

SI-TEX

SP-70 AUTOPILOT

**TECHNICAL DATA
&
COMPUTER INTERFACE GUIDE**
Part #65220

**SI-TEX Marine Electronics Inc.
#800 - 11001 Roosevelt Blvd.
St. Petersburg, FL 33716
(813) 576-5734**

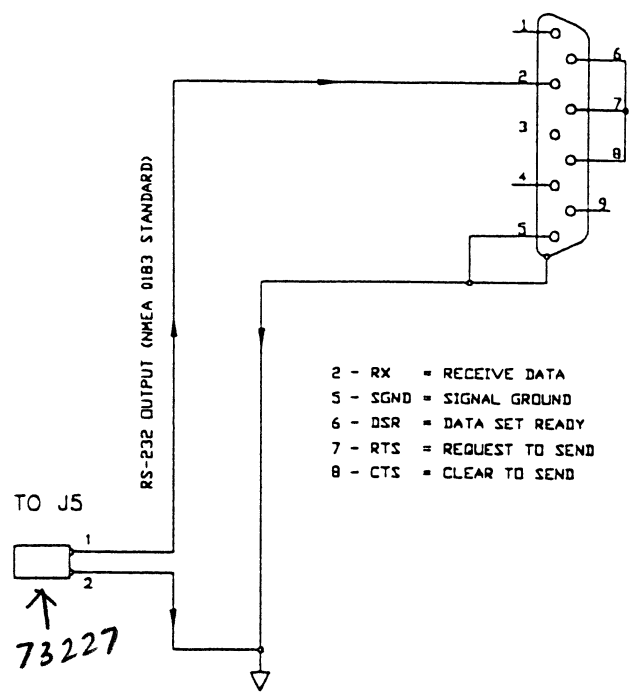
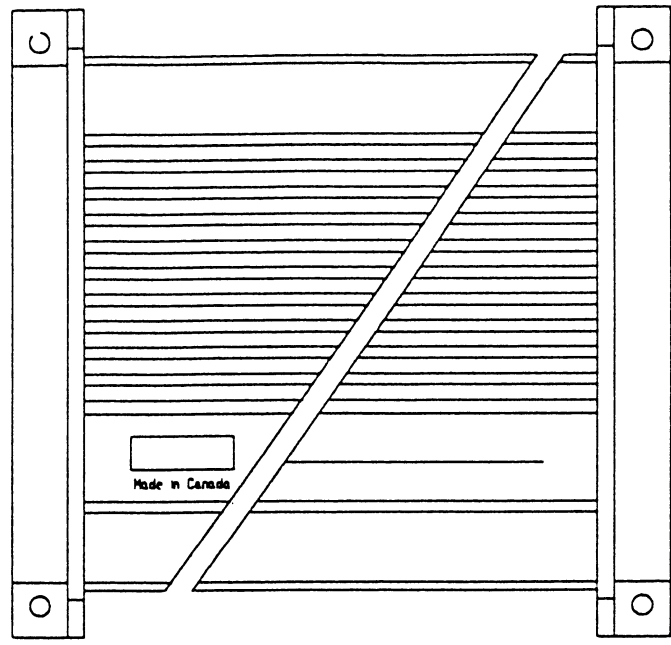
NOTE

- 1) The following three pages contains details on the RS-232 sentences sent out from the SP-70 autopilot as well as a hardware wiring diagram.
- 2) Once you have the hardware working, look at field #6 in the sentences arriving on the screen. These are on the page #1 of the two pages called "STATUS MESSAGES from SI-TEX ELECTRONICS INC." and they identify the particular version of software in the SP-70 autopilot you have connected the computer interface.
- 3) For identifying sensitivity or gain settings, look at field #12 on version 1.01 autopilots. For versions higher than 1.01, please look at field #13.

If you further questions or any technical difficulties, please do not hesitate to contact us. Our phone number is (813) 576-5734 and our fax number is (813) 530-7272.

We look forward to serving you.

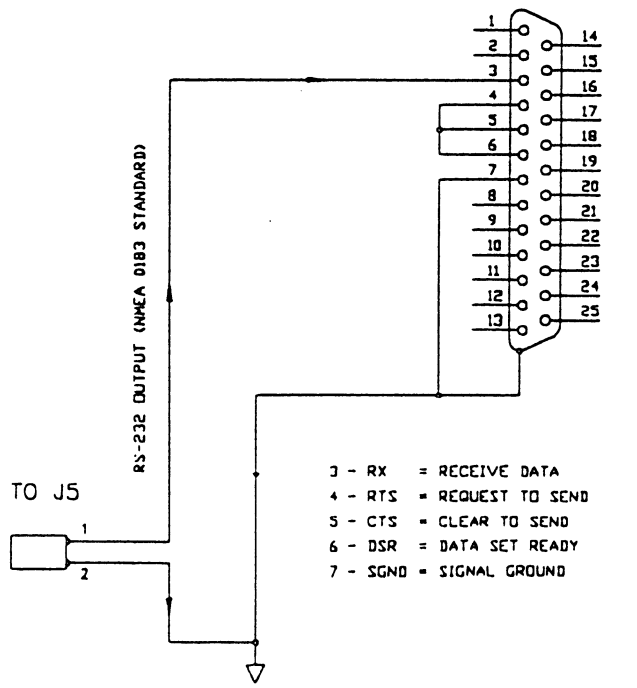
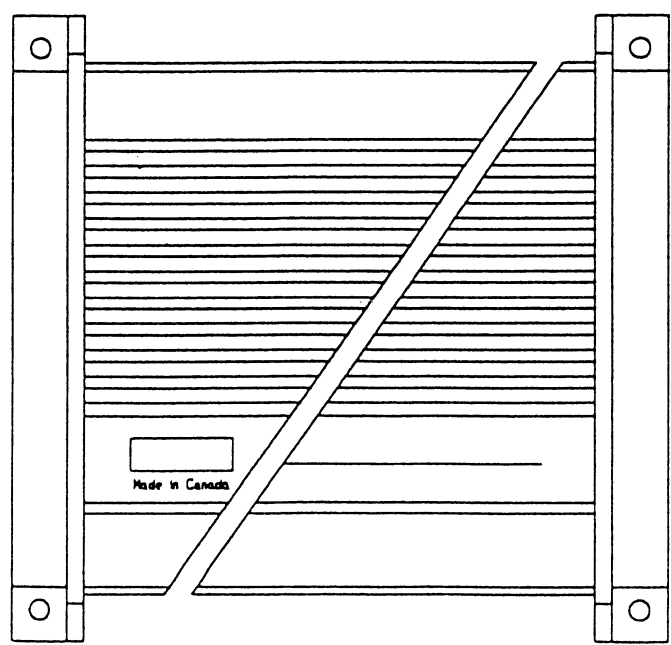
CONNECTION TO THE PC (PERSONAL COMPUTER), TO THE RS-232 INPUT - (COM1, COM2) - 9 PIN PLUG CONNECTOR



1420/2200 INTERFACE CONNECTION FOR OUTPUT SIGNAL TEST

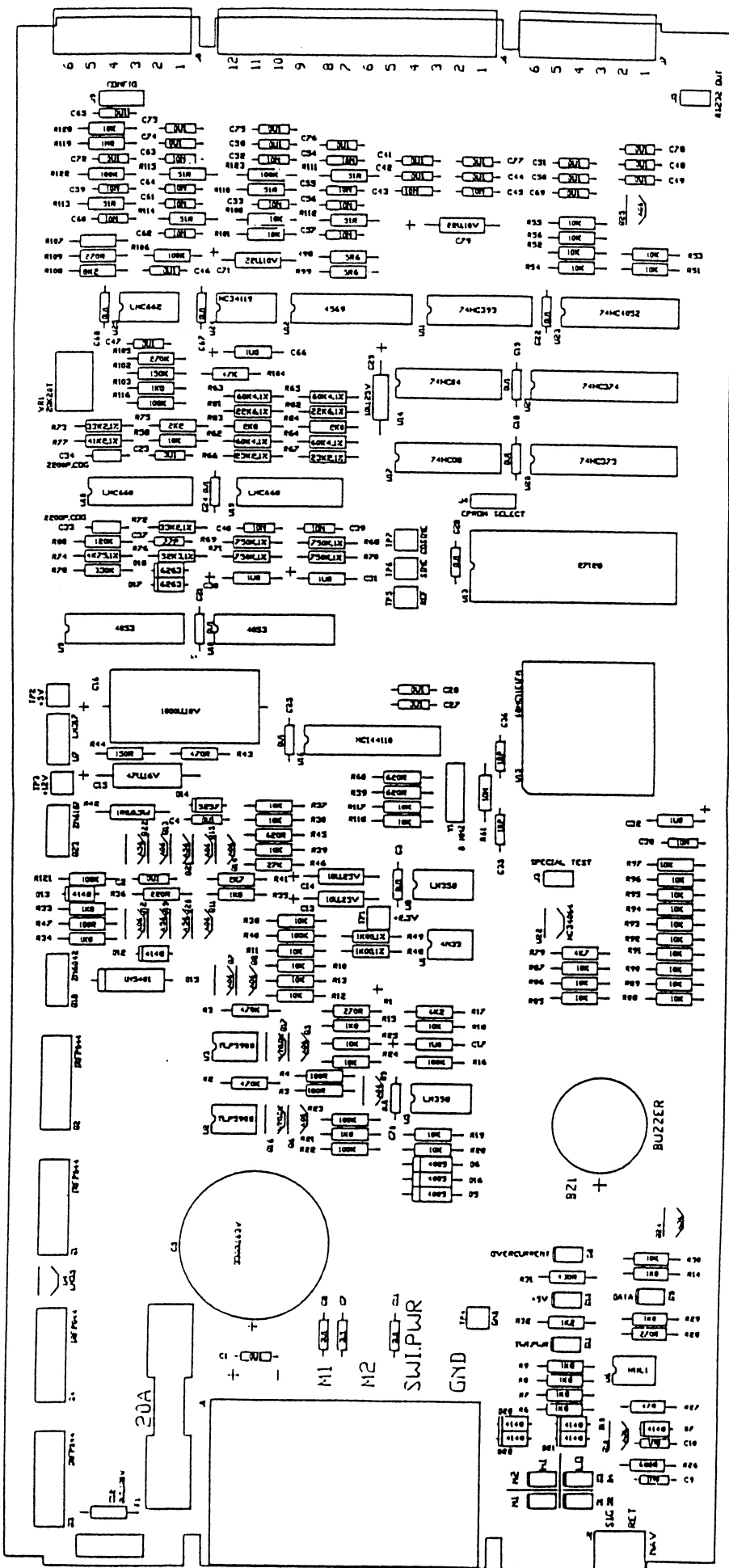
COMNAV MARINE LTD APRIL 28, 1984

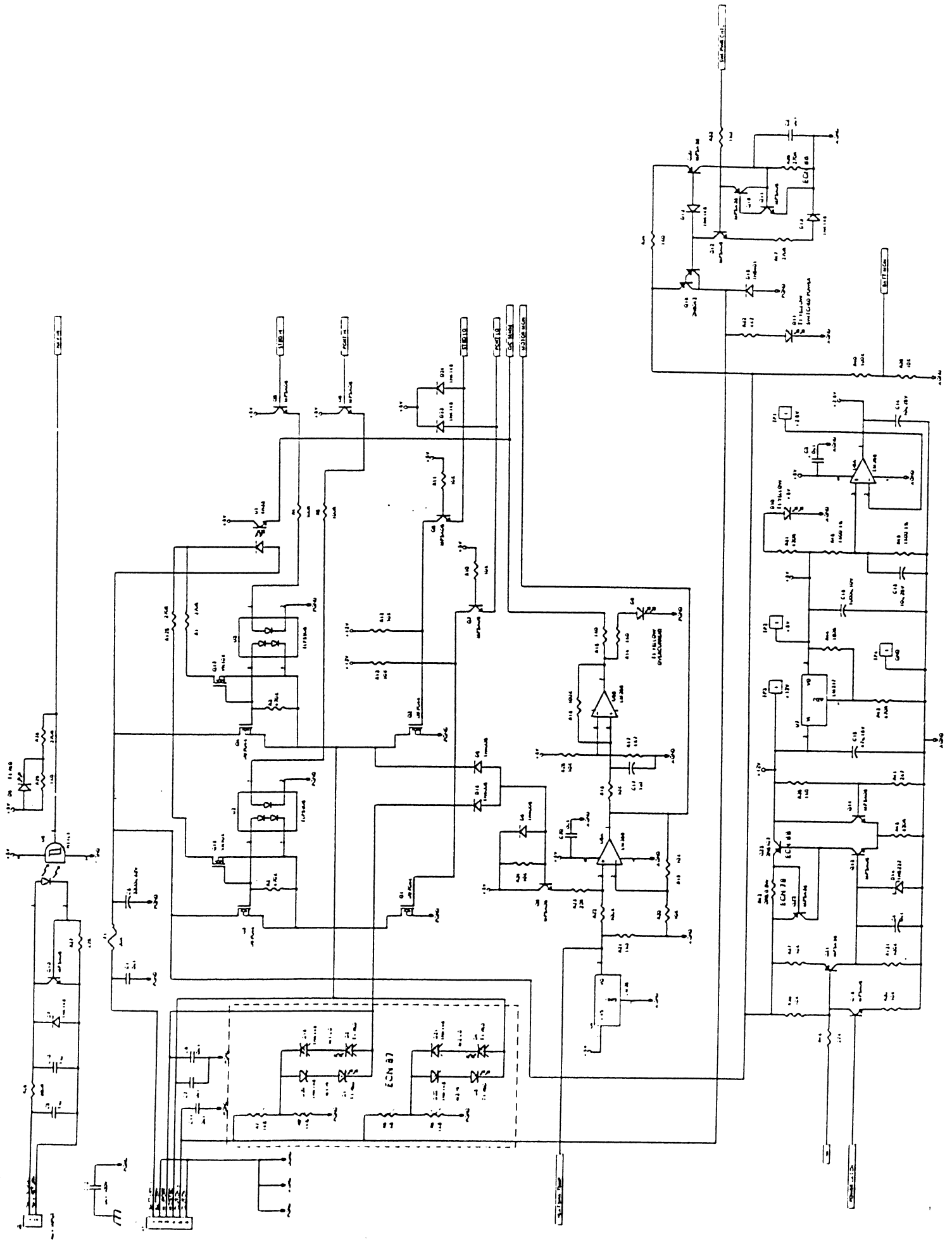
CONNECTION TO THE PC (PERSONAL COMPUTER), TO THE RS-232 INPUT - (COM1, COM2) - 25 PIN PLUG CONNECTOR

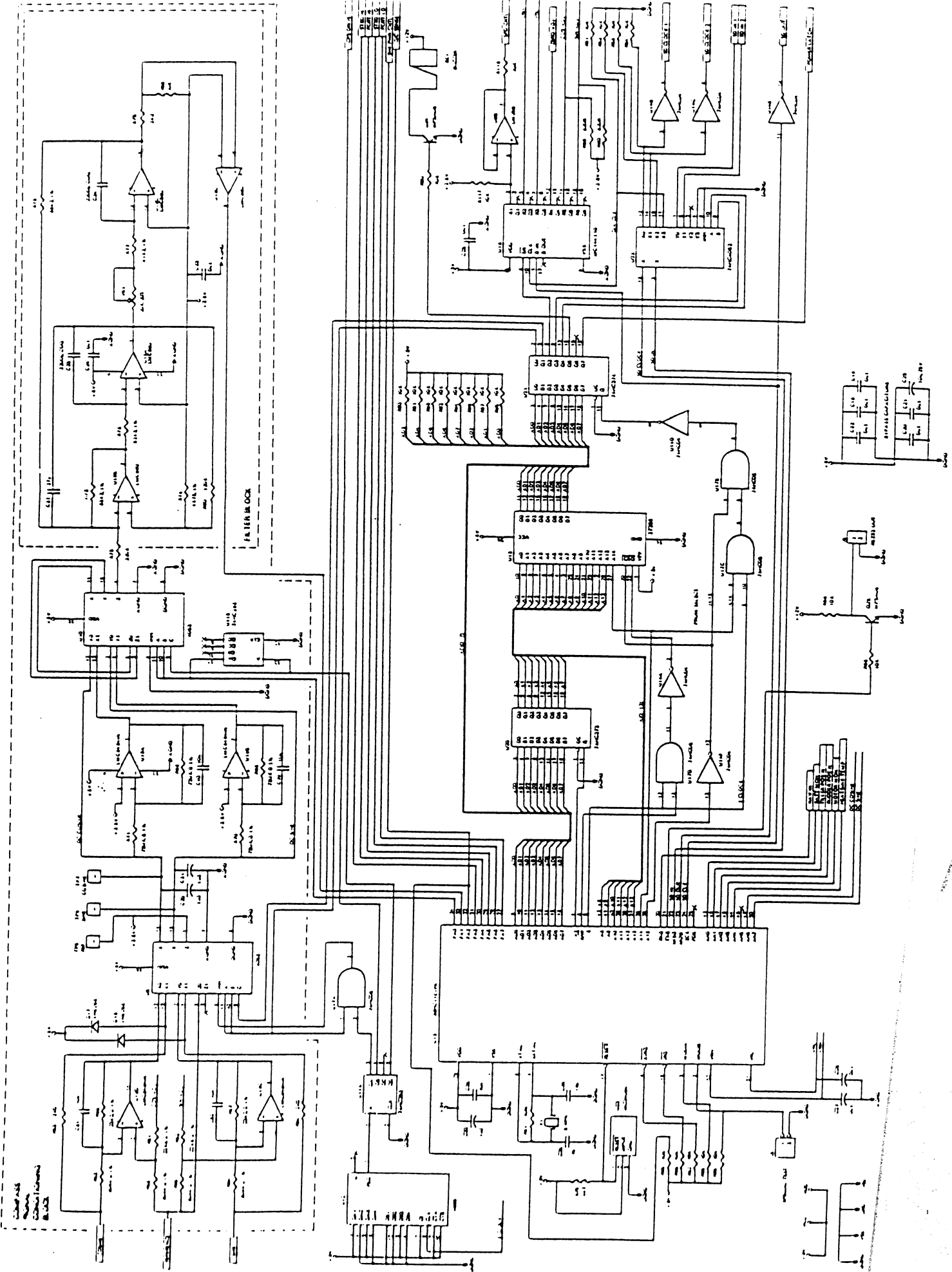


1420/2200 INTERFACE CONNECTION FOR OUTPUT SIGNAL TEST

COMNAV MARINE LTD APRIL 28, 1984

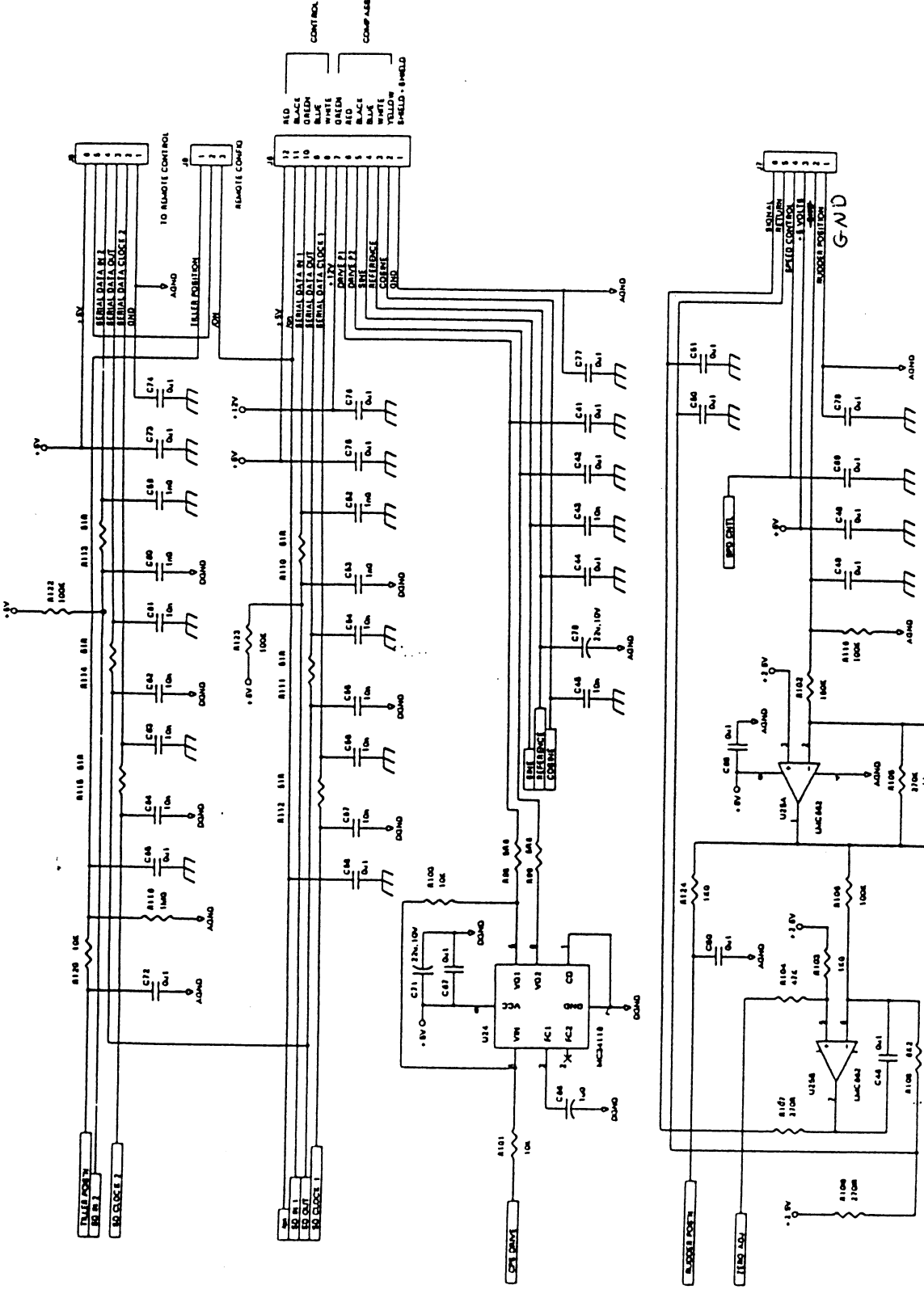






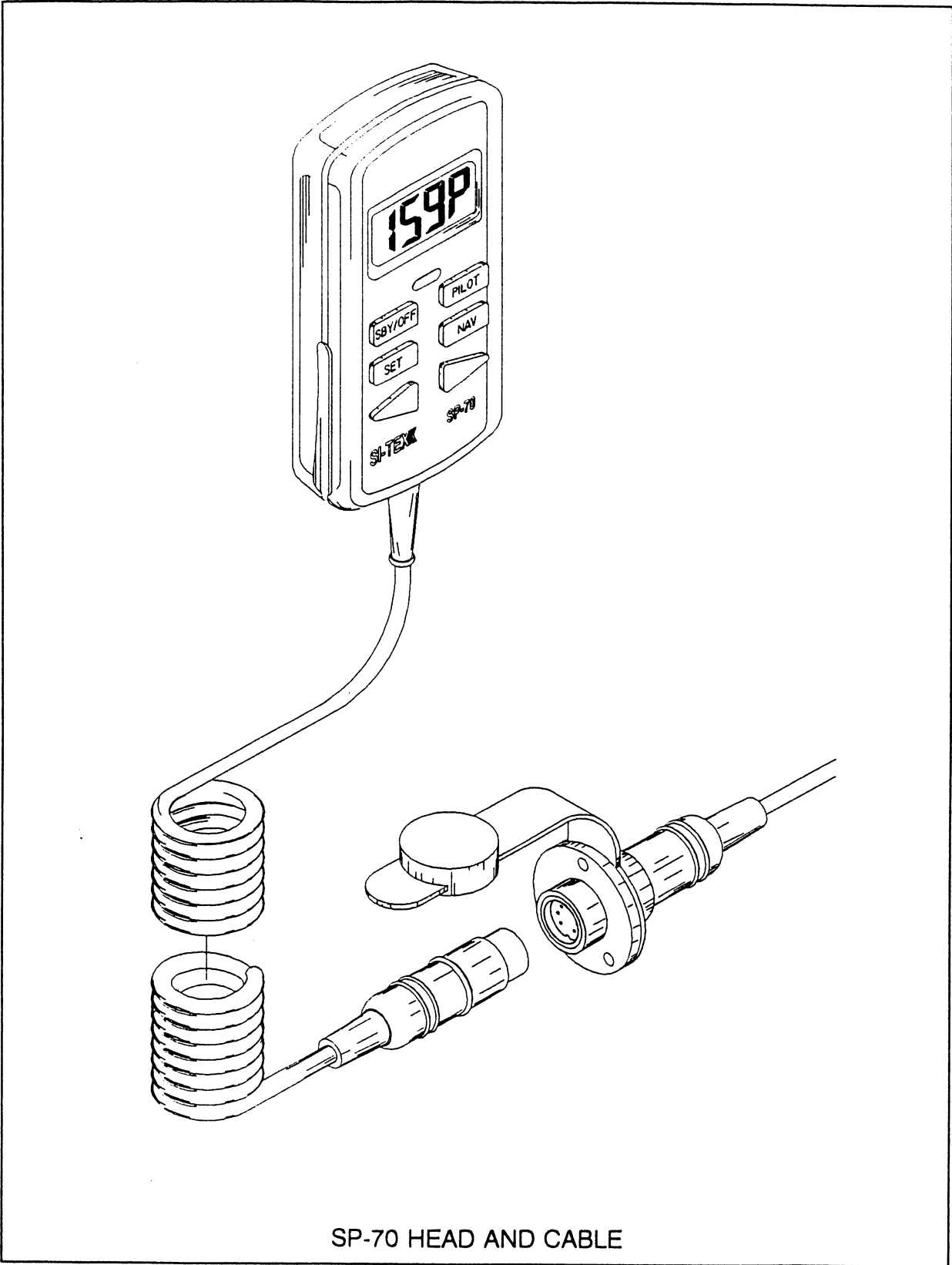
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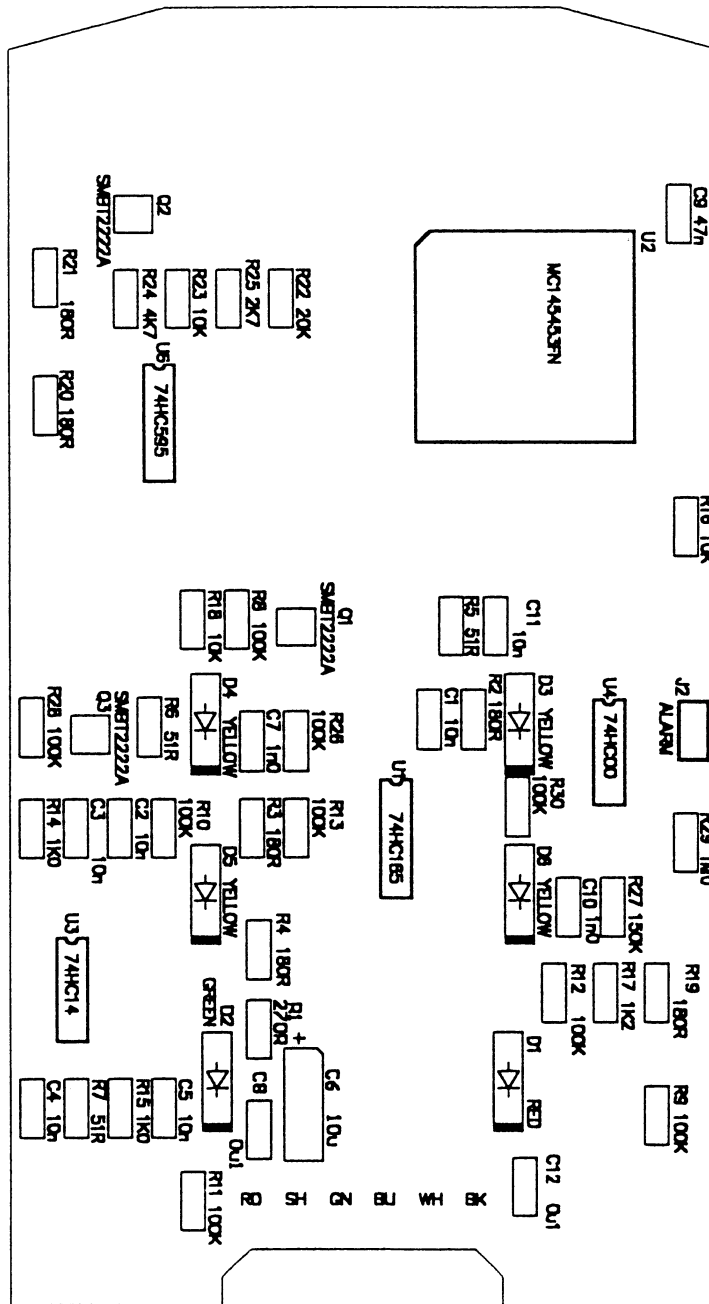
74181 ALU
74180 MUX
74182 MAJORITY
7410 NAND
7404 INVERTER
7400 NOR
74121 MONOSTABLE MULTIVIBRATOR
74123 MONOSTABLE MULTIVIBRATOR



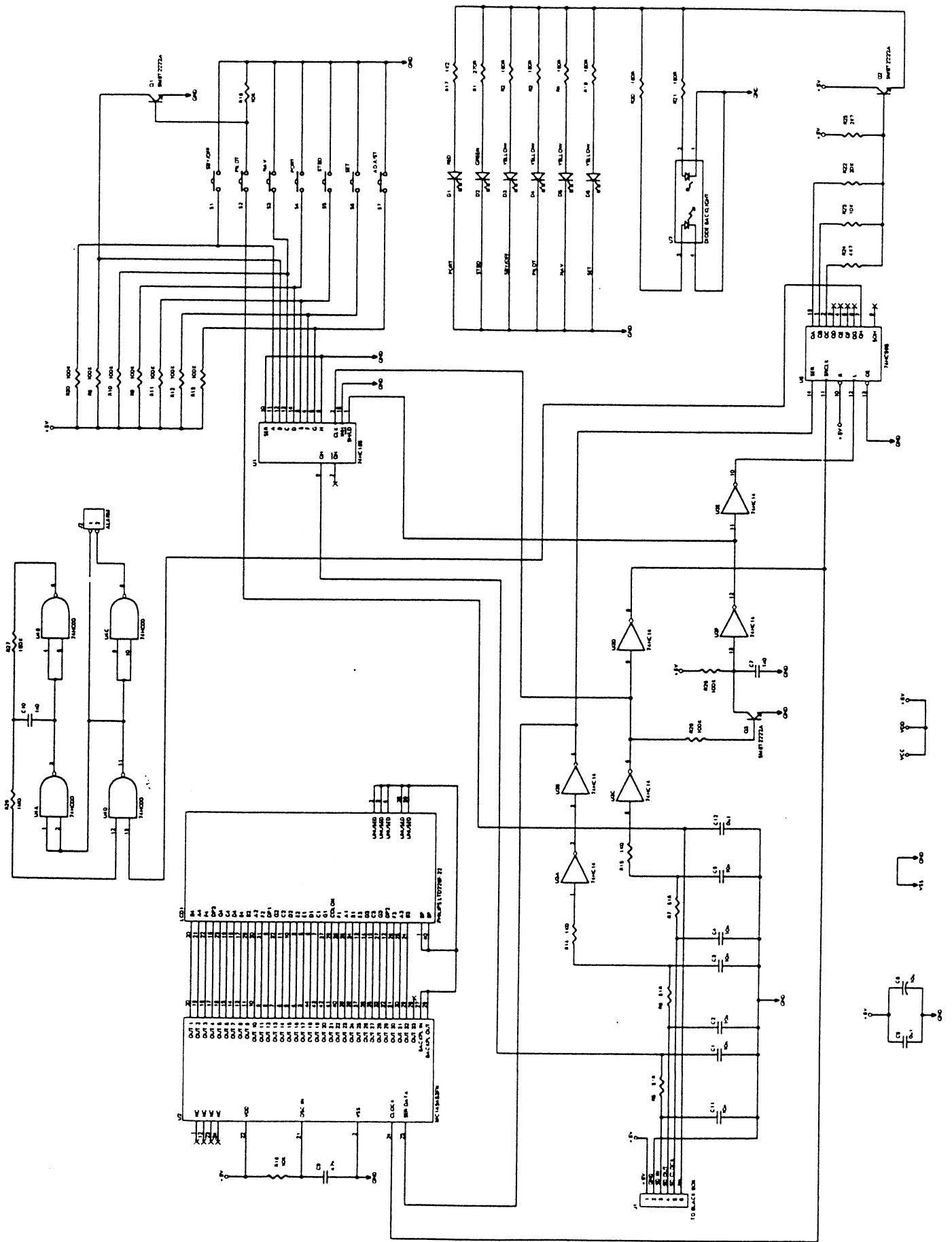
Part	Used	PartType	Designators
1	1	+2.5V	TP1
2	1	+5V	TP2
3	1	+12V	TP3
4	1	0R5,0.5W	R42
5	40	0u1	C1 C2 C3 C4 C7 C8 C11 C18 C19 C20 C21 C22 C23 C24 C25 C27 C28 C41 C42 C44 C46 C47 C48 C49 C50 C51 C58 C65 C67 C68 C69 C70 C72 C73 C74 C75 C76 C77 C78 C80
6	1	0u1, 100V	C12
7	9	1K0	R14 R15 R21 R29 R33 R34 R35 R103 R124
8	2	1K00, 1%	R48 R49
9	4	1K8	R6 R7 R8 R9
10	1	1M0	R119
11	3	1N4005	D5 D6 D16
12	9	1N4148	D7 D12 D13 D19 D20 D21 D22 D23 D24
13	1	1N5237	D14
14	1	1N5401	D15
15	2	1N6263	D17 D18
16	6	1n0	C9 C10 C52 C53 C59 C60
17	5	1u0	C17 C30 C31 C32 C66
18	2	2K0	R83 R84
19	1	2K2	R75
20	1	2K7	R41
21	1	2N6042	Q18
22	1	2N6107	Q23
23	3	4K7	R17 R32 R79
24	1	4K75, 1%	R74
25	1	4N33	U1
26	2	5R6	R98 R99
27	1	8K2	R108
28	1	8 MHz	Y1
29	39	10K	R10 R11 R12 R13 R18 R19 R20 R24 R25 R30 R37 R38 R39 R50 R51 R52 R53 R54 R55 R56 R58 R85 R86 R87 R88 R89 R90 R91 R92 R93 R94 R95 R96 R97 R100 R101 R117 R118 R120
30	1	10M	R61
31	15	10n	C38 C39 C40 C43 C45 C54 C55 C56 C57 C61 C62 C63 C64 C81 C82
32	3	10u, 25V	C13 C14 C29
33	2	18p	C35 C36
34	1	20A	F1
35	1	20K, 20T	VR1
36	2	22K6, 0.1%	R81 R82
37	1	22R	R23
38	2	22u, 10V	C71 C79
39	2	23K2, 0.1%	R66 R67
40	1	27K	R46
41	1	27p	C37
42	2	33K2, 1%	R72 R73
43	1	41K2, 1%	R77
44	1	47K	R104
45	1	47R	R27
46	1	47u, 16V	C15
47	6	51R	R110 R111 R112 R113 R114 R115
48	1	52K3, 1%	R76
49	4	60K4, 0.1%	R62 R63 R64 R65
50	1	68HC11E1FN	U15
51	1	74HC04	U14
52	1	74HC08	U17
53	1	74HC373	U20
54	1	74HC374	U21
55	1	74HC393	U11
56	1	74HC4052	U23
57	8	100K	R16 R22 R40 R106 R116 R121 R122 R123

58	2	100R	R4 R5
59	1	120K	R80
60	1	150K	R102
61	1	150R	R44
62	1	270K	R105
63	7	270R	R1 R28 R36 R47 R107 R109 R125
64	1	330K	R78
65	1	430R	R31
66	2	470K	R2 R3
67	1	470R	R43
68	3	620R	R45 R59 R60
69	1	680R	R26
70	4	750K, 0.1%	R68 R69 R70 R71
71	1	1000u, 10V	C16
72	2	2200p, COG	C33 C34
73	1	3300u, 63V	C5
74	2	4053	U9 U10
75	1	4569	U12
76	1	27256	U13
77	1	BUZZER	BZ1
78	1	COMB2	J2
79	2	COMB6	J7 J8
80	1	COMB12	J6
81	1	COSINE	TP7
82	1	GND	TP4
83	1	H11L1	U6
84	2	HEADER 2	J3 J5
85	4	IRFP044	Q1 Q2 Q3 Q4
86	1	LM35	U4
87	1	LM317	U7
88	2	LM358	U5 U8
89	1	LMC660	U18
90	1	LMC662	U25
91	1	LMC6484IN	U19
92	1	MC34064	U22
93	1	MC34119	U24
94	1	MC144110	U16
96	13	MPSA06	Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q24 Q25
97	4	MPSA56	Q19 Q20 Q21 Q22
98	1	PCOMB6	J1
99	1	REF	TP5
100	1	REMOTE CONFIG	J9
101	1	SINE	TP6
102	5	T1 RED	D1 D2 D3 D4 D9
103	3	T1 YELLOW	D8 D10 D11
104	2	TLP5908	U2 U3
105	2	VN10K	Q16 Q17





SP70R4 TOP



Form **SP70 CONTROL HEAD**
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 Rev. 1 of 1
 1000 204-011
 1000 204-011

SP70 BOM

Wednesday, July 05, 1995

C8	0u1	SM1206
C12	0u1	SM1206
C7	1n0	SM1206
C10	1n0	SM1206
C1	10n	SM1206
C2	10n	SM1206
C3	10n	SM1206
C4	10n	SM1206
C5	10n	SM1206
C11	10n	SM1206
C6	10u	SM6032P
C9	47n	SM1206
D1	RED	SMLED
D2	GREEN	SMLED
D3	YELLOW	SMLED
D4	YELLOW	SMLED
D5	YELLOW	SMLED
D6	YELLOW	SMLED
J2	ALARM	HEADER 2
LCD1	PHILIPS LTD226F-22	LCDSTD
Q1	SMBT2222A	SMSOT-23
Q2	SMBT2222A	SMSOT-23
Q3	SMBT2222A	SMSOT-23
R14	1K0	SM1206
R15	1K0	SM1206
R17	1K2	SM1206
R29	1M0	SM1206
R25	2K7	SM1206
R24	4K7	SM1206
R16	10K	SM1206
R18	10K	SM1206
R23	10K	SM1206
R22	20K	SM1206
R5	51R	SM1206
R6	51R	SM1206
R7	51R	SM1206
R8	100K	SM1206
R9	100K	SM1206
R10	100K	SM1206
R11	100K	SM1206
R12	100K	SM1206
R13	100K	SM1206
R26	100K	SM1206
R28	100K	SM1206
R30	100K	SM1206
R27	150K	SM1206
R2	180R	SM1206
R3	180R	SM1206
R4	180R	SM1206
R19	180R	SM1206
R20	180R	SM1206
R21	180R	SM1206
R1	270R	SM1206
U4	74HC00	SMSO-14N
U3	74HC14	SMSO-14N
U1	74HC165	SMSO-16N
U6	74HC595	SMSO-16N
U7	DIODE BACKLIGHT	SP70 BACKLT
U2	MC145453FN	LCC44