

# Chapter 5

## Parts Lists

The parts lists included in this chapter are for information purposes only and may change without notice. However, service notices are published to inform field service personnel of significant changes that may effect the operation of products already in the field.

In most cases, other than general maintenance and minor repairs, contact the Kurzweil Service Department to order a board replacement. International service personnel should contact their appropriate Kurzweil Distributor.

### PCB & Sub Assemblies

Part No.	Description
1010101190	Engine Board Assembly
1010400640	LCD Assembly
1010900210	Button Board
1010900220	Slider Board
1010900230	Front Panel Board
1011000740	Connector Board
1019900070	Engine Board—USB x/D Daughtercard
1012400340	Wheels Assembly

### Engine Board

Part No.	Description	Qty.	Reference Designation
603010084	CAP CER X7R 4700pF 50V 10% 0603	2	C228, C232
603010107	CAP CER NPO 270pF 50V 5% 0603	20	C172, C174, C175, C178, C181, C187, C188, C191, C193, C195, C196, C199, C201, C203, C204, C207, C208, C213, C216, C220
603010111	CAP CER X5R 10uf 6.3V 10% 0805	5	C139, C248, C263, C277, C280
603010114	CAP CER NPO 33pF 50V 5% 0603	4	C17, C18, C142, C143
603010115	CAP CER NPO 56pF 50V 5% 0603	2	C229, C233
603010116	CAP CER NPO 1000pF 50V 5% 0603	10	C173, C177, C186, C190, C194, C198, C202, C206, C210, C217
603010117	CAP CER X7R 10000pF 16V 10% 0603	2	C247, C262
603010118	CAP CER X7R 0.1uF 16V 10% 0603	160	C1-5, C8-16, C19-53, C57, C59-63, C66-68, C71-78, C84-96, C100-111, C114-121, C127-138, C140, C141, C144-155, C158, C159, C225-227, C234, C236-241, C243, C245, C249, C252-261, C264, C273-276, C281, C282, C284-286
603010119	CAP CER Y5V 0.1uF 25V +80/-20% 0805	17	C157, C176, C179, C180, C182, C183, C185, C189, C192, C197, C200, C205, C209, C211, C214, C218, C221
603010120	CAP CER X5R 1uf 6.3V 10% 0805	4	C81, C82, C124, C125
603020004	CAP ELC LOZ 100uF 6.3V 20% SZD SMT	6	C54, C79, C97, C112, C122, C156
603020013	CAP ELC GP 2.2uF 50V 20% SZB SMT	1	C250

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Part No.	Description	Qty.	Reference Designation
603020014	CAP ELC LOZ 22uF 6.3V 20% SZB SMT	13	C55, C56, C69, C70, C80, C83, C98, C99, C113, C123, C126, C244, C246
603080007	CAP ELC GP 10uF 35V 20% 0.20D 0.43H 0.079"SP RAD	13	C184, C212, C215, C219, C222, C251, C266-272
603080035	CAP ELC LOZ 220uF 25V 20% 8D 11.5H 3.5mmSP RAD	6	C223, C224, C230, C231, C235, C242
608030002	DIODE RECT GP SMT 1A S1A 50V SMA 1N4001	1	D5
608040005	DIODE SHTKY 1A SMB5817 20V SMT DO-214AA	2	D7, D9
6080100080	DIODE SW BAS16 75V 75mA SOT-23	5	D3, D4, D6, D8, D10
6080100090	DIODE SHTKY SIG 5ns LO-C SL BAS40 SOT-23	1	D11
628010032	CON HDR DIP 0.1" SQR PIN .23HD .12"TL 6POS	1	J29
628010062	CON HDR DIP 0.1" RIBON FL SHRD KEYED 14POS	1	J6
628010084	CON HDR DIP 0.1" RIBON FL SHRD 20POS	1	J15
628010110	CON SIP HEADER .1"SP (2.54MM) 3POS	6	J1, J14, J23, J25, J26, J34
628010115	CON HDR SIP 0.156" SQR PIN LOK 8POS	1	J21
6209900150	CON COINCELL HOLDER TOSHIBA BV-32	1	J20
6209900170	SOCKET IC DIMM 168POS .050LS PLSTC PD NI AU PL	2	J10, J11
6209900190	SOCKET IC PLCC SMT 32POS RECT	1	FOR U4
6280101020	CON HDR SIP 2.5mm SPOX FL SHRD 10POS	1	J5
6280101070	CON HDR SIP 2.5mm SPOX FL SHRD 6POS	1	J33
6280101160	CON HDR DIP 2mm SQR PIN .126HD .097TL TIN 28POS	1	J12
6280101170	CON HDR DIP 0.1" SQR PIN .23HD .12"TL 4POS	1	J3
6280101210	CON HDR SIP 2.5mm SPOX FL SHRD 12POS	1	J18
6040100160	IND SMT 22uH 20% 0.1 OHM 1.95A 10mm PM105-220M	2	L14, L15
6060100070	IND FE BD 2.5-TURN SMT	2	L8, L13
6060100080	IND FE BD SMT 500mA 600 OHM @ 100MHz 0805	11	L1-7, L12, L16-18
6090100180	TRN SIG GP NPN MMBT2222A 40V 0.5A SOT-23	1	Q2
6090100190	TRN SIG GP PNP MMBT2907A 40V 0.5A SOT-23	1	Q1
602010002	RES THICK FILM 0 OHM 5% 1/8W 0805 T&R	11	R14, R16, R20, R62, R63, R69, R70, R71, R156, R179, R180
602010007	RES THICK FILM 10 OHM 5% 1/8W 0805 T&R	2	R177, R178
602010011	RES THICK FILM 100 OHM 5% 1/8W 0805 T&R	3	R44-46
602010014	RES THICK FILM 1.0K OHM 5% 1/8W 0805 T&R	12	R1, R3, R4, R13, R61, R72, R82, R140, R145-147, R149
602010019	RES THICK FILM 10K OHM 5% 1/8W 0805 T&R	18	R2, R6, R7, R17, R18, R31, R32, R34, R41, R42, R43, R48, R56, R57, R60, R83, R175, R176
602010051	RES THICK FILM 1.5K OHM 5% 1/8W 0805 T&R	1	R11
602010070	RES THICK FILM 2.0K OHM 5% 1/8W 0805 T&R	1	R38
602010072	RES THICK FILM 20K OHM 5% 1/8W 0805 T&R	3	R148, R150, R157
602010073	RES THICK FILM 22 OHM 5% 1/8W 0805 T&R	6	R15, R35, R36, R37, R136, R137
602010107	RES THICK FILM 33 OHM 5% 1/8W 0805 T&R	2	R154, R155
602010109	RES THICK FILM 330 OHM 5% 1/8W 0805 T&R	3	R8, R138, R151
602010239	RES THICK FILM 24.9 OHM 1% 1/16W 0603 T&R	8	R21-28
602010249	RES THICK FILM 2.10K OHM 1% 1/10W 0805 T&R	1	R9
602010250	RES THICK FILM 3.01K OHM 1% 1/10W 0805 T&R	1	R12
602010254	RES THICK FILM 15.0K OHM 1% 1/10W 0805 T&R	2	R130, R134
602010257	RES THICK FILM 31.6K OHM 1% 1/10W 0805 T&R	1	R132
602010261	RES THICK FILM 5.1M OHM 5% 1/10W 0805 T&R	1	R39
602010264	RES THICK FILM 0 OHM 5% 1/10W 1206 T&R	2	R181, R182
602010265	RES THICK FILM 13.0K OHM 1% 1/10W 0805 T&R	1	R135

Part No.	Description	Qty.	Reference Designation
602020001	RES THIN FILM 4.75K OHM 1% 1/10W 0805 T&R	42	R10, R52-55, R64-67, R76-80, R85-88, R91-94, R97-100, R103-106, R109-112, R116, R117, R119, R120, R124, R125, R127, R128
602020002	RES THIN FILM 10.0K OHM 1% 1/10W 0805 T&R	6	R115, R118, R123, R126, R131, R133
602020003	RES THIN FILM 11.8K OHM 1% 1/10W 0805 T&R	20	R51, R58, R59, R68, R75, R81, R84, R89, R90, R95, R96, R101, R102, R107, R108, R113, R114, R121, R122, R129
602030005	RES NET QUAD ISO 10K OHM 5% 1/16W	18	RN1-6, RN12-19, RN33-36
602030020	RES NET QUAD ISO 4.7K OHM 5% 1/16W	2	RN9, RN10
602030025	RES NET QUAD ISO 1.0K OHM 5% 1/16W	2	RN31, RN32
602030028	RES NET QUAD ISO 22 OHM 5% 1/16W	6	RN11, RN20, RN30, RN37-39
602030029	RES NET QUAD ISO 10 OHM 5% 1/16W	8	RN21-28
6150000060	RELAY DPDT 5VDC	5	RY1, RY2, RY3, RY4, RY5
6010101130	IC ANA OPAMP NJM4580E DL BIP LO-NOIS SOP8-160	6	U35-40
6010103440	IC ANA VREG LDO 2.5V 250mA SOT-23	1	U47
6010103460	IC MEM DDR SDRAM 2Mx16x4 BANKS TSOP-66 PB-FREE	1	U13
6010103470	IC ASIC VLSI MARA REV3	2	U10, U11
6010103690	IC 74LCX139 DEMUX/DECODER 2X 2-OF-4 TSSOP-16	2	U24, U26
6010103830	IC DC-DC STEPDOWN PWM CONTROLLER 300KHz	1	U41
6010103840	IC DIG 74LV245A OCT BUS XCEIVER 3-ST TSSOP20	1	U27
6010103860	IC PLD XC9536XL 3.3V 5ns VQFP-44	1	U45
6010103870	IC MASK (P2ROM) PC3 BASE-0 EVEN SOUND ROM 16 MB	1	U23
6010103880	IC MASK (P2ROM) PC3 BASE-0 ODD SOUND ROM 16 MB	1	U22
6010103890	IC MASK (P2ROM) PC3 BASE-1 EVEN SOUND ROM 16 MB	1	U21
6010103900	IC MASK (P2ROM) PC3 BASE-1 ODD SOUND ROM 16 MB	1	U20
6010103910	IC EPROM OTP 256KX8 120ns PLCC32 RoHS	1	U4
6010103960	IC DIG NC7WZU04 TINY UHS DUAL UNBUFFERED INVERT	1	U14
6010103980	IC DIG 74AHCT125 QD BUS BUF 3-ST TSSOP14-4.4mm	2	U28, U46
6010103990	IC DIG 74AHCT245 OCT BUS XCEIVER 3-ST	1	U29
6010104010	IC DIG 74VHC05 HX INV OD TSSOP14-044	1	U9
6010104020	IC DIG LV BUFFER/LINE DRIVER W/5V TOL TSSOP 4.4mm	1	U5
6010104030	IC DIG LV QUAD BUFFER W/5V TOL 74LCX125MTCX	1	U12
6010104040	IC BUS EXCHANGE SW 24BIT SSOP56 74CBTLV16212DL	4	U16-19
6010104050	IC DIG NC7WZ08 TINY UHS DUAL 2-IN AND	2	U7, U25
6010104060	IC DIG NC7SZ126 TINY UHS BUF 3-ST SOT23-5	1	U8
6010104070	IC MEM 512-Mbit (64M x 8 BITS) CMOS NAND FLASH 3.3V	1	U2
6010104080	IC MEM SDRAM 4 Meg x 32 TSOP-86 143MHz PB-FREE	1	U3
6010104090	IC ANA VREG LDO 1.5V 250mA SOT-23	1	U48
6010104100	IC CLOCK DRIVER 1-TO-5 CMOS SOIC8	1	U15
6010104110	DUAL MATCH N-CHAN PWR MOSFET 30V V(BR)DSS 4A I(D)	2	U42, U49
6010104120	IC MCU SH7705 133MHZ FP-208C	1	U1
6010104130	IC ANA VREG POS FIX 3-T LM340 5V 1A TO-263	1	U34

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Part No.	Description	Qty.	Reference Designation
6010104140	IC IF DAC AK4358-VQ 8CHAN 24BIT 192kHz LQFP48	1	U33
6010104190	IC IF QUAD DIFF LVDS LINE DRIVER SOIC16	1	U55
6010104340	IC DIG 74HC14 HX SCHMITT INV TSSOP 4.4mm	1	U44
6010104350	IC DC-DC STEPDOWN PWM CONTROLLER 500KHz	1	U43
6100300120	XTL 16.6667MHz +/-50PPM FND PAR 10pF SMT	1	X2
6100300140	XTL 12.2880MHz +/-50PPM FND PAR 20pF SMT HC49SDF	1	X3
6100900060	XTL OSC SMD 48.0000 MHz +/-50PPM CB3LV	1	Y1
627030001	BATTERY CR2032 3V	1	AT J20

## Connector Board

Part No.	Description	Qty.	Reference Designation
603010009	CAP CER X7R 1000pF 50V 10% 0603	23	C1-3, C6, C8-11, C14-22, C47, C57-61
603010014	CAP CER X7R 10000pF 50V 10% 0805	2	C65, C75
603010111	CAP CER X5R 10uF 10V 10% 0805	2	C64, C76
603010114	CAP CER NPO 33pF 50V 5% 0603	2	C4, C5
603010119	CAP CER Y5V 0.1uF 25V +20/-20% 0805	28	C12, C13, C29, C32, C33, C35, C38, C44-46, C49-54, C56, C62, C63, C66, C67, C69-74, C77
603020001	CAP ELC GP 1uF 50V 20% SZB SMT	1	C48
603020002	CAP ELC GP 10uF 16V 20% SZB SMT	3	C7, C23, C24
603080012	CAP ELC GP 100uF 16V 20% 0.25D 0.44H 0.098"SP RAD	5	C34, C36, C37, C39, C40
603080020	CAP ELC GP 1,000uF 25V 20% 0.49D 0.79H 0.197"SP RAD	2	C30, C31
603080089	CAP ELC LLM 10000uF 16V 20% 25D 25mmH SNAP	1	C55
608010004	DIODE SW GP SMT CYL LL4148 DL-35	17	D1-11, D13, D16, D19-20
608010090	DIODE SHTKY SIG 5ns LO-C SL BAS40 SOT-23	1	D18
6080200080	DIODE ZEN .5W SMT MMSZ5234B 6.2V @ 20mA SOD-123	1	D14
608030002	DIODE RECT GP SMT 1A S1A 50V SMA 1N4001	1	D12
6080700100	DIODE BRDG 4A GBU404 400VR	1	D15
608070012	DIODE 1N5822	1	D17
6200100080	CON HDR SIP 0.156" SQR PIN LOK 5POS	1	J324
6200200120	CON 1/4" PHONE STEREO RA49C-14B	7	J310-314, J317-319, J322, J323
620020013	CON 1/8" MINI PHONE STEREO SW No Thread RA	1	J315
6200300050	CON DIN DL MIDI JACK	1	J320
6200400050	CON RCA R/A PC MT	2	J300, J309
6209900180	CON MOD JACK 6-PIN RA PC MOUNT	1	J316
628010084	CON HDR DIP 0.1" RIBON FL SHRD 20POS	3	J304, J306, J307
6280101020	CON HDR SIP 2.5mm SPOX FL SHRD 10POS	1	J303
6280101060	CON HDR SIP 2.5mm SPOX FL SHRD 5POS	1	J308
6280101070	CON HDR SIP 2.5mm SPOX FL SHRD 6POS	1	J325
6280101120	CON HDR SIP 2.5mm SPOX FL SHRD 8POS	1	J305
628010115	CON HDR SIP 0.156" SQR PIN LOK 8POS	1	J301
6280101180	CON HDR DIP 0.079" SQR PIN .157HD .102TL GLD 10POS	1	J321
6280101210	CON HDR SIP 2.5mm SPOX FL SHRD 12POS	1	J302
606010005	IND FE BD SMT 200mA 600 OHM @ 100MHz 0805	3	L1, L2, L3
6140000070	IND NET T-FIL 100pF -15dB @ 250-900 MHz EXCCET-101U	2	L4, L5

Part No.	Description	Qty.	Reference Designation
6090100180	TRN SIG GP NPN MMBT2222A 40V 0.5A SOT-23	4	Q2, Q4, Q5, Q6
6090100190	TRN SIG GP PNP MMBT2907A 40V 0.5A SOT-23	2	Q1, Q3
602010078	RES THICK FILM 220 OHM 5% 1/16W 0603 T&R	2	R100, R101
602010014	RES THICK FILM 1.0K OHM 5% 1/8W 0805 T&R	3	R87, R111, R148
602010019	RES THICK FILM 10K OHM 5% 1/8W 0805 T&R	25	R1-3, R9, R10, R12, R13, R21, R23-26, R30, R31, R70, R77, R84-86, R103, R104, R112, R118, R149, R150
602010022	RES THICK FILM 100K OHM 5% 1/8W 0805 T&R	8	R88-91, R119, R120, R153, R161
602010026	RES THICK FILM 1.0M OHM 5% 1/8W 0805 T&R	8	R11, R16, R71, R72, R92, R105, R113, R115
602010030	RES THICK FILM 11K OHM 5% 1/8W 0805 T&R	1	R109
602010048	RES THICK FILM 150 OHM 5% 1/16W 0603 T&R	1	R81
602010049	RES THICK FILM 1.5M OHM 5% 1/10W 0805 T&R	1	R63
602010051	RES THICK FILM 1.5K OHM 5% 1/8W 0805 T&R	2	R22, R82
602010072	RES THICK FILM 20K OHM 5% 1/8W 0805 T&R	1	R80
602010077	RES THICK FILM 220 OHM 5% 1/8W 0805 T&R	1	R6
602010081	RES THICK FILM 2.2K OHM 5% 1/8W 0805 T&R	3	R66, R110, R117
602010089	RES THICK FILM 2.4K OHM 5% 1/8W 0805 T&R	1	R114
602010094	RES THICK FILM 270 OHM 5% 1/8W 0805 T&R	2	R83, R106
602010096	RES THICK FILM 2.7K OHM 5% 1/8W 0805 T&R	2	R162, R163
602010107	RES THICK FILM 33 OHM 5% 1/8W 0805 T&R	2	R169, R174
602010113	RES THICK FILM 3.3K OHM 5% 1/8W 0805 T&R	1	R164
602010132	RES THICK FILM 39K OHM 5% 1/8W 0805 T&R	1	R108
602010183	RES THICK FILM 680K OHM 5% 1/8W 0805 T&R	3	R76, R78, R79
602010221	RES THICK FILM 200 OHM 1% 1/4W 1210 T&R	8	R151, R152, R155-160
602010237	RES THICK FILM 10 OHM 5% 1/2W 2010 T&R	1	R7
602010240	RES THICK FILM 47 OHM 5% 1/2W 2010 T&R	2	R28, R29
602010241	RES THICK FILM 56 OHM 5% 1/10W 0805 T&R	4	R93, R96, R99, R102
602010242	RES THICK FILM 75 OHM 5% 1/10W 0805 T&R	1	R4
602010244	RES THICK FILM 100 OHM 1% 1/10W 0805 T&R	7	R165-167, R170-173
602010245	RES THICK FILM 110 OHM 5% 1/16W 0603 T&R	12	R17, R20, R65, R68, R69, R73-75, R94, R95, R97, R98
602010258	RES THICK FILM 121K OHM 1% 1/10W 0805 T&R	1	R67
602010259	RES THICK FILM 165K OHM 1% 1/10W 0805 T&R	1	R64
602010260	RES THICK FILM 4.7M OHM 5% 1/10W 0805 T&R	1	R116
602010285	RES THICK FILM 110 OHM 5% 1/8W 0805 T&R	1	R5
6110100580	POT 10K RA KNURLED SHAFT W/POINTER 20mm	2	R107, R154
6020300260	RES NET QUAD ISO 100 OHM 5% 1/10W	9	RN1-8, RN15
6020300270	RES NET QUAD ISO 10K OHM 5% 1/10W	6	RN9-14
6210200070	SW SLIDE SPDT RA PC 2.5MMSP	1	SW1
6220000060	XFRMR AES/EBU ISOLATION	1	T1
6010100440	IC ANA CMPR LM339 QD V LO-PWR LO-OS SOP14-160	1	U4
6010100520	IC ANA OPAMP TL072 DL FET LO-NOIS GP SOP8-160	1	U8
6010100930	IC DIG 74HC541 OC BUS BUF 3-ST SOP20-200	1	U2
6010103070	IC DIG 74HC4051 8-CH ANADIG MUX SOP16-200	1	U11
6010103760	IC MCU M38869 10MHZ 60K FLASH ROM QFP 80	1	U1
6010103850	IC IF ASYNCH SAMPLE RATE CONVERTER TQFP48	1	U314
6010103920	IC IF QUAD DIFF LVDS LINE RECEIVER SOIC16	1	U316
6010103930	IC REAL TIME CLK W/XTAL SMT	1	U318
6010103940	IC ANA VREG LDO 1.8V 250mA SOT-23	1	U315

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Part No.	Description	Qty.	Reference Designation
6010103950	IC ANA VREG LDO 3.3V 250mA SOT-23	1	U319
6010104000	IC DIG 74LS05 HX INV OC SOIC14-150	1	U5
6010104260	IC ANA VREG NEG FIX 3-T LM79M12 -12V -500mA TO-220	1	U313
6010200110	IC 6N138 DIP TYPE	1	U6
6010200720	IC ANA VREG POS FIX 3-T KA78T05 5V 3A TO-220	1	U308
6010200730	IC ANA VREG POS FIX 3-T LM78M12 12V 500mA TO-220	1	U312
6100300130	XTL 10.0000MHz +/-50PPM FND PAR 18pF SMT HC49SD	1	Y1
6100900050	XTL OSC SMD 24.5760 MHz +/-50PPM CB3LV	1	Y2
6100900070	XTL OSC SMD 22.5792 MHz +/-50PPM CB3LV	1	Y3

## Front Panel Board

Part No.	Description	Qty.	Reference Designation
603010119	CAP CER Y5V 0.1uF 25V +80/-20% 0805	5	C2, C3, C4, C5, C7
603020002	CAP ELC GP 10uF 16V 20% SZB SMT	1	C9
603070046	CAP CER SL/GP 33pF 3KV 5% 7mm H 7.5mm L RAD	1	C11
603080062	CAP ELC LOZ 470uF 6.3V 20% 8D 11.5H 3.5SP RAD	3	C1, C6, C8
603110056	CAP FLM PE 0.22uF 50V 5% 11L 6T 5mmSP RAD	1	C10
608010004	DIODE SW GP SMT CYL LL4148 DL-35	14	D101-112, D137, D138
6190100170	OPT LED SMT RED WATER CLEAR 120° VIEW 1206 (USA)	8	D3-6, D9-12
6190100200	OPT LED SMT BLUE WATER CLEAR 120° VIEW 1206 (USA)	10	D14, D113, D116, D117, D119, D122, D125, D128, D131, D134
6190100210	OPT LED SMT YEL WATER CLEAR 120° VIEW 1206 (USA)	15	D114, D115, D118, D120, D121, D123, D124, D126, D127, D129, D130, D132, D133, D135, D136
6190100220	OPT LED SMT RED/GREEN WATER CLEAR (USA)	2	D7, D13
628010072	CON DIP HEADER .1"SP (2.54MM) 16POS	1	J201
628010084	CON HDR DIP 0.1" RIBON FL SHRD 20POS	1	J202
604020008	IND RAD POWER INDUCTOR 47uH 0.23 ohm 1A	1	L1
6010103970	TRN PWR MOSFET NDT3055 60V 0.12 OHM 4A SMD	1	Q19
6090100190	TRN SIG GP PNP MMBT2907A 40V 0.5A SOT-23	8	Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8
6090100200	TRN SIG GP NPN MMBT3904 40V 0.1A SOT-23	2	Q22, Q23
6090100210	TRN SIG GP NPN ZXTN25015DFH 15V 5A SOT-23	2	Q20, Q21
6090100220	TRN SIG GP PNP ZXTP25015DFH 15V 4A SOT-23	9	Q9-12, Q14-18
602010109	RES THICK FILM 330 OHM 5% 1/8W 0805 T&R	1	R31
602010228	RES THICK FILM 2.2K OHM 5% 1/8W 0805 T&R	8	R11-17, R26
602010236	RES THICK FILM 4.7 OHM 5% 1/4W 1210 T&R	1	R3
602010238	RES THICK FILM 15 OHM 5% 1/8W 1206 T&R	8	R2, R4, R5, R7, R9, R18, R22, R24
602010248	RES THICK FILM 750 OHM 1% 1/8W 0805 T&R	1	R32
602010252	RES THICK FILM 10K OHM 5% 1/10W 0805 T&R	3	R10, R27, R28
602010255	RES THICK FILM 20.0K OHM 1% 1/8W 0805 T&R	1	R30
602010266	RES THICK FILM 30K OHM 5% 1/10W 0805 T&R	1	R29

Part No.	Description	Qty.	Reference Designation
602010267	RES THICK FILM 4.7 OHM 5% 1/8W 1206 T&R	8	R1, R6, R8, R19, R20, R21, R23, R25
6020300270	RES NET QUAD ISO 10K OHM 5% 1/10W 5.08mm X 2.2mm	2	RN1, RN2
6110100570	ENCODER W/BUSH V-MNT GREASED 20mm FLAT SH	1	SP1
6210100290	SW TACT SPST 12mm x 12mm 130gf 4-PIN	65	SW1, SW2, SW4-10, SW12-16, SW19-21, SW23, SW24, SW26-32, SW35-38, SW48, SW109-133
6220000070	XFMR CCFT 2.5W 5VOLT PRI	1	T1
6010100830	IC DIG 74HC138 3-TO-8 LINE DEC SOP16-150	2	U2, U4
6010100910	IC DIG 74HC373 OC D-LATCH 3-ST SOP20-200	1	U3
6010100930	IC DIG 74HC541 OC BUS BUF 3-ST SOP20-200	1	U1

## Slider Board

Part No.	Description	Qty.	Reference Designation
628010072	CON HDR DIP 0.1" RIBON FL SHRD RA 16POS	1	J303
6280101040	CON HDR SIP 2.5mm SPOX FL SHRD RA 4POS	1	J304
6280101200	CON HDR SIP 2.5mm SPOX FL SHRD RA 8POS	1	J302
6210100290	SW TACT SPST 12mm x 12mm 130gf 4-PIN	9	SW1-9
6110100460	RES SLID SL 10K LIN 45mm	10	R1-10
603010020	CAP CER X7R 0.1uF 50V 10% 0805	1	C1
6190100200	OPT LED SMT BLUE WATER CLEAR 120° VIEW 1206 (USA)	1	D10
6190100220	OPT LED SMT RED/GREEN WATER CLEAR (USA)	8	D2, D3, D4, D5, D6, D7, D8, D9
6010103070	IC DIG 74HC4051 8-CH ANADIG MUX SOP16-200	1	U1

## Engine Board–USB/xD Daughtercard

Part No.	Description	Qty.	Reference Designation
603010118	CAP CER X7R 0.1uF 16V 10% 0603	5	C1, C2, C3, C4, C5
619010001	OPT LED T1 BLUE DIFFUSED	2	D1, D2
620050001	CON USB TYPE B PCB MOUNT SL RA SHIELDED BLACK	1	J3
6209900160	CON xD-PICTURE CARD RA SMT 3.3V	1	J4
6280200040	CON SOCKET DIP 0.079" SP ELEVATED 28POS	1	J1
6090100180	TRN SIG GP NPN MMBT2222A 40V 0.5A SOT-23	1	Q1
6090100190	TRN SIG GP PNP MMBT2907A 40V 0.5A SOT-23	1	Q2
602010019	RES THICK FILM 10K OHM 5% 1/8W 0805 T&R	1	R1
602010070	RES THICK FILM 2.0K OHM 5% 1/8W 0805 T&R	2	R6, R8
602010113	RES THICK FILM 3.3K OHM 5% 1/8W 0805 T&R	2	R5, R7
602010166	RES THICK FILM 560 OHM 5% 1/8W 0805 T&R	1	R4
602010246	RES THICK FILM 150 OHM 5% 1/8W 1206 T&R	2	R2, R3
602030005	RES NET QUAD ISO 10K OHM 5% 1/16W 3.2mm X 1.6mm	2	RN1, RN2
6010103840	IC DIG 74LV245A OCT BUS XCEIVER 3-ST TSSOP	1	U1

## Button Board

Part No.	Description	Qty.	Reference Designation
6280101190	CON HDR SIP 2.5mm SPOX FL SHRD RA 4POS	1	J301
6210100290	SW TACT SPST 4-PIN	2	SW134, SW135
6190100170	OPT LED SMT RED WATER CLEAR 120° VIEW 1206 (USA)	2	D139, D140

## Wheels Assembly

Part No.	Description	Qty.	Reference Designation
	CABLE PITCH & MOD WHEEL	1	
	POT ROTARY 10K	2	
	BUSHING 8.0X26K2000	1	
	SPRING TORSION MUSIC WIRE	1	
	BRACKET PITCH & MOD WHEEL MOUNTING	1	
	PITCH & MOD WHEEL	1	
	CHEEK BLOCK	1	

## Keyboard Assembly

Part No.	Description	Qty.	Reference Designation
	PCB KEY CONTACT LOW BASS		
	PCB KEY CONTACT HIGH TREBLE		
	KEY CONTACT STRIP (12 NOTE)		
	KEY NATURAL A		
	KEY NATURAL B		
	KEY NATURAL C		
	KEY NATURAL D		
	KEY NATURAL E		
	KEY NATURAL F		
	KEY NATURAL G		
	KEY NATURAL LOW A		
	KEY NATURAL HIGH C		
	KEY SHARP		
	KEY SPRING		



## Miscellaneous

Part No.	Description	Qty.	Reference Designation
207010017	KNOB SLIDER MASTER VOLUME BLK W/RED STRIPE	1	
207010018	KNOB SLIDER BLK W/YELLOW STRIPE	9	
6220000080	ASSY TRANSFORMER DMT-6-15	1	
	CABLE ENGINE TO CONNECTOR BD 8P	1	
	CABLE ENGINE TO CONNECTOR BD 12P	1	
	CABLE ENGINE TO CONNECTOR BD 6P	1	
	CABLE ENGINE TO CONNECTOR BD 10P	1	
	CABLE FRONT PANEL TO CONNECTOR BD 20P	1	
	CABLE KYBD (BASS & TREBLE) TO CONNECTOR BD 20P	2	
	CABLE SLIDER TO CONNECTOR BD 8P	1	
	CABLE SLIDER TO FRONT PANEL BD 16P	1	
	CABLE SLIDER TO BUTTON BD 4P	1	
	ENDCAP LEFT	1	
	ENDCAP RIGHT	1	
	KNOB ALPHA WHEEL	1	
	CAP BUTTON SW	16	
	CAP BUTTON SW/LED	41	
	CAP BUTTON LABELED	16	
	MODULE POWER ENTRY	1	

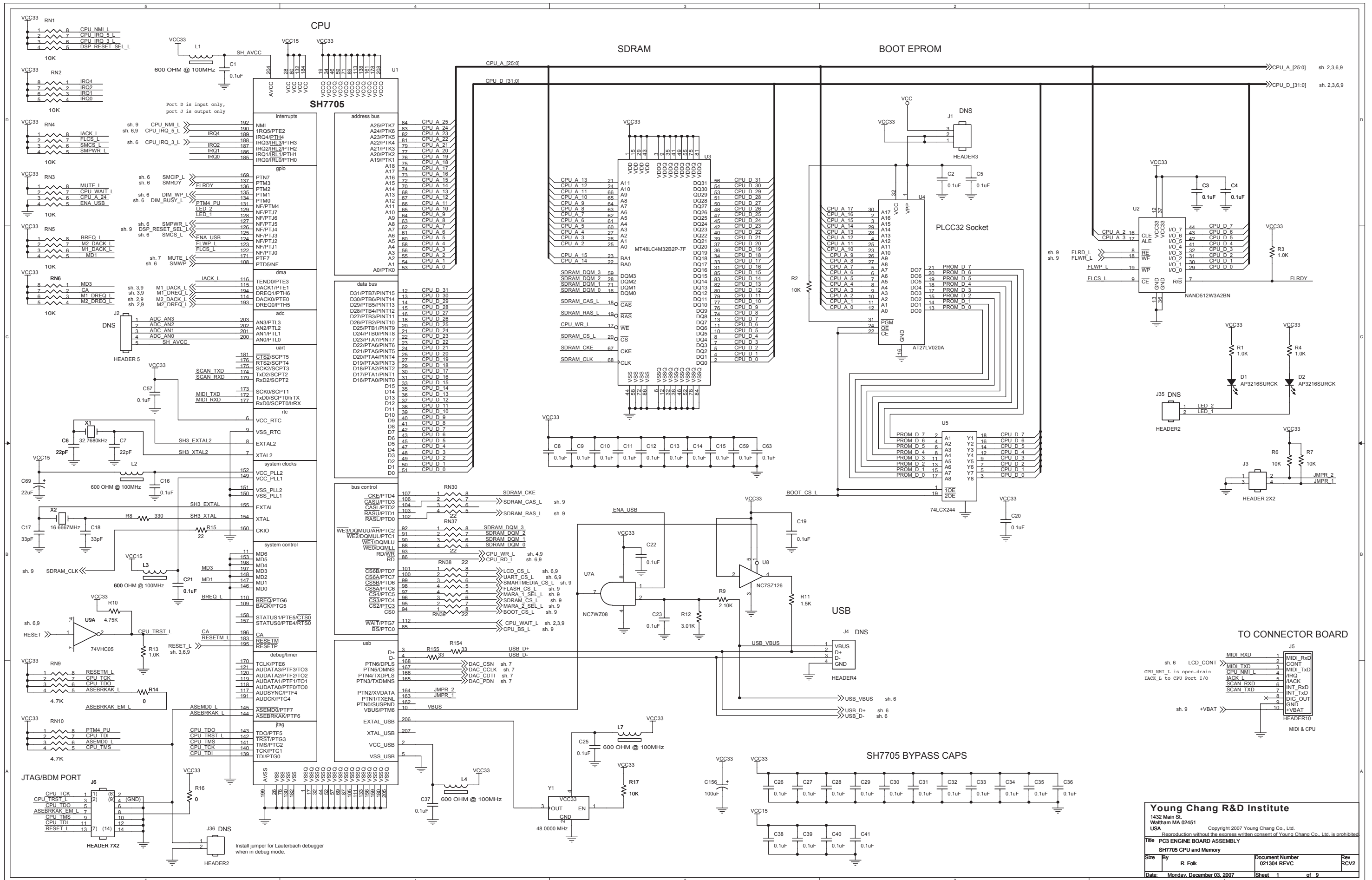


# Chapter 6

## Schematics

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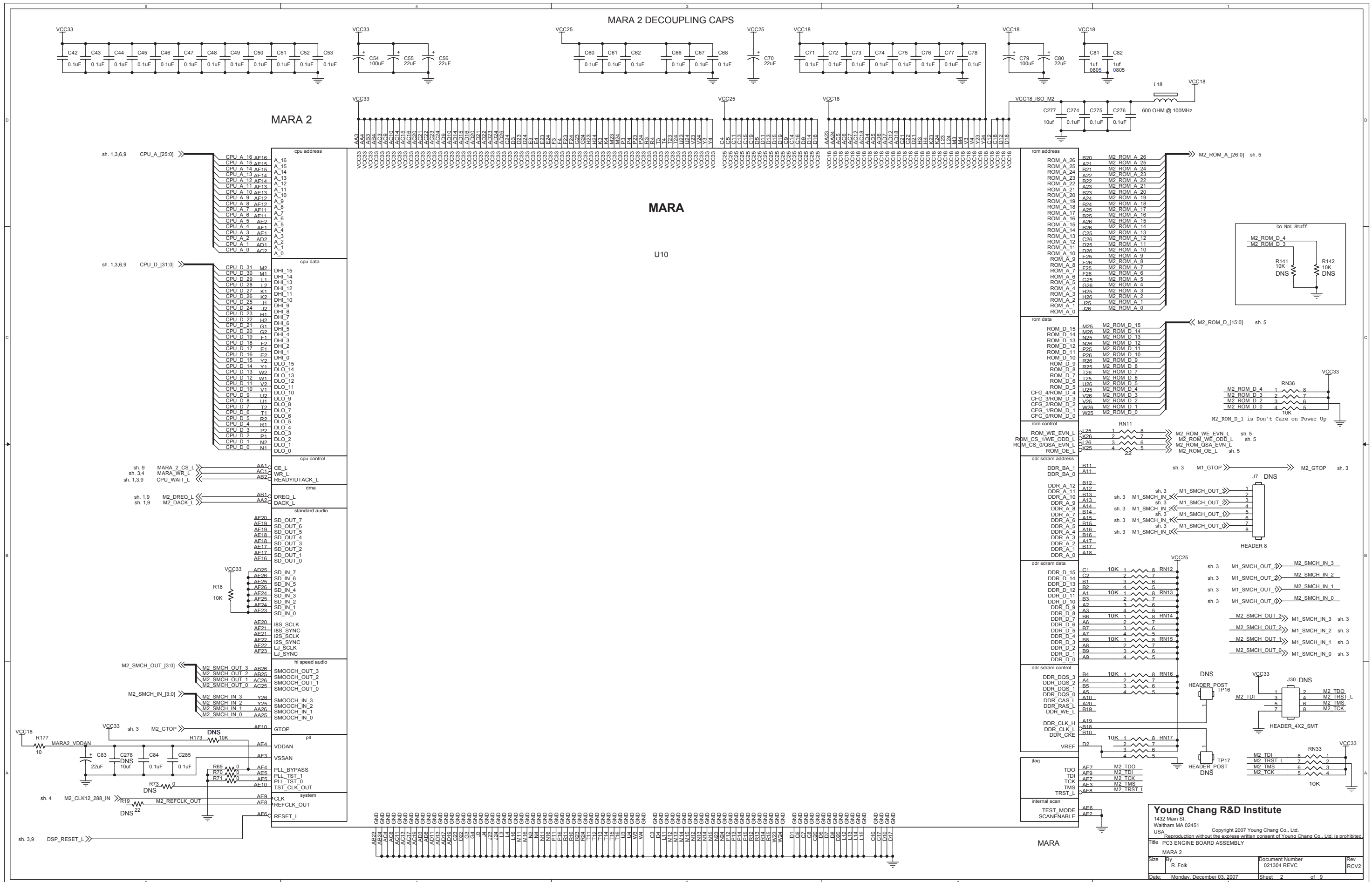
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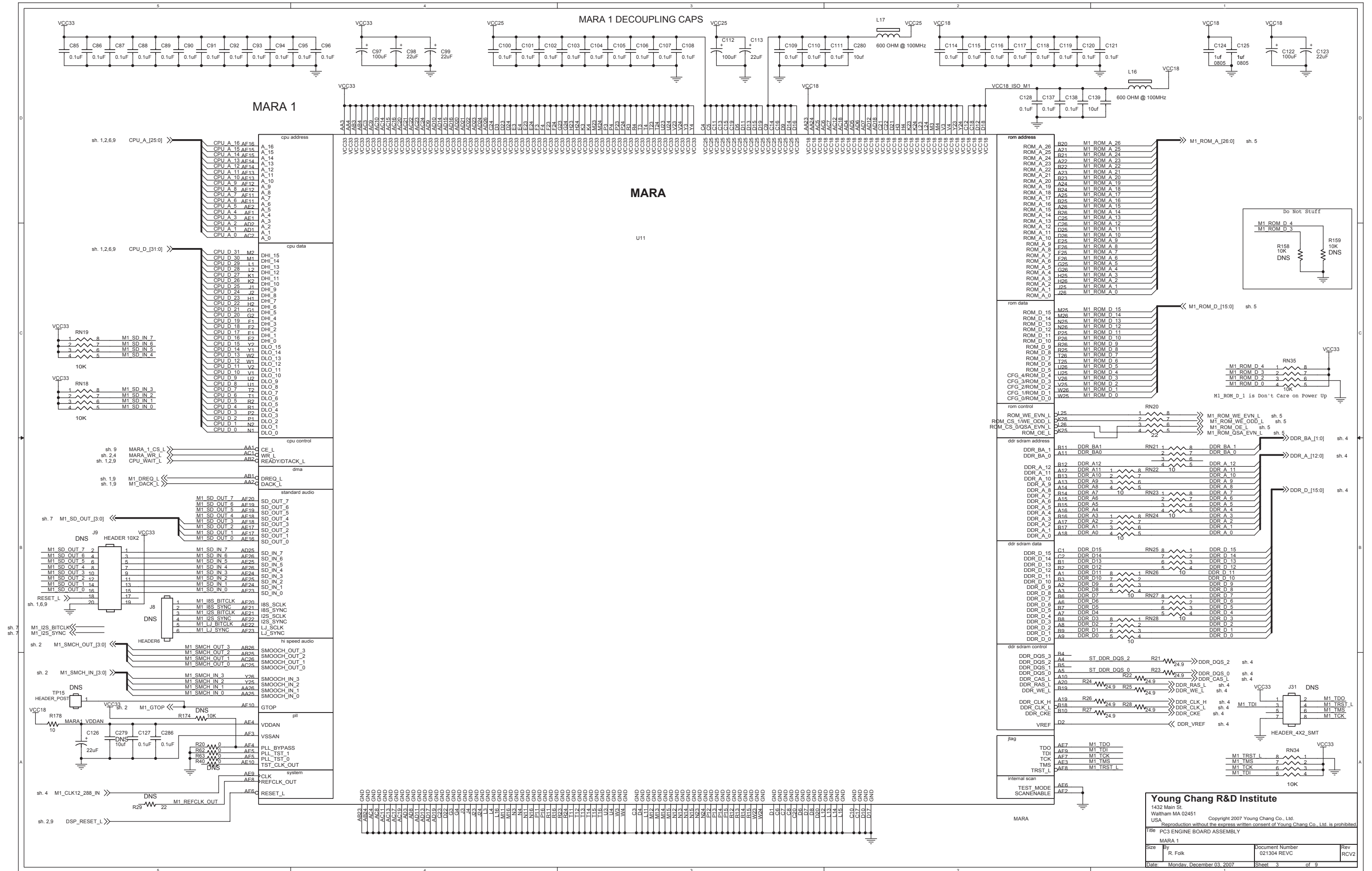
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Title: PC3 ENGINE BOARD ASSEMBLY  
 SH7705 CPU and Memory

Size	By	Document Number	Rev
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Date: Monday, December 03, 2007 Sheet 1 of 9

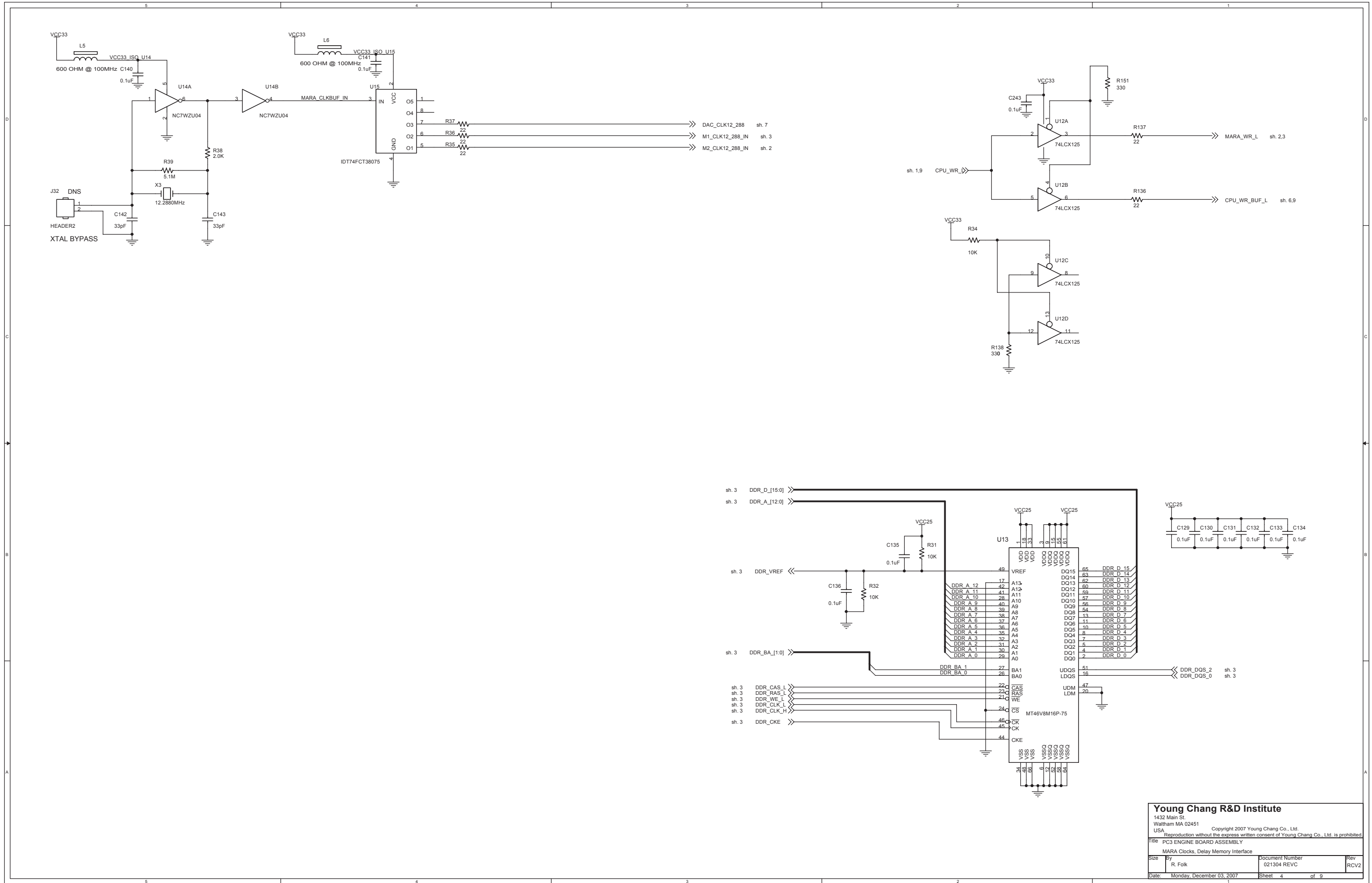




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Title: PC3 ENGINE BOARD ASSEMBLY  
 MARA 1

Size	By	Document Number	Rev
	R. Folk	021304 REV.C	RVCV2
Date	Monday, December 03, 2007	Sheet	3 of 9

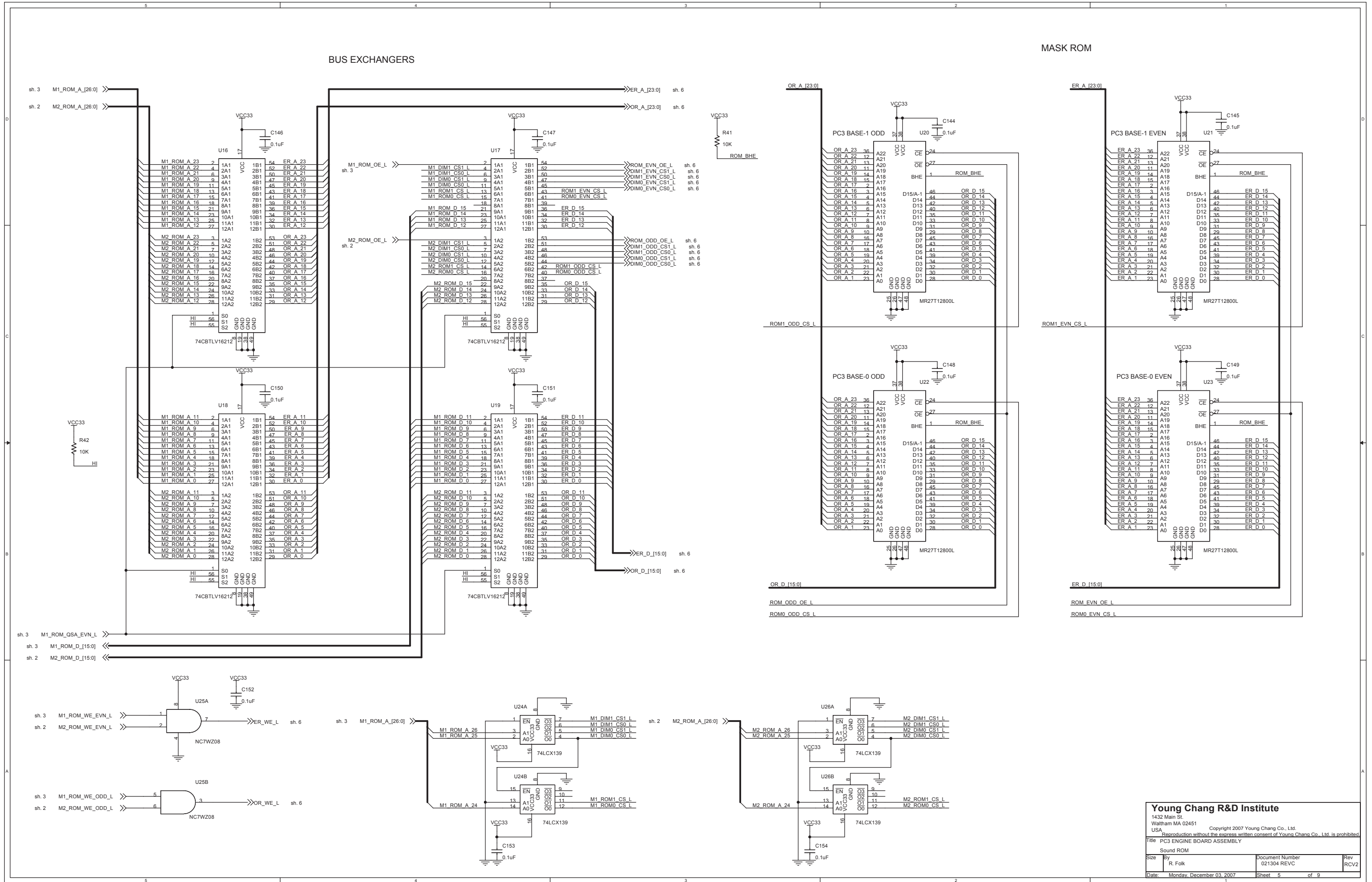


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Title: PC3 ENGINE BOARD ASSEMBLY  
 MARA Clocks, Delay Memory Interface

Size	By	Document Number	Rev
	R. Folk	021304 REVC	RCV2

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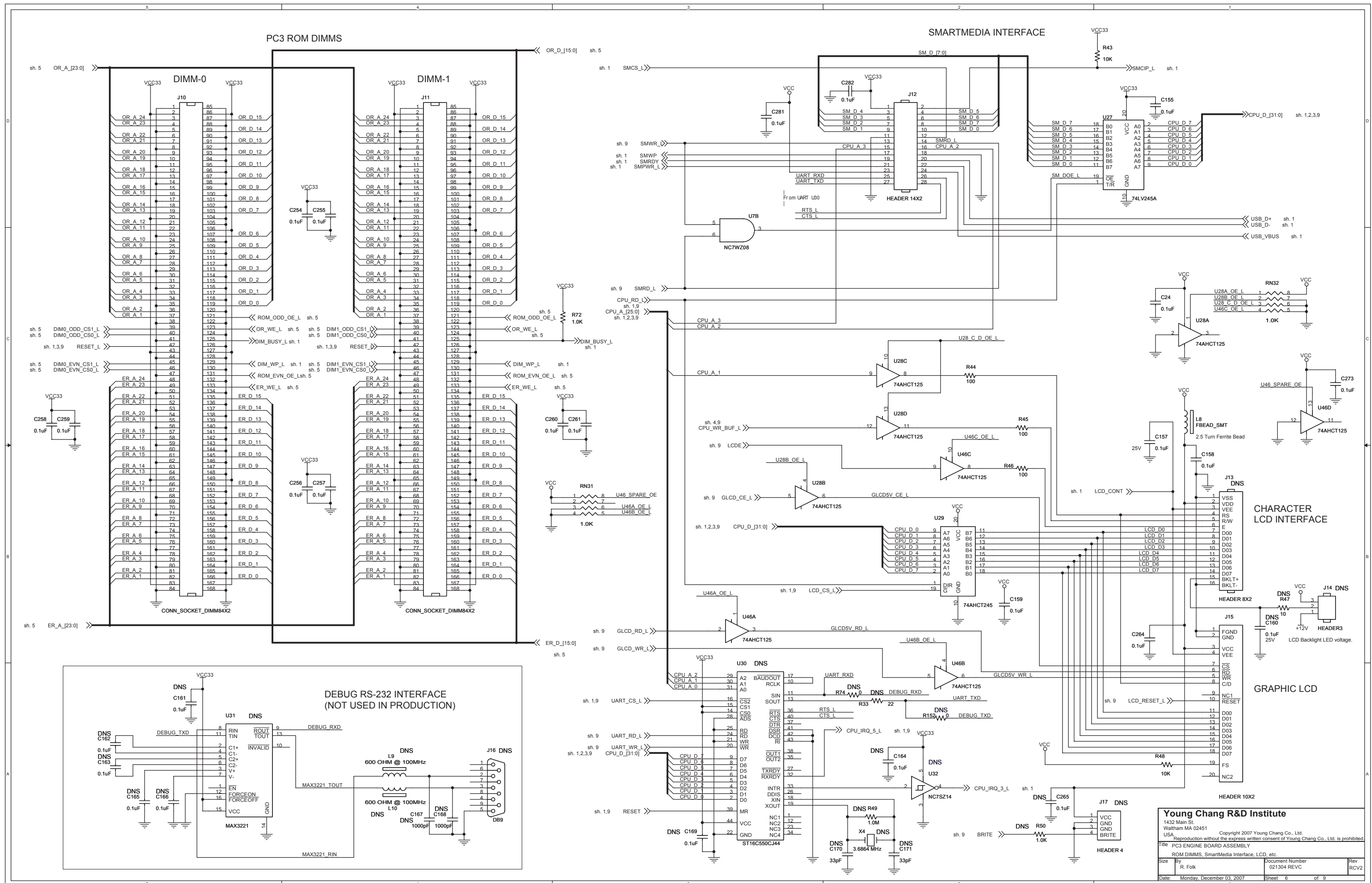
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 Sound ROM

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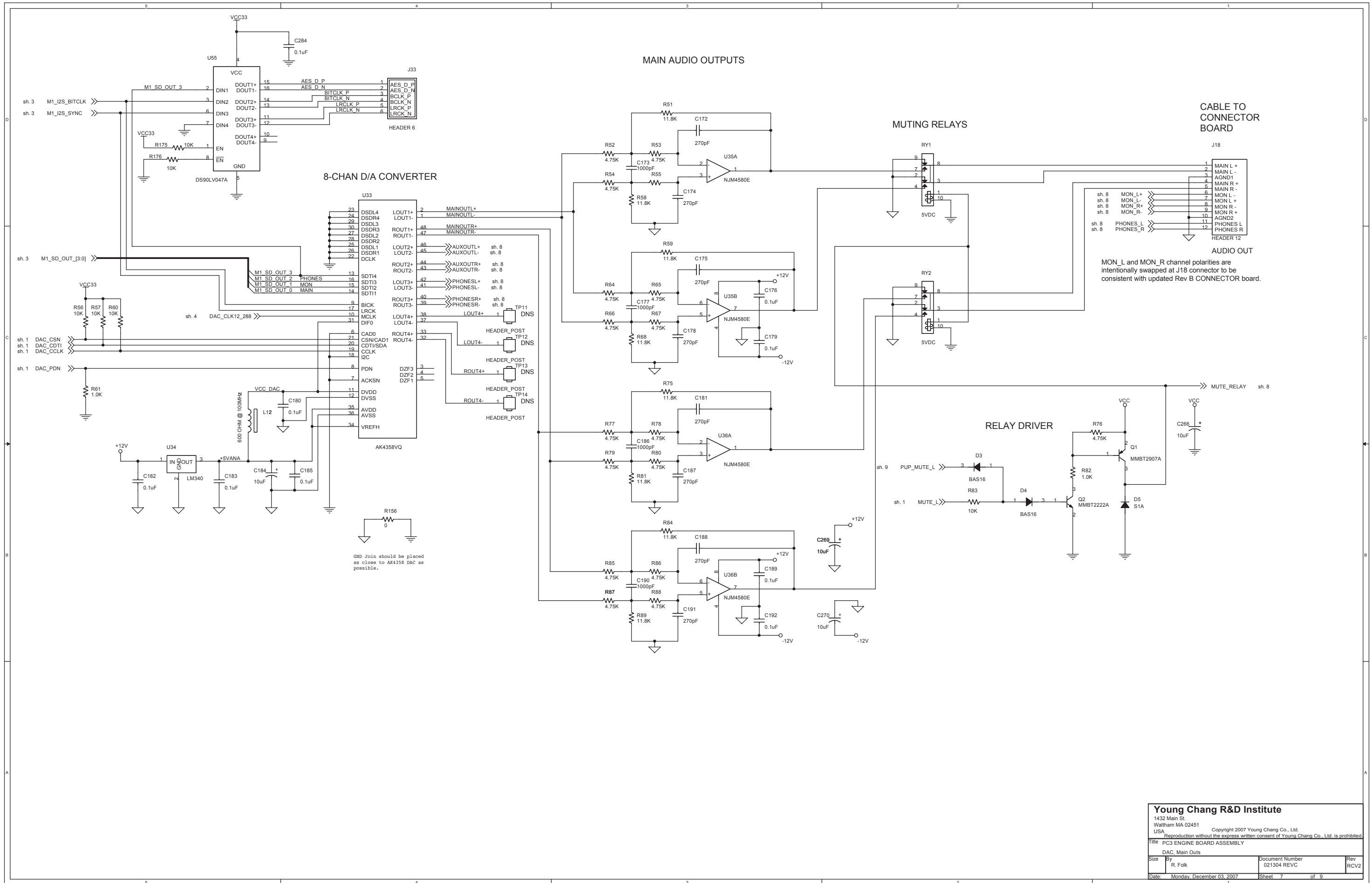
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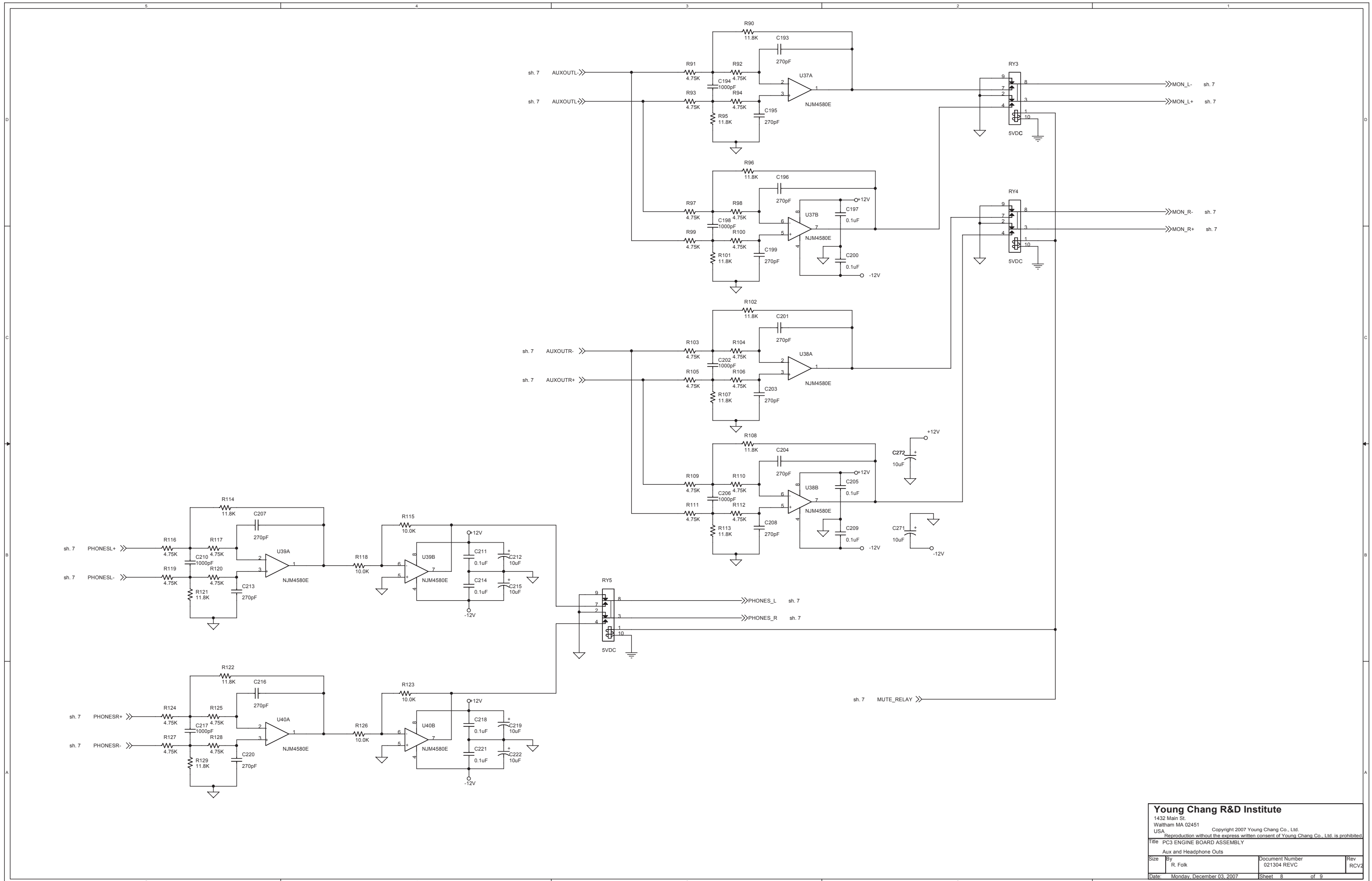


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 ROM DIMMS, SmartMedia Interface, LCD, etc.  
 Size: R. Folk  
 By: Document Number 021304 REV C  
 Date: Monday, December 03, 2007  
 Sheet: 6 of 9



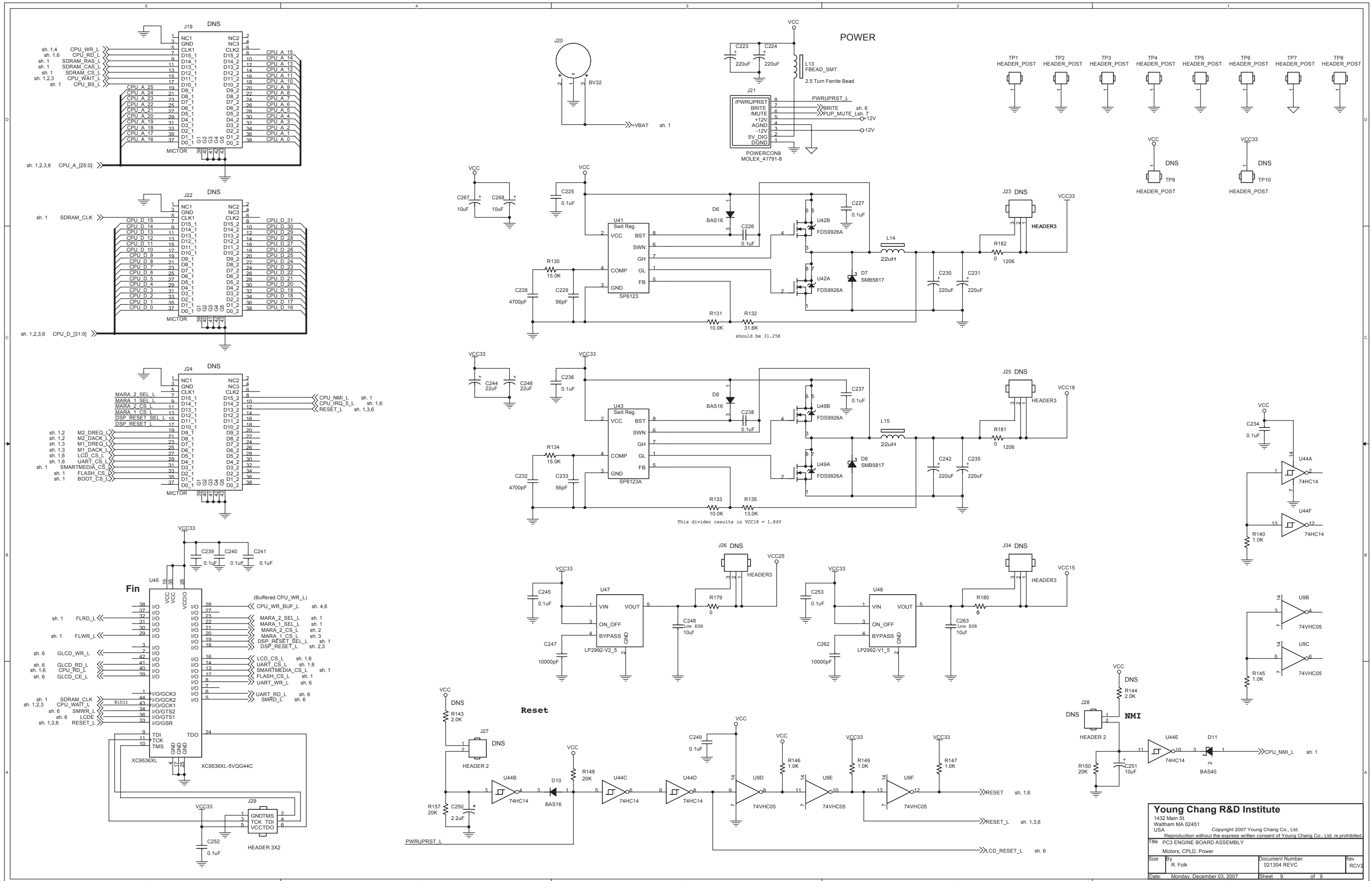
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DAC, Main Outs			
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	R. Folk	021304 REVC	RCV2
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Title: PC3 ENGINE BOARD ASSEMBLY  
 Aux and Headphone Outs

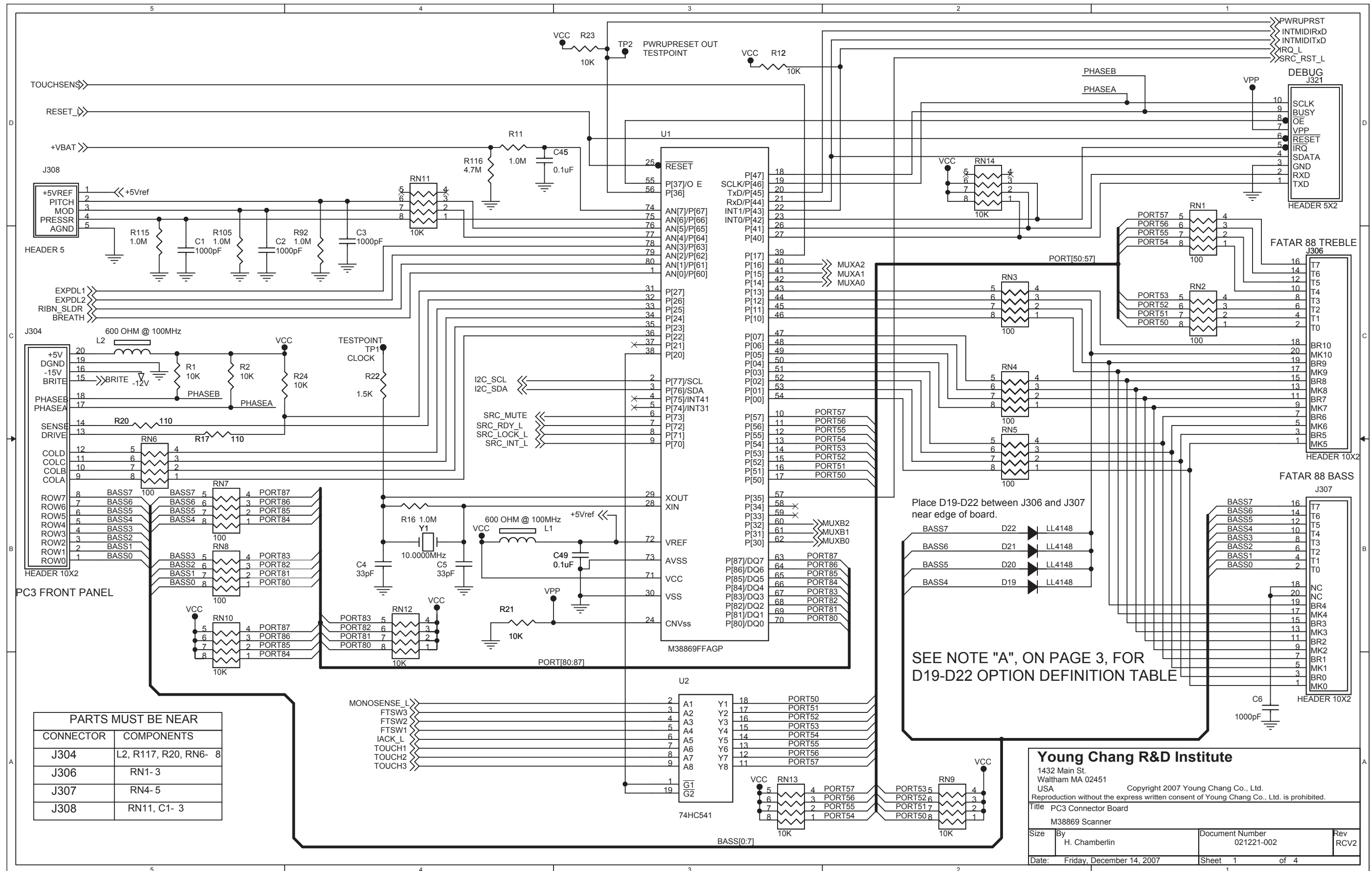
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	R. Folk	021304 REVC	RCV2
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Title: PC3 ENGINE BOARD ASSEMBLY  
 Micrors, CPLD, Power

Size: By	R. Folk	Document Number: 021304 REV C	Rev: RCV2
Date: Monday, December 03, 2007	Sheet: 9	of 9	



**PARTS MUST BE NEAR**

CONNECTOR	COMPONENTS
J304	L2, R117, R20, RN6- 8
J306	RN1-3
J307	RN4- 5
J308	RN11, C1- 3

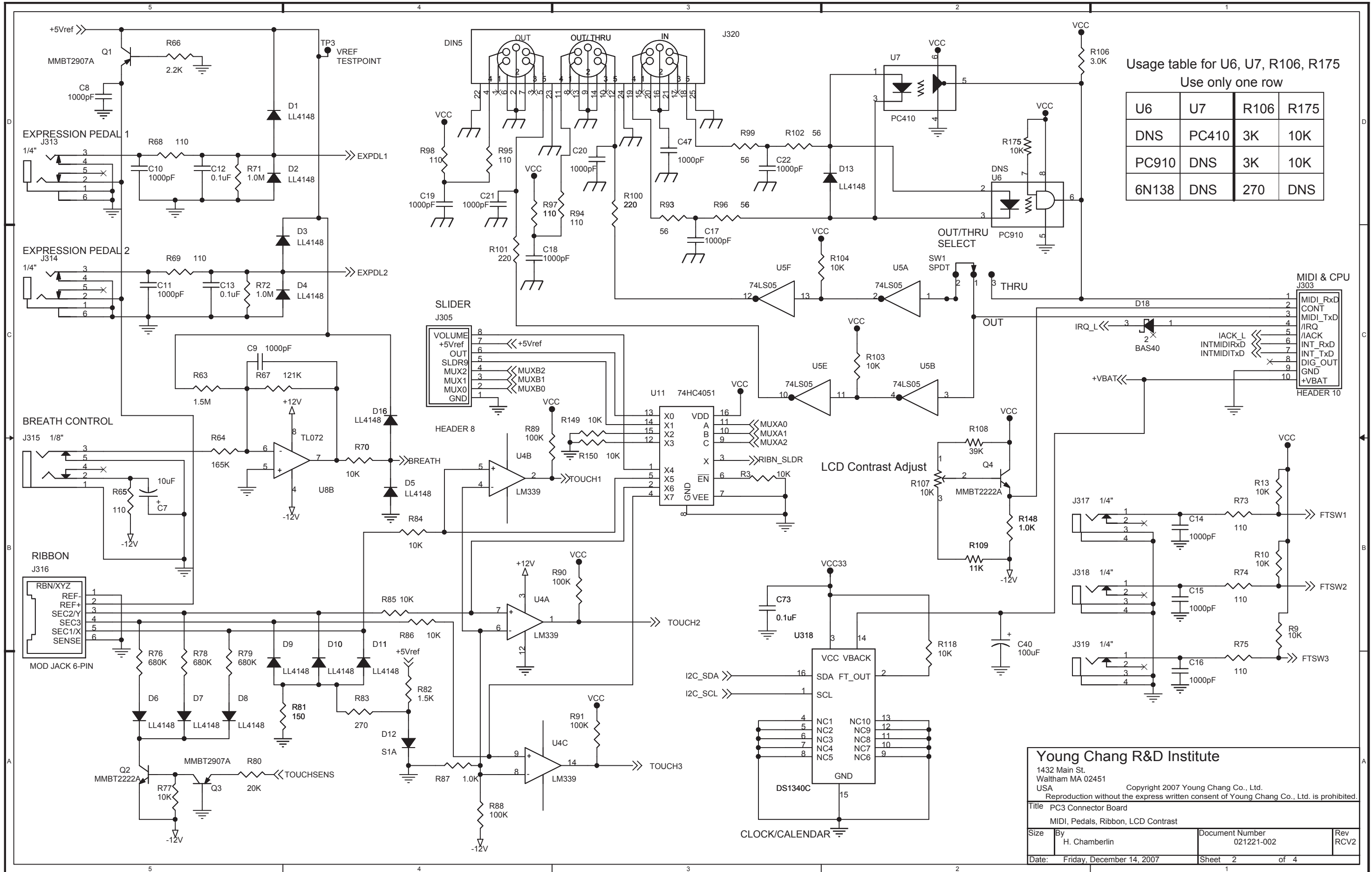
Place D19-D22 between J306 and J307 near edge of board.

SEE NOTE "A", ON PAGE 3, FOR D19-D22 OPTION DEFINITION TABLE

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Title: PC3 Connector Board  
 M38869 Scanner

Size	By H. Chamberlin	Document Number 021221-002	Rev RCV2
Date: Friday, December 14, 2007	Sheet 1	of 4	



Usage table for U6, U7, R106, R175  
Use only one row

U6	U7	R106	R175
DNS	PC410	3K	10K
PC910	DNS	3K	10K
6N138	DNS	270	DNS

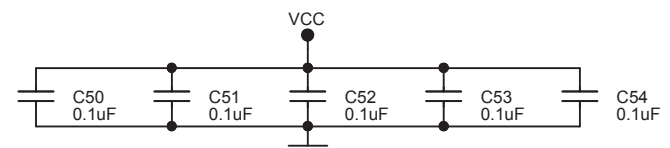
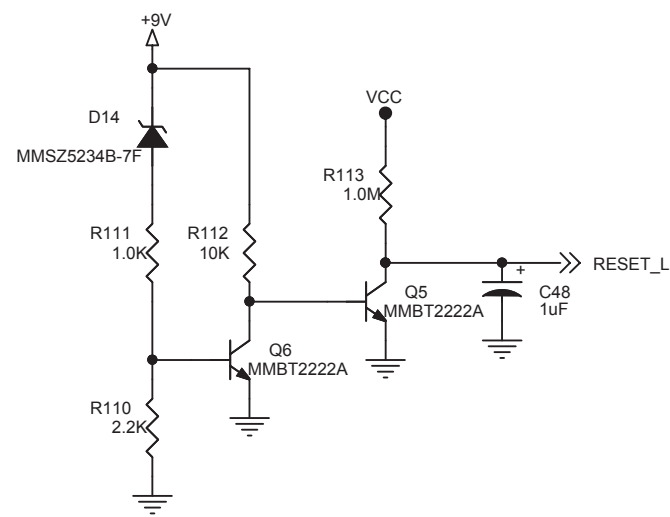
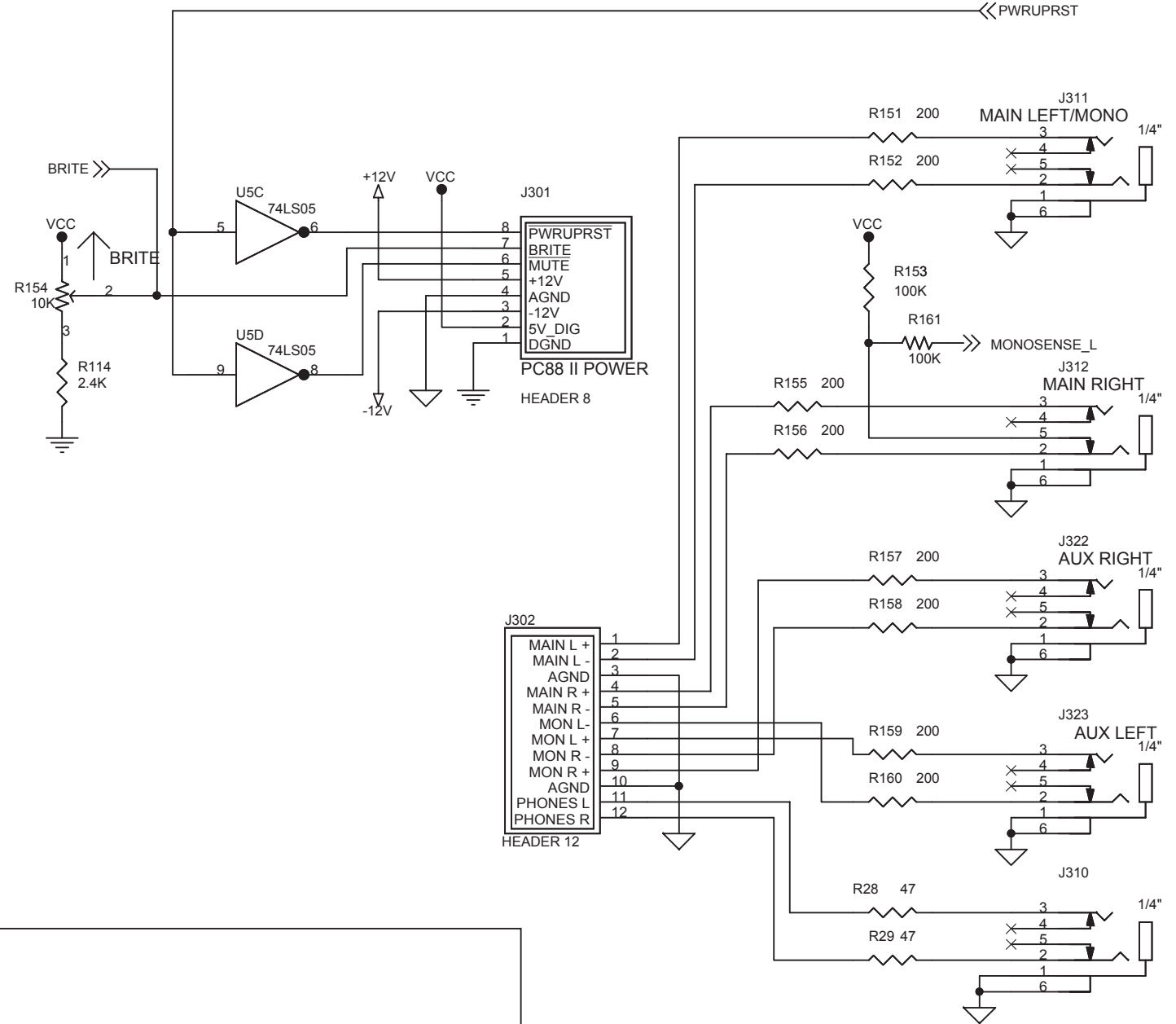
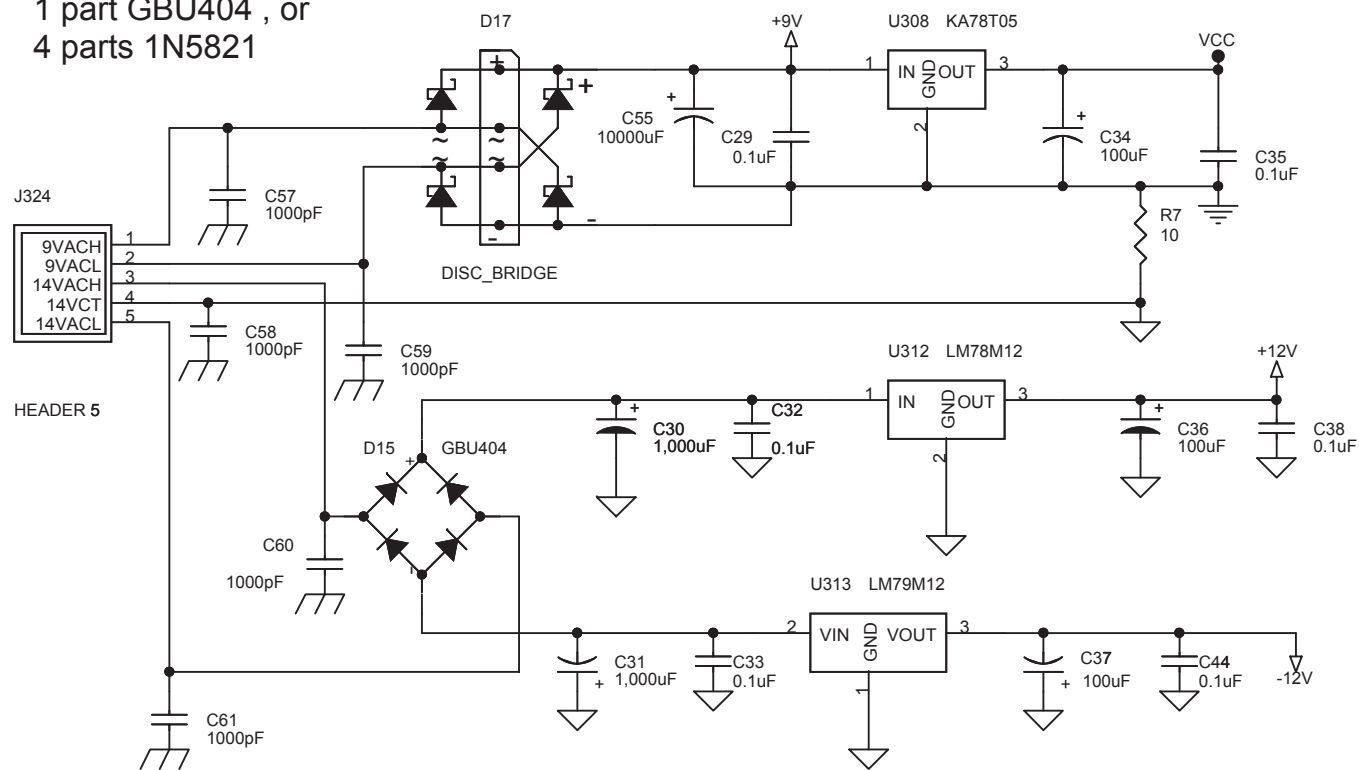
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Title: PC3 Connector Board  
 MIDI, Pedals, Ribbon, LCD Contrast

Size	By	Document Number	Rev
	H. Chamberlin	021221-002	RCV2

Date: Friday, December 14, 2007  
 Sheet 2 of 4

**NOTE:**  
 D17 is a circuit pattern which accomodates either:  
 1 part GBU404 , or  
 4 parts 1N5821



ONE EACH AT GROUND PINS OF U1, U2, U5, U7, U11

**NOTE A:**  
 D22 D20 D21 D19  
 OPT4 OPT3 OPT2 OPT1 HEX Meaning

OPT4	OPT3	OPT2	OPT1	HEX	Meaning
0	0	0	0	00	88 notes, TP/10-MDF-Leadfree
0	0	0	1	01	" TP/40H
0	0	1	0	02	" TP/40L
0	0	1	1	03	" -to be defined-
0	1	0	0	04	76 notes, TP/8P
0	1	0	1	05	" -to be defined-
0	1	1	0	06	" -to be defined-
0	1	1	1	07	" -to be defined-
1	0	0	0	08	61 notes, TP/8P
1	0	0	1	09	61 notes, TP/9P
1	0	1	0	0A	" -to be defined-
1	0	1	1	0B	" -to be defined-
1	1	0	0	0C	Rack Unit, no keyboard, full control panel
1	1	0	1	0D	" minimal control panel
1	1	1	0	0E	" -to be defined-
1	1	1	1	0F	" -to be defined-

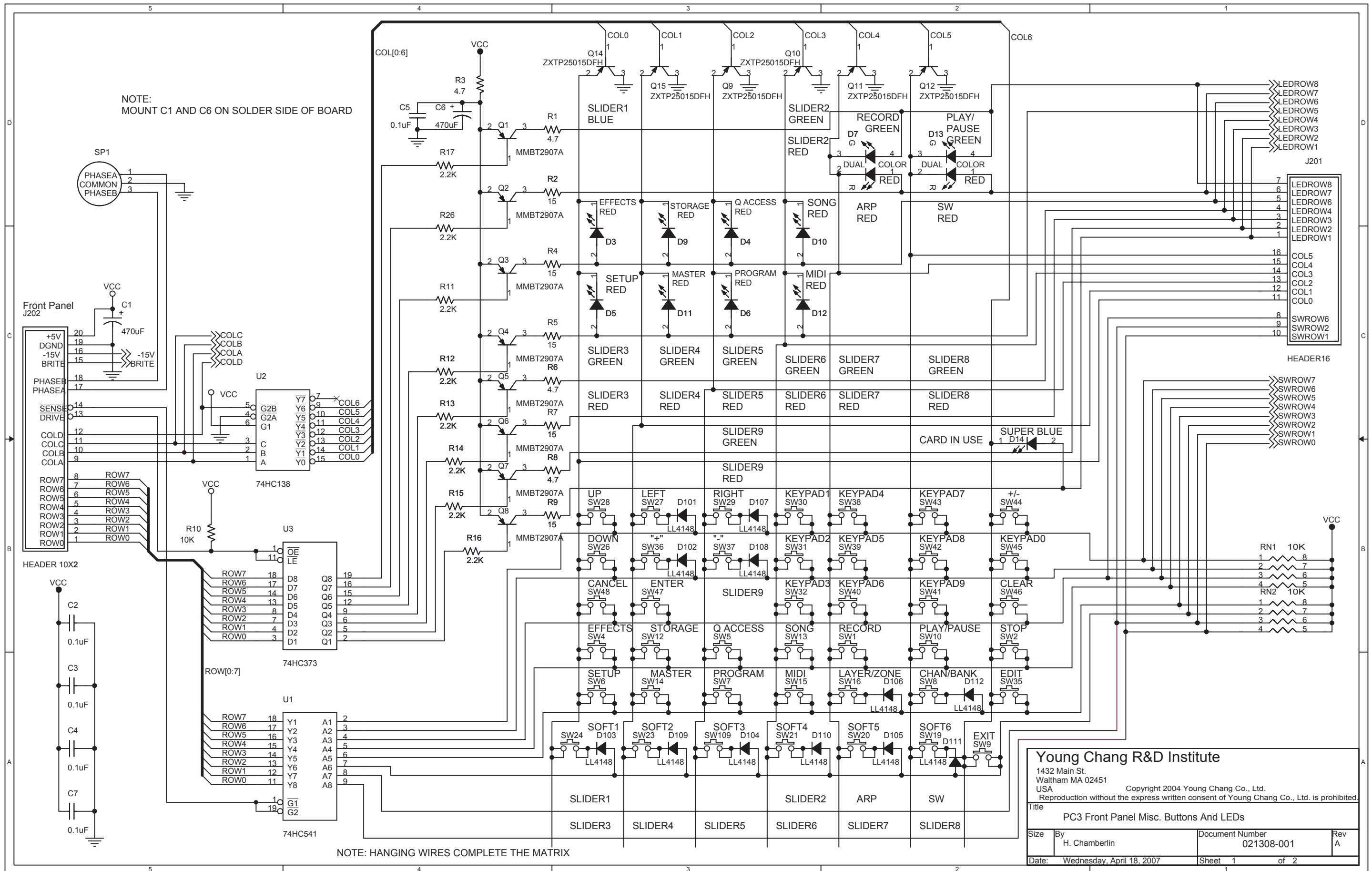
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Title: PC3 Connector Board  
 Power Supply, Audio

Size B	By H. Chamberlin	Document Number 021221-002	Rev RCV2
Date: Friday, December 14, 2007	Sheet 3	of 4	



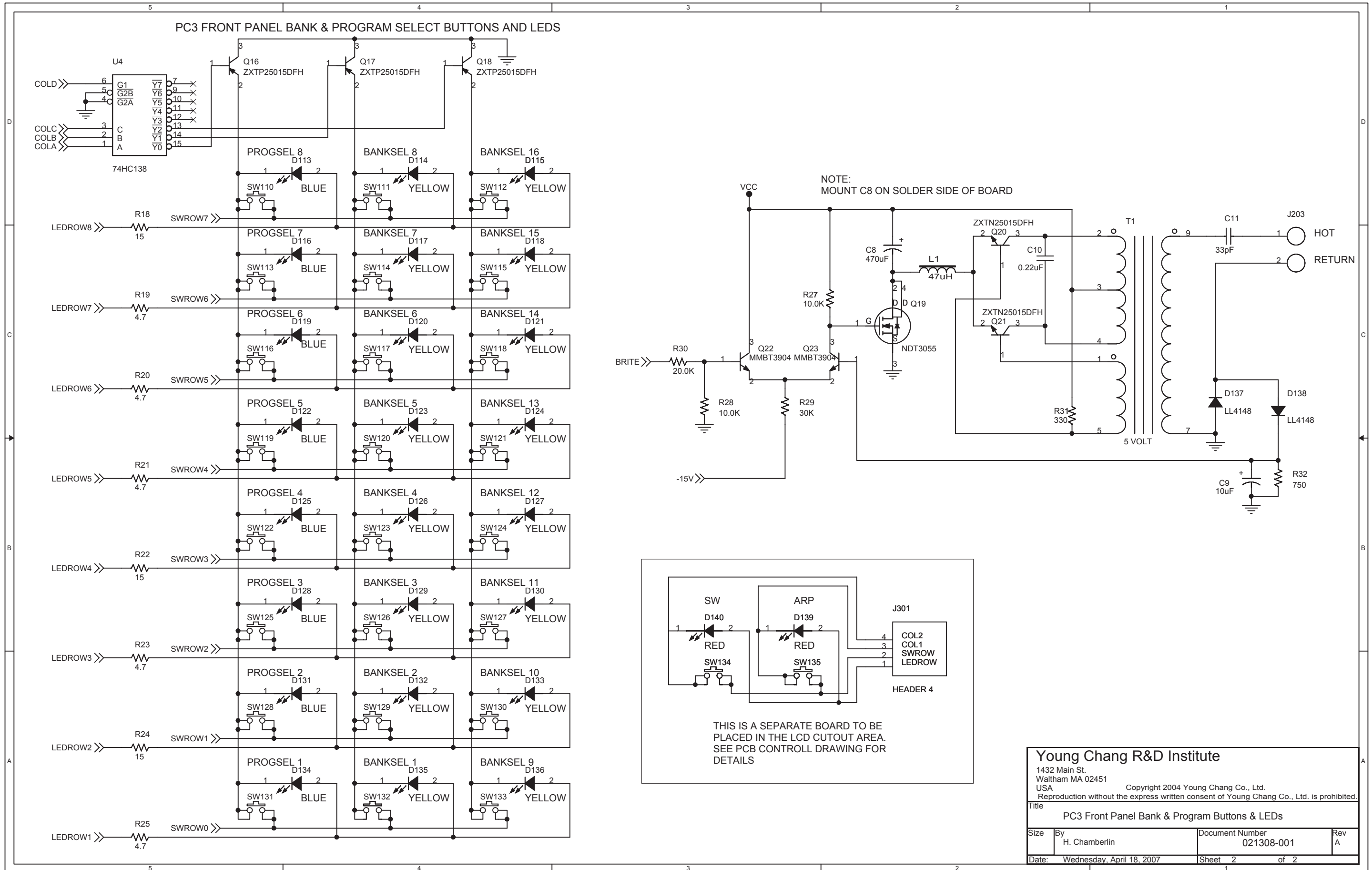




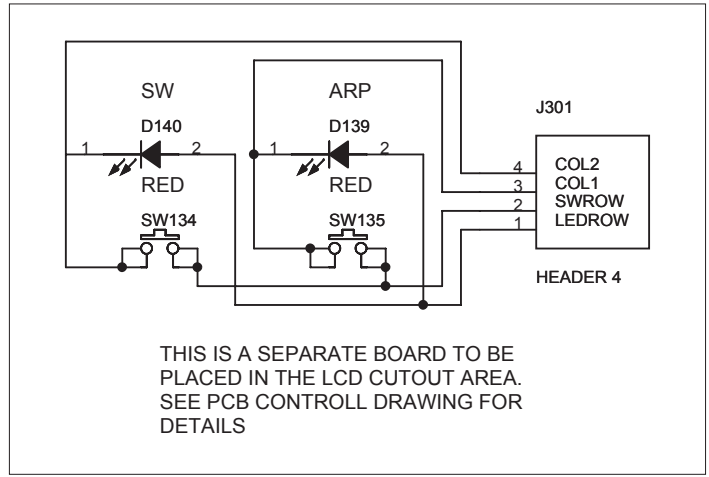
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Title: **PC3 Front Panel Misc. Buttons And LEDs**

Size	By H. Chamberlin	Document Number 021308-001	Rev A
Date:	Wednesday, April 18, 2007	Sheet 1 of 2	

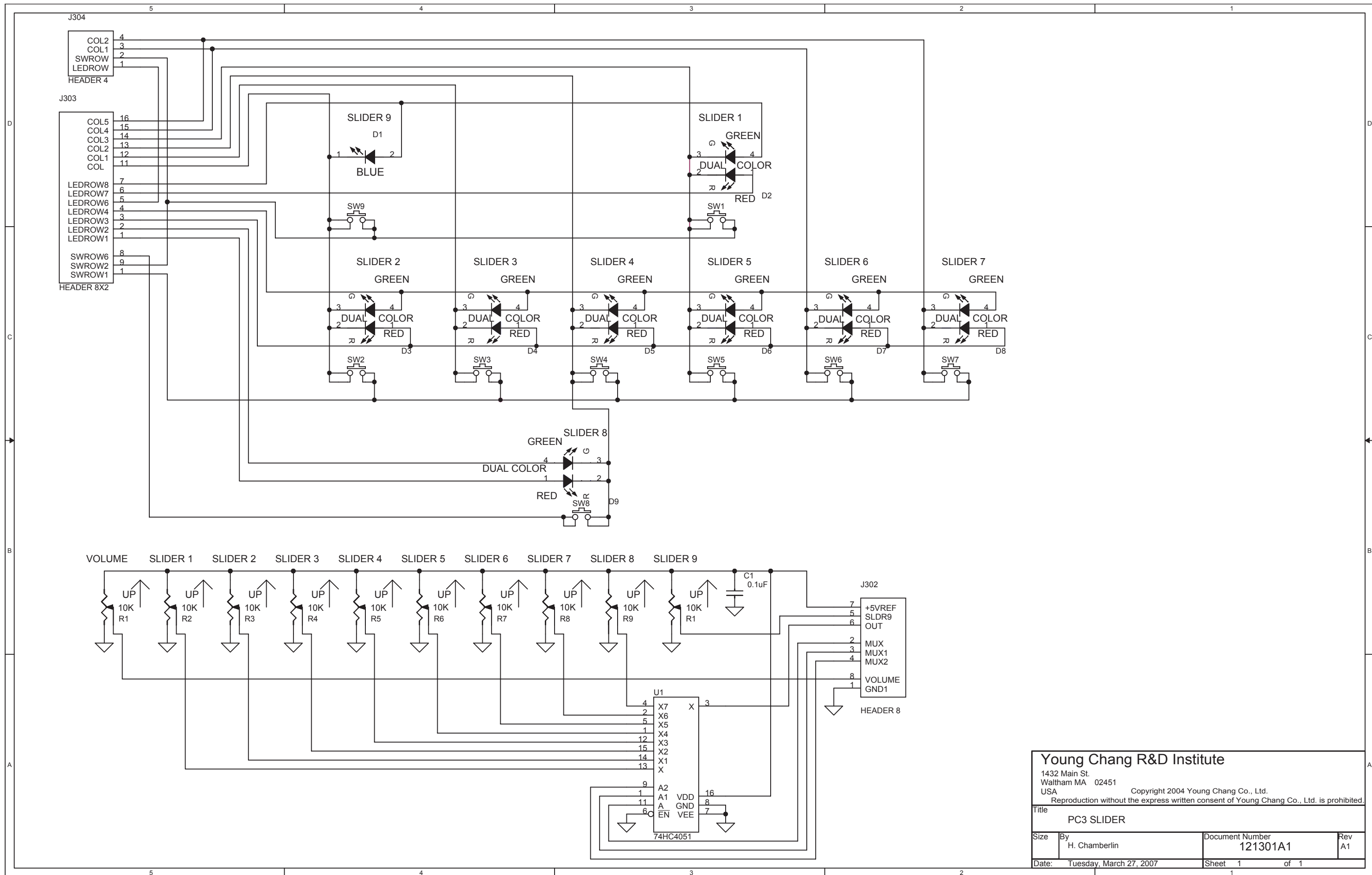


NOTE:  
MOUNT C8 ON SOLDER SIDE OF BOARD



THIS IS A SEPARATE BOARD TO BE PLACED IN THE LCD CUTOUT AREA. SEE PCB CONTROLL DRAWING FOR DETAILS

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Title PC3 Front Panel Bank & Program Buttons & LEDs			
Size	By H. Chamberlin	Document Number 021308-001	Rev A
Date: Wednesday, April 18, 2007	Sheet 2	of 2	

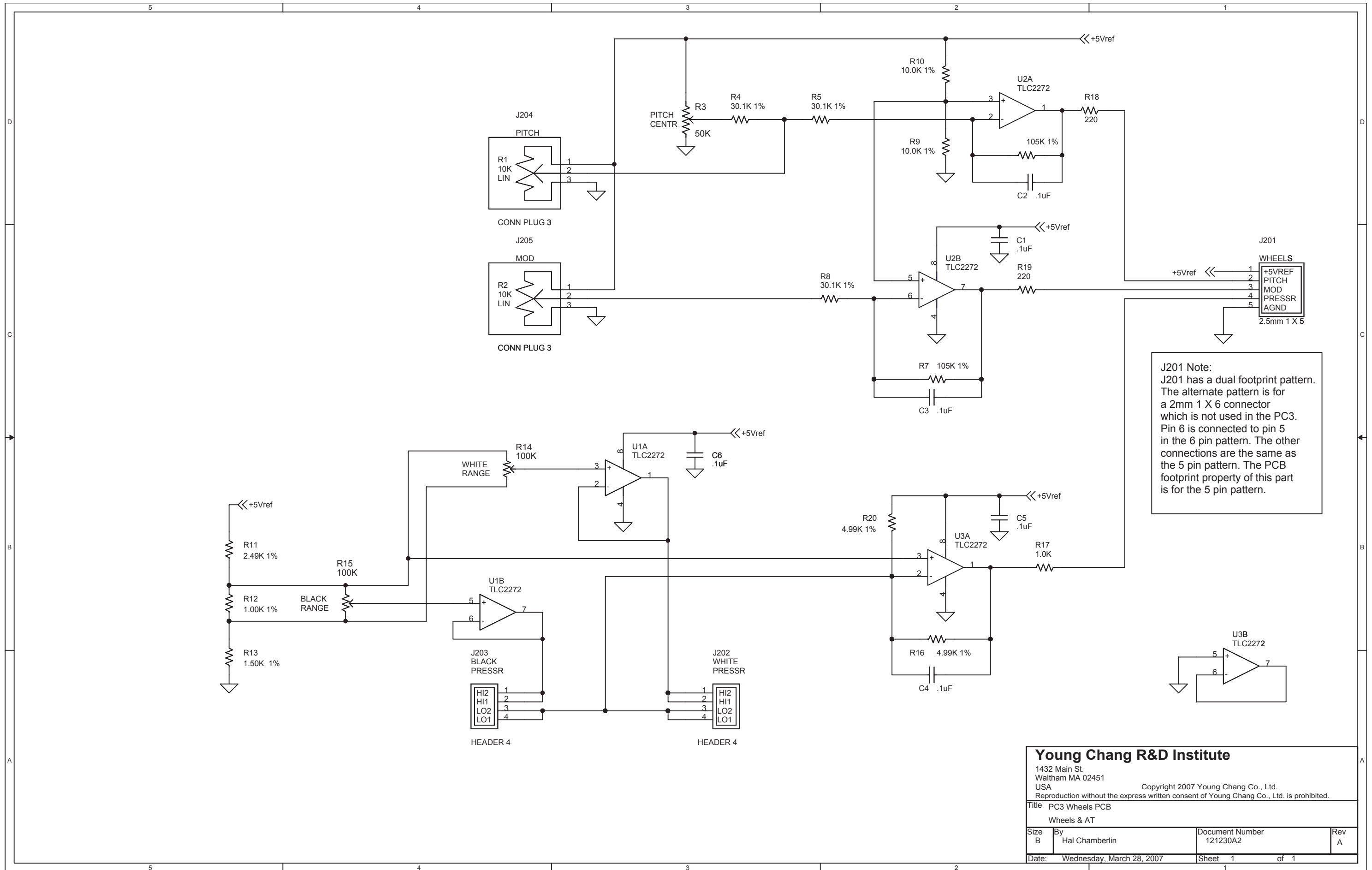


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Title: **PC3 SLIDER**

Size	By H. Chamberlin	Document Number <b>121301A1</b>	Rev A1
Date:	Tuesday, March 27, 2007	Sheet 1	of 1



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Title: PC3 Wheels PCB  
 Wheels & AT

Size B	By Hal Chamberlin	Document Number 121230A2	Rev A
Date: Wednesday, March 28, 2007	Sheet 1	of 1	



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