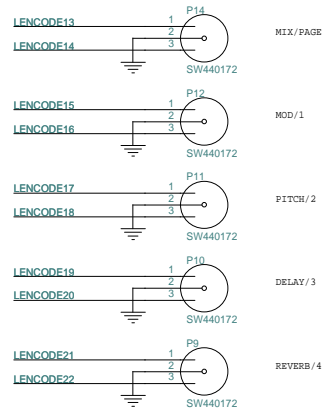
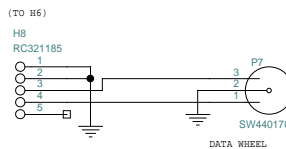


ENCODER BOARD



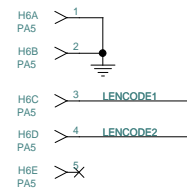
RC6
RC321214



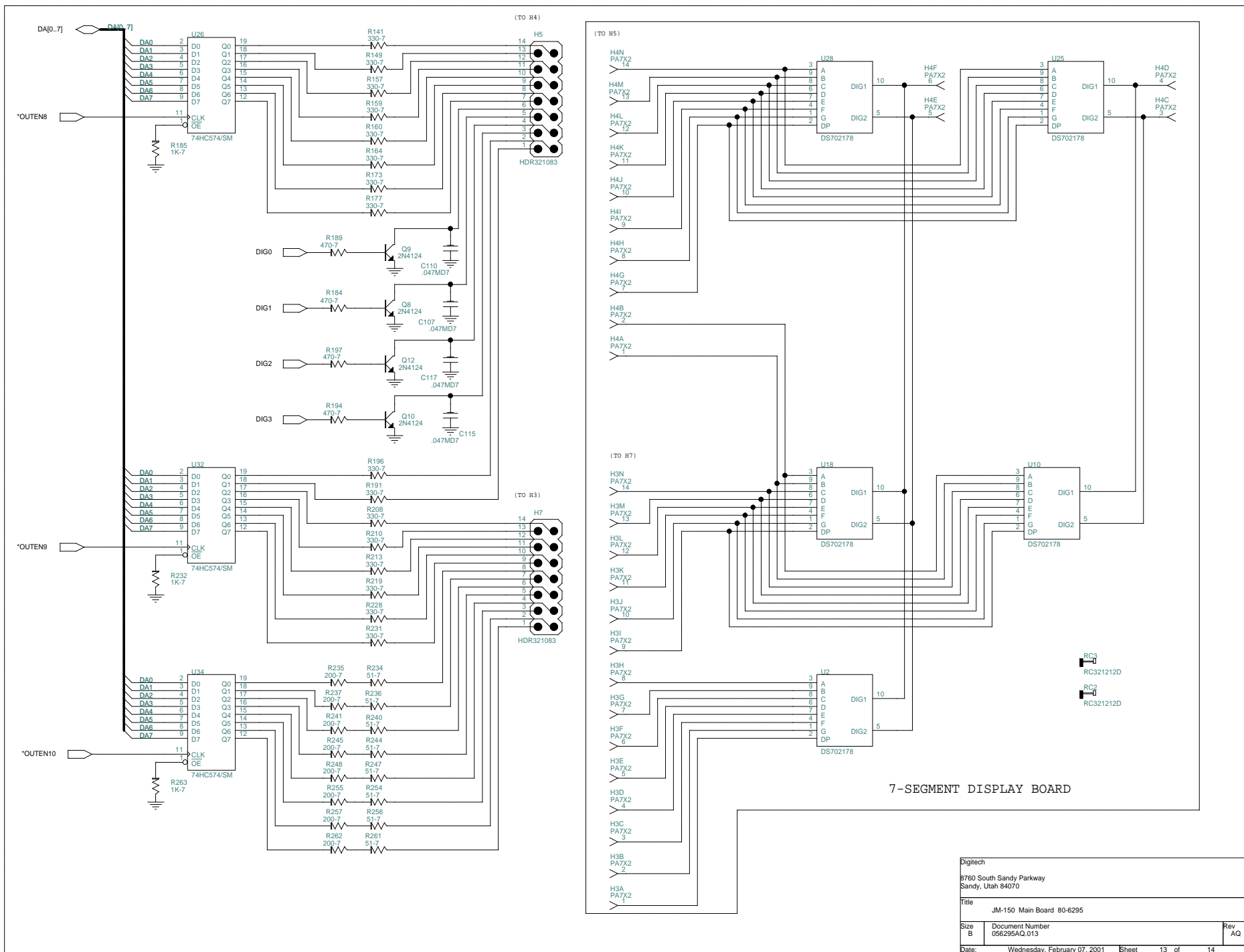
DATA WHEEL BOARD

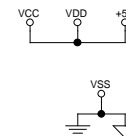
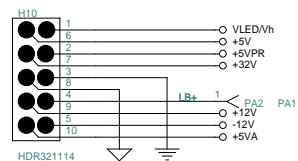
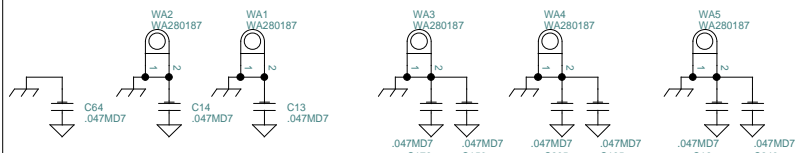
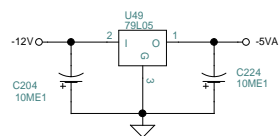
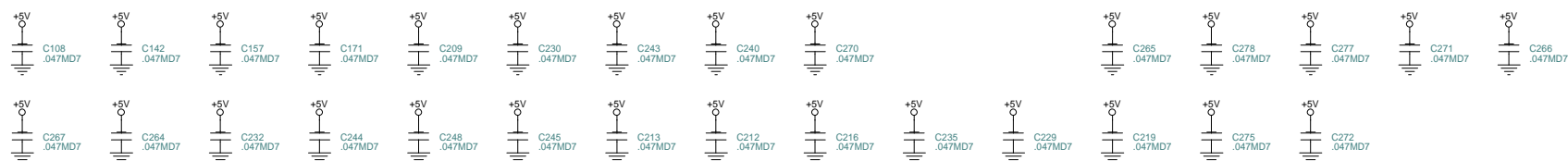
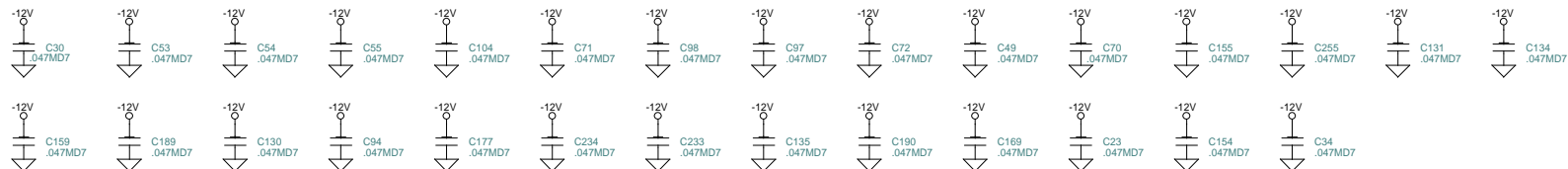
(TO H8)

TO BREAKAWAY ENCODER BOARD



Digitex		
8760 South Sandy Parkway Sandy, Utah 84070		
Title		
JM-150 Main Board 80-6295		
Size	Document Number	Rev
B	056295AQ.012	AQ
Date:	Wednesday, February 07, 2001	Sheet 12 of 14





&l0 (s0P (sl5H (s8V (s0S &l6D &l66P &l3E &a7L &a120M &l61FDOD Software

Page 1

JM-150 Main Board 80-6295

Revised: January 17, 2001

056295AQ.000

Revision: AQ

Bill Of Materials

January 18, 2001

13:51:19

Quan Reference

Part

SYMAN

Description

1	BT1	BT241027	24-1027	3V	Battery, Lithium, W/tabs, Horiz PCB Mount			
117	C1,C11,C12,C13,C14,C23, C27,C30,C34,C39,C40,C49, C53,C54,C55,C56,C57,C58, C59,C64,C70,C71,C72,C74, C75,C76,C90,C94,C95,C97, C98,C99,C100,C104,C106, C107,C108,C110,C115,C117, C130,C131,C132,C133,C134, C135,C136,C138,C142,C154, C155,C156,C157,C159,C161, C164,C166,C169,C171,C177, C178,C179,C181,C184,C185, C189,C190,C191,C196,C205, C206,C209,C212,C213,C214, C215,C216,C218,C219,C220, C221,C222,C225,C226,C228, C229,C230,C232,C233,C234, C235,C236,C237,C238,C240, C243,C244,C245,C246,C247, C248,C252,C253,C255,C257, C264,C265,C266,C267,C270, C271,C272,C273,C274,C275, C277,C278	.047MD7	62-3129	.047	uF Cap	50V	20%	Cerm, SMT 0805
29	C2,C5,C7,C16,R19,C20,C25, C28,R35,C43,C48,R51,R52, R53,R59,C61,R67,R68,U79, C93,R96,R131,R134,R211, R220,C261,C262,C263,R440	OMIT	00-0000	This part has been omitted				
2	C3,C6	33LLME1	60-0059-01	33	uF Cap	16V	20%	Elect., LL T&R
2	C4,C8	10S400E	60-0310	10	uF Cap	400V	-20/+80%	Elect
1	C9	.22J	56-0014	.22	uF Cap	50V	5%	Stacked Metal Pet 224J ammo
5	C10,C122,C128,C129,C140	.47J	56-0016	.47	uF Cap	50V	5%	Stacked Metal Pet 474J ammo
2	C15,C36	220PKD7	62-3138	220	pF Cap	50V	10%	Cerm, SMT 0805
2	C17,C18	.0082K250F	56-2219	.0082	uF Cap	250V	10%	Poly Film
1	C19	820PMD1	62-0005	820	pF Cap	50V	20%	Ceramic Disc T&R
1	C21	.33J	56-0015	.33	uF Cap	50V	5%	Stacked Metal Pet 334J ammo
7	C22,C153,C162,C187,C195, C200,C201	.0022J	56-0002	.0022	uF Cap	50V	5%	Poly Film 222J ammo
2	C24,C31	.1J400F	56-2218	.1	uF Cap	400V	5%	Poly Film
24	C26,C37,C38,C42,C60,C67, C68,C73,C79,C80,C81,C82, C83,C85,C89,C112,C114, C146,C147,C148,C151,C158, C160,C168	10NPME1	60-0051-01	10	uF Cap	16V	-20/+20%	Elect., NP T&R
1	C29	.068J	56-0011	.068	uF Cap	50V	5%	Stacked Metal Pet 683J ammo
2	C32,C33	.10J	56-0012	.10	uF Cap	50V	5%	Stacked Metal Pet 104J ammo
3	C41,C62,C84	.0047J	56-0004	.0047	uF Cap	50V	5%	Poly Film 472J ammo
3	C44,C46,C65	.0068J	56-0005	.0068	uF Cap	50V	5%	Poly Film 682J ammo
6	C45,C51,C125,C143,C152, C163	.015J	56-0007	.015	uF Cap	50V	5%	Poly Film 153J ammo
8	C47,C69,C91,C92,C170,	120PJD7	62-3135	120	pF Cap	50V	5%	Cerm, SMT 0805

DOD Software

JM-150 Main Board 80-6295

Revised: January 17, 2001

Page

January 18, 2001 13:51:19

13:51:19

SYMAN

Description

C183,C192,C231				
3 C50,C188,C194	.0010J	56-0000	.0010 uF Cap	50V 5% Poly Film 102J ammo
8 C52,C77,C172,C207,C211, C217,C223,C227	1M50E1	60-0044-01	1.0 uF Cap	50V -20/+20% Elect., T&R C&F
5 C63,C113,C116,C120,C210	.047J	56-0010	.047 uF Cap	50V 5% Stacked Metal Pet 473J ammo
10 C66,C127,C137,C249,C250, C251,C258,C259,C260,C268	22PJJD7	62-3134	22 pF Cap	50V 5% Cerm, SMT 0805
2 C78,C88	.022J	56-0008	.022 uF Cap	50V 5% Poly Film 223J ammo
6 C86,C173,C202,C204,C224, C276	10ME1	60-0049-01	10 uF Cap	16V -20/+20% Elect., -D Ammo
10 C87,C109,C111,C118,C139, C141,C150,C167,C174,C203	.010J	56-0006	.010 uF Cap	50V 5% Poly Film 103J ammo
2 C96,C123	15NPSE1	60-0053-01	15 uF Cap	16V -20/+80% Elect., NP T&R
4 C101,C119,C186,C193	150PMD1	62-0031	150 pF Cap	50V 20% Ceramic Disc T&R
6 C102,C121,C149,C165,C254, C256	470PKD7	62-3133	470 pF Cap	50V 10% Cerm, SMT 0805
1 C103	TP500317	50-0317	0 Ohm Test Pt	5% 1/4 Watt Carbon Film Radial T&R
3 C105,C126,C144	.15J	56-0013	.15 uF Cap	50V 5% Stacked Metal Pet 154J ammo
2 C124,C145	1NPMEE1	60-0046-01	1.0 uF Cap	16V -20/+20% Elect., N.P. T&R
5 C175,C176,C198,C199,C239	15LLME1	60-0052-01	15 uF Cap	16V 20% Elect., LL T&R
2 C180,C197	.0027J	56-0027	.0027 uF Cap	50V 5% Poly Film 272J ammo
2 C182,C208	.033J	56-0009	.033 uF Cap	50V 5% Poly Film 333J ammo
4 C241,C242,C279,C280	10KT	62-0163	10 uF Cap	16V 10% Tantalum T&R
1 C269	4.7ME1	60-0048-01	4.7 uF Cap	16V -20/+20% Elect., T&R
42 D1,D3,D4,D5,D6,D7,D8,D9, D10,D11,D12,D13,D14,D15, D16,D17,D18,D19,D20,D21, D22,D23,D24,D25,D26,D27, D28,D29,D30,D31,D32,D33, D34,D35,D36,D37,D38,D39, D40,D70,D80,D81	1N4148R	70-0004	1N4148 Diode Silicon Switching,	75 Volts PIV, RADIAL
1 D2	LED701902	70-1902	LED Red,	RT. ANGLE, anti-tip housing
33 D41,D42,D43,D44,D45,D46, D47,D48,D49,D51,D52,D53, D54,D55,D56,D57,D58,D59, D64,D65,D66,D67,D68,D69, D71,D72,D73,D74,D75,D76, D77,D78,D79	LEDG702114	70-2114	Green Light Emitting Diode, Tl	(AUTO INSERT)
1 D50	LEDG702062	70-2062	LED Green,	Tl Case (HAND STUFF ONLY)
1 D60	LEDR702061	70-2061	LED Red,	Tl Case (HAND STUFF ONLY)
3 D61,D62,D63	LEDR702113	70-2113	Red Light Emitting Diode, Tl	(AUTO INSERT)
1 D82	1N751A	70-0003	1N751A Diode Zener Glass,	1/2W 5.1V, DO-35
2 H1,H6	PA5	00-0000	5 Pin Pad Pattern,	Not a part
2 H2,H8	RC321185	32-1185	5 Pin Ribbon Cable Flex,	0.1" spacing, 2.00" Length, Open end
5 H3,H4,H12,H14,H16	PA7X2	00-0000	7X2 Pin Pad Pattern,	Not a part
7 H5,H7,H9,H11,H15,H18,H19	HDR321083	32-1083	14 Pin Hdr, 7x2, 0.1"	spacing, 0.025 pins, .375
1 H10	HDR321114	32-1114	5X2 Pin Vertical Header,	.165" Spacing, Dual Row W/Mtg Pegs
1 H13	PA13X2	00-0000	13X2 Pin Pad Pattern,	Not a part
1 H17	HDR322000	32-2000	26 Pin Hdr, 13x2, 0.1"	spacing, 0.025 pins
5 J1,J2,J3,J4,J7	J320119	32-0119	1/4 Phone Jack, Hor.	Mount, Full Nose Thread Slimline
2 J5,J6	J320116	32-0116	JACK, Shielded 5 pin DIN,	PCB mount
1 J8	J320092	32-0092	5 Pin DIN Jack	

DOD Software
JM-150 Main Board 80-6295
056295AQ.000
Bill Of Materials
Quan Reference

Revised: January 17, 2001

Revision: AO

January 18, 2001 13:51:19

SYMAN

Description

28	L1,L2,L3,L4,L5,L6,L8,L9, L10,L11,L12,L13,L14,L15, L16,L20,L21,L22,L23,L24, L25,L26,L27,L28,L31,L32, L33,L34	FB260217	26-0217	Ferrite Bead, 2.5Kohms @70Mhz, SMT 0805		
1	L7	600UH	26-0196	600 uH Inductor		
5	L17,L18,L19,L29,L30	FB260219	26-0219	Ferrite Bead, 600 ohms @100Mhz, SMT 0805		
2	LS30,LS31	LS281007	28-1007	Led Standoff, 0.187" OD x 0.120" ID x 0.330" Length		
3	P1,P13,P15	100K402011	40-2011	100 K "W" 16mm, Rot Pot x2, Rack Leads		
1	P2	5K420219	42-0219	5 K Trim Pot, Vertical Mount, 10mm		
10	P3,P4,P5,P6,P8,P9,P10, P11,P12,P14	SW440172	44-0172	Encoder Switch,24 Pos/Dtnt,2-bit,R/A,16mm body,15mm D-shaft		
1	P7	SW440170	44-0170	Encoder Switch, 32 Position, Vert, 17mm shaft		
2	PA1,PA2	PA1	00-0000	1 Pin Pad Pattern, Not a part		
1	PA3	PA10079	00-0000	10 Pin Pad Pattern, Not a part, 2MM Spacing		
1	PCB1	80-6295-A	80-6295-A	DigiTech, JM-150/JM-250 MAIN PCB, RAW		
3	Q1,Q5,Q13	J112	70-1012	J112A JFET, National Only		
1	Q2	2N4125	70-1008	2N4125 PNP, Gen. Purp. Amplifier/Switching Xstr		
6	Q3,Q4,Q6,Q7,Q11,Q14	2N5088	70-1007	2N5088 NPN, Transistor, T&R		
19	Q8,Q9,Q10,Q12,Q15,Q16, Q17,Q18,Q19,Q20,Q21,Q22, Q23,Q24,Q25,Q26,Q27,Q28, Q29	2N4124	70-1009	2N4124 NPN, Gen. Purp. Amplifier/Switching Xstr T&R		
27	R1,R7,R40,R65,R70,R82, R84,R89,R106,R112,R114, R117,R143,R150,R176,R179, R198,R243,R251,R283,R290, R291,R313,R314,R339,R340, R424	2K-7	50-1508	2	KOhm Resistor 5% 1/10 Watt TF, SMT 0805	
13	R2,R8,R20,R37,R44,R72, R81,R92,R98,R142,R405, R407,R408	1M-7	50-1506	1	MOhm Resistor 5% 1/10 Watt TF, SMT 0805	
3	R3,R13,R36	62K-7	50-1501	62	KOhm Resistor 5% 1/10 Watt TF, SMT 0805	
90	R4,R5,R9,R14,R17,R18,R30, R48,R50,R54,R57,R69,R74, R75,R77,R80,R86,R94,R97, R116,R118,R119,R126,R158, R161,R167,R171,R175,R190, R193,R199,R216,R218,R227, R238,R242,R246,R253,R269, R272,R275,R276,R281,R282, R285,R286,R287,R288,R294, R295,R296,R298,R301,R309, R310,R320,R323,R325,R329, R332,R334,R335,R343,R347, R348,R351,R352,R356,R361, R363,R366,R374,R375,R376, R383,R384,R385,R386,R391, R393,R395,R400,R402,R423, R429,R430,R431,R445,R446, R448	10K-7	50-1503	10	KOhm Resistor 5% 1/10 Watt TF, SMT 0805	
24	R6,R250,R284,R293,R300, DOD Software	680-7	50-1511	680	Ohm Resistor 5% 1/10 Watt TF, SMT 0805	
JM-150 Main Board 80-6295		Revised: January 17, 2001				
056295AQ.000		Revision: AQ				
Bill Of Materials		13:51:19				
Quan Reference		January 18, 2001	SYMAN Description			
		Part				

Page

R302,R321,R327,R331,R333,

[illegible]

1	U50	ADS1286	72-1420	CONVERTER, 12-Bit Serial A to D, SMT
1	U52	TMS57070	72-3042	TMS57070 in QFP100 SPECIAL FOOTPRINT, SMT
1	U53	LM311/SM	72-5415	LM311 Analog Voltage Comparator, SMT
2	U55,U74	74HC139/SM	72-5420	Dual 2 Line to 4 Line Decoder/Demultiplexer, SMT
2	U57,U64	256KX16-70	72-1419	DRAM, 256K x 16 70ns, SOJ, SMT
2	U58,U59	74HC574A/S	72-1263	Octal D-Type Edge Triggered Flip-Flops, SMT
2	U61,U62	R107R10K	54-0353	8 Bit R-2R Ladder, 10.00 kOhm 2% Thick Film

056295aq.pls

1	U63	SDISC5500	72-5500	SDISCI W/I's Interface in QFP100 SPECIAL FOOTPRINT, SMT
1	U68	6N138	70-2139	6N138 Opto-Isolator
1	U69	Z8S180/S	72-4161	CPU Z8S180 Microprocessor, 20MHz, SMT
1	U70	74HC04/SM	72-1086	Hex Inverter 74HC04, SMT
1	U75	MC34064P	70-5004	MC34064 Undervoltage Sensing Circuit
1	U76	72-1423-01	72-1423-01V1	
1	U77	74HC86/SM	72-1404	74HC86 Quad 2-Input XOR Gate, SMT
1	U78	74AC74/SM	72-5425	74AC74 Dual D-Type Pos Edge Trig Flip-Flop, SMT
1	U80	128KX8_SRA	72-5417	128K X 8 RAM Static, SMT
2	U81,U82	74HC138/SM	72-5419	3 Line to 8 Line Decoder/Demultiplexer, SMT
2	V1,V2	12AX7A2	76-0002	12AX7A2 Tube
1	W1	W360030	36-0030	Wire, 2 End, 10.50", Black, 20AWG UL/CSA
5	WA1,WA2,WA3,WA4,WA5	WA280187	28-0187-A	Washer, for grounding J320119
1	X1	22.579 MHZ	76-0320	20.579 MHZ Crystal, Vert
1	X2	20.00MHZ-V	76-0321	20.00 MHZ Crystal, Vert