SHEET	CIRCUIT FUNCTIONS
1	POWER, RESET, CLOCKS, PANEL CONN
2	5307 COLDFIRE uP
3	DEBUG CONNECTORS + HOST INTERFACE
4	uP MEMORY + BUFFERS + PAL
5	MIDI INTERFACE, LCD, POWER CTL
6	SOUND MEMORY
7	G2.0 CHIPS 0 AND 1
8	H1.5 CHIPS 0 AND 1
9	H1.5 CHIPS 2 AND 3
10	XILINX FPGA, G0.5 EFFECTS ENGINE
11	MAIN AUDIO OUTS + HEADPHONES
12	SUB AUDIO OUTPUTS 1 + FOOTSWITCH
13	SUB AUDIO OUTPUTS 2

INSTALL RELEASE

REV	DATE	DESCRIPTION	AUTHOR
A	6/1/01	INITIAL RELEASE	TD
B	6/25/01	C1 AND C2 INCREASED TO 220PF	TD
C	7/27/01	L20 AND L22 CHANGED FROM ZI329 TO ZI325	TD

POWER UP RESET

CPU AND AUDIO CLOCKS

FRONT PANEL INTERFACE

MOUNTING HOLES

H3 Do Not Stuff · H2 Do Not Stuff · H1 Do Not Stuff · H6 Do Not Stuff · H5 Do Not Stuff · H4 Do Not Stuff

ANALOG TO DIGITAL GROUND SHIFT

PIC DEBUG CONNECTOR

ap11022-01

E-mu Systems, Inc.
applied magic for the arts

1600 Green Hills Road
P.O. Box 660015
Scotts Valley, CA 95067

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XL-7 COMMAND STATION

Size	DWG NO	Rev
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COLDFIRE 5307
66MHZ
FQFP208
IC11570

D[7:0]

D[31:16]

U30

VCC3.3

R117 1.00K 1%

D7 = CS0 AUTO-ACK ON

D[6:5] = 01/11 CS0 BOOTS AT 8/16-BITS

D[4] = PWR UP STATE OF PP[15:3]

D[3:2] = CLKIN 28-39 MHZ

D[1:0] = 1/2 BCLK/PSTCLK

RN5-4 4.7K D7
RN5-3 4.7K D6
RN5-2 4.7K D5
RN5-1 4.7K D4
RN6-4 4.7K D3
RN6-3 4.7K D2
RN6-2 4.7K D1
RN6-1 4.7K D0

BOOT16 3

JUMPER:
SHORT = BOOT FROM 8-BIT EPROM
OPEN = BOOT FROM 16-BIT FLASH

W1
JR335

R131 10 5%

C91 2.2UF 20% 16v

C95 .01UF

RN2-1 4.7K
RN2-2 4.7K

TAN 3

USBSOFN 3
USBINTN 3

UPCLK 1
RSTIN_5307N 1

RN3-3 4.7K

CTS2N 5
RXD2 5
RXD1 5

USBDRQN 10

RN3-2 4.7K

STUFF OPTION FOR SDRAM TIMING

R133 Do Not Stuff 5%

RN4-3 4.7K

RN3-1 4.7K

RN3-4 4.7K

DSCLK 3
BKPTN 3
DSI 3

BDM MODE

RN1-3 4.7K
RN1-4 4.7K

TP14

SMFLASHPGMN 6
UPFLASHPGM 4
FPGA_DIN 10
10 FPGA_DONE
SMAUXSEL 6
FPGA_PGMN 10
FPGA_CCLK 10
A[23:0] 3,4,5,10

C107 .01UF
C114 .01UF
C122 .01UF
C115 .01UF
C103 .01UF
C94 .01UF

PLLVCC

BUS SIGNALS
TAN 64
INTERRUPTS
IRQ7N 68
IRQ5N 70
IRQ3N 71
IRQ1N 72
CLOCKS/RESET
CLKIN 174
RSTIN 67
BUS ARBITER
BGN 76
TIMER
TIN1 82
TIN0 80
DUART
CTS2N 158
RD2 160
CTS1N 163
RD1 165
DMA
DREQ0N/PP6 199
DREQ1N/PP5 200
DRAM CONTROL
EDGESEL 168
NC 179
JTAG/BDM
DSCLK/TRST 149
BKPTN/TMS 154
TCK 150
DSI/TDI 153
HIZN 155
MTMOD0 176
MTMOD1 177
MTMOD2 181
MTMOD3 182

A31/PP15 A30/PP14 A29/PP13 A28/PP12 A27/PP11 A26/PP10 A25/PP9 A24/PP8 A23 A22 A21 A20 A19 A18 A17 A16 A15 A14 A13 A12 A11 A10 A9 A8 A7 A6 A5 A4 A3 A2 A1 A0

FPGA_DONE
FPGA_CCLK
FPGA_PGMN

GND

BUS SIGNALS
R/WN 63
OEN 49
SIZ1 47
SIZ0 46
TSN 66
ASN 62
TIPN/PP7 198
TT1/PP1 206
TT0/PP0 207
TM2/PP4 202
TM1/PP3 203
TM0/PP2 204
CLOCKS/RESET
RSTON 172
BCLKO 170
R132 100 5%
BUS ARBITER
BRN 74
BDN 75
TIMER
TOUT1 78
TOUT0 79
DUART
RTS1N 164
TD1 166
RTS2N 159
TD2 161
DRAM CONTROL
DRAMWN 91
SRASN 92
SCASN 94
SCKE 95
RAS1N 84
RAS0N 83
CAS3N 90
CAS2N 88
(lsb) CAS1N 87
(msb) CAS0N 86
MBUS
SCL 102
SDA 103
BE3N 100
BE2N 99
BE1N 98
BE0N 96
CHIP SELECTS/ BYTE ENABLES
CS7N 60
CS6N 59
CS5N 58
CS4N 56
CS3N 55
CS2N 54
CS1N 51
CS0N 50
JTAG/BDM
DSO/TDO 151
PSTCLK 184
PST0 192
PST1 193
PST2 195
PST3 196
DDATA0 186
DDATA1 187
DDATA2 189
DDATA3 190

R149 33 RAS0N 4
R151 33 CAS1N 4
R150 33 CAS0N 4
R148 33 UPCS5N 3
R147 33 UPCS4N 3
R146 33 UPCS1N 3
R145 33 UPCS0N 3
R130 33 DSO 3
BDMCLK 3

RN2-4 4.7K
RN1-2 4.7K
RN2-3 4.7K
RN1-1 4.7K
RN4-4 4.7K
RN4-2 4.7K
RN4-1 4.7K

UPWRN 3,5,7,8,9,10
OEN 3,4
TP16
TP15
TSN
ASN
SMUTE 11,12,13
TT1 3
TT0 3
TM2 3
TM1 3
RESETN 3,4,6
BCLKO 3,4,10

TXD1 5
RTS2N 5
TXD2 5

DRAMWRN 4
SRASN 4
SCASN 4
SCKE 4
RAS0N 4
CAS1N 4
CAS0N 4

I2C_CLK 1
I2C_DATA 1

TP17

PST[3:0] 3
DDATA[3:0] 3

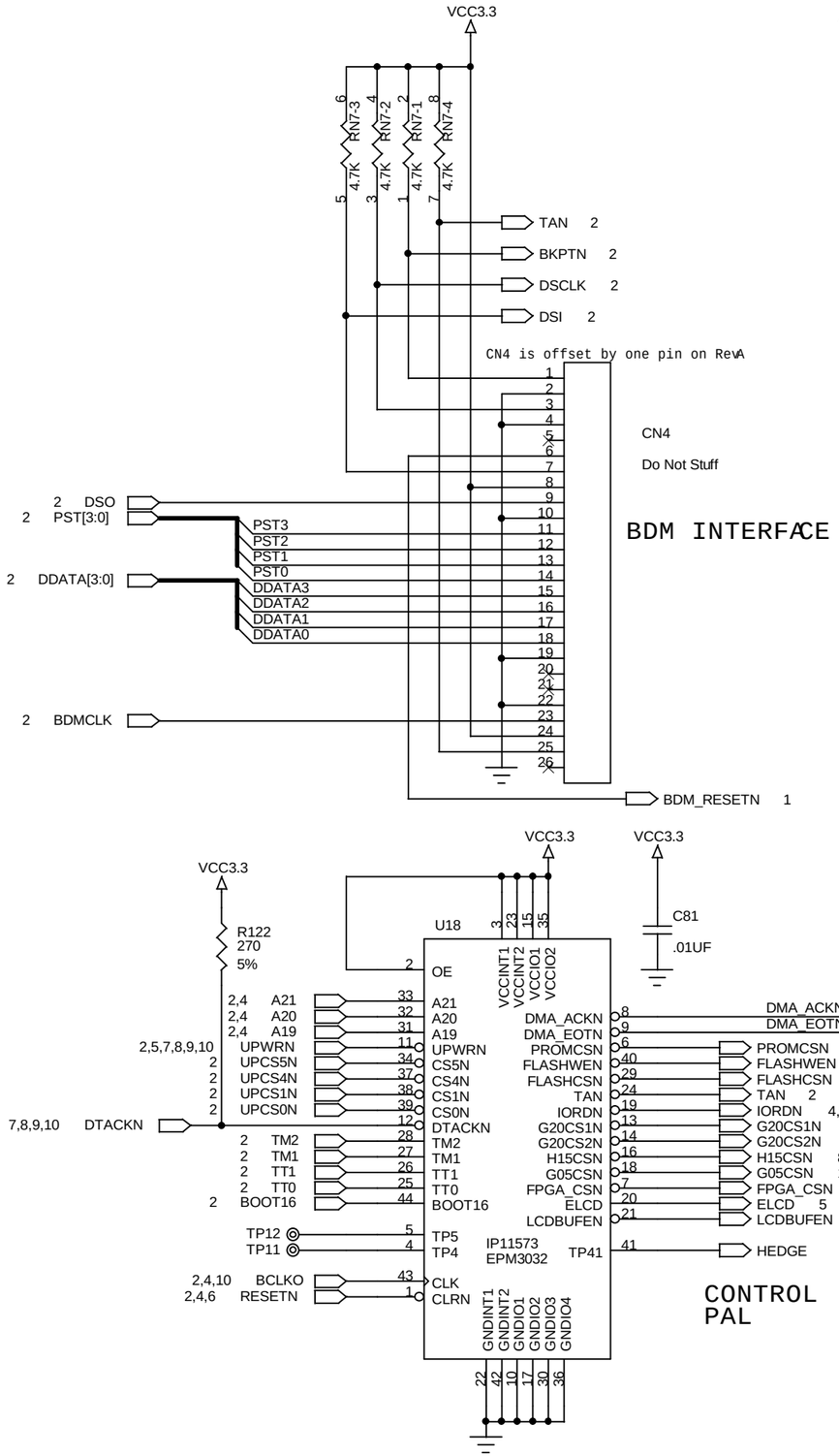
MIDI/SERIAL
SDRAM
FRONT PANEL
CHIP SELECTS

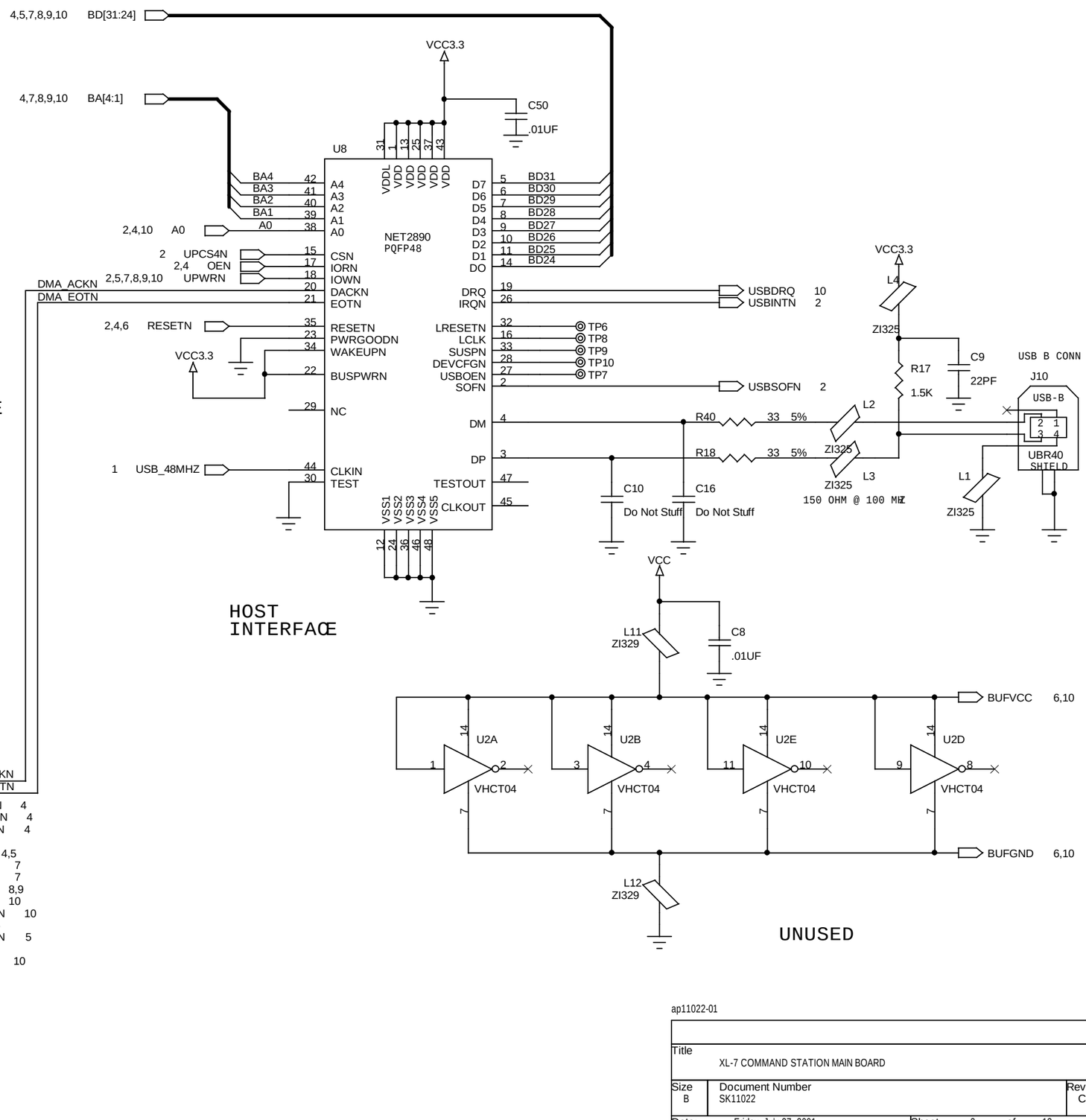
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2,3,5,10 A[23:0]

2 D[31:16]

BD[31:16]

BD[31:16] 3,5,7,8,9,10

5V TOLERANT DATA BUS

BA[14:1] 3,7,8,9,10

2,3,10 A[14:0]

3,5 IORDN

2 CAS0N
2 CAS1N
2 DRAMWRN
2 SCASN
2 SRASN
2 RAS0N
2 SCKE
2,3,10 BCLKO

TP13

2 UPFLASHPGM
3 FLASHCSN
2,3 OEN
3 FLASHWEN
2,3,6 RESETN

3 PROMCSN
2,3 OEN

U33, U29, U27, U26 — 74LVC245 (VCC3.3; OE, DIR, GND)

U16 — 128 Mb SDRAM 8x1Mx16 bit (IM11571)

U20, U19 — 4MBx16 FLASH (Vpen, Vcc, Vccq, STS, NC/A24, NC/A23, CE2N, CE1N, CE0N, OEN, WEN, RPN, BYTEN)

Do Not Stuff
EASY BGA-64

U15 — Do Not Stuff AT27C080 (VCC, CEN, OEN, GND)

BOOT ROM SOCKET

R124 4.7K 5%

C67 C75 C68 .01UF

C82 C86 .01UF

C118 C113 C106 C97 .01UF

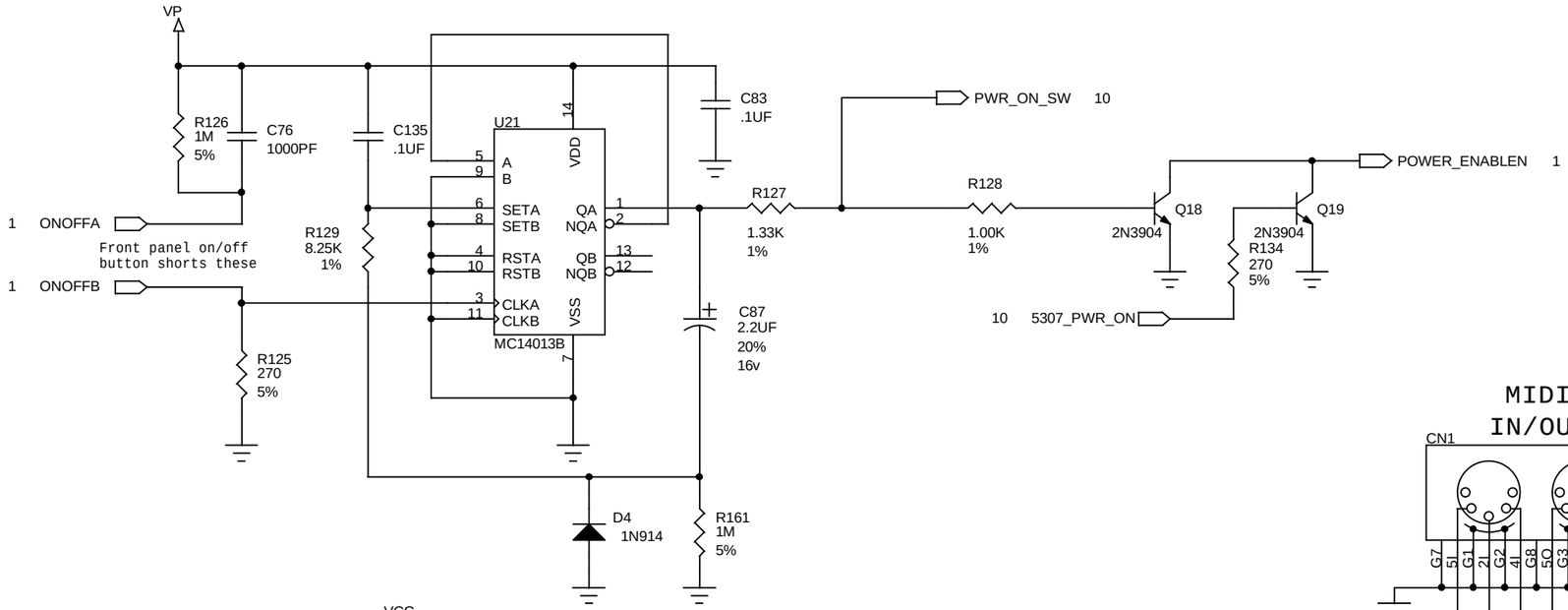
E28F640J3A-120

FLASH MEMORY (DUAL FOOTPRINT):
USER PRESETS, RIFFS, BEATS
NON VOLATILE VARIABLES
OPERATING SYSTEM

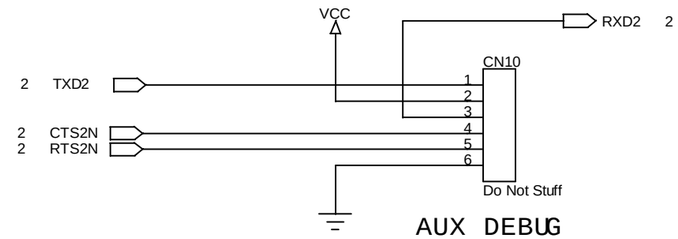
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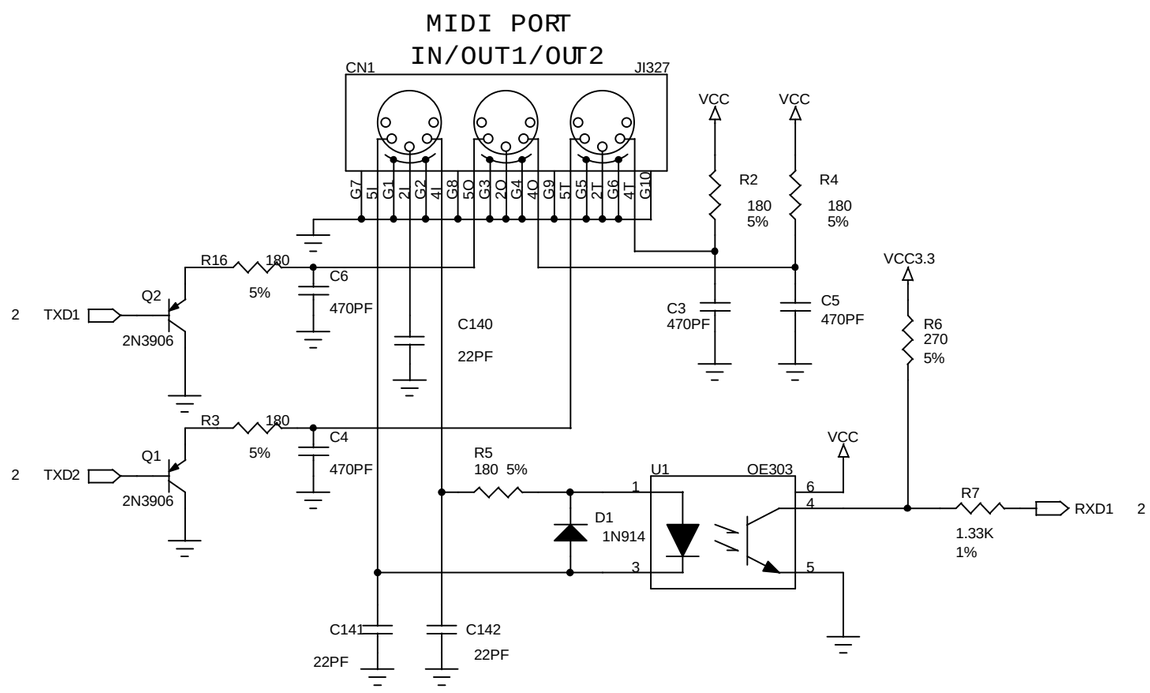
POWER ON/OFF CONTROL



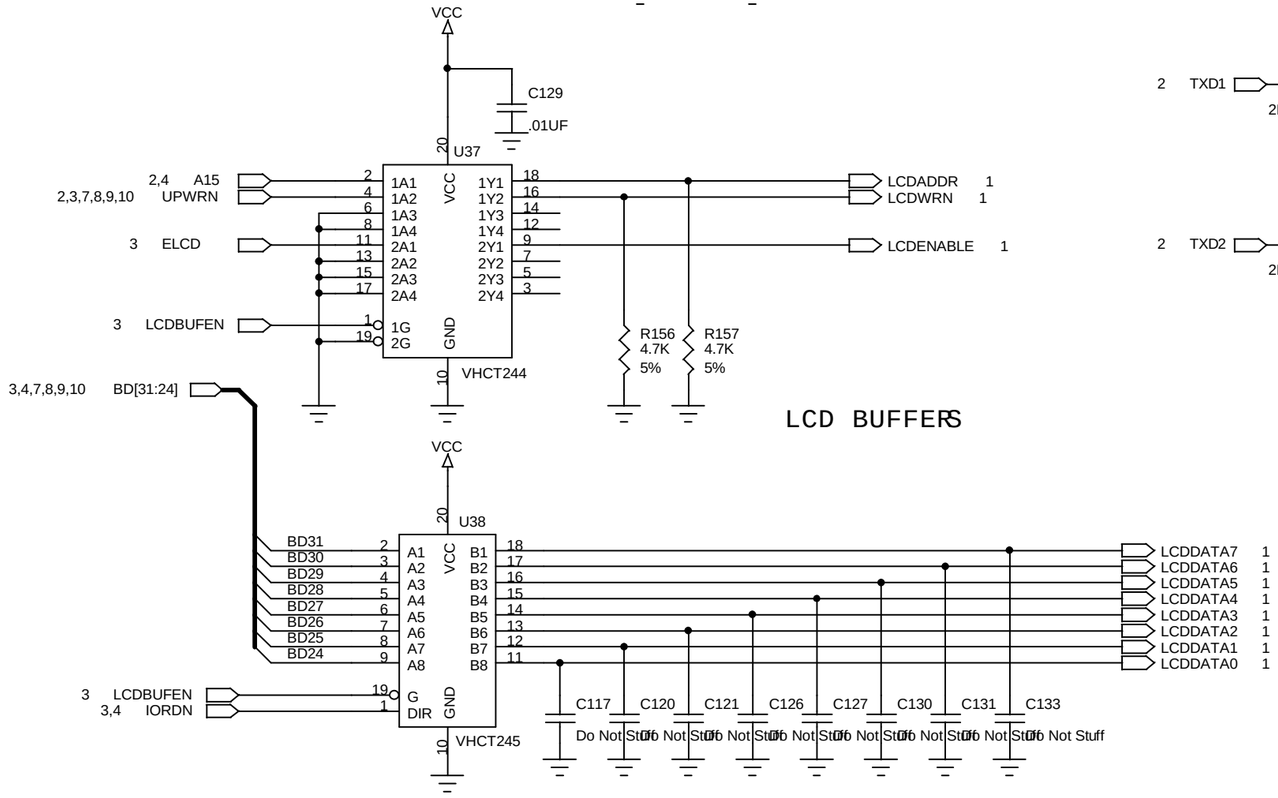
AUX DEBUG



MIDI PORT IN/OUT1/OUT2



LCD BUFFERS



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7 BSMA[21:0]

7,10 SMA[25:0]

7 SMD[15:0]

7 SMOEN
7 SMWEN

RN13: SMA21 → BSMA21, SMA20 → BSMA20, SMOEN → BSMOEN, SMWEN → BSMWEN

RN8: SMA19 → BSMA19, SMA18 → BSMA18, SMA17 → BSMA17, SMA16 → BSMA16

RN9: SMA15 → BSMA15, SMA14 → BSMA14, SMA13 → BSMA13, SMA12 → BSMA12

RN10: SMA11 → BSMA11, SMA10 → BSMA10, SMA9 → BSMA9, SMA8 → BSMA8

RN11: SMA7 → BSMA7, SMA6 → BSMA6, SMA5 → BSMA5, SMA4 → BSMA4

RN12: SMA3 → BSMA3, SMA2 → BSMA2, SMA1 → BSMA1, SMA0 → BSMA0

CN8 — SLOT 0
CN7 — SLOT 1
CN6 — SLOT 2
CN5 — SLOT 3

JC361-FLASH

SMA23 SMA22 BSMA21 BSMA20 BSMA19 BSMA18 BSMA17 BSMA16 BSMA15 BSMA14 BSMA13 BSMA12 BSMA11 BSMA10 BSMA9 BSMA8 BSMA7 BSMA6 BSMA5 BSMA4 BSMA3 BSMA2 BSMA1 BSMA0

SMA24 SMA25

CS2 CS1N CS0N OEN WEN WPN AUXSEL PGM

D31 D15 D30 D14 D29 D13 D28 D12 D27 D11 D26 D10 D25 D9 D24 D8 D23 D7 D22 D6 D21 D5 D20 D4 D19 D3 D18 D2 D17 D1 D16 D0

SMD15 SMD14 SMD13 SMD12 SMD11 SMD10 SMD9 SMD8 SMD7 SMD6 SMD5 SMD4 SMD3 SMD2 SMD1 SMD0

VCC GND

3,10 BUFVCC
3,10 BUFGND

U2C — VHCT04

SMA25 → R51 Do Not Stuff 5% → R50 4.7K 5%

R41 Do Not Stuff 5%

10 SMA25N

7 BSMOEN
7 BSMWEN
2,3,4 RESETN
2 SMAUXSEL

2 SMFLASHPGMN → R142 270 5% → Q20 2N3906

R140 4.7K 5%

C110 .1UF

SOUND MEMORY

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G2.0 SOUND ENGINE CHIPS

C77 .01UF, C66 .01UF, C70 .01UF, C84 .01UF — VCC

C98 .01UF, C104 .01UF, C92 .01UF — VCC

U17 — G2.0 IC402 MASTER (#1)

- SMD[15:0] ← 3,4,5,8,9,10 BD[31:16]
- BD[31:0] → D[15:0]
- SMA[25:0] → SMA25..SMA0
- BA[11:1] ← 3,4,8,9,10 BA[11:1]
- BA[11:0] → A[11:0]
- SMOEN → 23
- SMWEN → 22
- RAS3N → 17
- RAS2N → 18
- RAS1N → 19
- SRCD1 → 78 → G1SRCD1 8
- SRCD0 → 77 → G1SRCD0 8
- XDATA1 → 79
- XDATA0 → 80
- SYNCN → 81
- DTACKN → 82 → DTACKN
- SMBSYN → 56
- G20CS1N ← 3 G20CS1N
- RD → 83
- RSTN → 16
- SMREQN → 55
- CLK ← 20
- VCC: 13, 25, 38, 50, 63, 75, 94
- GND: 9, 21, 34, 46, 59, 71, 90

RN14-1 4.7K: 1, 2 — RN14-3 4.7K: 5, 6 — RN14-2 4.7K: 3, 4 — VCC

U25 — G2.0 IC402 SLAVE (#2)

- SMD[15:0] ← 3,4,5,8,9,10 BD[31:16]
- BD[31:0] → D[15:0]
- SMA[25:0] → SMA25..SMA0
- BA[11:1] ← 3,4,8,9,10 BA[11:1]
- BA[11:0] → A[11:0]
- SMOEN → 23 → SMOEN 6
- SMWEN → 22 → SMWEN 6
- RAS3N → 17
- RAS2N → 18
- RAS1N → 19
- SRCD1 → 78 → G2SRCD1 9
- SRCD0 → 77 → G2SRCD0 9
- XDATA1 → 79
- XDATA0 → 80
- SYNCN → 81 → G2SYNCN 8,9
- DTACKN → 82 → DTACKN 3,8,9,10
- SMBSYN → 56
- G20CS2N ← 3 G20CS2N
- RD → 83
- RSTN → 16
- SMREQN → 55
- CLK ← 20
- VCC: 13, 25, 38, 50, 63, 75, 94
- GND: 9, 21, 34, 46, 59, 71, 90

RN14-4 4.7K: 8, 7 — VCC

U28

- C108 .1UF — VCC
- SMOEN, SMWEN
- SMA21, SMA20, SMA19, SMA18, SMA17, SMA16
- BSMA21, BSMA20, BSMA19, BSMA18, BSMA17, BSMA16
- G ← 19
- DIR ← 1
- GND: 10
- Do Not Stuff

RN22-1 Do Not Stuff
RN22-2 Do Not Stuff
RN22-3 Do Not Stuff
RN22-4 Do Not Stuff
RN21-1 Do Not Stuff
RN21-2 Do Not Stuff
RN21-3 Do Not Stuff
RN21-4 Do Not Stuff

U22

- C89 .1UF — VCC
- SMA15, SMA14, SMA13, SMA12, SMA11, SMA10, SMA9, SMA8
- BSMA15, BSMA14, BSMA13, BSMA12, BSMA11, BSMA10, BSMA9, BSMA8
- G ← 19
- DIR ← 1
- GND: 10
- Do Not Stuff

RN20-1 Do Not Stuff
RN20-2 Do Not Stuff
RN20-3 Do Not Stuff
RN20-4 Do Not Stuff
RN19-1 Do Not Stuff
RN19-2 Do Not Stuff
RN19-3 Do Not Stuff
RN19-4 Do Not Stuff

U13

- C69 .1UF — VCC
- SMA7, SMA6, SMA5, SMA4, SMA3, SMA2, SMA1, SMA0
- BSMA7, BSMA6, BSMA5, BSMA4, BSMA3, BSMA2, BSMA1, BSMA0
- G ← 19
- DIR ← 1
- GND: 10
- Do Not Stuff

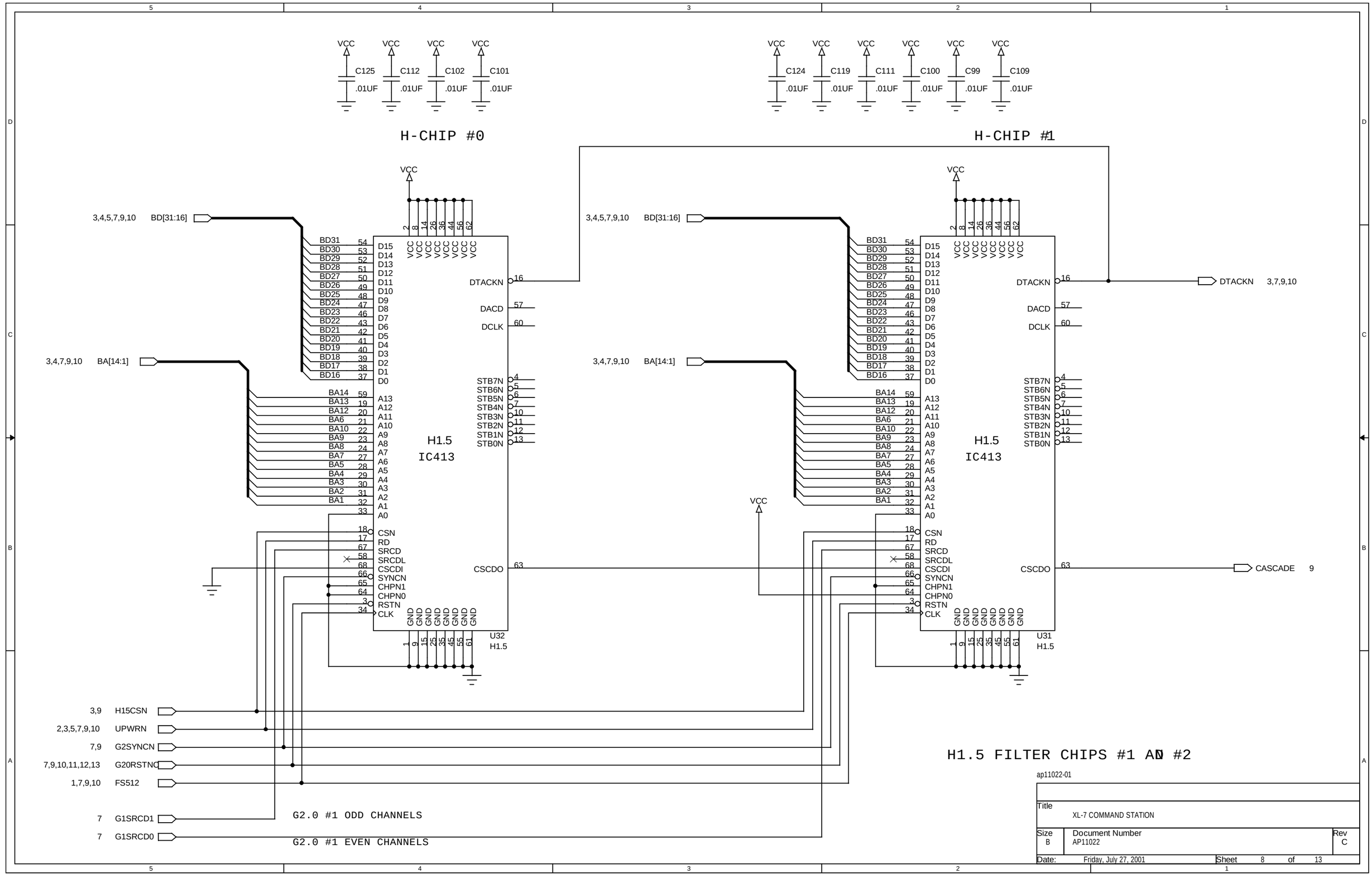
RN18-1 Do Not Stuff
RN18-2 Do Not Stuff
RN18-3 Do Not Stuff
RN18-4 Do Not Stuff
RN17-1 Do Not Stuff
RN17-2 Do Not Stuff
RN17-3 Do Not Stuff
RN17-4 Do Not Stuff

- BSMA[21:0] 6
- BSMOEN 6
- BSMWEN 6

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- 2,3,5,8,9,10 UPWRN
- 8,9,10,11,12,13 G20RSTN
- 1,8,9,10 FS512

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C125 .01UF
C112 .01UF
C102 .01UF
C101 .01UF
C124 .01UF
C119 .01UF
C111 .01UF
C100 .01UF
C99 .01UF
C109 .01UF
H-CHIP #0
H-CHIP #1
3,4,5,7,9,10 BD[31:16]
3,4,7,9,10 BA[14:1]
H1.5 IC413
DTACKN
DACD
DCLK
STB7N
STB6N
STB5N
STB4N
STB3N
STB2N
STB1N
STB0N
CSN
RD
SRCD
SRCDL
CSCDI
SYNCN
CHPN1
CHPN0
RSTN
CLK
CSCDO
U32 H1.5
U31 H1.5
DTACKN 3,7,9,10
CASCADE 9
3,9 H15CSN
2,3,5,7,9,10 UPWRN
7,9 G2SYNCN
7,9,10,11,12,13 G20RSTNC
1,7,9,10 FS512
7 G1SRCD1
7 G1SRCD0
G2.0 #1 ODD CHANNELS
G2.0 #1 EVEN CHANNELS
H1.5 FILTER CHIPS #1 AND #2
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C93 .01UF
C85 .01UF
C80 .01UF
C79 .01UF
C88 .01UF
C96 .01UF

C74 .01UF
C78 .01UF

H-CHIP #2

H-CHIP #3

3,4,5,7,8,10 BD[31:16]

3,4,7,8,10 BA[14:1]

8 CASCADE

R123 4.7K 5%

H1.5 IC413

U24 H1.5

U23 H1.5

DTACKN 16 → DTACKN 3,7,8,10

DACD 57 → H15DACDATA 10

DCLK 60 → H15DACCLK 10

STB7N 4 → H15DACSTB7 10

STB6N 5 (X)
STB5N 6 (X)
STB4N 7 (X)
STB3N 10 (X)
STB2N 11 (X)
STB1N 12 (X)
STB0N 13 (X)

CSCDO 63 → 63 (X)

3,8 H15CSN

2,3,5,7,8,10 UPWRN

7,8 G2SYNCN

7,8,10,11,12,13 G20RSTN

1,7,8,10 FS512

7 G2SRCD1

7 G2SRCD0

G2.0 #2 ODD CHANNELS

G2.0 #2 EVEN CHANNELS

H1.5 FILTER CHIPS #2 AND #3

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MISC FPGA

G0.5 EFFECTS CHIP

S/PDIF OUT

EFFECTS TANK MEMORY

EMU8000
G0.5 CHIP
IC405

U34

XILINX
XCS05XL

U7

U35 IM418

U2F VHCT04

ZI329 L13

ZI10218 T1 ZT320

ZI325 L20

ZI325 L22

J3 JI344

C26 .01UF
C65 .01UF
C54 .01UF
C11 .01UF
C116 .01UF
C132 .01UF
C1 220PF
C2 220PF
C7 .01UF

R67 75K
R53 75K
R52 75K
R42 75K
R87 Do Not Stuff 5%
R103 Do Not Stuff 5%
R116 4.7K 5%
R135 33 5%
R1 100 5%
R8 180 5%
R9 180 5%
R10 4.7K 5%
R139 4.7K 5%
R111 15K 5%
R15 1.00K 1%
R21 10 5%
R110 180 5%
R14 36K 5%
R13 15K 5%
R12 8.25K 1%
R11 4.7K 5%
R136 33 5%
R138 33 5%
R137 33 5%

RN15-3 4.7K
RN15-2 4.7K
RN15-1 4.7K
RN15-4 4.7K

Q3 2N3904

VCC
VCC3.3
15VAN
GND

SLAVE SERIAL MODE

BD[31:16]
BD[31:24]
BA[6:1]

UPWRN
G05CSN
HEDGE
FPGA_PGMN
FPGA_CCLK
FPGA_DIN

FOOTSW1N
FSW_DET1N
FOOTSW2N
FSW_DET2N
JKDETSUB2R
JKDETSUB2L
JKDETSUB1R
JKDETSUB1L
PWR_ON_SW
H15DACDATA
H15DACSTB7
FPGA_CSN
USBDRQ
SMA25
BCLKO
H15DACCLK
FS512

SUB_BCLK
SUB_DATA1
SUB_DATA2
SUB_FS1
SUB_FS2
SUB1_DAC_DATA
SUB2_DAC_DATA
SUB1_FS
SUB2_FS

SAAD
SAABC
SAAWC
G20RSTN
G05RSN
SMA25N
FS256
USBDRQN
FPGA_DONE
5307_PWR_ON
PIC_PGM
FS1024
G20RSTNC
G05RSTN

TMD[3:0]
TMA[8:0]
TMARASN
TMACASN
TMAWRN
SPDIF1
SPDIF0
FSN
BCLK
DACD1
DACD0
CLKOUT
DTACKN

BUFVCC
BUFGND

MAIN_FS
MAIN_BCLK
MAIN_DAC_DATA
DTACKN

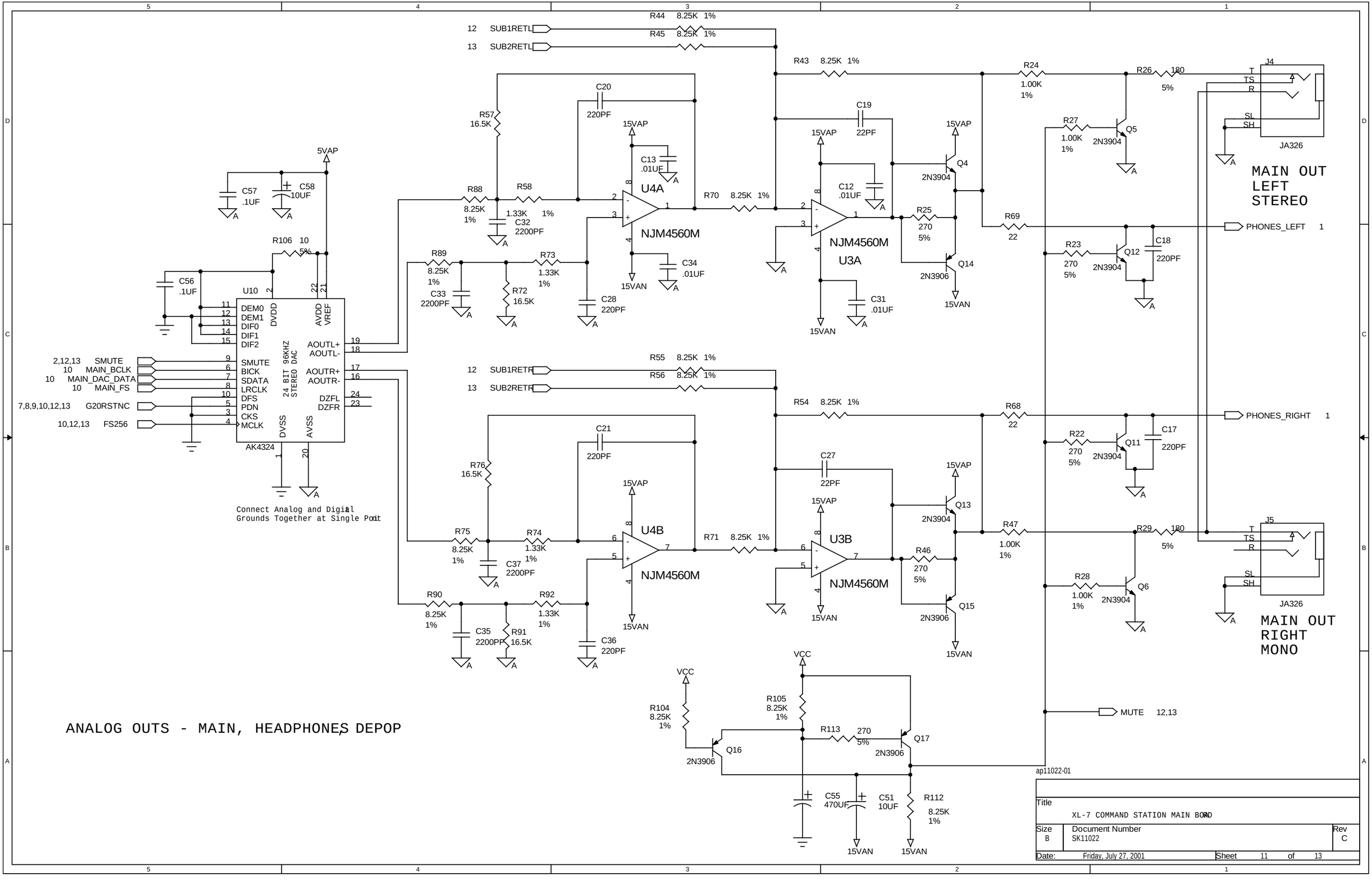
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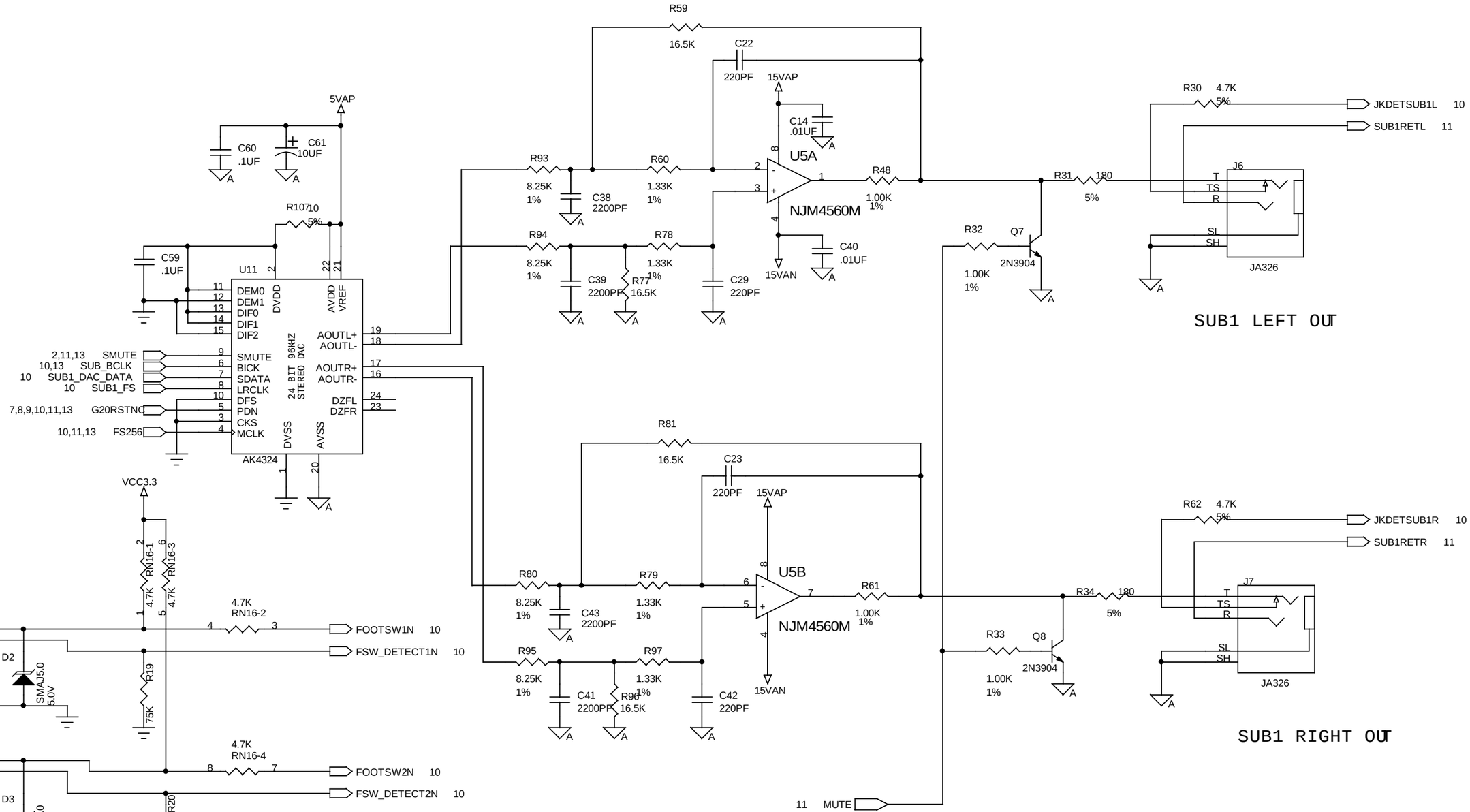
Title
XL-7 COMMAND STATION MAIN BOARD

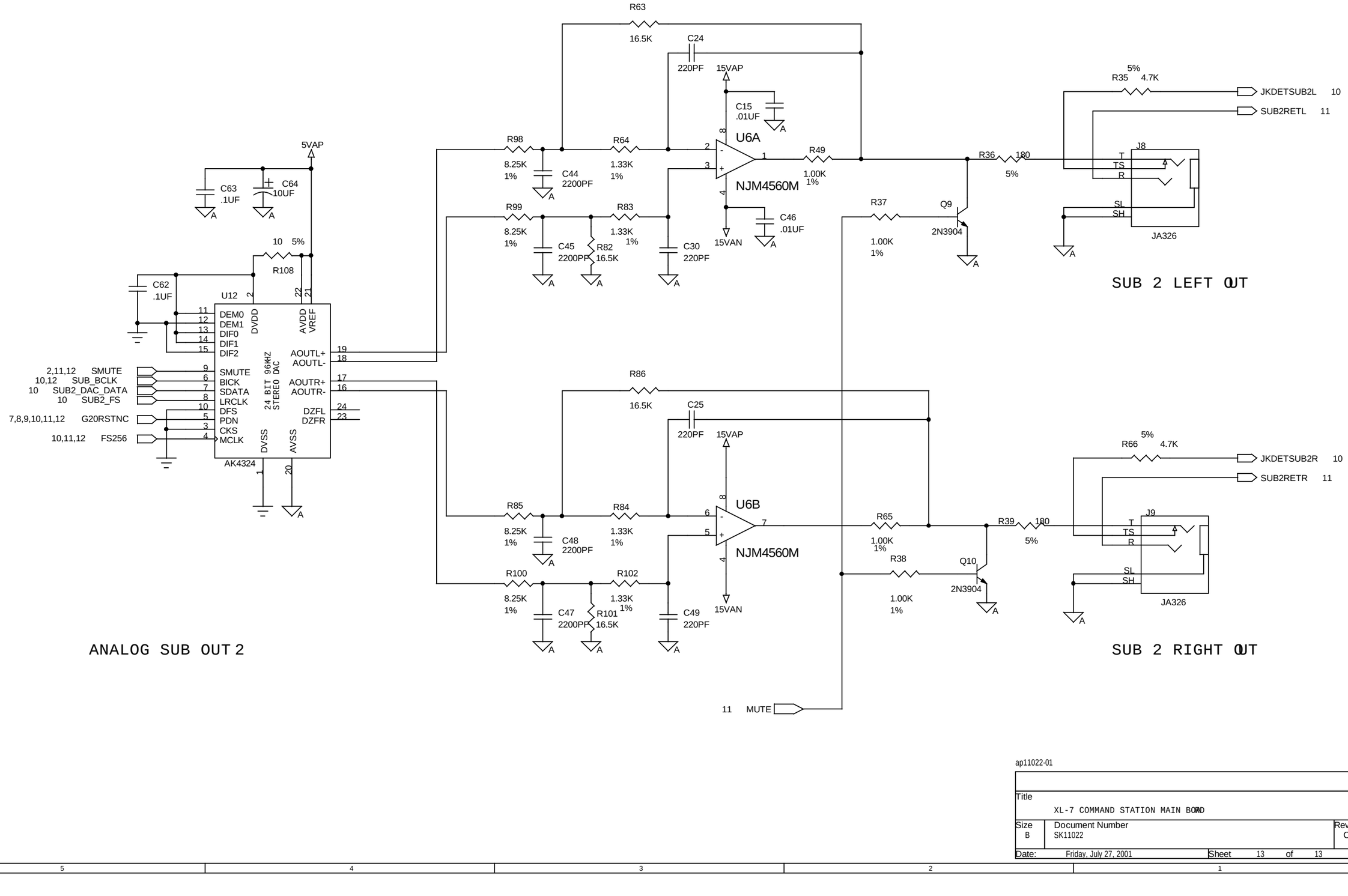
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ANALOG OUTS - MAIN, HEADPHONES, DEPOP



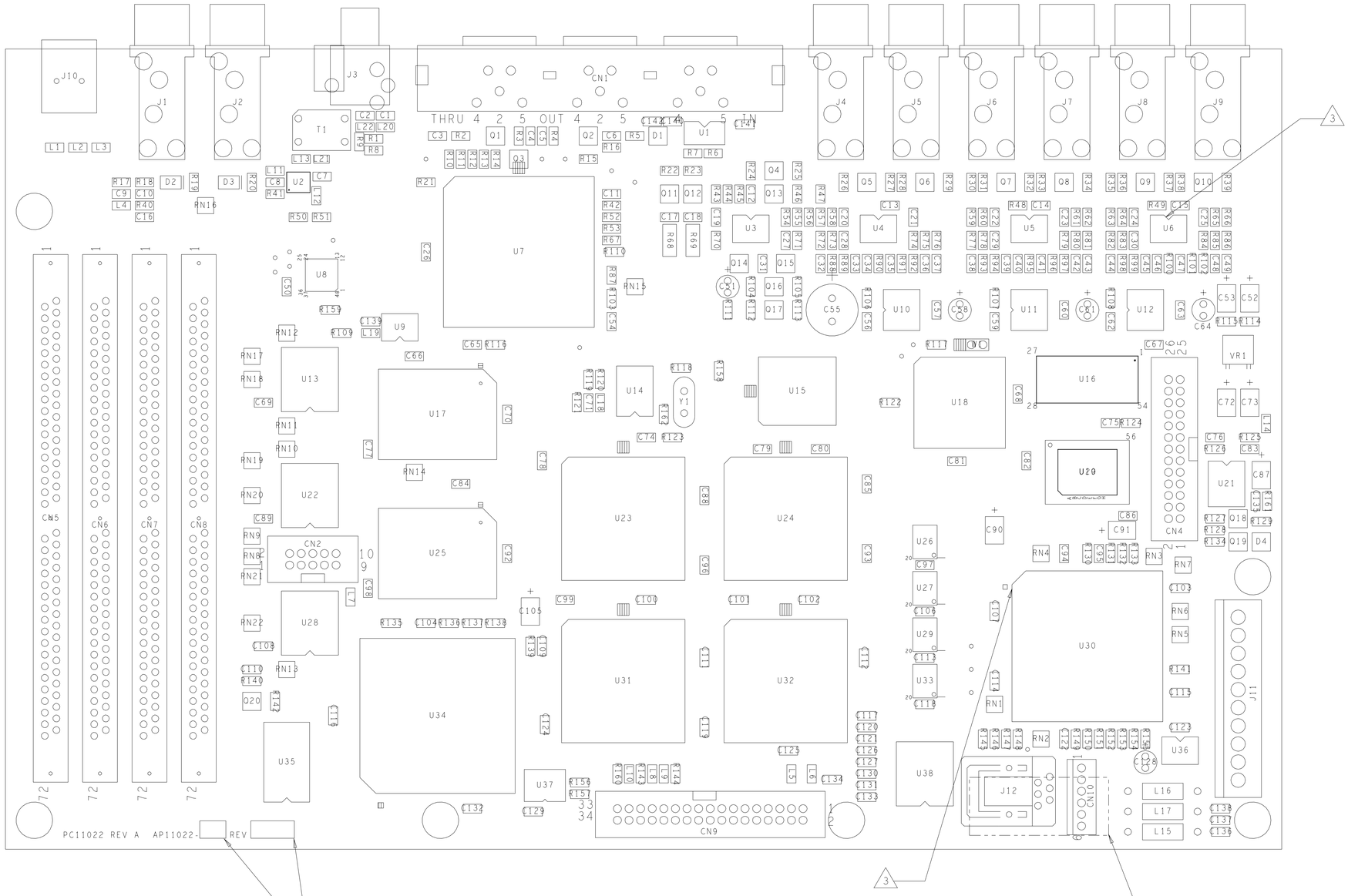

R59
16.5K
C22
220PF
15VAP
C14
.01UF
U5A
NJM4560M
R93
8.25K
1%
C38
2200PF
R60
1.33K
1%
R48
1.00K
1%
R94
8.25K
1%
C39
2200PF
R78
1.33K
1%
R77
16.5K
C29
220PF
C40
.01UF
15VAN
R30 4.7K
5%
JKDETSUB1L 10
SUB1RETL 11
R31 180
5%
J6
T
TS
R
SL
SH
JA326
R32
1.00K
1%
Q7
2N3904
SUB1 LEFT OUT
5VAP
C60
.1UF
C61
10UF
R107 10
5%
C59
.1UF
U11
DEM0
DEM1
DIF0
DIF1
DIF2
DVDD
AVDD
VREF
AOUTL+
AOUTL-
AOUTR+
AOUTR-
DZFL
DZFR
SMUTE
BICK
SDATA
LRCLK
DFS
PDN
CKS
MCLK
DVSS
AVSS
24 BIT 96KHZ STEREO DAC
AK4324
2,11,13 SMUTE
10,13 SUB_BCLK
10 SUB1_DAC_DATA
10 SUB1_FS
7,8,9,10,11,13 G20RSTNC
10,11,13 FS256
R81
16.5K
C23
220PF
15VAP
U5B
NJM4560M
R80
8.25K
1%
C43
2200PF
R79
1.33K
1%
R61
1.00K
1%
R95
8.25K
1%
C41
2200PF
R97
1.33K
1%
R96
16.5K
C42
220PF
15VAN
R62 4.7K
5%
JKDETSUB1R 10
SUB1RETR 11
R34 180
5%
J7
T
TS
R
SL
SH
JA326
R33
1.00K
1%
Q8
2N3904
SUB1 RIGHT OUT
VCC3.3
RN16-1
RN16-3
4.7K
RN16-2
RN16-4
FOOTSWITCH INPUT A
J1
D2
SMAJ5.0
5.0V
R19
75K
FOOTSW1N 10
FSW_DETECT1N 10
FOOTSWITCH INPUT B
J2
D3
R20
75K
FOOTSW2N 10
FSW_DETECT2N 10
11 MUTE
ANALOG SUB OUT 1 + FOOTSWITCH INPUTS
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REVISIONS					
KEY	REV	ECO	DESCRIPTION	APVD	DATE
	A	3775	Production Release	TD	6/01



NOTES: UNLESS OTHERWISE SPECIFIED:

1. WORKMANSHIP SHALL BE IN ACCORDANCE WITH IPC-A-610A CLASS 2 REQUIREMENTS.
2. NOTE POLARITY OF COMPONENTS WHEN INDICATED.
3. DENOTES PIN 1 END OF IC'S, SOCKETS AND CONNECTORS. SQUARE PAD INDICATES PIN 1.
4. MARK ASSY NO. AND CURRENT REV LEVEL WITH INDELIBLE INK HERE.
5. PLACE WORK ORDER AND PART NUMBER LABEL WITH SUPPLIER ID OR LOGO IN THIS AREA.
6. ALL SUPPLIER PROCESS/TEST/Q.C. STAMPS IN THIS AREA.
7. INSERT ASSEMBLED BOARD INTO CONDUCTIVE BAG.
8. SEE PL11022 BOM FOR REFERENCE DESIGNATORS OF STUFFED AND UNSTUFFED COMPONENTS.
9. REWORK MUST CONFORM TO IPC GUIDELINES IPC-R-700C.
10. USE SOLDER PASTE MASTER AW11022-01 REV A FOR SOLDER PASTE SCREEN.

CONFIDENTIAL

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DO NOT SCALE DRAWING

DIMENSIONS ARE IN INCHES
UNLESS OTHERWISE SPECIFIED

	MM	INCH
XX	+/-	+/- .01
.XXX	+/-	+/- .005

ANGLES ± FRACTIONS ±

MATERIAL:

FINISH:

APPROVALS	DATE
DRAWN C GAMMEL	02/01
CHECKED TD	6/01
APPROVED Pon P.	6/12/01

E-mu Systems, Inc.
Scotts Valley, CA

PCBA, XL-7
MAIN BOARD

SIZE	DWG. NO.	REV.
D	AP11022	A

SCALE: 1/1 SHEET 1 OF 1

Parts List for AP11022-01 XL-7/MP-7 Main Board Rev. D

Part No.	Qty	Value	Description	Part Reference
CA325	5	10UF	CAP AL UF 10 25V 20% RAD	C51 C58 C61 C64 C128
CA330	1	470UF	CAP AL UF 470 25V 20% RAD	C55
CC414	7	470PF	CAP 0805 PF 470 50V 5% NPO	C3 C4 C5 C6 C136 C137 C138
CC417	61	.01UF	CAP 0805 UF .01 50V 10% X7R	C7 C8 C11 C12 C13 C14 C15 C26 C31 C34 C40 C46 C50 C54 C65 C66 C67 C68 C70 C74 C75 C77 C78 C79 C80 C81 C82 C84 C85 C86 C88 C92 C93 C94 C95 C96 C97 C98 C99 C100 C101 C102 C103 C104 C106 C107 C109 C111 C112 C113 C114 C115 C116 C118 C119 C122 C123 C124 C125 C129 C132
CC419	13	.1UF	CAP 0805 UF .1 50V 10% X7R	C56 C57 C59 C60 C62 C63 C69 C83 C89 C108 C110 C134 C135
CC420	12	2200PF	CAP 0805 PF 2200 50V 10% X7R	C32 C33 C35 C37 C38 C39 C41 C43 C44 C45 C47 C48
CC421	6	22PF	CAP 0805 PF 22 50V 5% NPO	C9 C19 C27 C140 C141 C142
CC423	3	1000PF	CAP 0805 PF 1000 50V 10% X7R	C71 C76 C139
CC430	16	220PF	CAP 0805 PF 220 50V 5% NPO	C1 C2 C17 C18 C20 C21 C22 C23 C24 C25 C28 C29 C30 C36 C42 C49
CT323	8	2.2UF	CAP TT 3528 UF 2.2 >=16V 20% TR	C52 C53 C72 C73 C87 C90 C91 C105
DD11406	2	SMAJ5.0	DIODE TRANS SUPPRESSOR 5.0V DO214	D2 D3
DD316	2	1N914	DIODE SIGNAL 1N914 SOT23 TR	D1 D4
IC10186	3	AK4324	IC DAC X8 DS 128X AK4324 24VSOP	U10 U11 U12
IC10191	4	NJM4560M	IC LIN DUAL OP AMP 4560 SO8	U3 U4 U5 U6
IC10216	1	XCS05XL	IC CMOS FPGA XCS05XL-4 PLCC84	U7
IC11364	1	MC14013B	IC D FLIP FLOP DUAL MOS SO14	U21
IC11375	4	74LVC245	IC 74LVC245DB 3.3V OCTAL BUS XCVR 3ST SO20	U26 U27 U29 U33
IC11377	1	NET2890	IC USB INTERFACE CTRLR NET2890 PQFP48	U8
IC11379	1	VHCT04	IC CMOS VHCT04 HEX INVERTER TSSOP14	U2
IC11570	1	MCF5307FT66	IC CMOS UP MC5307 66MHZ PQFP208	U30
IC402	2	G2.0	IC CMOS G2.0 PQFP-100	U17 U25
IC405	1	EMU 8000	IC CMOS EMU8000-PQFP	U34
IC413	4	H1.5	IC CMOS H1.5 PLCC-68	U23 U24 U31 U32
IC447	1	IC447	IC CMOS CY2292-375 CLOCK GEN SO16	U14
II401	1	AV9170	IC INTFC PLL/SYNC AV9170 SO-8	U9
IL376	1	78M05	IC LIN REGULATOR 5V .5A 78M05 DPAK	VR1
IL387	1	TLC7705	IC LIN UP SUPERVISOR 4.25V TRIP SO8	U36

Part No.	Qty	Value	Description	Part Reference
IM10791	1	E28F640J3A-120	IC FLASH 4Mx16 3.3V E28F640J3A-120 TSOP56	U19
IM11571	1	IM11571	IC SDRAM 8MX16 >99MHZ CL=3 TSOP2-56	U16
IM418	1	IM418	IC CMOS DRAM 256KX4 <=80NS SOJ20	U35
IP11573	1	IP11573	IC PROG PLD CONTROL XL-7 EPM3032	U18
IT485	3		IC CMOS 74ACT245 OCT XCVR 3ST SOL20	U13 U22 U28
IT492	1	VHCT244	IC CMOS VHCT244 OCT BUF/DRV TSSOP20	U37
IT493	1	VHCT245	IC CMOS 74VHCT245 OCT XCVR 3ST SOL20	U38
JA326	8	JA326	CON AUD JACK 1/4 TIP CLSD W/CGRND	J1 J2 J4 J5 J6 J7 J8 J9
JC349	1	JC349	CON CMP SOCKET SMD PLCC-32	U15
JC357	1	JC357	CON CMP SOCKET SMD PLCC-44	U18
JC361	4	JC361	CON SKT SIMM 72 MET LATCH RT AU	CN5 CN6 CN7 CN8
JI327	1	JI327	CON DIN TRIFORM 5 POS RT ANGLE	CN1
JI344	1	JI344	CON I/O RCA PCMT RT ANGLE	J3
JP10499	1	JP10499	CON HDR .100X10 .025SQ LOCKING	J11
JP10533	1	UBR40	CON JACK USB SERIES B SMD	J10
JR335	1	JR335	CON HDR 1X2 .100 CNTR AU	W1
JR338	1	JR338	CON HDR 34 POS DUAL ROW .1 CTR AU	CN9
JR396	1	JR396	CON HDR SHROUDED 2X5 .1CTR AU	CN2
OE303	1	OE303	OPTO ISOLATOR SMD PC400	U1
QQ308	7	2N3906	TRANS PNP 2N3906 SOT23	Q1 Q2 Q14 Q15 Q16 Q17 Q20
QQ309	13	2N3904	TRANS NPN 3904 SOT-23 TR	Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q18 Q19
RN348	10	4.7K	RES NET ISO KOHM 4.7X4 1/16W 5%TR	RN1 RN2 RN3 RN4 RN5 RN6 RN7 RN14 RN15 RN16
RN351	6		RES NET ISO -OHM -47X4 1/16W 5% TR	RN17 RN18 RN19 RN20 RN21 RN22
RP389	14	1.33K	RES 0805 KOHM 1.33 1/10W 1% TR	R7 R58 R60 R64 R73 R74 R78 R79 R83 R84 R92 R97 R102 R127
RP402	15	1.00K	RES 0805 KOHM 1.00 1/10W 1% TR	R15 R24 R27 R28 R32 R33 R37 R38 R47 R48 R49 R61 R65 R117 R128
RP427	26	8.25K	RES 0805 KOHM 8.25 1/10W 1% TR	R12 R43 R44 R45 R54 R55 R56 R70 R71 R75 R80 R85 R88 R89 R90 R93 R94 R95 R98 R99 R100 R104 R105 R112 R129 R141
RP437	12	16.5K	RES 0805 KOHM 16.5 1/10W 1% TR	R57 R59 R63 R72 R76 R77 R81 R82 R86 R91 R96 R101
RR11386	1	36K	RES 0805 KOHM 36 1/10W 5% TR	R14
RR11387	6	75K	RES 0805 KOHM 75 1/10W 5% TR	R19 R20 R42 R52 R53 R67
RR11390	17	180	RES 0805 OHM -180. 1/10W 5% TR	R2 R3 R4 R5 R8 R9 R16 R26 R29 R31 R34 R36 R39 R109 R110 R118 R119
RR408	18	33	RES 0805 OHM 33 1/10W 5% TR	R18 R40 R130 R135 R136 R137 R138 R145 R146 R147 R148 R149 R150 R151 R152 R153 R154 R155

Part No.	Qty	Value	Description	Part Reference
RR411	12	270	RES 0805 OHM 270 1/10W 5% TR	R6 R22 R23 R25 R46 R113 R122 R125 R134 R142 R158 R159
RR418	2	1M	RES 0805 MOHM 1 1/10W 5% TR	R126 R161
RR420	1		RES 0805 -OHM --0.-- 1/10W 5% TR	R120
RR422	3	100	RES 0805 OHM 100 1/10W 5% TR	R1 R132 R162
RR427	1	1.5K	RES 0805 KOHM 1.5 1/10W 5% TR	R17
RR432	17	4.7K	RES 0805 KOHM 4.7 1/10W 5% TR	R10 R11 R30 R35 R50 R62 R66 R116 R123 R124 R139 R140 R143 R144 R156 R157 R160
RR435	2	15K	RES 0805 KOHM 15 1/10W 5% TR	R13 R111
RR453	7	10	RES 0805 OHM 10 1/10W 5% TR	R21 R106 R107 R108 R114 R115 R131
RW307	2	22	RES 2010 -OHM -22 1/2W 10% TR	R68 R69
ZI10218	1	ZI10218	INDUCTOR CHOKE COMMON MODE 280 OHMS	L21
ZI316	3	133@100M	INDUCTOR FB TYPE 43 Z @ 100MHZ = 133	L15 L16 L17
ZI325	9	ZI325	FERRITE BD 0805 150 OHMS @ 100MHZ TR	L1 L2 L3 L4 L14 L18 L19 L20 L22
ZI329	9	ZI329	FERRITE BD 0805 1K @ 100MHZ TR	L5 L6 L7 L8 L9 L10 L11 L12 L13
ZT320	1	ZT320	XFMR AES DIGITAL AUDIO 1:1	T1
ZX318	1	16MHz	XTAL 16MHZ 18PF PARALLEL HC49/US	Y1