-00	WASH SPLTLCK NO.4	A		4	
730-001-00	THERMAL JOINT COMPOUND	A		AR	
740-001-00	TYRAP 3-1/4L	A		10	
740-003-00	TYRAP 8IN BLK	A		4	
740-007-01	GROMMET STRIP MEDIUM	A		AR	
740-023-00	FLT CBL CLMP NYL LOCK 40C	A		1	
760-128-00	DUST COVER 25P DSUB FEM	A		1	
760-129-00	DUST COVER 25P DSUB MALE	A		1	
760-130-00	DUST CVR 9S/15HD DSUB F B	A		2	
790-001-00	BAG POLY 20 X 30 4MIL	A		1	
790-011-00	BAG POLY 20 X 7 X 30 4MIL	A		1	
800-085-00	BOX D8 PWR SUPPLY	A		1	
810-074-00	FOAM ENDS D8 PWR SUPPLY	A		2	
810-081-00	INSERT PWR CBL TRAY D8PS	A		1	
820-212-00	ERRATA SH D8 CPU PORT CHG			1	

**080-036-00 Rev A1 Linear supply subassembly**

PART NO.	DESCRIPTION	REV	QTY
040-284-00	DIS 18GA BRN/BLU .156 7.5	E	1
040-285-00	DIS 26GA 2C 2MM/.100 6.5	A	1
055-123-00-01	PCB ASSY LINEAR SPLY - D8	E3	E1 1 see chapter 123, Mackie linear P/S
080-110-00	SA TWISTED PAIR LINEAR SP	A	1
410-002-00	INSL SILPAD .007 SELF ADH	A	2
480-027-00	SW PWR SPLY ASTEC 5V 22A	A	1 OEM switching P/S
550-198-00	HTSK BRKT PWR DIST-40.8	A	1
550-401-00	FAB BRKT HTSNK ASTEC D8PW	A	1
550-418-00	FAB BRKT HTSK LINEAR SPLY	A	1
700-028-00	SEMS 6-32X1/4 PHP BLKZC	B	7
700-028-03	SEMS 6-32X1/2 PHP BLKZC	B	2
700-086-00	TF 6-32X3/8 FL 100DG BLK	A	2
730-026-00	ADHESIVE RTV162	A	AR

**080-107-00 Rev A1 Power transformer subassembly**

PART NO.	DESCRIPTION	REV	QTY
400-084-00	7P .156X1 22GA END	C	1
400-210-00	TERM QDISC .250 F 18-22GA	A	2
600-036-00	XFMR POWER D8 120V	B	1

**080-108-00 Rev A1 Power Switch subassembly**

PART NO.	DESCRIPTION	REV	QTY
040-248-00	DIS 18GA 1010 BLU 14 QDX2	B	1
040-286-00	DIS 18GA 1010 BLK 14 QDX2	A	1
040-287-00	DIS 18GA 1010 WHT 14 QDX2	A	1
040-288-00	DIS 18GA 1010 BRN 14 QDX2	A	1
500-040-00	SW DPST PWR RCKR W/LED	A	1
740-001-00	TYRAP 3-1/4L	A	2
740-011-00	HEATSHRINK TUBE 2:1 .50ID	B	10

**080-109-00 Rev B2 Hard/Floppy drive subassembly**

PART NO.	DESCRIPTION	REV	QTY
080-090-10	SA FORMATTED HD VER2.01	A1	A2 1
480-029-00	OEM FLOPPY DRV 3.5 BLACK	B	1
550-361-00	BRKT DISK DRV D8 PWR SPLY	A	2
700-028-00	SEMS 6-32X1/4 PHP BLKZC	B	4
700-085-03	SCR PHP M3X6 STL BLK ZC	A	4

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## 090-123-00 DIGITAL 8 BUS CONSOLE CE REV A3

PART NO.	DESCRIPTION	REV		QTY
090-123-00	DIGITAL 8 CONSOLE CE	A	A3	1
040-138-00	CBL 3P 22GA .098CL 17IN	A		1
040-141-00	RIB 28GA 26C 8IN PLZD	A		5
040-142-00	RIB 28GA 40C 8IN PLZD	A		4
040-143-00	RIB 28GA 25C 4.5IN DSUB	B		1
040-145-00	RIB 28GA 26C 2.5IN PLZD	A		1
040-146-00	RIB 28GA 34C 3IN PLZD	A		1
040-147-00	RIB 28GA 20C 11.5IN PLZD	A		1
040-149-00	RIB 28GA 34C 10.5IN PLZD	A		1
040-195-00	RIB 28GA 10C 23IN PLZD	A		1
040-196-00	RIB 28GA 34C 21IN PLZD	A		1
040-197-00	RIB 28GA 26C 6IN PLZD	A		2
040-198-00	RIB 28GA 34C 8.25IN PLZD	A		1
040-199-00	RIB 28GA 34C 11.5IN PLZD	A		1
040-200-00	RIB 28GA 34C 18IN PLZD	A		1
040-202-00	RIB 28GA 26C 20.5IN PLZD	B		1
040-203-00	RIB 28GA 34C 4IN PLZD	A		1
040-204-00	RIB 28GA 34C 6.5IN PLZD	A		1
040-211-00	RIB 28GA 26C 13.5IN PLZD	A		1
040-212-00	RIB 28GA 20C 8.5IN PLZD	A		2
040-213-00	RIB 28GA 20C 17.5IN PLZD	A		1
040-252-00	RIB 28GA 20C 22 28IN DSUB	A		1
040-253-00	RIB 18GA 7C .156X1 6.75IN	A		1
040-254-00	RIB 18GA 8P .156X1 19IN	A		1
040-255-00	RIB 18GA 5C .156X1 21.5IN	A		1
040-277-00	RIB 28GA 40C 1IN PLZD	A		1
040-278-00	DIS 16GA 1007 GN/YL 5 Q/L	B		1
040-300-00	CBL DATA 25P EMI FRT D8	A		1
040-340-00	DIS 14GA BLK 6.5 LUG/LUG	A		1
055-108-00	PCB ASSY MIC/LINE METERS	52	A1	1
055-109-00	PCB ASSY LINE/MSTR METER	55	A1	1
055-110-00-01	PCB ASSY ANA I/O JACKFLD	B6	B1	1
055-111-00	PCB ASSY PWR DIST - D8	B1	B1	1
055-112-00-01	PCB ASSY DCA - D8	C	C1	1
055-113-00-01	PCB ASSY CODEC - D8	B	B1	1
055-114-00-01	PCB ASSY DSP - D8	C2	C1	1
055-115-00-03	PCB ASSY DIGITAL I/O - D8	E	E3	1
055-120-01	PCB ASSY MIC/CNTRL SURF	A1	A1	1
055-121-01	PCB ASSY LINE/CTL SURF D8	A1	A1	1
055-122-01	PCB ASSY OUT/CTL SURF -D8	A1	A1	1
055-124-00	PCB ASSY FADER X 8 - D8	31	A1	2
055-125-00	PCB ASSY FADER X 9 - D8	31	A1	1
055-136-00-01	PCB ASSY CNTRL BRAIN - D8	A7	A1	1
055-154-00	PCB IVL EFFECTS D8	A	A1	1
055-163-00-01	PCB ASSY EFFECTS BACKPLN	C1	C1	1
055-164-00-01	PCB ASSY CLOCK - D8	C	C1	1
055-191-00	PCB ASSY JOG WHEEL D8	1	A1	1
080-096-00	SA VFD D8	A	A1	1
091-136-00	CONSOLE WARNING SHEET D8	B		1
400-406-00	ADAPTER MIDI BRKOUT CABLE	A		1
550-260-00	SCREEN TOP PANEL D8	B		1
550-261-00	PNT FRONT MTR BRIDGE D8	A		1
550-262-00	PAINT BOTTOM - D8	A		1
550-263-00	FAB SIDE PANEL LEFT D8	A		1
550-264-00	FAB SIDE PANEL RIGHT D8	A		1

PART NO.	DESCRIPTION	REV	QTY
550-273-00	FAB SUB CHASSIS - D8	A	1
550-278-00	FAB STIFFENER - D8	A	1
550-279-00	FAB SHIELD METER - D8	B	1
550-280-00	FAB SHIELD DSP - D8	B1	1
550-283-00	FAB PLATE MOUNT JOG - D8	A	1
550-285-00	FAB CARD CAGE	A1	1
550-287-00	FAB SHIELD AUDIO - D8	B	1
550-303-00	SCREEN REAR PANEL D8	C	1
550-307-00	FINISH BLANK COV PL LG D8	B	1
550-332-00	PNT BLANK COV PLATE SM D8	A1	5
551-039-00	EXTR PNT MTR BRIDGE RIDGE	A	1
700-011-00	MCH 4-40X1/4 BTNSKT BLKOX	A	39
700-011-01	MCH 4-40X3/16 BTNSK BLKOX	A	52
700-015-00	MCH 10-32X3/4 PHP BLKZC		12
700-019-00	MCH 10-32X3/8 PHP BLKZC		7
700-028-00	SEMS 6-32X1/4 PHP BLKZC	B	140
700-028-02	SEMS 6-32X3/8 PHP BLKZC	B	4
700-044-08	SEMS 6-32X5/8 PHP ZC	A	4
701-005-00	SM A-AB 6X1/4 PHP BLKZC	A	6
701-016-00	5-20X5/16 PHPII TYP B BLK	A	28
705-001-00	KEPNUT 6-32	A	2
705-003-00	NUT HEX-SPLD W/400-214-00	A	AR
705-020-00	NUT HEX M9 (W/ENCODER)	A	AR
705-021-00	NUT CAP 1/2 DIA OD STLZC	A	3
706-017-00	STDF 4-40X.25 JACKSCREW	A	2
706-065-00	STDF 4-40/M2.6F JACKSCR	A	2
710-002-00	WASHER-SPLD W/400-214-00	A	AR
710-008-00	WASH SPLTLCK NO.4	A	4
710-027-00	WASH FLAT M9 (W/ENCODER)	A	AR
712-051-00	GASKET EMI NYL FOAM 32IN	A	1
730-026-00	ADHESIVE RTV162	A	AR
740-001-00	TYRAP 3-1/4L	A	3
740-002-00	TYRAP MOUNT .75 X .75	B	3
740-017-00	CARD GUIDE 4.0L SNAP-IN	A	20
750-001-00	BUMPON ROUND BLK .63X.31	A	5
750-004-00	FOOT #10 BLK 1 X .562	A	4
760-070-00	TRIM RING - D8	A	1
760-071-00	JOG WHEEL - D8	A	1
760-077-00	ARMREST - D8	A	1
760-079-00	ENDCAP RT - D8	A	1
760-080-00	ENDCAP LT - D8	A	1
760-081-00	KNOB TRIM W/PNTR	A	24
760-085-01	KNOB 24X10 T-SLOT MLD LIN	A	25
760-128-00	DUST COVER 25P DSUB FEM	A	2
780-040-00	LENS MTR BRIDGE-D8 SLKSCR	A	1
780-041-00	LENS DISPLAY - D8	A	1
780-046-00	VFD SHLD FILTER - D8	A	1
790-002-00	BAG POLY 12 X 18 2MIL	A	1
790-020-00	BAG 72X52 4MIL 36IN P-SHT	A	1
800-070-00	BOX TOP DIGITAL 8	A	1
800-078-00	BOX BOTTOM DIGITAL 8	A	1
800-080-00	BOX INTERNAL D8	A	1
810-062-00	FOAM TOP D8	A	1
810-068-00	INSERT ACCY TRAY - D8	A	1
810-069-00	FOAM BOTTOM D8	A	1
840-100-00	LOGO NAMEPLATE - MOLDED	A	1



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## 090-126-00 REV 21, Remote CPU and Power supply

PART NO.	DESCRIPTION	REV		QTY	
090-126-00	D8 PWR SPLY 120V CE	21	A4	1	
040-139-00	RIB 28GA 34C 23IN PLZD	B		1	
040-140-00	RIB 28GA 40C 19IN PLZD	B		1	
040-276-00	RIB 28GA 20C 7.5 M DSUB	A		1	
040-339-00	CBL DC PWR BRDSHLD D8PWR	B		1	NOTE: New Part Number
055-201-00-01	PCB ASSY PWR DIST D8 PWR	A2	A1	1	
080-036-00	SA LINEAR SUPPLY - D8	B	A1	1	
080-107-00	SA XFMR 120V CE D8	A	A1	1	
080-108-00	SA PWR SW W/CBLS D8	B	A1	1	
080-109-00	SA HARD DR/FLOPPY DR D8	B3	B3	1	
091-161-00	COMPUTER WARNING SHT D8	B		1	
091-200-00	REAL TIME OS 2.0 LABEL	A	A1	1	
329-087-03	MICRO PROC CELERON 300MHZ	A		1	
480-005-00	OEM PCB VIDEO 64 BIT	A	A1	1	
480-024-00	BRKT BLANK PORT	A		3	
480-026-00	OEM ETHERNET CARD	A	A1	1	
480-030-00	PC PWR SPLY 250W 90-240V	B	A1	1	
480-039-00	OEM PCB MOTHER CB50-BX	A	A1	1	
480-043-00	OEM FAN MICROPROC	A	A1	1	
480-053-00	OEM MIDI CARD WINMAN1X1	A	A1	1	
480-064-00	SDRAM 32MB 4MX64 DIMM 3V	A		1	NOTE: This is one 32MB SDRAM
510-001-00	FUSE SB 1A 5X20MM 250V UL	B		1	
510-026-00	FUSE SB 3.15A 5X20MM 250V	A		1	
510-029-00	FUSE SB 2.5A 5X20 250V UL	A		1	
550-356-00	SIDE D8 PWR SPLY	A		2	
550-384-00	FAB CAGE CVR D8 PWR SPLY	A		1	
550-385-00	SCR FNT PANEL D8 PWR SPLY	A		1	
550-390-00	FAB PLATE CVR VOLT SW D8	A		1	
550-415-00	FAB SHIELD D8 PWR SPLY	A		1	
550-535-00	FAB CARDRACK D8 PWR SPLY	A		1	
550-542-00	PNT TOP D8 CPSU	A		1	
550-543-00	FAB CHASSIS D8 CPSU	B		1	
700-028-00	SEMS 6-32X1/4 PHP BLKZC	B		39	
700-028-02	SEMS 6-32X3/8 PHP BLKZC	B		8	
700-045-04	SEMS 10-32X3/8 PHP BLKZC	A		6	
700-086-00	TF 6-32X3/8 FL 100DG BLK	A		2	
701-001-00	SM B 6X3/8 PHP BLKZC	B		7	
705-001-00	KEPNUT 6-32	A		14	
706-017-00	STDF 4-40X.25 JACKSCREW	A		4	
706-059-00	STDF SNAPIN .5IN NO 6 SVC	A		2	
710-008-00	WASH SPLTLCK NO.4	A		4	
730-001-00	THERMAL JOINT COMPOUND	A		AR	
740-001-00	TYRAP 3-1/4L	A		10	
740-003-00	TYRAP 8IN BLK	A		4	
740-007-01	GROMMET STRIP MEDIUM	A		AR	
740-023-00	FLT CBL CLMP NYL LOCK 40C	A		1	
760-128-00	DUST COVER 25P DSUB FEM	A		1	
760-129-00	DUST COVER 25P DSUB MALE	A		1	
760-130-00	DUST CVR 9S/15HD DSUB F B	A		2	
790-001-00	BAG POLY 20 X 30 4MIL	A		1	
790-011-00	BAG POLY 20 X 7 X 30 4MIL	A		1	
800-085-00	BOX D8 PWR SUPPLY	A		1	
810-074-00	FOAM ENDS D8 PWR SUPPLY	A		2	
810-081-00	INSERT PWR CBL TRAY D8PS	A		1	
820-212-00	ERRATA SH D8 CPU PORT CHG			1	
840-171-00	LBL FUSE 1.0 AMP	A		1	

# Integrated Circuits

The following list shows details of the integrated circuits used on each circuit board.

If you are viewing this on-screen, click on **DATA** in the list below, to open up the data sheet for that particular IC. These data sheets are included by kind permission of their respective manufacturers.

Many manufacturers offer free data sheets from their websites, so please make sure that you contact them if you need further information. They will also make sure that their data sheets are regularly updated, whereas these presented here are offered as a guide only and may be out of date by the time I've had a cup of tea and caught the bus home.

## 055-108-00 REV A, MIC METER BOARD

325-012-03	IC, 8 BIT SHIFT REGISTERS WITH OUTPUT LATCHES SMD	74HC595	U101-103 U201-203 U301-303 U401-403 U501-503 U601-603
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## 055-109-00 REV A, OUTPUT METER BOARD

325-007-03	IC, HEX, SCH TRIGGER, INV, SMD	74HC14	U1
325-012-03	IC, 8 BIT SHIFT REGISTERS WITH OUTPUT LATCHES SMD	74HC595	U101-103 U201-203 U301-303 U401-403 U501-503 U601-603 U701-703 U801-802

## 055-110-00 REV A, ANALOG I/O

320-012-00	I.C. LINEAR SMD	NJM4560M	U1-6
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## 055-112-00 REV C, DCA CARD

320-011-00	I.C. LINEAR	NJM 4560	U52-53 U56-57
320-012-00	I.C. LINEAR SMD	NJM4560M	U1 U3 U6-7 U9-10 U14 U17 U19 U21-22 U24 U26 U29 U33 U35 U37 U39-40 U44 U48 U50 U54 U58 U61 U65 U67 U5 U16 U28 U47 U60 U12 U31 U63
325-004-03	IC, QUAD, NOR, SMD	74HC02	U5 U16 U28 U47 U60
325-012-03	IC, SMD, 8 BIT SHIFT REGISTER W/ OUTPUT LATCHES	74HC595	U12 U31 U63
325-024-03	IC, CMOS SWITCH, SMD	74HC4316	U2 U4 U8 U11 U13 U15 U18 U20 U25 U27 U30 U32 U34 U41 U43 U45 U49 U55 U59 U62 U64
<b>DATA</b> 329-019-03	IC, DGTL ATTENUATOR	CS3310	U23 U36 U38 U51 U66

## 055-113-00 REV B, CODEC CARD

320-012-00	IC LINEAR SMD	NJM4560M	U1-2 U6-7 U51 U101-102 U151 U201-202 U251 U301-302 U351 U401-402 U451 U501-502 U551 U601-602 U651 U701-702 U751 U801-802 U851 U901-902 U951 U1001-1002 U1051 U1101-1102 U1151 U5
<b>DATA</b> 325-053-03	IC, SMD, SCH TRIGGER HEX INV.	74AC14	U5
<b>DATA</b> 329-045-03	D/A CONV SM	CS4390	U52 U152 U252 U352 U452 U552 U652 U752 U852 U952 U1052 U1152
<b>DATA</b> 329-046-03	A/D CONV SM	CS5360	U3-4 U103 U203 U303 U403 U503 U603 U703 U803 U903 U1003 U1103

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## 055-114-00 REV C, DSP CARD

	080-058-00	Programmed EPROM		
	315-004-00	OSCILLATOR	7.3728 MHZ	Y1
	315-012-00	OSC SMT 22.5792MHZ	22.5792 MHZ	Y2
<b>DATA</b>	324-004-03	HIGH SPEED CMOS RS-232 DRIVERS/RECEIVERS	ADM232A	U48
	325-035-03	IC, SMD, HEX INVERTER	74AC04	U110
	325-037-03	IC, SMD, DCDR/DEMUX	74AC138	U28-29 U40-42
	325-038-03	IC, QUAD, OR, SMD	74AC32	U49 U53 U55 U59 U62 U65 U68 U71 U74 U77 U80 U83
	325-039-03	IC, SMD, DUAL D F/F	74AC74	U107
	325-042-03	IC, SMD, OCTAL D-TYPE FF	74AC574	U26 U30-35 U39 U44 U47 U50-51 U54 U56-58 U60-61 U63-64 U66-67 U69-70 U72-73 U75-76 U78-79 U81-82 U84-85 U87-88 U90-91 U93-94 U96-97 U99-100 U102-103 U105-106 U108-109 U111-112 U114-115 U117
	325-043-03	OCTAL 3-STATE NONINVERTING BUFFER	74AC241A	U46 U86 U89 U92 U95 U98
	325-053-03	IC, SMD, SCH TRIGGER HEX INV.	74AC14	U27 U43 U52 U101 U104
	325-054-03	IC, SMD, OCTAL, D-TYP, TRANS LATCH	74AC573	U36
	335-001-00	IC, SMD, DIGITAL SIGNAL PROPRIETARY PROCESSOR		U1-24 NOTE: THIS IS NOW 335-011-00
<b>DATA</b>	335-002-00	IC, SMD, DIGITAL SIGNAL PROCESSOR	ADSP-2181	U25
<b>DATA</b>	335-003-00	IC, SMD, U/P SUPERVISORY CIRCUIT	ADM705	U37
	335-004-00	IC, SMD, ASYNCHRONOUS COMMUNICATIONS	TL16C452	U45

## 055-115-00 REV E, DIGITAL I/O

	080-066-00	PIC PRGMD 115PCB D8		U3
	315-010-00	OSCILLATOR	16 MHZ	X3
	315-015-00	CRYSTAL, SMD	20MHZ	X1
	325-012-03	IC, SMD, 8 BIT SHIFT REGISTER W/ OUTPUT LATCHES	74HC595	U1-2
<b>DATA</b>	325-027-03	CMOS 74HC74A DUAL D FLPL	74HC74A	U7
<b>DATA</b>	325-033-03	IC, SMD, EIA RS-485 TRANSCEIVER	ADM1485	U4-6 U15
<b>DATA</b>	329-021-03	TRANSMITTER CS8402A	CS8402A	U13
<b>DATA</b>	329-022-03	RECEIVER CS8412	CS8412	U19
<b>DATA</b>	329-023-03	IC, CONVERTER, SMT	AD1890	U12

## 055-119-00 REV B, TAPE I/O

	080-067-00	PIC PRGMD 119PCB D8 PIC16C54S		U4
	311-005-00	X-SISTOR NPN SMD	IMBTA06	Q1
	315-015-00	CRYSTAL, SMD	20MHZ	Y1
	320-012-00	I.C. LINEAR SMD	NJM4560M	U1-2 U51 U101-102 U151 U201-202 U251 U301-302 U351
<b>DATA</b>	325-053-03	IC,SMD,SCH TRIG HEX INV.	74AC14	U5
<b>DATA</b>	329-045-03	D/A CONV SM	CS4390	U52 U152 U252 U352
<b>DATA</b>	329-046-03	A/D CONV SM	CS5360	U3 U103 U203 U303

## 055-120-00 REV A, MIC/LINE CONTROL SURFACE

304-036-00	LED , TOWER 2MM	RED	D1308 D1408 D1508 D1608 D1708 D1808
320-006-00	I.C. LINEAR SMD	NJM 2068	U101-102 U201 U301-302 U401 U501-502 U601 U701-702 U801 U901-902 U1001 U1101-1102 U1201
320-012-00	I.C. LINEAR SMD	NJM4560M	U8
321-003-00	I.C. LINEAR POS 3 TERM VOLTAGE REGULATOR	LM 7805	U1
325-003-03	IC, ANALOG MUX, 8 CH SMD	4051B	U4-6
325-006-03	IC, DCDR/DEMUX SMD	74HC138	U3
325-012-03	IC, 8 BIT SHIFT REGISTERS WITH OUTPUT LATCHES SMD	74HC595	U1301-1303 U1401-1403 U1501-1503 U1601-1603 U1701-1703 U1801-1803 U1901-1903 U2001-2003 U2101-2103 U2201-2203 U2301-2303 U2401-2403
325-025-03	IC, 8 BIT SHIFT REGISTER WITH INPUT LATCHES SMD	74HC597	U1304 U1404 U1504 U1604 U1704 U1804 U1904 U2004 U2104 U2204 U2304 U2404
325-048-03	IC, SMD, 12-STAGE BINARY RIPPLE COUNTER	74HC4040	U7
325-053-03	IC, SMD, SCH TRIGGER HEX INV.	74AC14	U2

## 055-121-00 REV A, LINE CONTROL SURFACE

320-012-00	IC LINEAR SMD	NJM4560M	U1 U9 U101 U201 U301 U401 U501 U601 U701 U801 U901 U1001 U1101 U1201
321-003-00	IC LINEAR POS 3 TERM VOLTAGE REGULATOR	LM 7805	U3
325-003-03	IC, ANALOG MUX, 8 CH SMD	4051B	U5-7 U10
325-006-03	IC, DCDR/DEMUX SMD	74HC138	U4
325-012-03	IC, 8 BIT SHIFT REGISTERS WITH OUTPUT LATCHES, SMD	74HC595	U1301-1303 U1401-1403 U1501-1503 U1601-1603 U1701-1703 U1801-1803 U1901-1903 U2001-2003 U2101-2103 U2201-2203 U2301-2303 U2401-2403 U2613-2617
325-025-03	IC, 8 BIT SHIFT REGISTER WITH INPUT LATCHES, SMD	74HC597	U1304 U1404 U1504 U1604 U1704 U1804 U1904 U2004 U2104 U2204 U2304 U2404 U2618-2620
325-048-03	IC, SMD, 12-STAGE BINARY RIPPLE COUNTER	74HC4040	U8
325-053-03	IC, SMD, SCH TRIGGER HEX INV.	74AC14	U2

## 055-122-00 REV A, OUTPUT CONTROL SURFACE

320-004-00	IC LINEAR SMD	NJM4560	U65
321-003-00	IC LINEAR POS 3 TERM VOLTAGE REGULATOR	LM 7805	U59
325-003-03	IC, ANALOG MUX, 8 CH SMD	4051B	U61-62
325-006-03	IC, DCDR/DEMUX SMD	74HC138	U60
325-007-03	IC, HEX, SCH TRIGGER, INV, SMD	74HC14	U51
325-012-03	IC, 8 BIT SHIFT REGISTERS WITH OUTPUT LATCHES, SMD	74HC595	U1-25 U39-50
325-025-03	IC, 8 BIT SHIFT REGISTER WITH INPUT LATCHES, SMD	74HC597	U26-38
325-048-03	IC, SMD, 12-STAGE BINARY RIPPLE COUNTER	74HC4040	U64

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## 055-123-00 REV E, LINEAR POWER SUPPLY

321-008-00	I.C. ADJ POS 3 TERM VOLTAGE REGULATOR	LM317T	U2
321-009-00	I.C. ADJ NEG 3 TERM VOLTAGE REGULATOR	LM337T	U1

## 055-124-00 REV A, 8-WAY FADER

320-004-00	I.C. LINEAR SMD	NJM4560	U1-2 U10 U101-102 U201-202 U301-302 U401-402 U501-502 U601-602 U701-702 U904
321-003-00	I.C. LINEAR POS 3 TERM VOLTAGE REGULATOR	LM 7805	U3
325-003-03	IC, ANALOG MUX, 8 CH SMD	4051B	U12
325-012-03	IC, 8 BIT SHIFT REGISTERS WITH OUTPUT LATCHES, SMD	74HC595	U903
325-048-03	IC, SMD, 12-STAGE BINARY RIPPLE COUNTER	74HC4040	U15
325-053-03	IC, SMD, SCH TRIGGER HEX INV.	74AC14	U4
329-015-03	IC, 8 CHANNEL DAC, SMD	AD8803	U908

DATA

## 055-125-00 REV A, 9-WAY FADER

320-004-00	I.C. LINEAR SMD	NJM4560	U1-2 U10 U101-102 U201-202 U301-302 U401-402 U501-502 U601-602 U701-702 U801-802 U904
321-003-00	I.C. LINEAR POS 3 TERM VOLTAGE REGULATOR	LM 7805	U3
325-003-03	IC, ANALOG MUX, 8 CHL SMD	4051B	U7-8
325-006-03	IC, DCDR/DEMUX SMD	74HC138	U6
325-012-03	IC, 8 BIT SHIFT REGISTERS WITH OUTPUT LATCHES, SMD	74HC595	U903 U915
325-048-03	IC, SMD, 12-STAGE BINARY RIPPLE COUNTER	74HC4040	U9
325-053-03	IC, SMD, SCH TRIGGER HEX INV	74AC14	U4
329-016-03	IC, 12 CHANNEL DAC, SMD	AD8804	U914

DATA

055-136-00 REV A, BRAIN BOARD

	080-057-00	Programed Eprom		U38
	311-005-00	X-SISTOR NPN SMD	IMBTA06	Q1
	315-004-00	OSCILLATOR	7.3728 MHZ	X3
	315-006-00	OSCILLATOR	20 MHZ	X1
	315-010-00	OSCILLATOR	16 MHZ	X2
	320-004-00	I.C. LINEAR SMD	NJM4560	U3 U7-8
	321-003-00	I.C. LINEAR POS 3 TERM VOLTAGE REGULATOR	LM 7805	U17
<b>DATA</b>	324-004-03	HIGH SPEED CMOS RS-232 DRIVERS/RECEIVERS	ADM232A	U12
	325-010-03	IC, OCTAL, D-TYP, TRANS LATCH,	74HC574	U2 U4-6 U13 U15 U33 U35
	325-020-03	IC, HEX, INV, SMD	74HC04	U52
	325-037-03	IC, SMD, DCDR/DEMUX	74AC138	U28-29
	325-052-03	IC, OCTAL BUFFER/LINE DRIVER, 3 STATE OUTPUTS, SMD	74HC541	U1 U18
	329-040-03	IC, SERIAL NUMBER	DS2401	U16
<b>DATA</b>	329-041-03	IC, 10 BIT ADC	AD7812	U11
<b>DATA</b>	335-002-00	IC, SMD, DIGITAL SIGNAL PROCESSOR	ADSP-2181	U25
<b>DATA</b>	335-003-00	IC, SMD, U/P SUPERVISORY CIRCUIT	ADM705	U10
	335-004-00	IC, SMD, ASYNCHRONOUS COMMUNICATIONS	TL16C452	U9 U14 U34

055-164-00 REV C, CLOCK CARD

	080-068-00	Programmed EPROM PIC		U5
	315-012-00	OSCILLATOR	22.5792 MHZ	Y1
	315-014-00	OSCILLATOR	24.576 MHZ	Y2
	315-015-00	CRYSTAL, SMD	20MHZ	Y3
	325-035-03	IC, SMD, HEX INVERTER	74AC04	U3
	325-036-03	IC, SMD, 12-STAGE BINARY RIPPLE COUNTER	74AC4040	U1
	325-039-03	IC, SMD, DUAL D F/F	74AC74	U4
	325-041-03	IC, SMD, OCTAL BUFFER/LINE DRIVER, 3 STATE OUTPUTS	74AC541	U6-9
	325-042-03	IC, SMD, OCTAL D-TYPE FF	74AC574	U2

# Connectors

This table shows each connector and the boards they connect to. Note that the connectors on each board are joined to the same numbered connector on other boards. For example, J4 on the Analog I/O board connects to J4 on the Mic/Line control surface.

The following pages show each connector in detail, including the labeling and designation on each pin on either end of the connecting cable.

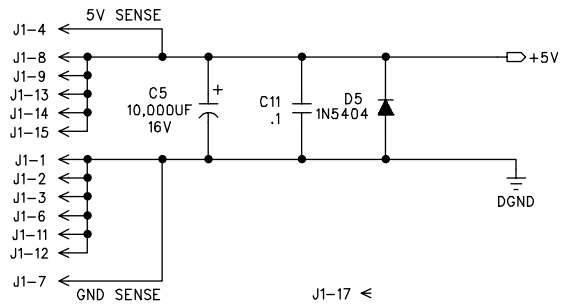
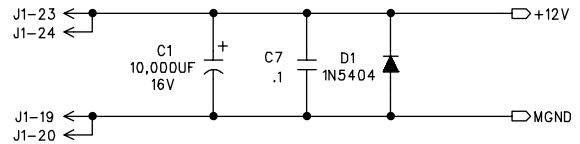
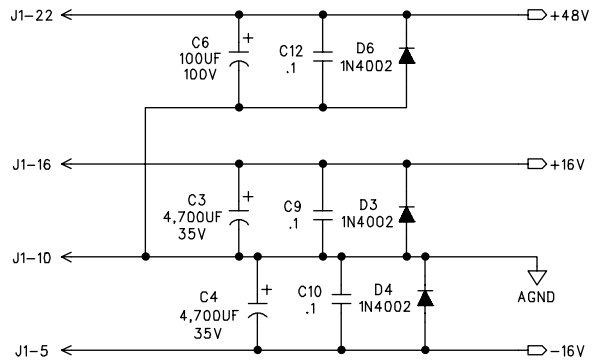
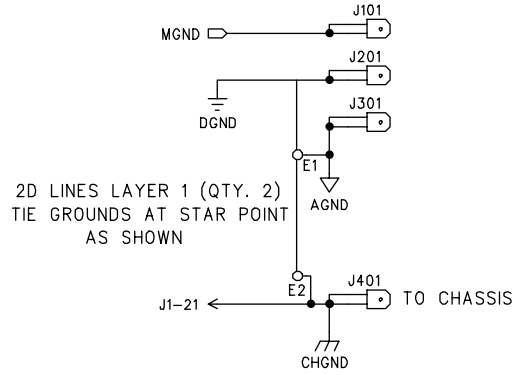
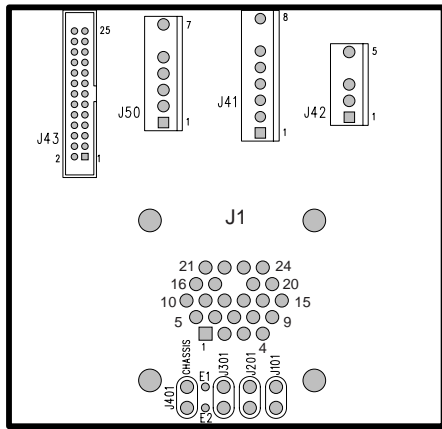
J #	Pins	From	To	Description	Page
J1	24 ...	111 Power distribution	Remote CPU p/s	Incoming power	2
J1	26 ...	110 Analog I/O	113 Codec	Returns	3
J2	26 ...	110 Analog I/O	113 Codec	Auxs	3
J3	26 ...	121 Line ctrl surface	113 Codec	Line13-24	4
J4	40 ...	110 Analog I/O	120 Mic/Line ctrl surface	INPUT Mic/Line1-6	5
J5	40 ...	110 Analog I/O	120 Mic/Line ctrl surface	INPUT Mic/Line7-12	5
J6	40 ...	110 Analog I/O	121 Line ctrl surface	INPUT Line13-24	6
J7	26 ...	110 Analog I/O	120 Mic/Line ctrl surface	Send1-12	5
J8	26 ...	112 DCA	8 BUS OUT (D Connector)	Buses Out	7
J9	26 ...	110 Analog I/O	112 DCA	Phones/Studio	7
J10	40 ...	110 Analog I/O	112 DCA	Main Mix L/R and more	8
J11	40 ...	112 DCA	113 Codec	Bus1-8, MixL/R, MeterL/R, SoloL/R	9
J12	26 ...	114 DSP	113 Codec	DT9-DT12, DR9-DR12	10
J13	34 ...	114 DSP	113 Codec	DT1-DT8, DR1-DR8	10
J14	62 ...	163 Backplane	Effects card 3	Effects card slot 3	12
J15	20 ...	163 Backplane	113 Codec	Clocks to Codec	11
J16	62 ...	163 Backplane	Effects card 2	Effects card slot 2	12
J17	62 ...	163 Backplane	Effects card 4	Effects card slot 4	12
J18	62 ...	163 Backplane	119 Tape I/O card	Tape I/O card slot 17-24	13
J19	62 ...	163 Backplane	119 Tape I/O card	Tape I/O card slot 9-16	13
J20	62 ...	163 Backplane	119 Tape I/O card	Tape I/O card slot 17-24	13
J21	20 ...	163 Backplane	114 DSP	Clock, Effects and Digital I/O data	14
J22	62 ...	163 Backplane	Alternate I/O card	Extra slot for I/O	15
J23	62 ...	163 Backplane	164 Clock Card	Clock Card Slot	16
J24	34 ...	163 Backplane	114 DSP	Effects data	14
J25	10 ...	114 DSP	Data In	From remote CPU (D Connector)	17
J26	10 ...	136 Brain	Data In	From remote CPU (D Connector)	18
J27	14 ...	136 Brain	VF Display	Connection to VFD	18
J28	26 ...	136 Brain	109 Meter	Connection to Meter	19
J29	14 ...	109 Meter	108 Meter	Meter join	20
J30	62 ...	163 Backplane	115 Digital I/O card	Digital I/O card slot	21
J31	20 ...	136 Brain	112 DCA	Computer control	22
J32	20 ...	136 Brain	163 Backplane	RX, TX to cards and DSP	22
J34	10 ...	136 Brain	Jog Wheel	Connections to Jog wheel	23
J35	34 ...	136 Brain	122 Output ctrl surface	Clock, data, ramp (control)	24
J36	26 ...	136 Brain	121 Line ctrl surface	Clock, data, ramp	25
J37	26 ...	136 Brain	120 Mic/Line ctrl surface	Clock, data, ramp	26
J38	34 ...	136 Brain	124 8-way Fader	Clock, data, ramp	27
J39	34 ...	136 Brain	124 8-way Fader	Clock, data, ramp	27
J40	34 ...	136 Brain	125 9-way Fader	Clock, data, ramp	28
J41	7 ...	136 Brain	111 Power distribution	Power supply for Brain board	29
J42	4 ...	111 Power distribution	114 DSP	Power supply for DSP board	30
J43	26 ...	111 Power distribution	110 Analog I/O	Power supply for Analog I/O	30
J47	34 ...	163 Backplane	114 DSP	Tape I/O data	31
J48	34 ...	163 Backplane	114 DSP	Tape I/O and Alt I/O data	31
J50	6 ...	163 Backplane	111 Power distribution	Power supply for Backplane	32
J51	62 ...	163 Backplane	Effects card 1	Effects card slot 1	33
J60	3 ...	121 Line ctrl surface	112 DCA	Talkback circuit	34

# CONNECTORS

## MACKIE. d8b SERVICE MANUAL

### J1

This is J1 on the power distribution board, not to be confused with the other J1 shown opposite, or J1 on the DSP board.

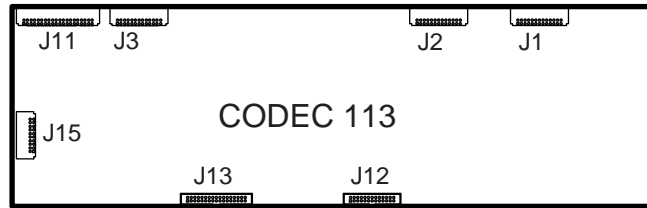
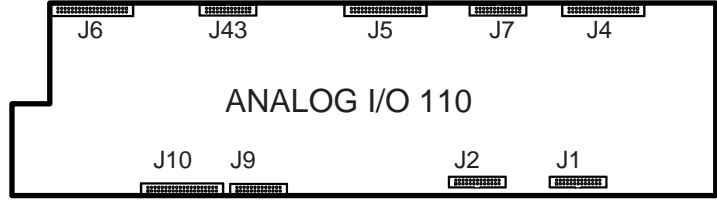


J1-17 <  
J1-18 <  
UNUSED PINS  
NOTE: PIN 18 ON PCB BLOCKED



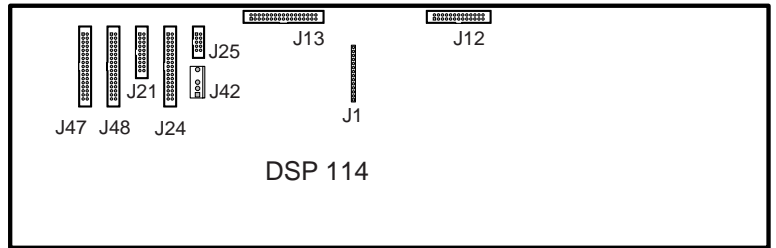
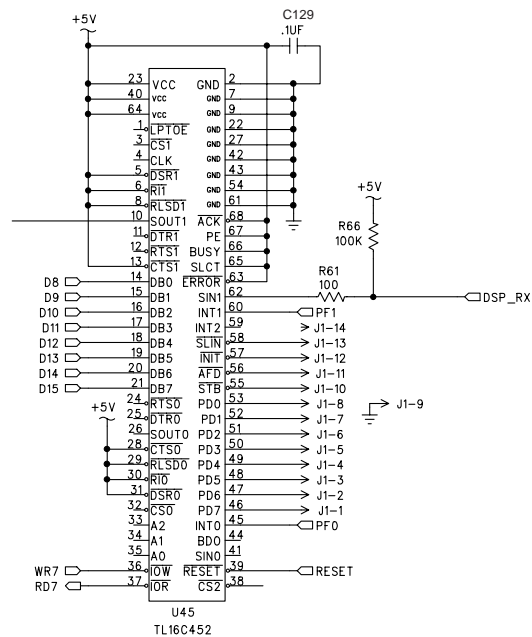
# J1 and J2

J1		J2	
J1-1	← RET-1	J2-1	← AUX-1
J1-2	← RET-1-GND	J2-2	← AUX-1-GND
J1-3	← RET-2	J2-3	← AUX-2
J1-4	← RET-2-GND	J2-4	← AUX-2-GND
J1-5	← RET-3	J2-5	← AUX-3
J1-6	← RET-3-GND	J2-6	← AUX-3-GND
J1-7	← RET-4	J2-7	← AUX-4
J1-8	← RET-4-GND	J2-8	← AUX-4-GND
J1-9	← RET-5	J2-9	← AUX-5
J1-10	← RET-5-GND	J2-10	← AUX-5-GND
J1-11	← RET-6	J2-11	← AUX-6
J1-12	← RET-6-GND	J2-12	← AUX-6-GND
J1-13	← RET-7	J2-13	← AUX-7
J1-14	← RET-7-GND	J2-14	← AUX-7-GND
J1-15	← RET-8	J2-15	← AUX-8
J1-16	← RET-8-GND	J2-16	← AUX-8-GND
J1-17	← RET-9	J2-17	← AUX-9
J1-18	← RET-9-GND	J2-18	← AUX-9-GND
J1-19	← RET-10	J2-19	← AUX-10
J1-20	← RET-10-GND	J2-20	← AUX-10-GND
J1-21	← RET-11	J2-21	← AUX-11
J1-22	← RET-11-GND	J2-22	← AUX-11-GND
J1-23	← RET-12	J2-23	← AUX-12
J1-24	← RET-12-GND	J2-24	← AUX-12-GND
J1-25	←	J2-25	←
J1-26	←	J2-26	←



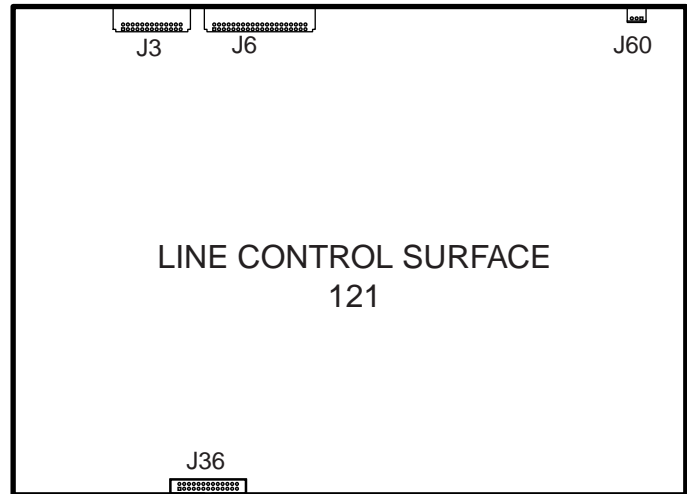
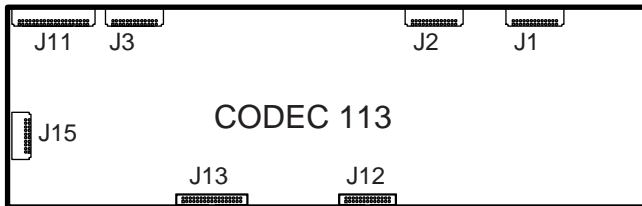
The labels for each pin are the same on the Codec board as on the Analog I/O board. In the following pages, where there are slight differences in labeling, both ends of a connector are shown.

# J1 on DSP (unused)

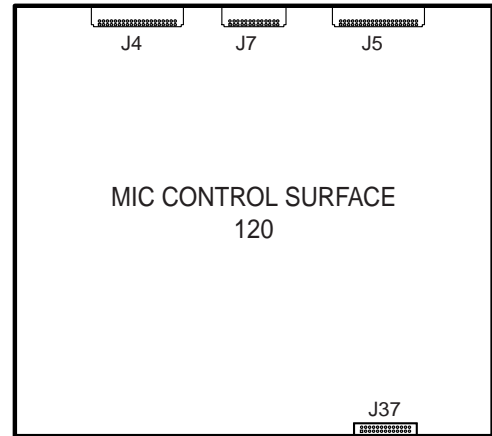
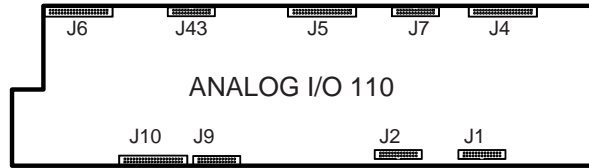
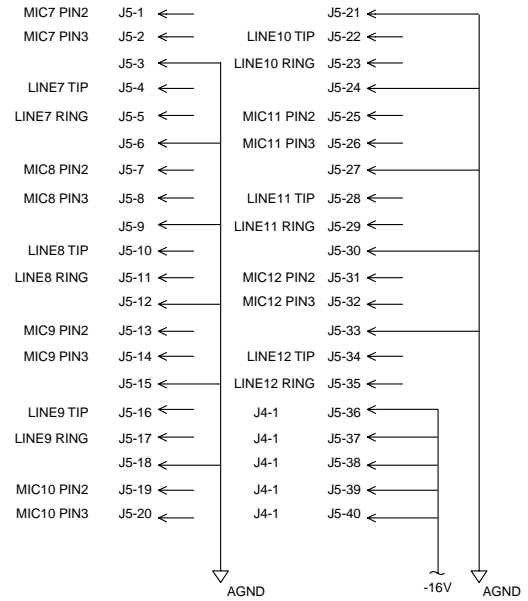
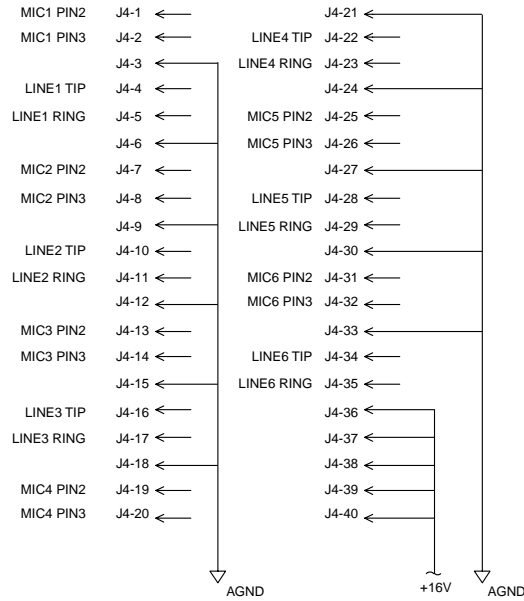


### J3

- J3-1 ← □ LINE-13
- J3-2 ← □ LINE-13-GND
- J3-3 ← □ LINE-14
- J3-4 ← □ LINE-14-GND
- J3-5 ← □ LINE-15
- J3-6 ← □ LINE-15-GND
- J3-7 ← □ LINE-16
- J3-8 ← □ LINE-16-GND
- J3-9 ← □ LINE-17
- J3-10 ← □ LINE-17-GND
- J3-11 ← □ LINE-18
- J3-12 ← □ LINE-18-GND
- J3-13 ← □ LINE-19
- J3-14 ← □ LINE-19-GND
- J3-15 ← □ LINE-20
- J3-16 ← □ LINE-20-GND
- J3-17 ← □ LINE-21
- J3-18 ← □ LINE-21-GND
- J3-19 ← □ LINE-22
- J3-20 ← □ LINE-22-GND
- J3-21 ← □ LINE-23
- J3-22 ← □ LINE-23-GND
- J3-23 ← □ LINE-24
- J3-24 ← □ LINE-24-GND
- J3-25 ←
- J3-26 ←

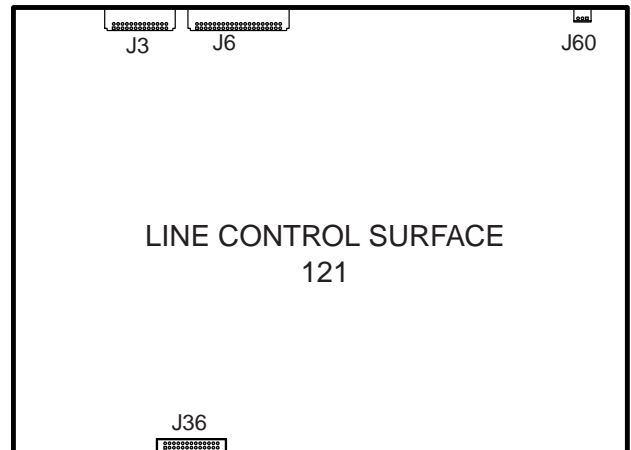
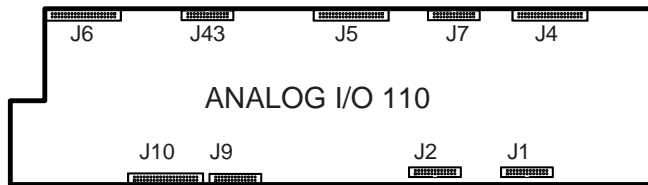
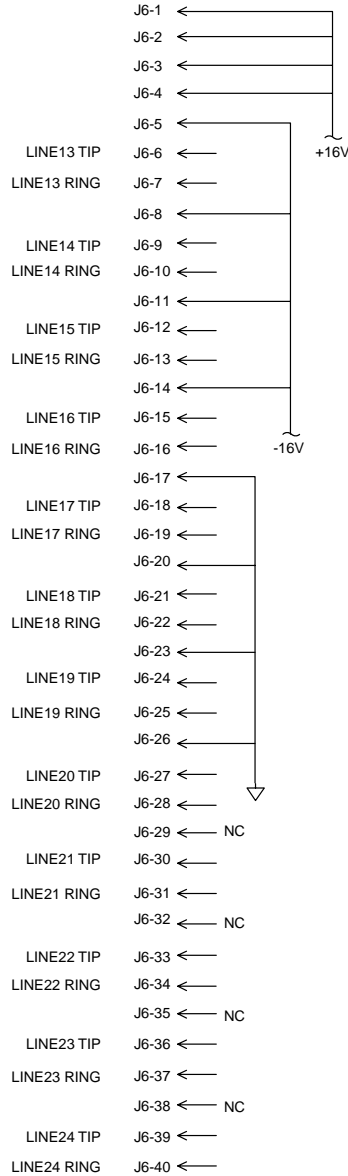


# J4, J5 and J7



- SEND1 J7-1 ←
- SEND1 GND J7-2 ←
- SEND2 J7-3 ←
- SEND2 GND J7-4 ←
- SEND3 J7-5 ←
- SEND3 GND J7-6 ←
- SEND4 J7-7 ←
- SEND4 GND J7-8 ←
- SEND5 J7-9 ←
- SEND5 GND J7-10 ←
- SEND6 J7-11 ←
- SEND6 GND J7-12 ←
- SEND7 J7-13 ←
- SEND7 GND J7-14 ←
- SEND8 J7-15 ←
- SEND8 GND J7-16 ←
- SEND9 J7-17 ←
- SEND9 GND J7-18 ←
- SEND10 J7-19 ←
- SEND10 GND J7-20 ←
- SEND11 J7-21 ←
- SEND11 GND J7-22 ←
- SEND12 J7-23 ←
- SEND12 GND J7-24 ←
- J7-25 ←
- J7-26 ←

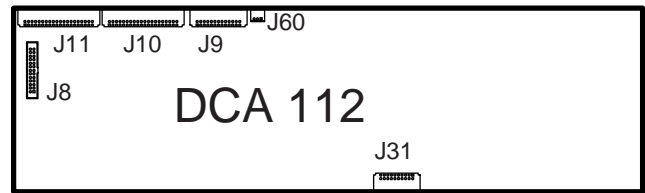
### J6



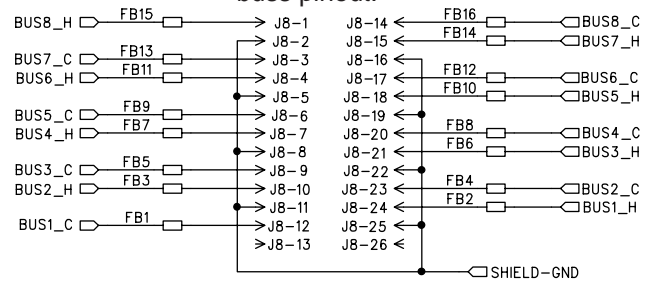
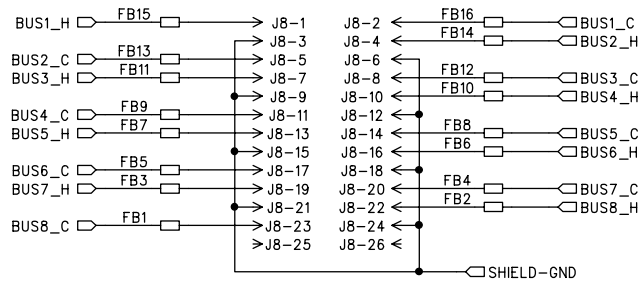
# J8

NOTE although the busses are labeled like this on all schematics, they are swapped in software, so Bus1 on schematic = Bus 8 really

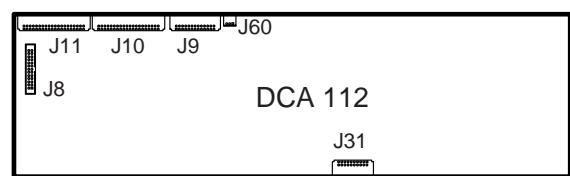
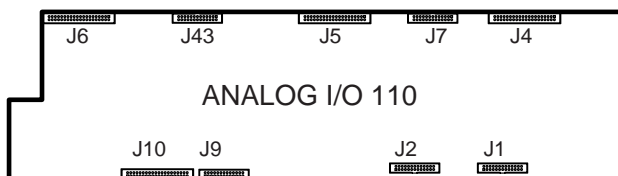
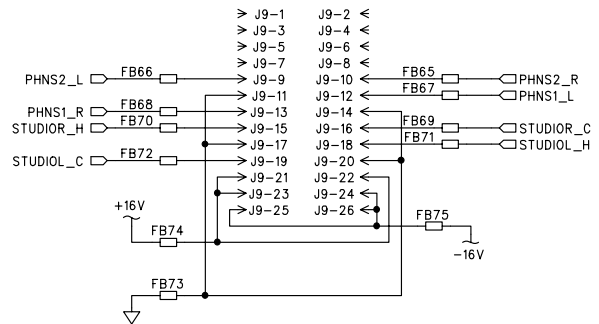
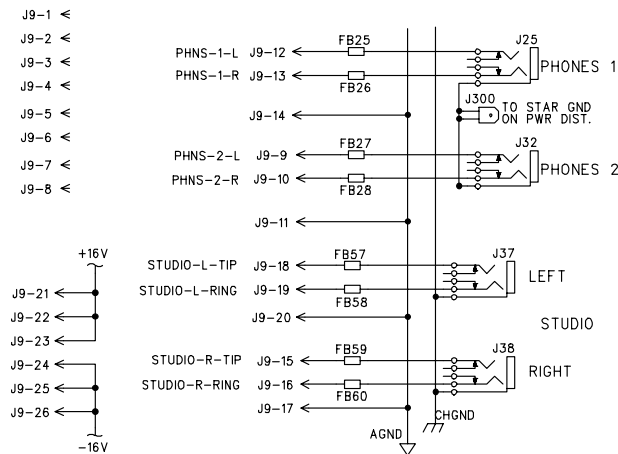
- Bus 2 = Bus 7 really
- Bus 3 = Bus 6
- Bus 4 = Bus 5
- Bus 5 = Bus 4
- Bus 6 = Bus 3
- Bus 7 = Bus 2
- Bus 8 = Bus 1



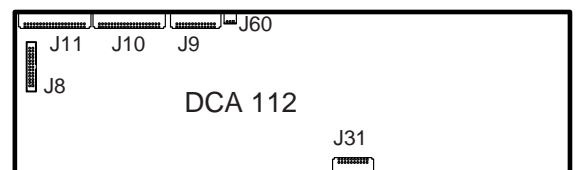
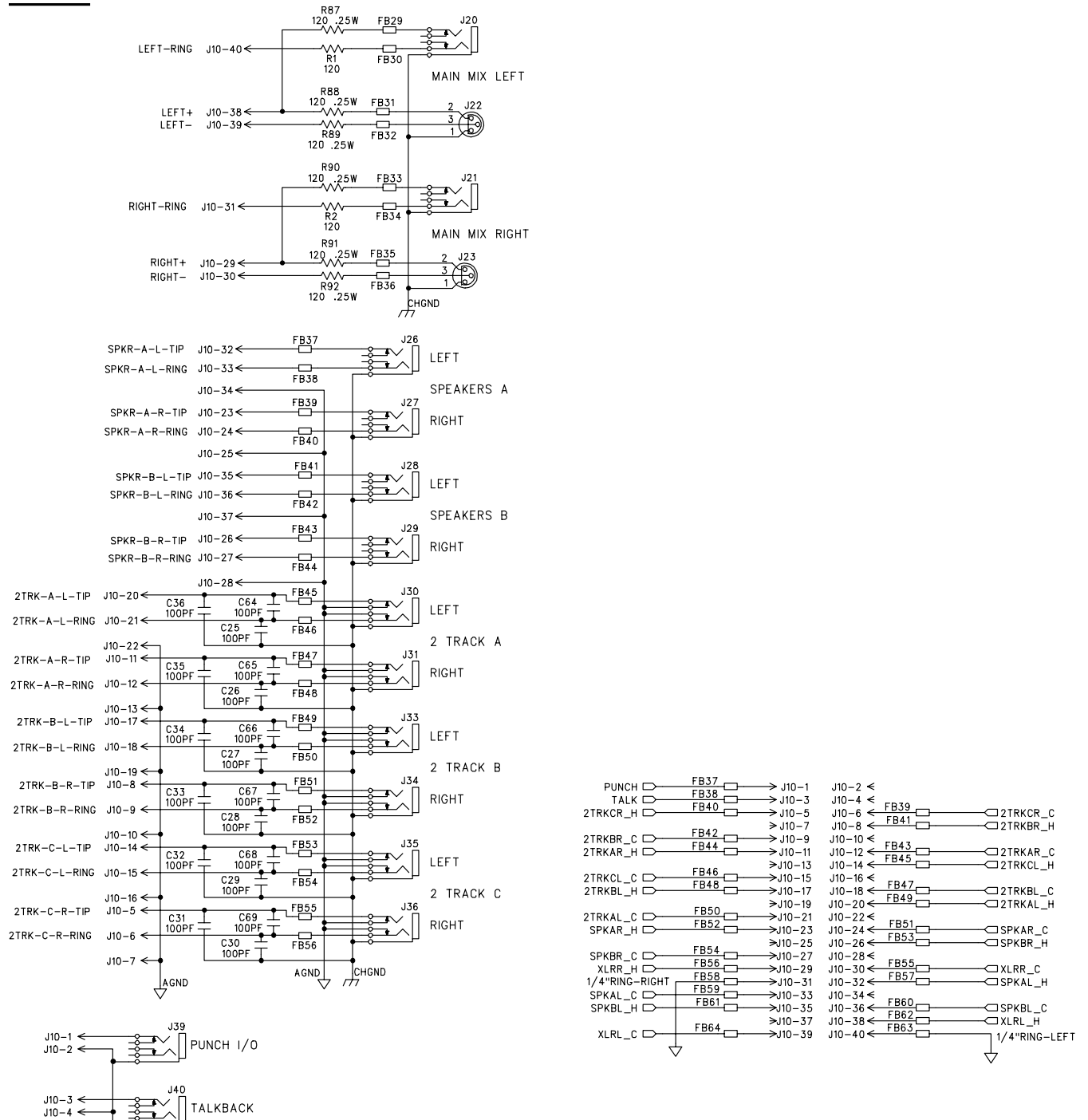
DB25 connector to outside world  
NOTE this is the correct buss pinout.



# J9

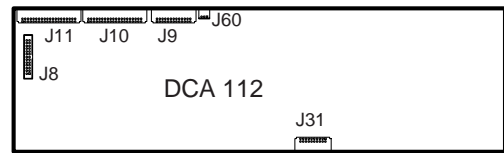
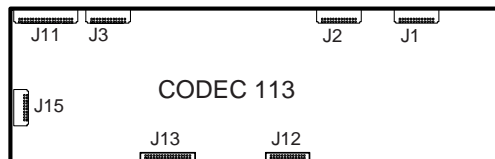
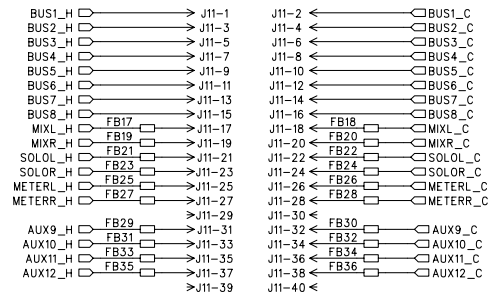
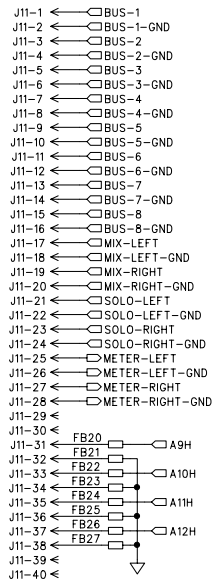


### J10

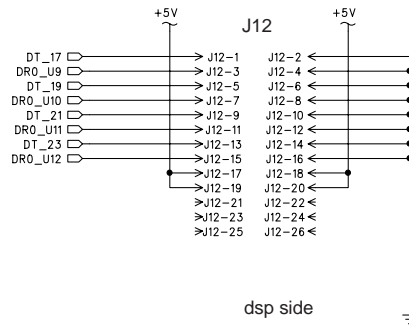
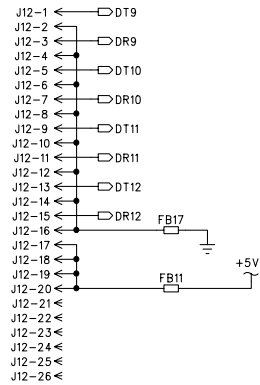
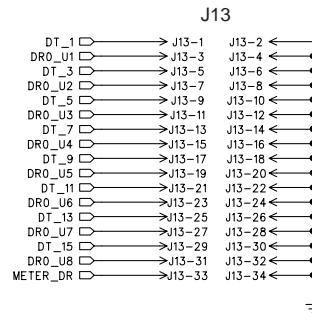
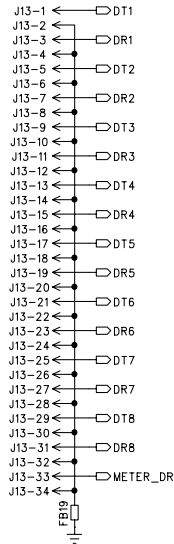


# J11

NOTE although the busses are labeled like this on all schematics, they are swapped in software, so Bus1 on schematic = Bus 8 really  
 Bus 2 = Bus 7 really  
 Bus 3 = Bus 6  
 Bus 4 = Bus 5  
 Bus 5 = Bus 4  
 Bus 6 = Bus 3  
 Bus 7 = Bus 2  
 Bus 8 = Bus 1

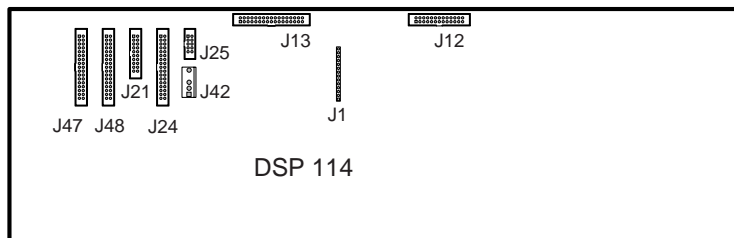
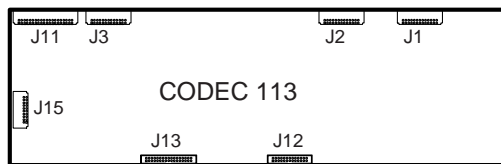


### J12 and J13



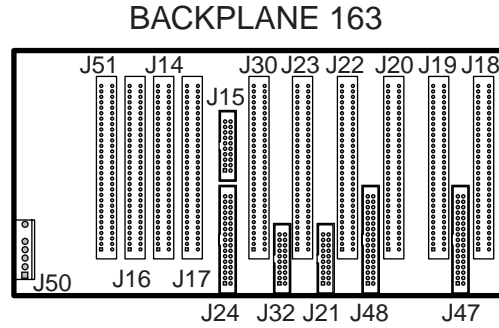
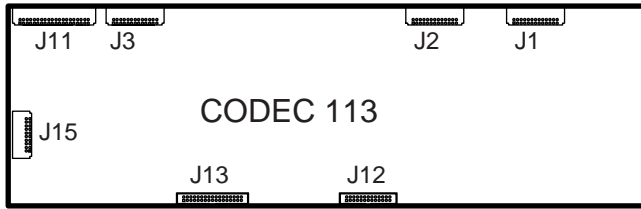
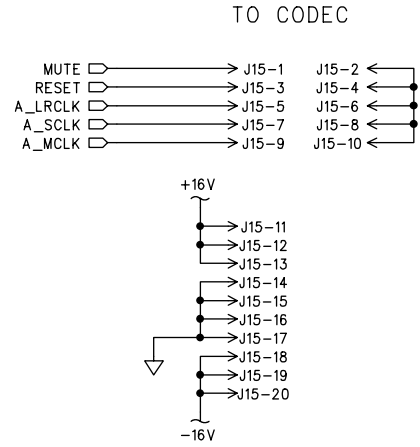
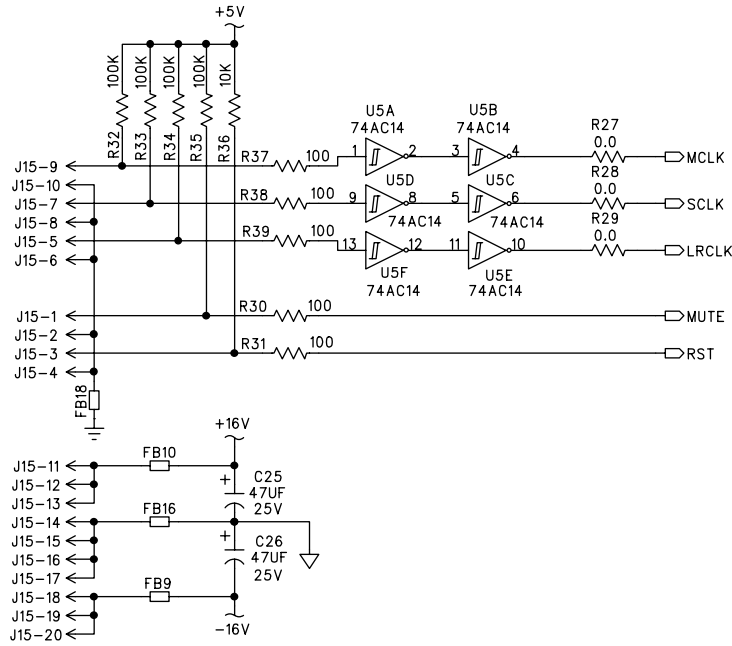
Codec side

dsp side

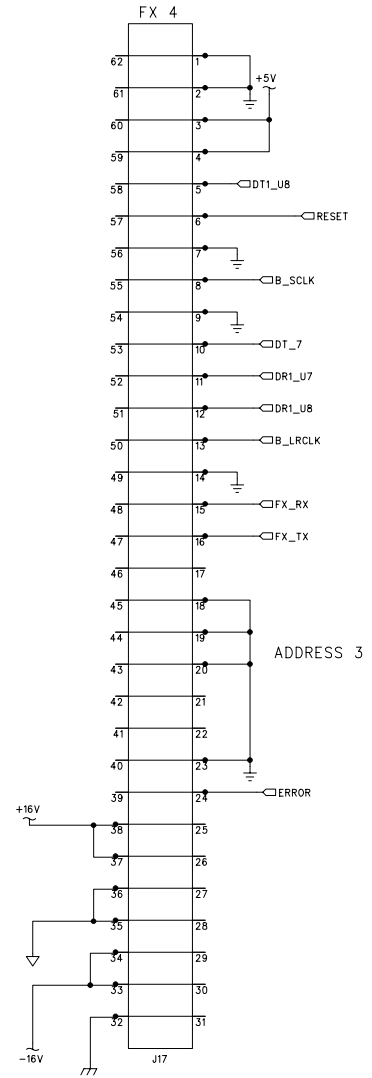
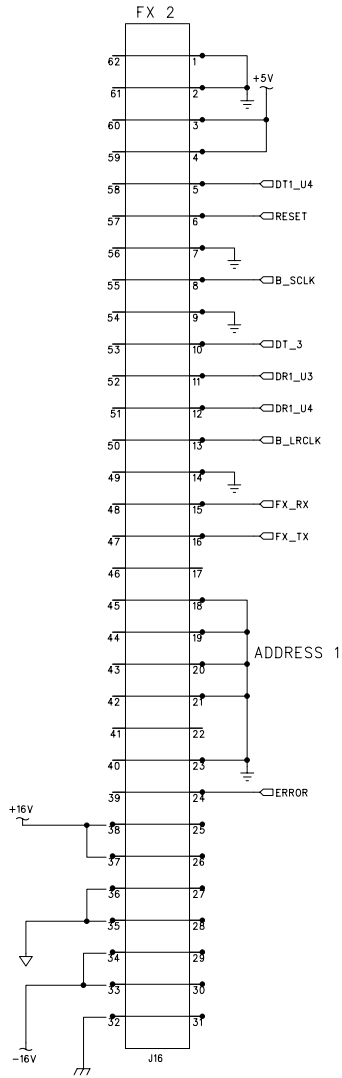
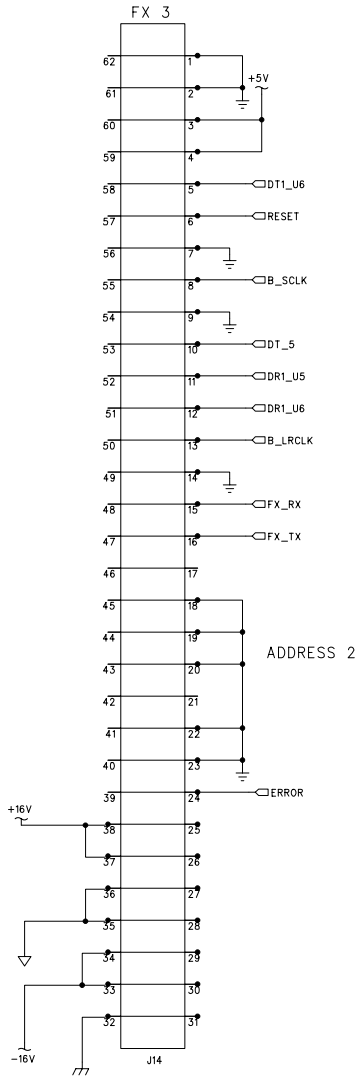




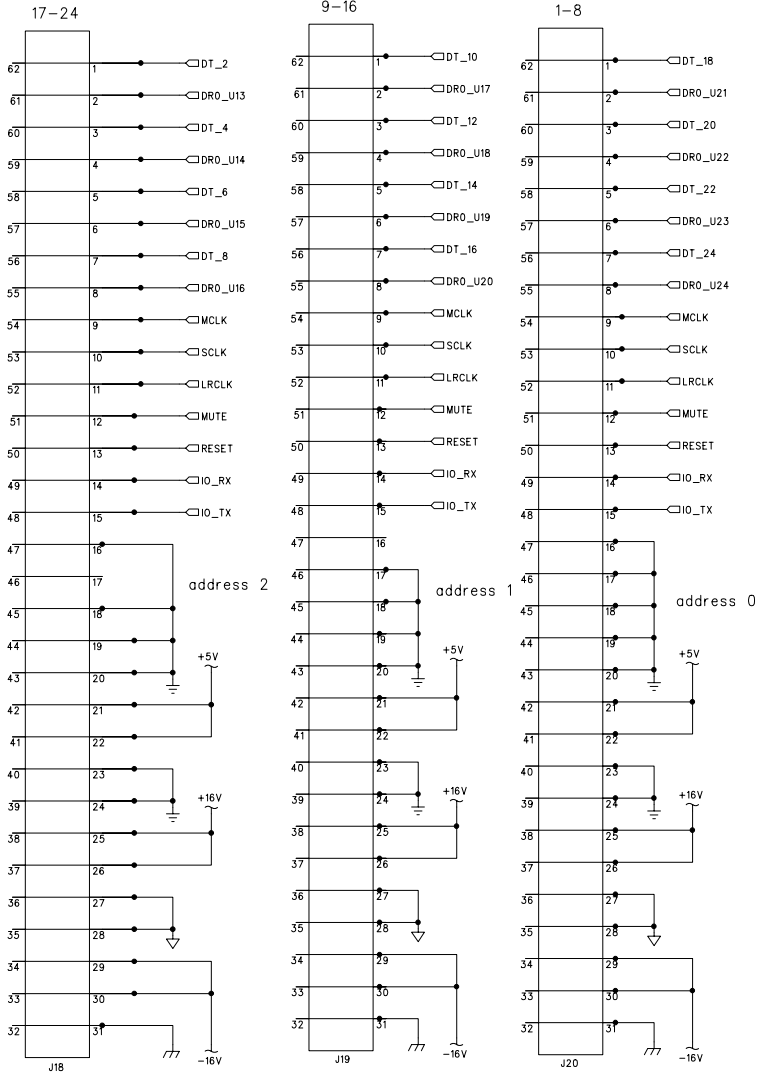
# J15



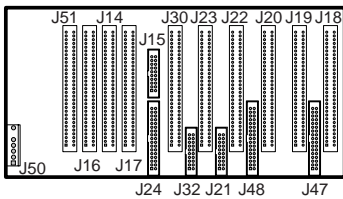
### J14, J16 and J17 (on Backplane)



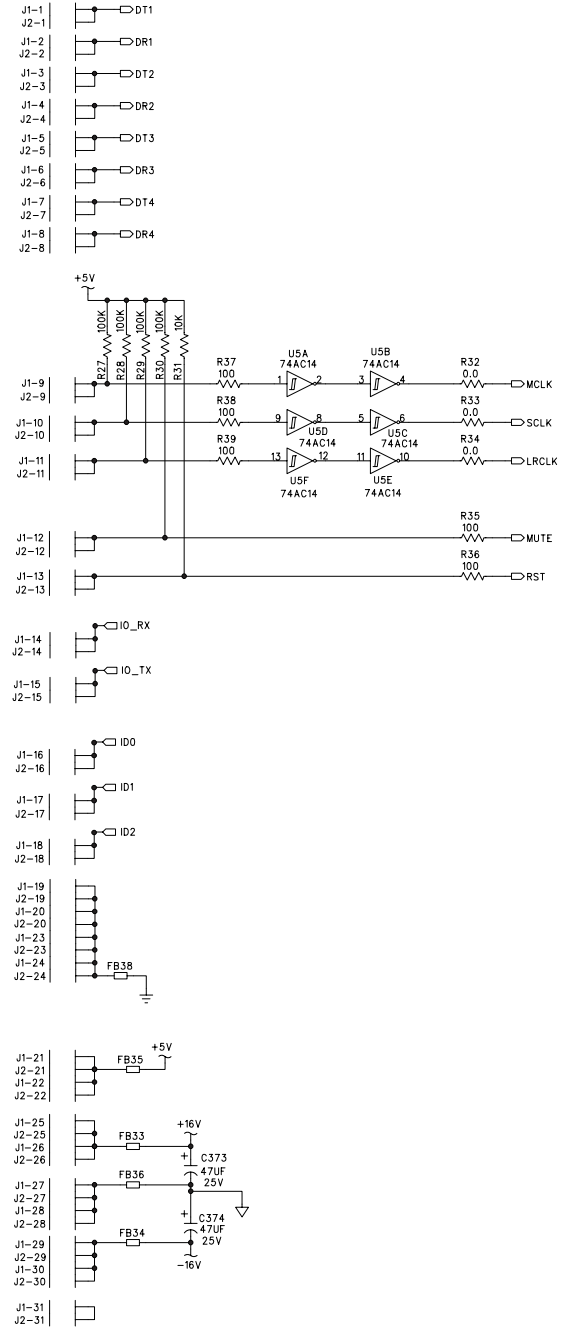
# J18, J19, J20



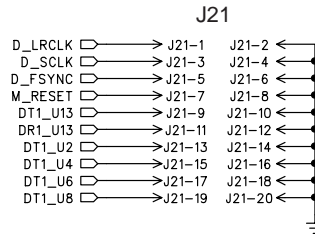
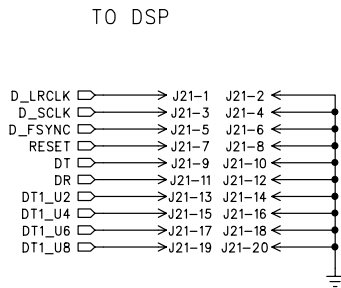
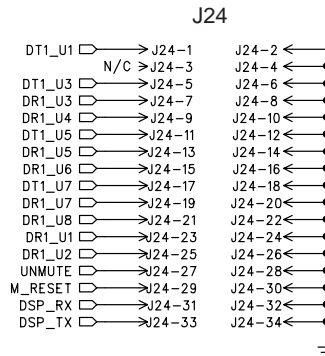
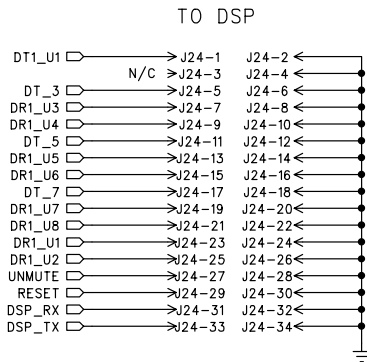
BACKPLANE 163



TAPE I/O CARD 119

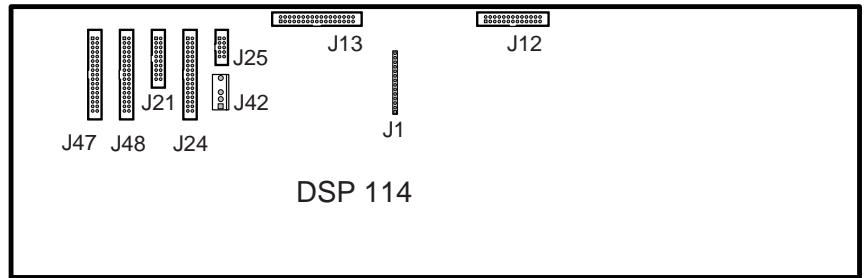
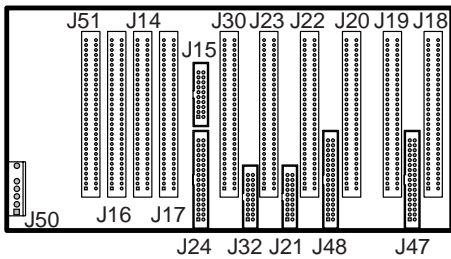


### J21 and J24

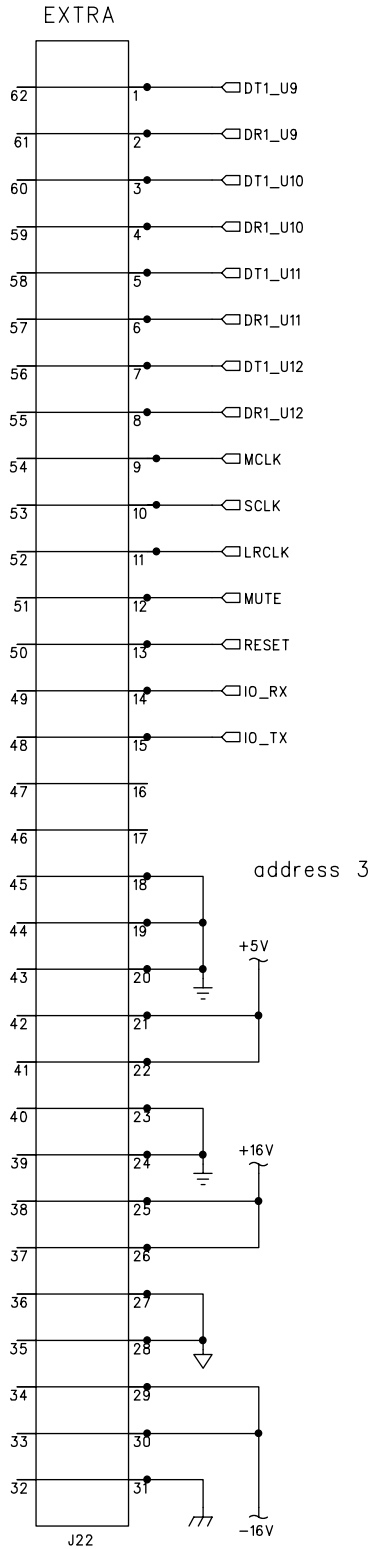


### BACKPLANE

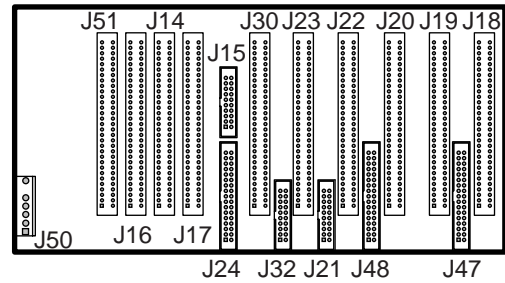
163



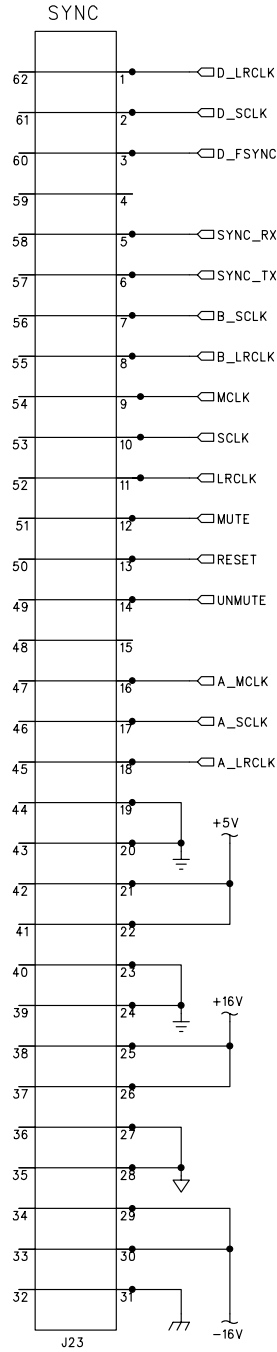
J22



BACKPLANE  
163

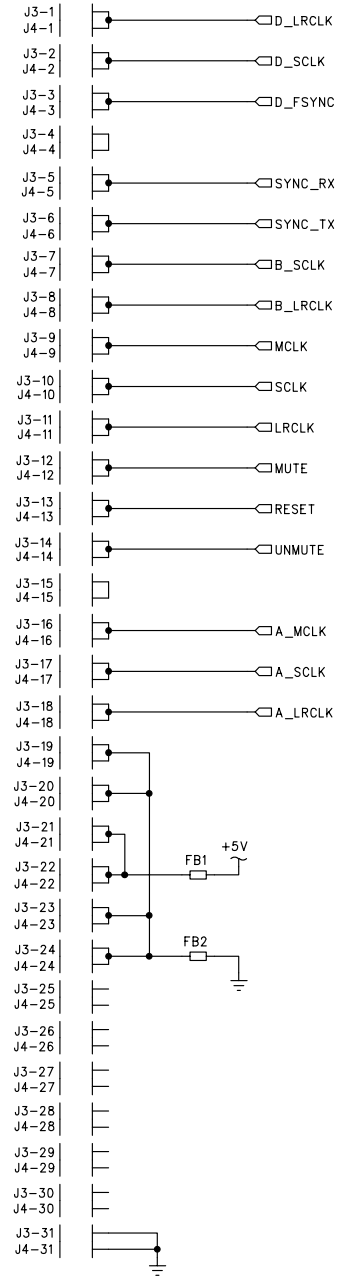
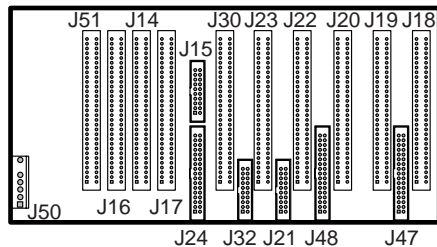


### J23



BACKPLANE

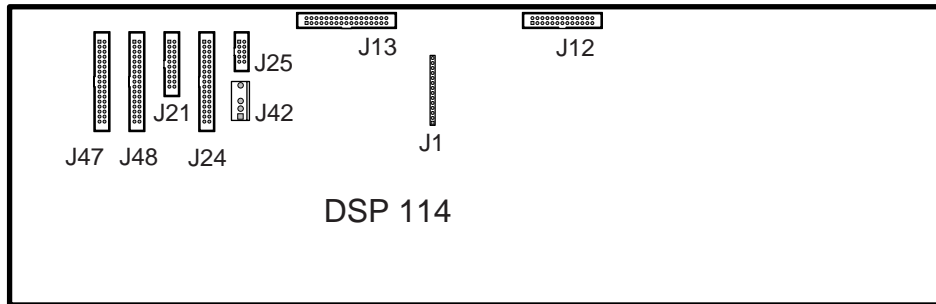
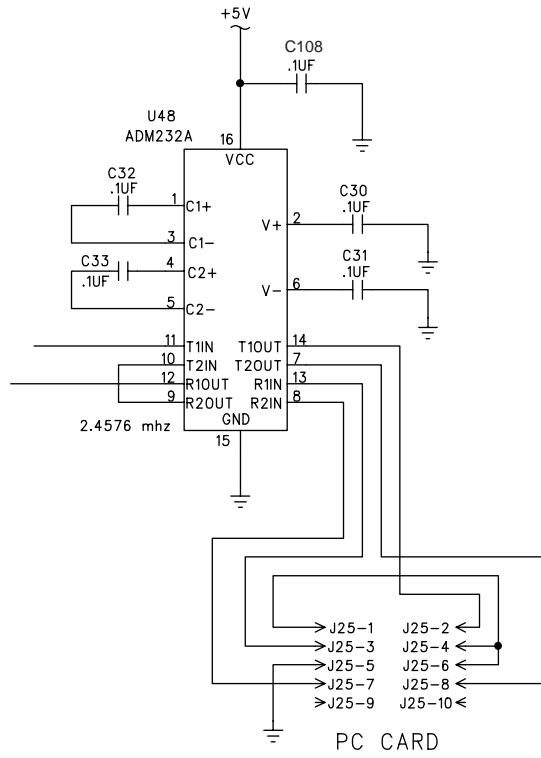
163



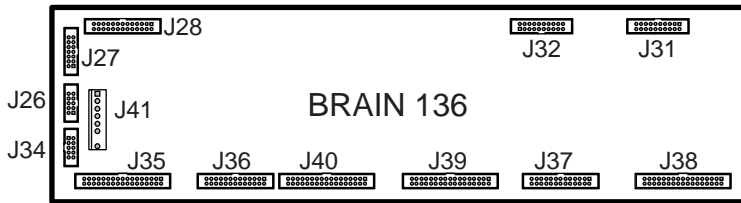
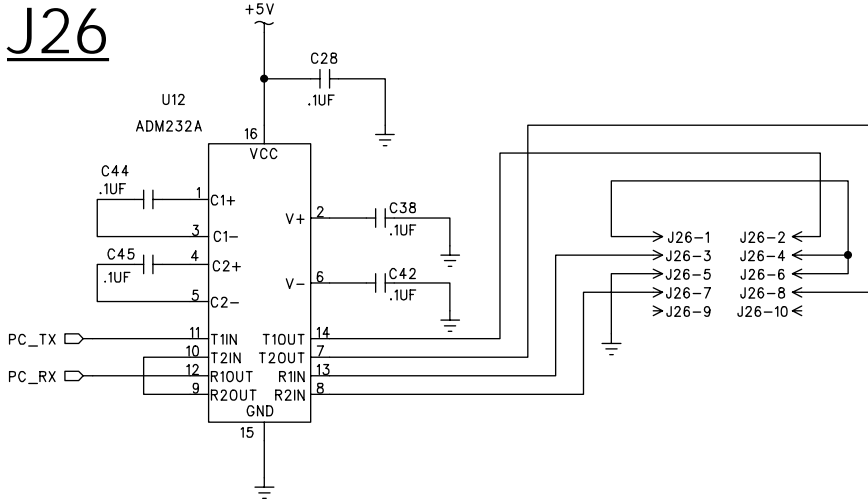
CLOCK CARD

164

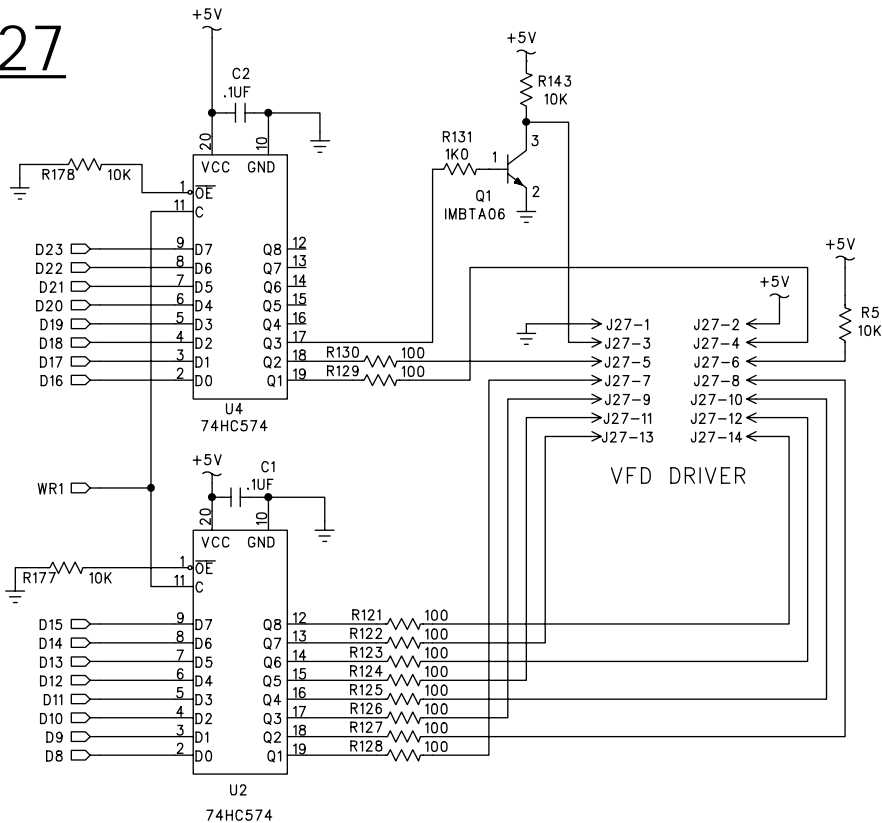
J25



### J26

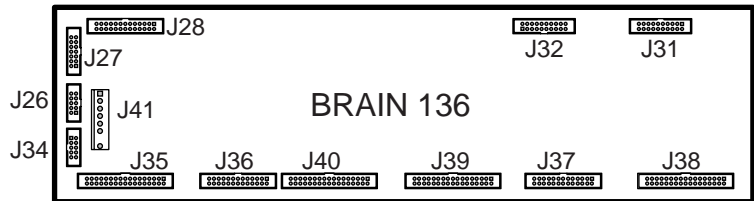
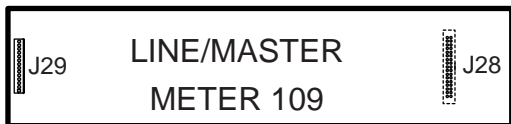
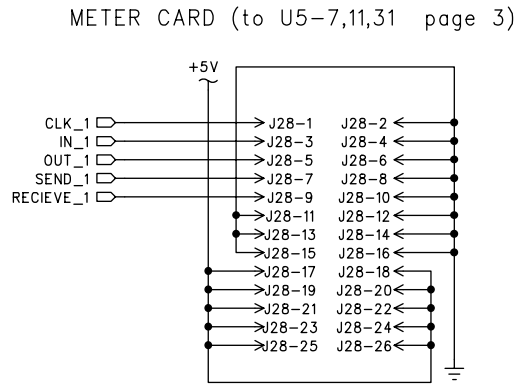
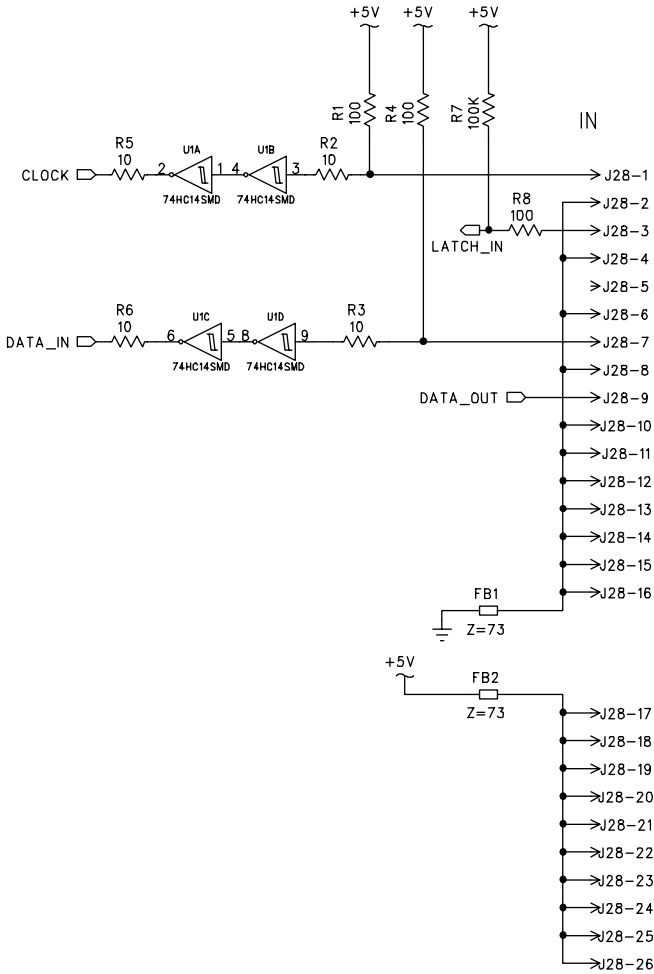


### J27





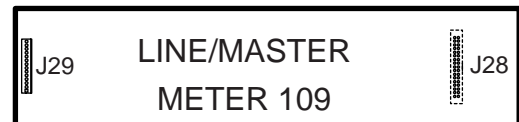
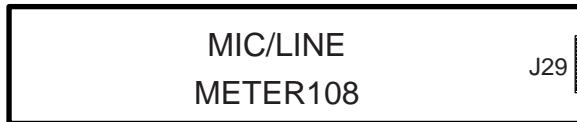
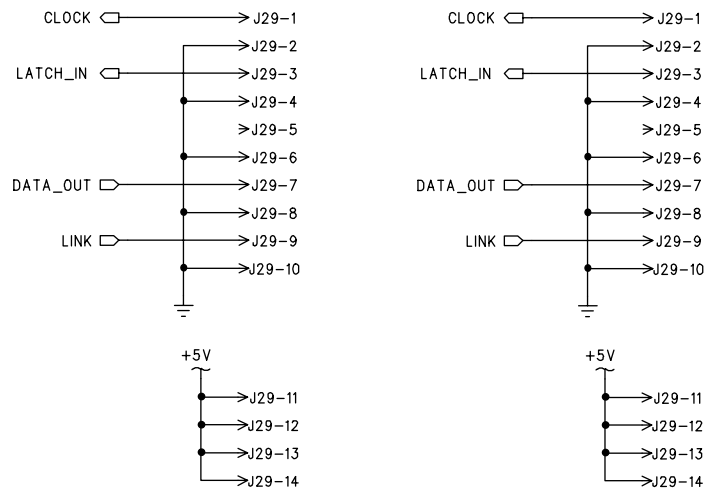
# J28



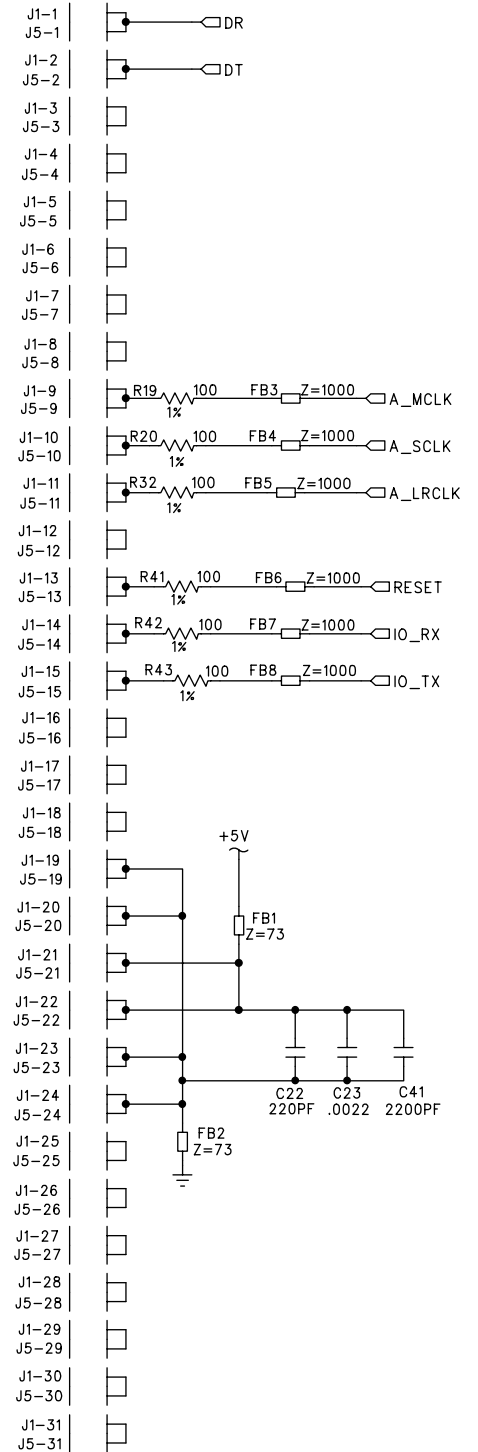
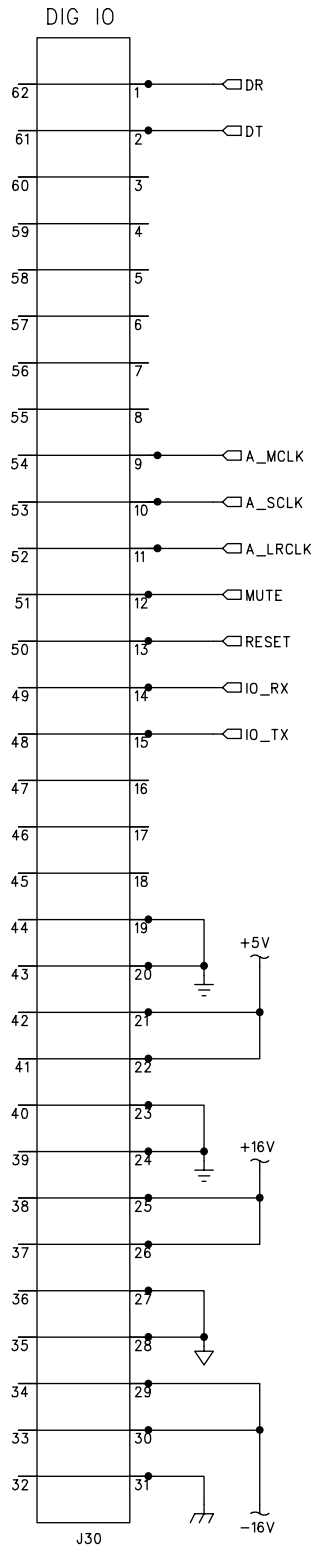
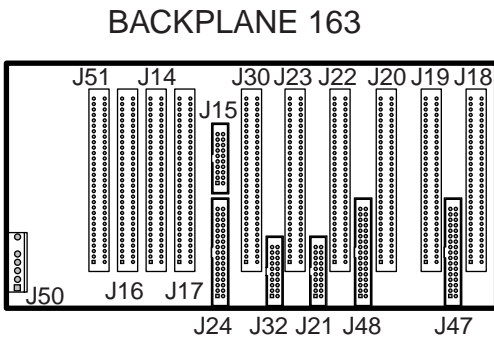
# CONNECTORS

## MACKIE. d8b SERVICE MANUAL

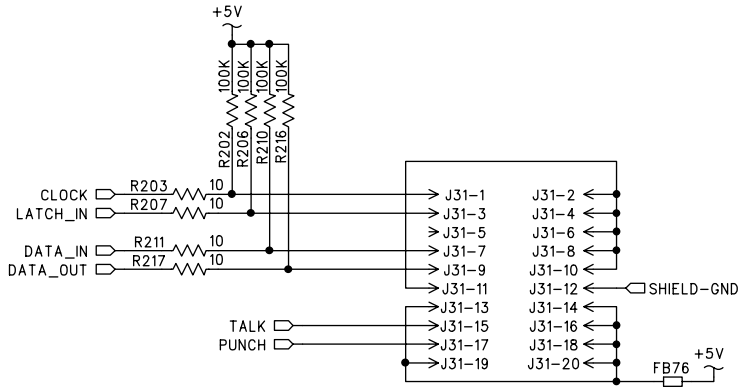
### J29



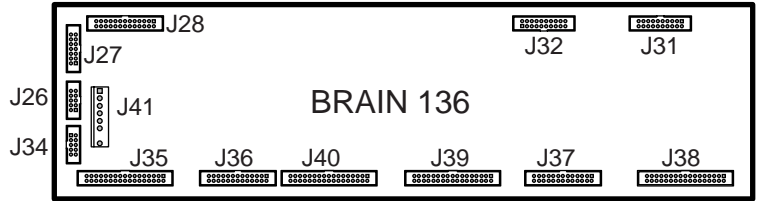
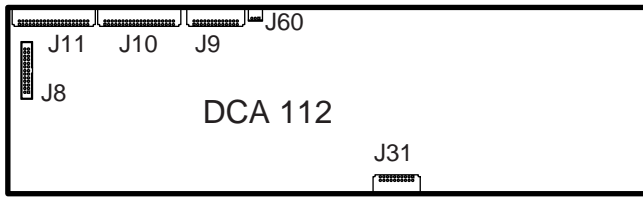
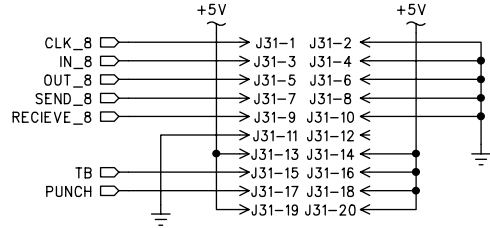
J30



### J31

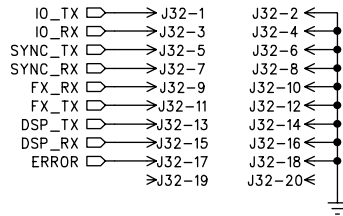


DCA CARD (to U5-7,11,31)

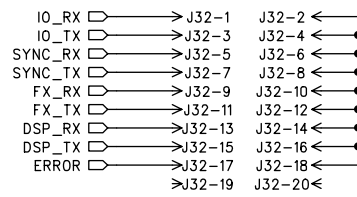


### J32

SYNC CARD (to U34)

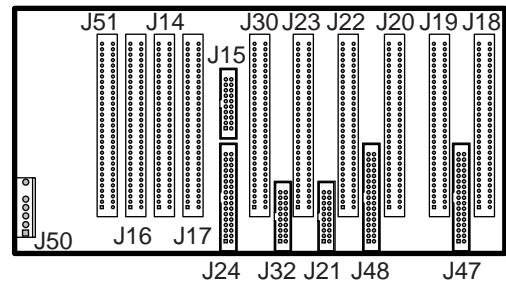
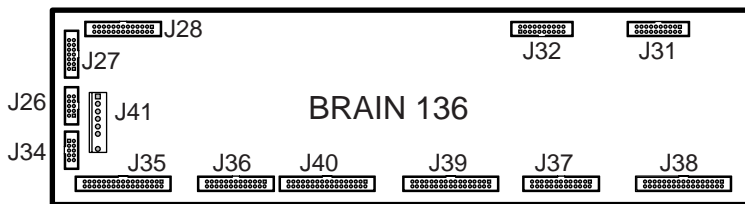


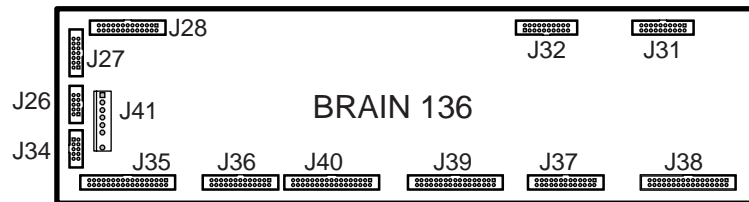
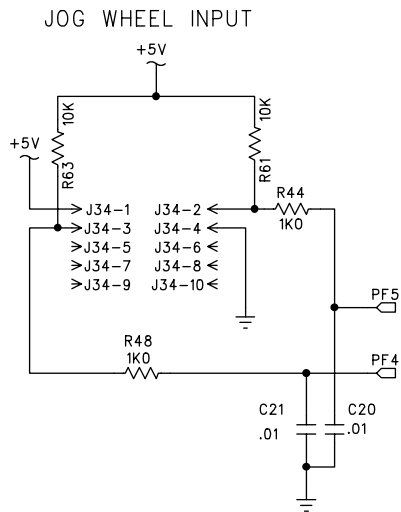
TO BRAIN



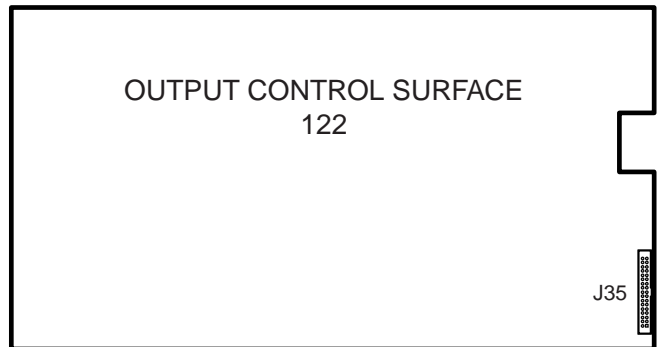
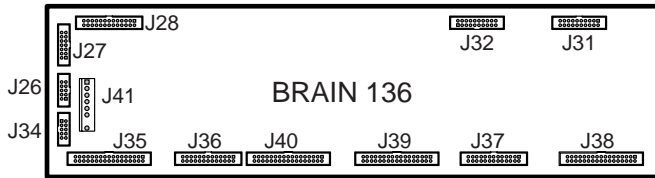
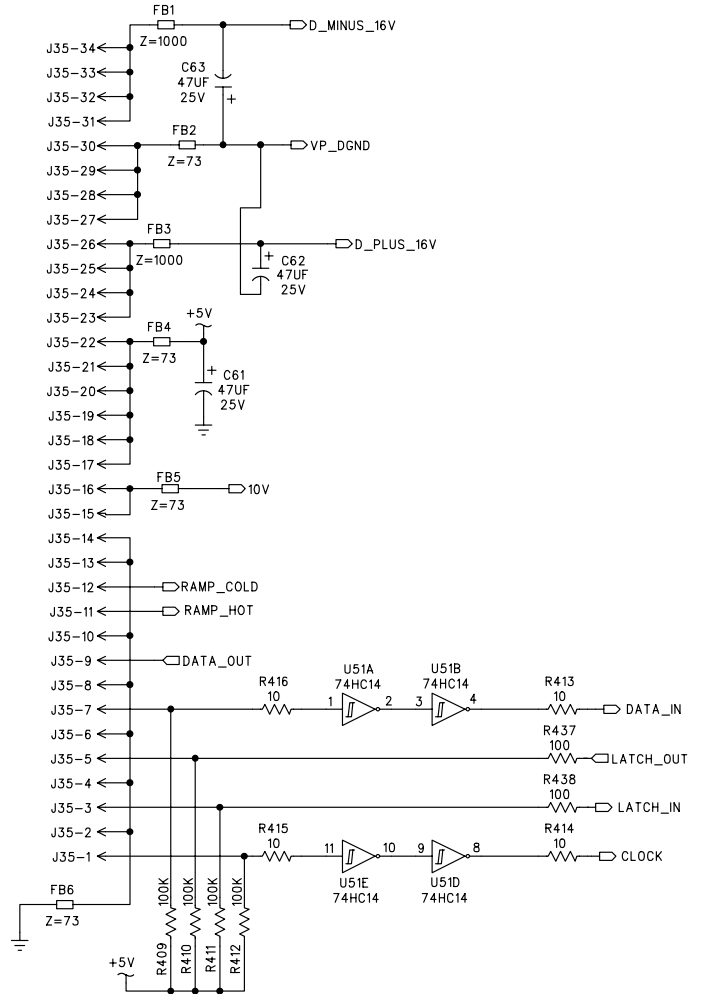
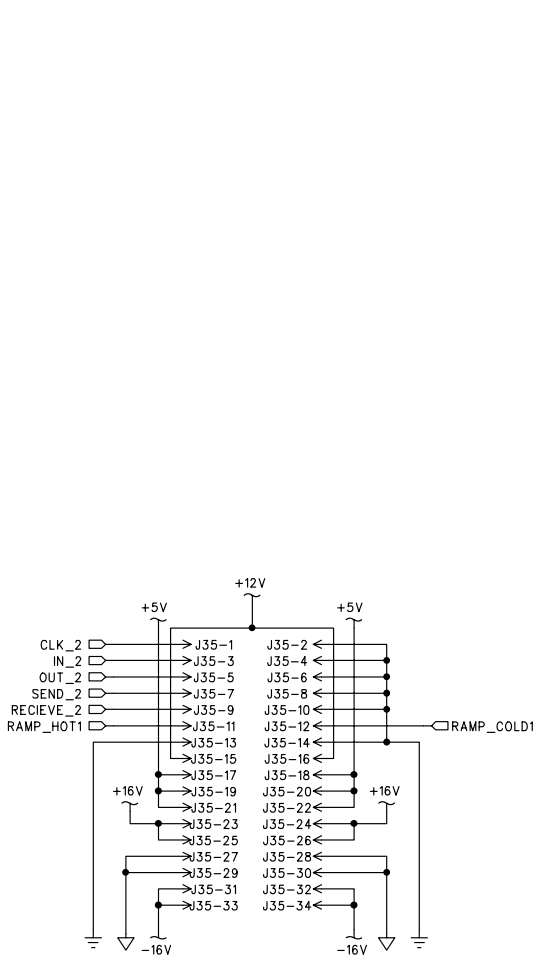
BACKPLANE

163

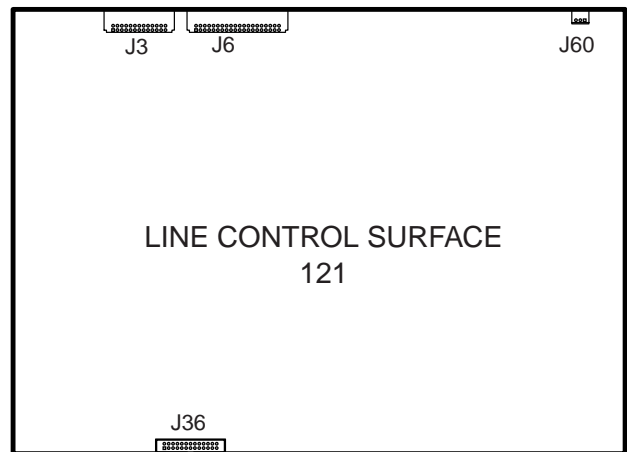
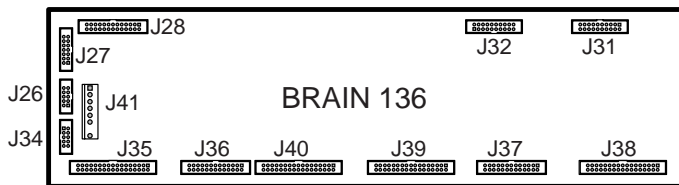
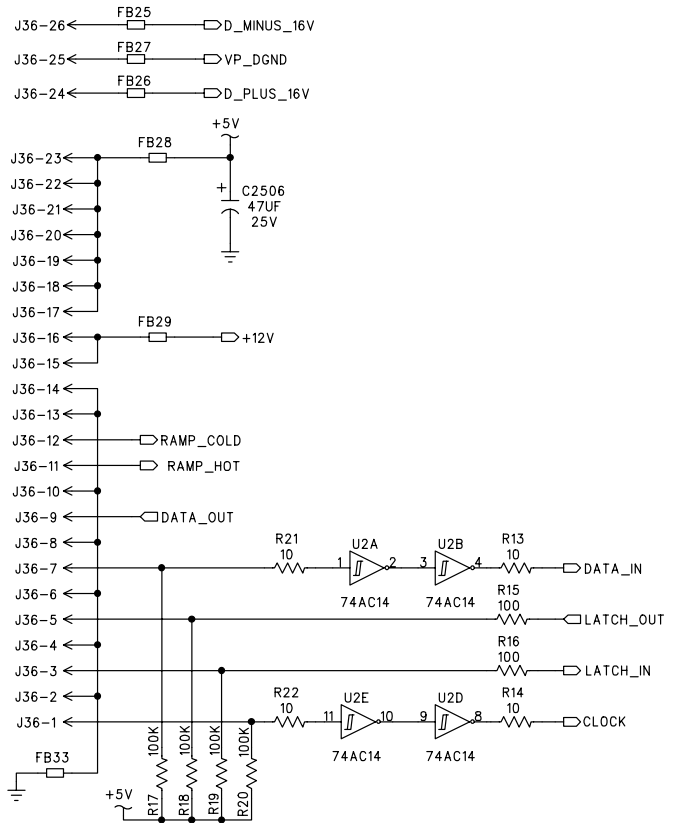
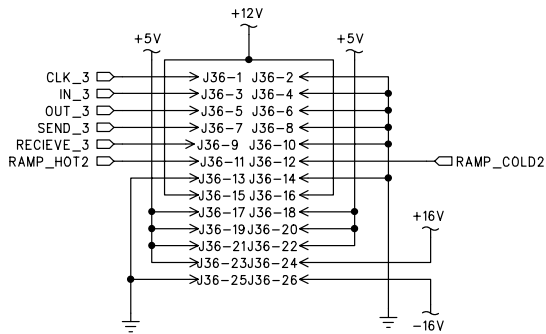


J34

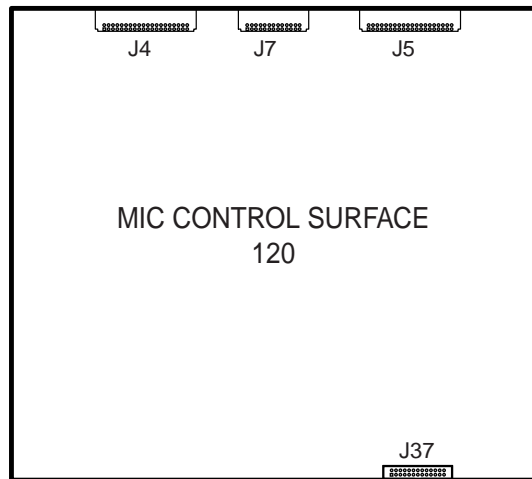
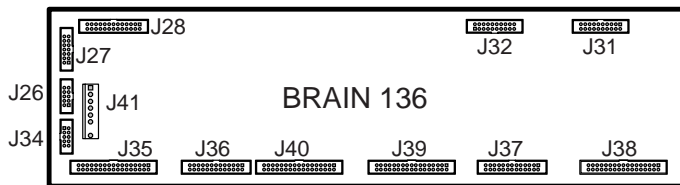
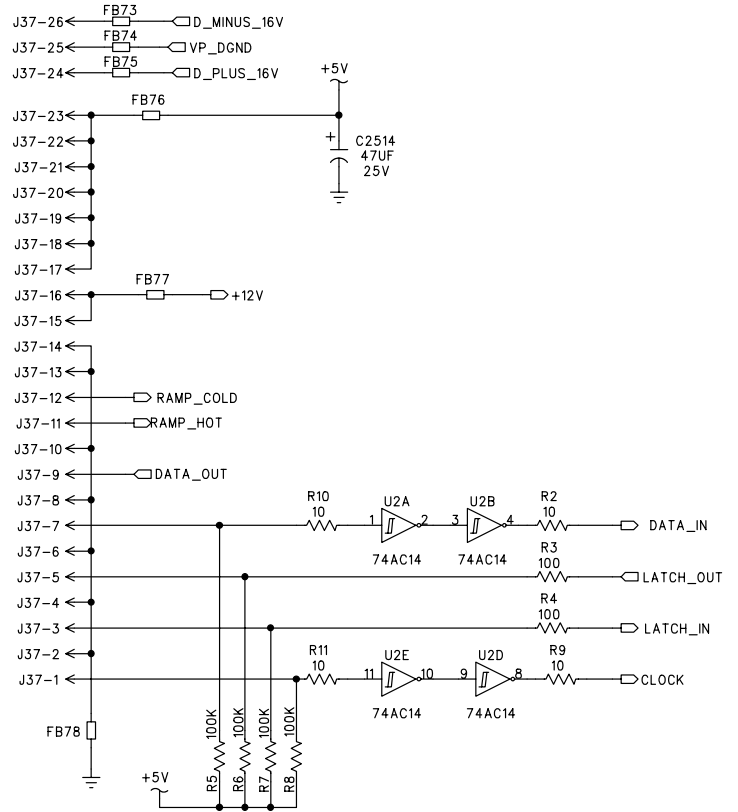
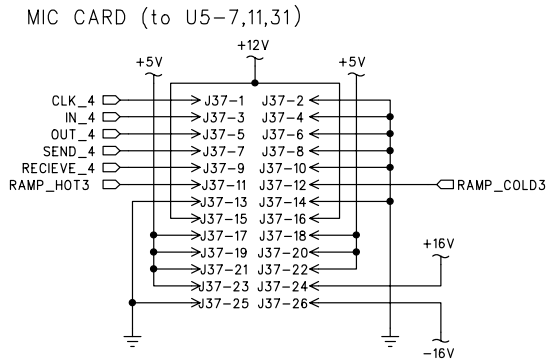
J35



# J36

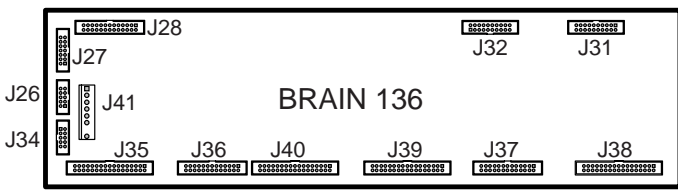
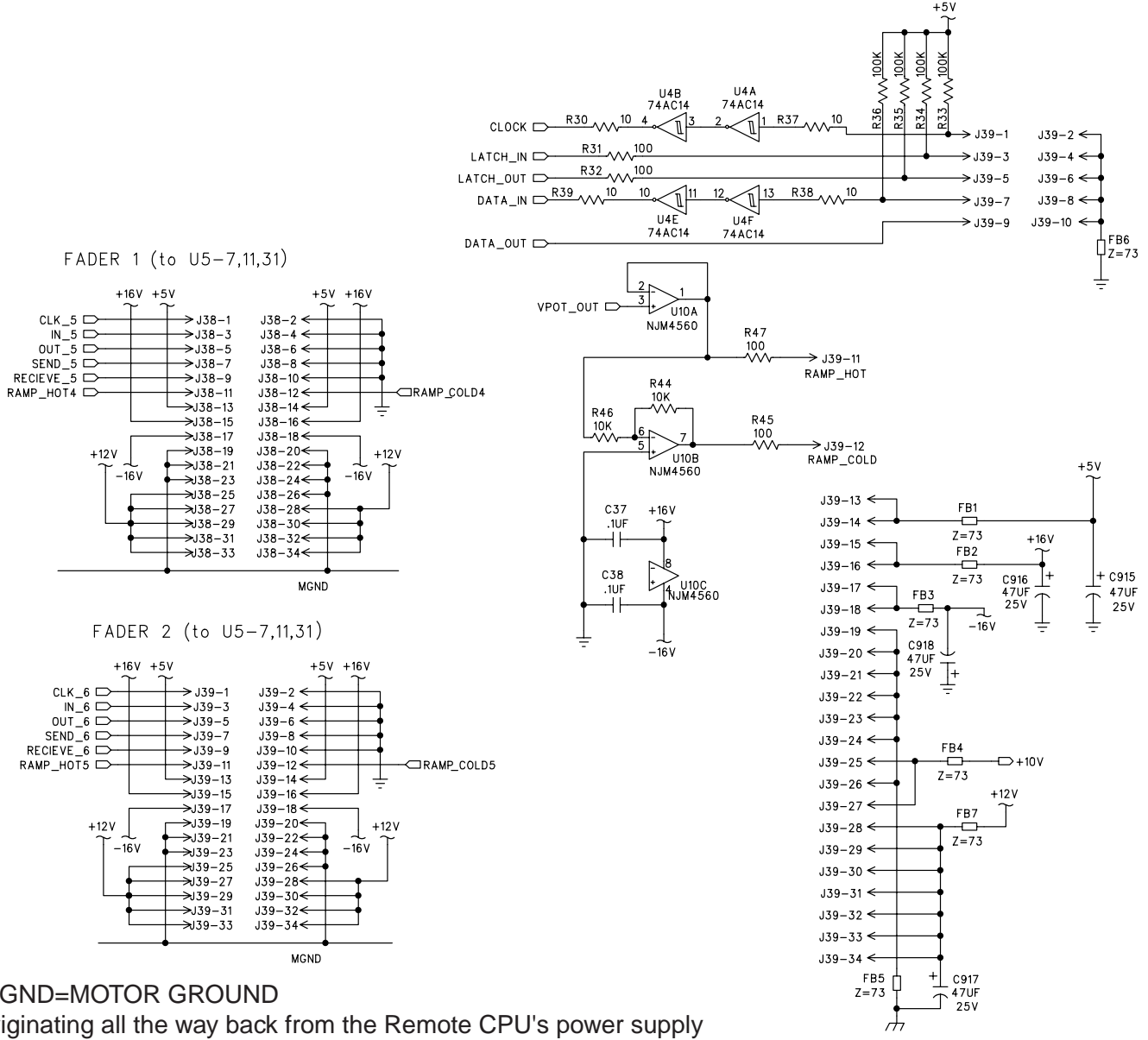


### J37

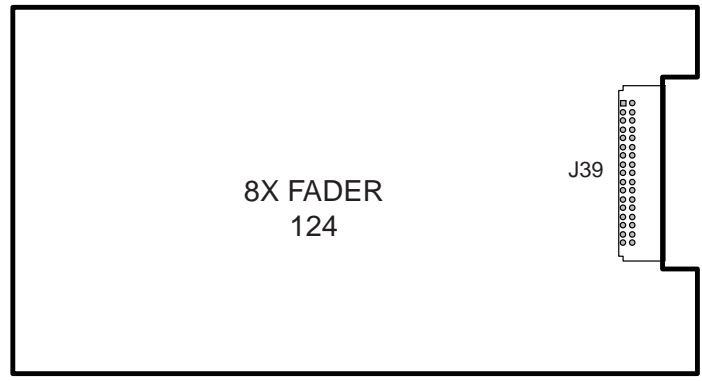




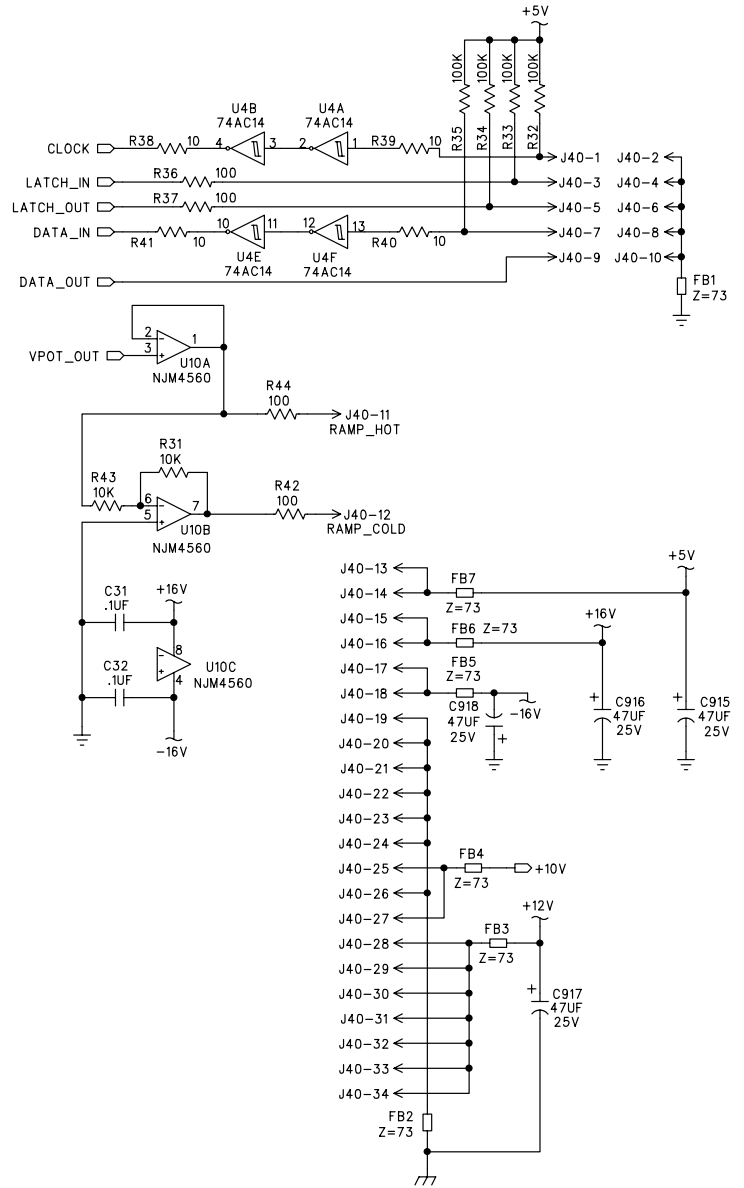
# J38 and J39



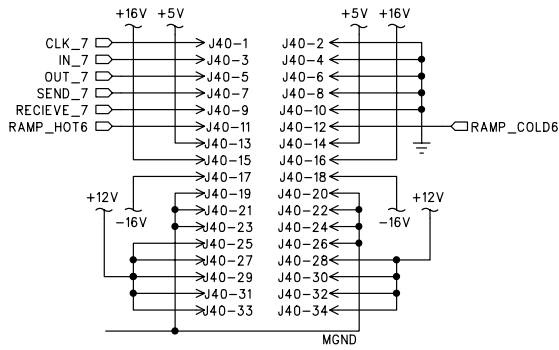
Note that J38 on the Brain board, connects to J39 on Fader 1.  
J39 on the Brain board connects to J39 on Fader 2.



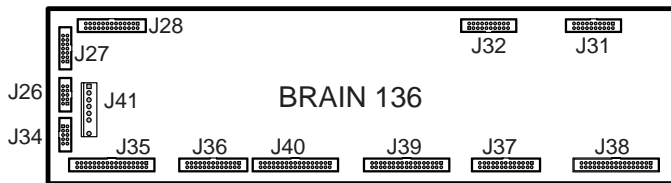
### J40



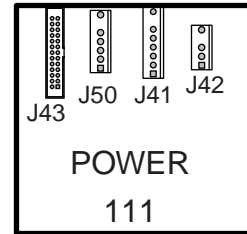
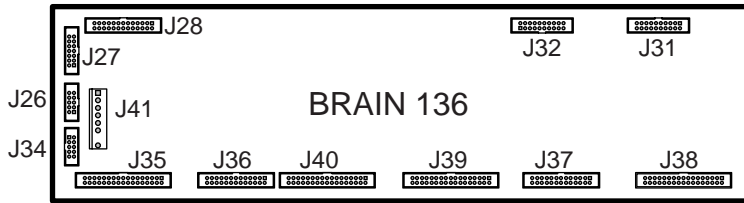
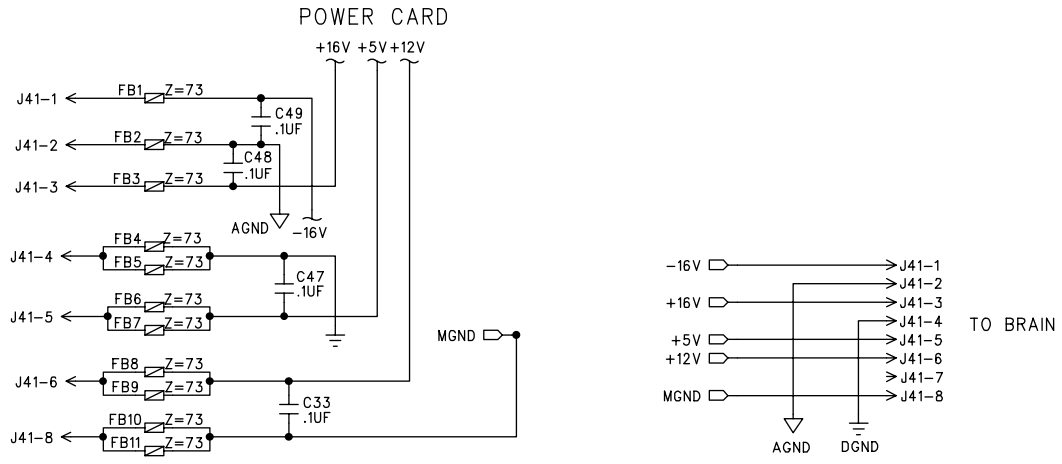
FADER 3 (to U5-7,11,31 page 3)



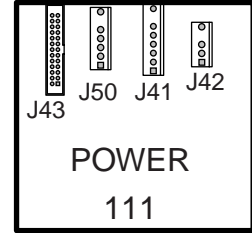
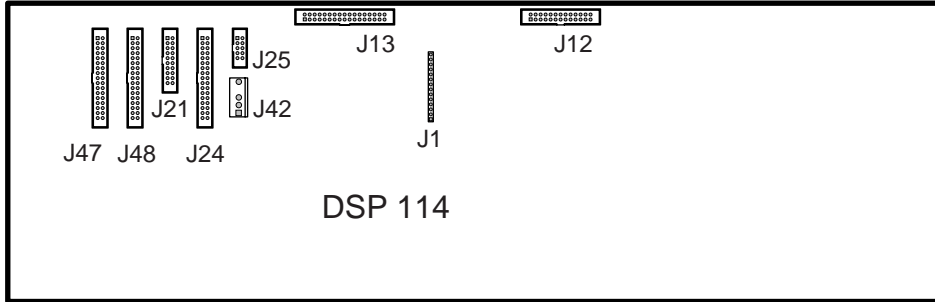
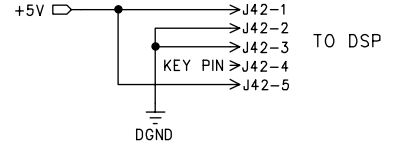
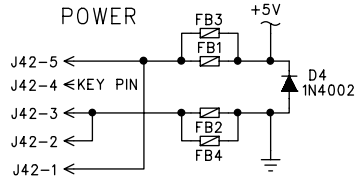
MGND=MOTOR GROUND  
originating all the way back from  
the Remote CPU's power supply



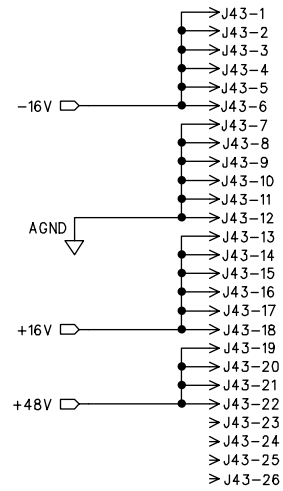
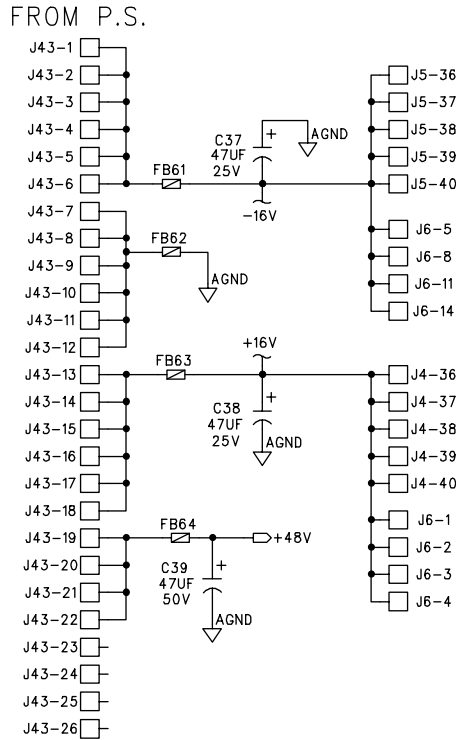
J41



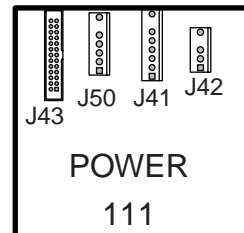
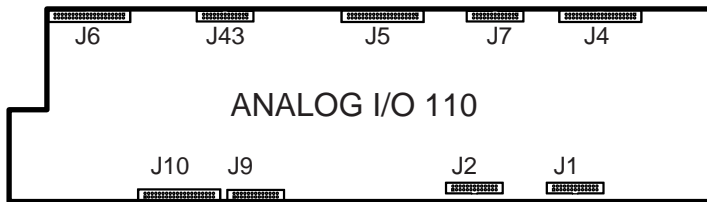
J42



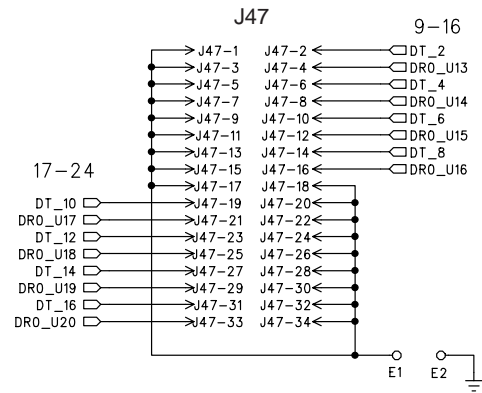
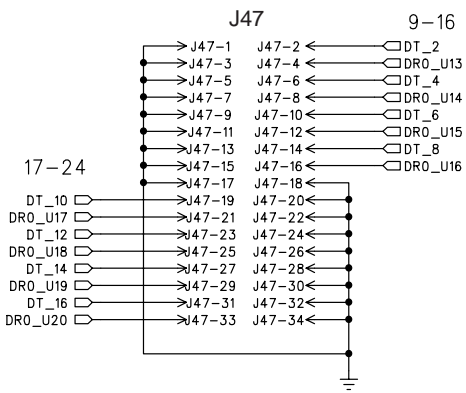
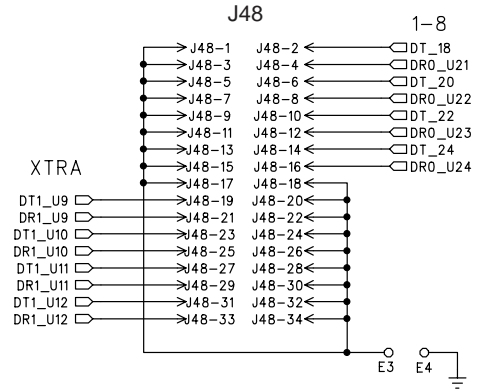
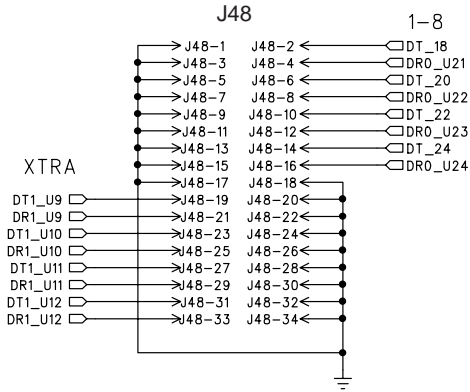
J43



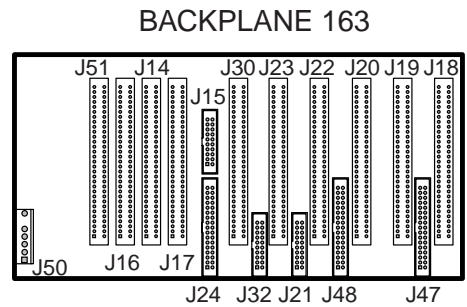
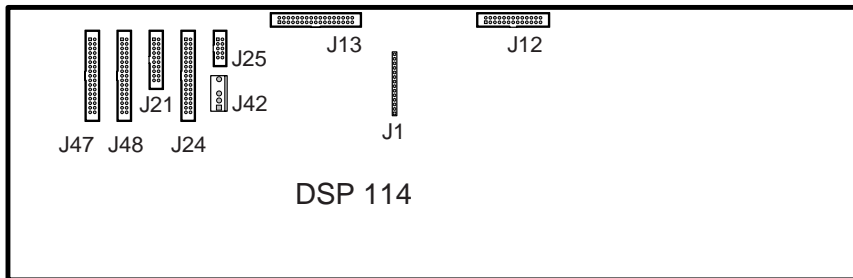
TO ANALOG I/O



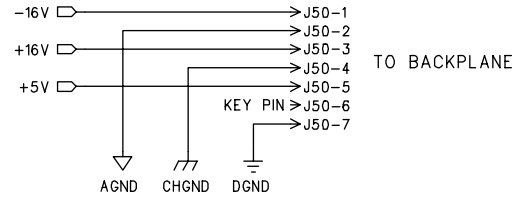
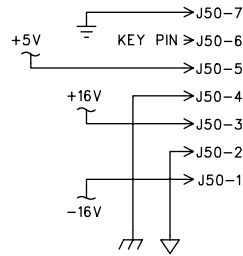
# J47 and J48



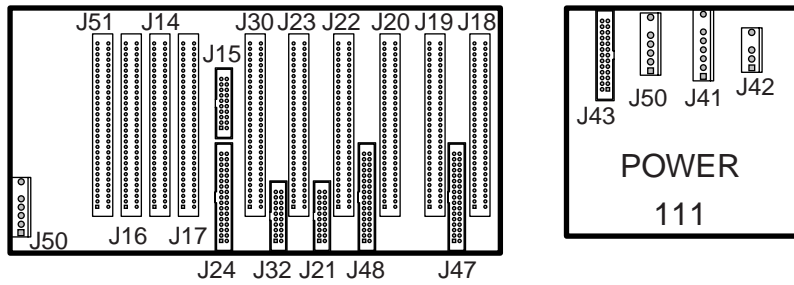
TO DSP



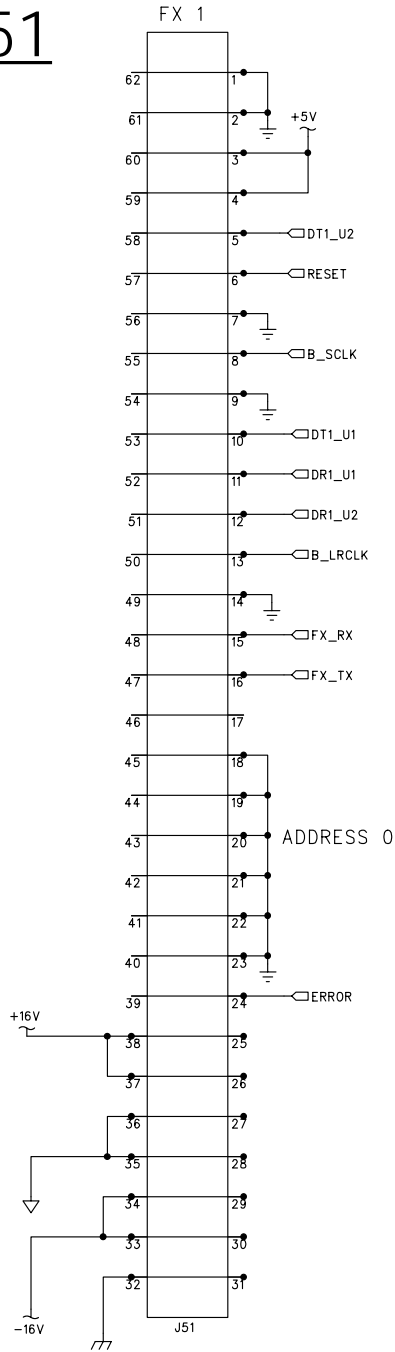
### J50



### BACKPLANE 163

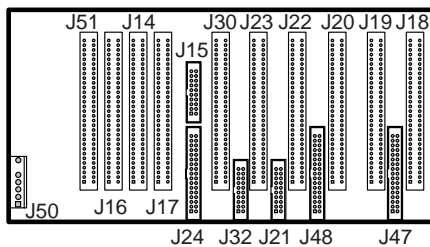


J51



BACKPLANE

163



J60

