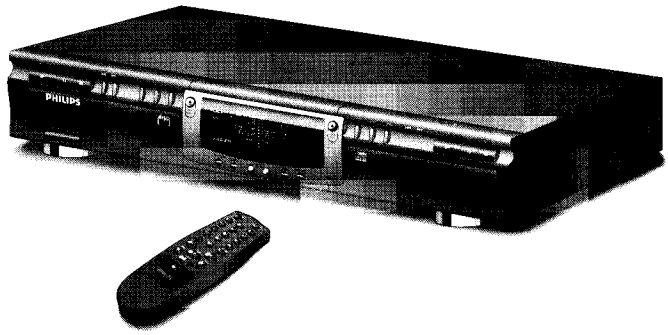
Compact disc recorder CDR765

/00/11S/13S/17

Service
Service
Service



Service Manual

SERVICING

For servicing CDR765 the set can be divided into three parts.

1. The Display board, the Connector interface board and the Headphone board have to be repaired on component level. The power supply is available as a spare part but can also be repaired on component level.
2. The CDR-loader (containing CDR mechanism and CDM-board) and the CDR main board will be exchanged completely in case of failure. Both are available as sparepart. For easy diagnostics, the set has been equipped with a selfdiagnose program. Defective loaders and main boards have to be returned for central repair.
3. The CD-loader module is a new Loader with a CDM12.4.. The complete mounted CD-Loader but also a separate CDM12.4 mechanism and separate loader parts will be available via service stock. The CD-mainboard can be repaired on component level.

Also available: Circuit description:"The basics of Compact Disc Recordable / Rewritable.
Service codenumber 4822 725 25242.

CONTENTS PAGE

COMPACT disc DIGITAL AUDIO Recordable ReWritable

COMPACT disc DIGITAL AUDIO Recordable

COMPACT disc DIGITAL AUDIO ReWritable

Published by M.T. 9829 Service MMA P.I.A. Hasselt Printed in The Netherlands Subject to modification (GB) 4822 725 25249

PCS 98 752

PHILIPS

TECHNICAL SPECIFICATIONS

General

1. Mains voltage
   All range version 84-250V
   /17 117V
2. Mains frequency 50-60Hz
3. Power consumption 18W

Input/Output

1. **Line output(CD & CDRW).**
   Output level: 2Vrms at 0dB.
   Output resistance: 200Ω.
2. **Line input.**
   input sensitivity: 500mVrms.
   Input impedance: 50kΩ.
   Maximum input voltage:5Vrms.
3. **Digital output(CD & CDRW).**
   Format: AES/EBU format according IEC958 (consumer format).
   Sampling frequency: 44.1kHz.
   output resistance: 75Ω.
4. **Digital input.**
   Format: AES/EBU format according IEC958 (consumer format).
   Sampling frequency: 44.1kHz.
   Input resistance: 75Ω.
5. **Optical input.**
   Format: AES/EBU format according IEC958 (consumer format).
   Sampling frequency: 44.1kHz.

Audio performance

Cinch analog output (playback path CD & CDRW).

Output voltage: 2Vrms ± 2dB. (0dB digital).
Frequency range F.R.: 20Hz < F.R. < 20kHz.
Amplitude linearity: ± 0.3dB.
typical.: ± 0.1dB.
Channel unbalance: <0.3dB at 1kHz.
typical: ±0.2dB.
Output resistance: 200Ω.
Phase non-linearity: <0.2° at 1kHz.
Outband attenuation: 50dB above 30kHz.
Channel separation: >90dB at 1kHz.
typical: 110dB.
>85dB from 20Hz. until 20kHz.
typical: >93dB.
S/N-ratio A-weigthed: >98dB
Typical: 105dB
S/N-ratio unweighted: >95dB.
typical: 100dB.
Dynamic range: >92dB. at 1kHz.
typical: 96dB.
>90dB from 20Hz. until 20kHz.
typical: 96dB.
THD+N: >82dB from 20Hz. until 20kHz.
typical: 85dB.

Cinch analog input/output (monitor path recordable unit only).

Measured with Audio precision system one.
Input voltage is 500mVrms.

Output voltage: 2Vrms ± 2dB. (0dB digital).
Frequency range F.R.: 20Hz < F.R. < 20kHz.
Amplitude linearity: ± 0.3dB.
typical.: ± 0.1dB.
Channel unbalance: <0.3dB at 1kHz.
typical: ±0.2dB.
Output resistance: 200Ω.
Phase non-linearity: <0.2° at 1kHz.
Outband attenuation: 50dB above 30kHz.
Channel separation: >90dB at 1kHz.
typical: 98dB.
>85dB from 20Hz. until 20kHz.
typical: >92dB.
S/N-ratio unweighted: >84dB.
typical: 88dB.
Dynamic range: >85dB. at 1kHz.
typical: 90dB.
THD+N: >80dB from 20Hz. until 20kHz.
typical: 85dB.
Intermodulation THD: >80dB.

Headphone output (all functions).

Output voltage: 4Vrms(0dB) / 8 - 2000Ω.
S/N: >80dB.
THD+N: >78dB.
Channel separation: >60dB from 20Hz. until 20kHz.

Dimensions and weight

1. Number and height of feet: 4 x 11mm foiled.
2. Apparatus tray closed: WxDxH 435 x 305 x 75 (without feet)
3. Weight without packaging: 4 kg
4. Weight in packaging: 5 kg

Laser Device Unit CDRW

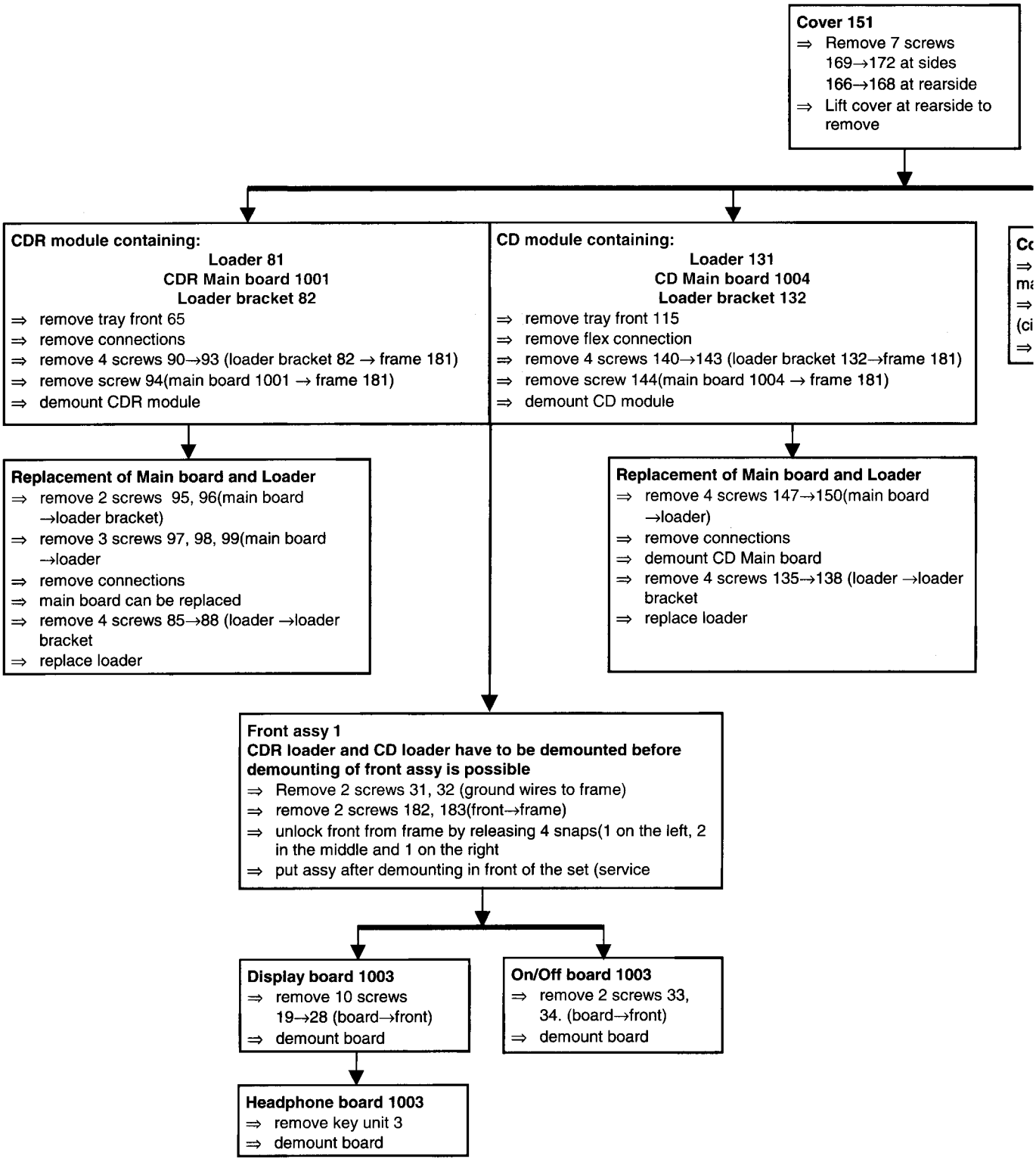
1. Material: GaAlAs
2. Wave length: 775→795 nm(at 25°C)
3. Laser output
   read: 0,7→0,9 mW
   write: 13→18 mW
4. Class: 3B

Laser Device Unit CD

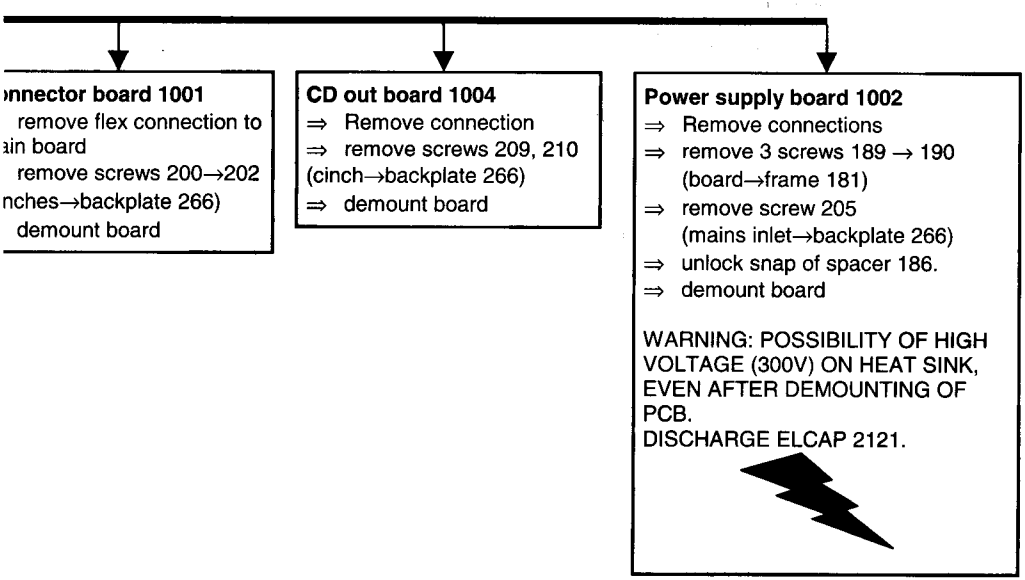
1. Material: GaAlAs
2. Wave length: 760→800 nm(at 25°C)
3. Laser output: max. 0.5 mW
4. Class: 1

DISMANTLING INSTRUCTIONS

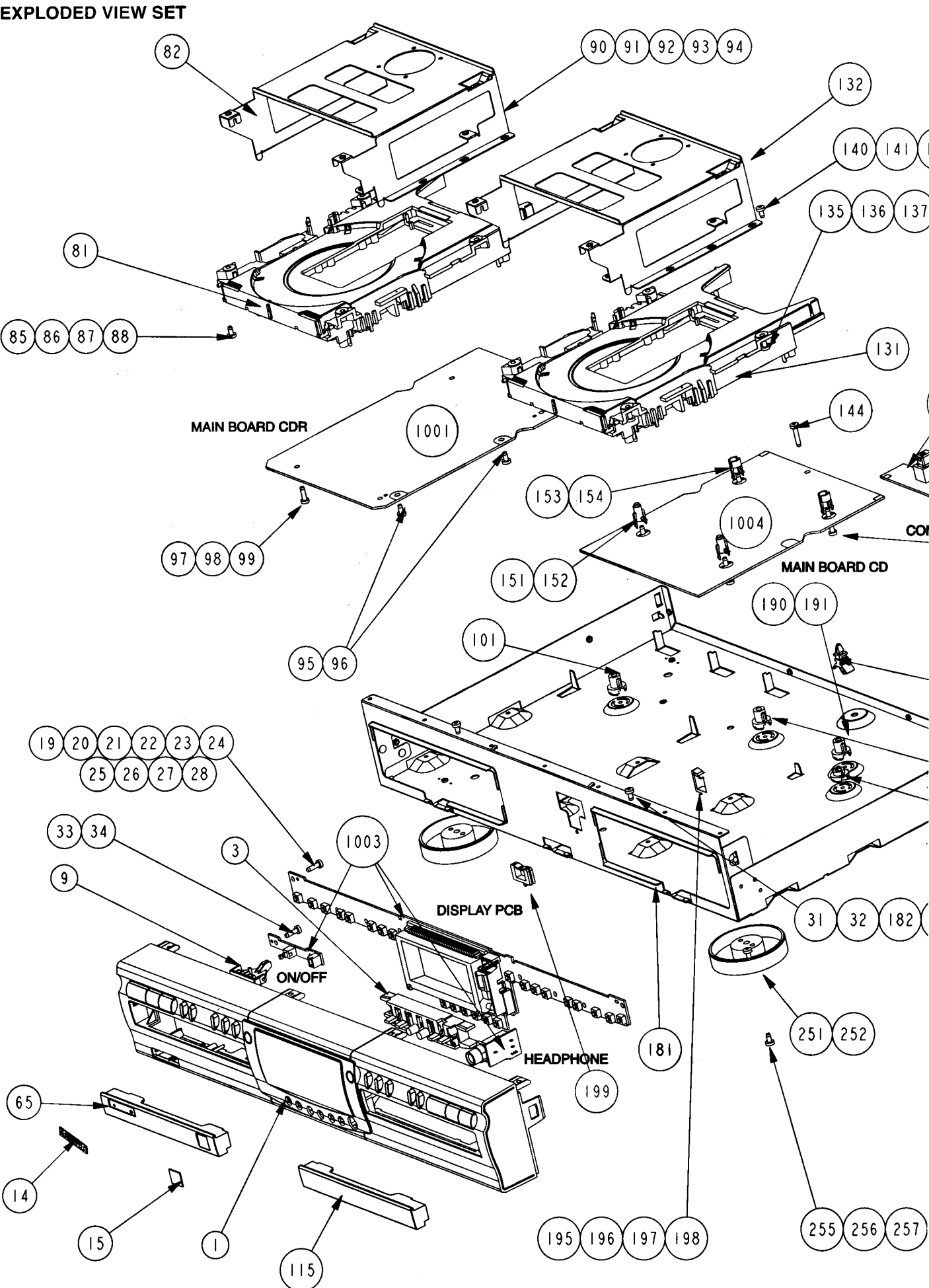
See exploded view for item numbers

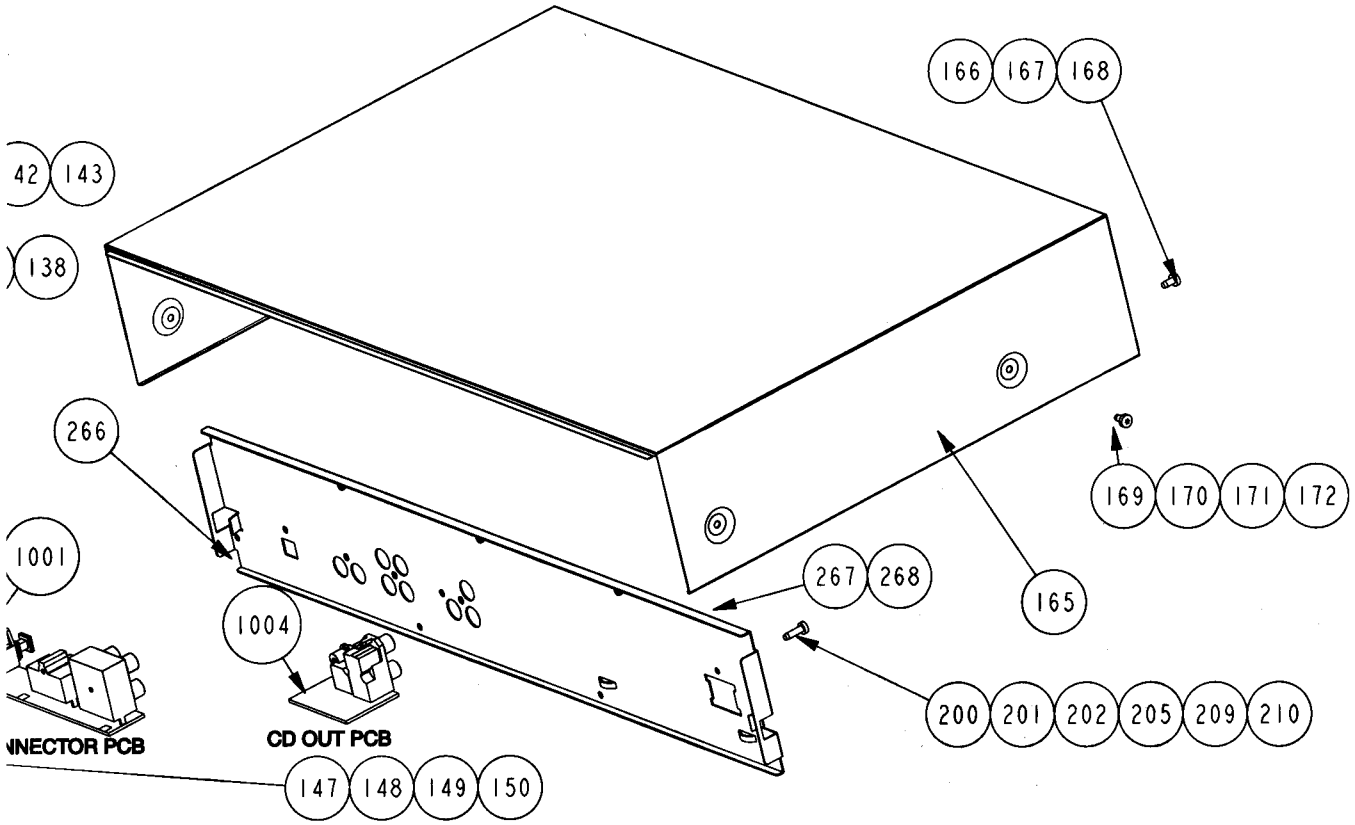


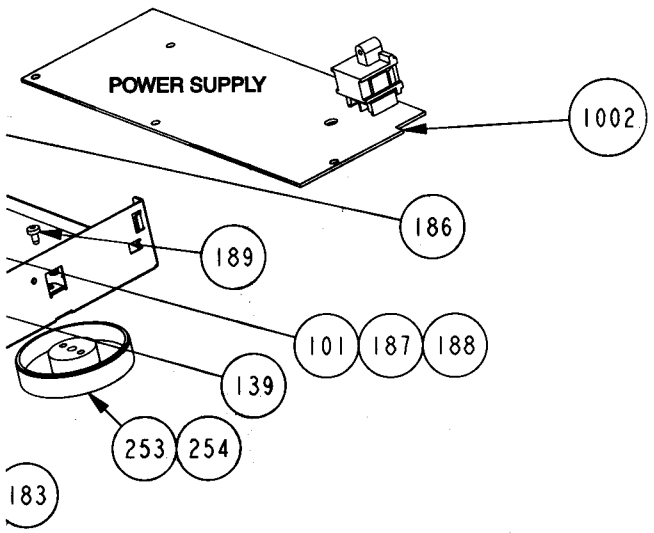
mounting
↑
↓
demounting



EXPLODED VIEW SET



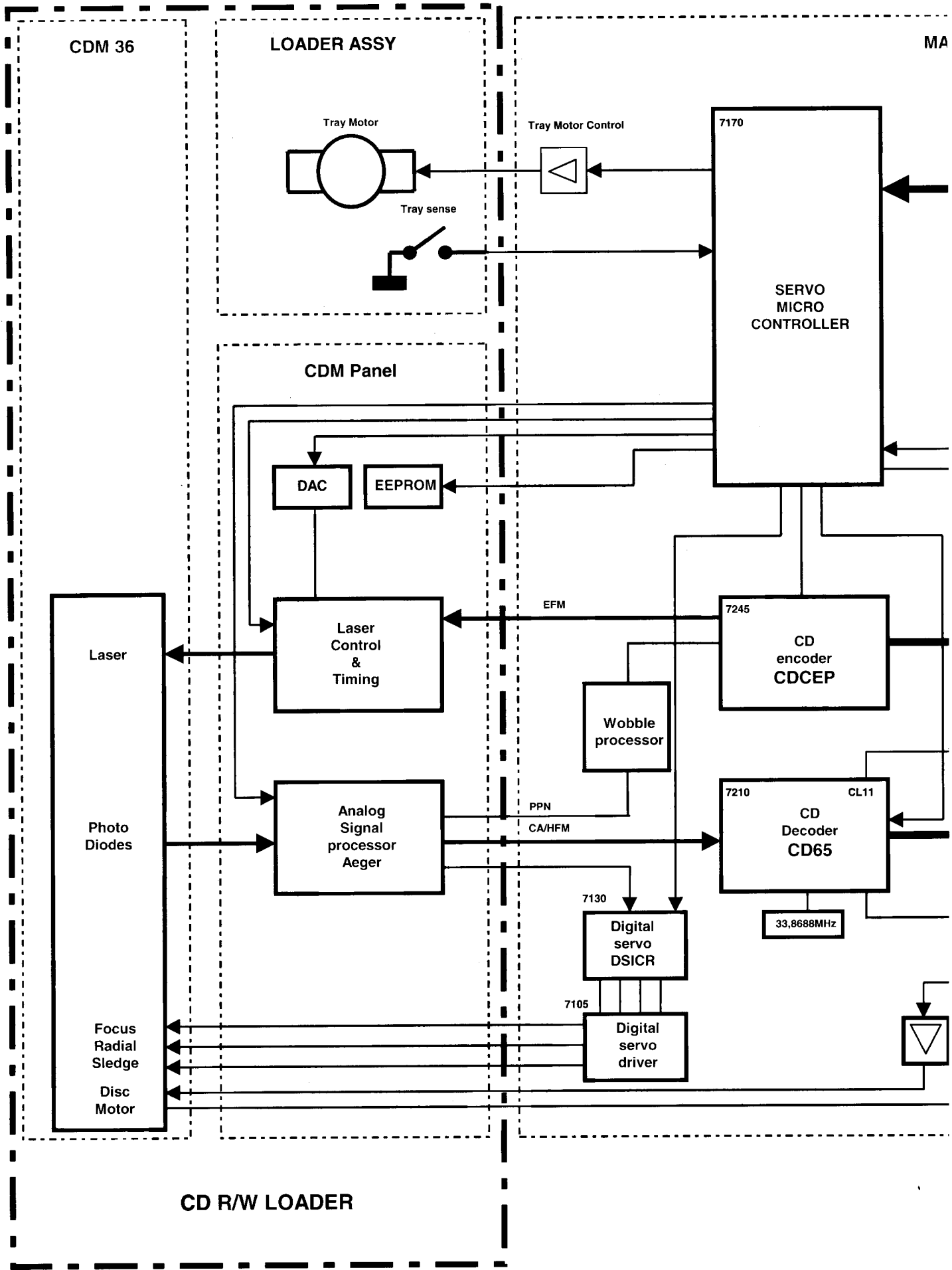


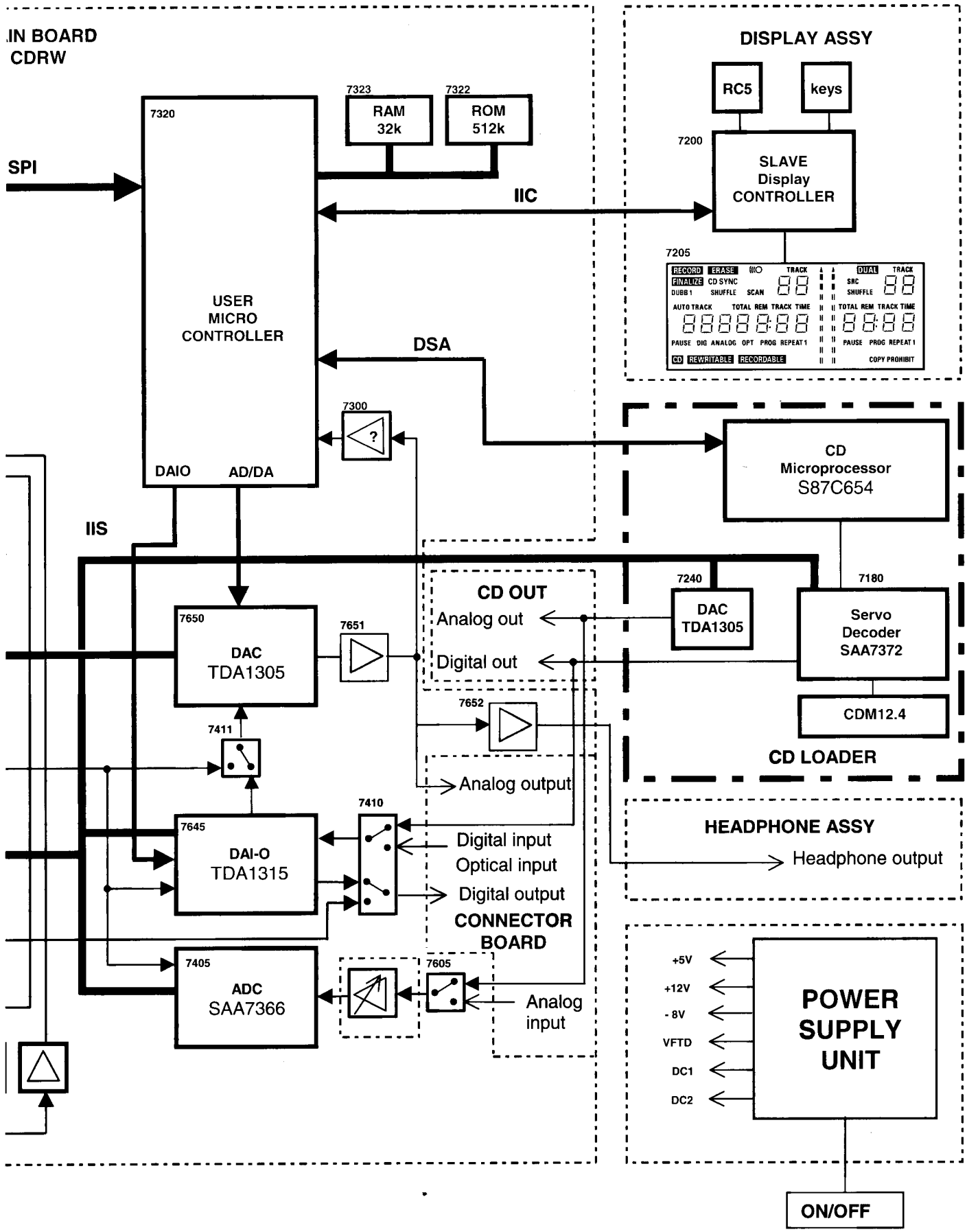


MECHANICAL PARTSLIST

1	4822 459 05099	FRONT ASSY CDR765 BLACK /xx
1	4822 459 05103	FRONT ASSY.CDR765 GREY /xxS
3	4822 410 12024	KEY UNIT MIDDLE ASSY BLACK /xx
3	4822 410 12025	KEY UNIT MIDDLE ASSY GREY /xxS
9	4822 410 11962	POWER BUTTON BLACK /xx
9	4822 410 11964	POWER BUTTON GREY /xxS
14	4822 459 10887	WORDMARK logo
15	4822 454 13339	CDRW - LOGO
65	4822 459 05101	TRAY FRONT LEFT ASSY BLACK /xx
65	4822 459 05104	TRAY FRONT LEFT ASSY GREY /xxS
81	4822 691 10737	CDR LOADER CDL3610/01
115	4822 459 05102	TRAY FRONT RIGHT ASSY BLACK /xx
115	4822 459 05105	TRAY FRONT RIGHT ASSY GREY /xxS
131	4822 691 10742	CD LOADER UNIT L1265/51
165	4822 442 01506	COVER
251	4822 462 42159	FOOT SILVER
252	4822 462 42159	FOOT SILVER
253	4822 462 42158	FOOT BLACK
254	4822 462 42158	FOOT BLACK
301⚠	4822 321 10249	SBC1201 MAINS CABLE EUROPE
301⚠	4822 321 10939	MAINS CORD USA
312	4822 321 11357	AUDIO CORD SET
313	4822 321 11357	AUDIO CORD SET
317	4822 321 61452	DIG OUT CABLE L=1000M M RCA
318	4822 219 10559	REMOTE CONTROL RC07110/01
1001	4822 214 12825	CDR MAINBOARD CDR765
1002⚠	4822 218 11938	POWER SUPPLY 20PS314/00
1002⚠	4822 218 11967	POWER SUPPLY 20PS314/17

OVERALL BLOCKDIAGRAM





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SIGNALS AND ABBREVIATIONS

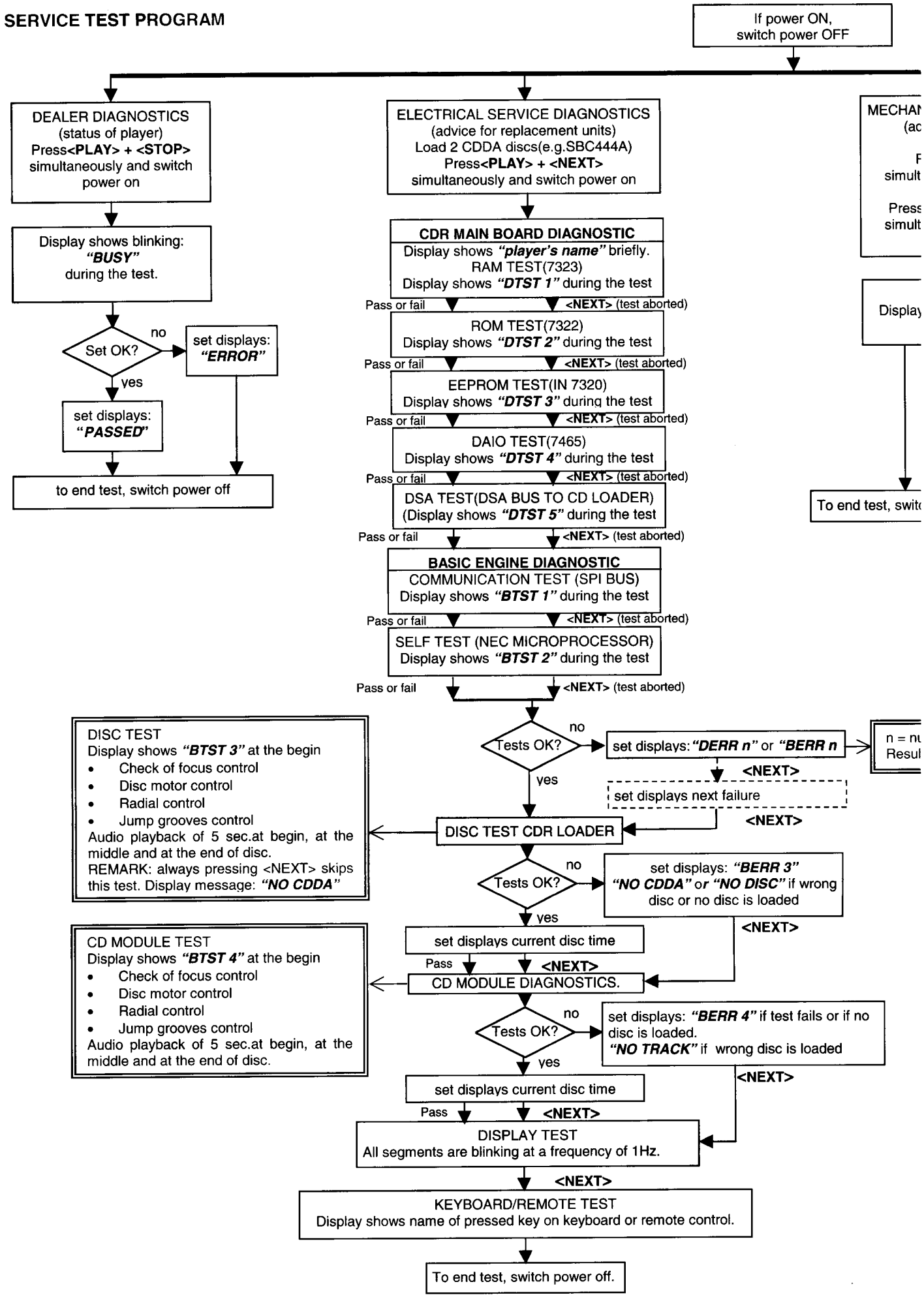
SIGNAL NAME	SIGNAL FLOW	FUNCTION AND DESCRIPTION
+12Va	Supply voltage	Single power supply +12V for op-amps 7150, 7235
+12Vb	Supply voltage	Power supply +12V for op-amps
+4V	Supply from CDR loader	Power supply +4V for servo microcontroller
+5Va	Supply voltage	Analog power supply +5V
+5Vb	Supply voltage	Digital power supply +5V
+5VDS	Supply voltage	Power supply +5V for Connector Part
+5VM	Supply voltage	Power supply turntable motor control circuit
-8Va	Supply voltage	Power supply -8V
A1A	IC7170→CONN.1101	Calculation β and HF0 Positive peak detector between CA and CALF
A2A	IC7170→CONN.1101	Beta = (A1-A2)/(A1+A2) Negative peak detector between CA and CALF
ACK	IC7320↔R3904(IC7170)	Acknowledge serial communication user microprocessor
AD[0:18]	IC7320→IC7322 IC7320→IC7323	External address bus of user processor
ADC		Analog/Digital Converter
ANACD	IC7320→IC7605	Control signal dubbing analog for protected tracks
ANAIN1	IC7320→IC7601	Control signal level setting analog input
ANAIN2	IC7320→IC7601	Control signal level setting analog input
ATSB	IC7320→IC7650	Attenuation 12 dB of DAC(active low) during search
BS	IC7320→IC7440	Block synchronisation
CA	CONN.1101→R3299	Central Aperture(C1+C2+C3+C4)DC →for Mod. calculation
CALF	IC7170→CONN.1101	CA low frequency
CD60		Decoder
CD60CLK	IC7210→IC7403	I2S clock from CD60
CD60WS	IC7210→IC7403	I2S word select from CD60
CDAICL	IC7320→IC7465	DAI-O interface clock
CDAIDA	IC7320↔IC7465	DAI-O interface data
CDAILD	IC7320→IC7465	DAI-O interface mode
CDCEP		CD-Circ Efm Encoder Plus
CDE	IC7170→R3255	CD erase
CDTRAYO	IC7320→CONN1380	CD loader tray open (CDR765) (not used)
CDTRAYC	IC7320→CONN1380	CD loader tray closed (CDR765) (not used)
CE_INT	IC7170←IC7245	CDCEP interrupt
CFLG	IC7210→CONN.1250	Correction flag output(CD60)
CL11	IC7210→IC7411	11.2896 MHz systemclock for ADC/DAC
CL16	IC7210→IC7241	164344 MHz systemclock (not used)
CLCE	IC7170→IC7245	µP clock output encoder(CD60)
CLDAIO	IC7465→IC7411	Clock output DAIO
CLDE	IC7170→IC7210	µP clock output decoder(CD60)
CLDS	IC7170→IC7130	µP clock output DSICR
CLKC0	IC7241→CONN1360	System clock for CD player (CDR765)
CLKCDCEP	IC7260→IC7245	I2S clock to CDCEP
CLKN2	CONN1360→IC7260	I2S clock from CD player (CDR765)
CLKQ	IC7245→IC7240 IC7245→IC7241	PLL clock output from encoder
CLKQD	IC7241→IC7240	CLKQ divided by 2
CLO3	IC7440→IC7411	GDIN clock3 out: system clock for DAC (option)
CLWP	IC7170→IC7245	µP clock Atip information CDCEP
COMCLK	IC7320↔R3165(IC7170)	Communication clock for data transfer from user microprocessor
COMSYNC	IC7320↔IC7170	Communication synchronisation from user microprocessor
CRIN	IC7440→IC7210	GDIN clock1 out: system clock for decoder CD60 (option)
CSRAM	IC7320→IC7323	Chip Select RAM

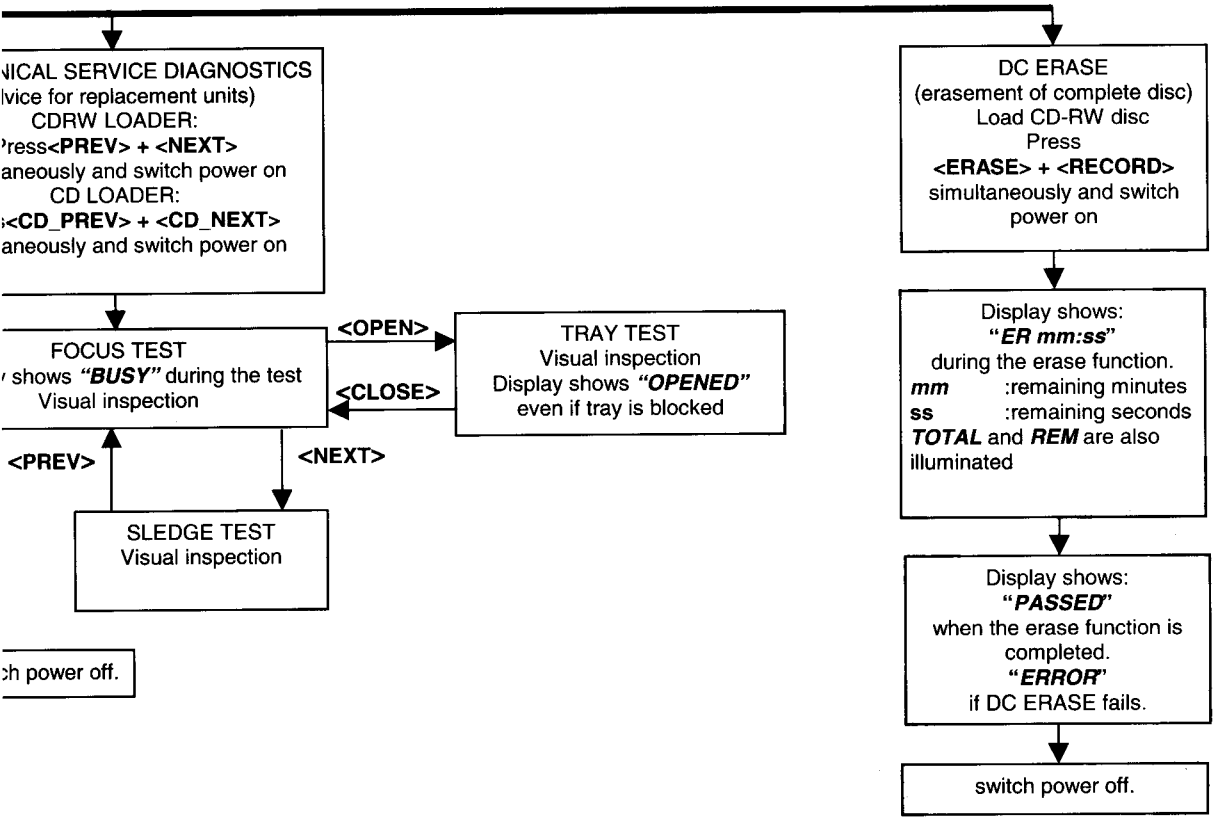
CSROM	IC7320→IC7322	Chip Select ROM
D[0:7]	IC7320↔IC7322 IC7320↔IC7323 IC7320↔IC7324	Data bus
DAC		Digital/Analog Converter
DACDCEP	IC7260↔IC7245	I2S data to CDCEP
DACE	IC7170→IC7245	µP data I/O CDCEP
DACL	IC7170→CONN.1102	DAC clock
DADE	IC7170→IC7210	uP data CDLIP
DADI	IC7170→CONN.1102	DAC data in (CDM)
DADS	IC7170→IC7130	µP data I/O DSICR
DAIN	IC7465↔IC7245	Data signal(CDCEP)
DAI-O		Digital Audio Input/Output
DAIO_REC	IC7325→IC7403	high during recording from digital in source, low to prevent conflict in IIS bus during playback and analog recording(option)
DALD	IC7170→CONN.1102	DAC load(CDM)
DAN2	CONN1360↔IC7260	I2S data from CD player (CDR765)
DAOUT	R3217(IC7210)→IC7403	I2S data output(CD60)
DATADIR	IC7320→IC7403	Data direction: control signal, HIGH during playback
DAWP	IC7170→IC7245	µP data Atip information(CDCEP)
DEEM1	IC7320→IC7650	Deemphasis active(44.1 kHz sample rate)
DIGIN	IC7410→IC7465 IC7410→IC7440	Digital input signal to DAIO and GDIN
DIGINEXT	CONN1400→IC7410	Digital input
DIGOUT	IC7465→CONN.1400	Digital output
DIGSW1	IC7320→IC7410	Control signal for digital input/output selection
DIGSW2	IC7320→IC7410	Control signal for digital input/output selection
DSA_ACK	IC7320→CONN1360	Data/strobe/acknowledge serial communication from USER uP to CD player (CDR765)
DSA_DATA	IC7320→CONN1360	Data/strobe/acknowledge serial communication from USER uP to CD player (CDR765)
DSA_STROBE	IC7320→CONN1360	Data/strobe/acknowledge serial communication from USER uP to CD player (CDR765)
DSICR		Digital Servo IC Recordable
EBUCD60	IC7210→IC7410	Digital out signal from CD60
EBUDAIO	IC7465→IC7410	Digital out signal from DAIO
EBUININT	CONN1360→IC7410	Digital input from CD player (CDR765)
EECL	IC7170→CONN.1102	EEPROM clock
EEDA	IC7170↔CONN.1102	EEPROM data
EFM	IC7245→IC7205	Eight to Fourtheen Modulation CDCEP output for monitoring (reduced voltage from CD60 to MONON)
EFMCLK	IC7245→CONN.1102	EFM clock 4.3218 or 8.6436 MHz
EFMM	IC7245→CONN.1102	EFM N-1
FEN	CONN.1101→IC7130	Focus Error Normalized = (C1 + C3 - C2 - C4)/(C1 + C2 + C3 + C4)
FEOFS	IC7170→R3133	Focus Error OFF Switch
FOC-	IC7105→CONN.1101	Focus actuator negative connection
FOC+	IC7105→CONN.1101	Focus actuator positive connection
FS	CONN.1102→R3152	FS = FS0 - DALFA(write power to laser control)
FSM	CONN.1102→D6155	Focused sense monitor
GDIN		General Digital Input (option)
GDINCL	IC7320→IC7440	GDIN interface clock
GDINDA	IC7320↔IC7440	GDIN interface data
GDINLD	IC7320→IC7440	GDIN interface mode
HALL_U, V, W	IC7170→IC7270 IC7170→IC7280	Hall element U, V, W of motor

HMSW	CONN.1101→IC7170	Home Switch
IISCLK	IC7603→IC7465 IC7603→IC7245 IC7403→IC7650	I2S-BUS clock
IISWS	R3219(IC7210)→IC7403	I2S-BUS word select
INTSLAVE	CONN1330→IC7320	Slave processor interrupt
KILL	T7446→R3671,3672	Kill signal to mute analog output signal
KILL_OUT	IC7320→R3473	Control signal to activate Kill signal
LDCE	IC7170←IC7245	µP load input(from CDCEP)
LDDE	IC7170→IC7210	µP load output decoder
LDDS	IC7170→IC7130	µP load output DSICR
LDON	IC7130→CONN.1102 IC7105→CONN.1102	Laser Diode ON(on read)
LEFTOUT	C2497→CONN.1400 C2497→CONN.1420 C2497→C2300	Analog left output
LWRT	IC7245→CONN.1102	Laser at writing power
MIRN	CONN.1101→IC7130	Mirror normalized
MISO	IC7320↔R3168(IC7170) IC7320↔CONN.1300	Master in, Slave out: data from Basic Engine to USER.
MONON	IC7170→IC7205	Monitoring EFM from CDCEP to CD60
MOSI	IC7320↔R3903(IC7170) IC7320↔CONN.1300	Master out, Slave in : data from USER to Basic Engine
MOTO1	IC7210→IC7170	Control signal for motor
MPWM	IC7170→IC7245	Motor Pulse Width Modulation
N=2	IC7320→IC7260	Control signal to close switch when dubbing (n = 2 !)
N2	IC7170→IC7240 IC7170→IC7205	N = high(double speed)
N4	IC7170→IC7205	N = high(fourfold speed)
NCLOSE	IC7170→R3196	Tray close (CDR loader)
NIRQ	IC7170→IC7245	Interrrupt request wobble processing(CDCEP)
NMUTE	IC7320→IC7650	Mute signal (active low)
NOPEN	IC7170→R3181	Tray open (CDR loader)
NRSMP	IC7245→CONN.1102	None read sample
OPTIN	CONN.1400→IC7440 CONN.1400→IC7465	Optical input
OTD	IC7130→IC7170	Off track dectection DISCR
OVLD	IC7603→IC7320	Overload flag input
PP	CONN.1101→C2231	XB or PPN(read or write)
PWM	IC7170→R3268	Pulse width modulation
R/W	IC7320→IC7324	µP read/write signal
RAD-	IC7105→CONN.1101	Radial actuator negative connection
RAD+	IC7105→CONN.1101	Radial actuator positive connection
RADINT	IC7170→R3111	Radial actuator integrator voltage.
REN	CONN.1101	Radial Error Normalized
RENSW	IC7170→R3124	Radial Error Normalized switch
RESEN	IC7170→IC7245 IC7170→IC7130	Reset encoder(CDCEP) and digital servo(DSICR)
RESET	IC7170→IC7210	Reset decoder CD60
RIGHTOUT	C2498→CONN.1400 C2498→CONN.1420 C2498→C2303	Analog right output
RSTHA	IC7325→IC7465	Reset high active, reset for DAIO

RSTIN	IC7320→IC7325	Reset microcontroller(from user µP)
RSTLA	IC7325→IC7440 IC7325→IC7170 IC7325→D6130 IC7325→CONN.1330	Reset low active, reset for GDIN, servo uP, DSD3, DSICR and display.
RXD	IC7320↔IC7325	Receive data of serial interface
SCL	IC7320↔L5300	I2C-bus clock for communication
SCLI	IC7320→T7326	I2C-bus clock Input to check "busy" of slave
SDA	IC7320↔L5300	I2C-bus data to display driver
SDAUX	IC7603→IC7440	Analog to digital converted data from ADC to DAI-O
SL-	IC7105→CONN.1101	Sledge motor negative connection
SL+	IC7105→CONN.1101	Sledge motor positive connection
STROBE	IC7320→IC7465 IC7320→CONN.1302	Control signal for DAI-O : data strobe
SWRT	IC7245→CONN.1102	Start Write 9ms(one shot at start up LWRT)
SYSCKLSW2	IC7320→IC7411	Control signal for system clock selection
SYSCLKSW1	IC7320→IC7411	Control signal for system clock selection
SYSSYNC	IC7170→CONN.1135	System synchronization
TLN	CONN.1101→IC7130	Track Loss Normalized
TRAYSW	CONN1380→IC7320	Control signal from CD loader (CDR765)
TRS1N	IC7170→CONN.1103	Tray sense
TXD	IC7320↔IC7325	Transmit data serial interface
UDAVAIL	IC7320→IC7465	User-data available
UNLOCK	IC7465→IC7320	Not locked on incoming EBU-signal
UNLOCK_GDIN	IC7323→R3435	Unlock signal to GDIN
V4	IC7210→CONN.1250	Versatile pin 4
VDC1	Supply voltage	Filament voltage for display
VDC2	Supply voltage	Filament voltage for display
VFTD	Supply voltage	Power supply for display
WCLK	IC7210→IC7245	Word clock
WSCDCEP	IC7260→IC7245	I2S word select to CDCEP
WSN2	CONN1360→ IC7260	I2S word select from CD player (CDR765)

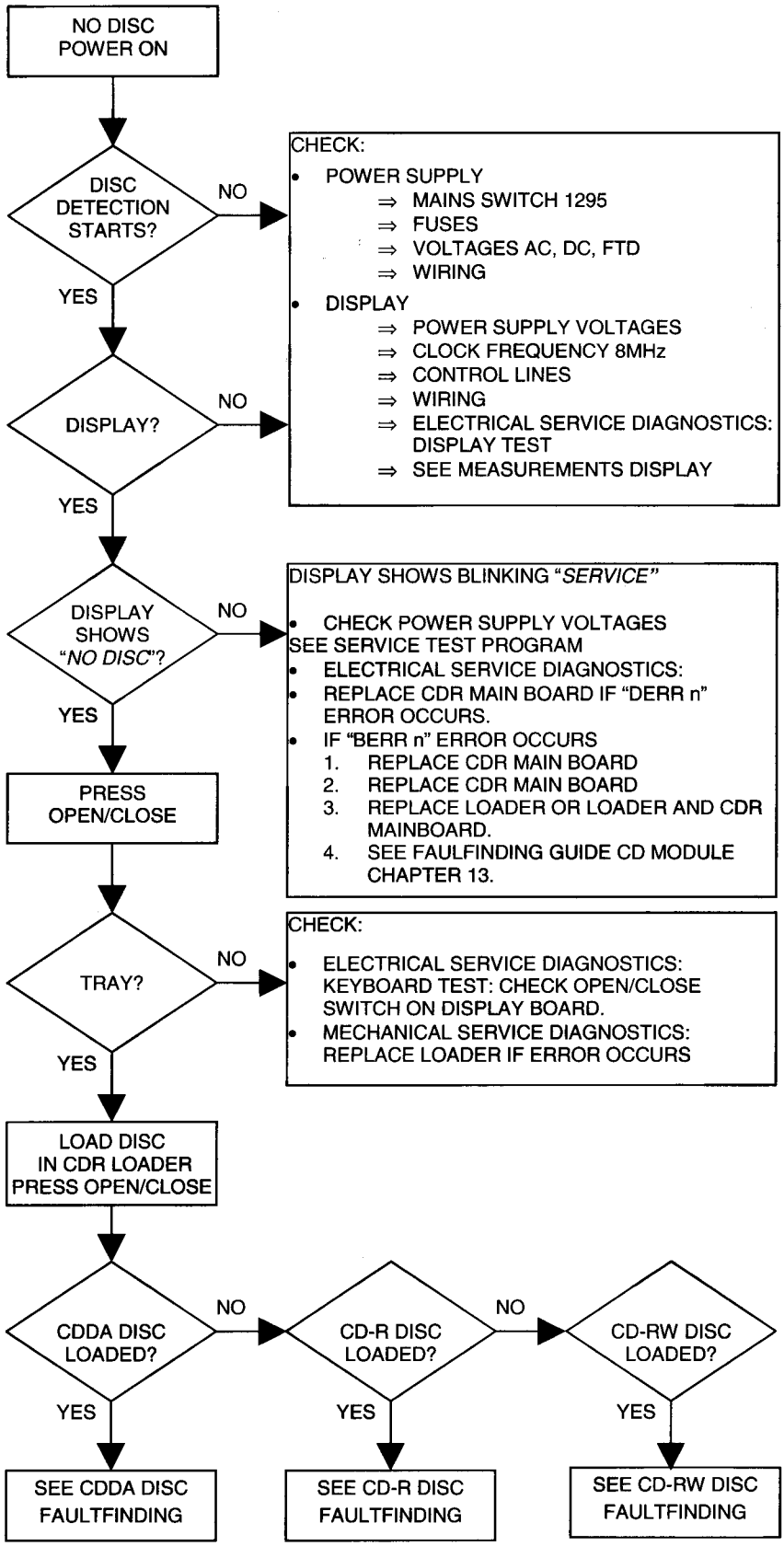
SERVICE TEST PROGRAM



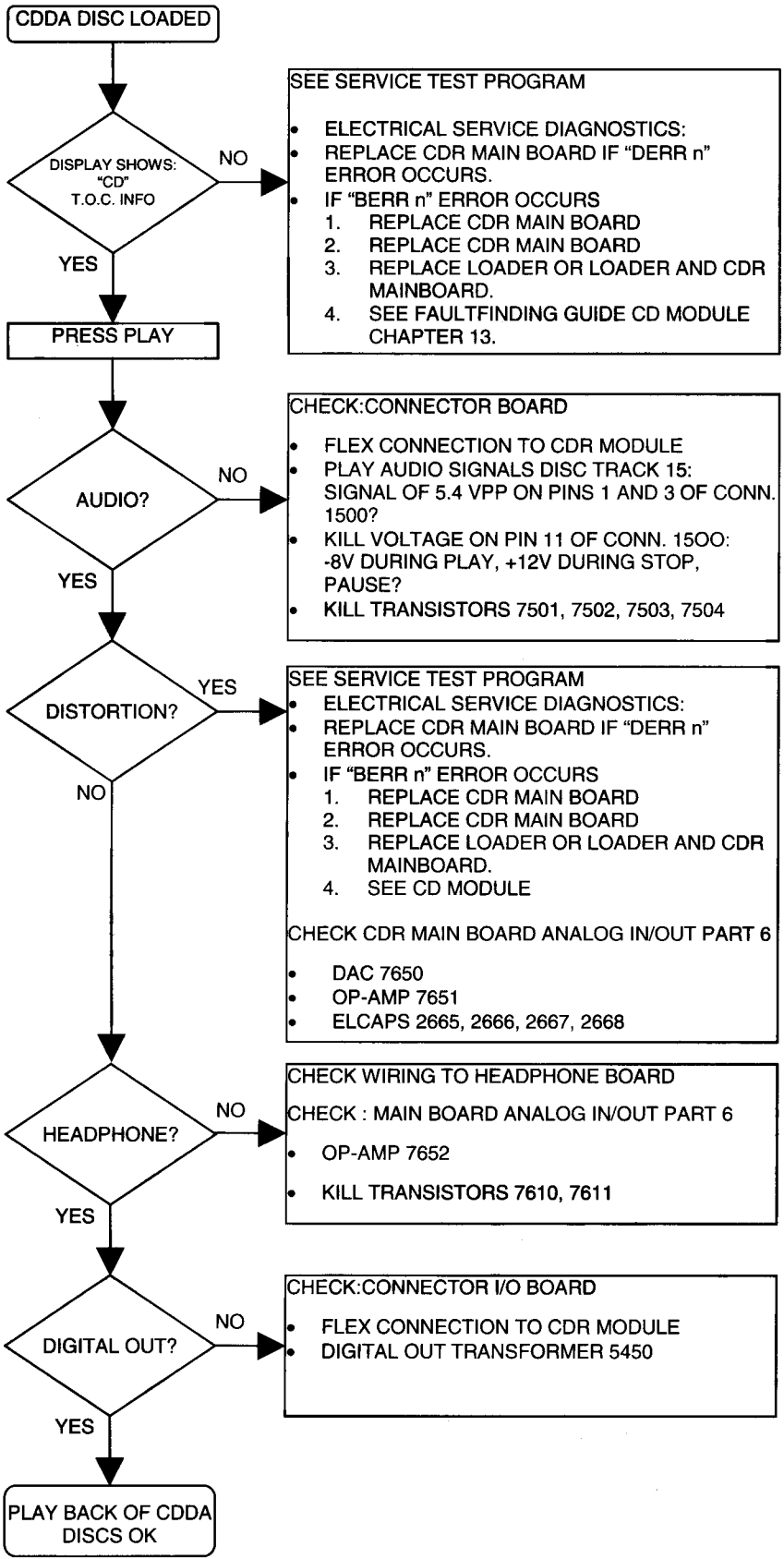


umber of test
t of aborted test will not be displayed

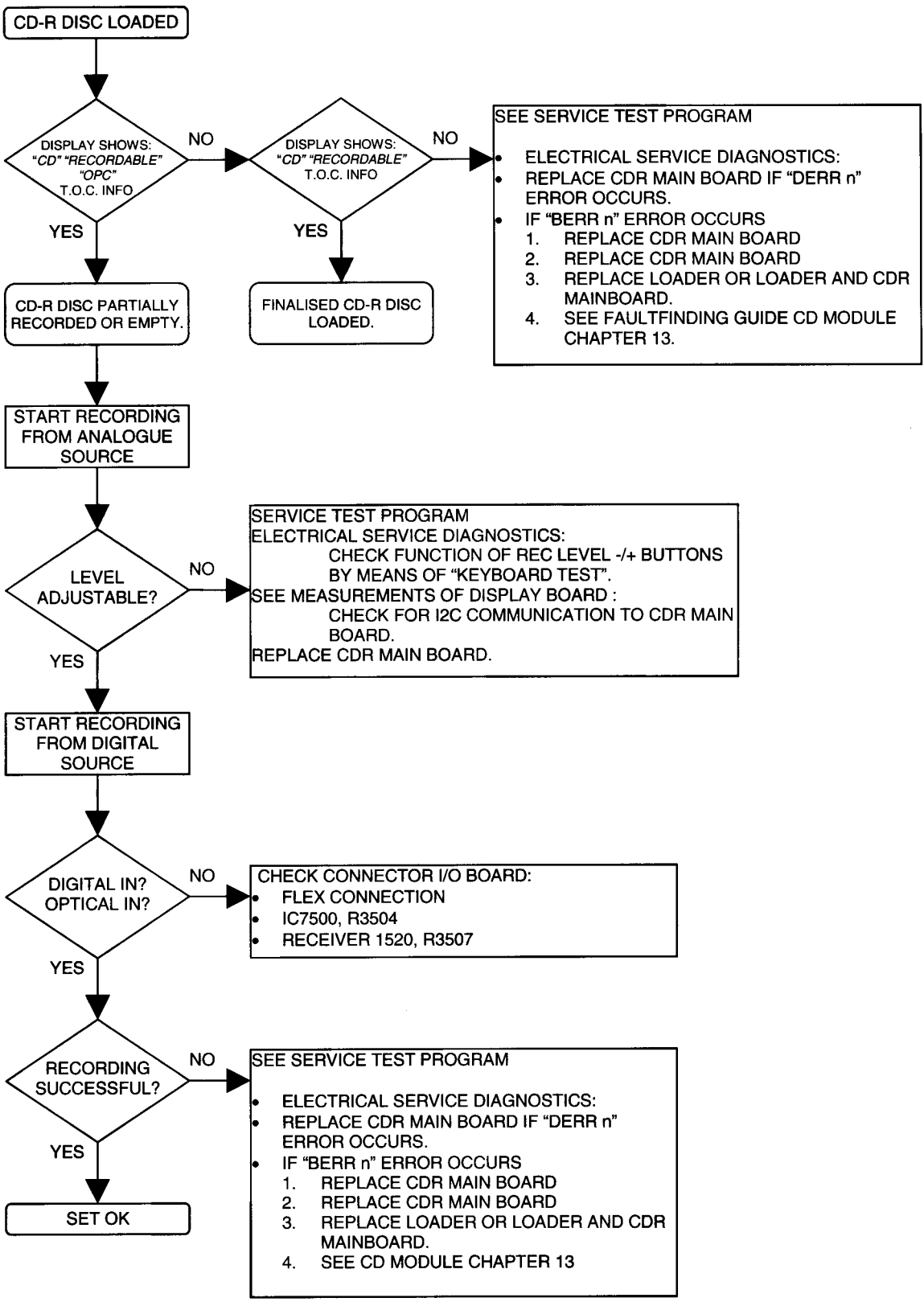
FAULTFINDING GUIDE



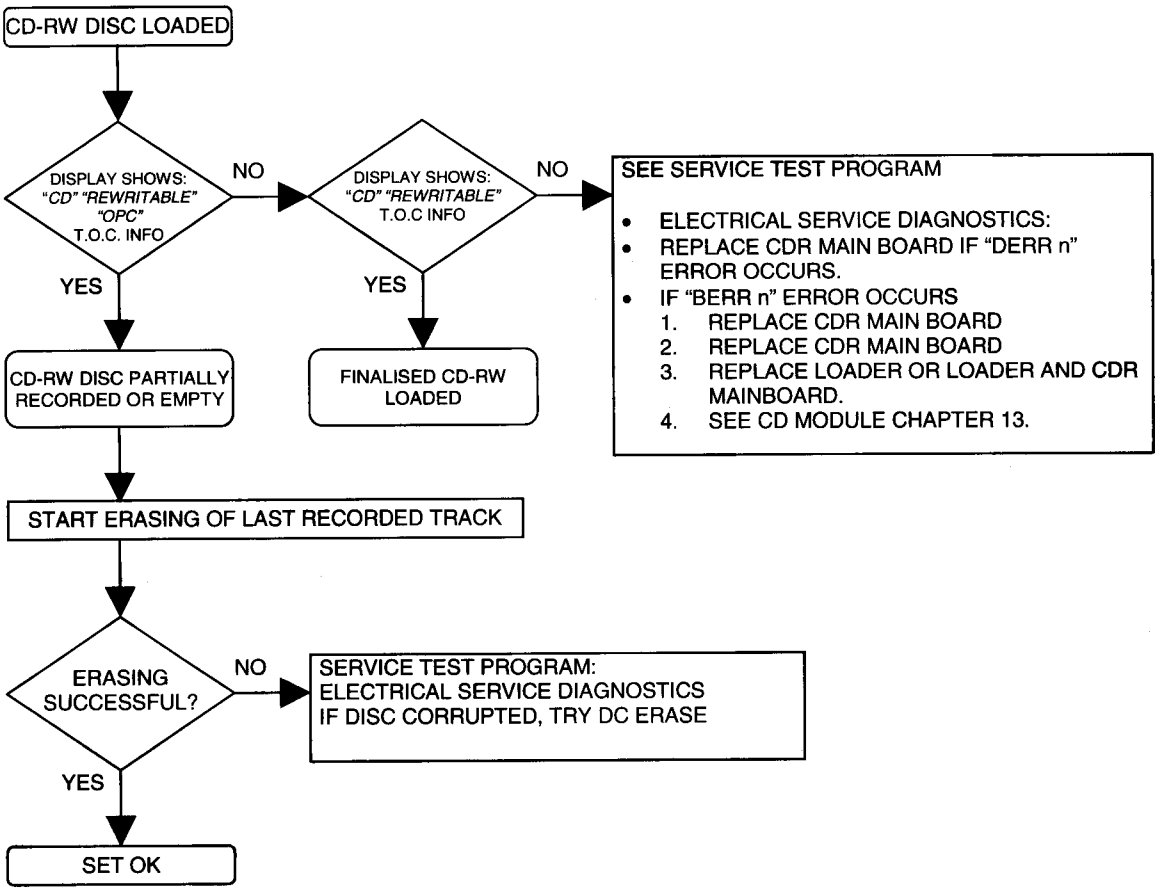
CDDA DISC FAULTFINDING GUIDE



CD-R DISC FAULTFINDING



CD-RW DISC FAULTFINDING



MEASUREMENTS DISPLAY PANEL

1. Measurement of voltage supplies.

Several voltages arrive at the display PCB.
Measurements and limits.

Voltage	Nominal value	Limits
VFTD	-26V	±5%
VDC1-DC2	3.5V	±10%
Vb	5V	±5%

2. Measurement of oscillator.

As clock driver for the display controller a resonator of 8Mhz is used.
The clock frequency is available at pin 8 of the display controller.
Check the frequency of 8Mhz ±5%.

3. Checking the control lines.

There are several lines which are inputs to the display controller and others which are outputs, these lines have to be checked to guarantee basic functionality.

RESETN:

This line should be kept low during power up for at least 3 machine cycles,with supply voltage within the operating range and oscillation stable.1 machine cycle = 12 X 1/Fc (8Mhz) Sec.

SDA and SCL:

The level on these two lines must be checked. When there is no communication they should have the 'High' level.

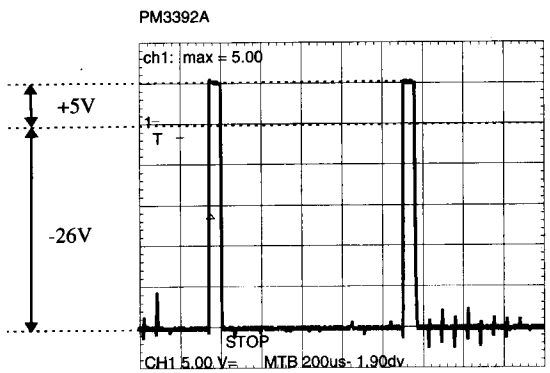
INTERRUPT:

The interrupt line is an output for the display controller. Check if this level is high after reset, no key pressed and no RC5 coming in.
Low pulses will be present when a key is pressed or when receiving RC5 commands from remote control.

Key matrix lines:

Check if at I/O port 4 of the controller all pins are high.(No keys pressed).(Pin 26 to 33). If not check respective pull-up resistors.

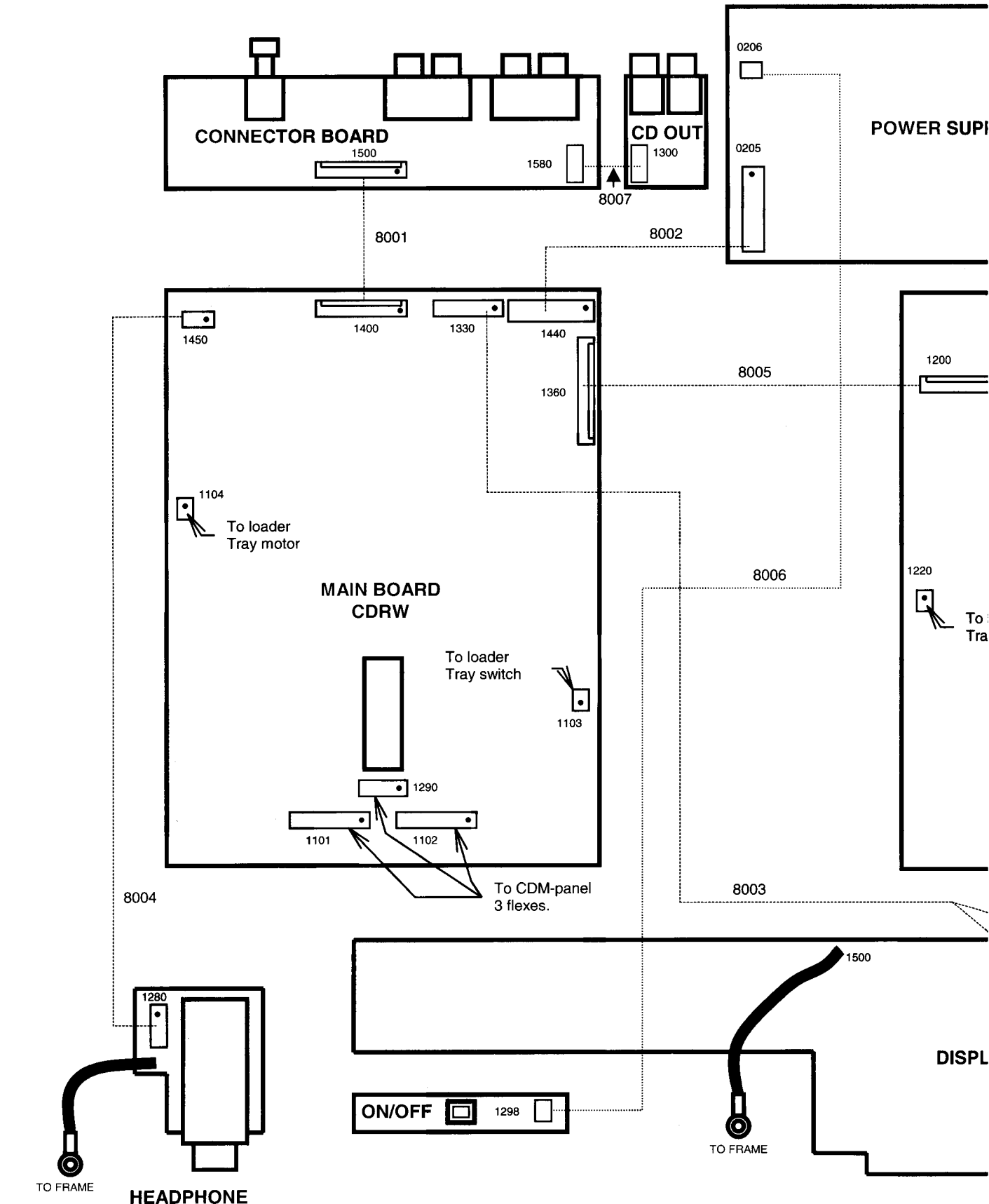
4. Operation of grid and segment control lines.



This figure shows the signal generated by the display processor on one of the grid lines. The level on the grid line changes from -26V to +5V.

The grid lines are scanned successively about every 950 µsec.

WIRING DIAGRAM



Pin 1 indicated by All Wires are 1/1.

8001

1	RIGHTOUT!
2	GROUND
3	LEFTOUT!
4	LEFTIN!
5	GROUND
6	RIGHTIN!
7	GROUND
8	+5Vb!
9	LEFT2!
10	GROUND
11	KILL!
12	RIGHT2!
13	GROUND
14	DIGOUT!
15	DIGINEXT!
16	GROUND
17	OPTIN!
18	GROUND
19	EBUININT!
20	GROUND

8002

1	+5Vb!
2	+5VM!
3	+5Vb!
4	GROUND
5	GROUND
6	VDC2!
7	VFTD!
8	GROUND
9	+12V!
10	-8V!
11	VDC1!

8003

1	SDA!	1
2	SCL!	2
3	RSTLA!	3
4	GROUND	4
5	INTSLAVE!	5
6	VDC1!	6
7	VFTD!	1'
8	VDC2!	2'
9	+5Vb!	3'
10	GROUND	4'

8004

1	HPLEFT!
2	GROUND
3	HPRIGHT!

8005

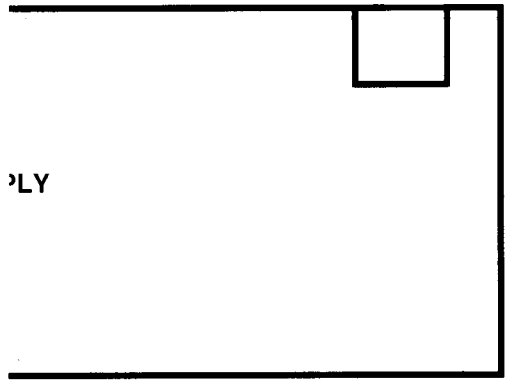
1	GROUND
2	DSA_DATA!
3	GROUND
4	DSA_STROBE!
5	DSA_ACK!
6	GROUND
7	+5Vb!
8	+12Vb!
9	GROUND
10	CLKN2!
11	WSN2!
12	GROUND
13	DAN2!
14	GROUND
15	EBUININT!
16	LSTHA!
17	LEFT2!
18	GROUND
19	RIGHT2!
20	GROUND
21	CLKCD!
22	GROUND

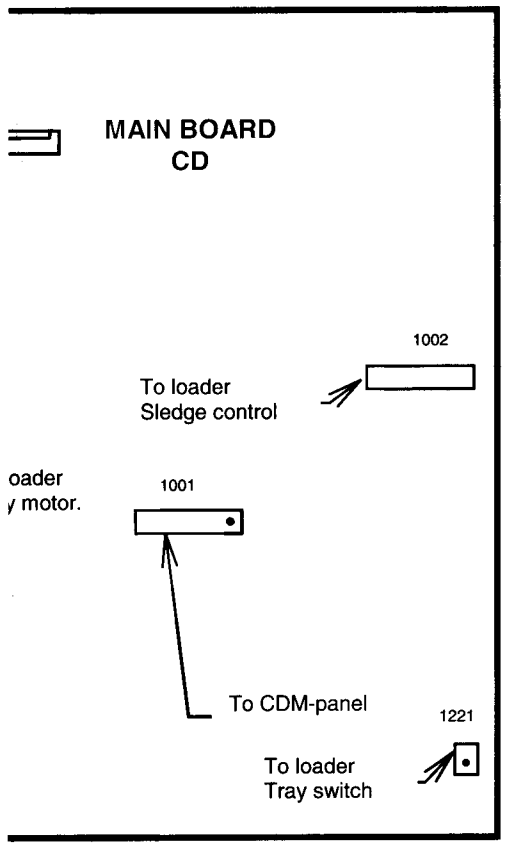
8006

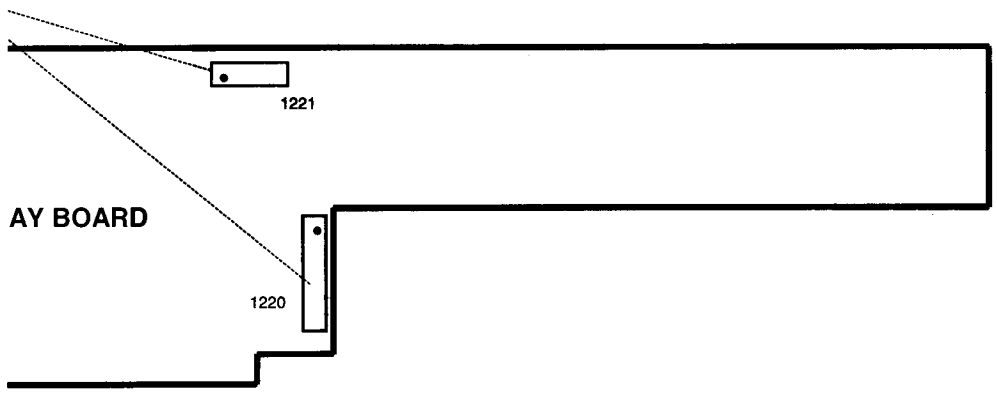
1	ON!
2	OFF!

8007

1	LEFT2!
2	GND
3	RIGHT2!
4	DIGININT!
5	GND
6	KILL!

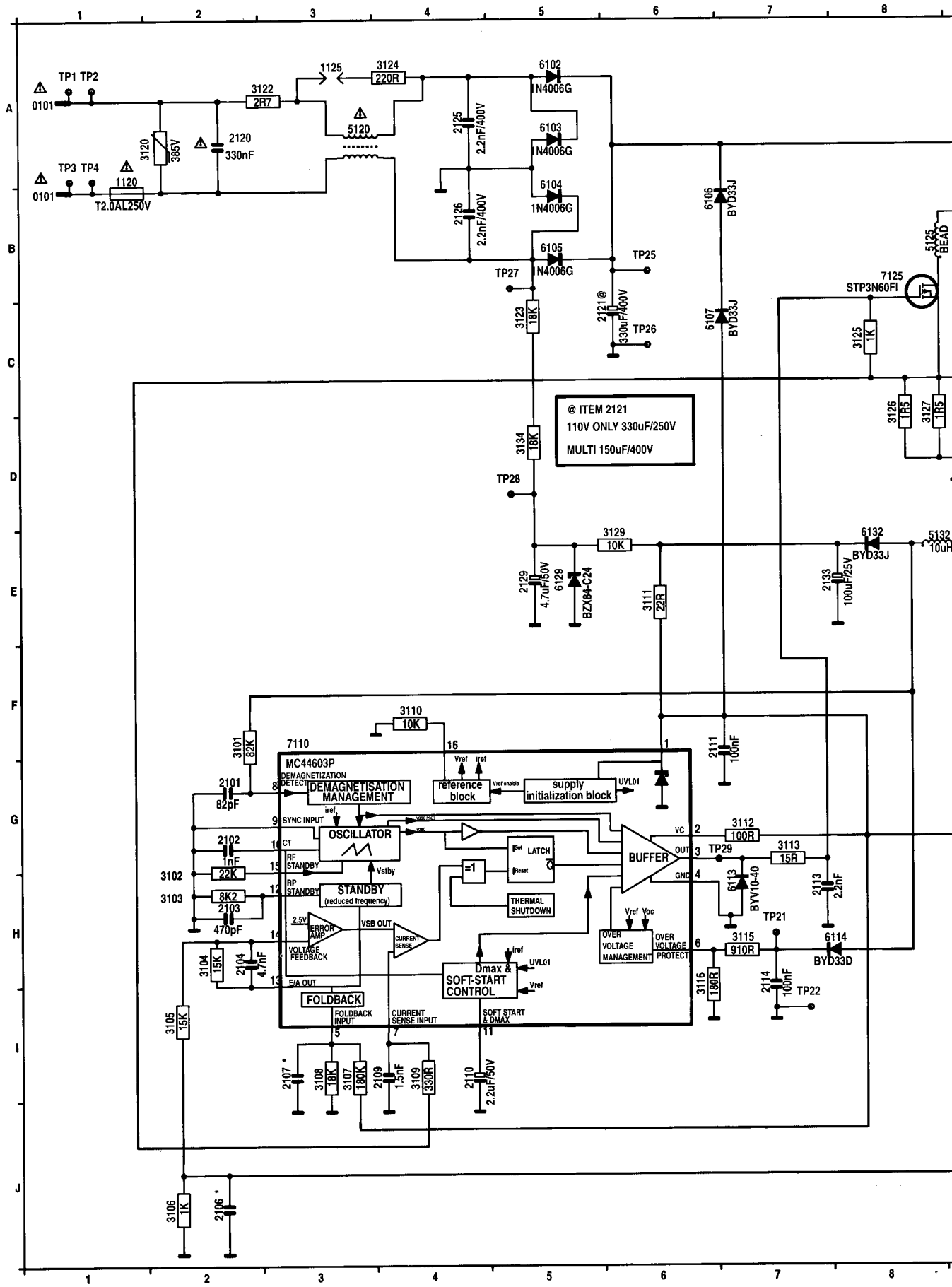


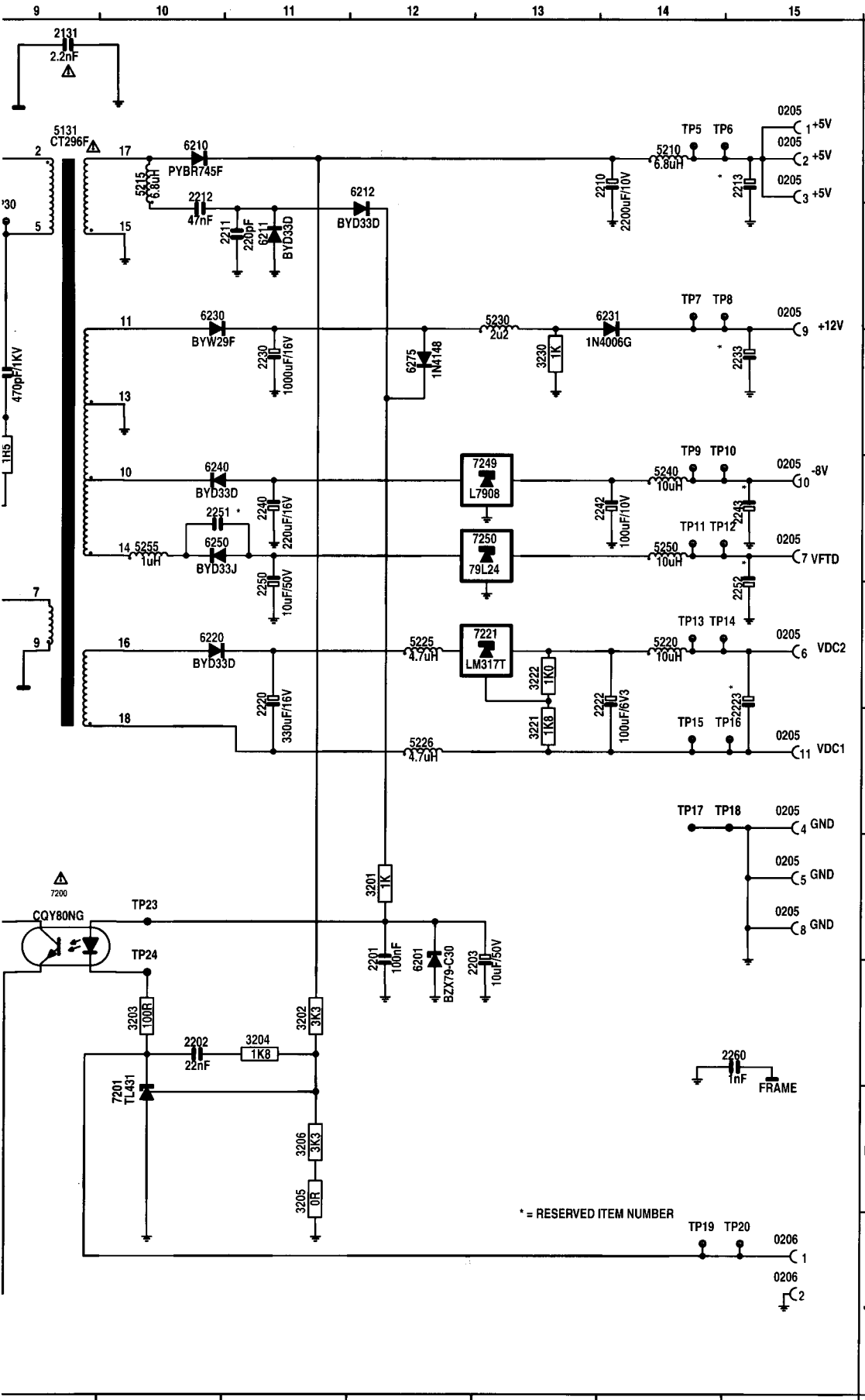




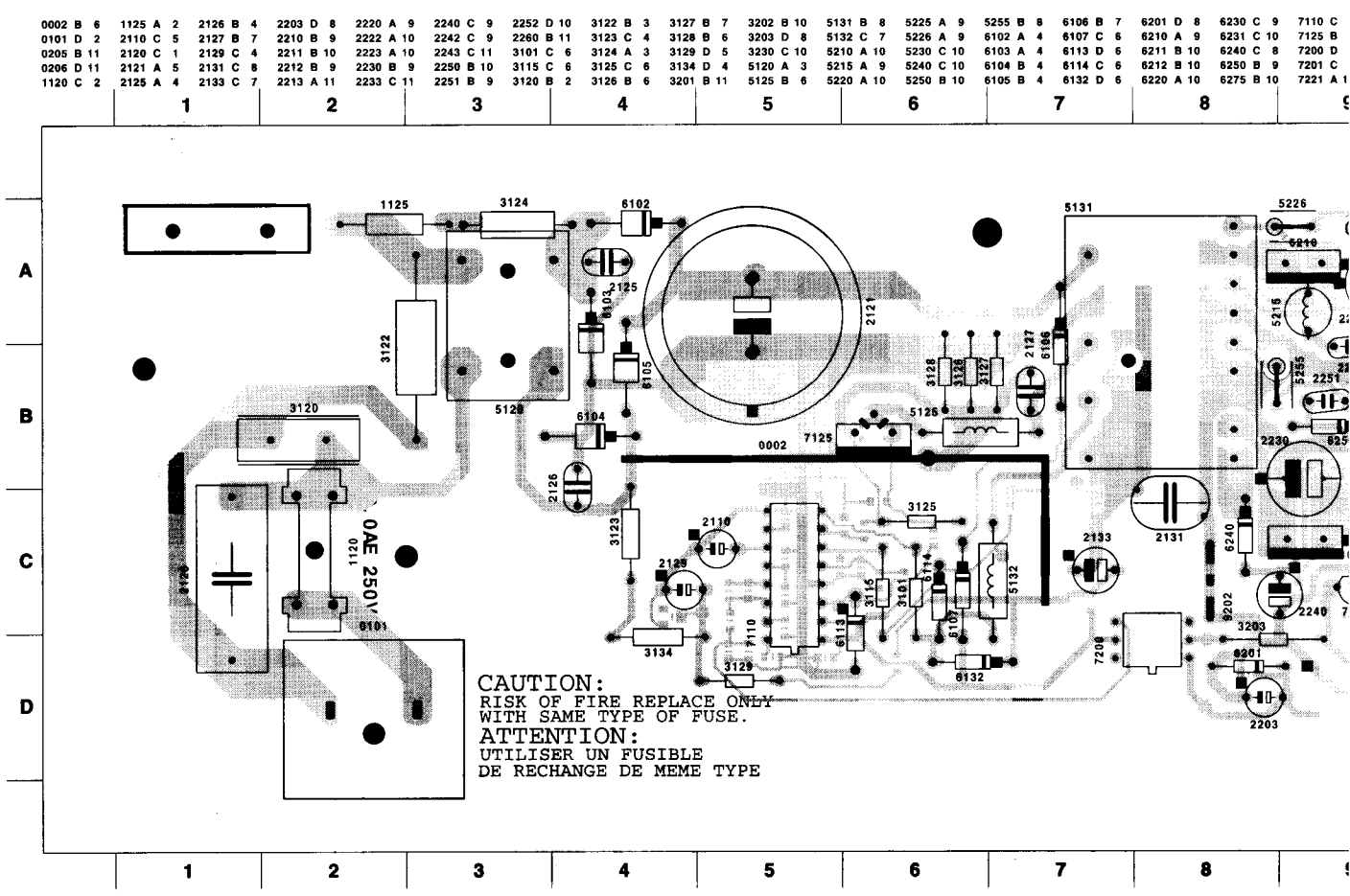
HAS1189
9820

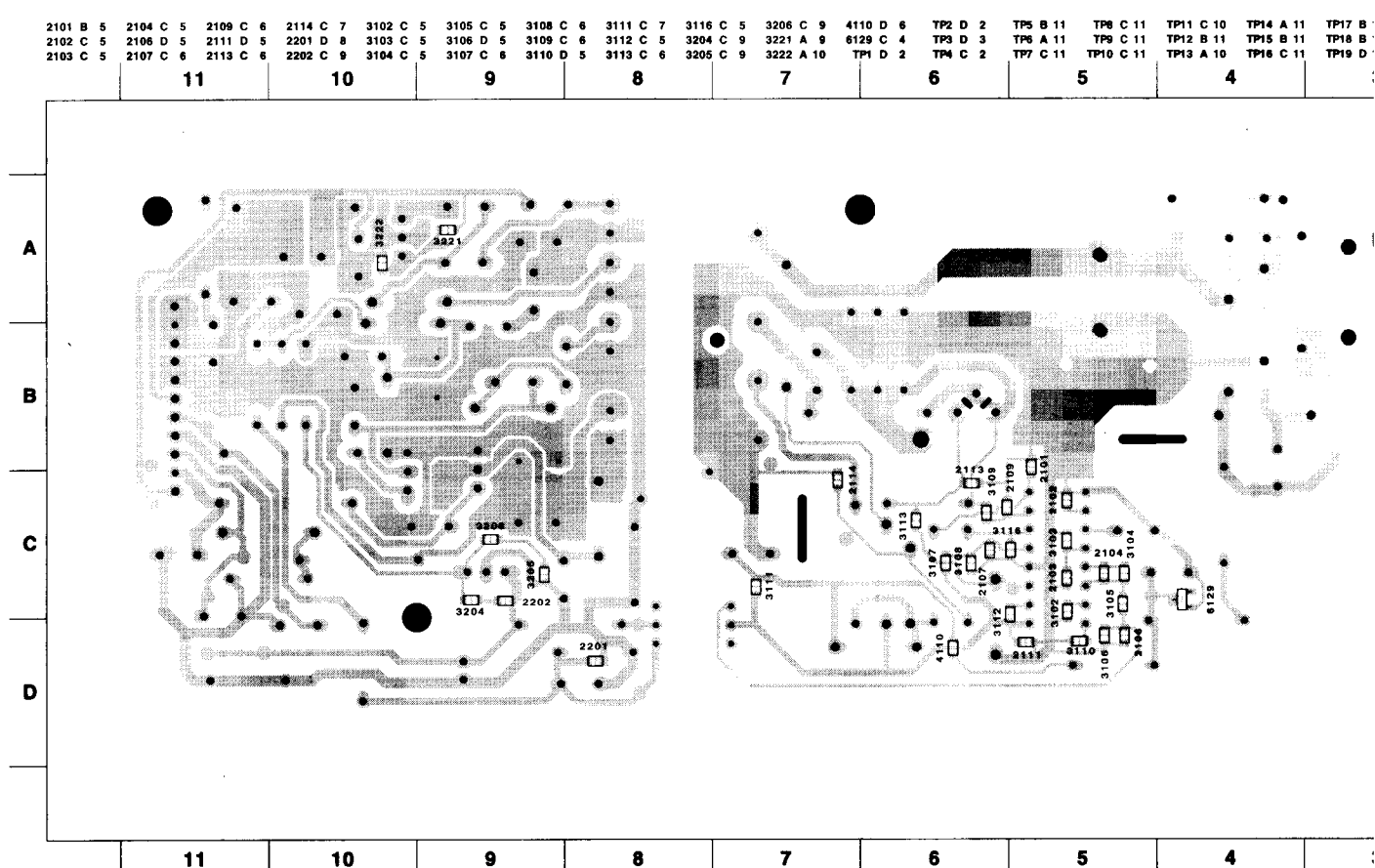
POWER SUPPLY UNIT CIRCUIT DIAGRAM



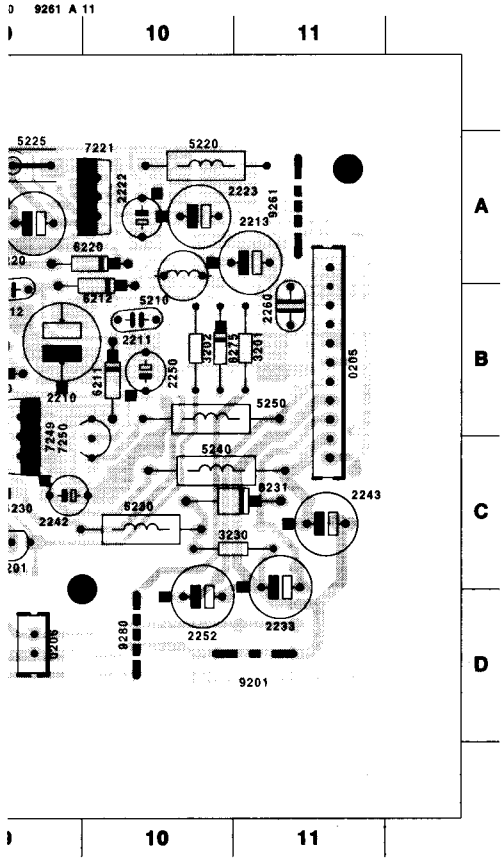


POWER SUPPLY UNIT BOARD

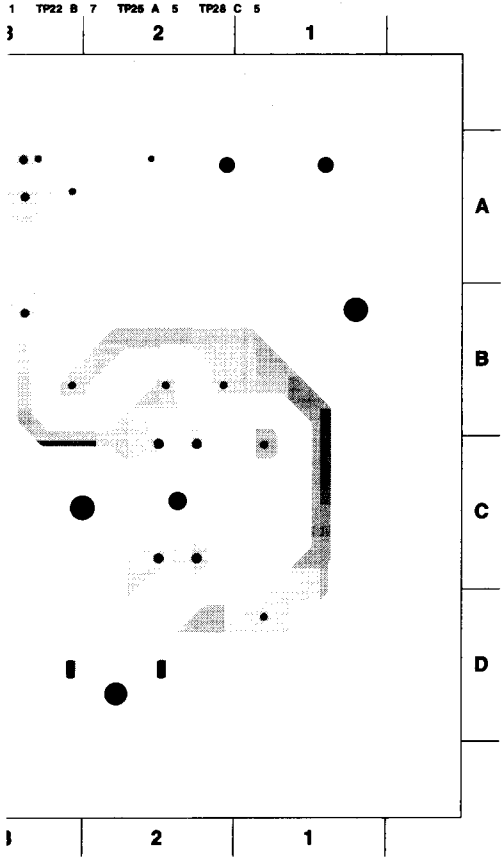




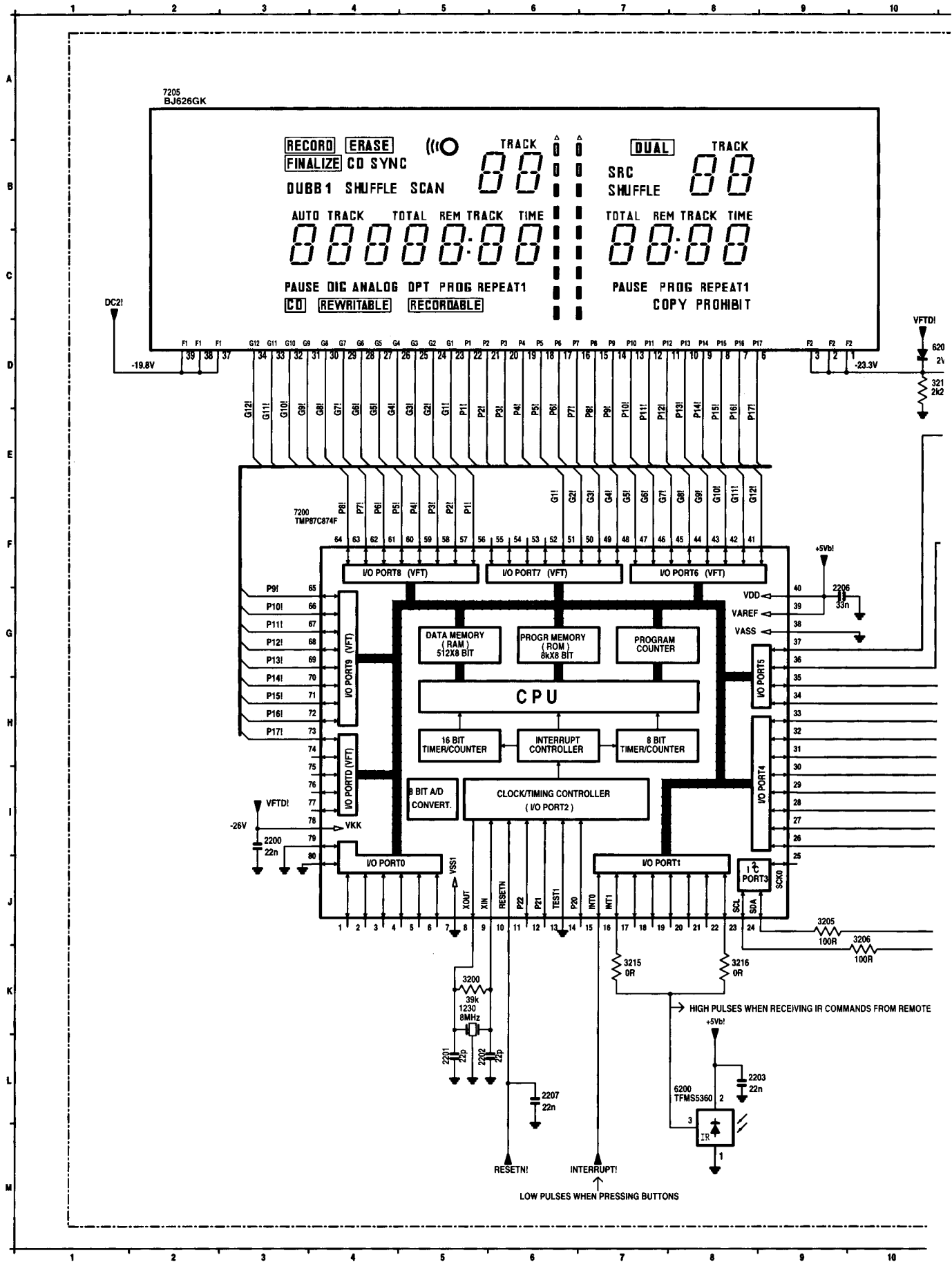
5 7249 C 9 9280 D 10
5 7250 C 10
8 9201 D 11
9 9202 C 8
0 9261 A 11

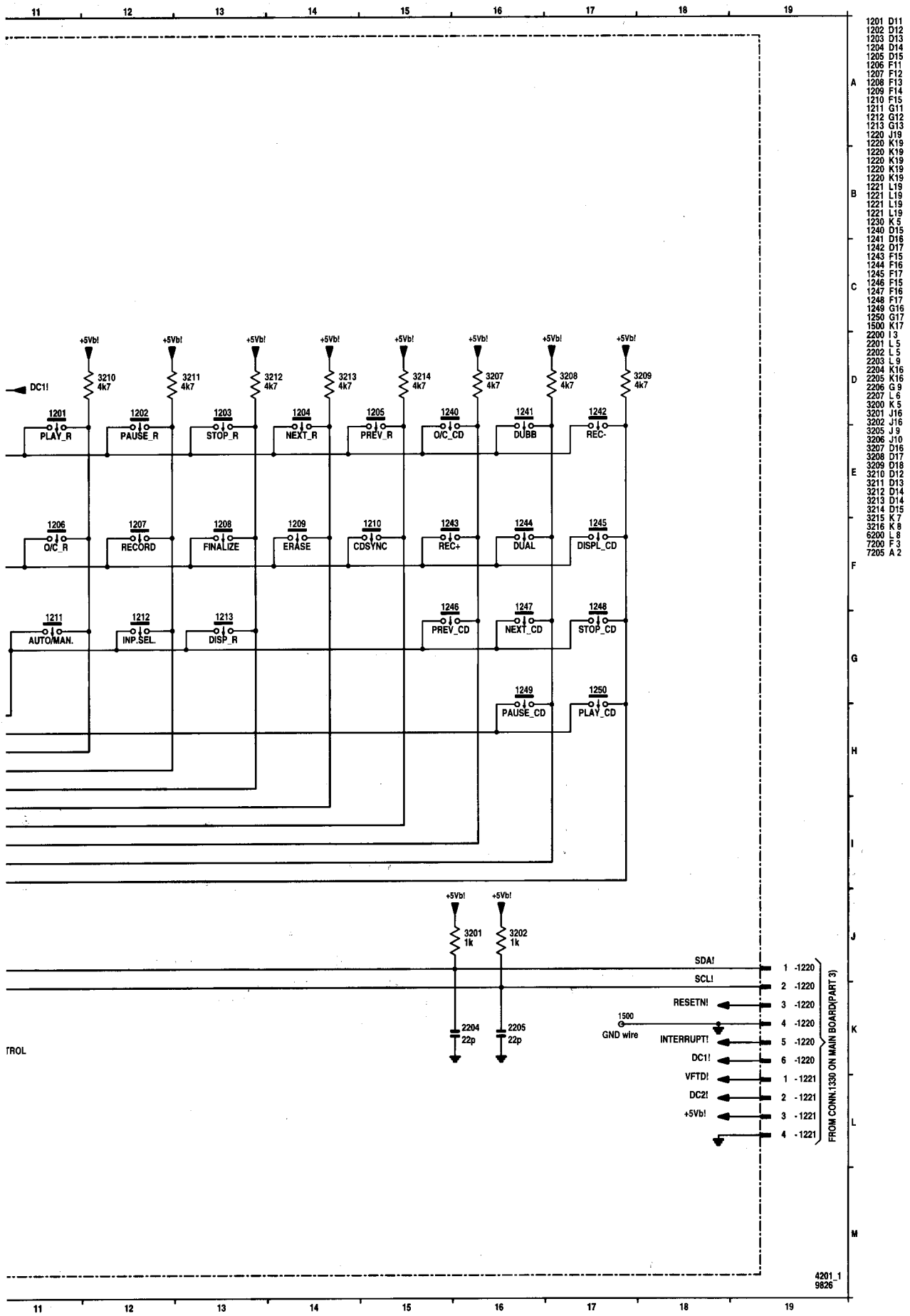


1 TP20 D 11 TP23 D 8 TP26 B 5 TP29 C 5
1 TP21 C 7 TP24 D 8 TP27 C 4 TP30 B 7
1 TP22 B 7 TP25 A 5 TP28 C 5



DISPLAY CIRCUIT DIAGRAM

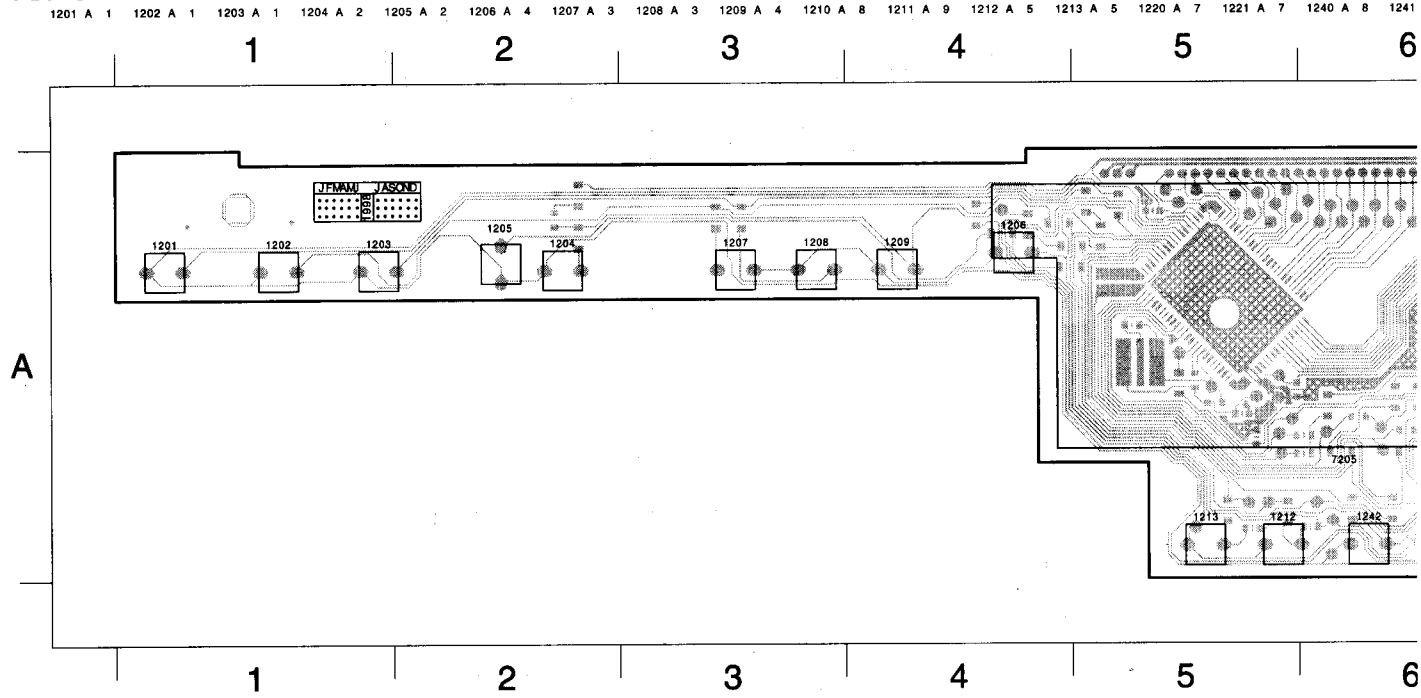



11 12 13 14 15 16 17 18 19
+5Vb!
3210 4k7
3211 4k7
3212 4k7
3213 4k7
3214 4k7
3207 4k7
3208 4k7
3209 4k7
DC1!
1201 PLAY_R
1202 PAUSE_R
1203 STOP_R
1204 NEXT_R
1205 PREV_R
1240 O/C_CD
1241 DUBB
1242 REC-
1206 O/C_R
1207 RECORD
1208 FINALIZE
1209 ERASE
1210 CDSYNC
1243 REC+
1244 DUAL
1245 DISPL_CD
1211 AUTO/MAN.
1212 INP.SEL.
1213 DISP_R
1246 PREV_CD
1247 NEXT_CD
1248 STOP_CD
1249 PAUSE_CD
1250 PLAY_CD
3201 1k
3202 1k
2204 22p
2205 22p
SDA!
SCL!
RESETN!
1500
GND wire
INTERRUPT!
DC1!
VFTD!
DC2!
+5Vb!
1 -1220
2 -1220
3 -1220
4 -1220
5 -1220
6 -1220
1 -1221
2 -1221
3 -1221
4 -1221
FROM CONN.1330 ON MAIN BOARD(PART 3)
TROL
1201 D11
1202 D12
1203 D13
1204 D14
1205 D15
1206 F11
1207 F12
1208 F13
1209 F14
1210 F15
1211 G11
1212 G12
1213 G13
1220 J19
1220 K19
1220 K19
1220 K19
1220 K19
1220 K19
1221 L19
1221 L19
1221 L19
1221 L19
1230 K 5
1240 D15
1241 D16
1242 D17
1243 F15
1244 F16
1245 F17
1246 F15
1247 F16
1248 F17
1249 G16
1250 G17
1500 K17
2200 I 3
2201 L 5
2202 L 5
2203 L 9
2204 K16
2205 K16
2206 G 9
2207 L 6
3200 K 5
3201 J16
3202 J16
3205 J 9
3206 J10
3207 D16
3208 D17
3209 D18
3210 D12
3211 D13
3212 D14
3213 D14
3214 D15
3215 K 7
3216 K 8
6200 L 8
7200 F 3
7205 A 2
A B C D E F G H I J K L M
4201_1
9826
11 12 13 14 15 16 17 18 19

DISPLAY BOARD

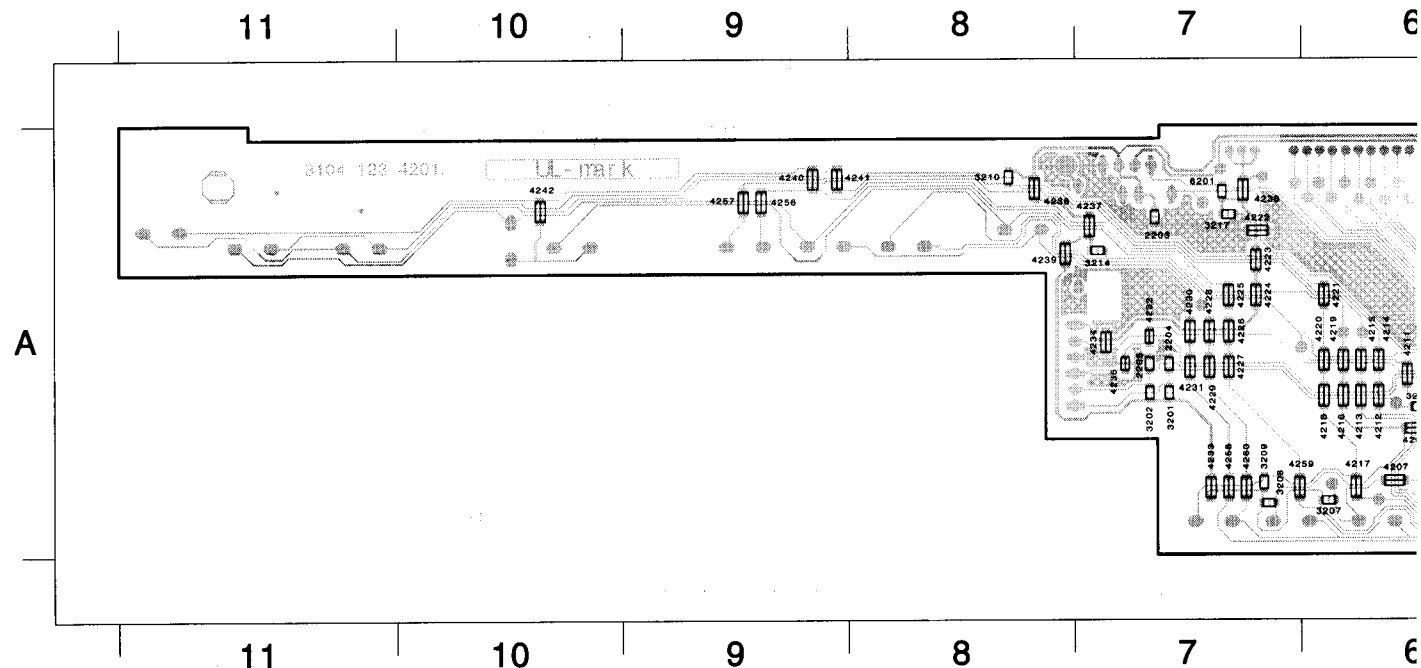
TOP SIDE

1201 A 1 1202 A 1 1203 A 1 1204 A 2 1205 A 2 1206 A 4 1207 A 3 1208 A 3 1209 A 4 1210 A 8 1211 A 9 1212 A 5 1213 A 5 1220 A 7 1221 A 7 1240 A 8 1241

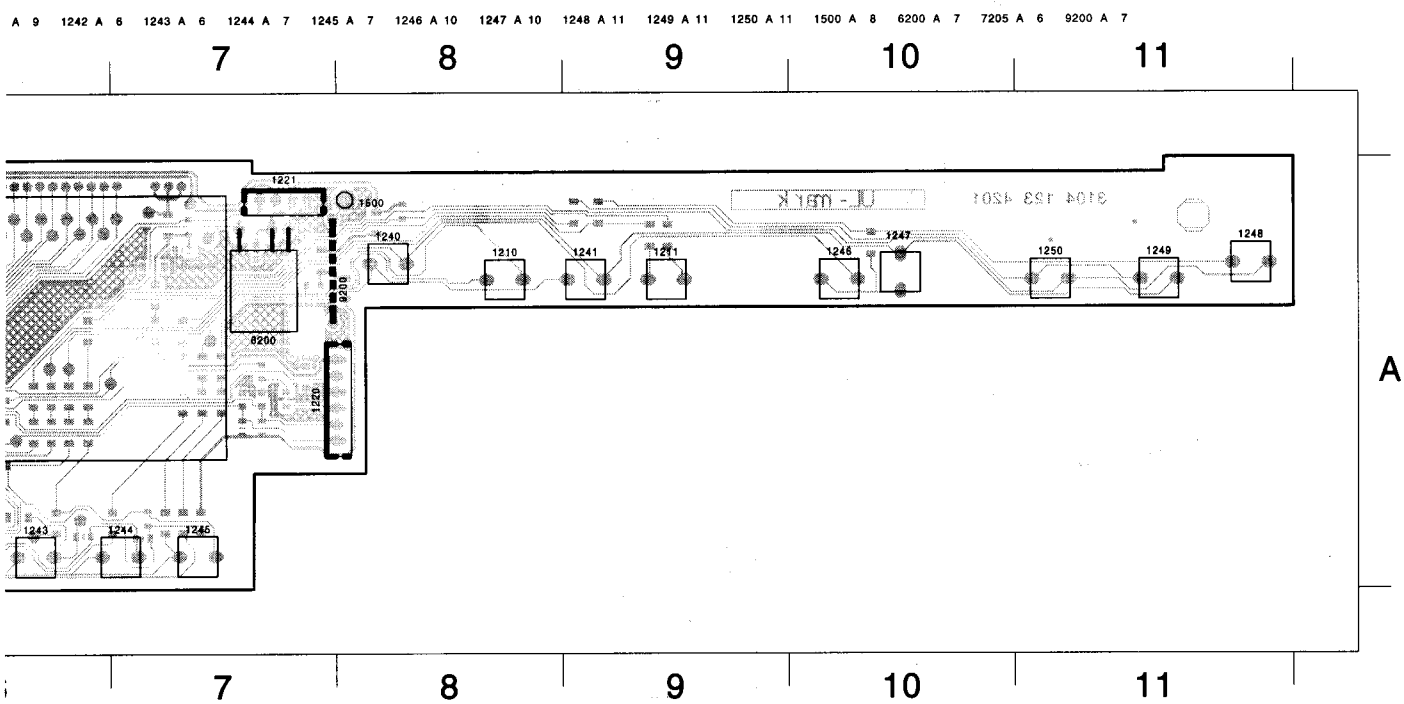


BOTTOM SIDE

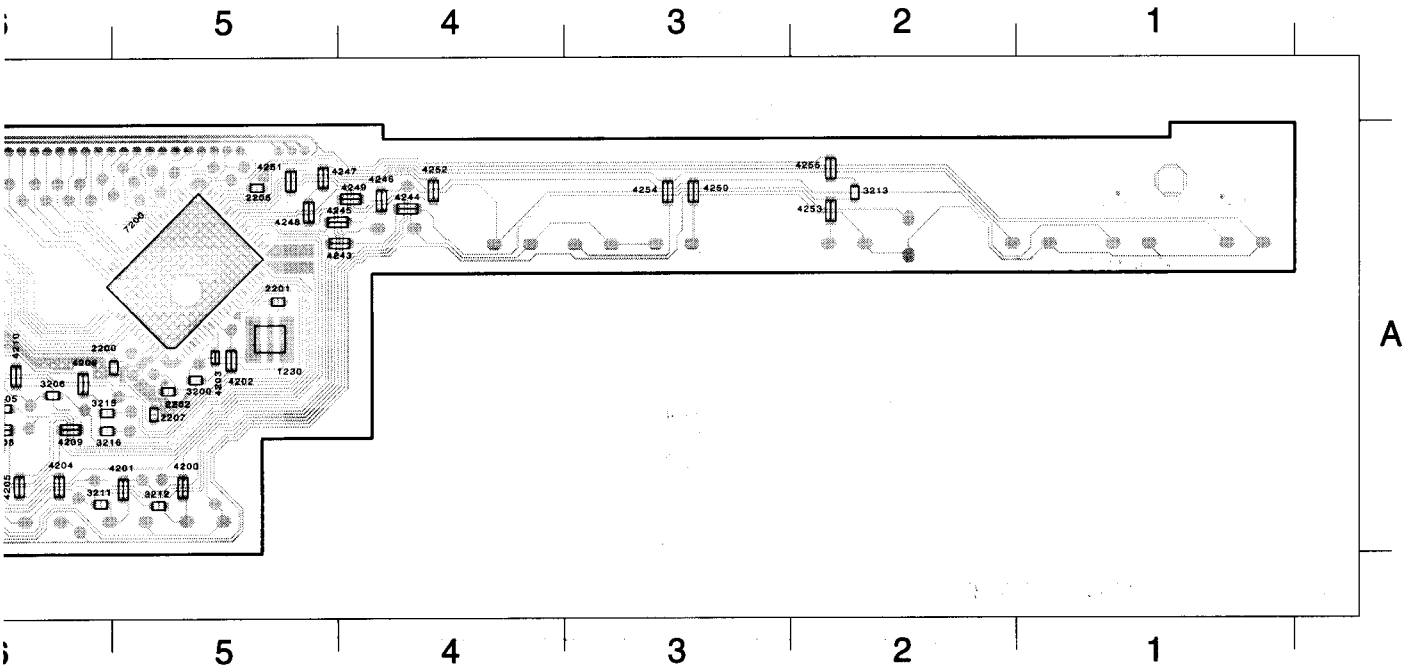
1230 A 5 2202 A 5 2205 A 7 3200 A 5 3205 A 6 3208 A 7 3211 A 6 3214 A 7 3217 A 7 4202 A 5 4205 A 6 4208 A 6 4211 A 6 4214 A 6 4217 A 6 4220 A 6 4223
2200 A 5 2203 A 7 2206 A 5 3201 A 7 3206 A 6 3209 A 7 3212 A 5 3215 A 6 4200 A 5 4203 A 5 4206 A 6 4209 A 6 4212 A 6 4215 A 6 4218 A 6 4221 A 6 4224
2201 A 5 2204 A 7 2207 A 5 3202 A 7 3207 A 6 3210 A 8 3213 A 2 3216 A 6 4201 A 5 4204 A 6 4207 A 6 4210 A 6 4213 A 6 4216 A 6 4219 A 6 4222 A 7 4225



A 9 1242 A 6 1243 A 6 1244 A 7 1245 A 7 1246 A 10 1247 A 10 1248 A 11 1249 A 11 1250 A 11 1500 A 8 6200 A 7 7205 A 6 9200 A 7

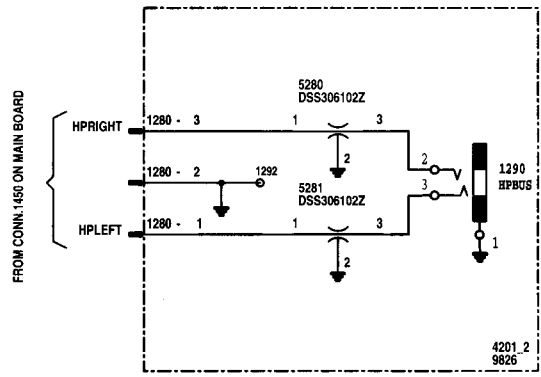


A 7 4226 A 7 4229 A 7 4232 A 7 4235 A 7 4238 A 8 4241 A 9 4244 A 4 4247 A 5 4250 A 3 4253 A 2 4256 A 9 4259 A 7 7200 A 5
A 7 4227 A 7 4230 A 7 4233 A 7 4236 A 7 4239 A 8 4242 A 10 4245 A 4 4248 A 5 4251 A 5 4254 A 3 4257 A 9 4260 A 7
A 7 4228 A 7 4231 A 7 4234 A 7 4237 A 7 4240 A 9 4243 A 4 4246 A 4 4249 A 4 4252 A 4 4255 A 2 4258 A 7 6201 A 7



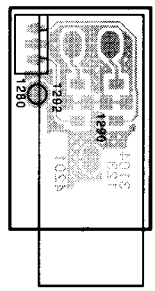
HEADPHONE

CIRCUIT DIAGRAM

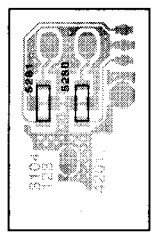


HEADPHONE BOARD

TOP SIDE

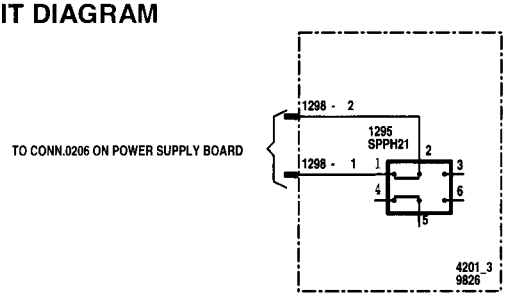


BOTTOM SIDE

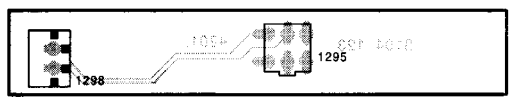


SWITCH ON/OFF

CIRCUIT DIAGRAM

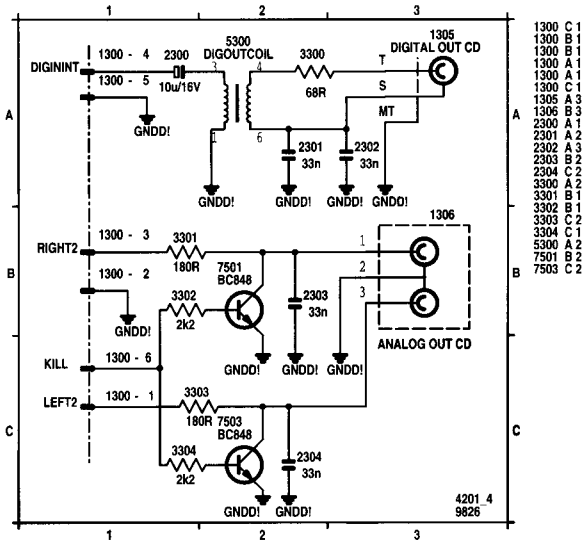


SWITCH BOARD



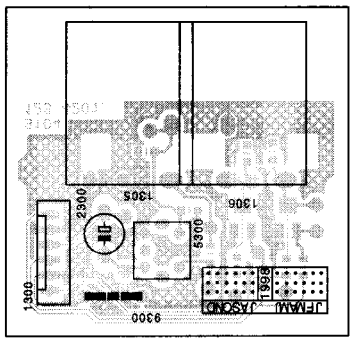
CD OUT BOARD

CIRCUIT DIAGRAM

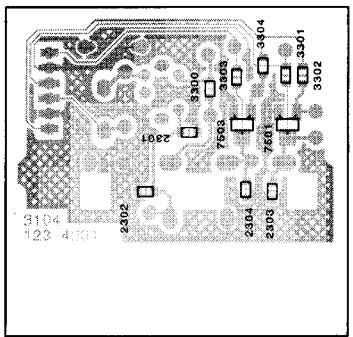


CD OUT BOARD

TOP SIDE



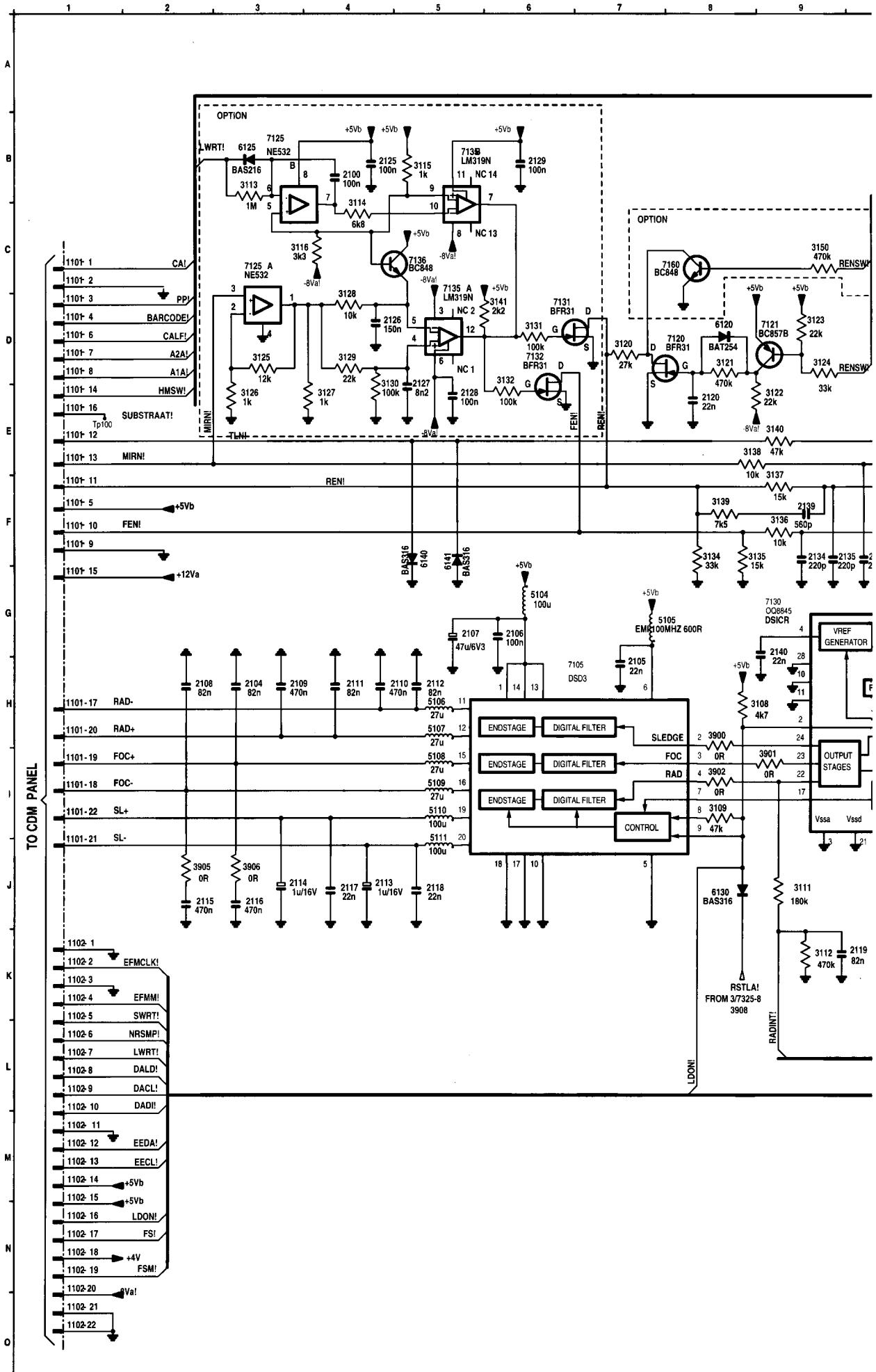
BOTTOM SIDE

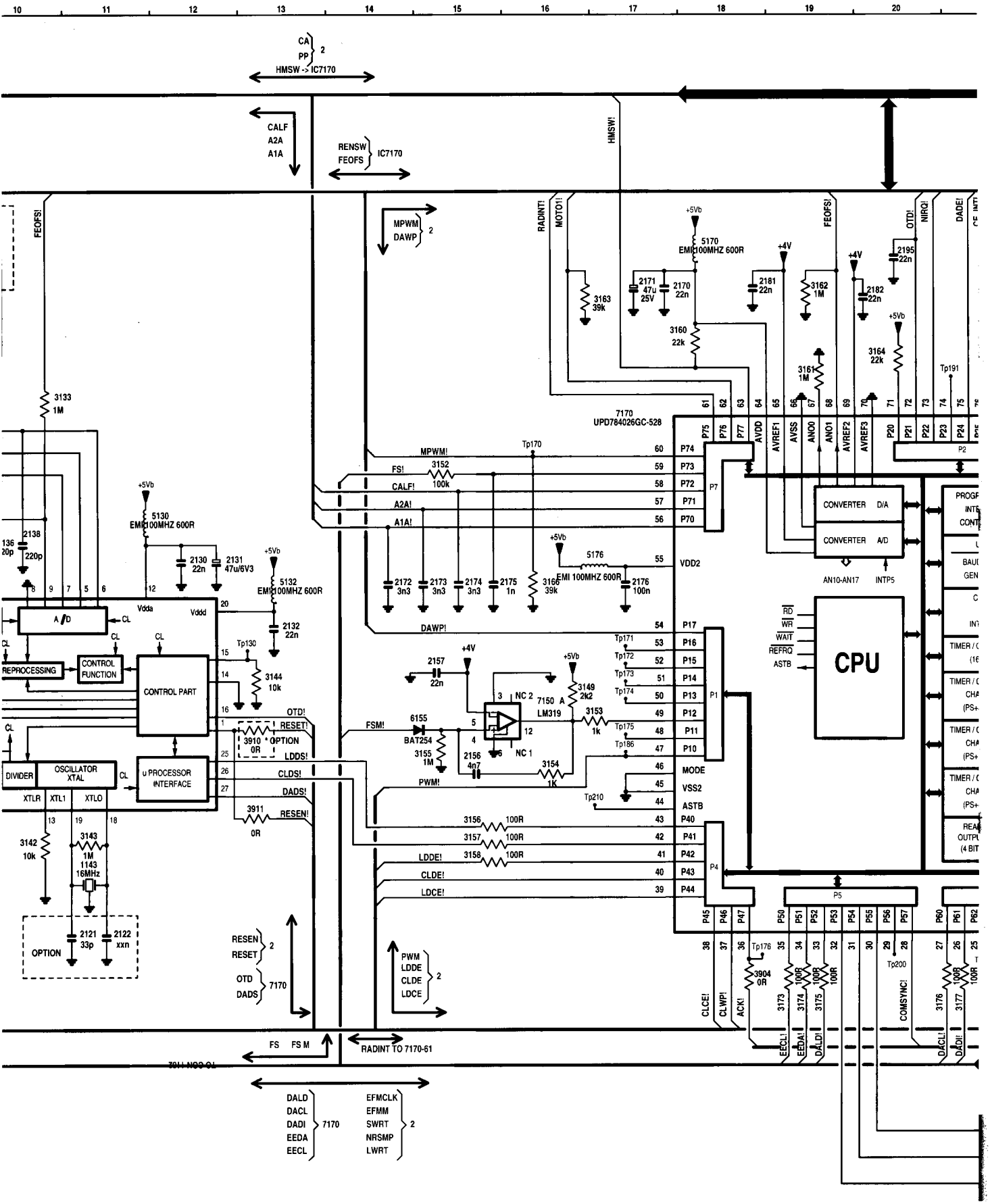


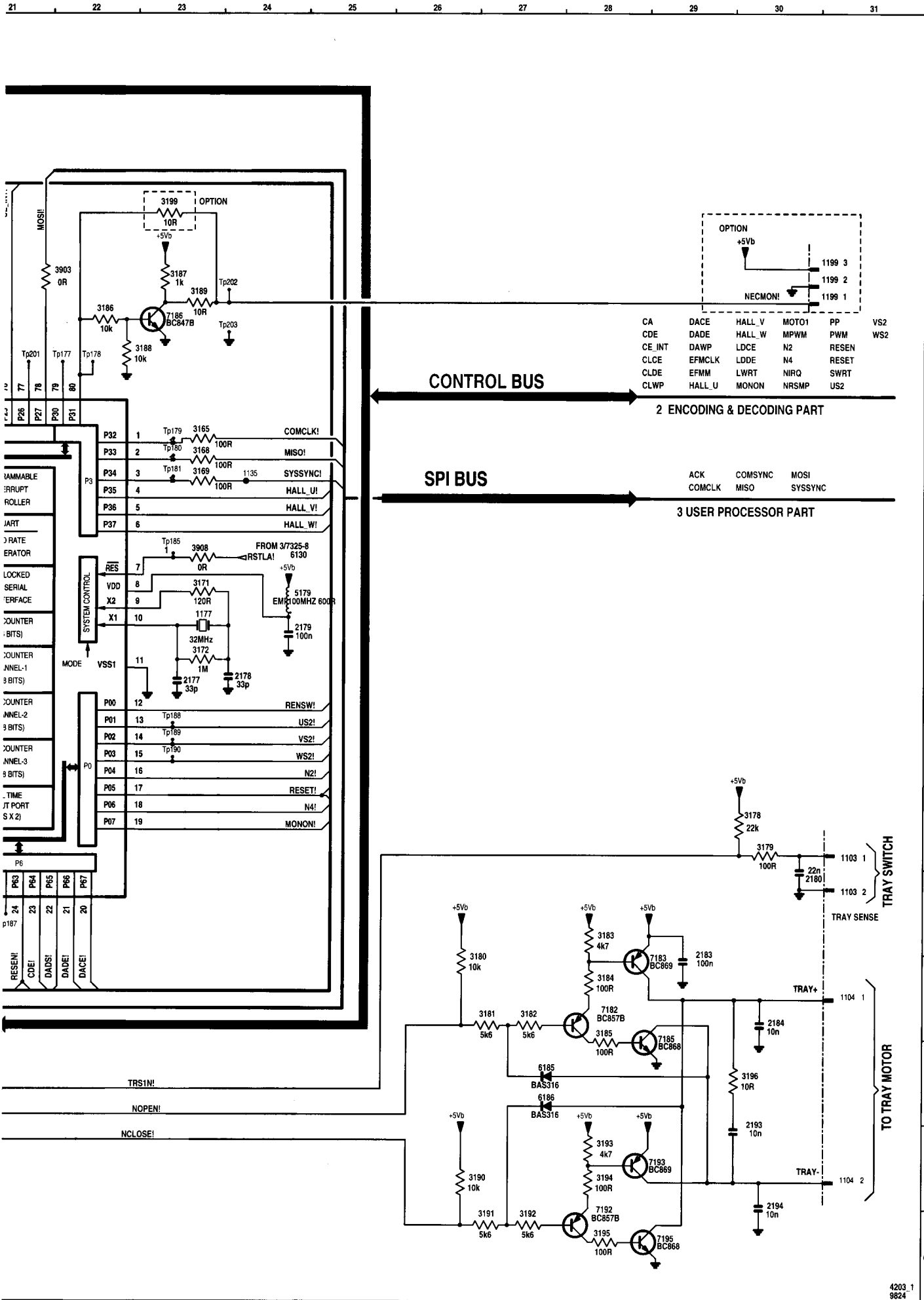
CDR MAIN BOARD

CONTENTS

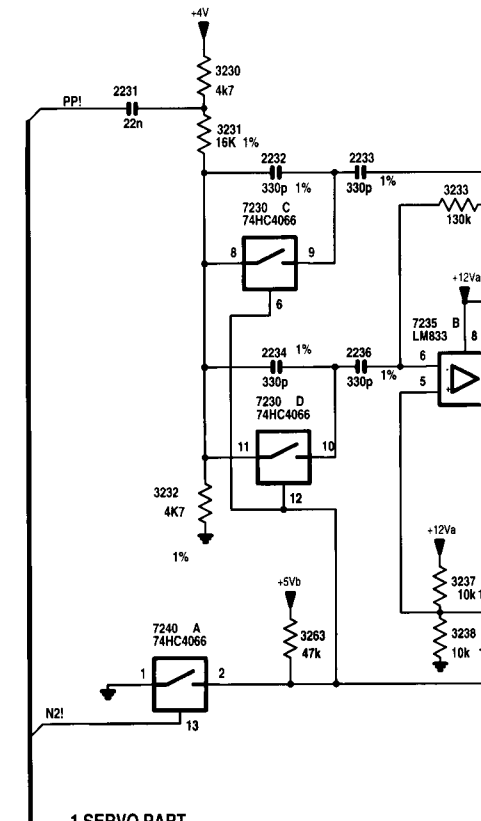
1. SERVO PART


OPTION
LWRT!
7125 NE532
BAS216
2125 100n
3115 1k
7135 LM319N
2129 100n
2100 100n
3113 1M
3114 6k8
NC 14
NC 13
3116 3k3
7136 BC848
7125 A NE532
7135 A LM319N
3128 10k
2126 150n
3141 2k2
7131 BFR31
3131 100k
7132 BFR31
3132 100k
3125 12k
3126 1k
3127 1k
3129 22k
3130 100k
2127 8n2
2128 100n
NC 2
NC 1
MIRN!
TLN!
FEN!
REN!
OPTION
7160 BC848
3150 470k
RENSW!
7120 BFR31
6120 BAT254
7121 BC857B
3123 22k
3124 33k
3121 470k
3122 22k
2120 22n
3120 27k
3140
3138 47k
3137 10k
3139 15k
7k5
2139
3136 560p
10k
3134 33k
3135 15k
2134 220p
2135 220p
6140 BAS316
6141 BAS316
5104 100u
2107 47u/6V3
2106 100n
5105 EMI100MHZ 600R
7105 DSD3
2105 22n
7130 OQ8845 DSICR
VREF GENERATOR
2140 22n
3108 4k7
ENDSTAGE
DIGITAL FILTER
SLEDGE
FOC
RAD
CONTROL
OUTPUT STAGES
3900 0R
3901 0R
3902 0R
3109 47k
Vssa
Vssd
2108 82n
2104 82n
2109 470n
2111 82n
2110 470n
2112 82n
5106 27u
5107 27u
5108 27u
5109 27u
5110 100u
5111 100u
3905 0R
3906 0R
2115 470n
2116 470n
2114 1u/16V
2117 22n
2113 1u/16V
2118 22n
6130 BAS316
3111 180k
3112 470k
2119 82n
RSTLA!
FROM 3/7325-8
3908
RADINT!
LDON!
TO CDM PANEL
1101-1 CA!
1101-2
1101-3 PP!
1101-4 BARCODE!
1101-6 CALF!
1101-7 A2A!
1101-8 A1A!
1101-14 HMSW!
1101-16 SUBSTRAAT!
Tp100
1101-12
1101-13 MIRN!
1101-11 REN!
1101-5 +5Vb
1101-10 FEN!
1101-9
1101-15 +12Va
1101-17 RAD-
1101-20 RAD+
1101-19 FOC+
1101-18 FOC-
1101-22 SL+
1101-21 SL-
1102-1
1102-2 EFMCLK!
1102-3
1102-4 EFMM!
1102-5 SWRT!
1102-6 NRSMP!
1102-7 LWRT!
1102-8 DALD!
1102-9 DACL!
1102-10 DADI!
1102-11
1102-12 EEDA!
1102-13 EECL!
1102-14 +5Vb
1102-15 +5Vb
1102-16 LDON!
1102-17 FS!
1102-18 +4V
1102-19 FSM!
1102-20 8Va!
1102-21
1102-22


CA
PP
2
HMSW -> IC7170
CALF
A2A
A1A
RENSW
FEOFS
IC7170
HMSW!
MPWM
DAWP
2
RADINT!
MOTO!!
FEOFS!
OTD!
NIRQ!
DADE!
+5Vb
5170
EMI 100MHZ 600R
+4V
2195
22n
2171
47u
25V
2170
22n
2181
22n
3162
1M
2182
22n
3163
39k
3160
22k
3164
22k
3161
1M
Tp191
3133
1M
7170
UPD784026GC-528
P75
P76
P77
AVDD
AVREF1
AVSS
AN0
AN1
AVREF2
AVREF3
P20
P21
P22
P23
P24
P2
MPWM!
FS!
CALF!
A2A!
A1A!
Tp170
3152
100k
P74
P73
P72
P71
P70
P7
CONVERTER D/A
CONVERTER A/D
AN10-AN17
INTP5
5130
EMI 100MHZ 600R
2138
220p
2130
22n
2131
47u/6V3
5132
EMI 100MHZ 600R
2132
22n
5176
EMI 100MHZ 600R
2172
3n3
2173
3n3
2174
3n3
2175
1n
3166
39k
2176
100n
VDD2
DAWP!
P17
P16
P15
P14
P13
P12
P11
P10
P1
RD
WR
WAIT
REFRQ
ASTB
CPU
A/D
REPROCESSING
CONTROL FUNCTION
CONTROL PART
Vdda
Vddd
Tp130
3144
10k
OTD!
RESET!
3910
0R
OPTION
LDDS!
CLDS!
DADS!
RESEN!
3911
0R
DIVIDER
OSCILLATOR XTAL
XTLR
XTL1
XTLO
u PROCESSOR INTERFACE
3142
10k
3143
1M
1143
16MHz
OPTION
2121
33p
2122
xxn
2157
22n
+4V
+5Vb
3149
2k2
7150 A
LM319
3153
1k
NC 2
NC 1
6155
BAT254
FSM!
3155
1M
2156
4n7
3154
1K
PWM!
Tp171
Tp172
Tp173
Tp174
Tp175
Tp186
Tp210
P13
P12
P11
P10
MODE
VSS2
ASTB
P40
P41
P42
P43
P44
3156
3157
3158
100R
LDDE!
CLDE!
LDCE!
P4
P5
P45
P46
P47
P50
P51
P52
P53
P54
P55
P56
P57
P60
P61
P62
Tp176
3904
0R
Tp200
COMSYNC!
CLCE!
CLWP!
ACK!
EECL!
EEDA!
DALD!
3173
3174
3175
3176
3177
100R
DACL!
DADI!
RESEN
RESET
OTD
DADS
2
7170
PWM
LDDE
CLDE
LDCE
FS
FS M
RADINT TO 7170-61
DALD
DACL
DADI
EEDA
EECL
7170
EFMCLK
EFMM
SWRT
NRSMP
LWRT
2

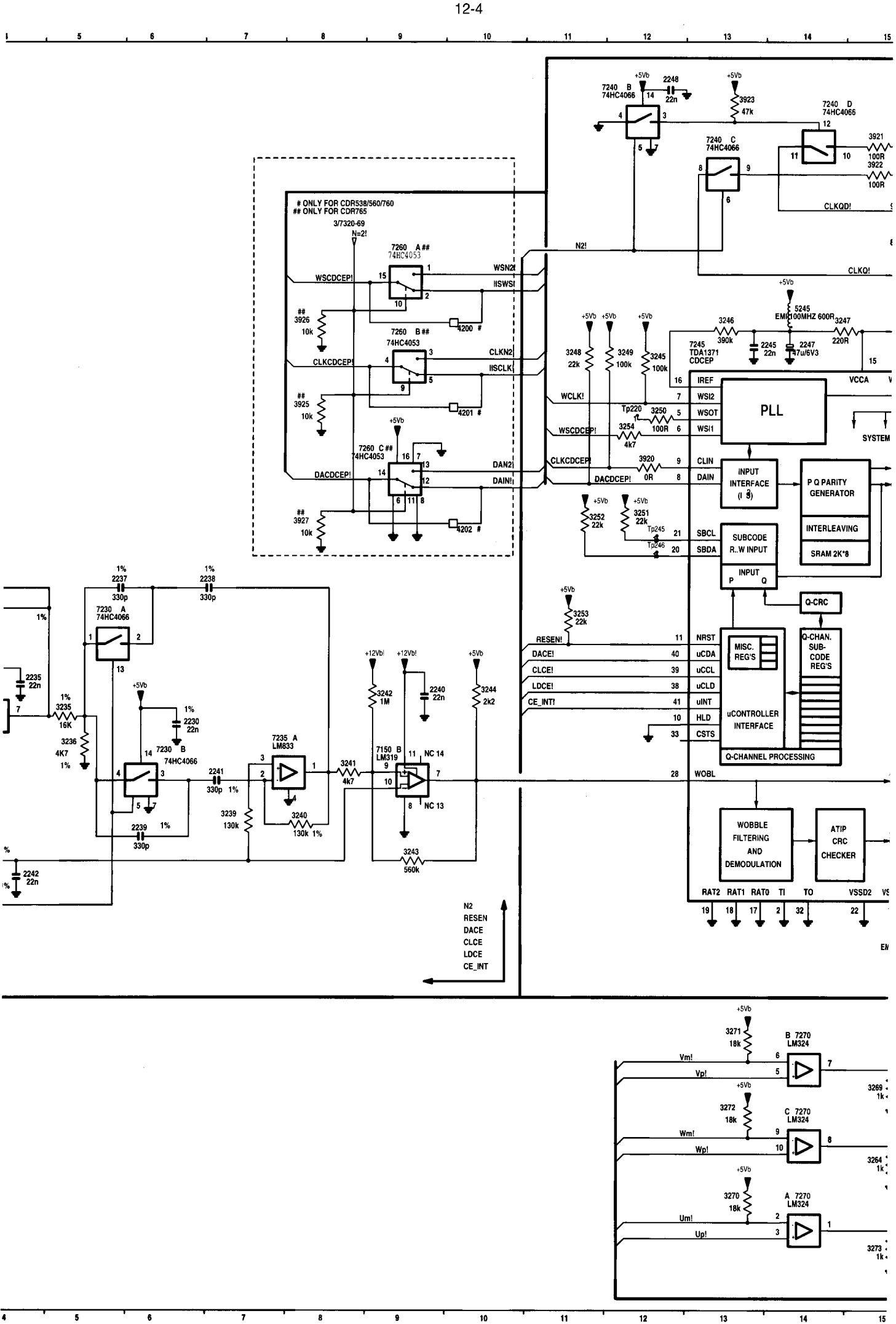

CONTROL BUS
2 ENCODING & DECODING PART
SPI BUS
3 USER PROCESSOR PART
CA CDE CE_INT CLCE CLDE CLWP
DACE DADE DAWP EFMCLK EFMM HALL_U
HALL_V HALL_W LDCE LDDE LWRT MONON
MOTO1 MPWM N2 N4 NIRQ NRSMP
PP PWM RESEN RESET SWRT US2
VS2 WS2
ACK COMCLK COMSYNC MISO MOSI SYSSYNC
OPTION
NECMON!
SYSTEM CONTROL
TRAY SWITCH
TRAY SENSE
TO TRAY MOTOR
TRAY+
TRAY-
TRS1N!
NOPEN!
NCLOSE!
4203_1
9824

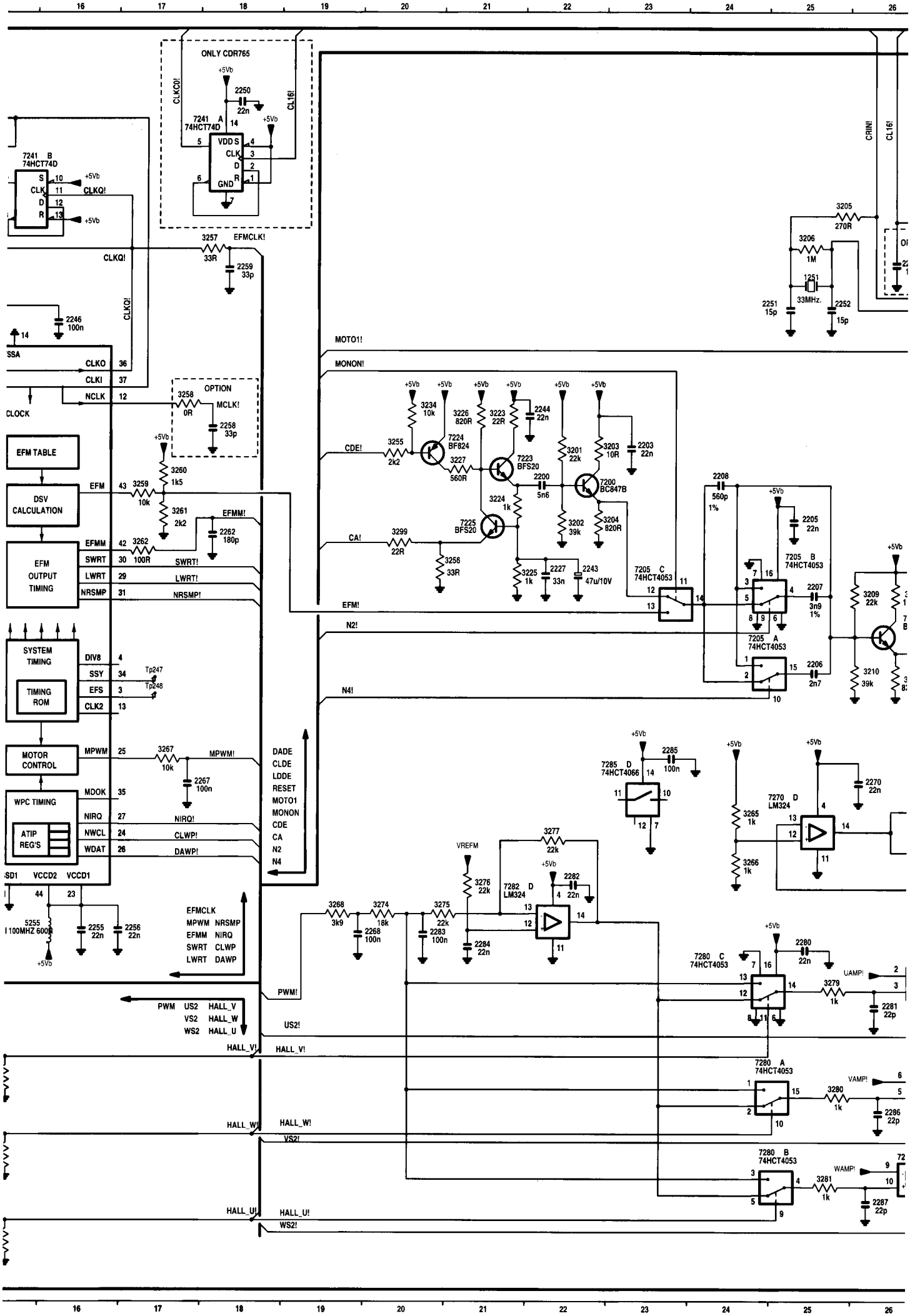
2. ENCODING & DECODING PART

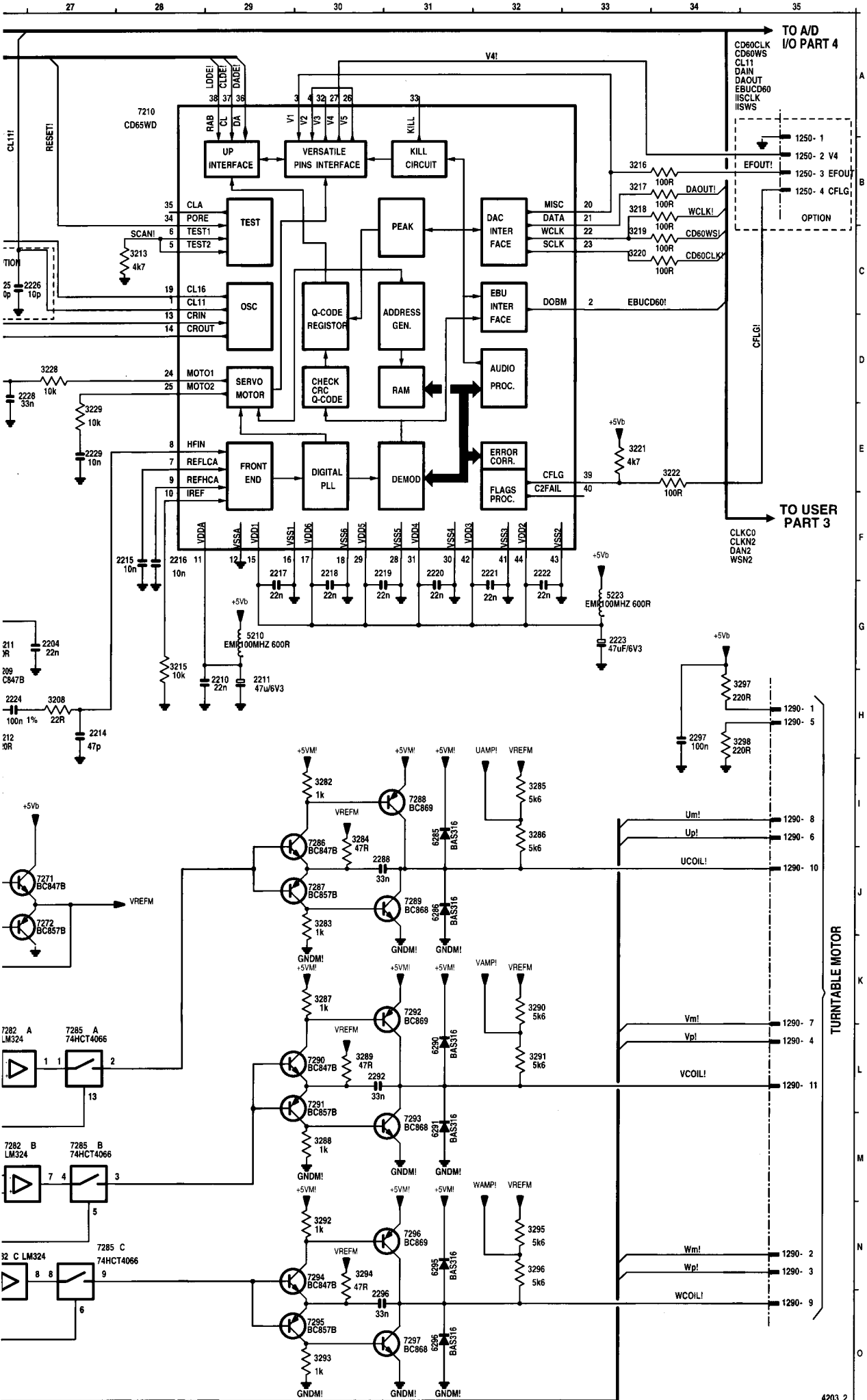


1 SERVO PART

SWRT	CLWP	NRSMP	PP	PWM	WS2	
CA	DACE	EFMCLK	MONON	US2	VS2	
CE_INT	DADE	EFMM	MOTO1	NIRQ	HALL_W	
CLCE	DAWP	LDCE	N2	RESEN	HALL_V	MPWM
CLDE	LWRT	LDDE	N4	RESET	HALL_U	CDE

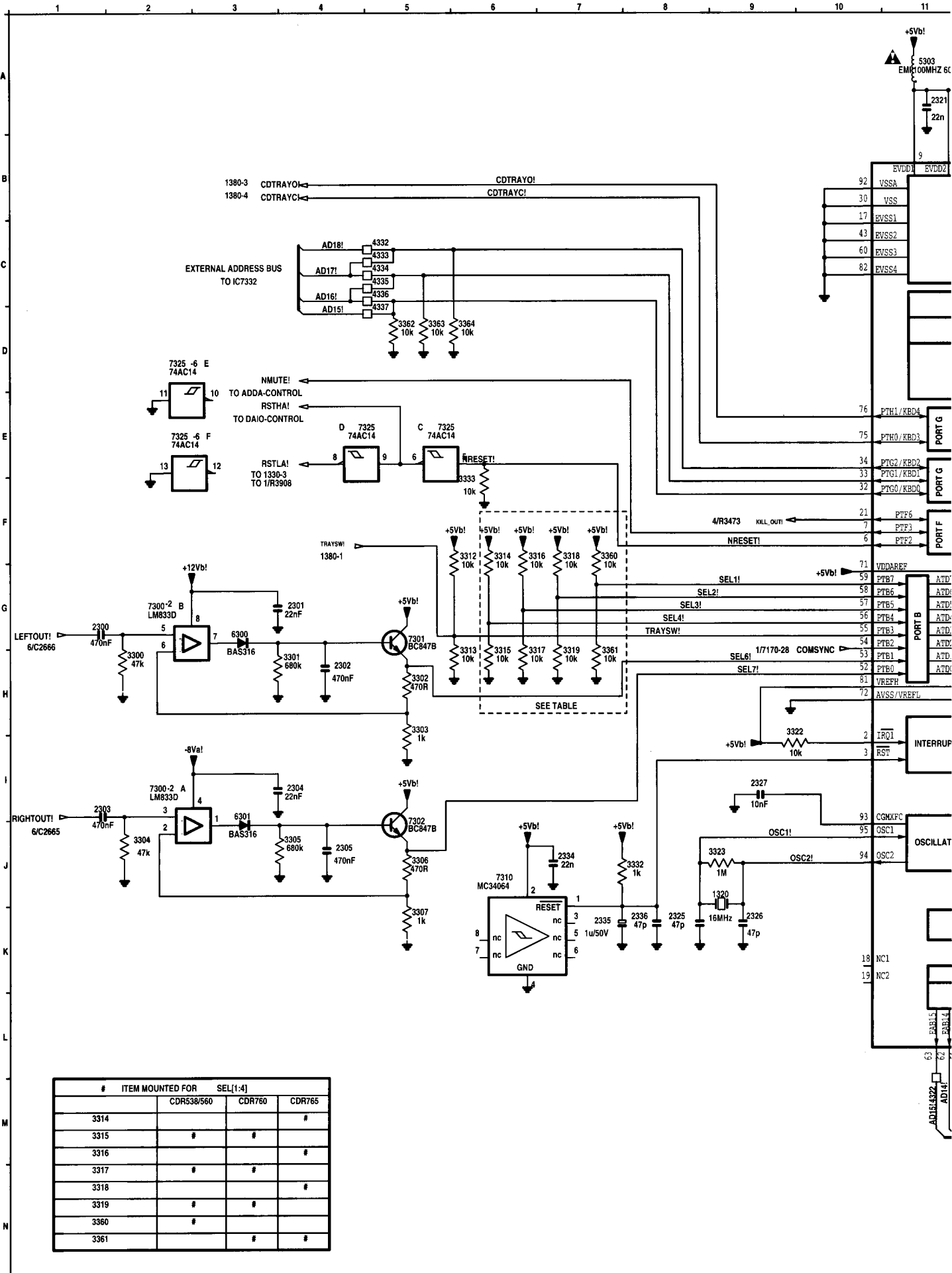

7240 B 74HC4066
7240 C 74HC4066
7240 D 74HC4066
+5Vb
2248 22n
3923 47k
3921 100R
3922 100R
CLKQD!
CLKQ!
N2!
ONLY FOR CDR538/560/760
ONLY FOR CDR765
3/7320-69
N=2!
7260 A## 74HC4053
7260 B## 74HC4053
7260 C## 74HC4053
WSCDCEP!
IISWSI
WSN2!
CLKCDCEP!
IISCLK!
CLKN2!
DACDCEP!
DAIN!
DAN2!
4200 #
4201 #
4202 #
3926 10k
3925 10k
3927 10k
5245 EMI 100MHZ 600R
3246 390k
3247 220R
7245 TDA1371 CDCEP
2245 22n
2247 47u/6V3
3248 22k
3249 100k
3245 100k
WCLK!
WSCDCEP!
CLKCDCEP!
DACDCEP!
Tp220
3250 100R
3254 4k7
3920 0R
3252 22k
3251 22k
Tp245
Tp246
IREF
WSI2
WSOT
WSI1
CLIN
DAIN
SBCL
SBDA
PLL
SYSTEM
VCCA
INPUT INTERFACE (I²S)
P Q PARITY GENERATOR
INTERLEAVING
SRAM 2K*8
SUBCODE R..W INPUT
INPUT P Q
Q-CRC
3253 22k
RESEN!
DACE!
CLCE!
LDCE!
CE_INT!
NRST
uCDA
uCCL
uCLD
uINT
HLD
CSTS
MISC. REG'S
Q-CHAN. SUB-CODE REG'S
uCONTROLLER INTERFACE
Q-CHANNEL PROCESSING
WOBL
WOBBLE FILTERING AND DEMODULATION
ATIP CRC CHECKER
RAT2 RAT1 RAT0 TI TO VSSD2
7230 A 74HC4066
7230 B 74HC4066
2237 330p
2238 330p
2235 22n
2230 22n
2239 330p
2242 22n
3235 16K
3236 4K7
2241 330p
3239 130k
3240 130k
7235 A LM833
7150 B LM319
NC 14
NC 13
3241 4k7
3242 1M
2240 22n
3244 2k2
3243 560k
+12Vb!
N2
RESEN
DACE
CLCE
LDCE
CE_INT
3271 18k
3272 18k
3270 18k
B 7270 LM324
C 7270 LM324
A 7270 LM324
Vm!
Vp!
Wm!
Wp!
Um!
Up!
3269 1k
3264 1k
3273 1k


ONLY CDR765
7241 A 74HCT74D
7241 B 74HCT74D
CLKQ!
CL16!
CRIN!
EFMCLK!
MOTO1!
MONON!
CDE!
CA!
EFM!
N2!
N4!
EFM TABLE
DSV CALCULATION
EFM OUTPUT TIMING
SYSTEM TIMING
TIMING ROM
MOTOR CONTROL
WPC TIMING
ATIP REG'S
OPTION
MCLK!
EFMM!
SWRT!
LWRT!
NRSMP!
MPWM!
NIRQ!
CLWP!
DAWP!
PWM!
US2!
VS2!
WS2!
HALL_V!
HALL_W!
HALL_U!
VAMP!
WAMP!
33MHz.
LM324
74HCT4053
74HCT4066

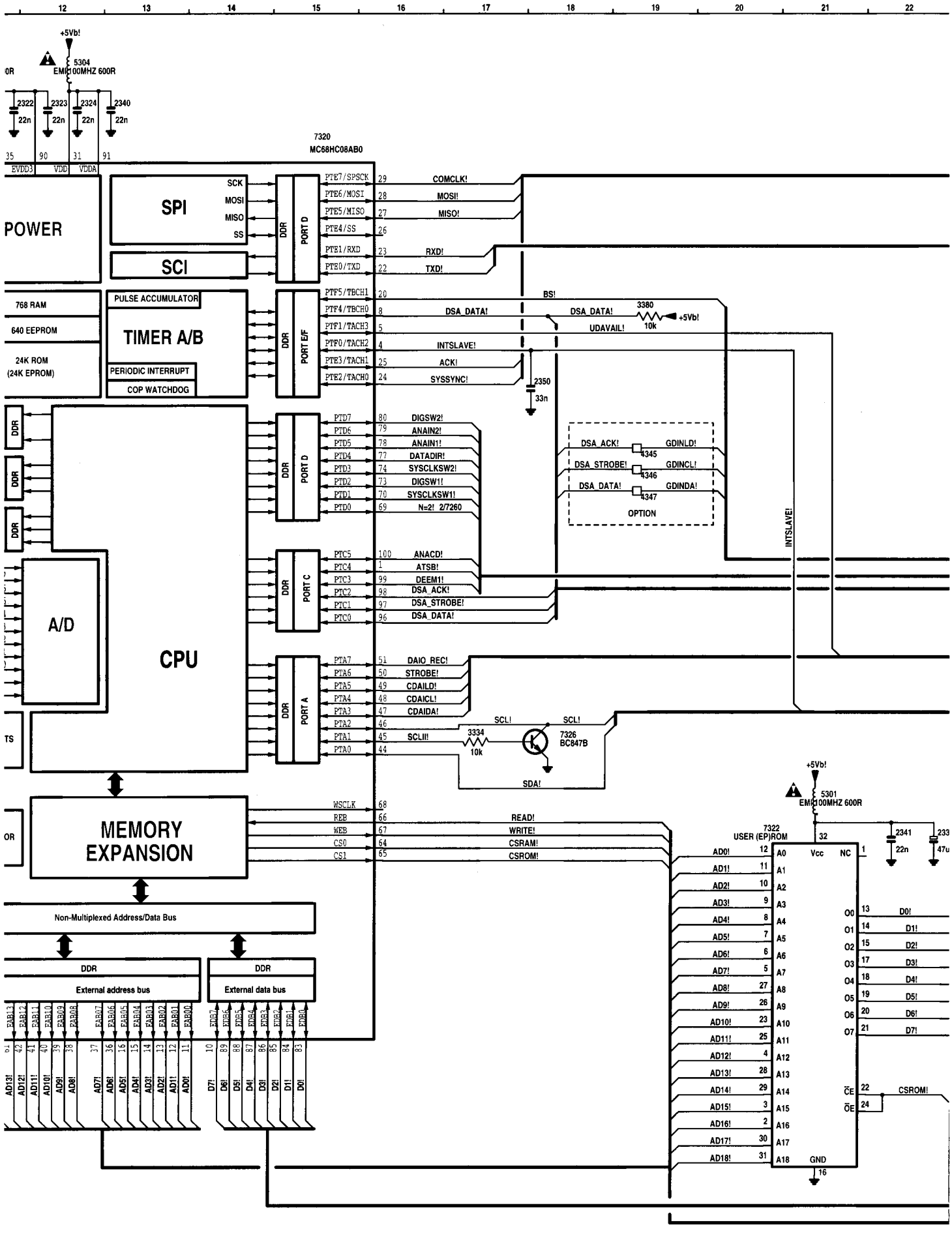


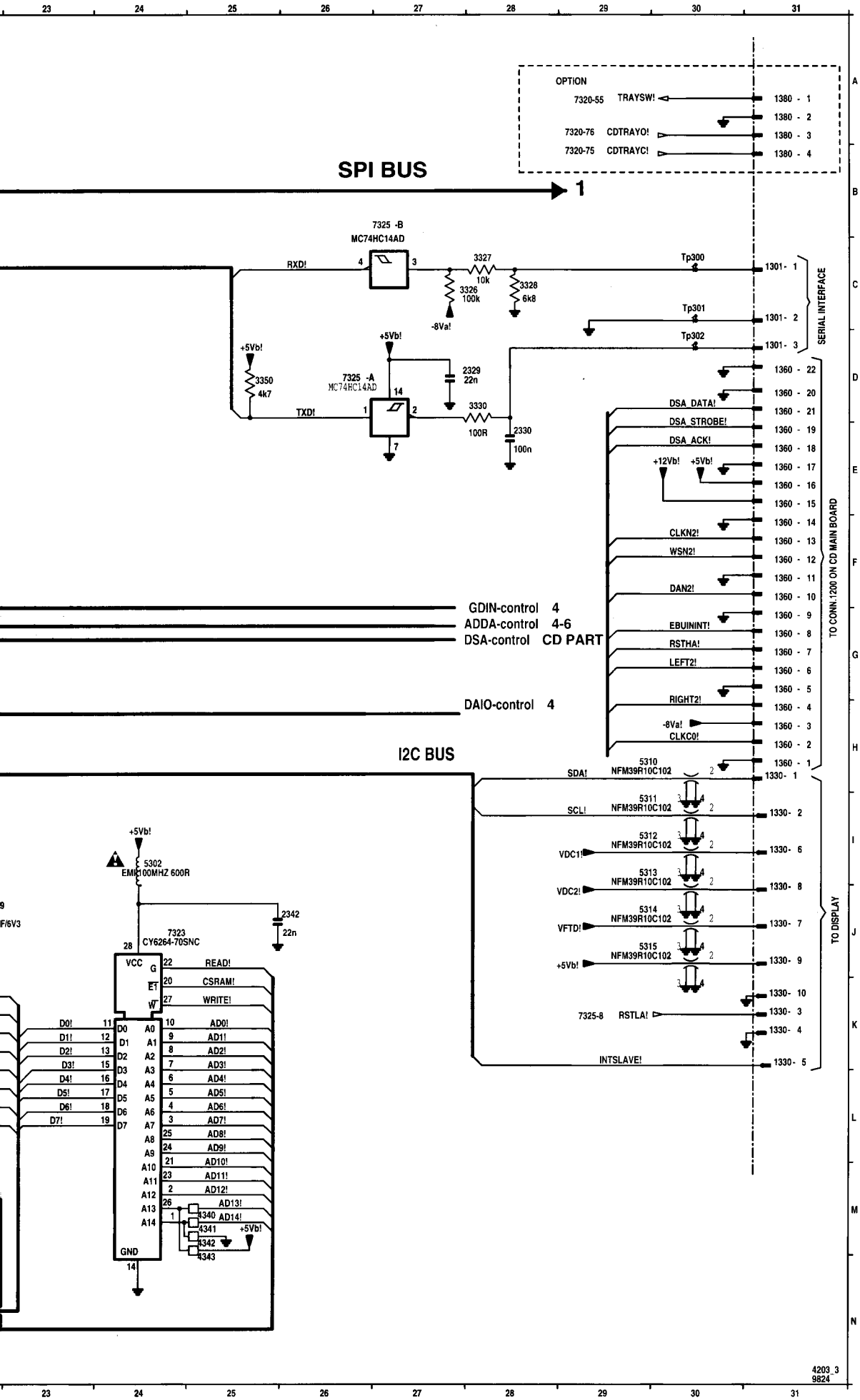
1250	B35	3289	L30
1250	B35	3290	K32
1250	B35	3291	L32
1250	B35	3292	N30
1251	C25	3293	O30
1290	H35	3294	N30
1290	N35	3295	N32
1290	N35	3296	N32
1290	L35	3297	H35
1290	H35	3298	H35
1290	I35	3299	F20
1290	L35	3920	E12
1290	I35	3921	A15
1290	O35	3922	B15
1290	J35	3923	A13
1290	L35	3925	E 8
2200	F22	3926	D 8
2203	E23	3927	F 8
2204	G27	4200	D10
2205	F25	4201	E10
2206	H25	4202	F10
2207	G25	5210	G29
2208	F24	5223	G33
2210	H29	5245	C14
2211	H29	5255	K16
2214	H27	6285	I31
2215	F28	6286	J31
2216	F28	6290	L31
2217	F29	6291	M31
2218	F30	6295	N31
2219	F31	6296	O31
2220	F31	7150	I 9
2221	F32	7200	F22
2222	F32	7205	H24
2223	G33	7205	G25
2224	H26	7205	G23
2225	C26	7209	H26
2226	C27	7210	A28
2227	G22	7223	F21
2228	D27	7224	E21
2229	E27	7225	F21
2230	I 6	7230	G 5
2231	F 1	7230	I 6
2232	G 2	7230	G 2
2233	G 3	7230	I 2
2234	H 2	7235	I 7
2235	H 4	7235	H 3
2236	H 3	7240	J 1
2237	G 6	7240	A11
2238	G 7	7240	A13
2239	J 6	7240	A14
2240	H 9	7241	A17
2241	I 7	7241	B15
2242	J 4	7245	D13
2243	G22	7260	C 9
2244	E22	7260	D 9
2245	D14	7260	F10
2246	D16	7270	N14
2247	D14	7270	L14
2248	A12	7270	M14
2250	A18	7270	J25
2251	D25	7271	J27
2252	O25	7272	J27
2255	K16	7280	M24
2256	K17	7280	N24
2258	E18	7280	L24
2259	C18	7282	L26
2262	F18	7282	M26
2267	I18	7282	N26
2268	K20	7282	K21
2270	I26	7285	L27
2280	L25	7285	M27
2281	L26	7285	N27
2282	K22	7285	I22
2283	K21	7286	I30
2284	K21	7287	J30
2285	I23	7288	I31
2286	N26	7289	J31
2287	O26	7290	L30
2288	J31	7291	L30
2292	L31	7292	K31
2296	O31	7293	M31
2297	H34	7294	N30
3201	E22	7295	O30
3202	F22	7296	N31
3203	E23	7297	O31
3204	F23		
3205	B25		
3206	C25		
3208	H27		
3209	G26		
3210	H26		
3211	G26		
3212	H26		
3213	C28		
3215	G28		
3216	B33		
3217	B33		
3218	B33		
3219	C33		
3220	C33		
3221	E33		
3222	E34		
3223	E21		
3224	F21		
3225	G22		
3226	E21		
3227	F21		
3228	D27		
3229	E27		
3230	F 2		
3231	G 2		
3232	I 2		
3233	G 4		
3234	E20		
3235	H 5		
3236	I 5		
3237	J 4		
3238	J 4		
3239	J 7		
3240	J 8		
3241	I 8		
3242	H 9		
3243	J 9		
3244	H10		
3245	D12		
3246	D13		
3247	D15		
3248	D11		
3249	D12		
3250	E12		
3251	F12		
3252	F11		
3253	G11		
3254	E12		
3255	E20		
3256	G21		
3257	C18		
3258	E17		
3259	F17		
3260	F17		
3261	F17		
3262	G17		
3263	K 3		
3264	N15		
3265	J24		
3266	K24		
3267	I17		
3268	K19		
3269	M15		
3270	N13		
3271	L13		
3272	M13		
3273	O15		
3274	K20		
3275	K21		
3276	K21		
3277	J22		
3279	L25		
3280	M25		
3281	N25		
3282	I30		
3283	J30		
3284	I30		
3285	I32		
3286	I32		
3287	K30		
3288	M30		

3. USER PROCESSOR PART

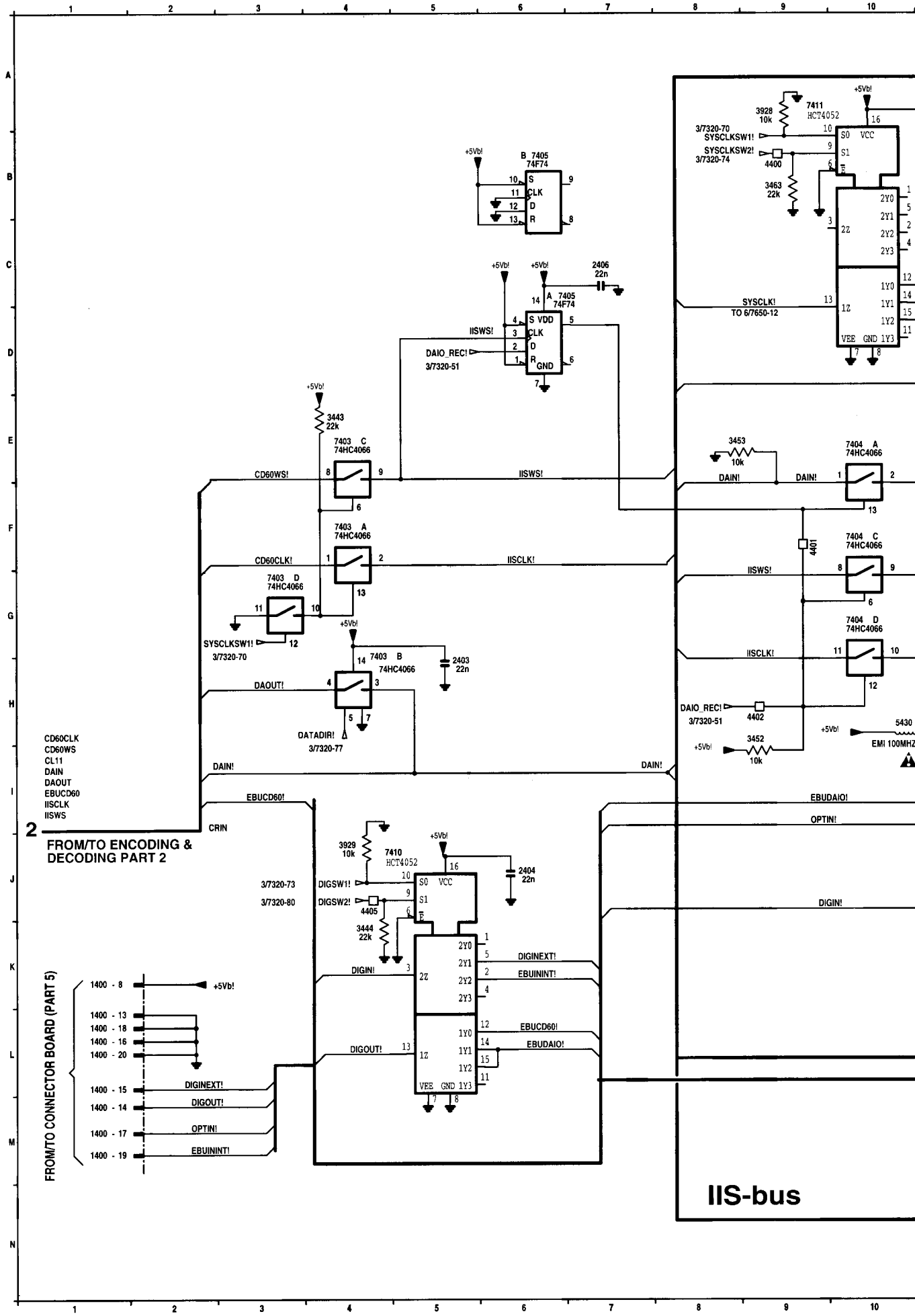


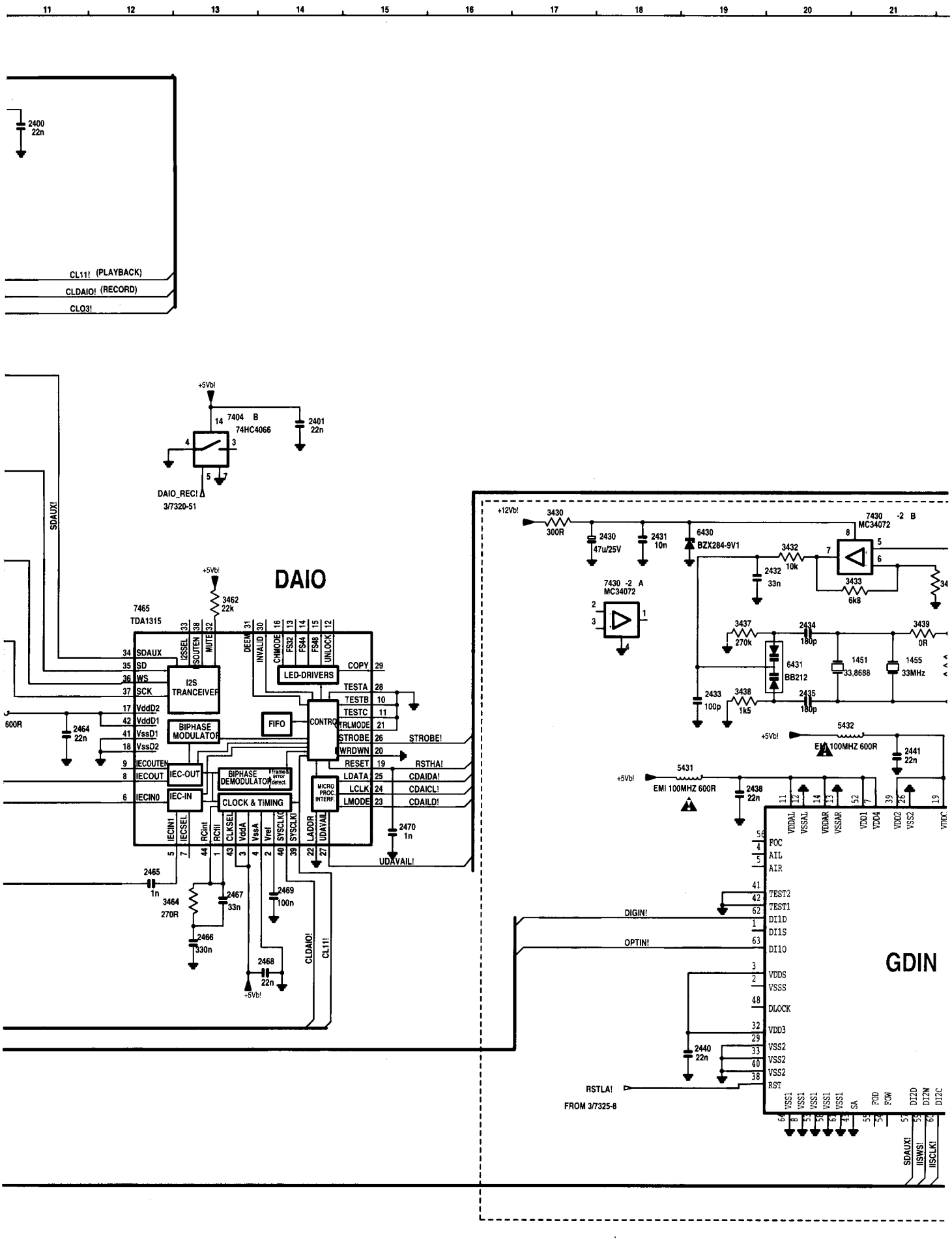
# ITEM MOUNTED FOR	SEL[1:4]		
	CDR538/560	CDR760	CDR765
3314			#
3315	#	#	
3316			#
3317	#	#	
3318			#
3319	#	#	
3360	#		
3361		#	#

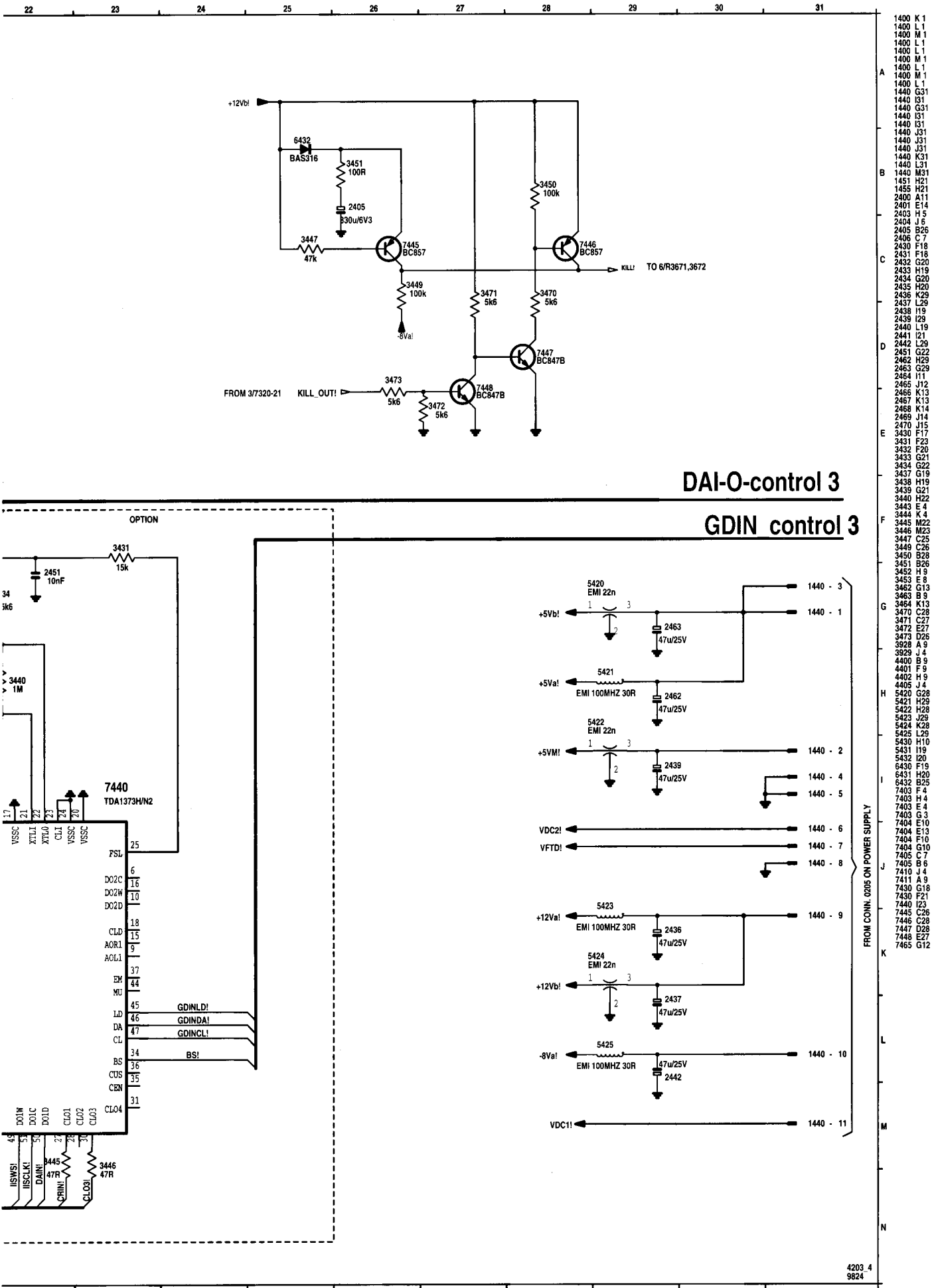

+5Vb!
5304
EMI 100MHZ 600R
2322 22n
2323 22n
2324 22n
2340 22n
7320
MC68HC08AB0
EVDD3
VDD
VDDA
POWER
SPI
SCK
MOSI
MISO
SS
SCI
768 RAM
640 EEPROM
24K ROM
(24K EPROM)
PULSE ACCUMULATOR
TIMER A/B
PERIODIC INTERRUPT
COP WATCHDOG
DDR
PORT D
PORT E/F
PORT C
PORT A
A/D
CPU
MEMORY EXPANSION
Non-Multiplexed Address/Data Bus
External address bus
External data bus
PTE7/SPSCK 29 COMCLK!
PTE6/MOSI 28 MOSI!
PTE5/MISO 27 MISO!
PTE4/SS 26
PTE1/RXD 23 RXD!
PTE0/TXD 22 TXD!
PTF5/TBCH1 20 BS!
PTF4/TBCH0 8 DSA_DATA!
PTF1/TACH3 5
PTF0/TACH2 4 INTSLAVE!
PTE3/TACH1 25 ACK!
PTE2/TACH0 24 SYSSYNC!
DSA_DATA! 3380 10k +5Vb!
UDAVAIL!
2350 33n
PTD7 80 DIGSW2!
PTD6 79 ANAIN2!
PTD5 78 ANAIN1!
PTD4 77 DATADIR!
PTD3 74 SYSCLKSW2!
PTD2 73 DIGSW1!
PTD1 70 SYSCLKSW1!
PTD0 69 N=2! 2/7260
DSA_ACK! 4345 GDINLD!
DSA_STROBE! 4346 GDINCL!
DSA_DATA! 4347 GDINDA!
OPTION
INTSLAVE!
PTC5 100 ANACD!
PTC4 1 ATSB!
PTC3 99 DEEM1!
PTC2 98 DSA_ACK!
PTC1 97 DSA_STROBE!
PTC0 96 DSA_DATA!
PTA7 51 DAIO_REC!
PTA6 50 STROBE!
PTA5 49 CDAILD!
PTA4 48 CDAICL!
PTA3 47 CDAIDA!
PTA2 46
PTA1 45 SCLI!
PTA0 44
SCL!
3334 10k
7326 BC847B
SDA!
WSCLK 68
REB 66 READ!
WEB 67 WRITE!
CS0 64 CSRAM!
CS1 65 CSROM!
+5Vb!
5301
EMI 100MHZ 600R
7322
USER (EP)ROM
2341 22n
233 47u
AD0! 12 A0
AD1! 11 A1
AD2! 10 A2
AD3! 9 A3
AD4! 8 A4
AD5! 7 A5
AD6! 6 A6
AD7! 5 A7
AD8! 27 A8
AD9! 26 A9
AD10! 23 A10
AD11! 25 A11
AD12! 4 A12
AD13! 28 A13
AD14! 29 A14
AD15! 3 A15
AD16! 2 A16
AD17! 30 A17
AD18! 31 A18
Vcc 32
NC 1
GND 16
O0 13 D0!
O1 14 D1!
O2 15 D2!
O3 17 D3!
O4 18 D4!
O5 19 D5!
O6 20 D6!
O7 21 D7!
CE 22 CSROM!
OE 24
PAB13! 42
PAB12! 41
PAB11! 40
PAB10! 39
PAB09! 38
PAB08! 37
PAB07! 36
PAB06! 16
PAB05! 15
PAB04! 14
PAB03! 13
PAB02! 12
PAB01! 11
PAB00! 10
PDB7! 89
PDB6! 88
PDB5! 87
PDB4! 86
PDB3! 85
PDB2! 84
PDB1! 83
PDB0!


OPTION
7320-55 TRAYSW!
7320-76 CDTRAYO!
7320-75 CDTRAYC!
1380 - 1
1380 - 2
1380 - 3
1380 - 4
SPI BUS
1
7325 -B
MC74HC14AD
RXD!
3327 10k
3326 100k
3328 6k8
-8Va!
Tp300
Tp301
Tp302
1301- 1
1301- 2
1301- 3
SERIAL INTERFACE
+5Vb!
3350 4k7
7325 -A
MC74HC14AD
2329 22n
TXD!
3330 100R
2330 100n
1360 - 22
1360 - 20
1360 - 21
1360 - 19
1360 - 18
1360 - 17
1360 - 16
1360 - 15
1360 - 14
1360 - 13
1360 - 12
1360 - 11
1360 - 10
1360 - 9
1360 - 8
1360 - 7
1360 - 6
1360 - 5
1360 - 4
1360 - 3
1360 - 2
1360 - 1
DSA_DATA!
DSA_STROBE!
DSA_ACK!
+12Vb!
+5Vb!
CLKN2!
WSN2!
DAN2!
EBUININT!
RSTHA!
LEFT2!
RIGHT2!
-8Va!
CLKC0!
TO CONN.1200 ON CD MAIN BOARD
GDIN-control 4
ADDA-control 4-6
DSA-control CD PART
DAIO-control 4
I2C BUS
5310 NFM39R10C102
5311 NFM39R10C102
5312 NFM39R10C102
5313 NFM39R10C102
5314 NFM39R10C102
5315 NFM39R10C102
SDA!
SCL!
VDC1!
VDC2!
VFTD!
+5Vb!
7325-8 RSTLA!
INTSLAVE!
1330- 1
1330- 2
1330- 6
1330- 8
1330- 7
1330- 9
1330- 10
1330- 3
1330- 4
1330- 5
TO DISPLAY
5302 EMI 100MHZ 600R
2342 22n
7323 CY6264-70SNC
VCC
G
E1
W
READ!
CSRAM!
WRITE!
D0! D1! D2! D3! D4! D5! D6! D7!
AD0! AD1! AD2! AD3! AD4! AD5! AD6! AD7! AD8! AD9! AD10! AD11! AD12! AD13! AD14!
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14
4341 4342 4343
GND
4203_3
9824

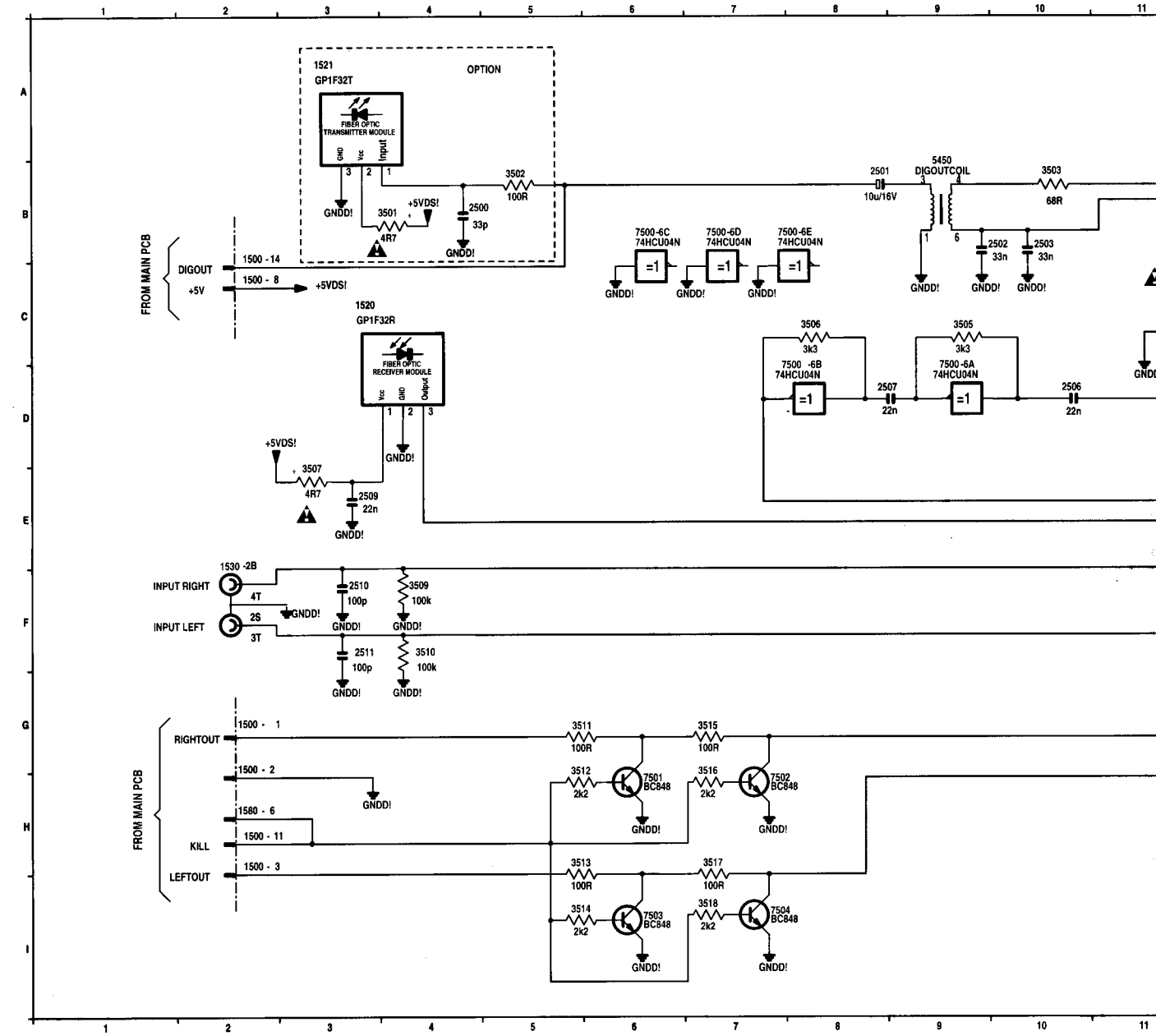
4. DIGITAL IN/OUT PART

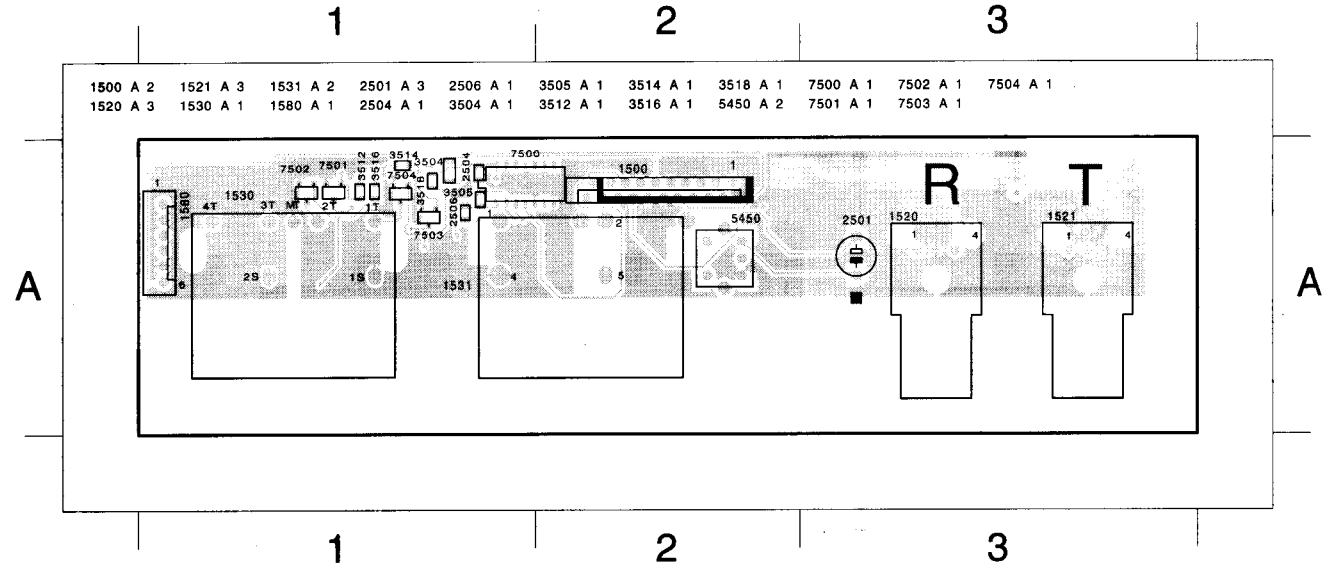


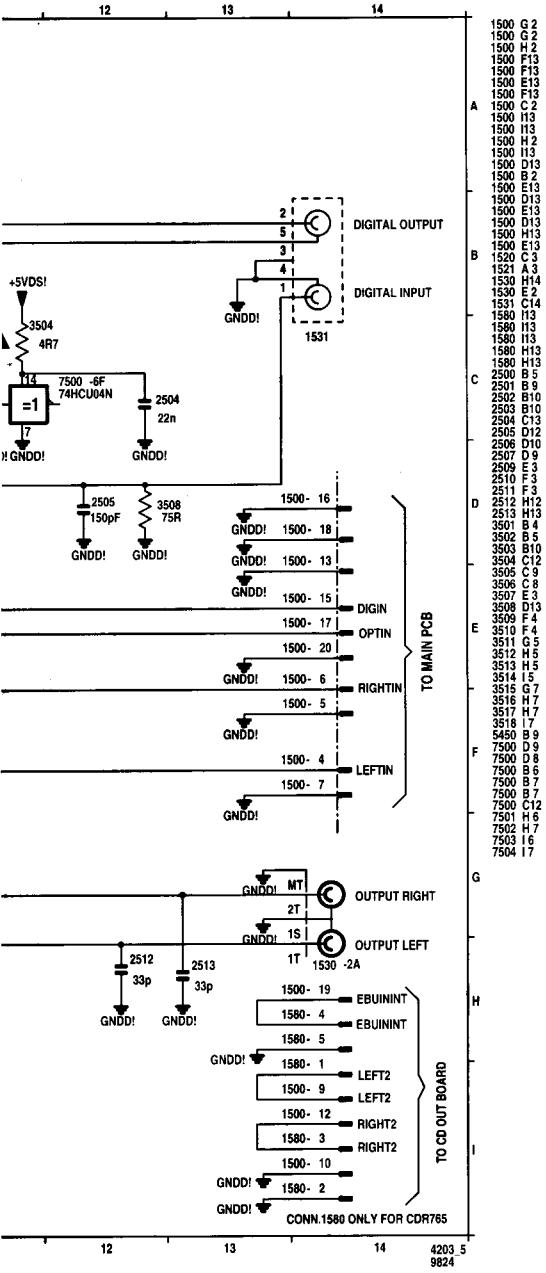

11 12 13 14 15 16 17 18 19 20 21
2400
22n
CL11! (PLAYBACK)
CLDAIO! (RECORD)
CLO3!
+5Vb!
7404 B
74HC4066
2401
22n
DAIO_REC!
3/7320-51
SDAUX!
DAIO
7465
TDA1315
3462
22k
34 SDAUX
35 SD
36 WS
37 SCK
17 VddD2
42 VddD1
41 VssD1
18 VssD2
9 IECOUTEN
8 IECOUT
6 IECIN0
I2S TRANCEIVER
BIPHASE MODULATOR
IEC-OUT
IEC-IN
BIPHASE DEMODULATOR
CLOCK & TIMING
FIFO
CONTROL
LED-DRIVERS
MICRO PROC. INTERF.
COPY 29
TESTA 28
TESTB 10
TESTC 11
CTRLMODE 21
STROBE 26
WRDWN 20
RESET 19
LDATA 25
LCLK 24
LMODE 23
STROBE!
RSTHA!
CDAIDA!
CDAICL!
CDAILD!
2470
1n
UDAVAIL!
600R
2464
22n
2465
1n
3464
270R
2467
33n
2466
330n
2469
100n
2468
22n
CLDAIO!
CL11!
+12Vb!
3430
300R
2430
47u/25V
2431
10n
6430
BZX284-9V1
7430 -2 B
MC34072
3432
10k
2432
33n
3433
6k8
7430 -2 A
MC34072
3437
270k
2434
180p
3439
0R
6431
BB212
1451
33,8688
1455
33MHz
2433
100p
3438
1k5
2435
180p
5432
EMI 100MHZ 600R
2441
22n
5431
EMI 100MHZ 600R
2438
22n
GDIN
DIGIN!
OPTIN!
RSTLA!
FROM 3/7325-8
2440
22n
SDAUX!
IISWS!
IISCLK!


+12Vb!
6432
BAS316
3451
100R
2405
330u/6V3
3447
47k
7445
BC857
3450
100k
7446
BC857
KILL!
TO 6/R3671,3672
3449
100k
-8Va!
3471
5k6
3470
5k6
7447
BC847B
FROM 3/7320-21
KILL_OUT!
3473
5k6
7448
BC847B
3472
5k6
DAI-O-control 3
GDIN control 3
OPTION
3431
15k
2451
10nF
3440
1M
7440
TDA1373H/N2
VSSC
XTLI
XTLO
CLI
VSSC
VSSC
FSL
DO2C
DO2W
DO2D
CLD
AOR1
AOL1
EM
MU
LD
DA
CL
BS
CUS
CEN
CLO4
GDINLD!
GDINDA!
GDINCL!
BS!
DO1M
DO1C
DO1D
CLO1
CLO2
CLO3
IISWS!
IISCLK!
DAIN!
CRIN!
CLO3!
3445
47R
3446
47R
5420
EMI 22n
+5Vb!
2463
47u/25V
5421
+5Va!
EMI 100MHZ 30R
2462
47u/25V
5422
EMI 22n
+5VM!
2439
47u/25V
VDC2!
VFTD!
5423
+12Va!
EMI 100MHZ 30R
2436
47u/25V
5424
EMI 22n
+12Vb!
2437
47u/25V
5425
-8Va!
EMI 100MHZ 30R
47u/25V
2442
VDC1!
1440 - 1
1440 - 2
1440 - 3
1440 - 4
1440 - 5
1440 - 6
1440 - 7
1440 - 8
1440 - 9
1440 - 10
1440 - 11
FROM CONN. 0205 ON POWER SUPPLY
4203_4
9824

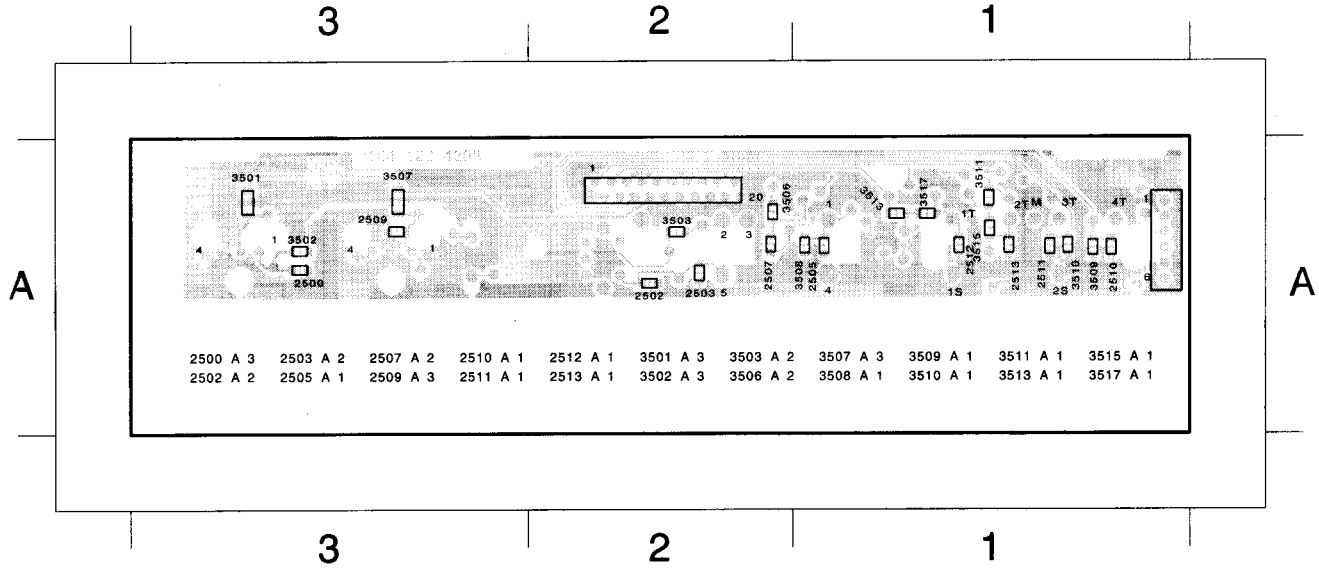
5 CONNECTOR PART



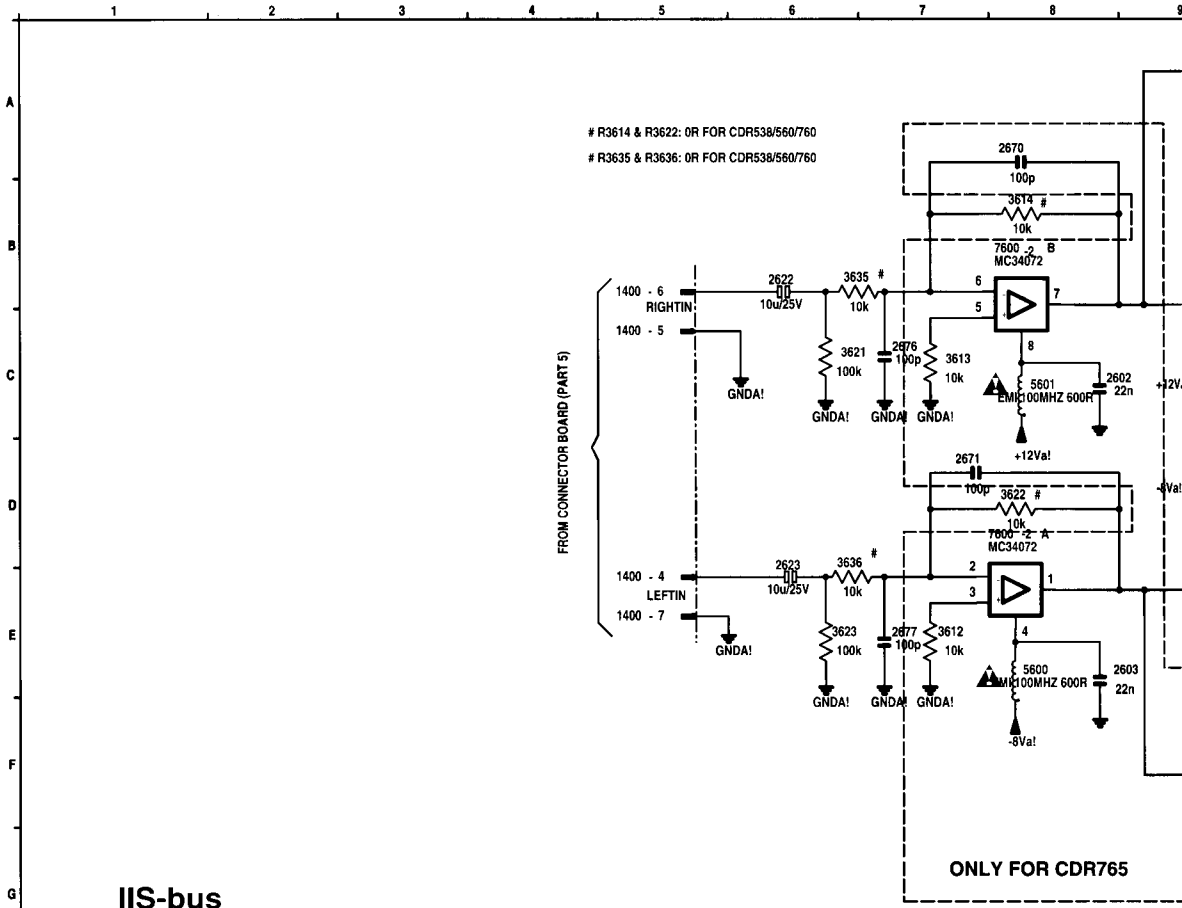


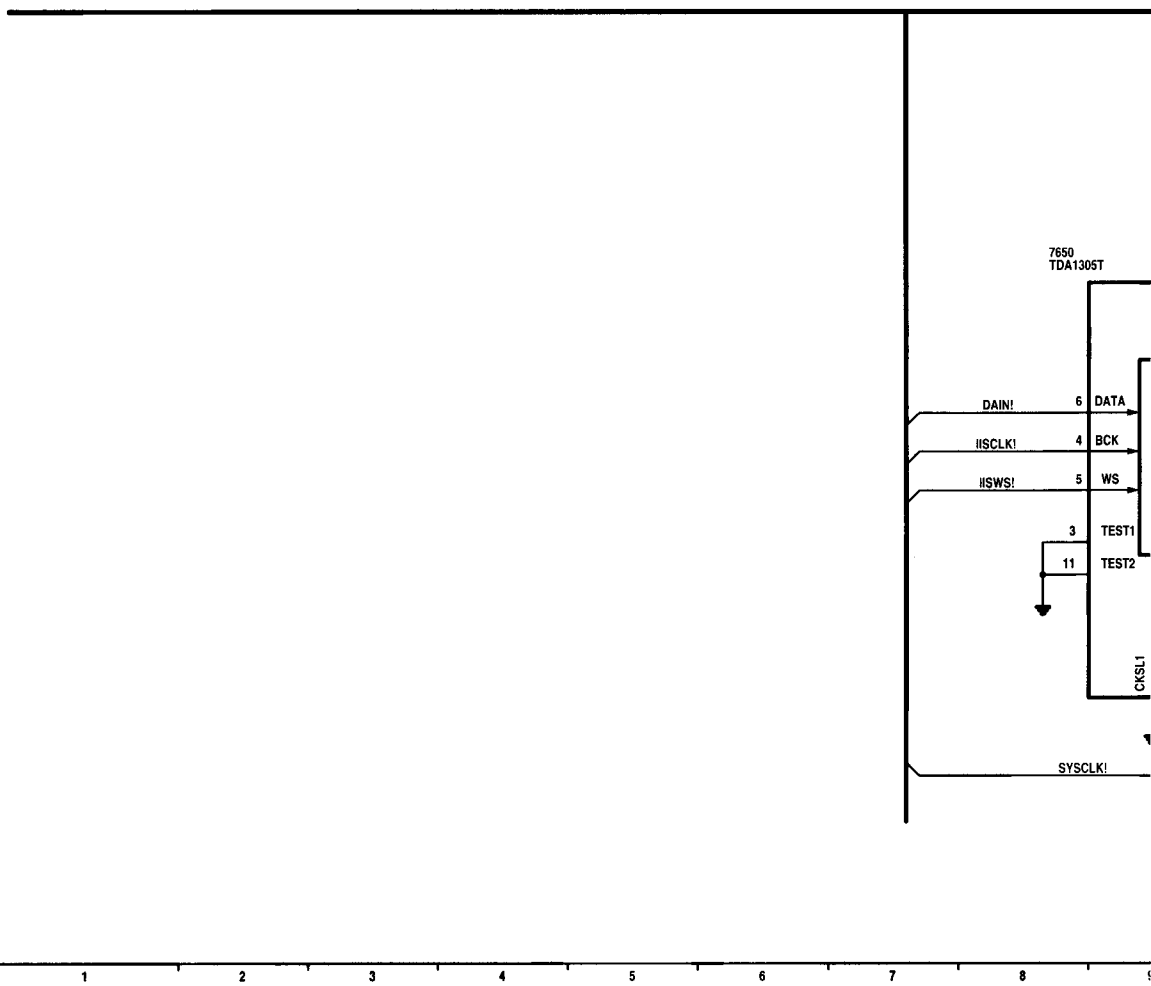


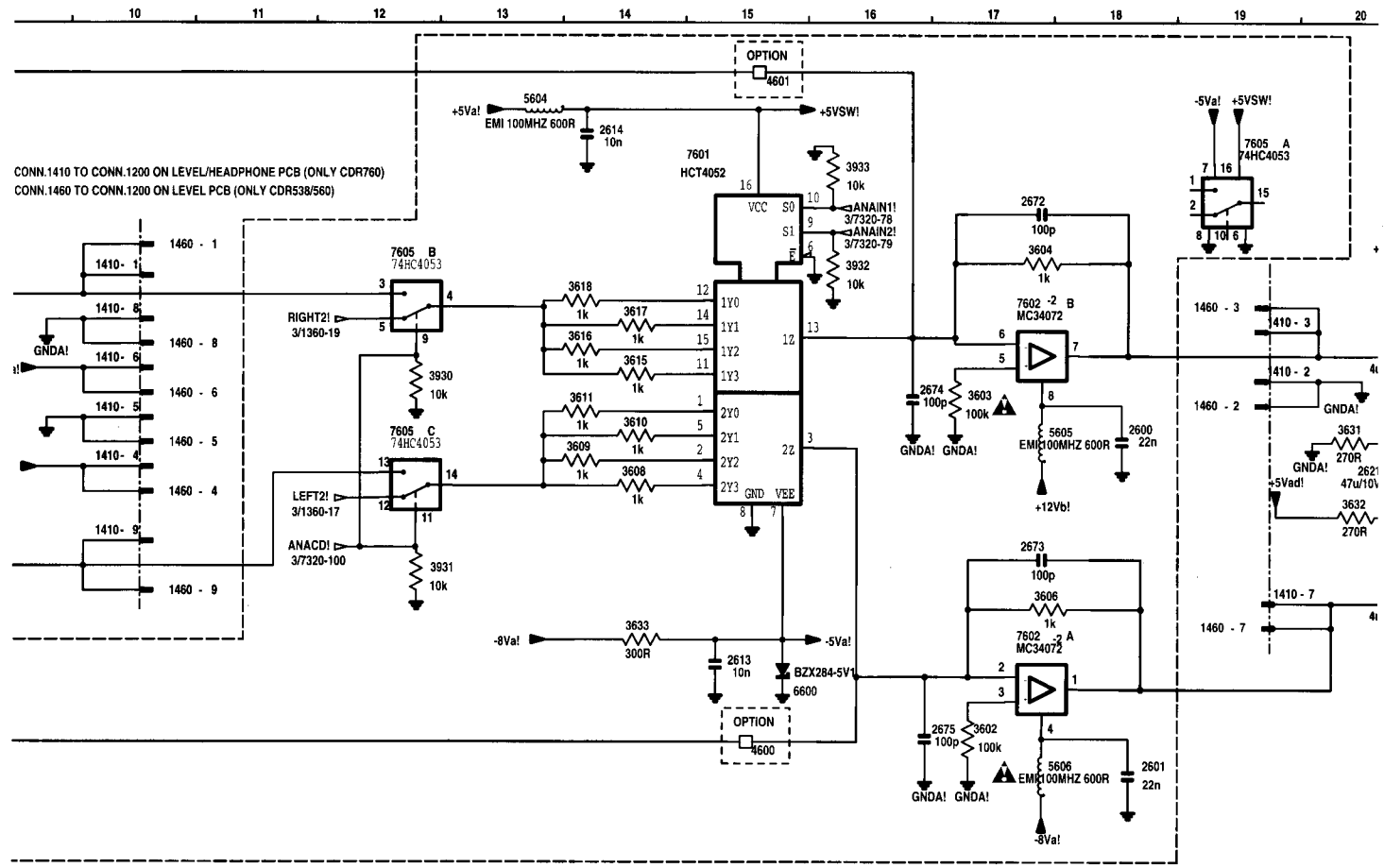
1500 G 2
1500 G 2
1500 H 2
1500 F13
1500 F13
1500 E13
1500 F13
1500 C 2
1500 I13
1500 I13
1500 H 2
1500 I13
1500 D13
1500 B 2
1500 E13
1500 D13
1500 E13
1500 D13
1500 H13
1500 E13
1520 C 3
1521 A 3
1530 H14
1530 E 2
1531 C14
1580 I13
1580 I13
1580 I13
1580 H13
1580 H13
2500 B 5
2501 B 9
2502 B10
2503 B10
2504 C13
2505 D12
2506 D10
2507 D 9
2509 E 3
2510 F 3
2511 F 3
2512 H12
2513 H13
3501 B 4
3502 B 5
3503 B10
3504 C12
3505 C 9
3506 C 8
3507 E 3
3508 D13
3509 F 4
3510 F 4
3511 G 5
3512 H 5
3513 H 5
3514 I 5
3515 G 7
3516 H 7
3517 H 7
3518 I 7
5450 B 9
7500 D 9
7500 D 8
7500 B 6
7500 B 7
7500 B 7
7500 C12
7501 H 6
7502 H 7
7503 I 6
7504 I 7

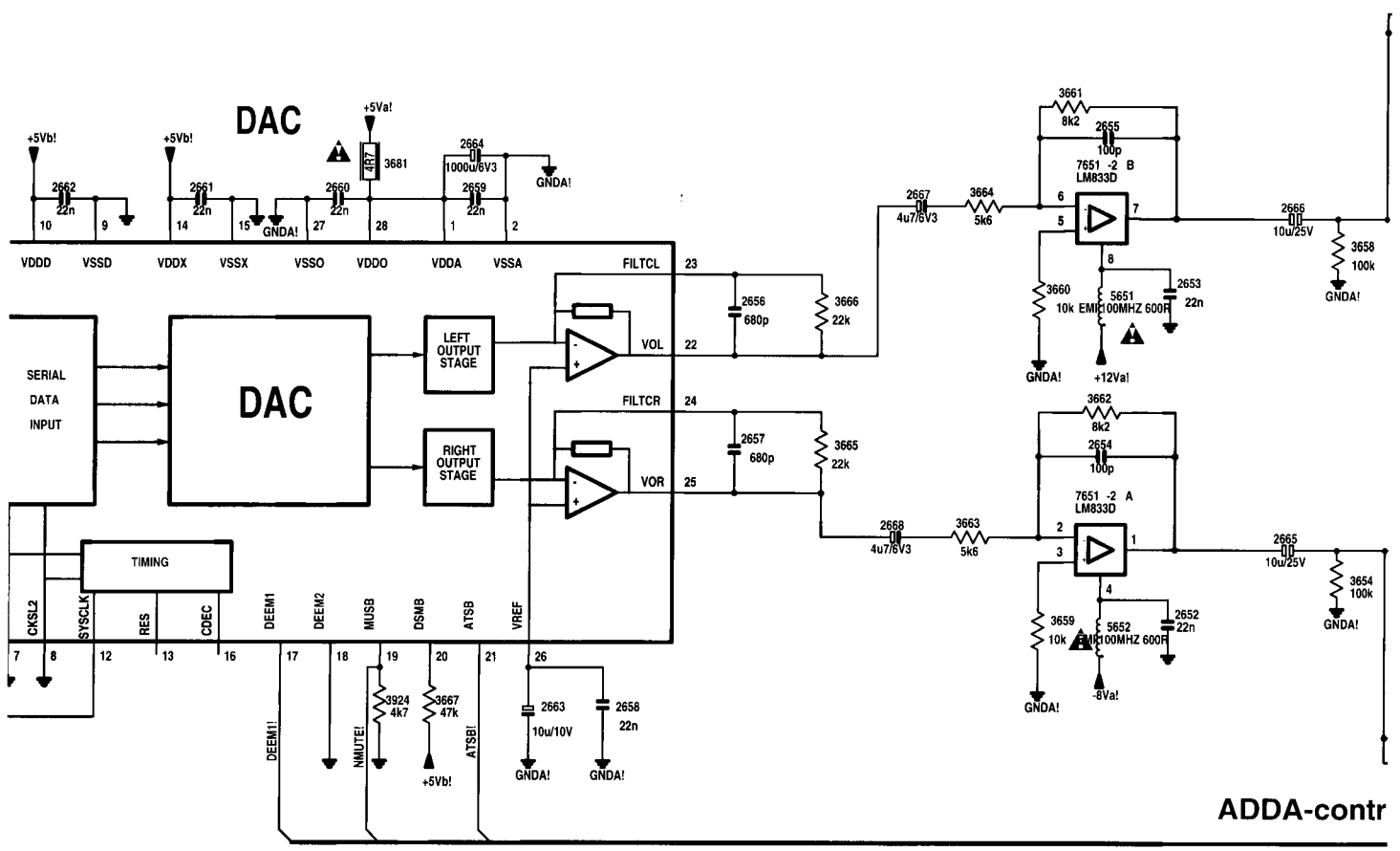


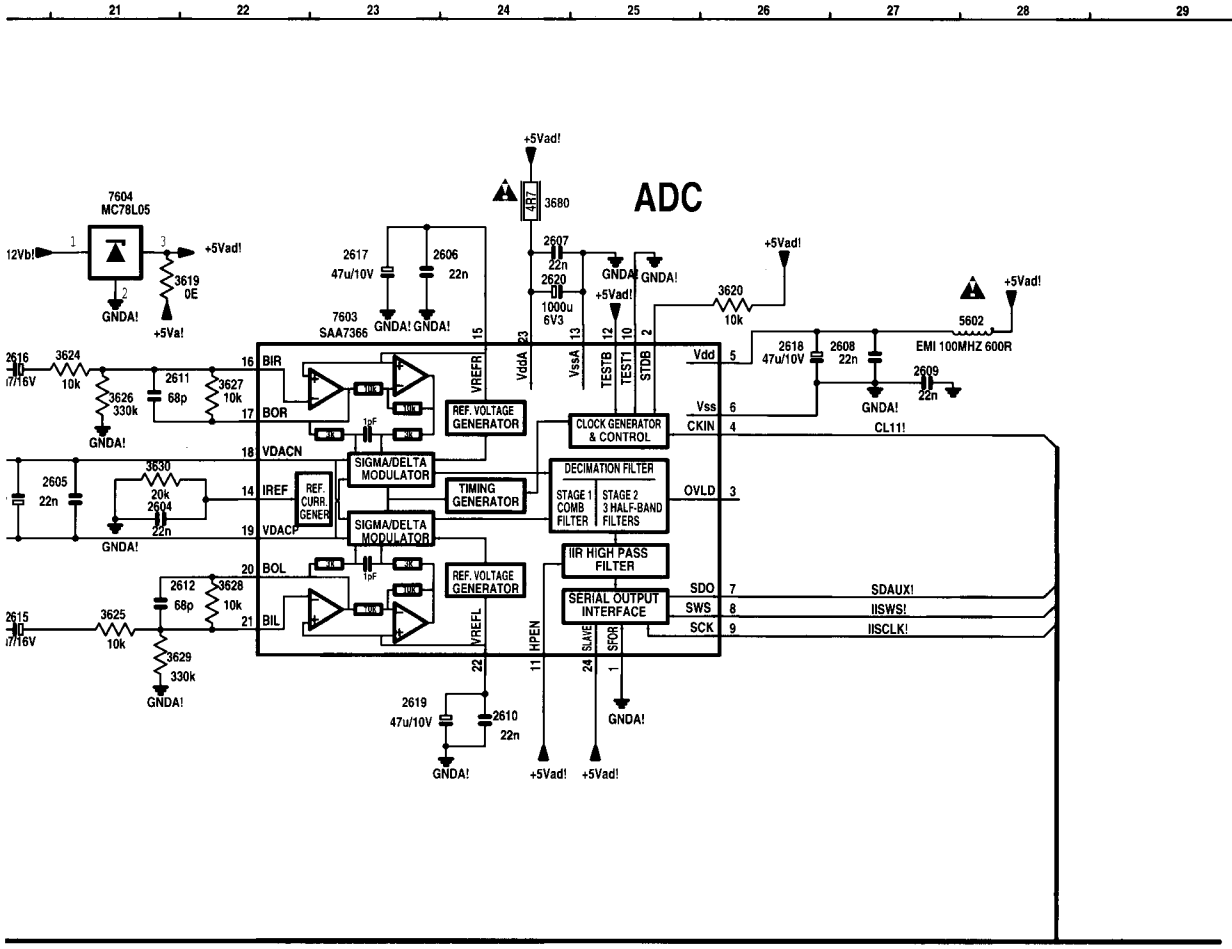
6. ANALOG IN/OUT PART

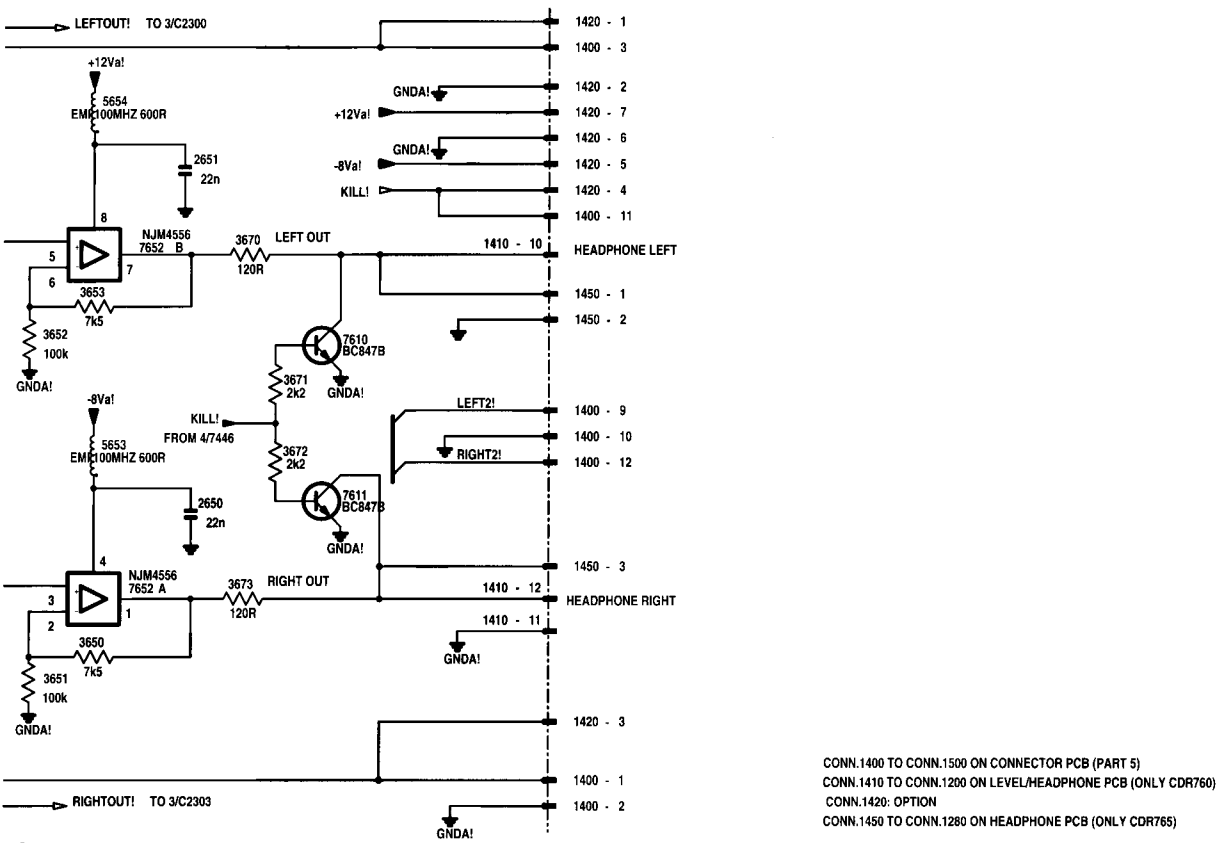





CONN.1410 TO CONN.1200 ON LEVEL/HEADPHONE PCB (ONLY CDR760)
CONN.1460 TO CONN.1200 ON LEVEL PCB (ONLY CDR538/560)
OPTION
4601
+5Va!
5604
EMI 100MHZ 600R
2614
10n
+5VSW!
7601
HCT4052
3933
10k
ANAIN1!
3/7320-78
ANAIN2!
3/7320-79
3932
10k
7605 B
74HC4053
RIGHT2!
3/1360-19
3930
10k
7605 C
74HC4053
LEFT2!
3/1360-17
ANACD!
3/7320-100
3931
10k
3618
3617
3616
3615
3611
3610
3609
3608
1k
2672
100p
3604
1k
7602 -2 B
MC34072
2674
100p
3603
100k
5605
EMI 100MHZ 600R
2600
22n
+12Vb!
GNDA!
-5Va!
+5VSW!
7605 A
74HC4053
1460 - 1
1460 - 2
1460 - 3
1460 - 4
1460 - 5
1460 - 6
1460 - 7
1460 - 8
1460 - 9
1410 - 1
1410 - 2
1410 - 3
1410 - 4
1410 - 5
1410 - 6
1410 - 7
1410 - 8
1410 - 9
3631
270R
+5Vad!
2621
47u/10V
3632
270R
2673
100p
3606
1k
7602 -2 A
MC34072
2675
100p
3602
100k
5606
EMI 100MHZ 600R
2601
22n
-8Va!
3633
300R
2613
10n
BZX284-5V1
6600
OPTION
4600


DAC
+5Vb!
+5Va!
2662
22n
2661
22n
2660
22n
2659
22n
4R7
3681
2664
1000u/6V3
GNDA!
VDDD
VSSD
VDDX
VSSX
VSSO
VDDO
VDDA
VSSA
SERIAL
DATA
INPUT
DAC
LEFT
OUTPUT
STAGE
RIGHT
OUTPUT
STAGE
FILTCL
FILTCR
VOL
VOR
2656
680p
3666
22k
2657
680p
3665
22k
TIMING
CKSL2
SYSCLK
RES
CDEC
DEEM1
DEEM2
MUSB
DSMB
ATSB
VREF
DEEM1!
NMUTE!
ATSB!
3924
4k7
3667
47k
+5Vb!
2663
10u/10V
2658
22n
3661
8k2
2655
100p
7651 -2 B
LM833D
2667
4u7/6V3
3664
5k6
2666
10u/25V
3658
100k
3660
10k
5651
EMI 100MHZ 600R
2653
22n
+12Va!
3662
8k2
2654
100p
7651 -2 A
LM833D
2668
4u7/6V3
3663
5k6
2665
10u/25V
3654
100k
3659
10k
5652
EMI 100MHZ 600R
2652
22n
-8Va!
ADDA-contr





CONN.1400 TO CONN.1500 ON CONNECTOR PCB (PART 5)
CONN.1410 TO CONN.1200 ON LEVEL/HEADPHONE PCB (ONLY CDR760)
CONN.1420: OPTION
CONN.1450 TO CONN.1280 ON HEADPHONE PCB (ONLY CDR765)

ol

3

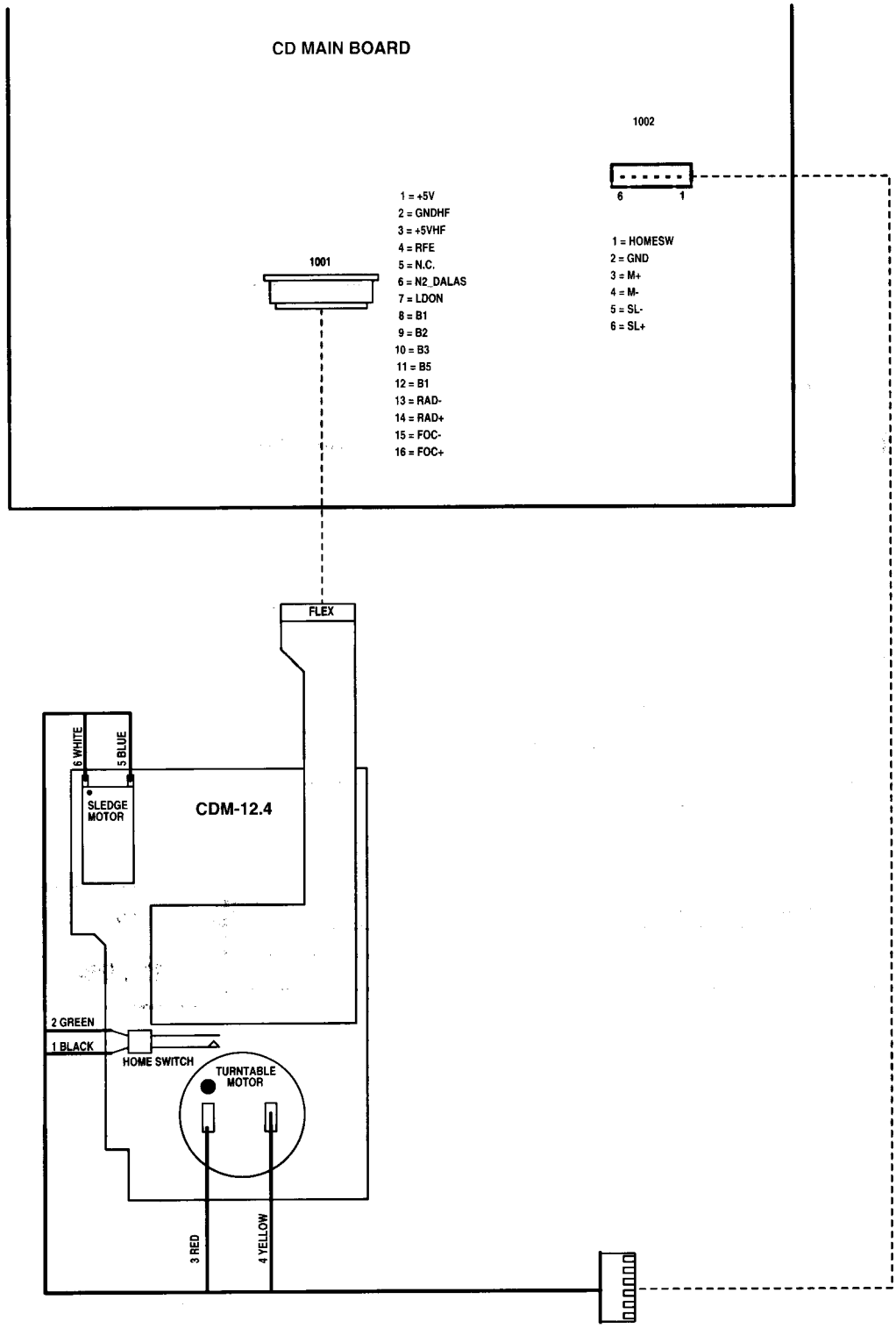
4203_6
9824

1400 M24 5601 C 8
1400 N24 5602 C28
1400 H25 5604 A13
1400 E 5 5605 D18
1400 C 5 5606 F18
1400 B 5 5651 J18
1400 E 5 5652 M18
1400 K25 5653 K21
1400 K25 5654 H21
1400 I25 6600 F16
1400 K25 7600 D 7
1410 B10 7500 B 8
1410 C19 7601 A15
1410 C19 7602 E17
1410 D10 7602 C17
1410 C10 7603 C23
1410 C10 7604 B21
1410 E19 7605 A19
1410 C10 7605 B12
1410 D10 7605 D12
1410 I24 7610 J23
1410 L24 7611 K23
1410 L24 7650 I 8
1420 H25 7651 L18
1420 H25 7651 I18
1420 M24 7652 L21
1420 I25 7652 I21
1420 I26
1420 I25
1420 H25
1450 J25
1450 J25
1450 L24
1460 B10
1460 C19
1460 C19
1460 D10
1460 D10
1460 C10
1460 E19
1460 C10
1460 E10
2600 D18
2601 F18
2602 C 9
2603 E 9
2604 D21
2605 D21
2606 B24
2607 B24
2608 C27
2609 C27
2610 F24
2611 C21
2612 E22
2613 E15
2614 A14
2615 E20
2616 C20
2617 B23
2618 C26
2619 F23
2620 B24
2621 D20
2622 B 6
2623 E 6
2650 K22
2651 I22
2652 L19
2653 J19
2654 K18
2655 I18
2656 J15
2657 K15
2658 M14
2659 I13
2660 I12
2661 I11
2662 I 9
2663 M13
2664 I13
2665 L19
2666 I19
2667 I16
2668 L16
2670 A 8
2671 D 7
2672 B17
2673 D17
2674 C17
2675 F17
2676 C 7
2677 E 7
3602 F17
3603 C17
3604 B17
3606 E17
3608 D14
3609 D14
3610 D14
3611 C14
3612 E 7
3613 C 7
3614 B 8
3615 C14
3616 C14
3617 C14
3618 B14
3619 B22
3620 B26
3621 C 6
3622 D 8
3623 E 6
3624 C21
3625 E21
3626 C21
3627 C22
3628 E22
3629 E22
3630 D21
3631 D20
3632 D20
3633 E14
3635 B 7
3636 D 6
3650 L21
3651 M21
3652 J21
3653 J21
3654 L20
3658 J20
3659 M18
3660 J17
3661 H18
3662 K18
3663 L17
3664 I17
3665 K16
3666 J16
3667 M13
3670 I22
3671 J22
3672 K22
3673 L22
3680 B24
3681 I12
3924 M12
3930 C13
3931 E13
3932 B16
3933 A16
4600 F15
4601 A15
5600 E 8

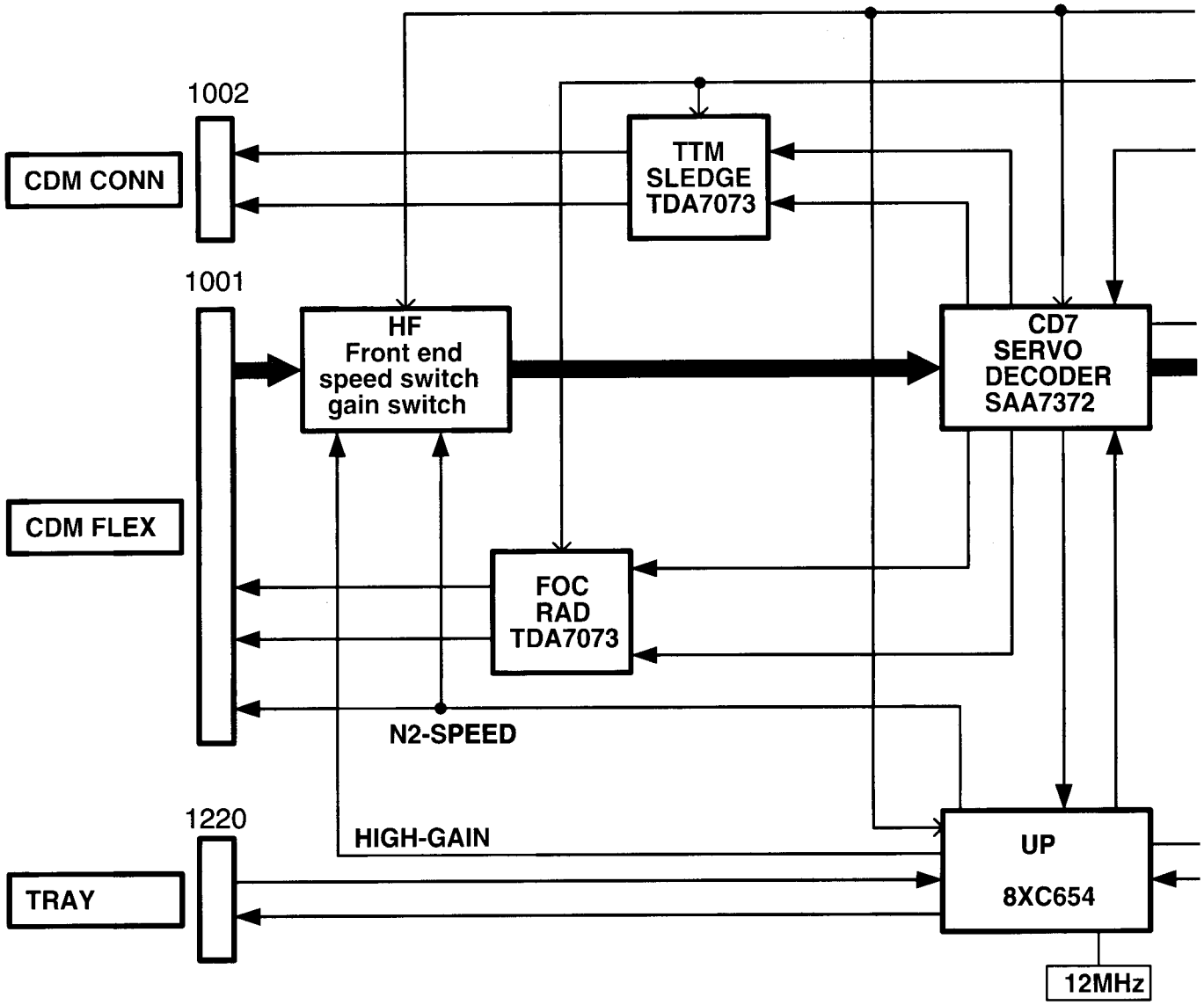
CD MAIN BOARD

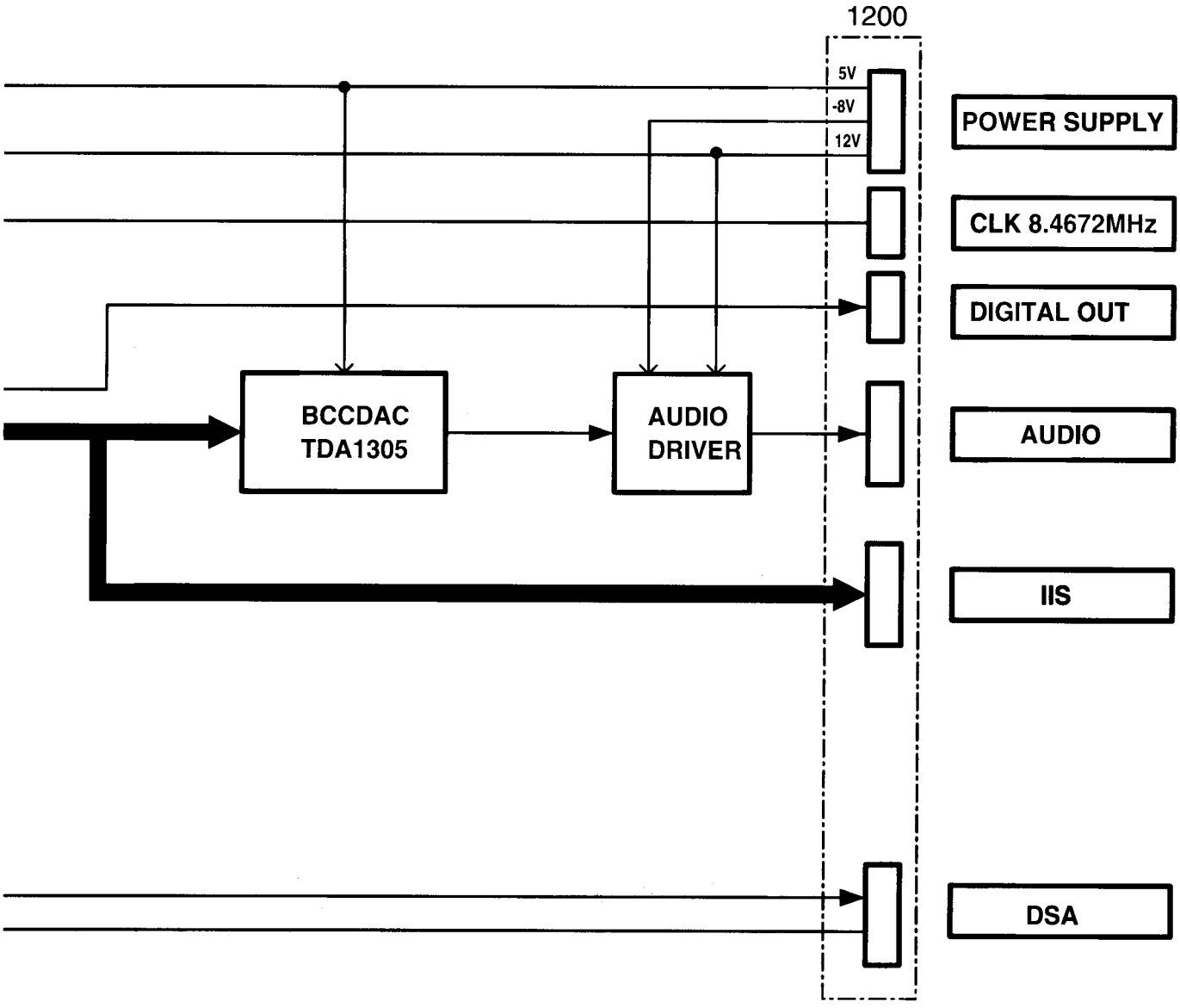
CONTENTS

WIRING DIAGRAM CDM12.4

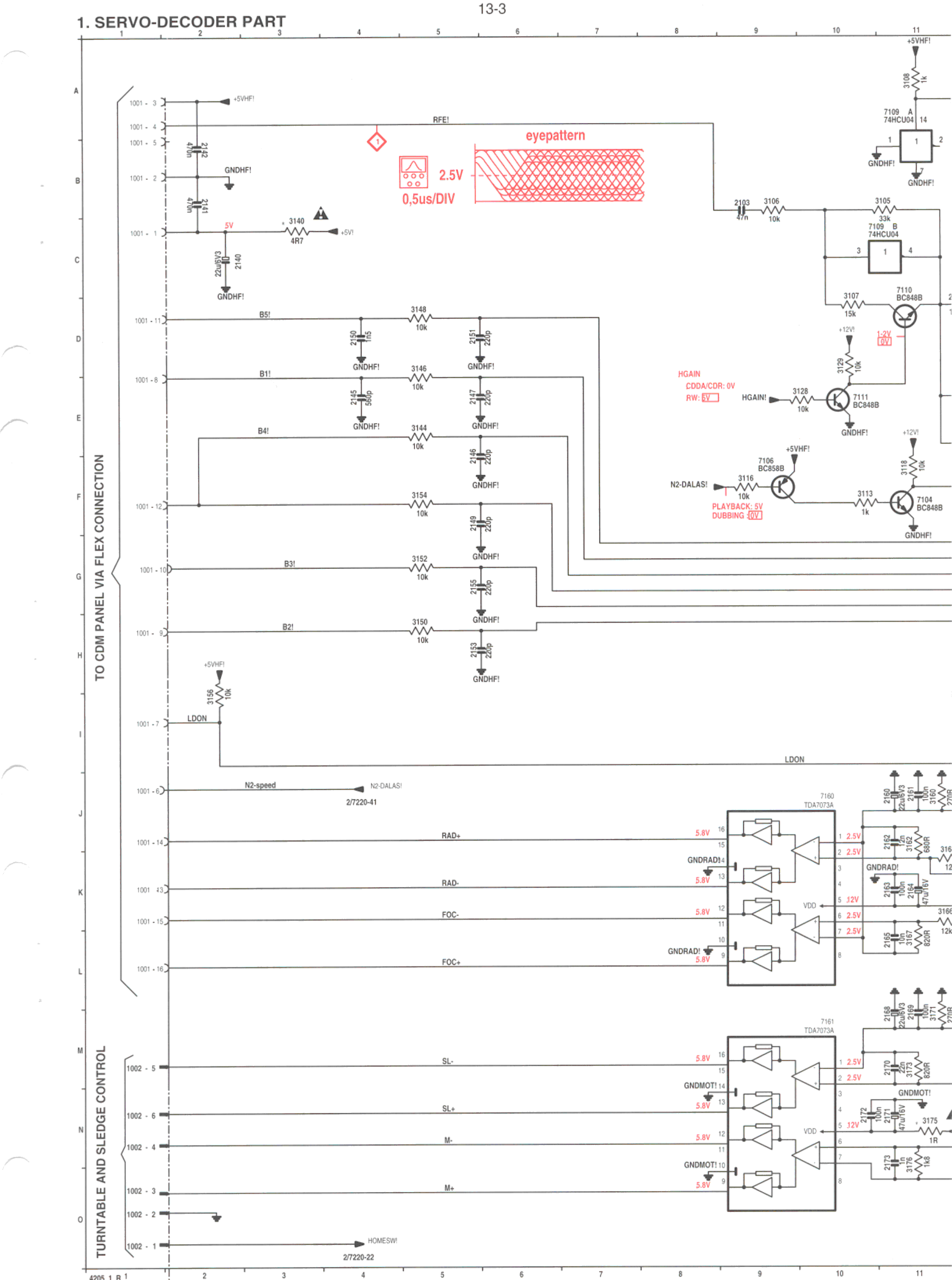


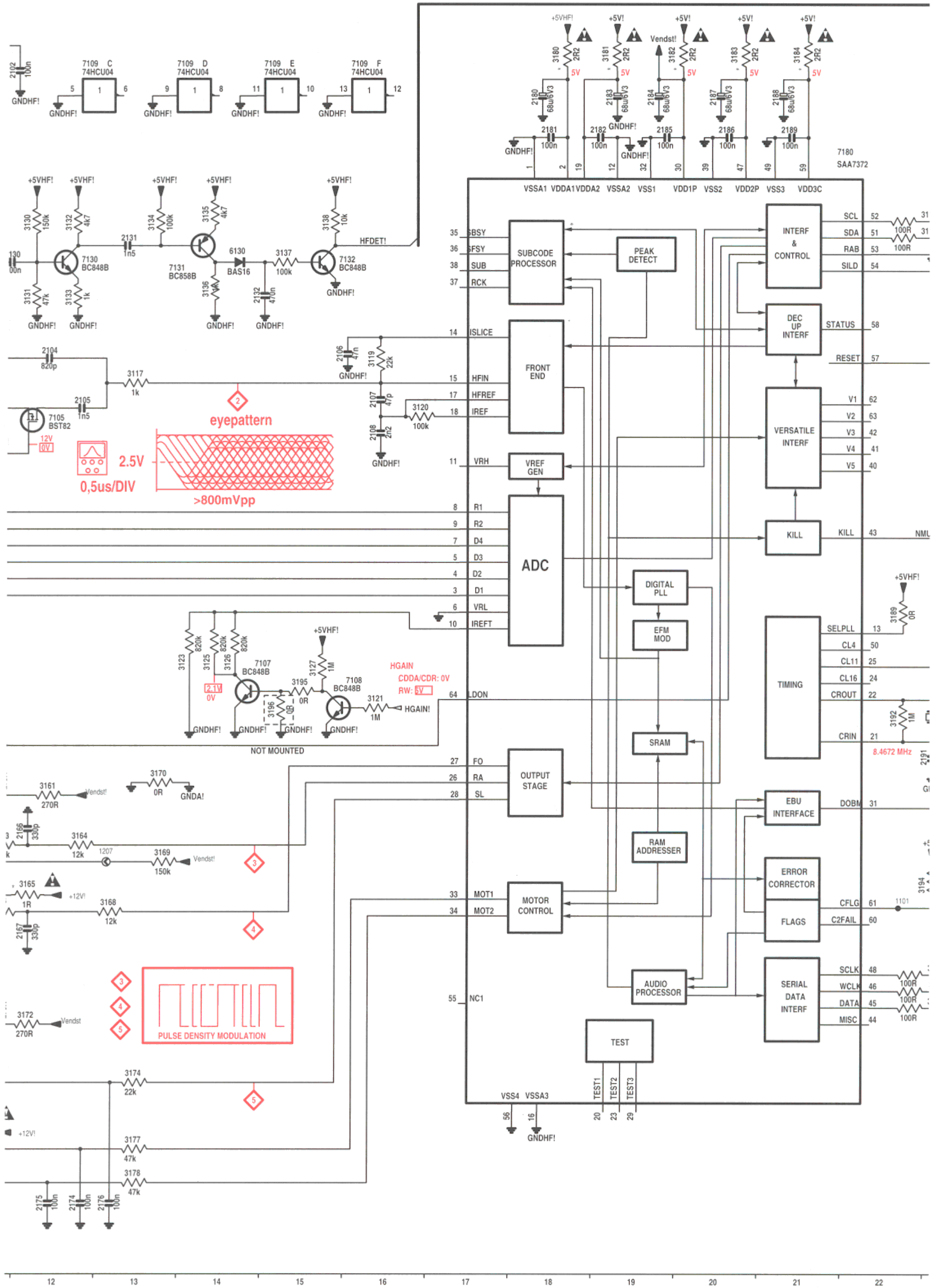
BLOCKDIAGRAM CD MAIN BOARD

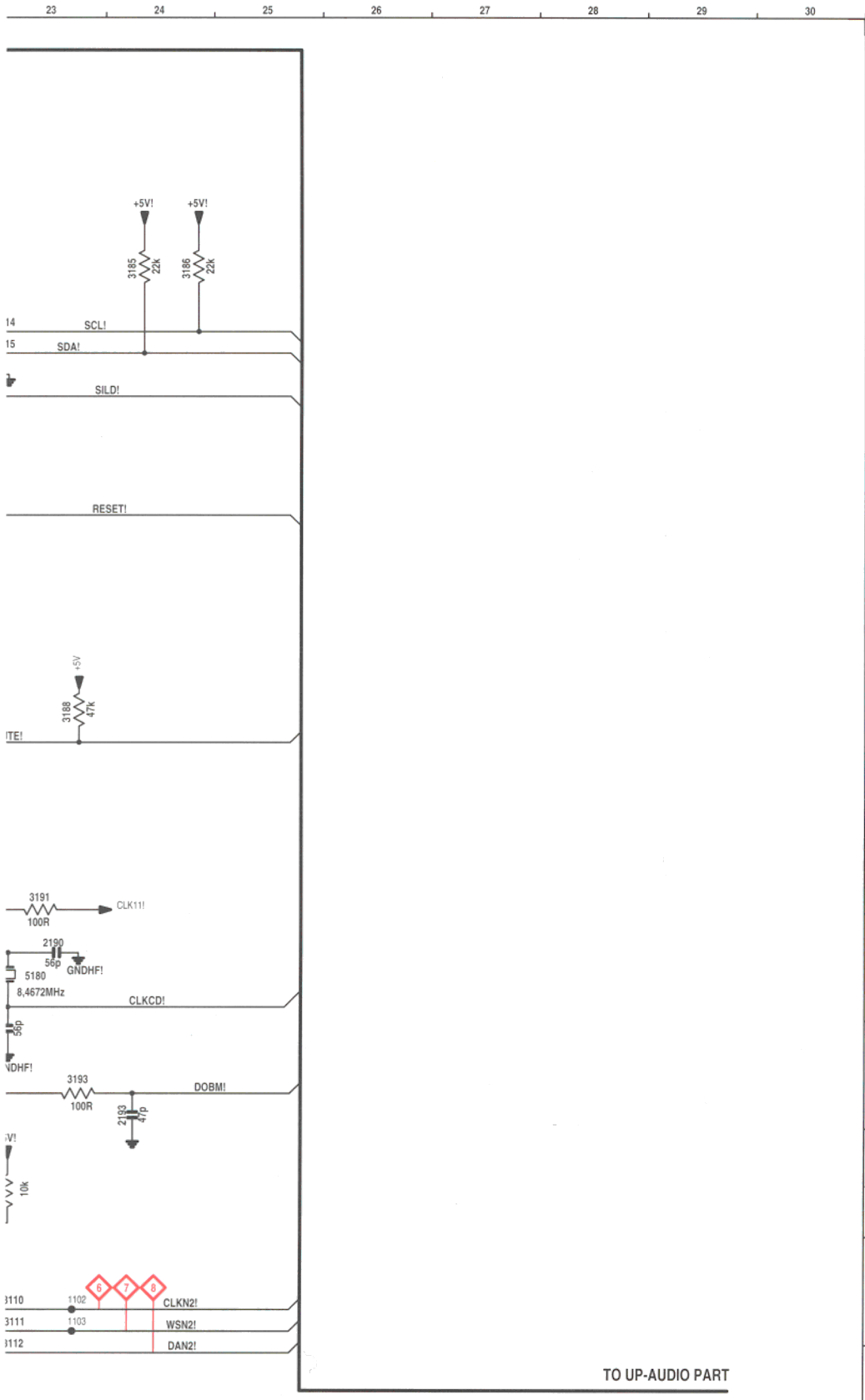


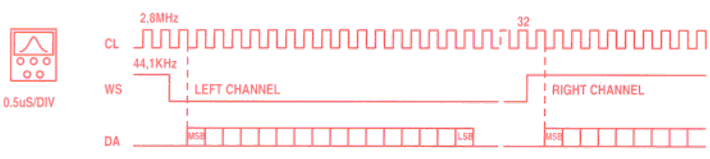

1200
5V
-8V
12V
POWER SUPPLY
CLK 8.4672MHz
DIGITAL OUT
BCCDAC
TDA1305
AUDIO
DRIVER
AUDIO
IIS
DSA
FLEX TO CDR MAINBOARD

1. SERVO-DECODER PART



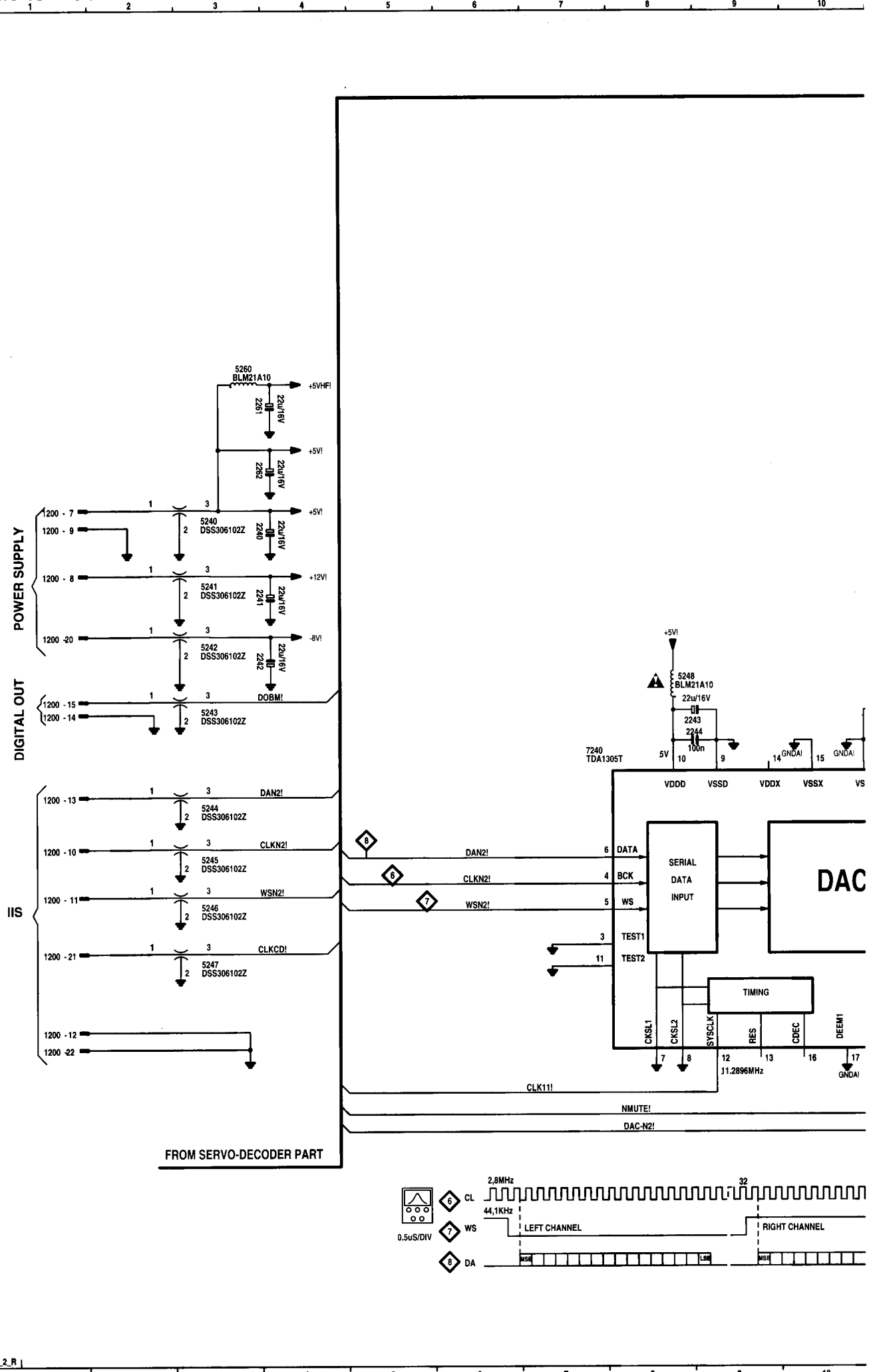

7180
SAA7372
VSSA1 VDDA1 VDDA2 VSSA2 VSS1 VDD1P VSS2 VDD2P VSS3 VDD3C
SUBCODE PROCESSOR
PEAK DETECT
FRONT END
VREF GEN
ADC
DIGITAL PLL
EFM MOD
SRAM
OUTPUT STAGE
MOTOR CONTROL
AUDIO PROCESSOR
RAM ADDRESSER
INTERF & CONTROL
DEC UP INTERF
VERSATILE INTERF
KILL
TIMING
EBU INTERFACE
ERROR CORRECTOR
FLAGS
SERIAL DATA INTERF
TEST
SBSY
SFSY
SUB
RCK
ISLICE
HFIN
HFREF
IREF
VRH
R1
R2
D4
D3
D2
D1
VRL
IREFT
LDON
FO
RA
SL
MOT1
MOT2
NC1
SCL
SDA
RAB
SILD
STATUS
RESET
V1
V2
V3
V4
V5
KILL
SELPLL
CL4
CL11
CL16
CROUT
CRIN
DOBM
CFLG
C2FAIL
SCLK
WCLK
DATA
MISC
TEST1
TEST2
TEST3
VSS4
VSSA3
eyepattern
2.5V
0,5us/DIV
>800mVpp
HGAIN
CDDA/CDR: 0V
RW: 5V
NOT MOUNTED
PULSE DENSITY MODULATION
8.4672 MHz
HFDET!
HGAIN!
GNDHF!
GNDA!
Vendst!
+5V!
+5VHF!
+12V!

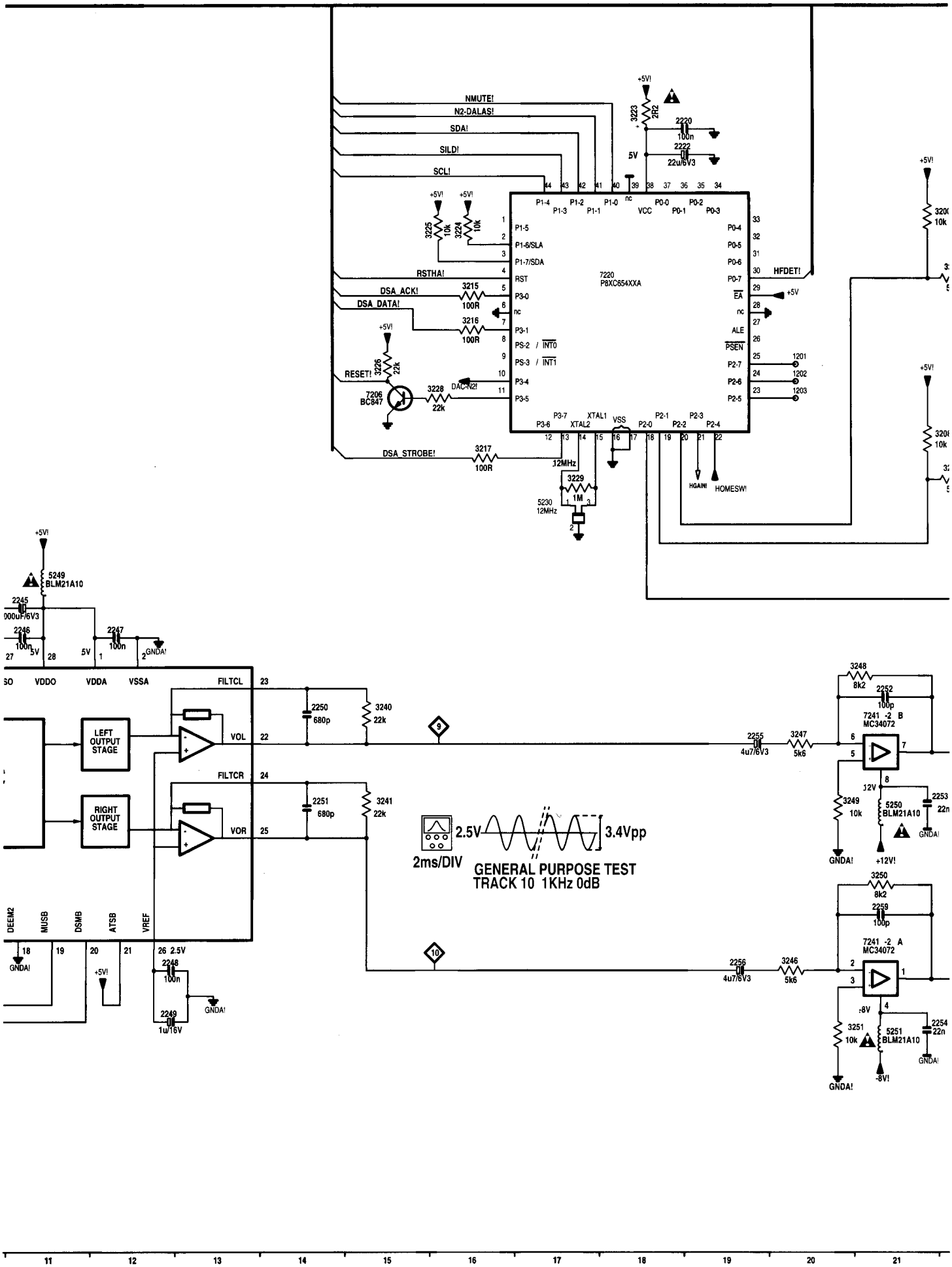


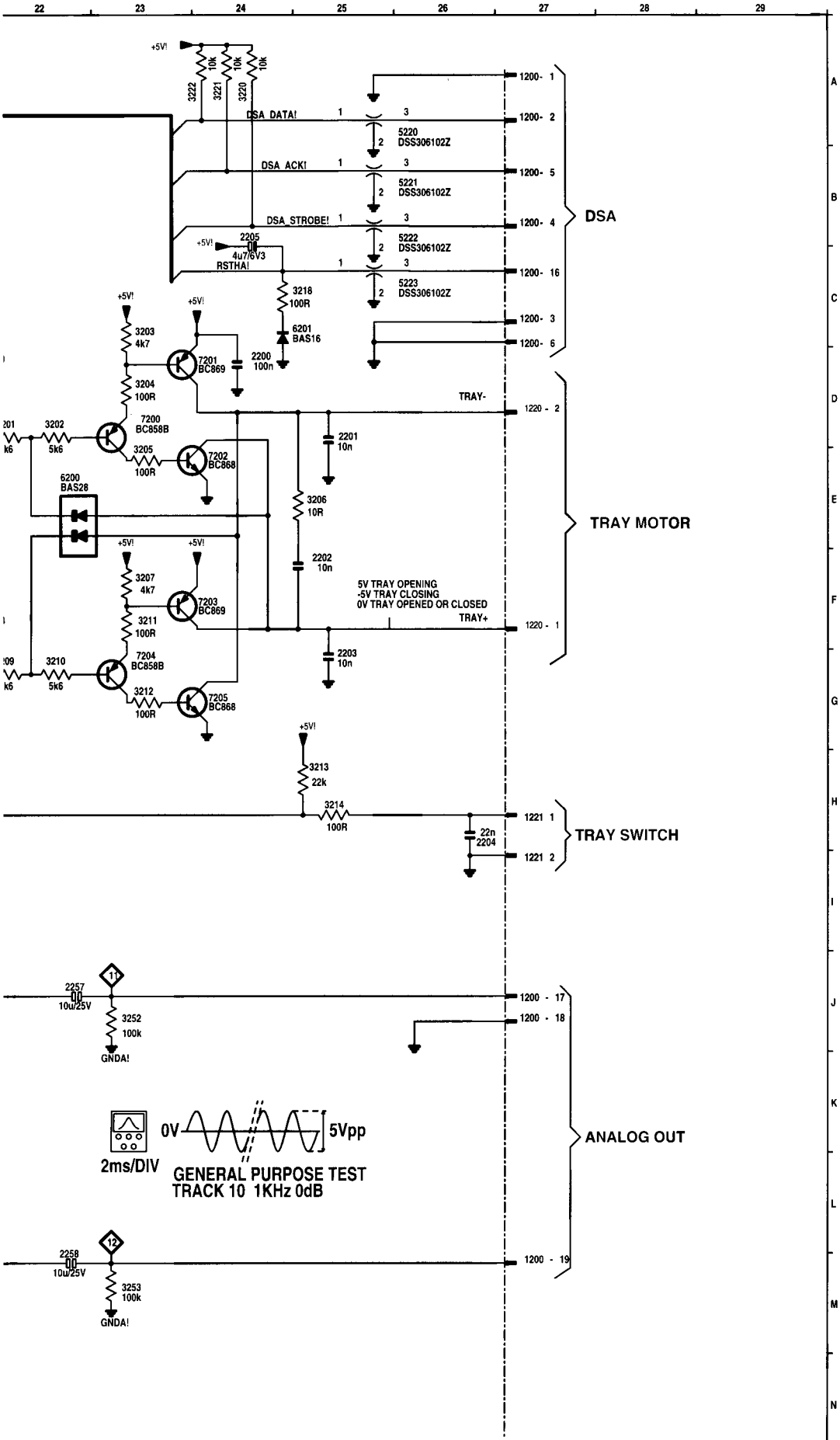


1001 C 1 7130 D12
1001 B 1 7131 D13
1001 A 1 7132 D15
1001 A 1 7160 J10
1001 B 1 7161 M10
1001 J 1 7180 B21
1001 I 1
1001 E 1
1001 H 1
1001 G 1
1001 D 1
1001 F 1
1001 K 1
1001 J 1
1001 K 1
1001 L 1
1002 O 1
1002 O 1
1002 O 1
1002 N 1
1002 M 1
1002 N 1
1101 K22
1102 L23
1103 L23
1207 K13
2102 A12
2103 B 9
2104 E12
2105 E12
2106 E15
2107 E16
2108 F16
2130 D12
2131 C13
2132 D14
2140 C 2
2141 B 2
2142 B 2
2145 E 4
2146 F 5
2147 E 5
2149 F 5
2150 D 4
2151 D 5
2153 H 5
2155 G 5
2160 J11
2161 J11
2162 J11
2163 K11
2164 K11
2165 L11
2166 J12
2167 L12
2168 M11
2169 M11
2170 M11
2171 N11
2172 N10
2173 N11
2174 O12
2175 O12
2176 O13
2180 B18
2181 B18
2182 B19
2183 B19
2184 B19
2185 B19
2186 B20
2187 B20
2188 B21
2189 B21
2190 I23
2191 J23
2193 J24
3105 B11
3106 B 9
3107 D10
3108 A11
3110 L23
3111 L23
3112 M23
3113 F10
3114 C23
3115 C23
3116 F 9
3117 E13
3118 F11
3119 E16
3120 E16
3121 I16
3123 H14
3125 H14
3126 H14
3127 H15
3128 E10
3129 D10
3130 C12
3131 D12
3132 C12
3133 D12
3134 C13
3135 C14
3136 D14
3137 D15
3138 C15
3140 C 3
3144 E 5
3146 D 5
3148 D 5
3150 H 5
3152 G 5
3154 F 5
3156 I 2
3160 J11
3161 J12
3162 J11
3163 K11
3164 K12
3165 K12
3166 K11
3167 L11
3168 K13
3169 K13
3170 J13
3171 M11
3172 M12
3173 M11
3174 M13
3175 N11
3176 N11
3177 N13
3178 O13
3180 A18
3181 A19
3182 A19
3183 A20
3184 A21
3185 C24
3186 C24
3188 G23
3189 H22
3191 H23
3192 I22
3193 J23
3194 K23
3195 I15
3196 I15
5180 I23
6130 D14
7104 F11
7105 F12
7106 F 9
7107 H15
7108 I16
7109 A11
7109 C10
7109 A12
7109 A13
7109 A15
7109 A16
7110 C11
7111 E10

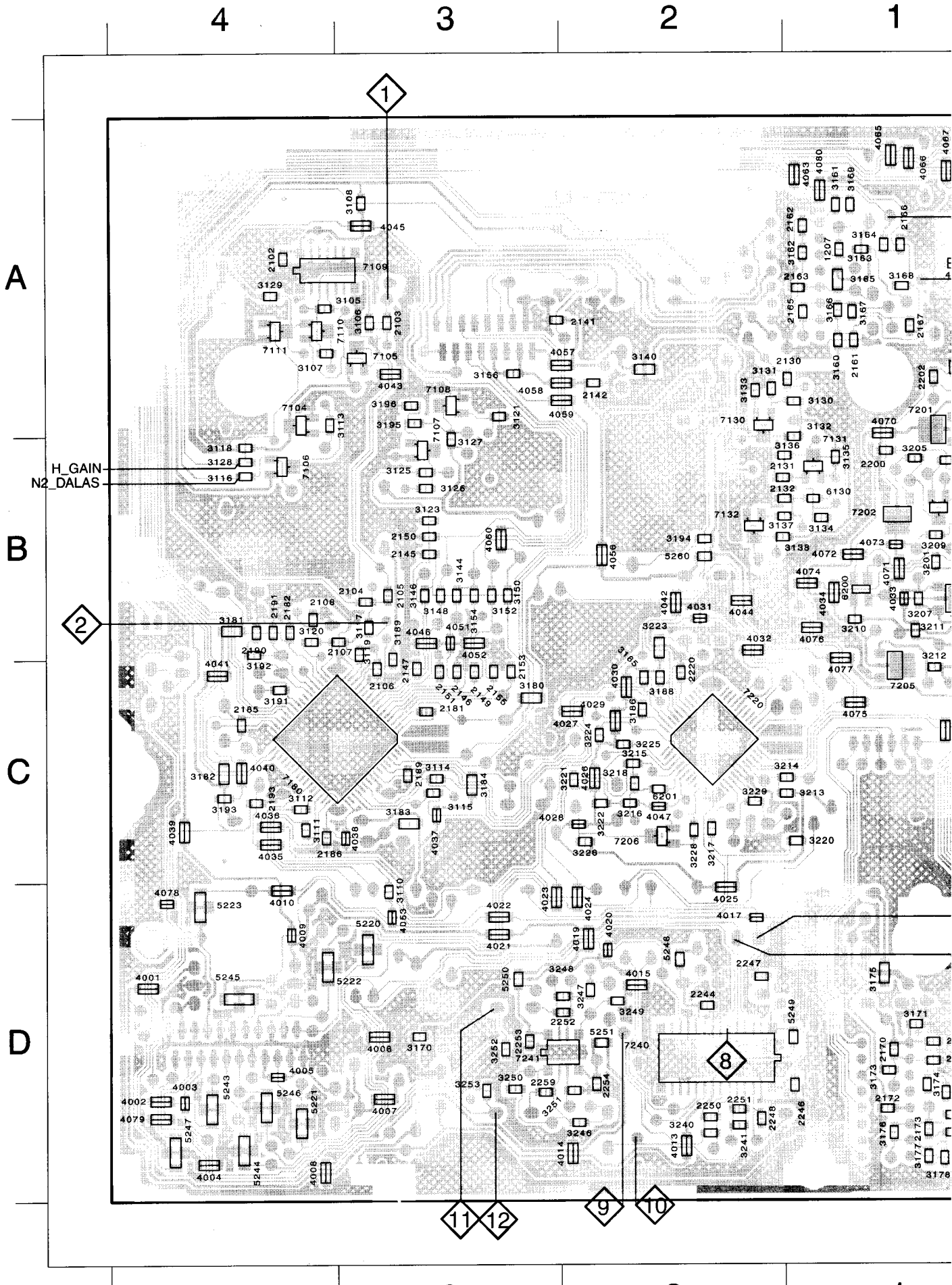
4205 1
9827

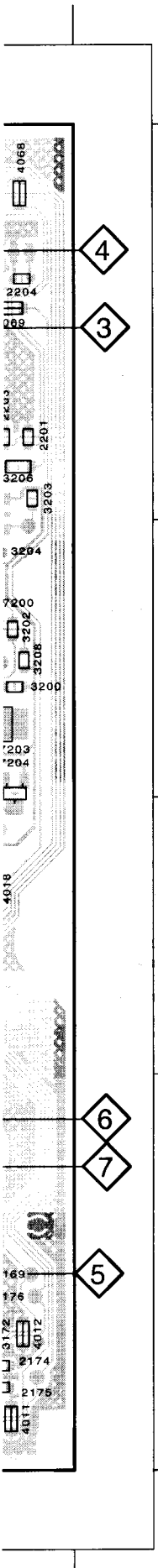

POWER SUPPLY
DIGITAL OUT
IIS
5260 BLM21A10
+5VHF!
2261 22u/16V
+5V!
2262 22u/16V
1200 - 7
1200 - 9
5240 DSS306102Z
2240 22u/16V
1200 - 8
5241 DSS306102Z
2241 22u/16V
+12V!
1200 -20
5242 DSS306102Z
2242 22u/16V
-8V!
1200 - 15
1200 - 14
5243 DSS306102Z
DOBM!
1200 - 13
5244 DSS306102Z
DAN2!
1200 - 10
5245 DSS306102Z
CLKN2!
1200 - 11
5246 DSS306102Z
WSN2!
1200 - 21
5247 DSS306102Z
CLKCD!
1200 -12
1200 -22
FROM SERVO-DECODER PART
5248 BLM21A10
22u/16V
2243
2244 100n
7240 TDA1305T
VDDD VSSD VDDX VSSX VS
DAN2!
CLKN2!
WSN2!
DATA
BCK
WS
TEST1
TEST2
SERIAL DATA INPUT
DAC
TIMING
CKSL1 CKSL2 SYSCLK RES CDEC DEEM1
11.2896MHz
CLK11!
NMUTE!
DAC-N2!
0.5uS/DIV
CL
WS
DA
2,8MHz
32
44,1KHz
LEFT CHANNEL
RIGHT CHANNEL
MSB
LSB


NMUTE!
N2-DALAS!
SDA!
SILD!
SCL!
RSTHA!
DSA_ACK!
DSA_DATA!
DSA_STROBE!
RESET!
DAC-N2!
HFDET!
HGAIN!
HOMESW!
7220
P8XC854XXA
12MHz
5230
12MHz
7206
BC847
LEFT OUTPUT STAGE
RIGHT OUTPUT STAGE
VOL
VOR
FILTCL
FILTCR
VDDO
VDDA
VSSA
DEEM2
MUSB
DSMB
ATSB
VREF
2.5V
3.4Vpp
2ms/DIV
GENERAL PURPOSE TEST
TRACK 10 1KHz 0dB
7241 -2 B
MC34072
7241 -2 A
MC34072
+5V!
+12V!
-8V!
GNDA!
5V



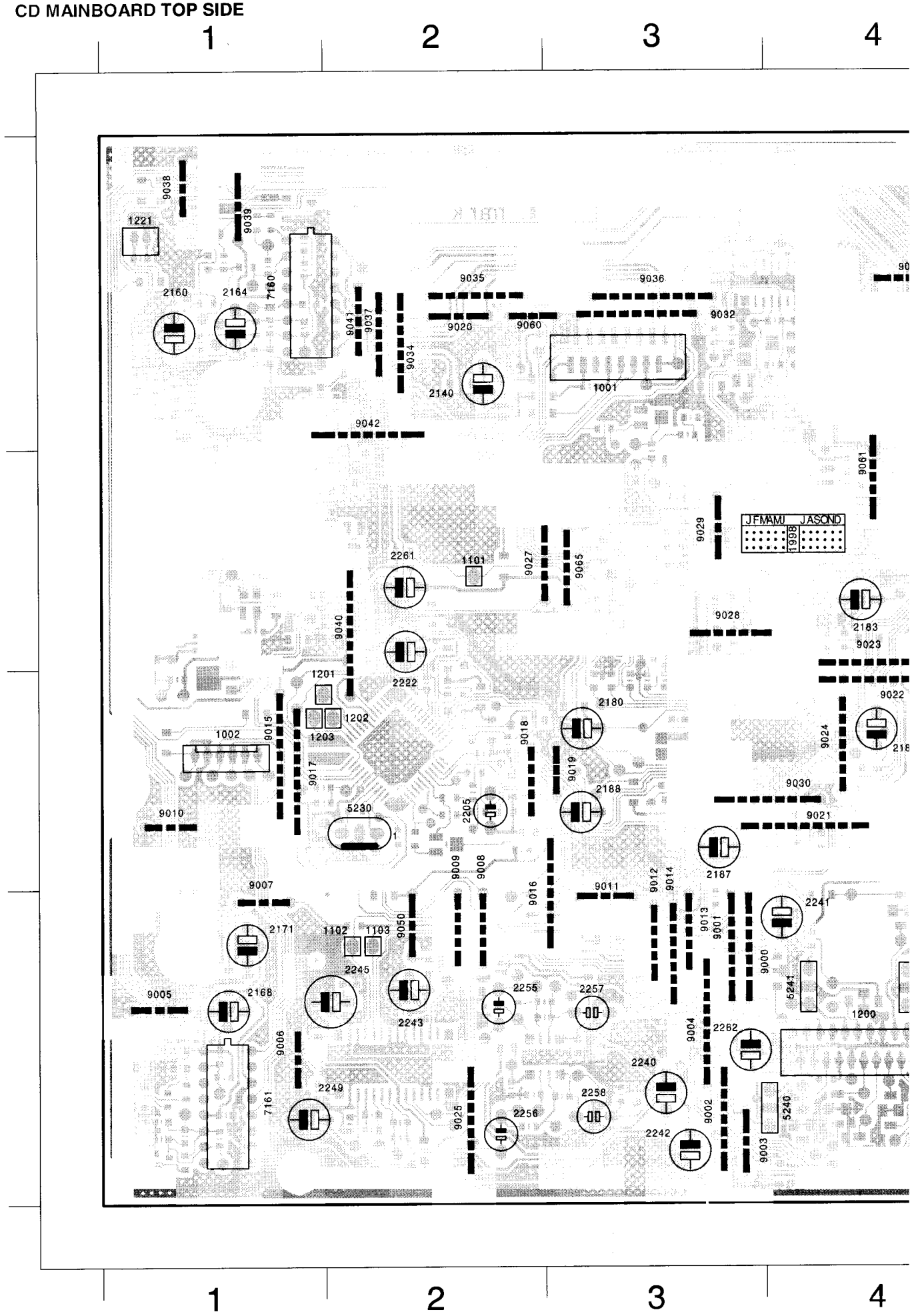
CD MAINBOARD BOTTOM SIDE

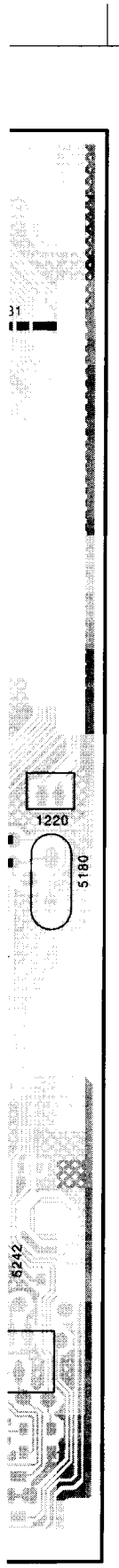




1207	A 1	3129	A 4	3229	C 2	4078	D 4
2102	A 4	3130	A 1	3240	D 2	4079	D 4
2103	A 3	3131	A 2	3241	D 2	4080	A 1
2104	B 3	3132	B 1	3246	D 2	5220	D 3
2105	B 3	3133	A 2	3247	D 2	5221	D 4
2106	C 3	3134	B 1	3248	D 2	5222	D 4
2107	B 3	3135	B 1	3249	D 2	5223	D 4
2108	B 4	3136	B 1	3250	D 3	5243	D 4
2130	A 1	3137	B 1	3251	D 2	5244	D 4
2131	B 2	3138	B 2	3252	D 3	5245	D 4
2132	B 1	3140	A 2	3253	D 3	5246	D 4
2141	A 3	3144	B 3	4001	D 4	5247	D 4
2142	A 2	3146	B 3	4002	D 4	5248	D 2
2145	B 3	3148	B 3	4003	D 4	5249	D 1
2146	C 3	3150	B 3	4004	D 4	5250	D 3
2147	C 3	3152	B 3	4005	D 4	5251	D 2
2149	C 3	3154	B 3	4006	D 3	5260	B 2
2150	B 3	3156	A 3	4007	D 3	6130	B 1
2151	C 3	3160	A 1	4008	D 4	6200	B 1
2153	C 3	3161	A 1	4009	D 4	6201	C 2
2155	C 3	3162	A 1	4010	D 4	7104	A 4
2161	A 1	3163	A 1	4011	D 1	7105	A 3
2162	A 1	3164	A 1	4012	D 1	7106	B 4
2163	A 1	3165	A 1	4013	D 2	7107	B 3
2165	A 1	3166	A 1	4014	D 2	7108	A 3
2166	A 1	3167	A 1	4015	D 2	7109	A 4
2167	A 1	3168	A 1	4017	D 2	7110	A 4
2169	D 1	3169	A 1	4018	C 1	7111	A 4
2170	D 1	3170	D 3	4019	D 2	7130	A 2
2172	D 1	3171	D 1	4020	D 2	7131	B 1
2173	D 1	3172	D 1	4021	D 3	7132	B 2
2174	D 1	3173	D 1	4022	D 3	7180	C 3
2175	D 1	3174	D 1	4023	D 3	7200	B 1
2176	D 1	3175	D 1	4024	D 2	7201	A 1
2181	C 3	3176	D 1	4025	D 2	7202	B 1
2182	B 4	3177	D 1	4026	C 2	7203	B 1
2185	C 4	3178	D 1	4027	C 2	7204	B 1
2186	C 4	3180	C 3	4028	C 2	7205	C 1
2189	C 3	3181	B 4	4029	C 2	7206	C 2
2190	B 4	3182	C 4	4030	C 2	7220	C 2
2191	B 4	3183	C 3	4031	B 2	7240	D 2
2193	C 4	3184	C 3	4032	B 2	7241	D 2
2200	B 1	3185	C 2	4033	B 1		
2201	A 1	3186	C 2	4034	B 1		
2202	A 1	3188	C 2	4035	C 4		
2203	A 1	3189	C 3	4036	C 4		
2204	A 1	3191	C 4	4037	C 3		
2220	C 2	3192	B 4	4038	C 3		
2244	D 2	3193	C 4	4039	C 4		
2246	D 1	3194	B 2	4040	C 4		
2247	D 2	3195	A 3	4041	C 4		
2248	D 2	3196	A 3	4042	B 2		
2250	D 2	3200	B 1	4043	A 3		
2251	D 2	3201	B 1	4044	B 2		
2252	D 2	3202	B 1	4045	A 3		
2253	D 3	3203	A 1	4046	B 3		
2254	D 2	3204	B 1	4047	C 2		
2259	D 3	3205	B 1	4051	B 3		
3105	A 4	3206	A 1	4052	B 3		
3106	A 3	3207	B 1	4053	D 3		
3107	A 4	3208	B 1	4056	B 2		
3108	A 3	3209	B 1	4057	A 2		
3110	D 3	3210	B 1	4058	A 2		
3111	C 4	3211	B 1	4059	A 2		
3112	C 4	3212	C 1	4060	B 3		
3113	A 4	3213	C 1	4063	A 1		
3114	C 3	3214	C 1	4065	A 1		
3115	C 3	3215	C 2	4066	A 1		
3116	B 4	3216	C 2	4067	A 1		
3117	B 3	3217	C 2	4068	A 1		
3118	B 4	3218	C 2	4069	A 1		
3119	B 3	3220	C 1	4070	A 1		
3120	B 4	3221	C 2	4071	B 1		
3121	A 3	3222	C 2	4072	B 1		
3123	B 3	3223	B 2	4073	B 1		
3125	B 3	3224	C 2	4074	B 1		
3126	B 3	3225	C 2	4075	C 1		
3127	B 3	3226	C 2	4076	B 1		
3128	B 4	3228	C 2	4077	C 1		

CD MAINBOARD TOP SIDE





A

1001 A 3
1002 C 1
1101 B 2
1102 D 2
1103 D 2
1200 D 4
1201 C 1
1202 C 2
1203 C 1
1220 B 4
1221 A 1
2140 A 2
2160 A 1
2164 A 1
2168 D 1
2171 D 1
2180 C 3
2183 B 4
2184 C 4
2187 C 3
2188 C 3
2205 C 2
2222 B 2
2240 D 3
2241 D 4

B

2242 D 3
2243 D 2
2245 D 2
2249 D 1
2255 D 2
2256 D 2
2257 D 3
2258 D 3
2261 B 2
2262 D 3
5180 C 4
5230 C 2
5240 D 4
5241 D 4
5242 D 4
7160 A 1
7161 D 1

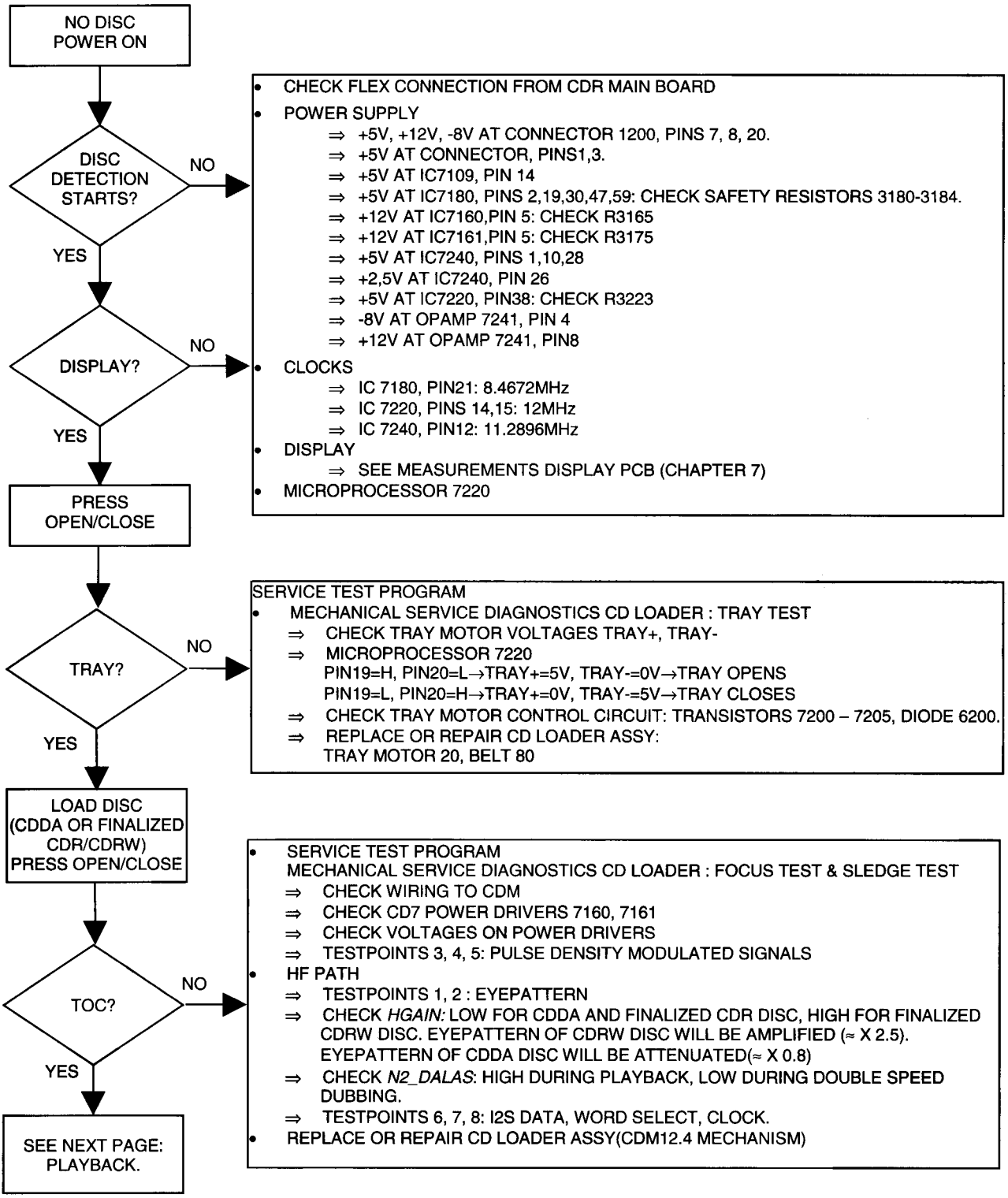
C

9000 D 3
9001 D 3
9002 D 3
9003 D 3
9004 D 3
9005 D 1
9006 D 1
9007 D 1
9008 D 2
9009 D 2
9010 C 1
9011 D 3
9012 D 3
9013 D 3
9014 D 3
9015 C 1
9016 D 3
9017 C 1
9018 C 2
9019 C 3
9020 A 2

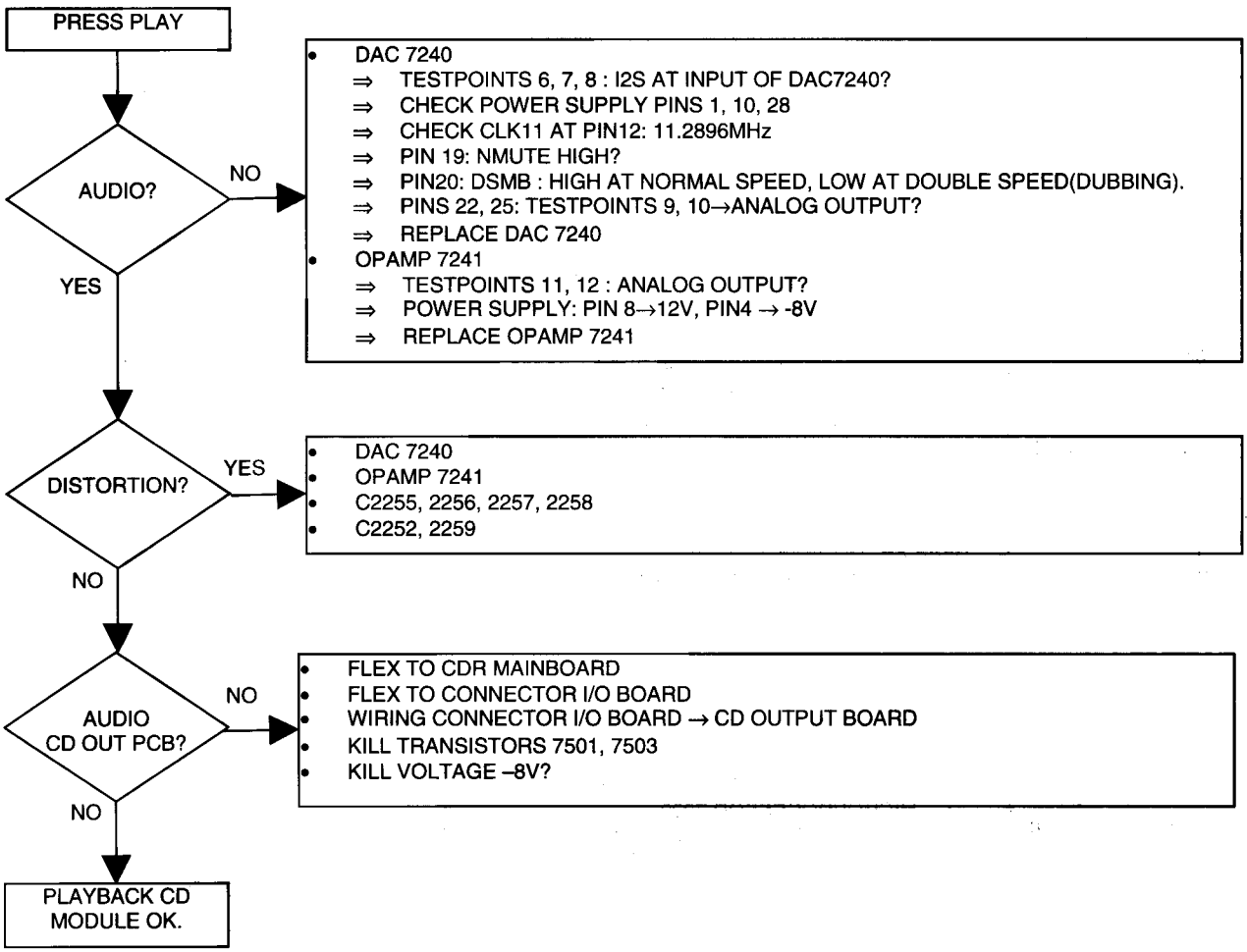
D

9021 C 4
9022 C 4
9023 B 4
9024 C 4
9025 D 2
9027 B 2
9028 B 3
9029 B 3
9030 C 4
9031 A 4
9032 A 3
9034 A 2
9035 A 2
9036 A 3
9037 A 2
9038 A 1
9039 A 1
9040 B 2
9041 A 2
9042 A 2
9050 D 2
9060 A 2
9061 B 4
9065 B 3

FAULTFINDING GUIDE CD MODULE



FAULTFINDING GUIDE PLAYBACK



ELECTRICAL PARTSLIST

CDR MAIN BOARD

MISCELLANEOUS

1001	4822 214 12825	PCB ASSY MAIN 4203 CDR765
1101	4822 267 60409	FLEX CONN 22P FEMALE
1102	4822 267 60409	FLEX CONN 22P FEMALE
1143	4822 242 82075	CSTCS16,00MXC03-TC
1177	4822 242 10557	XTL.RESONATOR 32 MHz
1251	4822 242 10757	33.868 000MHz SM 20P CX-11F
1290	4822 267 51454	FLEX CONN. 11P FEMALE
1320	4822 242 10236	LN-G102-139 (16MHz)
1360	4822 265 11154	FLEX CONN 22P
1400	4822 267 10939	FLEX CONN. 20P
1500	4822 267 10939	FLEX.CONN. 20P
1520	4822 218 11487	OPTICAL INPUT GP1F32R
1530	4822 265 11151	ANALOG INPUT/OUTPUT CINCH
1531	4822 267 31448	DIGITAL INPUT/OUTPUT CINCH

CAPACITORS

2104	4822 126 14104	82nF 10% 0805 16V
2105	5322 122 32654	22nF 10% 63V
2106	4822 126 13296	100nF 10% 16V
2107	4822 124 80483	47µF 20% 6.3V
2108	4822 126 14104	82nF 10% 0805 16V
2109	4822 126 13482	470nF 80/20% 16V
2110	4822 126 13482	470nF 80/20% 16V
2111	4822 126 14104	82nF 10% 0805 16V
2112	4822 126 14104	82nF 10% 0805 16V
2113	4822 124 11353	1µF 20% 16V
2114	4822 124 11353	1µF 20% 16V
2115	4822 126 13482	470nF 80/20% 16V
2116	4822 126 13482	470nF 80/20% 16V
2117	5322 122 32654	22nF 10% 63V
2118	5322 122 32654	22nF 10% 63V
2119	4822 126 14104	82nF 10% 0805 16V
2120	5322 122 32654	22nF 10% 63V
2130	5322 122 32654	22nF 10% 63V
2131	4822 124 80483	47µF 20% 6.3V
2132	5322 122 32654	22nF 10% 63V
2134	4822 122 33575	220pF 5% 50V
2135	4822 122 33575	220pF 5% 50V
2136	4822 122 33575	220pF 5% 50V
2138	4822 122 33575	220pF 5% 50V
2139	5322 116 80853	560pF 5% 63V
2140	5322 122 32654	22nF 10% 63V
2156	5322 126 10223	4.7nF 10% 63V
2157	5322 122 32654	22nF 10% 63V
2170	5322 122 32654	22nF 10% 63V
2171	4822 124 40433	47µF 20% 25V
2172	4822 122 33891	3.3nF 10% 63V
2173	4822 122 33891	3.3nF 10% 63V
2174	4822 122 33891	3.3nF 10% 63V
2175	5322 122 34123	1nF 10% 50V
2176	4822 126 13296	100nF 10% 16V
2177	5322 122 32659	33pF 5% 50V
2178	5322 122 32659	33pF 5% 50V
2179	4822 126 13296	100nF 10% 16V
2180	5322 122 32654	22nF 10% 63V
2181	5322 122 32654	22nF 10% 63V
2182	5322 122 32654	22nF 10% 63V
2183	4822 126 13296	100nF 10% 16V
2184	4822 122 33177	10nF 20% 50V
2193	4822 122 33177	10nF 20% 50V
2194	4822 122 33177	10nF 20% 50V
2195	5322 122 32654	22nF 10% 63V
2200	4822 122 32646	5.6nF 10% 50V
2203	5322 122 32654	22nF 10% 63V
2204	5322 122 32654	22nF 10% 63V
2205	5322 122 32654	22nF 10% 63V
2206	4822 122 32627	2.7nF 10% 50V
2207	5322 126 10465	3.9nF 10% 50V 0805 CER2
2208	5322 116 80853	560pF 5% 63V
2210	5322 122 32654	22nF 10% 63V
2211	4822 124 80483	47µF 20% 6.3V
2214	4822 126 13692	47pF 1% 63V
2215	4822 122 33177	10nF 20% 50V
2216	4822 122 33177	10nF 20% 50V
2217	5322 122 32654	22nF 10% 63V
2218	5322 122 32654	22nF 10% 63V
2219	5322 122 32654	22nF 10% 63V
2220	5322 122 32654	22nF 10% 63V
2221	5322 122 32654	22nF 10% 63V
2222	5322 122 32654	22nF 10% 63V
2223	4822 124 80483	47µF 20% 6.3V
2224	4822 126 13296	100nF 10% 16V
2225	5322 122 32448	10pF 5% 50V
2226	5322 122 32448	10pF 5% 50V
2227	4822 126 12105	33nF 5% 63V
2228	4822 126 12105	33nF 5% 63V
2229	4822 122 33177	10nF 20% 50V
2230	5322 122 32654	22nF 10% 63V
2231	5322 122 32654	22nF 10% 63V
2232	4822 126 13618	330pF 1% 63V
2233	4822 126 13618	330pF 1% 63V
2234	4822 126 13618	330pF 1% 63V
2235	5322 122 32654	22nF 10% 63V
2236	4822 126 13618	330pF 1% 63V
2237	4822 126 13618	330pF 1% 63V
2238	4822 126 13618	330pF 1% 63V
2239	4822 126 13618	330pF 1% 63V
2240	5322 122 32654	22nF 10% 63V
2241	4822 126 13618	330pF 1% 63V
2242	5322 122 32654	22nF 10% 63V
2243	4822 124 11445	47µF 20% 10V
2244	5322 122 32654	22nF 10% 63V
2245	5322 122 32654	22nF 10% 63V
2246	4822 126 13296	100nF 10% 16V
2247	4822 124 80483	47µF 20% 6.3V
2248	5322 122 32654	22nF 10% 63V
2250	5322 122 32654	22nF 10% 63V
2251	4822 126 13486	15pF 2% 63V
2252	4822 126 13486	15pF 2% 63V
2255	5322 122 32654	22nF 10% 63V
2256	5322 122 32654	22nF 10% 63V
2262	4822 126 10326	180pF 5% 63V
2267	4822 126 13296	100nF 10% 16V
2268	4822 126 13296	100nF 10% 16V
2270	5322 122 32654	22nF 10% 63V
2280	5322 122 32654	22nF 10% 63V
2281	5322 122 32658	22pF 5% 50V
2282	5322 122 32654	22nF 10% 63V
2283	4822 126 13296	100nF 10% 16V
2284	5322 122 32654	22nF 10% 63V
2285	4822 126 13296	100nF 10% 16V
2286	5322 122 32658	22pF 5% 50V
2287	5322 122 32658	22pF 5% 50V
2288	4822 126 12105	33nF 5% 63V
2292	4822 126 12105	33nF 5% 63V
2296	4822 126 12105	33nF 5% 63V

2297	4822 126 13296	100nF 10% 16V
2300	4822 126 13482	470nF 80/20% 16V
2301	5322 122 32654	22nF 10% 63V
2302	4822 126 13482	470nF 80/20% 16V
2303	4822 126 13482	470nF 80/20% 16V
2304	5322 122 32654	22nF 10% 63V
2305	4822 126 13482	470nF 80/20% 16V
2321	5322 122 32654	22nF 10% 63V
2322	5322 122 32654	22nF 10% 63V
2323	5322 122 32654	22nF 10% 63V
2324	5322 122 32654	22nF 10% 63V
2325	4822 126 13692	47pF 1% 63V
2326	4822 126 13692	47pF 1% 63V
2327	4822 122 33177	10nF 20% 50V
2329	5322 122 32654	22nF 10% 63V
2330	4822 126 13296	100nF 10% 16V
2334	5322 122 32654	22nF 10% 63V
2336	4822 126 13692	47pF 1% 63V
2339	4822 124 11445	47µF 20% 10V
2340	5322 122 32654	22nF 10% 63V
2341	5322 122 32654	22nF 10% 63V
2342	5322 122 32654	22nF 10% 63V
2350	4822 126 12105	33nF 5% 63V
2400	5322 122 32654	22nF 10% 63V
2403	5322 122 32654	22nF 10% 63V
2404	5322 122 32654	22nF 10% 63V
2405	4822 124 42242	330µF 20% 6.3V
2406	5322 122 32654	22nF 10% 63V
2436	4822 124 80483	47µF 20% 6.3V
2437	4822 124 80483	47µF 20% 6.3V
2439	4822 124 80483	47µF 20% 6.3V
2442	4822 124 80483	47µF 20% 6.3V
2462	4822 124 80483	47µF 20% 6.3V
2463	4822 124 80483	47µF 20% 6.3V
2464	5322 122 32654	22nF 10% 63V
2465	5322 122 34123	1nF 10% 50V
2466	4822 126 12102	330 nF 10% 16V 0603
2467	4822 126 12105	33nF 5% 63V
2468	5322 122 32654	22nF 10% 63V
2469	4822 126 13296	100nF 10% 16V
2470	5322 122 34123	1nF 10% 50V
2501	4822 124 41579	10µF 20% 50V
2502	4822 126 12105	33nF 5% 63V
2503	4822 126 12105	33nF 5% 63V
2504	5322 122 32654	22nF 10% 63V
2505	5322 122 33538	150pF 2% 63V
2506	5322 122 32654	22nF 10% 63V
2507	5322 122 32654	22nF 10% 63V
2509	5322 122 32654	22nF 10% 63V
2510	5322 122 32531	100pF 5% 50V
2511	5322 122 32531	100pF 5% 50V
2512	5322 122 32659	33pF 5% 50V
2513	5322 122 32659	33pF 5% 50V
2600	5322 122 32654	22nF 10% 63V
2601	5322 122 32654	22nF 10% 63V
2602	5322 122 32654	22nF 10% 63V
2603	5322 122 32654	22nF 10% 63V
2604	5322 122 32654	22nF 10% 63V
2605	5322 122 32654	22nF 10% 63V
2606	5322 122 32654	22nF 10% 63V
2607	5322 122 32654	22nF 10% 63V
2608	5322 122 32654	22nF 10% 63V
2609	5322 122 32654	22nF 10% 63V
2610	5322 122 32654	22nF 10% 63V
2611	4822 126 13694	68pF 1% 63V
2612	4822 126 13694	68pF 1% 63V
2613	5322 122 32654	22nF 10% 63V
2614	5322 122 32654	22nF 10% 63V
2615	4822 124 40246	4.7µF 20% 63V DXH=5X11
2616	4822 124 40246	4.7µF 20% 63V DXH=5X11
2617	4822 124 40433	47µF 20% 25V
2618	4822 124 11445	47µF 20% 10V
2619	4822 124 40433	47µF 20% 25V
2620	4822 124 41829	1000µF 20% 6.3V
2621	4822 124 11445	47µF 20% 10V
2622	4822 124 80865	10µF 20% 25V
2623	4822 124 80865	10µF 20% 25V
2650	5322 122 32654	22nF 10% 63V
2651	5322 122 32654	22nF 10% 63V
2652	5322 122 32654	22nF 10% 63V
2653	5322 122 32654	22nF 10% 63V
2654	5322 122 32531	100pF 5% 50V
2655	5322 122 32531	100pF 5% 50V
2656	5322 126 10184	680P 5% 50V.
2657	5322 126 10184	680P 5% 50V.
2658	5322 122 32654	22nF 10% 63V
2659	5322 122 32654	22nF 10% 63V
2660	5322 122 32654	22nF 10% 63V
2661	5322 122 32654	22nF 10% 63V
2662	5322 122 32654	22nF 10% 63V
2663	4822 124 41579	10µF 20% 50V
2664	4822 124 41829	1000µF 20% 6.3V
2665	4822 124 80865	10µF 20% 25V
2666	4822 124 80865	10µF 20% 25V
2667	4822 124 40246	4.7µF 20% 63V DXH=5X11
2668	4822 124 40246	4.7µF 20% 63V DXH=5X11
2670	5322 122 32531	100pF 5% 50V
2671	5322 122 32531	100pF 5% 50V
2672	5322 122 32531	100pF 5% 50V
2673	5322 122 32531	100pF 5% 50V
2674	5322 122 32531	100pF 5% 50V
2675	5322 122 32531	100pF 5% 50V
2676	5322 122 32531	100pF 5% 50V
2677	5322 122 32531	100pF 5% 50V

RESISTORS

3108	4822 051 20472	4k7 5% 0.1W
3109	4822 117 10834	47k 1% 0.1W
3111	4822 051 20184	180k 5% 0.1W
3112	4822 051 20474	470k 5% 0.1W
3120	4822 051 20273	27k 5% 0.1W
3121	4822 051 20474	470k 5% 0.1W
3122	4822 051 20223	22k 5% 0.1W
3123	4822 051 20223	22k 5% 0.1W
3124	4822 051 20333	33k 5% 0.1W
3133	4822 051 20105	1M 5% 0.1W
3134	4822 051 20333	33k 5% 0.1W
3135	4822 051 20153	15k 5% 0.1W
3136	4822 117 10833	10k 1% 0.1W
3137	4822 051 20153	15k 5% 0.1W
3138	4822 117 10833	10k 1% 0.1W
3139	4822 051 20752	7k5 5% 0.1W
3140	4822 117 10834	47k 1% 0.1W
3142	4822 117 10833	10k 1% 0.1W
3143	4822 051 20105	1M 5% 0.1W
3144	4822 117 10833	10k 1% 0.1W
3149	4822 117 11449	2k2 1% 0.1W
3152	4822 051 20104	100k 5% 0.1W
3153	4822 051 10102	1k 2% 0.25W
3154	4822 051 10102	1k 2% 0.25W
3155	4822 051 20105	1M 5% 0.1W
3156	4822 051 20101	100Ω 5% 0.1W
3157	4822 051 20101	100Ω 5% 0.1W
3158	4822 051 20101	100Ω 5% 0.1W
3160	4822 051 20223	22k 5% 0.1W
3161	4822 051 20105	1M 5% 0.1W
3162	4822 051 20105	1M 5% 0.1W
3163	4822 051 20393	39k 5% 0.1W
3164	4822 051 20223	22k 5% 0.1W

3165	4822 051 20101	100Ω 5% 0.1W
3166	4822 051 20393	39k 5% 0.1W
3168	4822 051 20101	100Ω 5% 0.1W
3169	4822 051 20101	100Ω 5% 0.1W
3171	4822 051 20121	120Ω 5% 0.1W
3172	4822 051 20105	1M 5% 0.1W
3173	4822 051 20101	100Ω 5% 0.1W
3174	4822 051 20101	100Ω 5% 0.1W
3175	4822 051 20101	100Ω 5% 0.1W
3176	4822 051 20101	100Ω 5% 0.1W
3177	4822 051 20101	100Ω 5% 0.1W
3178	4822 051 20223	22k 5% 0.1W
3179	4822 051 20101	100Ω 5% 0.1W
3180	4822 117 10833	10k 1% 0.1W
3181	4822 051 20562	5k6 5% 0.1W 0805
3182	4822 051 20562	5k6 5% 0.1W 0805
3183	4822 051 20472	4k7 5% 0.1W
3184	4822 051 20101	100Ω 5% 0.1W
3185	4822 051 20101	100Ω 5% 0.1W
3186	4822 117 10833	10k 1% 0.1W
3187	4822 051 10102	1k 2% 0.25W
3188	4822 117 10833	10k 1% 0.1W
3189	4822 051 20109	10Ω 5% 0.1W
3190	4822 117 10833	10k 1% 0.1W
3191	4822 051 20562	5k6 5% 0.1W 0805
3192	4822 051 20562	5k6 5% 0.1W 0805
3193	4822 051 20472	4k7 5% 0.1W
3194	4822 051 20101	100Ω 5% 0.1W
3195	4822 051 20101	100Ω 5% 0.1W
3196	5322 117 11726	10Ω 5%
3201	4822 051 20223	22k 5% 0.1W
3202	4822 051 20393	39k 5% 0.1W
3203	4822 051 20109	10Ω 5% 0.1W
3204	4822 117 11454	820Ω 1% 0.1W
3205	4822 117 11504	270Ω 1% 0.1W
3206	4822 051 20105	1M 5% 0.1W
3208	4822 051 20229	22Ω 5% 0.1W
3209	4822 051 20223	22k 5% 0.1W
3210	4822 051 20393	39k 5% 0.1W
3211	4822 051 20109	10Ω 5% 0.1W
3212	4822 117 11454	820Ω 1% 0.1W
3213	4822 051 20472	4k7 5% 0.1W
3215	4822 117 10833	10k 1% 0.1W
3216	4822 051 20101	100Ω 5% 0.1W
3217	4822 051 20101	100Ω 5% 0.1W
3218	4822 051 20101	100Ω 5% 0.1W
3219	4822 051 20101	100Ω 5% 0.1W
3220	4822 051 20101	100Ω 5% 0.1W
3221	4822 051 20472	4k7 5% 0.1W
3222	4822 051 20101	100Ω 5% 0.1W
3223	4822 051 20229	22Ω 5% 0.1W
3224	4822 051 10102	1k 2% 0.25W
3225	4822 051 10102	1k 2% 0.25W
3226	4822 117 11454	820Ω 1% 0.1W
3227	4822 051 20561	560Ω 5% 0.1W
3228	4822 117 10833	10k 1% 0.1W
3229	4822 117 10833	10k 1% 0.1W
3230	4822 051 20472	4k7 5% 0.1W
3231	4822 117 11751	16k RC12H 1% 0805
3232	4822 117 11145	4k7 1% 0.1W
3233	4822 117 10839	130k 1% 0.1W
3234	4822 117 10833	10k 1% 0.1W
3235	4822 117 11751	16k RC12H 1% 0805
3236	4822 117 11145	4k7 1% 0.1W
3237	4822 117 10833	10k 1% 0.1W
3238	4822 117 10833	10k 1% 0.1W
3239	4822 117 10839	130k 1% 0.1W
3240	4822 117 10839	130k 1% 0.1W
3241	4822 051 20472	4k7 5% 0.1W
3242	4822 051 20105	1M 5% 0.1W
3243	4822 051 20564	560k 5% 0.1W
3244	4822 117 11449	2k2 1% 0.1W
3245	4822 051 20104	100k 5% 0.1W
3246	4822 051 20394	390k 5% 0.1W
3247	4822 117 11503	220Ω 1% 0.1W
3248	4822 051 20223	22k 5% 0.1W
3249	4822 051 20104	100k 5% 0.1W
3250	4822 051 20101	100Ω 5% 0.1W
3251	4822 051 20223	22k 5% 0.1W
3252	4822 051 20223	22k 5% 0.1W
3253	4822 051 20223	22k 5% 0.1W
3254	4822 051 20472	4k7 5% 0.1W
3255	4822 117 11449	2k2 1% 0.1W
3256	4822 051 20339	33Ω 5% 0.1W
3257	4822 051 20339	33Ω 5% 0.1W
3259	4822 117 10833	10k 1% 0.1W
3260	4822 117 11139	1k5 1% 0.1W
3261	4822 117 11449	2k2 1% 0.1W
3262	4822 051 20101	100Ω 5% 0.1W
3263	4822 117 10834	47k 1% 0.1W
3264	4822 051 10102	1k 2% 0.25W
3265	4822 051 10102	1k 2% 0.25W
3266	4822 051 10102	1k 2% 0.25W
3267	4822 117 10833	10k 1% 0.1W
3268	4822 051 20392	3k9 5% 0.1W
3269	4822 051 10102	1k 2% 0.25W
3270	4822 117 10965	18k 1% 0.1W
3271	4822 117 10965	18k 1% 0.1W
3272	4822 117 10965	18k 1% 0.1W
3273	4822 051 10102	1k 2% 0.25W
3274	4822 117 10965	18k 1% 0.1W
3275	4822 051 20223	22k 5% 0.1W
3276	4822 051 20223	22k 5% 0.1W
3277	4822 051 20223	22k 5% 0.1W
3279	4822 051 10102	1k 2% 0.25W
3280	4822 051 10102	1k 2% 0.25W
3281	4822 051 10102	1k 2% 0.25W
3282	4822 051 10102	1k 2% 0.25W
3283	4822 051 10102	1k 2% 0.25W
3284	4822 051 20479	47Ω 5% 0.1W
3285	4822 051 20562	5k6 5% 0.1W 0805
3286	4822 051 20562	5k6 5% 0.1W 0805
3287	4822 051 10102	1k 2% 0.25W
3288	4822 051 10102	1k 2% 0.25W
3289	4822 051 20479	47Ω 5% 0.1W
3290	4822 051 20562	5k6 5% 0.1W 0805
3291	4822 051 20562	5k6 5% 0.1W 0805
3292	4822 051 10102	1k 2% 0.25W
3293	4822 051 10102	1k 2% 0.25W
3294	4822 051 20479	47Ω 5% 0.1W
3295	4822 051 20562	5k6 5% 0.1W 0805
3296	4822 051 20562	5k6 5% 0.1W 0805
3297	4822 117 11503	220Ω 1% 0.1W
3298	4822 117 11503	220Ω 1% 0.1W
3299	4822 051 20229	22Ω 5% 0.1W
3300	4822 051 20104	100k 5% 0.1W
3301	4822 051 20684	680k 5% 0.1W
3302	4822 051 20471	470Ω 5% 0.1W
3303	4822 051 10102	1k 2% 0.25W
3304	4822 051 20104	100k 5% 0.1W
3305	4822 051 20684	680k 5% 0.1W
3306	4822 051 20471	470Ω 5% 0.1W
3307	4822 051 10102	1k 2% 0.25W
3312	4822 117 10833	10k 1% 0.1W
3313	4822 117 10833	10k 1% 0.1W
3314	4822 117 10833	10k 1% 0.1W
3316	4822 117 10833	10k 1% 0.1W
3318	4822 117 10833	10k 1% 0.1W

3322	4822 117 10833	10k 1% 0.1W
3323	4822 051 20105	1M 5% 0.1W
3326	4822 051 20104	100k 5% 0.1W
3327	4822 117 10833	10k 1% 0.1W
3328	4822 117 11507	6k8 1% 0.1W
3330	4822 051 20101	100Ω 5% 0.1W
3332	4822 051 10102	1k 2% 0.25W
3333	4822 051 10102	1k 2% 0.25W
3334	4822 117 10833	10k 1% 0.1W
3350	4822 051 20472	4k7 5% 0.1W
3361	4822 117 10833	10k 1% 0.1W
3362	4822 117 10833	10k 1% 0.1W
3363	4822 117 10833	10k 1% 0.1W
3364	4822 117 10833	10k 1% 0.1W
3380	4822 117 10833	10k 1% 0.1W
3443	4822 051 20223	22k 5% 0.1W
3444	4822 117 10833	10k 1% 0.1W
3447	4822 117 10834	47k 1% 0.1W
3449	4822 051 20104	100k 5% 0.1W
3450	4822 051 20104	100k 5% 0.1W
3451	4822 051 20101	100Ω 5% 0.1W
3452	4822 117 10833	10k 1% 0.1W
3453	4822 117 10833	10k 1% 0.1W
3462	4822 051 20223	22k 5% 0.1W
3463	4822 051 20223	22k 5% 0.1W
3464	4822 117 11504	270Ω 1% 0.1W
3470	4822 051 20562	5k6 5% 0.1W 0805
3471	4822 051 20562	5k6 5% 0.1W 0805
3472	4822 051 20562	5k6 5% 0.1W 0805
3473	4822 051 20562	5k6 5% 0.1W 0805
3503	4822 051 20689	68Ω 5% 0.1W
3504⚠	4822 117 11152	4Ω7 5%
3505	4822 051 20332	3k3 5% 0.1W
3506	4822 051 20332	3k3 5% 0.1W
3507⚠	4822 117 11152	4Ω7 5%
3508	4822 051 20759	75Ω 5% 0.1W
3509	4822 051 20104	100k 5% 0.1W
3510	4822 051 20104	100k 5% 0.1W
3511	4822 117 11373	100Ω 1% RC12H 0805
3512	4822 1[illegible]7 11449	2k2 1% 0.1W
3513	4822 1[illegible]7 11373	100Ω 1% RC12H 0805
3514	4822 1[illegible]7 11449	2k2 1% 0.1W
3515	4822 1[illegible]7 11373	100Ω 1% RC12H 0805
3516	4822 1[illegible]7 11449	2k2 1% 0.1W
3517	4822 1[illegible]7 11373	100Ω 1% RC12H 0805
3518	4822 1[illegible]7 11449	2k2 1% 0.1W
3602	4822 1[illegible]7 10833	10k 1% 0.1W
3603	4822 1[illegible]7 10833	10k 1% 0.1W
3604	4822 1[illegible]7 10833	10k 1% 0.1W
3606	4822 1[illegible]7 10833	10k 1% 0.1W
3608	4822 1[illegible]7 11188	20k 1% 0.1W
3609	4822 1[illegible]7 10833	10k 1% 0.1W
3610	4822 1[illegible]7 13472	5k1 1% 0805 RC12H R3
3611	4822 1[illegible]7 12955	2k7 1% 0.1W 0805
3612	4822 1[illegible]7 10833	10k 1% 0.1W
3613	4822 1[illegible]7 10833	10k 1% 0.1W
3614	4822 1[illegible]7 10833	10k 1% 0.1W
3615	4822 1[illegible]7 11188	20k 1% 0.1W
3616	4822 1[illegible]7 10833	10k 1% 0.1W
3617	4822 117 13472	5k1 1% 0805 RC12H R3
3618	4822 117 12955	2k7 1% 0.1W 0805
3620	4822 117 10833	10k 1% 0.1W
3621	4822 051 20104	100k 5% 0.1W
3622	4822 117 10833	10k 1% 0.1W
3623	4822 051 20104	100k 5% 0.1W
3624	4822 117 10833	10k 1% 0.1W
3625	4822 117 10833	10k 1% 0.1W
3626	4822 051 20334	330k 5% 0.1W
3627	4822 117 10833	10k 1% 0.1W
3628	4822 117 10833	10k 1% 0.1W
3629	4822 051 20334	330k 5% 0.1W
3630	4822 117 11188	20k 1% 0.1W
3631	4822 117 11504	270Ω 1% 0.1W
3632	4822 117 11504	270Ω 1% 0.1W
3633	4822 117 11504	270Ω 1% 0.1W
3635	4822 117 11188	20k 1% 0.1W
3636	4822 117 11188	20k 1% 0.1W
3650	4822 117 10362	7k5 1% 0.1W
3651	4822 051 20104	100k 5% 0.1W
3652	4822 051 20104	100k 5% 0.1W
3653	4822 117 10362	7k5 1% 0.1W
3654	4822 051 20104	100k 5% 0.1W
3658	4822 051 20104	100k 5% 0.1W
3659	4822 117 10833	10k 1% 0.1W
3660	4822 117 10833	10k 1% 0.1W
3661	4822 117 11437	8k2 1% 0.1W
3662	4822 117 11437	8k2 1% 0.1W
3663	4822 117 13085	5k6 1% RC12H 0.1W 0805
3664	4822 117 13085	5k6 1% RC12H 0.1W 0805
3665	4822 051 20223	22k 5% 0.1W
3666	4822 051 20223	22k 5% 0.1W
3667	4822 117 10834	47k 1% 0.1W
3670	4822 051 20121	120Ω 5% 0.1W
3671	4822 117 11449	2k2 1% 0.1W
3672	4822 117 11449	2k2 1% 0.1W
3673	4822 051 20121	120Ω 5% 0.1W
3680⚠	4822 117 11152	4Ω7 5%
3681⚠	4822 117 11152	4Ω7 5%
3900	4822 051 20008	0Ω JUMP. (0805)
3901	4822 051 20008	0Ω JUMP. (0805)
3902	4822 051 20008	0Ω JUMP. (0805)
3903	4822 051 20008	0Ω JUMP. (0805)
3904	4822 051 20008	0Ω JUMP. (0805)
3905	4822 051 20008	0Ω JUMP. (0805)
3906	4822 051 20008	0Ω JUMP. (0805)
3908	4822 051 20008	0Ω JUMP. (0805)
3911	4822 051 20008	0Ω JUMP. (0805)
3920	4822 051 20008	0Ω JUMP. (0805)
3921	4822 051 20101	100Ω 5% 0.1W
3922	4822 051 20101	100Ω 5% 0.1W
3923	4822 117 10834	47k 1% 0.1W
3924	4822 117 10833	10k 1% 0.1W
3925	4822 117 10833	10k 1% 0.1W
3928	4822 117 10833	10k 1% 0.1W
3929	4822 117 10833	10k 1% 0.1W
3930	4822 117 10833	10k 1% 0.1W
3932	4822 117 10833	10k 1% 0.1W
3933	4822 117 10833	10k 1% 0.1W

COILS

5104	4822 157 71659	100µH 15% 7A06L
5105⚠	4822 157 71206	BLM21A601SPT
5106	4822 157 71658	27µH 15% 7A06L
5107	4822 157 71658	27µH 15% 7A06L
5108	4822 157 71658	27µH 15% 7A06L
5109	4822 157 71658	27µH 15% 7A06L
5110	4822 157 71659	100µH 15% 7A06L
5111	4822 157 71659	100µH 15% 7A06L
5130⚠	4822 157 71206	BLM21A601SPT
5132⚠	4822 157 71206	BLM21A601SPT
5170⚠	4822 157 71206	BLM21A601SPT
5176⚠	4822 157 71206	BLM21A601SPT
5179⚠	4822 157 71206	BLM21A601SPT
5210⚠	4822 157 71206	BLM21A601SPT
5223⚠	4822 157 71206	BLM21A601SPT
5245⚠	4822 157 71206	BLM21A601SPT
5255⚠	4822 157 71206	BLM21A601SPT
5301⚠	4822 157 71206	BLM21A601SPT
5302⚠	4822 157 71206	BLM21A601SPT

5303⚠	4822 157 71206	BLM21A601SPT
5304⚠	4822 157 71206	BLM21A601SPT
5310	4822 242 10958	NFM39R12C102T1
5311	4822 242 10958	NFM39R12C102T1
5312	4822 242 10958	NFM39R12C102T1
5313	4822 242 10958	NFM39R12C102T1
5314	4822 242 10958	NFM39R12C102T1
5315	4822 242 10958	NFM39R12C102T1
5420	4822 242 82201	DSS306-92F223Z16
5421	4822 157 11716	BLM21P300SPT
5422	4822 242 82201	DSS306-92F223Z16
5423	4822 157 11716	BLM21P300SPT
5424	4822 242 82201	DSS306-92F223Z16
5425	4822 157 11716	BLM21P300SPT
5430⚠	4822 157 71206	BLM21A601SPT
5450	4822 157 70601	100µH (920927085A)
5600⚠	4822 157 71206	BLM21A601SPT
5601⚠	4822 157 71206	BLM21A601SPT
5602⚠	4822 157 71206	BLM21A601SPT
5604⚠	4822 157 71206	BLM21A601SPT
5605⚠	4822 157 71206	BLM21A601SPT
5606⚠	4822 157 71206	BLM21A601SPT
5651⚠	4822 157 71206	BLM21A601SPT
5652⚠	4822 157 71206	BLM21A601SPT
5653⚠	4822 157 71206	BLM21A601SPT
5654⚠	4822 157 71206	BLM21A601SPT

DIODES

6120	4822 130 10654	BAT254
6130	4822 130 11397	BAS316
6140	4822 130 11397	BAS316
6141	4822 130 11397	BAS316
6155	4822 130 10654	BAT254
6185	4822 130 11397	BAS316
6186	4822 130 11397	BAS316
6285	4822 130 11397	BAS316
6286	4822 130 11397	BAS316
6290	4822 130 11397	BAS316
6291	4822 130 11397	BAS316
6295	4822 130 11397	BAS316
6296	4822 130 11397	BAS316
6300	4822 130 11397	BAS316
6301	4822 130 11397	BAS316
6432	4822 130 11397	BAS316
6600	4822 130 11383	BZX284-C5V1

TRANSISTORS & INTEGRATED CIRCUITS

7105	4822 209 15602	SZA1010T/K1
7120	5322 130 44787	BFR31
7121	5322 130 60508	BC857B
7130	4822 209 33421	OQ8845
7150	4822 209 30732	LM319D
7170	4822 209 14785	SERVO CONTROLLER V 2.1
7182	5322 130 60508	BC857B
7183	4822 130 60142	BC869
7185	5322 130 61569	BC868
7186	4822 130 60511	BC847B
7192	5322 130 60508	BC857B
7193	4822 130 60142	BC869
7195	5322 130 61569	BC868
7200	4822 130 60511	BC847B
7205	4822 209 60792	74HC4053D
7209	4822 130 60511	BC847B
7210	4822 209 16438	CD65WD
7223	5322 130 42718	BFS20
7224	4822 130 60383	BF824
7225	5322 130 42718	BFS20
7230	5322 209 61482	PC74HC4066T
7235	4822 209 30095	LM833D
7240	5322 209 61482	PC74HC4066T
7241	5322 209 73179	74HCT74D
7245	4822 209 33417	TDA1371H/N1
7260	4822 209 60792	74HC4053D
7270	4822 209 31615	LM324AD
7271	4822 130 60511	BC847B
7272	5322 130 60508	BC857B
7280	4822 209 60792	74HC4053D
7282	4822 209 31615	LM324AD
7285	5322 209 61482	PC74HC4066T
7286	4822 130 60511	BC847B
7287	5322 130 60508	BC857B
7288	4822 130 60142	BC869
7289	5322 130 61569	BC868
7290	4822 130 60511	BC847B
7291	5322 130 60508	BC857B
7292	4822 130 60142	BC869
7293	5322 130 61569	BC868
7294	4822 130 60511	BC847B
7295	5322 130 60508	BC857B
7296	4822 130 60142	BC869
7297	5322 130 61569	BC868
7300	4822 209 30095	LM833D
7301	4822 130 60511	BC847B
7302	4822 130 60511	BC847B
7310	4822 209 31275	MC34064D5
7320	4822 209 16834	MC68HC08AB0
7322	4822 209 16879	IC USER CDR765
7323	4822 209 16439	CY6264-70SNC
7325	5322 209 11548	74HC14D
7326	4822 130 60511	BC847B
7403	5322 209 61482	PC74HC4066T
7405	5322 209 73179	74HCT74D
7410	5322 209 61132	PC74HCT4052T
7411	5322 209 61132	PC74HCT4052T
7445	5322 130 60508	BC857B
7446	5322 130 60508	BC857B
7447	4822 130 60511	BC847B
7448	4822 130 60511	BC847B
7465	4822 209 33395	TDA1315H/N2
7500	5322 209 11517	PC74HCU04T
7501	4822 130 60511	BC847B
7502	4822 130 60511	BC847B
7503	4822 130 60511	BC847B
7504	4822 130 60511	BC847B
7600	4822 209 30095	LM833D
7601	5322 209 61132	PC74HCT4052T
7602	4822 209 30095	LM833D
7603	4822 209 33397	SAA7366T
7604	4822 209 72042	L78L05ACZ
7605	4822 209 60792	74HC4053D
7610	4822 130 60511	BC847B
7611	4822 130 60511	BC847B
7650	4822 209 33403	TDA1305T/N2
7651	4822 209 30095	LM833D
7652	4822 209 82362	NJM4556D

DISPLAY-HEADPHONE-CD OUT-ON/OFF

MISCELLANEOUS

1003/	4822 256 10506	FTD HOLDER
1201	4822 276 13114	TACT SWITCH
1202	4822 276 13114	TACT SWITCH
1203	4822 276 13114	TACT SWITCH
1204	4822 276 13114	TACT SWITCH
1205	4822 276 13114	TACT SWITCH
1206	4822 276 13114	TACT SWITCH
1207	4822 276 13114	TACT SWITCH
1208	4822 276 13114	TACT SWITCH
1209	4822 276 13114	TACT SWITCH
1210	4822 276 13114	TACT SWITCH
1211	4822 276 13114	TACT SWITCH
1212	4822 276 13114	TACT SWITCH
1213	4822 276 13114	TACT SWITCH
1230	4822 242 10753	CSTCS8,00MT-TC
1240	4822 276 13114	TACT SWITCH
1241	4822 276 13114	TACT SWITCH
1242	4822 276 13114	TACT SWITCH
1243	4822 276 13114	TACT SWITCH
1244	4822 276 13114	TACT SWITCH
1245	4822 276 13114	TACT SWITCH
1246	4822 276 13114	TACT SWITCH
1247	4822 276 13114	TACT SWITCH
1248	4822 276 13114	TACT SWITCH
1249	4822 276 13114	TACT SWITCH
1250	4822 276 13114	TACT SWITCH
1290	4822 267 31453	HEADPHONE SOCKET
1295	4822 276 14007	ON/OFF SWITCH
1305	4822 267 31729	DIGITAL OUT CINCH CD
1306	4822 265 11406	ANALOG OUT CINCH CD

CAPACITORS

2200	5322 122 32654	22nF 10% 63V
2201	5322 122 32658	22pF 5% 50V
2202	5322 122 32658	22pF 5% 50V
2203	5322 122 32654	22nF 10% 63V
2204	5322 122 32658	22pF 5% 50V
2205	5322 122 32658	22pF 5% 50V
2206	4822 126 12105	33nF 5% 63V
2207	5322 122 32654	22nF 10% 63V
2300	4822 124 11947	10µF 20% 16V
2301	4822 126 12105	33nF 5% 63V
2302	4822 126 12105	33nF 5% 63V
2303	4822 122 33575	220pF 5% 50V
2304	4822 122 33575	220pF 5% 50V

RESISTORS

3200	4822 051 20393	39k 5% 0.1W
3201	4822 051 10102	1k 2% 0.25W
3202	4822 051 10102	1k 2% 0.25W
3205	4822 051 20101	100Ω 5% 0.1W
3206	4822 051 20101	100Ω 5% 0.1W
3207	4822 051 20472	4k7 5% 0.1W
3208	4822 051 20472	4k7 5% 0.1W
3209	4822 051 20472	4k7 5% 0.1W
3210	4822 051 20472	4k7 5% 0.1W
3211	4822 051 20472	4k7 5% 0.1W
3212	4822 051 20472	4k7 5% 0.1W
3213	4822 051 20472	4k7 5% 0.1W
3214	4822 051 20472	4k7 5% 0.1W
3215	4822 051 20008	0Ω JUMP. (0805)
3216	4822 051 20008	0Ω JUMP. (0805)
3217	4822 117 11449	2k2 1% 0.1W
3300	4822 051 20689	68Ω 5% 0.1W
3301	4822 11 11448	180Ω 1% 0.1W
3302	4822 11 11449	2k2 1% 0.1W
3303	4822 11 11448	180Ω 1% 0.1W
3304	4822 117 11449	2k2 1% 0.1W
4xxx	4822 051 10008	0Ω 5% 0.25W

COILS

5280	4822 242 10805	NFM41R10C102T3
5281	4822 242 10805	NFM41R10C102T3
5300	4822 157 70601	100µH (920927085A)

DIODES

6200	4822 212 30842	TSOP1736SB1
6201	4822 130 10756	BZX284-C2V7

INTEGRATED CIRCUITS

7200	4822 209 16055	TMP87PM74ZF
7205	4822 135 00245	BJ626GK
7501	4822 130 60511	BC847B
7503	4822 130 60511	BC847B

CD MAIN BOARD

MISCELLANEOUS

1001	4822 267 51451	FLEX CONN 16P (CDM)
1200	4822 265 11414	FLEX CONN 22P

CAPACITORS

2102	4822 126 13196	100nF 10% 0805 25V
2103	5322 126 10223	4.7nF 10% 63V
2104	4822 122 33806	820pF 10% 63V
2105	5322 122 31865	1.5nF 10% 63V
2106	4822 126 12944	47nF 10% 50V
2107	4822 126 13692	47pF 1% 63V
2108	4822 122 33175	2.2nF 20% 50V
2130	4822 126 13296	100nF 10% 16V
2131	5322 122 31865	1.5nF 10% 63V
2132	4822 126 13482	470nF 80/20% 16V
2140	4822 124 41796	22µF 20% 16V
2141	4822 126 13482	470nF 80/20% 16V
2142	4822 126 13482	470nF 80/20% 16V
2145	5322 116 80853	560pF 5% 63V
2146	4822 122 33575	220pF 5% 50V
2147	4822 122 33575	220pF 5% 50V
2149	4822 122 33575	220pF 5% 50V
2150	5322 122 31865	1.5nF 10% 63V
2151	4822 122 33575	220pF 5% 50V
2153	4822 122 33575	220pF 5% 50V
2155	4822 122 33575	220pF 5% 50V
2160	4822 124 41796	22µF 20% 16V
2161	4822 126 13196	100nF 10% 0805 25V
2162	4822 126 12104	12nF 5% 63V
2163	4822 126 13196	100nF 10% 0805 25V
2164	4822 124 81286	47µF 20% 16V
2165	4822 122 33177	10nF 20% 50V
2166	5322 122 31863	330pF 5% 50V
2167	5322 122 31863	330pF 5% 50V
2168	4822 124 41796	22µF 20% 16V
2169	4822 126 13196	100nF 10% 0805 25V
2170	5322 122 32654	22nF 10% 63V
2171	4822 124 81286	47µF 20% 16V
2172	4822 126 13196	100nF 10% 0805 25V
2173	5322 122 34123	1nF 10% 50V
2174	4822 126 13196	100nF 10% 0805 25V
2175	4822 126 13196	100nF 10% 0805 25V
2176	4822 126 13196	100nF 10% 0805 25V
2180	4822 124 81286	47µF 20% 16V
2181	4822 126 13196	100nF 10% 0805 25V
2182	4822 126 13196	100nF 10% 0805 25V
2183	4822 124 81286	47µF 20% 16V
2184	4822 124 81286	47µF 20% 16V
2185	4822 126 13196	100nF 10% 0805 25V
2186	4822 126 13196	100nF 10% 0805 25V
2187	4822 124 81286	47µF 20% 16V
2188	4822 124 81286	47µF 20% 16V
2189	4822 126 13196	100nF 10% 0805 25V
2193	4822 126 13692	47pF 1% 63V
2200	4822 126 13196	100nF 10% 0805 25V
2201	4822 122 33177	10nF 20% 50V
2202	4822 122 33177	10nF 20% 50V
2203	4822 122 33177	10nF 20% 50V
2204	5322 122 32654	22nF 10% 63V
2220	4822 126 13196	100nF 10% 0805 25V
2222	4822 124 41796	22µF 20% 16V
2240	4822 124 41796	22µF 20% 16V
2241	4822 124 41796	22µF 20% 16V
2242	4822 124 41796	22µF 20% 16V
2243	4822 124 41796	22µF 20% 16V
2244	4822 126 13196	100nF 10% 0805 25V
2245	4822 124 12181	1000µF 20% 6.3V
2246	4822 126 13196	100nF 10% 0805 25V
2247	4822 126 13196	100nF 10% 0805 25V
2248	4822 126 13196	100nF 10% 0805 25V
2249	4822 124 22649	10µF 20% 16V
2250	5322 126 10184	680P 5% 50V.
2251	5322 126 10184	680P 5% 50V.
2252	5322 122 32531	100pF 5% 50V
2253	5322 122 32654	22nF 10% 63V
2254	5322 122 32654	22nF 10% 63V
2255	4822 124 12255	10µF 20% 50V
2256	4822 124 12255	10µF 20% 50V
2257	4822 124 80865	10µF 20% 25V
2258	4822 124 80865	10µF 20% 25V
2259	5322 122 32531	100pF 5% 50V
2261	4822 124 41796	22µF 20% 16V
2262	4822 124 41796	22µF 20% 16V

RESISTORS

3105	4822 051 20333	33k 5% 0.1W
3106	4822 117 10833	10k 1% 0.1W
3107	4822 051 20153	15k 5% 0.1W
3108	4822 051 10102	1k 2% 0.25W
3110	4822 051 20101	100Ω 5% 0.1W
3111	4822 051 20101	100Ω 5% 0.1W
3112	4822 051 20101	100Ω 5% 0.1W
3113	4822 051 10102	1k 2% 0.25W
3114	4822 051 20101	100Ω 5% 0.1W
3115	4822 051 20101	100Ω 5% 0.1W
3116	4822 117 10833	10k 1% 0.1W
3117	4822 051 10102	1k 2% 0.25W
3118	4822 117 10833	10k 1% 0.1W
3119	4822 051 20223	22k 5% 0.1W
3120	4822 051 20104	100k 5% 0.1W
3121	4822 051 20105	1M 5% 0.1W
3123	4822 051 20824	820k 5% 0.1W
3125	4822 051 20824	820k 5% 0.1W
3126	4822 051 20824	820k 5% 0.1W
3127	4822 051 20105	1M 5% 0.1W
3128	4822 117 10833	10k 1% 0.1W
3129	4822 117 10833	10k 1% 0.1W
3130	4822 051 20154	150k 5% 0.1W
3131	4822 117 10834	47k 1% 0.1W
3132	4822 051 20472	4k7 5% 0.1W
3133	4822 051 10102	1k 2% 0.25W
3134	4822 051 20104	100k 5% 0.1W
3135	4822 051 20472	4k7 5% 0.1W
3136	4822 051 10102	1k 2% 0.25W
3137	4822 051 20104	100k 5% 0.1W
3138	4822 1[illegible]7 10833	10k 1% 0.1W
3140⚠	4822 1[illegible]7 11152	4Ω7 5%
3144	4822 1[illegible]7 10833	10k 1% 0.1W
3146	4822 1[illegible]7 10833	10k 1% 0.1W
3148	4822 1[illegible]7 10833	10k 1% 0.1W
3150	4822 1[illegible]7 10833	10k 1% 0.1W
3152	4822 1[illegible]7 10833	10k 1% 0.1W
3154	4822 1[illegible]7 10833	10k 1% 0.1W
3156	4822 1[illegible]7 10833	10k 1% 0.1W
3160	4822 1[illegible]7 11504	270Ω 1% 0.1W
3161	4822 117 11504	270Ω 1% 0.1W
3162	4822 051 20681	680Ω 5% 0.1W
3163	4822 117 11383	12k 1% 0.1W
3164	4822 117 11383	12k 1% 0.1W
3165⚠	4822 117 11151	1Ω 5%
3166	4822 117 11383	12k 1% 0.1W
3167	4822 117 11454	820Ω 1% 0.1W
3168	4822 117 11383	12k 1% 0.1W
3169	4822 051 20154	150k 5% 0.1W
3170	4822 051 20008	0Ω JUMP. (0805)
3171	4822 117 11504	270Ω 1% 0.1W
3172	4822 117 11504	270Ω 1% 0.1W

3173	4822 117 11454	820Ω 1% 0.1W
3174	4822 051 20223	22k 5% 0.1W
3175⚠	4822 117 11151	1Ω 5%
3176	4822 051 20182	1k8 5% 0.1W
3177	4822 117 10834	47k 1% 0.1W
3178	4822 117 10834	47k 1% 0.1W
3180⚠	4822 117 11748	2Ω2 1206 5% FUSE
3181⚠	4822 117 11748	2Ω2 1206 5% FUSE
3182⚠	4822 117 11748	2Ω2 1206 5% FUSE
3183⚠	4822 117 11748	2Ω2 1206 5% FUSE
3184⚠	4822 117 11748	2Ω2 1206 5% FUSE
3185	4822 051 20223	22k 5% 0.1W
3186	4822 051 20223	22k 5% 0.1W
3188	4822 117 10834	47k 1% 0.1W
3189	4822 051 20008	0Ω JUMP. (0805)
3191	4822 051 20101	100Ω 5% 0.1W
3193	4822 051 20101	100Ω 5% 0.1W
3194	4822 117 10833	10k 1% 0.1W
3195	4822 051 20008	0Ω JUMP. (0805)
3200	4822 117 10833	10k 1% 0.1W
3201	4822 051 20562	5k6 5% 0.1W 0805
3202	4822 051 20562	5k6 5% 0.1W 0805
3203	4822 051 20472	4k7 5% 0.1W
3204	4822 051 20101	100Ω 5% 0.1W
3205	4822 051 20101	100Ω 5% 0.1W
3206⚠	5322 117 11726	10Ω 5%
3207	4822 051 20472	4k7 5% 0.1W
3208	4822 117 10833	10k 1% 0.1W
3209	4822 051 20562	5k6 5% 0.1W 0805
3210	4822 051 20562	5k6 5% 0.1W 0805
3211	4822 051 20101	100Ω 5% 0.1W
3212	4822 051 20101	100Ω 5% 0.1W
3213	4822 051 20223	22k 5% 0.1W
3214	4822 051 20101	100Ω 5% 0.1W
3215	4822 051 20101	100Ω 5% 0.1W
3216	4822 051 20101	100Ω 5% 0.1W
3217	4822 051 20101	100Ω 5% 0.1W
3220	4822 117 10833	10k 1% 0.1W
3221	4822 117 10833	10k 1% 0.1W
3222	4822 117 10833	10k 1% 0.1W
3223⚠	4822 117 11748	2Ω2 1206 5% FUSE
3224	4822 117 10833	10k 1% 0.1W
3225	4822 117 10833	10k 1% 0.1W
3226	4822 051 20223	22k 5% 0.1W
3228	4822 051 20223	22k 5% 0.1W
3229	4822 051 20105	1M 5% 0.1W
3240	4822 051 20223	22k 5% 0.1W
3241	4822 051 20223	22k 5% 0.1W
3246	4822 117 13085	5k6 1% RC12H 0.1W 0805
3247	4822 117 13085	5k6 1% RC12H 0.1W 0805
3248	4822 117 11437	8k2 1% 0.1W
3249	4822 117 10833	10k 1% 0.1W
3250	4822 117 11437	8k2 1% 0.1W
3251	4822 117 10833	10k 1% 0.1W
3252	4822 051 20104	100k 5% 0.1W
3253	4822 051 20104	100k 5% 0.1W
4xxx	4822 051 10008	0Ω 5% 0.25W

COILS

5220	4822 157 11405	NFM41R00C221T3
5221	4822 157 11405	NFM41R00C221T3
5222	4822 157 11405	NFM41R00C221T3
5223	4822 157 11405	NFM41R00C221T3
5230	5322 242 73686	CST12.00MTW-TF01
5240	4822 242 82201	DSS306-92F223Z16
5241	4822 242 82201	DSS306-92F223Z16
5242	4822 242 82201	DSS306-92F223Z16
5243	4822 157 11405	NFM41R00C221T3
5244	4822 157 11405	NFM41R00C221T3
5245	4822 157 11405	NFM41R00C221T3
5246	4822 157 11405	NFM41R00C221T3
5247	4822 157 11405	NFM41R00C221T3
5248⚠	4822 157 71206	BLM21A601SPT
5249⚠	4822 157 71206	BLM21A601SPT
5250⚠	4822 157 71206	BLM21A601SPT
5251⚠	4822 157 71206	BLM21A601SPT
5260⚠	4822 157 71206	BLM21A601SPT

DIODES

6130	4822 130 11397	BAS316
6200	5322 130 80214	BAS28

TRANSISTORS & INTEGRATED CIRCUITS

7104	4822 130 60511	BC847B
7105	5322 130 60803	BST72A
7106	5322 130 60508	BC857B
7107	4822 130 60511	BC847B
7108	4822 130 60511	BC847B
7109	5322 209 11517	PC74HCU04T
7110	4822 130 60511	BC847B
7111	4822 130 60511	BC847B
7130	4822 130 60511	BC847B
7131	5322 130 60508	BC857B
7132	4822 130 60511	BC847B
7160	4822 209 32852	TDA7073A/N2
7161	4822 209 32852	TDA7073A/N2
7180	4822 209 90341	SAA7372GP/M1
7200	5322 130 60508	BC857B
7201	4822 130 60142	BC869
7202	5322 130 61569	BC868
7203	4822 130 60142	BC869
7204	5322 130 60508	BC857B
7205	5322 130 61569	BC868
7206	4822 130 60511	BC847B
7220	4822 209 16881	MICROPROC. P8XC654XXA
7240	4822 209 33403	TDA1305T/N2
7241	4822 209 30095	LM833D

CONNECTIONS

8001	4822 320 12451	CWAS FLEX CDR 20P
8005	4822 320 12475	CWAS FLEX CDR 22P

POWER SUPPLY

MISCELLANEOUS

1003	4822 218 11938	PSU ASSY 20PS314/00
1003	4822 218 11967	PSU ASSY 20PS314/17
4⚠	4822 265 31015	MAINS INLET /00
4⚠	4822 265 31016	MAINS INLET /17
9⚠	4822 256 92053	FUSE HOLDER CLICK (PROM)
1120⚠	4822 070 32002	FUSE 218002.(2A)
1125	4822 252 60151	DSP-501N-A21F A

CAPACITORS

2101	4822 126 13695	82pF 1% NP0 63V
2102	5322 126 10511	1nF 5%NP0 50V
2103	5322 122 32268	470pF 10% 50V
2104	5322 126 10223	4,7nF10%X7R 63V
2109	5322 122 31865	1,5nF10%X7R 63V
2110	4822 124 41576	2,2µF 20% 50V
2111	4822 126 13196	100nF 10% 0805 X7R 25V
2113	4822 122 33127	2,2nF10%X7R 63V
2114	4822 126 13196	100nF 10% 0805 X7R 25V
2120	4822 121 10799	330nF 20% MPP 250V
2121	4822 124 12281	150µF 20% 400V(all versions except /17 USA)
2121	4822 124 12293	330µF 20% 250V(/17 version)
2125	4822 121 51598	2,2nF 5% 400V
2126	4822 121 51598	2,2nF 5% 400V
2127	4822 126 14496	470pF 10% 1KV
2129	4822 124 81024	4,7µF20% 50V
2131⚠	4822 126 14497	2,2nF 20% 250V
2133	4822 124 12062	100uF 20% 25V
2201	4822 126 13196	100nF 10% 0805 X7R 25V
2202	5322 122 32654	22nF10%X7R 63V
2203	4822 124 40248	10µF20% 63V
2210	4822 124 12282	2200µF 20% YK 10V
2211	4822 122 31173	220pF 10% 500V
2212	4822 121 43526	47nF 5% 250V
2220	4822 124 40849	330µF 20% 16V
2222	4822 124 12283	100µF 20% MS7 6.3V
2230	4822 124 81144	1000µF 16V
2240	4822 124 41545	220µF20% 16V
2242	4822 124 41584	100µF 20% 10V
2250	4822 124 40248	10µF20% 63V
2260	4822 122 31175	1nF 10% 500V

RESISTORS

3101	4822 116 52304	82k 5% 0,5W
3102	4822 051 20223	22k 5% 0,1W
3103	4822 051 20822	8k2 5% 0,1W
3104	4822 051 20153	15k 5% 0,1W
3105	4822 051 20153	15k 5% 0,1W
3106	4822 051 20102	1k 5% 0,1W
3107	4822 051 20184	180k 5% 0,1W
3108	4822 117 10965	18k 1% 0,1W
3109	4822 051 20331	330Ω 5% 0,1W
3110	4822 117 10833	10k 1% 0,1W
3111	4822 051 20229	22Ω 5% 0,1W
3112	4822 051 20101	100Ω 5% 0,1W
3113	4822 051 20159	15Ω 5% 0,1W
3115	4822 116 52232	910Ω 5% 0,5W
3116	4822 117 11448	180Ω 1% 0,1W
3120	4822 116 21217	1MA/423V 800V
3122	4822 117 13515	2Ω7 3W AC03 WW
3123	4822 050 21803	18k 1% 0,6W
3124	4822 116 83872	220Ω 5% 0,5W
3125	4822 050 21002	1k 1% 0,6W
3126	4822 116 80676	1Ω5 5% 0,5W
3127	4822 116 80676	1Ω5 5% 0,5W
3128	4822 116 80676	1Ω5 5% 0,5W
3129	4822 116 83864	10k 5% 0,5W
3134	4822 050 21803	18k 1% 0,6W
3201	4822 050 21002	1k 1% 0,6W
3202	4822 050 13302	3k3 1% 0,4W
3203	4822 116 52175	100Ω 5% 0,5W
3204	4822 051 20182	1k8 5% 0,1W
3205	4822 051 20008	0Ω JUMP. (0805)
3206	4822 051 20332	3k3 5% 0,1W
3221	4822 051 20182	1k8 5% 0,1W
3222	4822 051 20102	1k 5% 0,1W
3230	4822 050 21002	1k 1% 0,6W
4110	4822 051 20008	0Ω JUMP. (0805)

COILS

5120⚠	4822 157 53348	FILTER CHOKE ASSY CU15D3
5125	4822 157 11411	100MHz
5131⚠	4822 146 11062	TRANSFORMER CT296F CDR765
5132	4822 157 51462	10µH
5210	4822 157 11722	6,8µH 20% 7,7X9,5
5215	4822 157 11722	6,8µH 20% 7,7X9,5
5220	4822 157 51462	10µH
5225	4822 157 53139	4,7µH
5226	4822 157 53139	4,7µH
5230	4822 157 50963	2,2µH
5240	4822 157 51462	10µH
5250	4822 157 51462	10µH
5255	4822 157 51195	1µH 20% 4X9,8MM AXIAL

DIODES

6102	4822 130 31603	1N4006
6103	4822 130 31603	1N4006
6104	4822 130 31603	1N4006
6105	4822 130 31603	1N4006
6106	4822 130 42606	BYD33J
6107	4822 130 42606	BYD33J
6113	4822 130 32245	BYV10-40
6114	4822 130 42488	BYD33D
6129	5322 130 80122	BZX84-C24
6132	4822 130 42488	BYD33D
6201	4822 130 34328	BZX79-B30
6210	4822 130 83801	PBYR745F
6211	4822 130 42488	BYD33D
6212	4822 130 42488	BYD33D
6220	4822 130 42488	BYD33D
6230	4822 130 80983	BYW29F-150
6231	4822 130 31603	1N4006
6240	4822 130 42488	BYD33D
6250	4822 130 42606	BYD33J
6275	4822 130 30621	1N4148

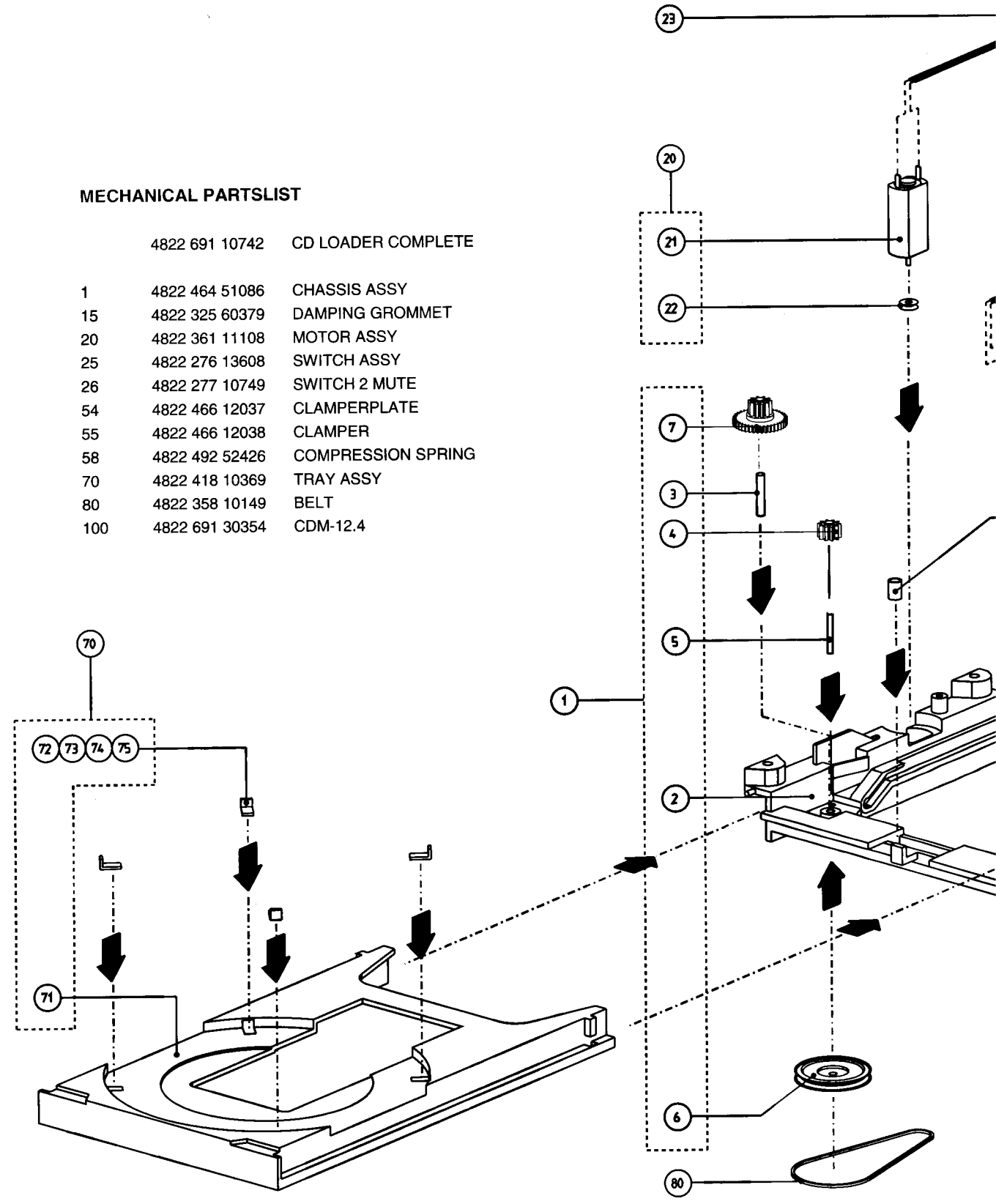
IC's

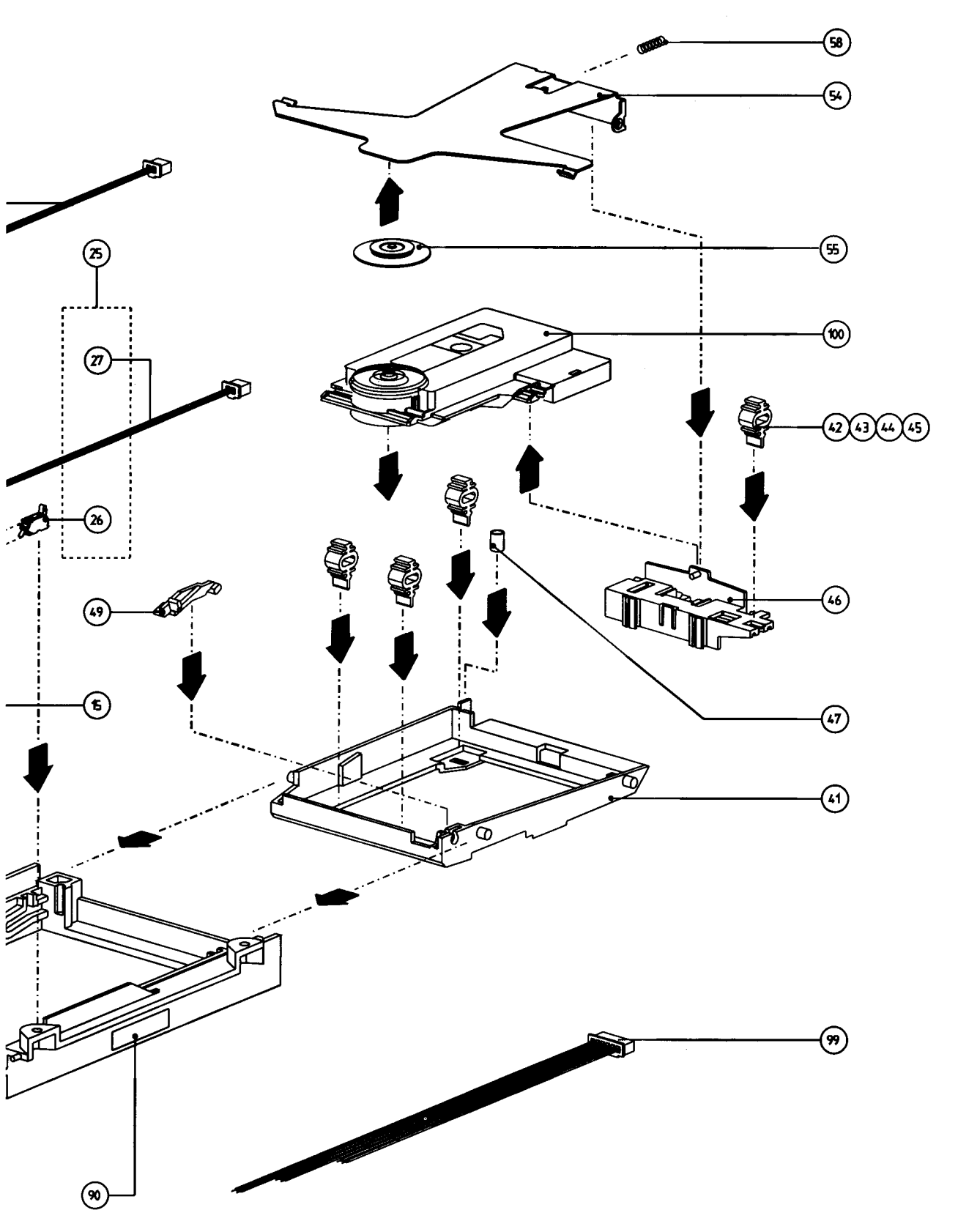
7110	4822 209 90025	MC44603P
7125	4822 130 63689	STP3N60FI
7200⚠	4822 130 91451	CQY80NG
7201	4822 209 16944	KA431AZ
7221	4822 209 80591	LM317T
7249	4822 209 82112	MC7908CT
7250	4822 209 31257	MC79L24ACP

EXPLODED VIEW CD LOADER

MECHANICAL PARTSLIST

	4822 691 10742	CD LOADER COMPLETE
1	4822 464 51086	CHASSIS ASSY
15	4822 325 60379	DAMPING GROMMET
20	4822 361 11108	MOTOR ASSY
25	4822 276 13608	SWITCH ASSY
26	4822 277 10749	SWITCH 2 MUTE
54	4822 466 12037	CLAMPERPLATE
55	4822 466 12038	CLAMPER
58	4822 492 52426	COMPRESSION SPRING
70	4822 418 10369	TRAY ASSY
80	4822 358 10149	BELT
100	4822 691 30354	CDM-12.4




58
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(GB) **WARNING**

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD)
Careless handling during repair can reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance.
Keep components and tools also at this potential.

ESD

(NL) **WAARSCHUWING**

Alle IC's en vele andere halfgeleiders zijn gevoelig voor elektrostatische ontladingen (ESD).
Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen.
Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.
Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

(F) **ATTENTION**

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD).
Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise a leur manipulation.
Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de sécurité.
Veiller a ce que les composants ainsi que les outils que l'on utilise soient également a ce potentiel.

(D) **WARNUNG**

Alle IC und viele andere Halbleiter sind empfindlich gegen elektrostatische Entladungen (ESD).
Unsorgfältige Behandlung bei der Reparatur kann die Lebensdauer drastisch vermindern.
Sorgen sie dafür, das Sie im Reparaturfall über ein Pulsarmband mit Widerstand mit dem Massepotential des Gerätes verbunden sind.
Halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

(I) **AVVERTIMENTO**

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).
La loro longevita potrebbe essere fortemente ridatta in caso di non osservazione della piu grande cauzione alla loro manipolazione.
Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

(GB)
Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

(D)
Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten.
Der Originalzustand des Gerats darf nicht verandert werden.
Fur Reparaturen sind Original-Ersatzteile zu verwenden.

(NL)
Veiligheidsbepalingen vereisen, dat het apparaat in zijn oorspronkelijke toestand wordt terug gebracht en dat onderdelen, identiek aan de gespecifieerde worden toegepast.

(I)
Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati pezzi di ricambiago idetici a quelli specificati.

(F)
Les normes de sécurité exigent que l'appareil soit remis a l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.

CAUTION INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
VARO! AVATTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASER SÄTTEILYLLE ÄLÄ KATSO SÄTEESEN.
VARNING OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD BETRAKTA EJ STRÅLEN.
ADVERSEL USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UNSAETTELSE FOR STRÅLING.
DANGER INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.
VORSICHT UNSICHTBARE LASERSTRAHLUNG WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.

SHOCK, FIRE HAZARD SERVICE TEST:

CAUTION: After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or Front Panel of product and controls and chassis bottom,
Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before return to user/customer.
Ref.UL Standard NO.1492.

NOTE ON SAFETY:

Symbol ⚠ : Fire or electrical shock hazard. Only original parts should be used to replace any part with symbol ⚠
Any other component substitution(other than original type), may increase risk or fire or electrical shock hazard.

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agrées, seuls habilités à réparer votre appareil en panne."