AKAI

MODEL S1100

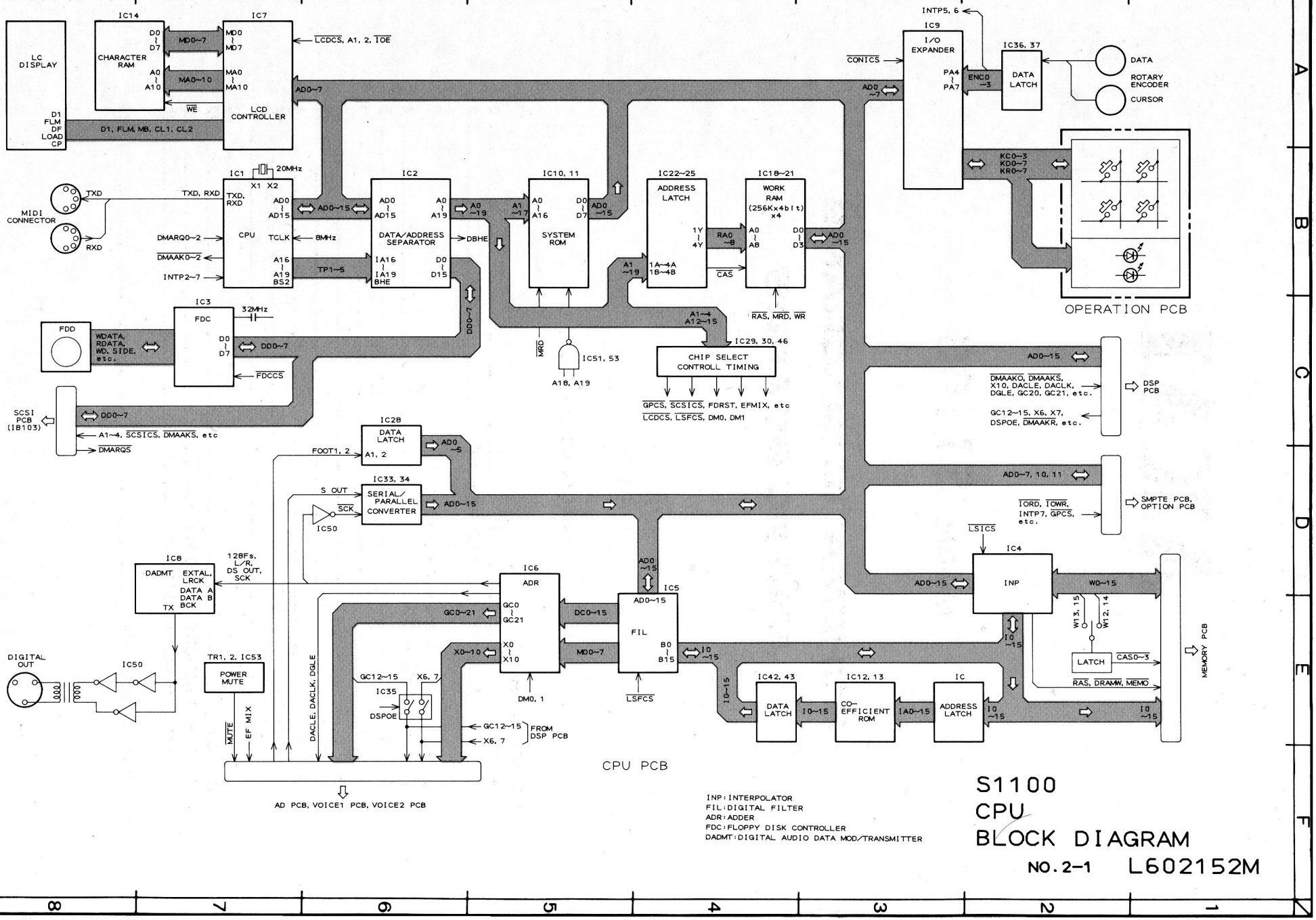
SCHEMATIC DIAGRAMS AND PC BOARDS

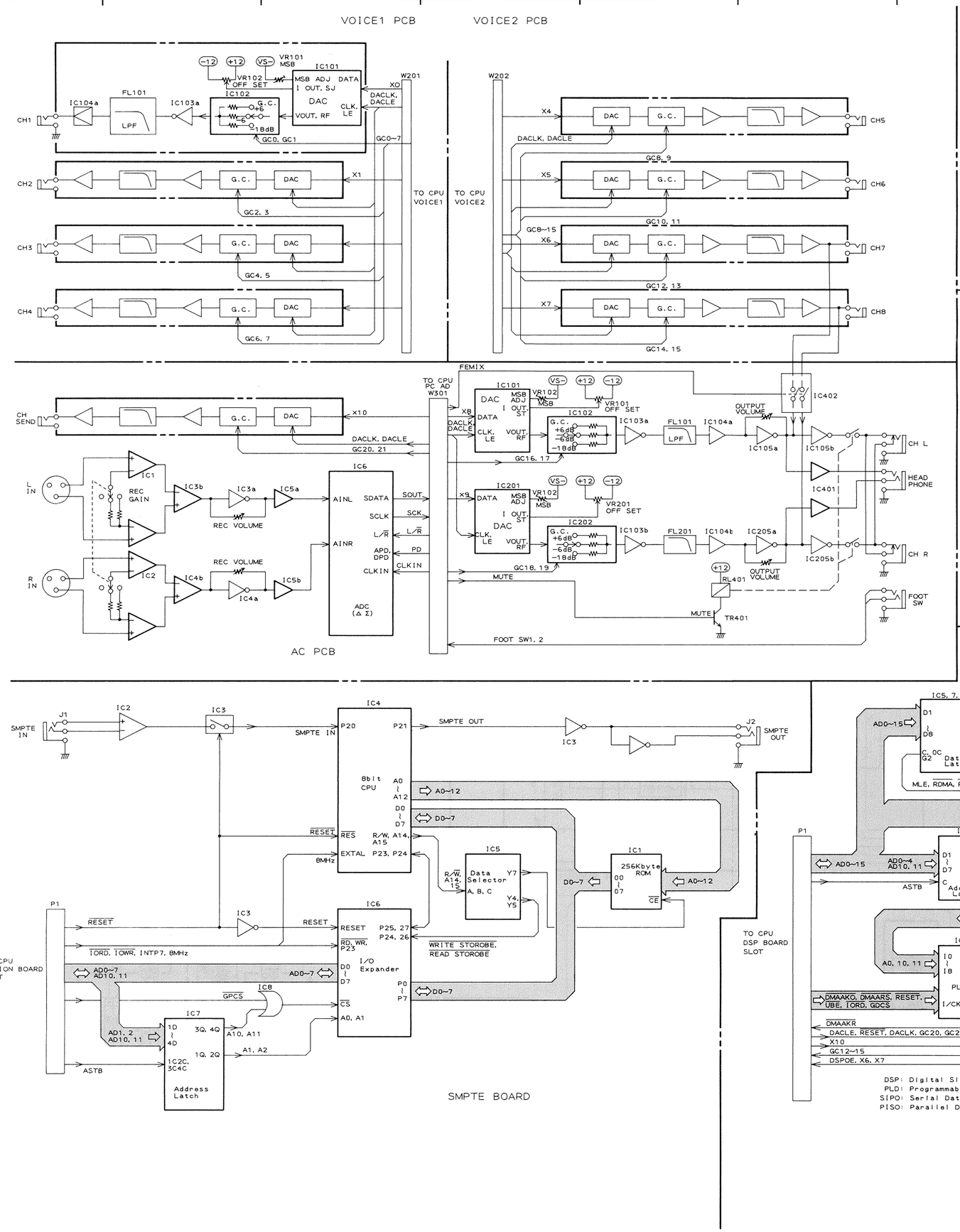
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2. VOICE, AD, SMPTE, SCSI, DSP, MEMORY 3

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5. AD 12
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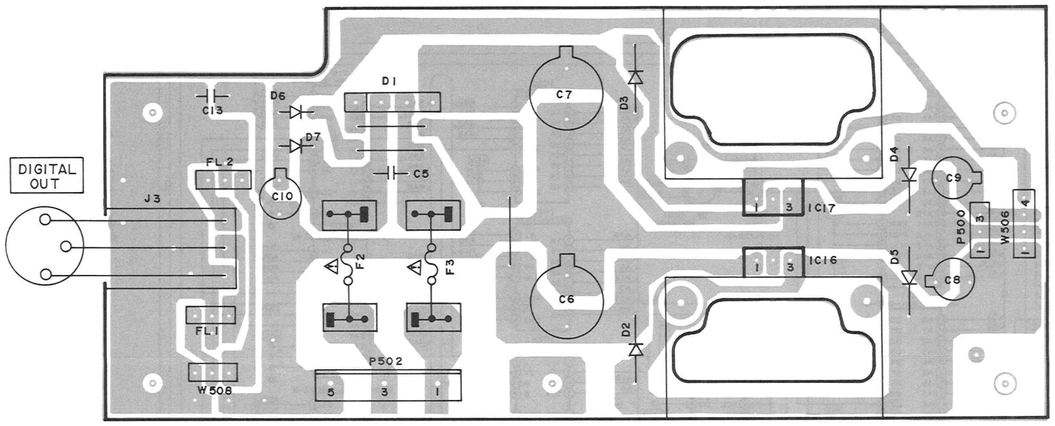

LC DISPLAY
D1 FLM DF LOAD CP
D1, FLM, MB, CL1, CL2
IC14
CHARACTER RAM
D0 ~ D7
A0 ~ A10
WE
IC7
LCD CONTROLLER
MD0 ~ MD7
MA0 ~ MA10
LCDCS, A1, 2, IOE
AD0~7
IC1
X1 X2
20MHz
TXD, RXD
AD0 ~ AD15
CPU
TCLK
8MHz
DMARQ0~2
DMAAK0~2
INTP2~7
TP1~5
MIDI CONNECTOR
TXD
RXD
IC2
DATA/ADDRESS SEPARATOR
A0 ~ A19
DBHE
IA16 ~ IA19 BHE
D0 ~ D15
IC10, 11
SYSTEM ROM
A0 ~ A16
D0 ~ D7
A1 ~17
AD0 ~15
IC22~25
ADDRESS LATCH
1Y ~ 4Y
1A~4A 1B~4B
RA0 ~8
CAS
IC18~21
WORK RAM (256Kx4bit) x4
A0 ~ A8
D0 ~ D3
RAS, MRD, WR
A1 ~19
IC3
FDC
32MHz
D0 ~ D7
DD0~7
FDCCS
FDD
WDATA, RDATA, WD, SIDE, etc.
SCSI PCB (IB103)
DD0~7
A1~4, SCSICS, DMAAKS, etc
DMARQS
MRD
IC51, 53
A18, A19
A1~4 A12~15
IC29, 30, 46
CHIP SELECT CONTROLL TIMING
GPCS, SCSICS, FDRST, EFMIX, etc
LCDCS, LSFCS, DM0, DM1
INTP5, 6
IC9
I/O EXPANDER
CONICS
PA4 ~ PA7
ENC0 ~3
IC36, 37
DATA LATCH
DATA
ROTARY ENCODER
CURSOR
AD0 ~7
KC0~3
KD0~7
KR0~7
OPERATION PCB
AD0~15
DMAAKO, DMAAKS, X10, DACLE, DACLK, DGLE, GC20, GC21, etc.
GC12~15, X6, X7, DSPOE, DMAAKR, etc.
DSP PCB
AD0~7, 10, 11
IORD, IOWR, INTP7, GPCS, etc.
SMPTE PCB, OPTION PCB
IC28
DATA LATCH
A1, 2
FOOT1, 2
AD0 ~5
IC33, 34
SERIAL/ PARALLEL CONVERTER
S OUT
SCK
IC50
AD0~15
LSICS
IC4
INP
W0~15
W13, 15
W12, 14
LATCH
CAS0~3
RAS, DRAMW, MEMO
MEMORY PCB
IC8
DADMT
EXTAL, LRCK
DATA A
DATA B
BCK
TX
128Fs, L/R, DS OUT, SCK
IC6
ADR
GC0 ~ GC21
X0 ~ X10
DC0~15
MD0~7
IC5
FIL
AD0~15
B0 ~ B15
I0 ~15
LSFCS
DM0, 1
DIGITAL OUT
IC50
TR1, 2, IC53
POWER MUTE
MUTE
EF MIX
GC12~15
X6, 7
IC35
DSPOE
FROM DSP PCB
DACLE, DACLK, DGLE
IC42, 43
DATA LATCH
IC12, 13
CO-EFFICIENT ROM
IA0~15
IC
ADDRESS LATCH
IO~15
AD PCB, VOICE1 PCB, VOICE2 PCB
CPU PCB
INP: INTERPOLATOR
FIL: DIGITAL FILTER
ADR: ADDER
FDC: FLOPPY DISK CONTROLLER
DADMT: DIGITAL AUDIO DATA MOD/TRANSMITTER
S1100
CPU
BLOCK DIAGRAM
NO. 2-1 L602152M



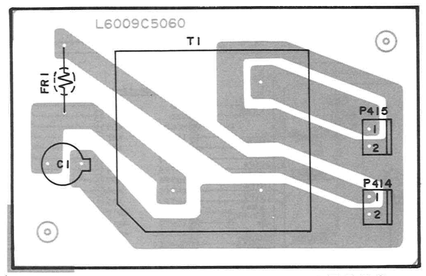
S1100
VOICE, AD, SMPTE SCSI, DSP, MEMORY BLOCK DIAGRAM

NO. 2-2 L602151M

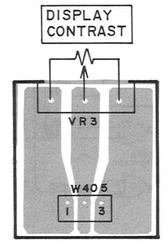
P118
W501
PANEL PCB L6009B5050
W904
W902
P112
P113
FDD BLK
MIDI
IN
THRU
OUT
J101
P115
LCD MODULE
P415
P414
P114
FR2 1/2W 4.7
T1
C1 2200P
NI05-05-S
INVERTOR PCB L6009C5060
P116
W505
VR3 5KB
DISPLAY CONTRAST
DISPLAY PCB L6021B505D
CPU PCB
L6021A5010
P101
TO EXM005 J201
MEMORY BOARD #1
P102
MEMORY BOARD #2
P103
MEMORY BOARD #3
P104
MEMORY BOARD #4
P100
TO DSP PCB J1
P108
OPTION BOARD #1
P107
OPTION BOARD #2
P106
TO SMPTE PCB P1
P105
TO SCSI PCB P1
P120
P121
P122
P125
FOR HARD DISK (OPTIONAL)
P109
P123
P117
P111
P124
DATA
CURSOR
SWITCHING POW PCB
PMC50E-4-XULA (100/200)
AD PCB L6021A5030
W301
P304
W303
W302
OUTPUT
LEFT
RIGHT
SEND
PHONE
FOOT SW
J101
J201
J301
J401
J501
P306
P307
P301
P303
P302
P500
DIGITAL OUT
W506
W508
POWER TRANS
J S1100J
C A S1100A, C
E V B S S1100E, V, B, S
WHT
RED
BLK
WHT
VLT
J, A, C
100~120VAC
E, V, B, S
200~240VAC
D2 DS135 IC16 LM2940CT -12
D1 DBA10B
D4 DS135
D5 DS135
C8 10/250M
C9 10/250M
C6 220/25 (M)
C7 220/25 (M)
LM7912CT IC17
D3 DS135
D7 GMA-01-4
D8 GMA-01-4
C5 0.01
C10 0.47/50 (M)
PS02
POWER SUPPLY PCB L6021B505A
F1
F2, F3
T1.6A 250V
1.6A 125V
1.6A 250V
W504
REC GAIN PCB L6021B505B
W502
W503
MAIN VOLUME VR2 10KA
REC LEVEL VR1 10KA
VR PCB L6021B505H
P512
P513
P514
Lch INPUT
Rch INPUT
C901 0.047
C902 0.047
INPUT JACK PCB L6021B505E
FILTER PCB L6021B505C
C1, C2, C3 0.001/400AC
C4 0.068/250AC (M)
C14, C15 0.001/400AC
C16, C17 0.068/250AC (M)
POWER SW PCB
L6021B505F
AC INLET
AC100V 50Hz/60Hz
AC120V 60Hz
POWER SW PCB
L6021B505G
AC INLET
E V B S
AC220V~240V 50Hz
EXM005 L6009C5020
J201
DSP PCB L6021C5040
J1
SMPTE PCB L6021C5060
P1
SMPTE IN SMPTE OUT
SCSI PCB L6016C5010
P101
VOICE 2 PCB
L6021B5020
W202
VOICE 1 PCB
L6021B5020
W201
W204
W203
CH5
CH6
CH7
CH8
CH1
CH2
CH3
CH4
WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS
AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(F)
ALL CAPACITORS IN μF 50WV(Z)
S1100
CONNECTION DIAGRAM
NO.12-1 L6021001



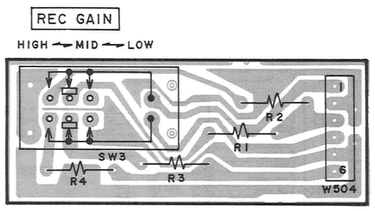
⚠ POWER SUPPLY PCB L6021B505A



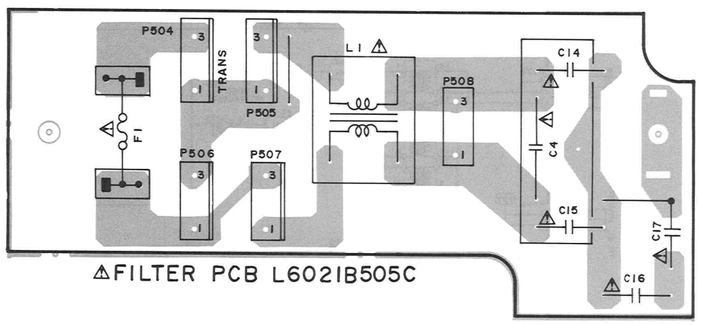
INVERTOR PCB L6009C5060



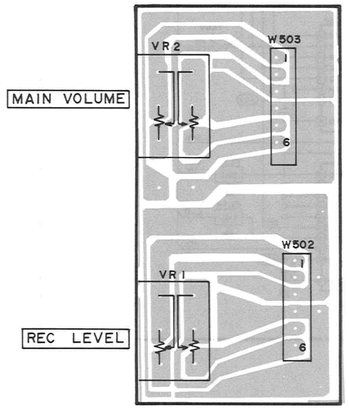
DISPLAY VR PCB
L6021B505D



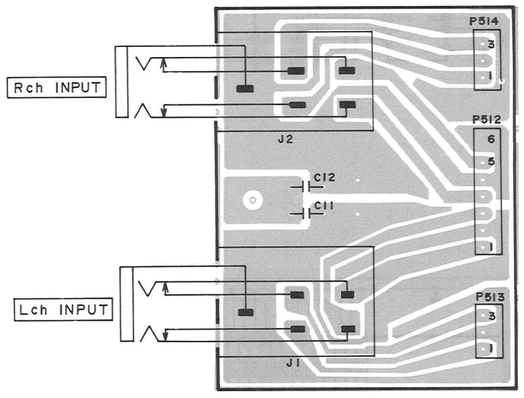
REC GAIN PCB L6021B505B



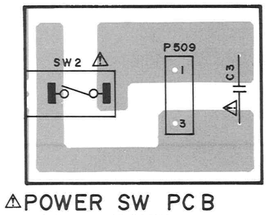
⚠FILTER PCB L6021B505C



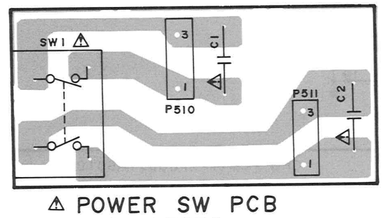
VR PCB
L6021B505H



INPUT JACK PCB
L6021B505E



⚠POWER SW PCB
L6021B505F
(J,C,A,C(Y1) model only)



⚠ POWER SW PCB
L6021B505G
(E,V,B,S model only)

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY.
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,
NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

C1 to C3, C7 to C11, C14
C18 to C34, C36, C37,
C44 to C54, C55 to C57, C15 : 0.047

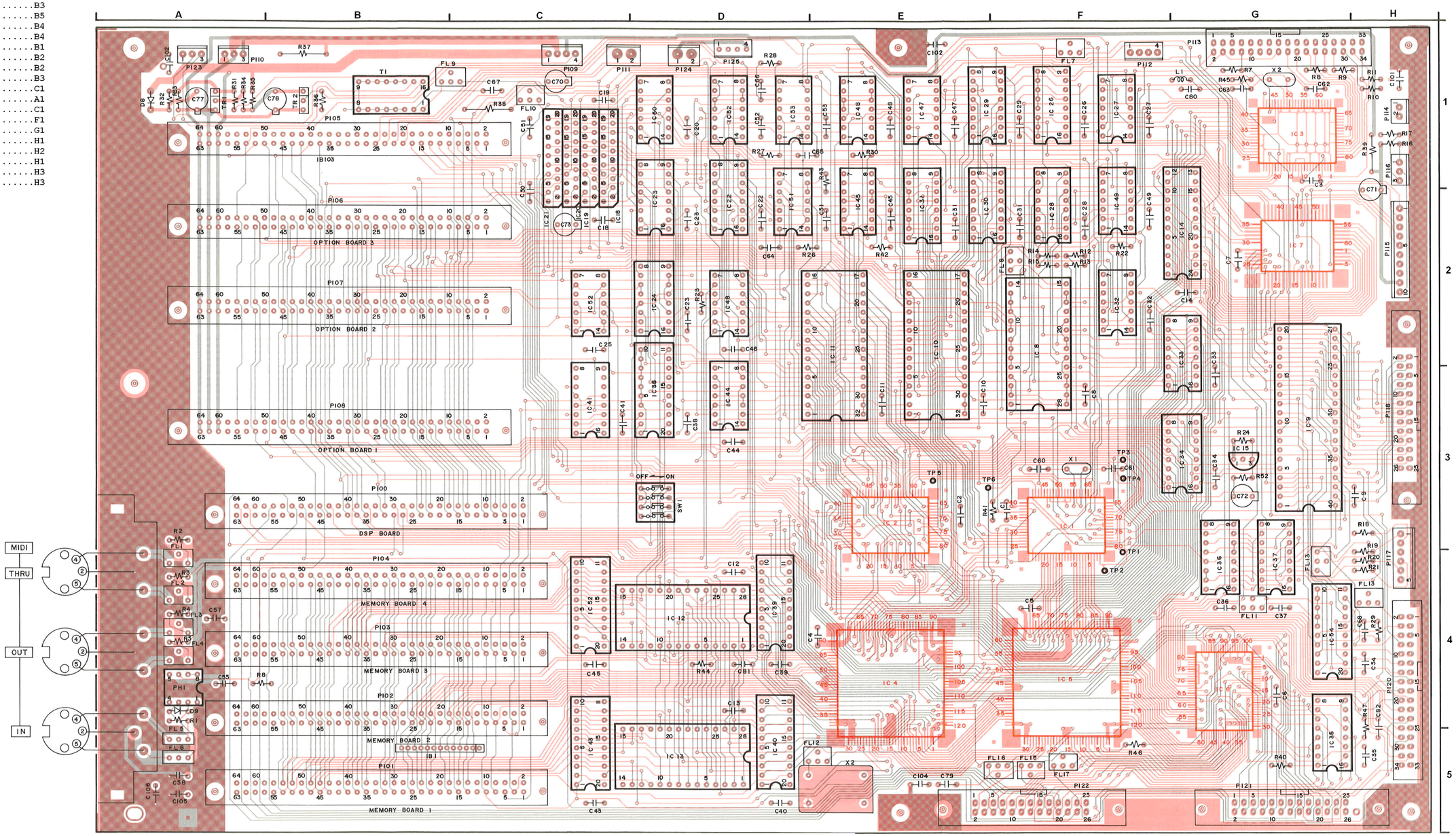
CPU PCB (1/2) L6021A5010

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 50WV (Z)

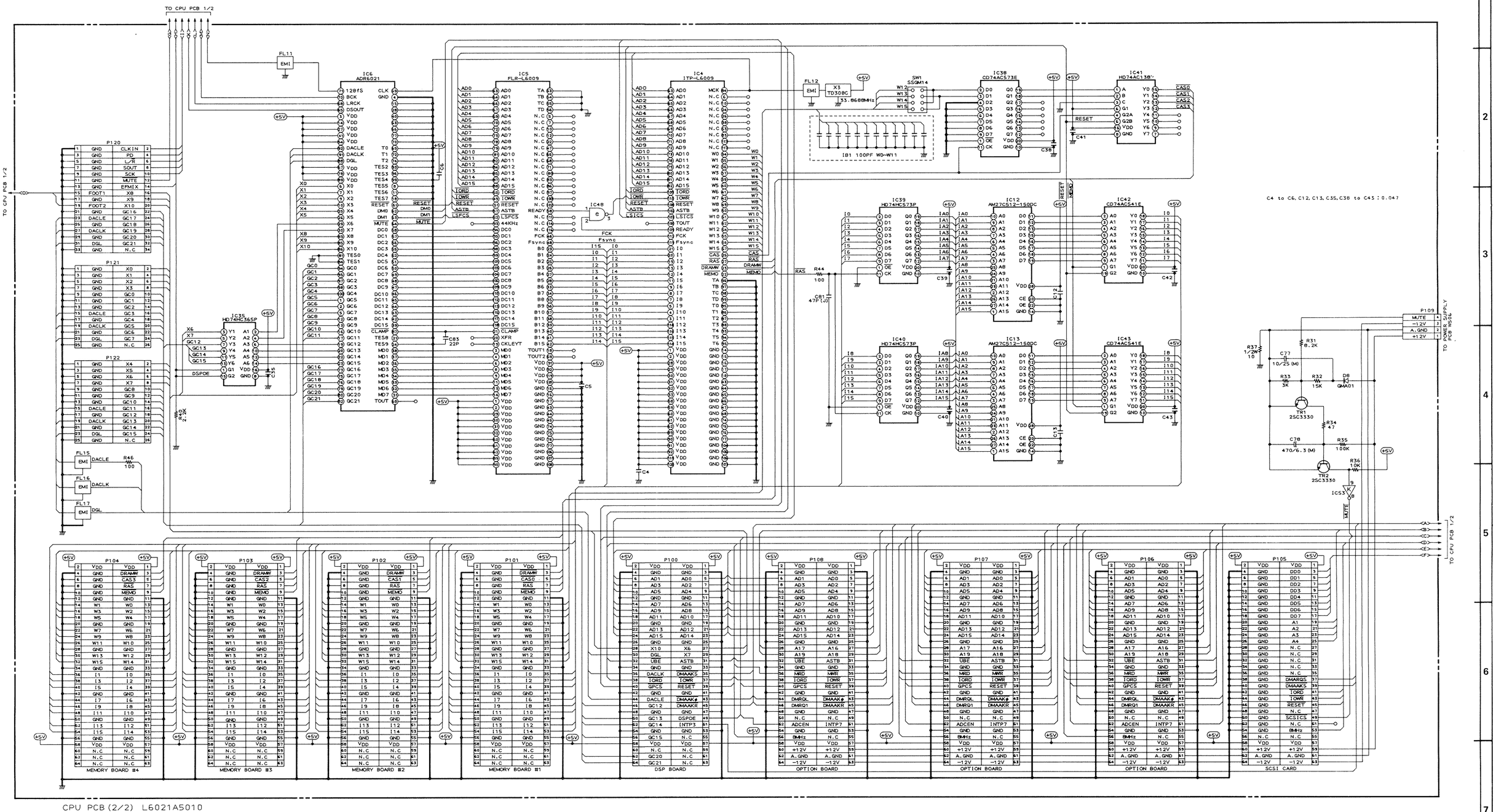
S1100
CPU (1/2)
SCHEMATIC DIAGRAM
NO.12-2 L6021002

IC3.....G1
IC4.....E4
IC5.....F4
IC6.....G4
IC7.....G2
IC8.....F2
IC9.....G3
IC10.....E2
IC11.....E2
IC12.....D4
IC13.....D5
IC14.....G2
IC15.....G3
IC18.....C1
IC19.....C1
IC20.....C1
IC21.....C1
IC22.....D1/D2
IC23.....D1/D2
IC24.....D2
IC25.....C2
IC26.....F1
IC27.....F1
IC28.....F1/F2
IC29.....E1
IC30.....E2/F2
IC31.....E2
IC32.....F2
IC33.....G2
IC34.....G3
IC35.....G4/G5
IC36.....G3/G4
IC37.....G3/G4
IC38.....D3
IC39.....D4
IC40.....D5
IC41.....C3
IC42.....C4
IC43.....C4/C5
IC44.....D3
IC45.....E2
IC46.....D2
IC47.....E1
IC48.....E1
IC49.....F1/F2
IC50.....D1
IC51.....D1/D2
IC52.....D1
IC53.....D1
IC54.....G4

CONNECTORS
J101.....A4
P100.....B3
P101.....B5
P102.....B4
P103.....B4
P104.....B4
P105.....B1
P106.....B2
P107.....B2
P108.....B3
P109.....C1
P110.....A1
P111.....C1
P112.....F1
P113.....G1
P114.....H1
P115.....H2
P116.....H1
P117.....H3
P118.....H3



CPU PCB L6021A5010



CPU PCB (2/2) L6021A5010

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 50WV (Z)

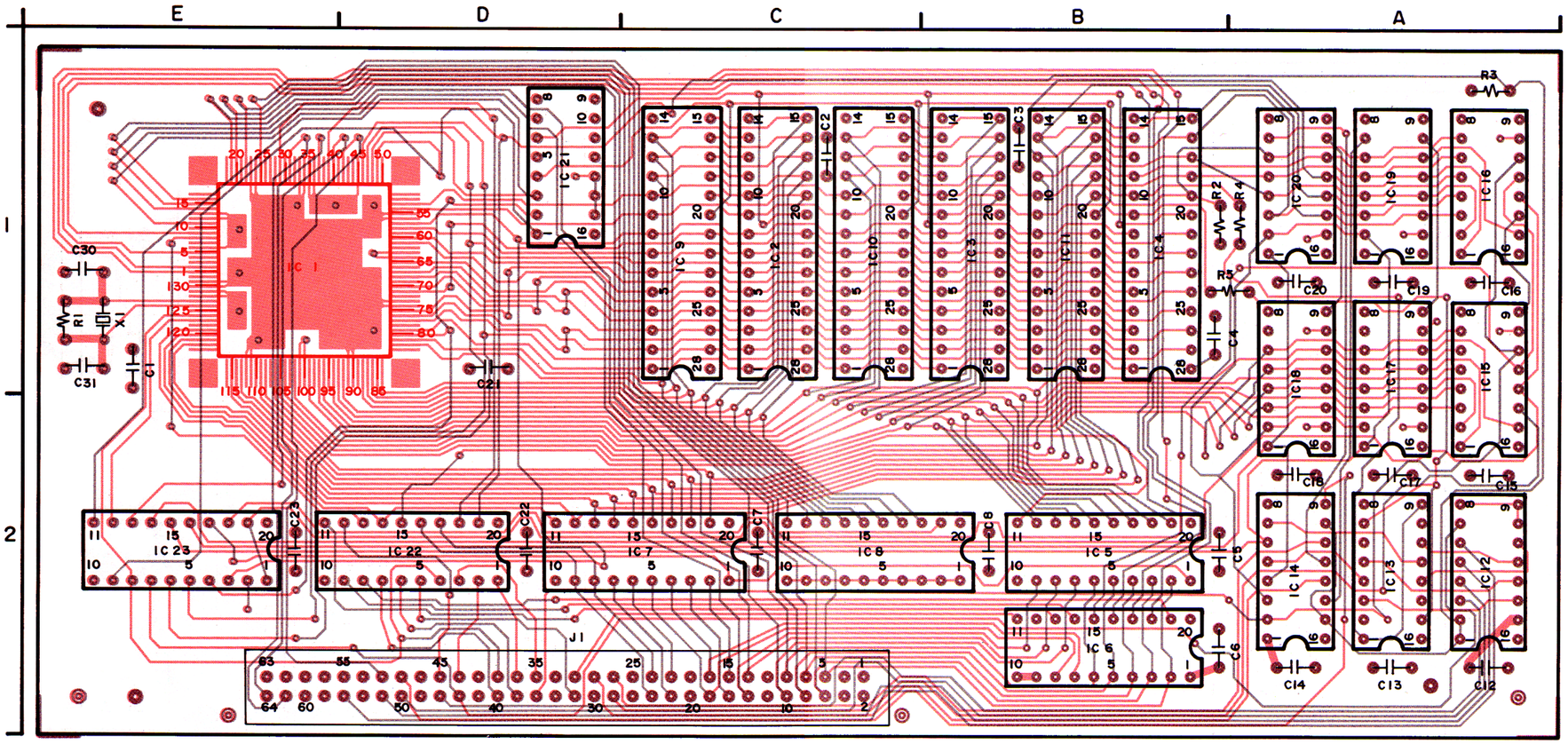
S1100
CPU (2/2)
SCHEMATIC DIAGRAM
NO.12-3 L6021003

C1 to C8, C12 to C23 : 0.047

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 50 WV (Z)

S1100
DSP
SCHEMATIC DIAGRAM
NO.12-4 L6021008

DSP PCB L6021C5040

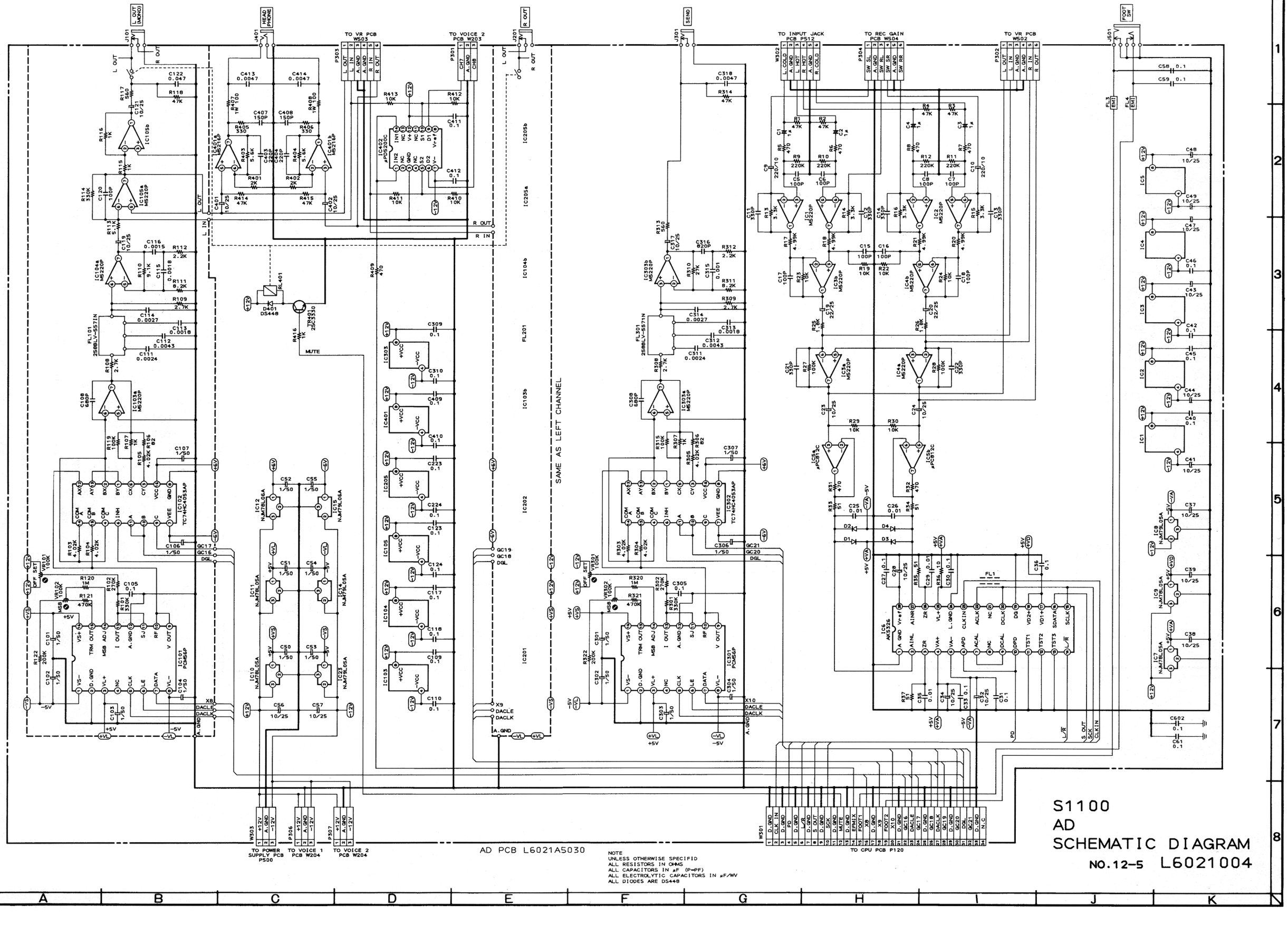


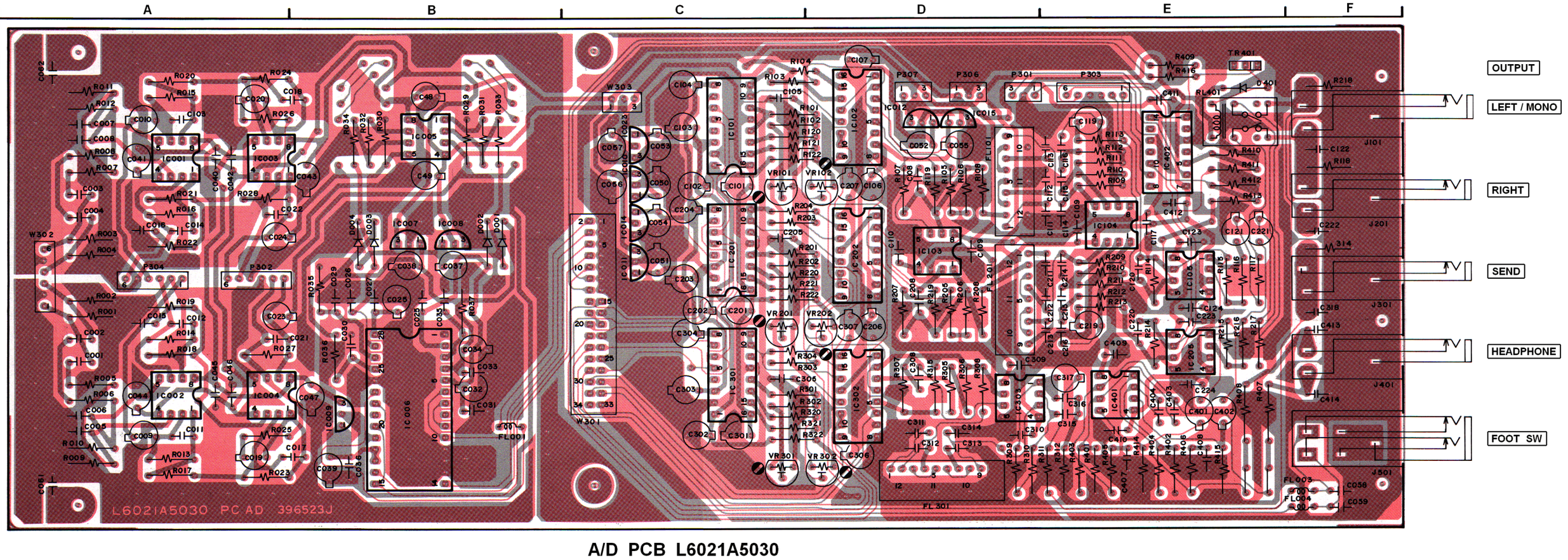
DSP PCB L602IC5040

PRINCIPAL PARTS LOCATION

ICS
IC1.....E,D2
IC2.....C1
IC3.....B1
IC4.....B1
IC5.....B2
IC6.....B2
IC7.....C,D2
IC8.....C2
IC9.....C1
IC10.....C1
IC11.....B1
IC12.....A2
IC13.....A2
IC14.....A2
IC15.....A1
IC16.....A1
IC17.....A1,2
IC18.....A1
IC19.....A1
IC20.....A1
IC21.....D1
IC22.....D2
IC23.....E2

CONNECTOR
J1.....C,D2


L OUT
R OUT
L IN
R IN
HEAD PHONE
TO VR PCB W503
TO VOICE 2 PCB W203
TO INPUT JACK PCB P512
TO REC GAIN PCB W504
TO VR PCB W502
SEND
FOOT SW
SAME AS LEFT CHANNEL
MUTE
DFF SET
TO POWER SUPPLY PCB P500
TO VOICE 1 PCB W204
TO VOICE 2 PCB W204
TO CPU PCB P120
AD PCB L6021A5030
S1100
AD
SCHEMATIC DIAGRAM
NO.12-5 L6021004
NOTE
UNLESS OTHERWISE SPECIFID
ALL RESISTORS IN OHMS
ALL CAPACITORS IN μF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN μF/WV
ALL DIODES ARE DS448

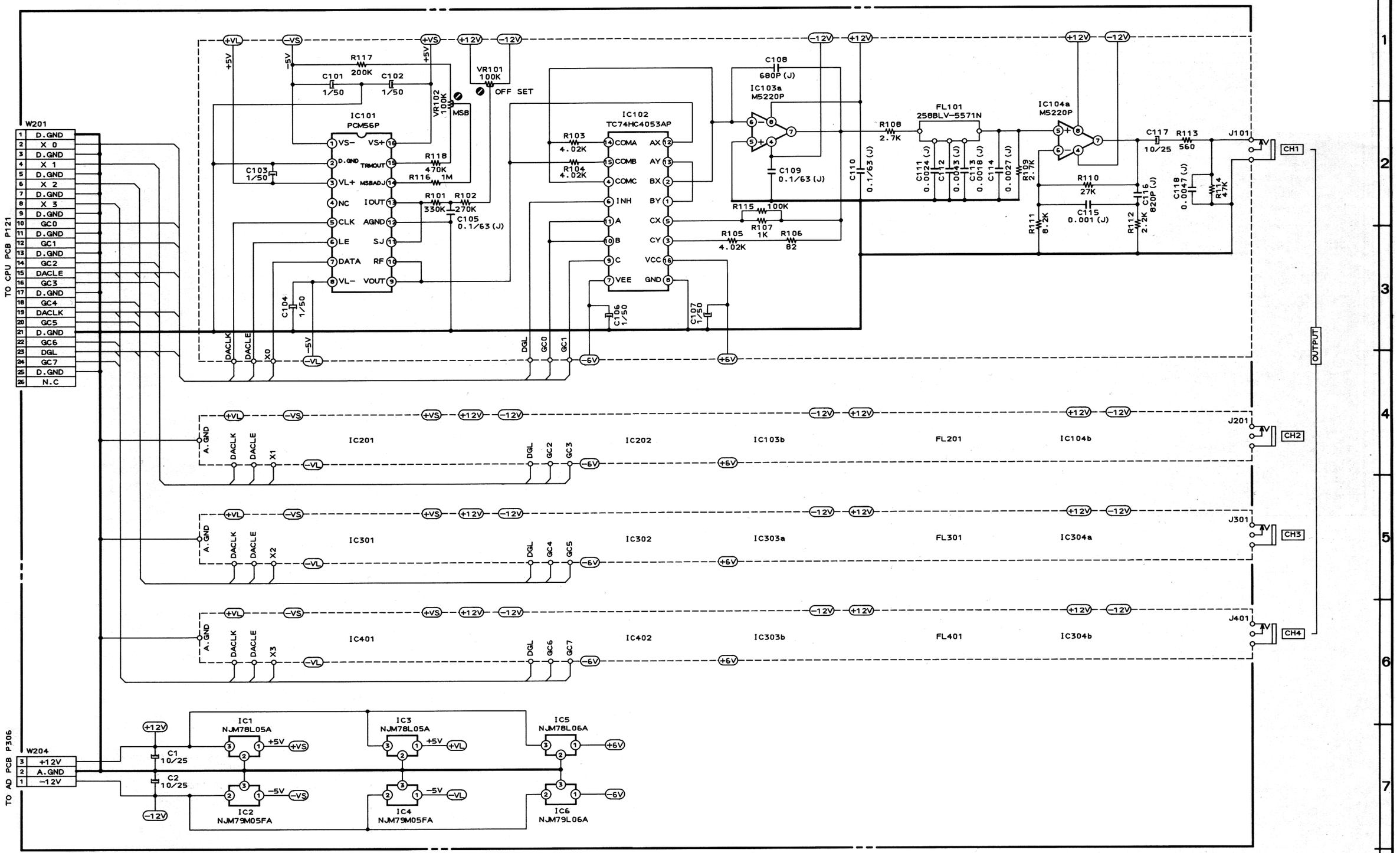


A/D PCB L6021A5030

PRINCIPAL PARTS LOCATION

ICS

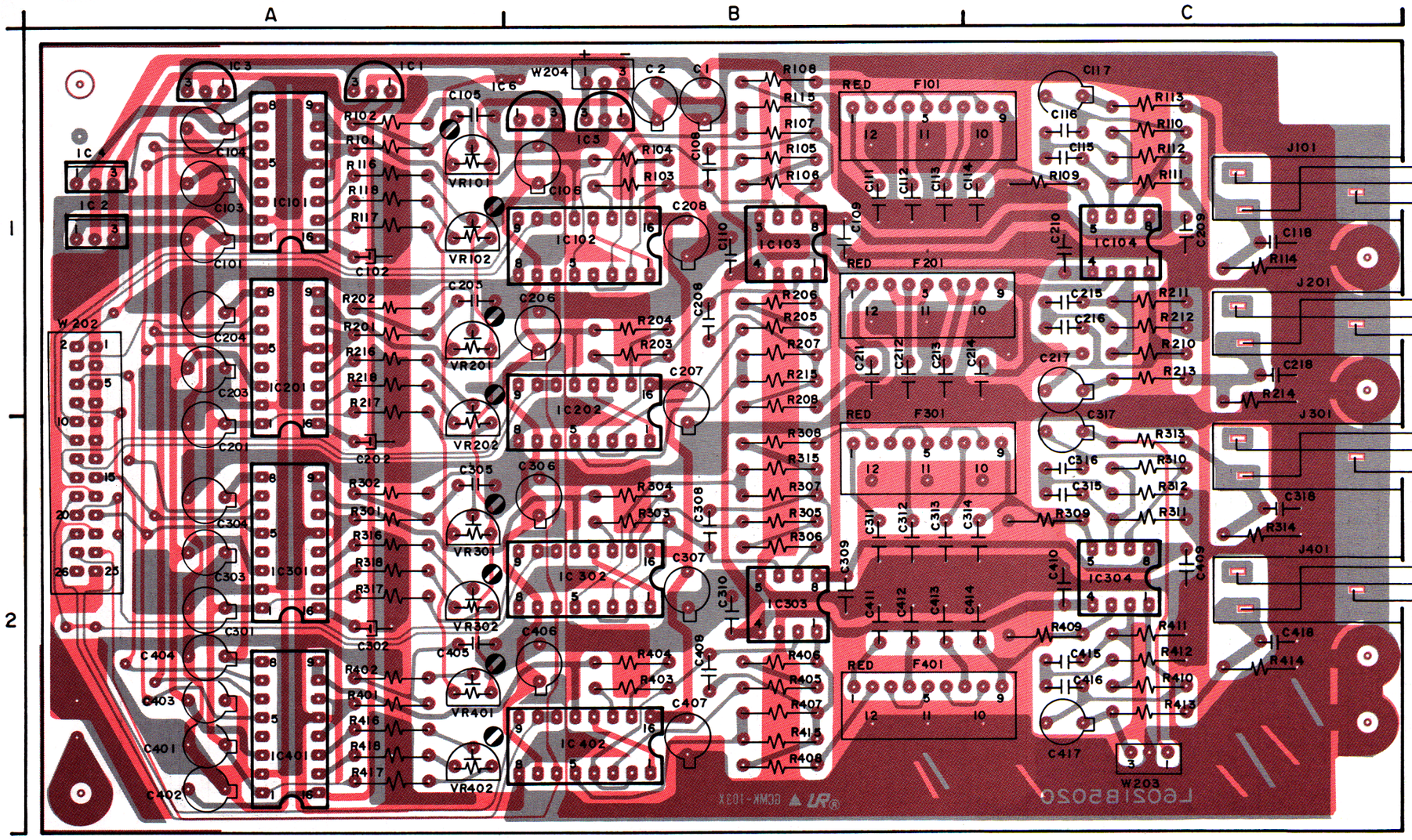
IC001	A1	IC301	C2
IC002	A2	IC302	D2
IC003	A1	IC303	D2
IC004	A2	IC401	E2
IC005	B1		
IC006	B2	CONNECTORS	
IC007	B2	W301	C1/C2
IC008	B2	W302	A1/A2
IC009	B2	W303	C1
IC010	C1	P301	D1
IC011	C1	P302	A2
IC012	D1	P303	E1
IC014	C1	P304	A2
IC015	D1	P306	D1
IC023	C1	P307	D1
IC101	C1		
IC102	D1	TRANSISTORS	
IC103	D1	TR401	E1
IC104	E1		
IC105	E1/E2		
IC201	C1/C2		
IC202	D1/D2		
IC205	E2		



VOICE 1 PCB L6021B5020

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W (J)
ALL CAPACITORS IN μF 50WV (M)

S1100
VOICE 1
SCHEMATIC DIAGRAM
NO.12-6 L6021005



VOICE 2 PCB L6021B5020

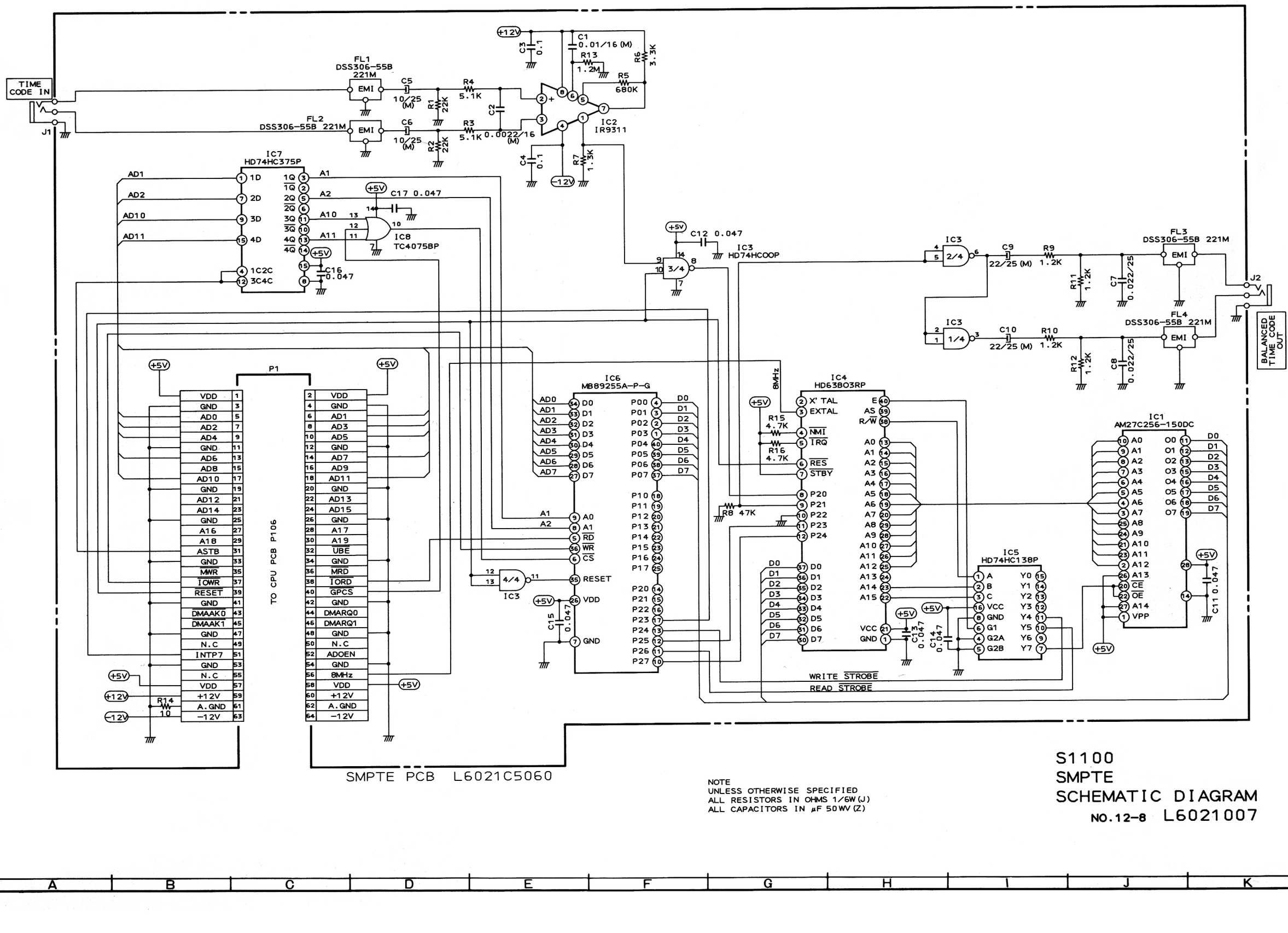
PRINCIPAL PARTS LOCATION

ICS

IC1.....A1
IC2.....A1
IC3.....A1
IC4.....A1
IC5.....B1
IC6.....B1
IC101.....A1
IC102.....B1
IC103.....B1
IC104.....C1
IC201.....A1,2
IC202.....B1,2
IC301.....A2
IC302.....B2
IC303.....B2
IC304.....C2
IC401.....A1
IC402.....B2

CONNECTORS

W202.....A1,2
W203.....C2
W204.....B1

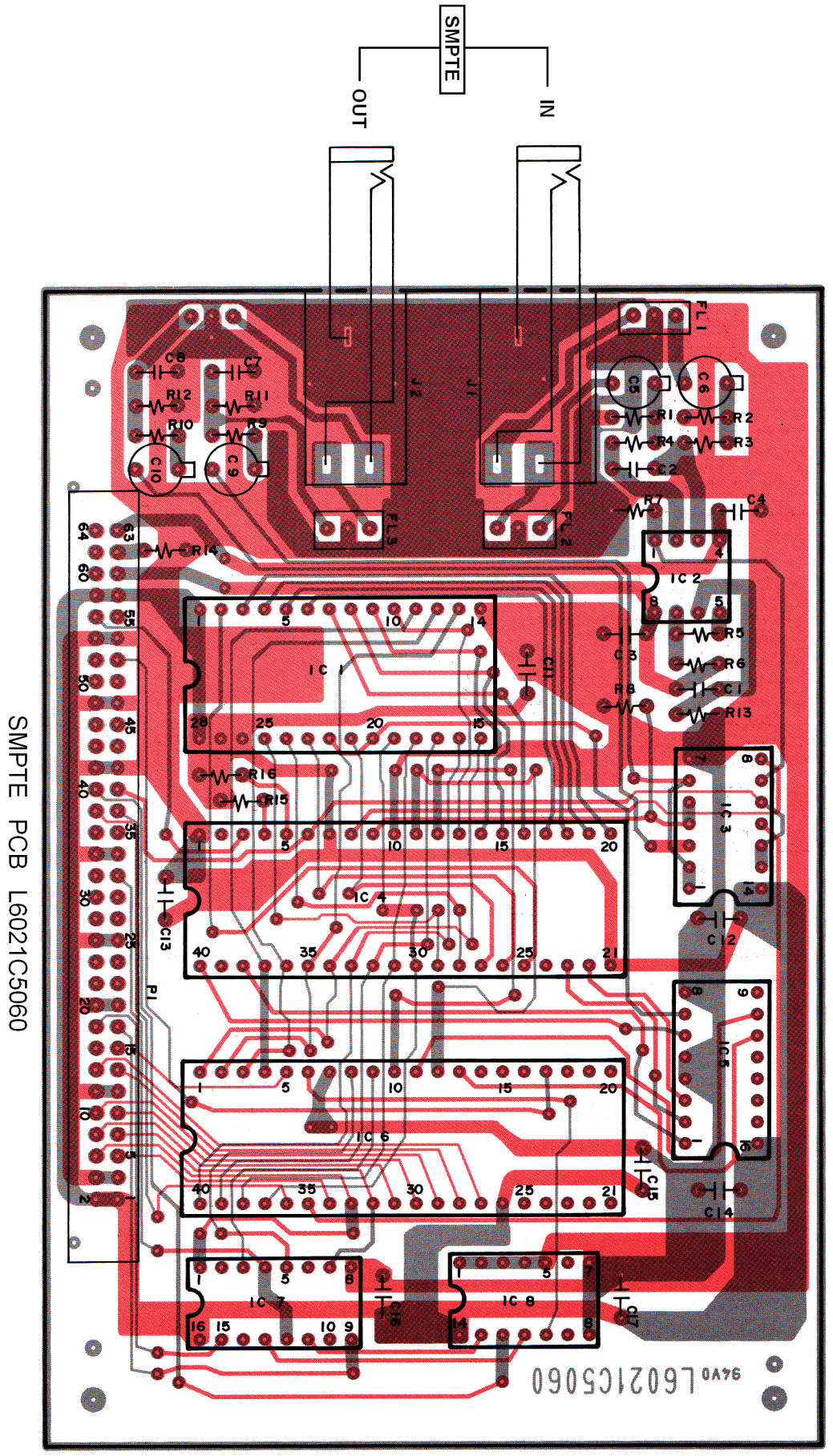


SMPTE PCB L6021C5060

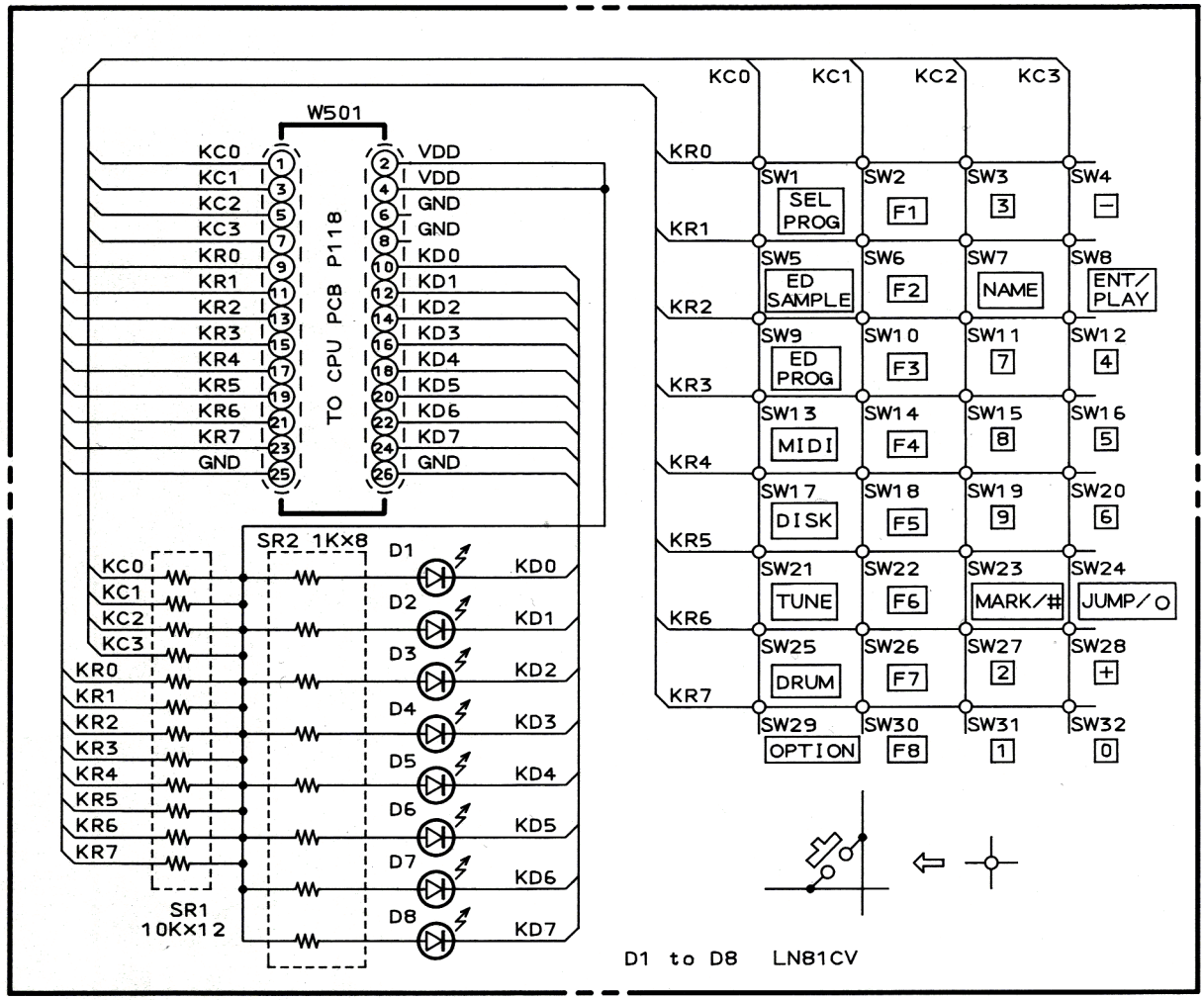
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN μF 50WV(Z)

S1100
SMPTE
SCHEMATIC DIAGRAM

NO.12-8 L6021007

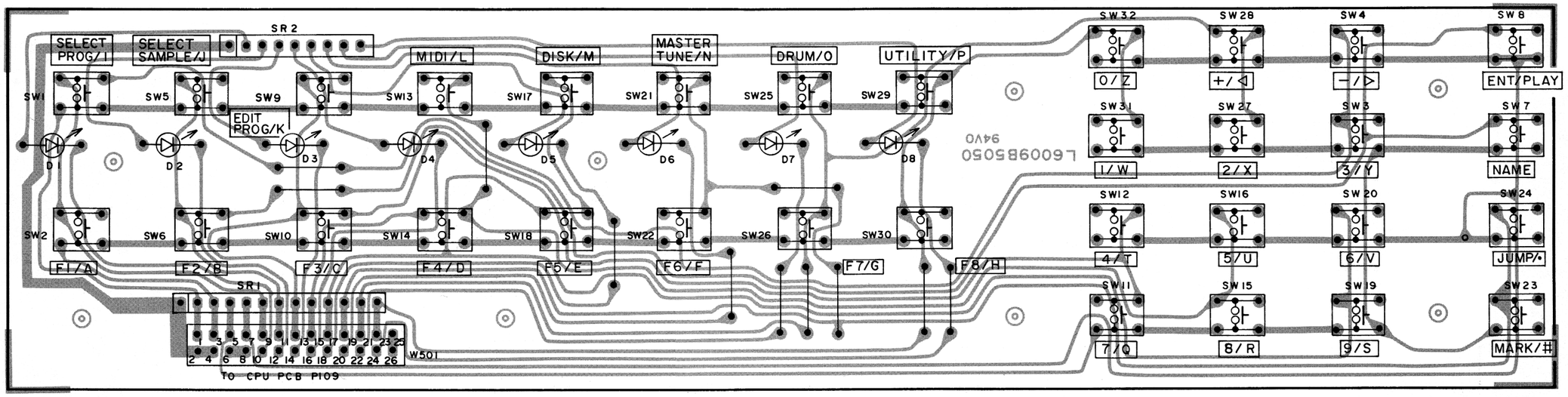


SMPTE PCB L6021C5060

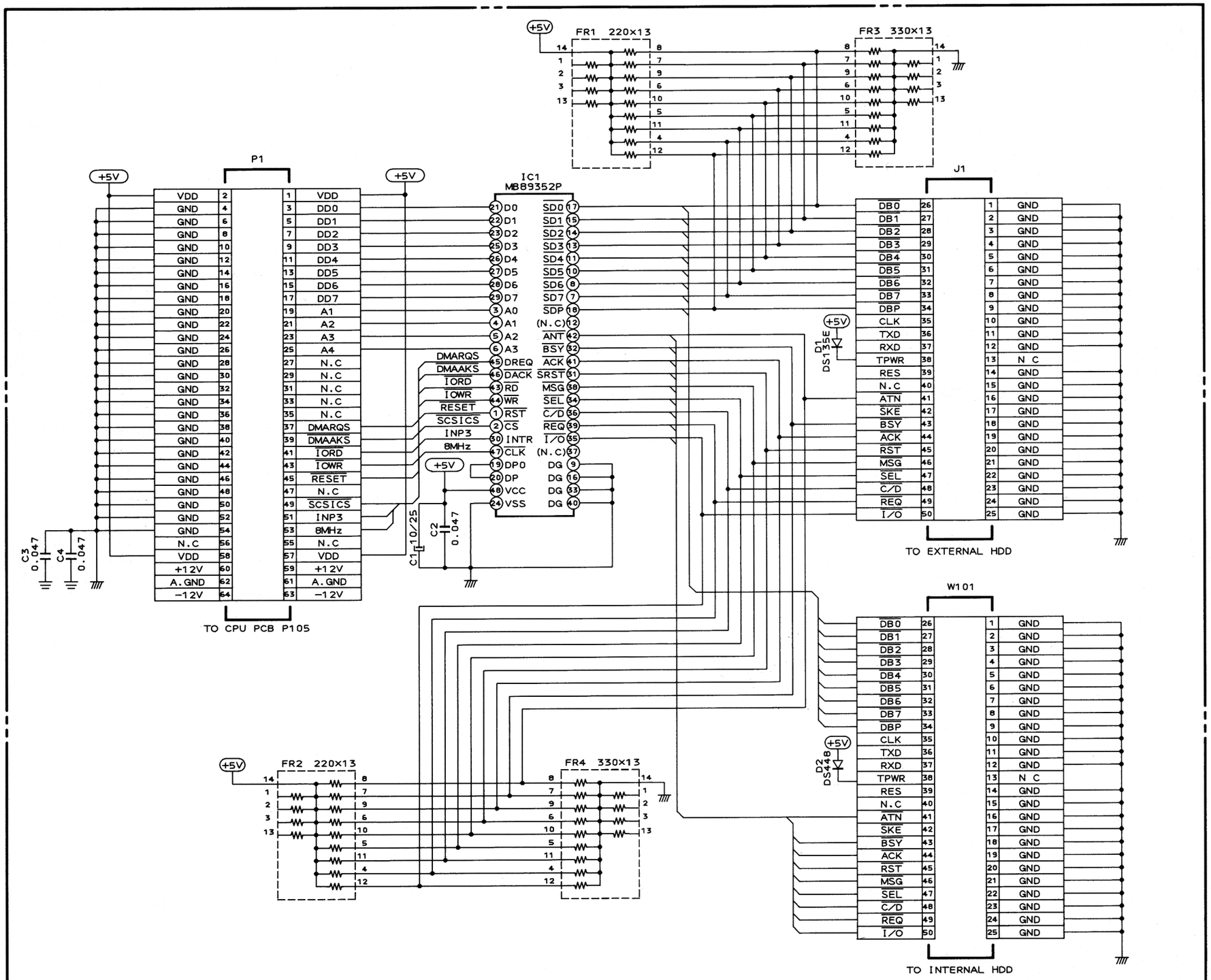


PANEL PCB L6009B5050

S1100
PANEL
SCHEMATIC DIAGRAM
NO.12-9 L6021010



PANEL PCB L6009B5050

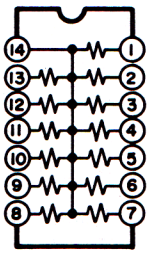


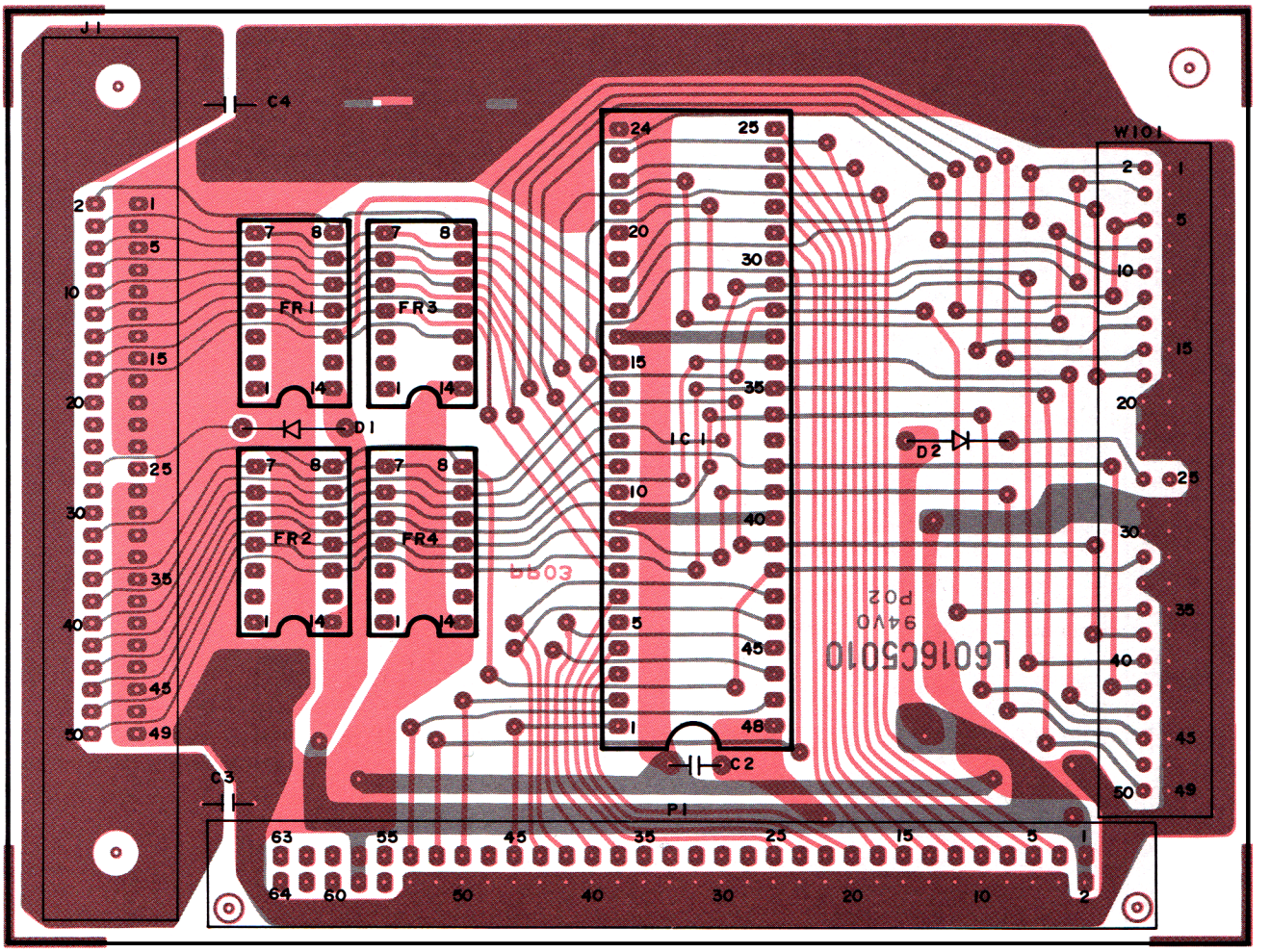
SCSI PCB L6016C5010

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/ W(J)
ALL CAPACITORS IN μF 25WV(M)

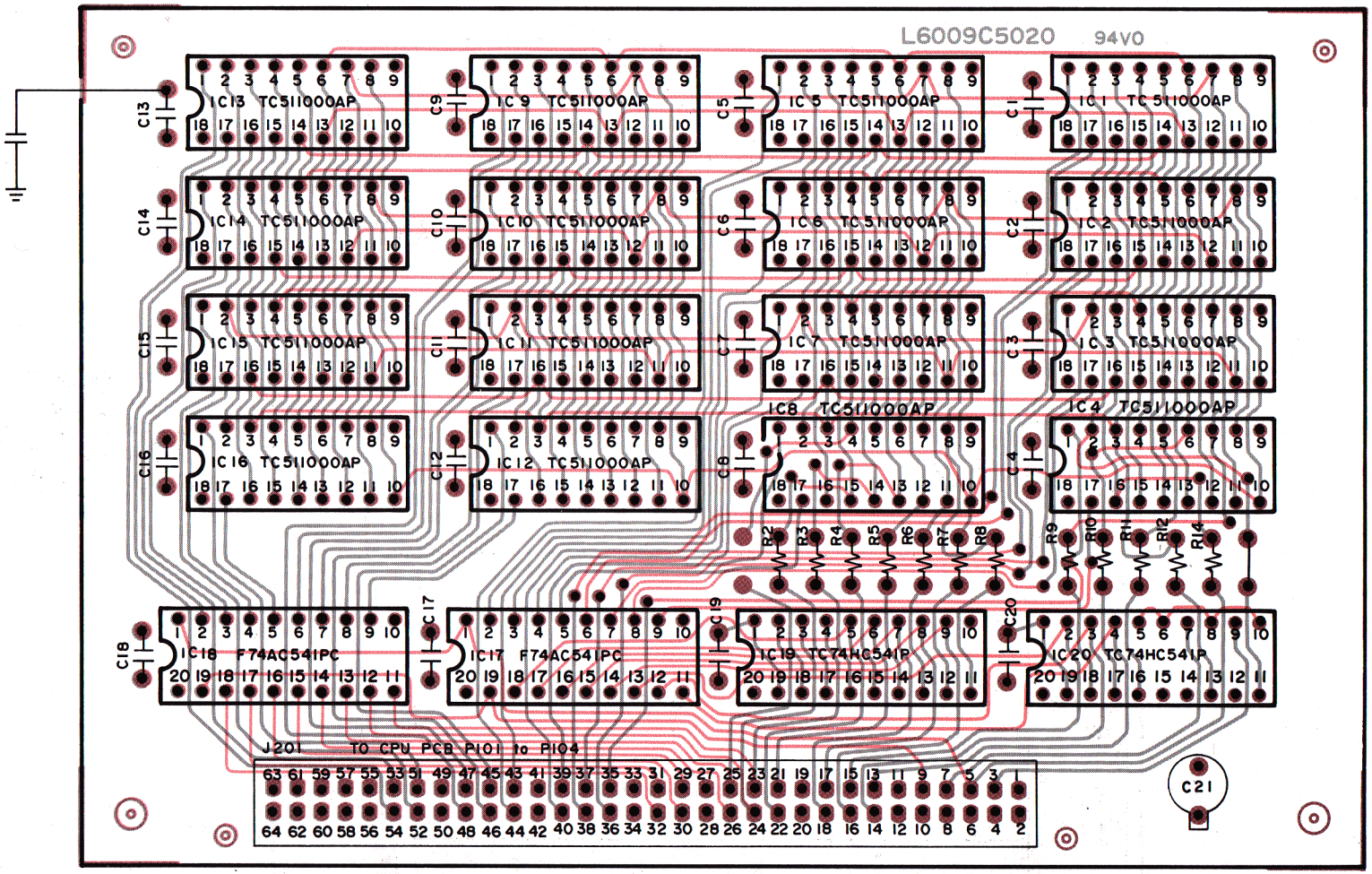
S1100
SCSI
SCHEMATIC DIAGRAM
NO.12-10 L6021009

FR1, 2 (220 Ohm x13)
FR2, 4 (330 Ohm x13)





SCSI PCB L6016C5010J2



MEMORY PCB L6009C5020 EXM005 (OPTIONAL MEMORY BOARD)