

4.1 CALIBRATION.

4.2 The option 008 requires no calibration; the calibration of the 009 option is performed following the normal calibration of the 8000B Series Counter. The equipment required is listed in table 4.1 and with the exception of an optional jumper assembly is a portion of the equipment used for calibrating the Model 8000B. Calibration points are provided in figures 4.2 and 4.3.

4.3 Jumper.

4.4 The jumper assembly consists of a mating connector (Dana P/N 600047) for programming connector J113 having the required pins hard-wired together for the various calibration steps. This same operation can be performed with individual clip leads but with considerably more difficulty. The wiring of the jumper assembly is shown in figure 4.1.

4.5 Calibration Procedure.

WARNING

Removal of covers exposes potentially lethal voltages. Avoid contact with internal electrical connections while unit is connected to AC power source.

- a. Set the FUNCTION switch to REMOTE. Allow all programming lines to remain open.
- b. On the Programmable Signal Conditioner assembly, monitor R125 (channel A) and adjust potentiometer R47 for a reading of -2.88 volts DC; monitor R127 (channel B) and adjust potentiometer R50 for a reading of -2.88 volts DC. (Reference measurements to E29.)
- c. Connect jumper strings #1 and #2 as shown in figure 4.1 to pin 33 (GRD) of J113. Monitor R125 (channel A) and adjust potentiometer R35 for a reading of +2.84 volts DC; monitor R127 (channel B) and adjust potentiometer R37 for a reading of +2.84 volts.

- d. Remove jumper string #1 from J113-33 (GRD) and attach jumper string #3 to J113-33 (GRD).
- e. Connect a signal generator output to both the INPUT A of the counter and the vertical input of the oscilloscope (channel 1, 2V/cm). Connect the rear panel MARKER output of the counter to the Z AXIS input of the oscilloscope.
- f. Adjust the signal generator for an output of 100 Hz, 4V P-P sinewave. With channel 2 of the oscilloscope (DC coupled, .5V/cm) monitor MD1-12 and MD2-8 on the SWITCH board assembly (reference to E1). Adjust potentiometer R113 for equal logic levels at MD1-12 and MD2-8.
- g1. (Models 8010B, 8030B.) Monitor ME0-6 and MC1-8 on the Switch board and adjust potentiometer R114 for equal logic levels.
- g2. (Models 8015B, 8035B.) Monitor ME1-1 and ME1-2 on the Switch board and adjust potentiometer R114 for equal logic levels.
- h. Decrease the output level of the signal generator to 1 volt P-P and set the oscilloscope channel 1 gain to 20 mV/cm. Adjust potentiometer R102 so that marker initiation is within 10 mV of zero; adjust potentiometer R103 so that marker termination is within 10 mV of zero.

Table 4.1 - Required Calibration Equipment

Instrument Type	Required Specification	Recommended Equipment
Oscilloscope	100 Hz BW, 20 mV/cm	TEK 454
Voltmeter	10V, 4 digit accuracy	Dana 4300
Sinewave Generator	100 Hz @ 4V P.P.	Dana 7010
Jumper Assembly – see figure 4.1		

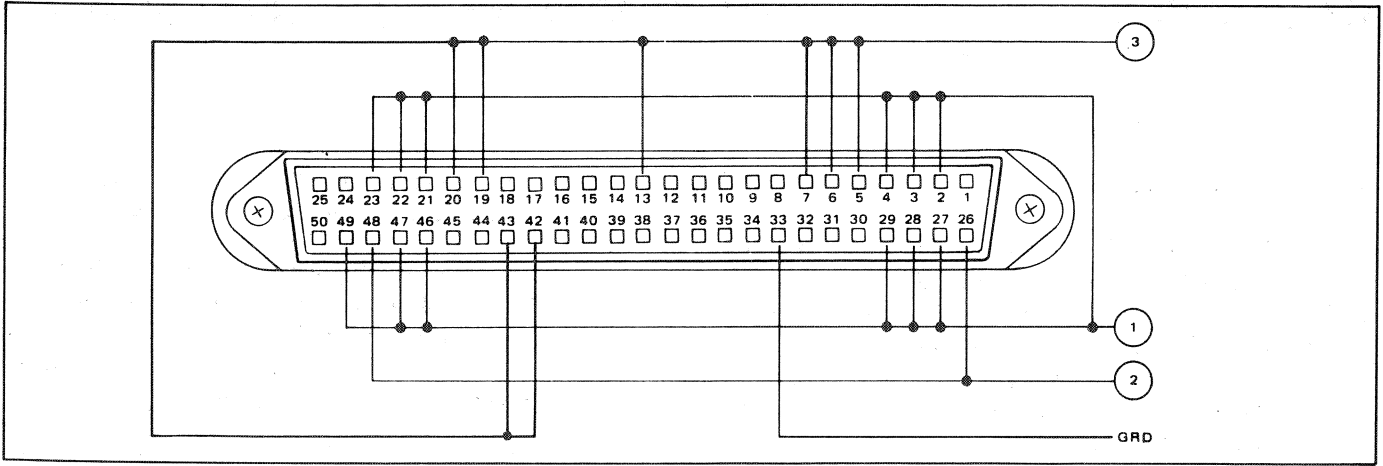


Figure 4.1 - Jumper Assembly

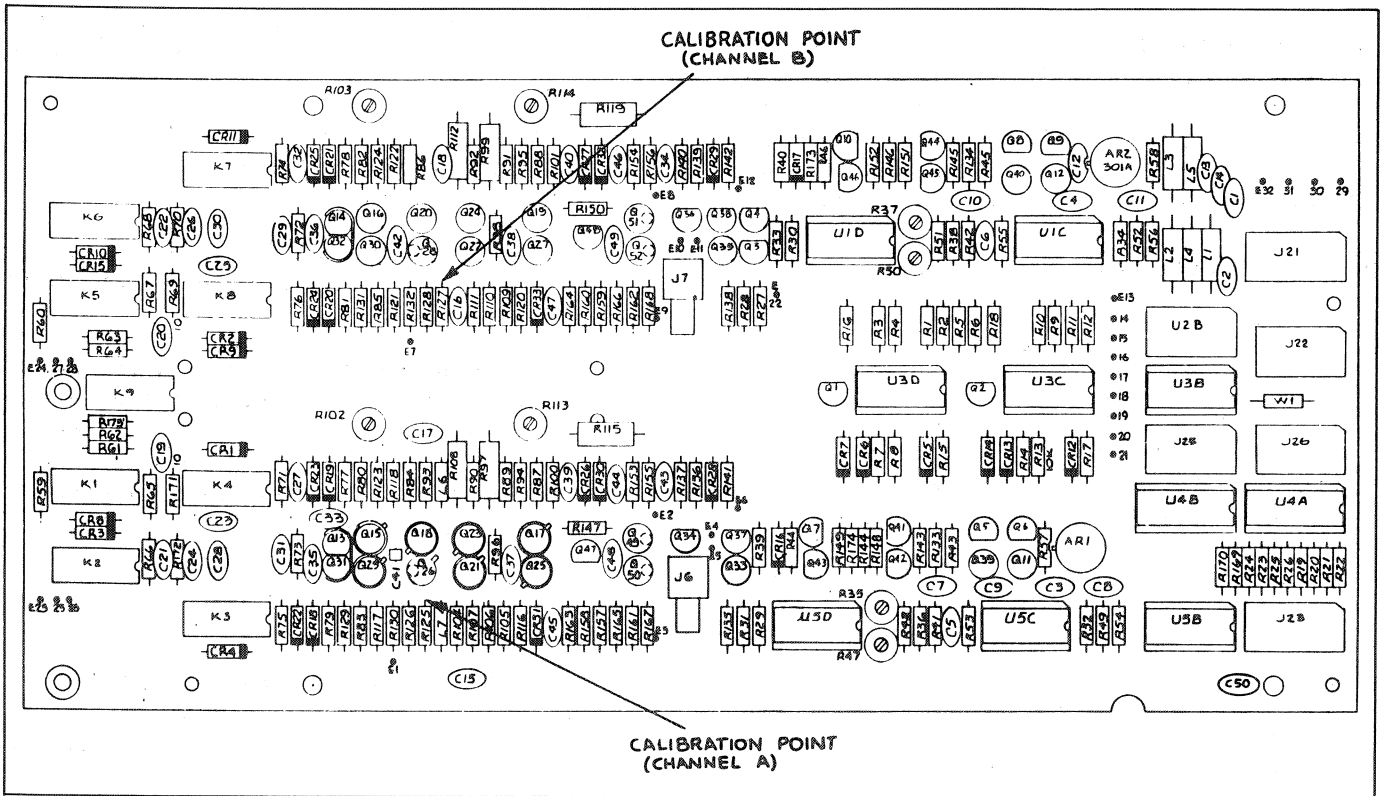


Figure 4.2 - Programmable Signal Conditioner Calibration Points

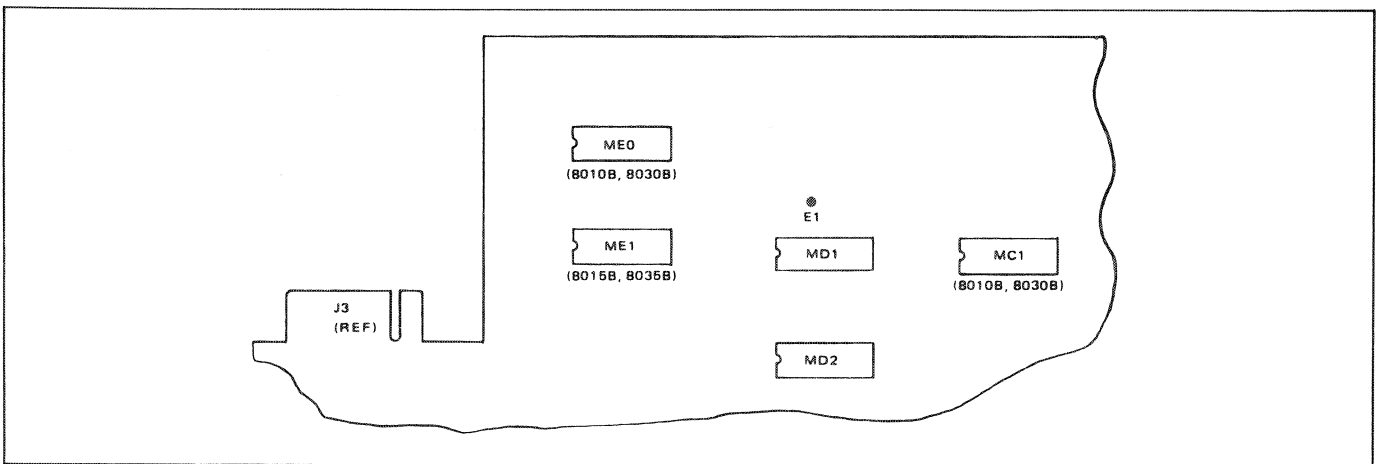


Figure 4.3 - Switch Board Calibration Points

4.6 MAINTENANCE.

4.7 The fan on the rear panel assembly, Dana P/N 406732, used with the 009 option requires oil periodically. The location of the oil pad is indicated in figure 4.4.

4.8 Use premium grade SAE20 or 30 oil at 2 to 6 month intervals, depending on frequency of use.

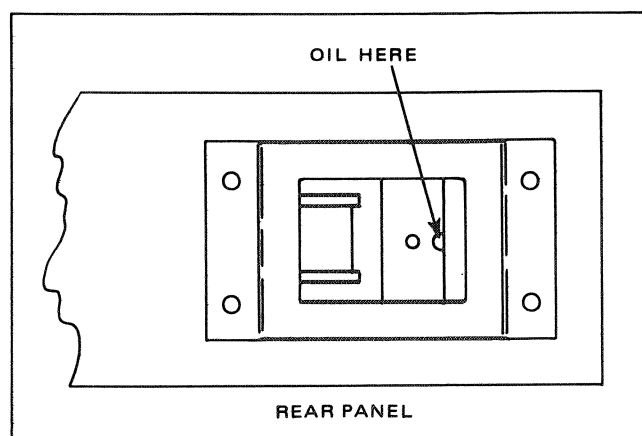


Figure 4.4 - Oil Pad Location

Figure	Title	Page
<u>Option 009</u>		
5.1	Assembly, Full Systems Interface (406737)	5-2
5.2	Layout, Rear Panel (406732)	5-4
5.3	Layout, Interconnect (406128)	5-6
5.4	Assembly, Programmable Signal Conditioner Module (406738)	5-7
5.5	Layout, Programmable Signal Conditioner (406741)	5-8
5.6	Schematic, Programmable Signal Conditioner	5-9
5.7	Assembly, Remote Programming Cable (600762)	5-10
5.8	Assembly, Interface Harness (406756)	5-11
5.9	Assembly, Remote and Recorder Harness (406733)	5-12
<u>Option 008</u>		
5.10	Layout, Systems Interface (406664)	5-14
5.11	Assembly, Remote & Recorder Harness (406563)	5-15

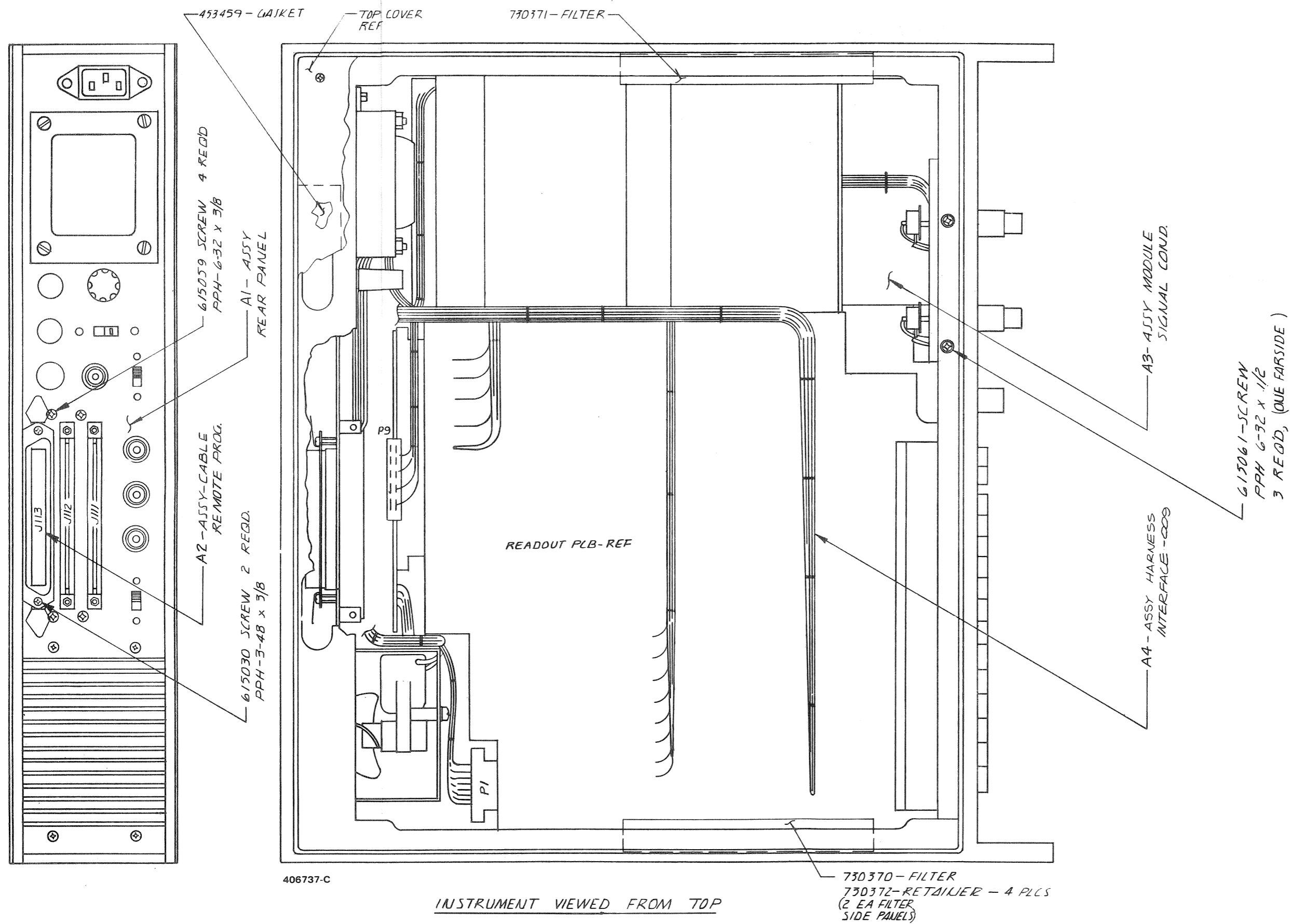


Figure 5.1 - Assembly, Full Systems Interface (406737)

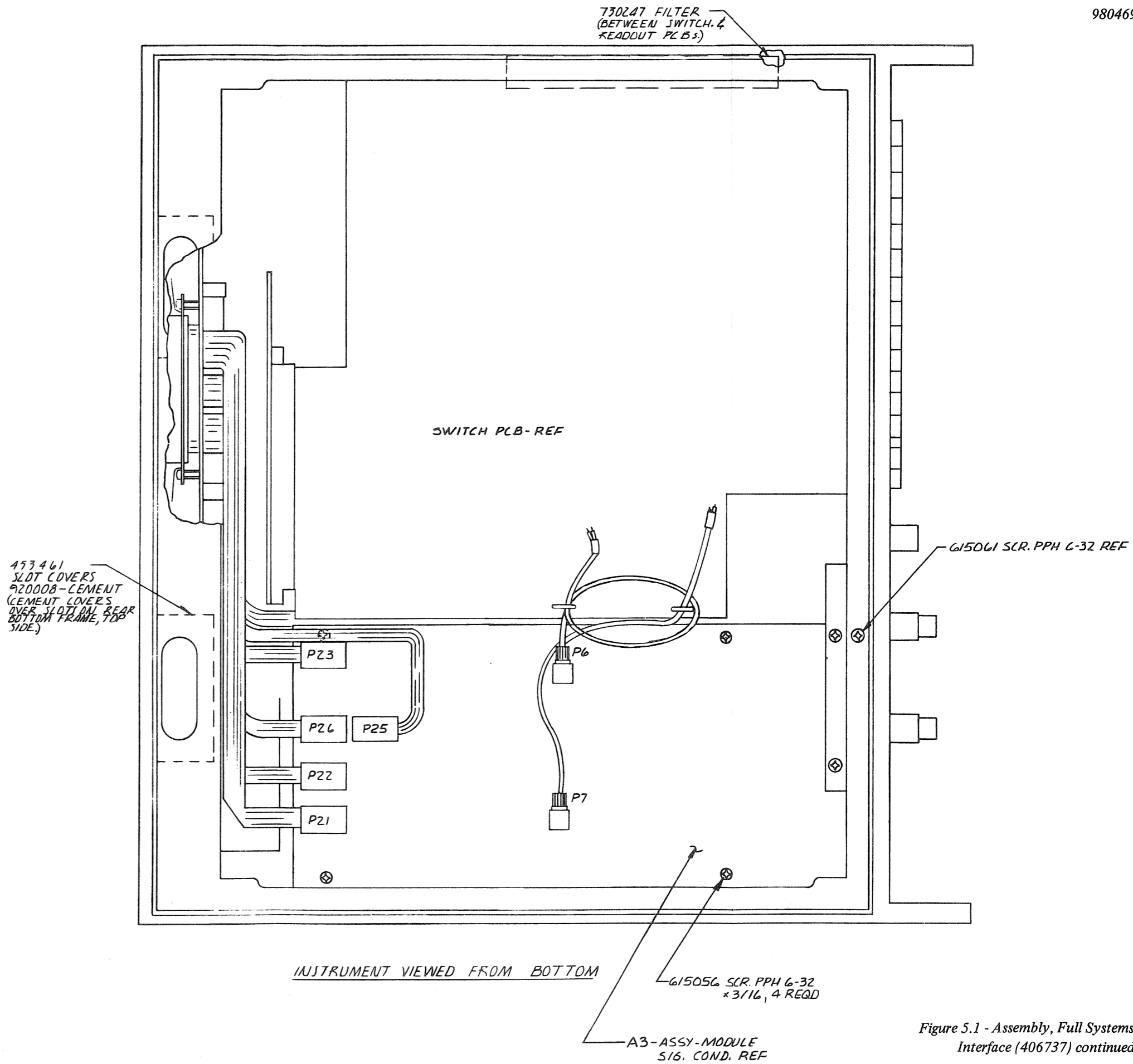


Figure 5.1 - Assembly, Full Systems Interface (406737) continued

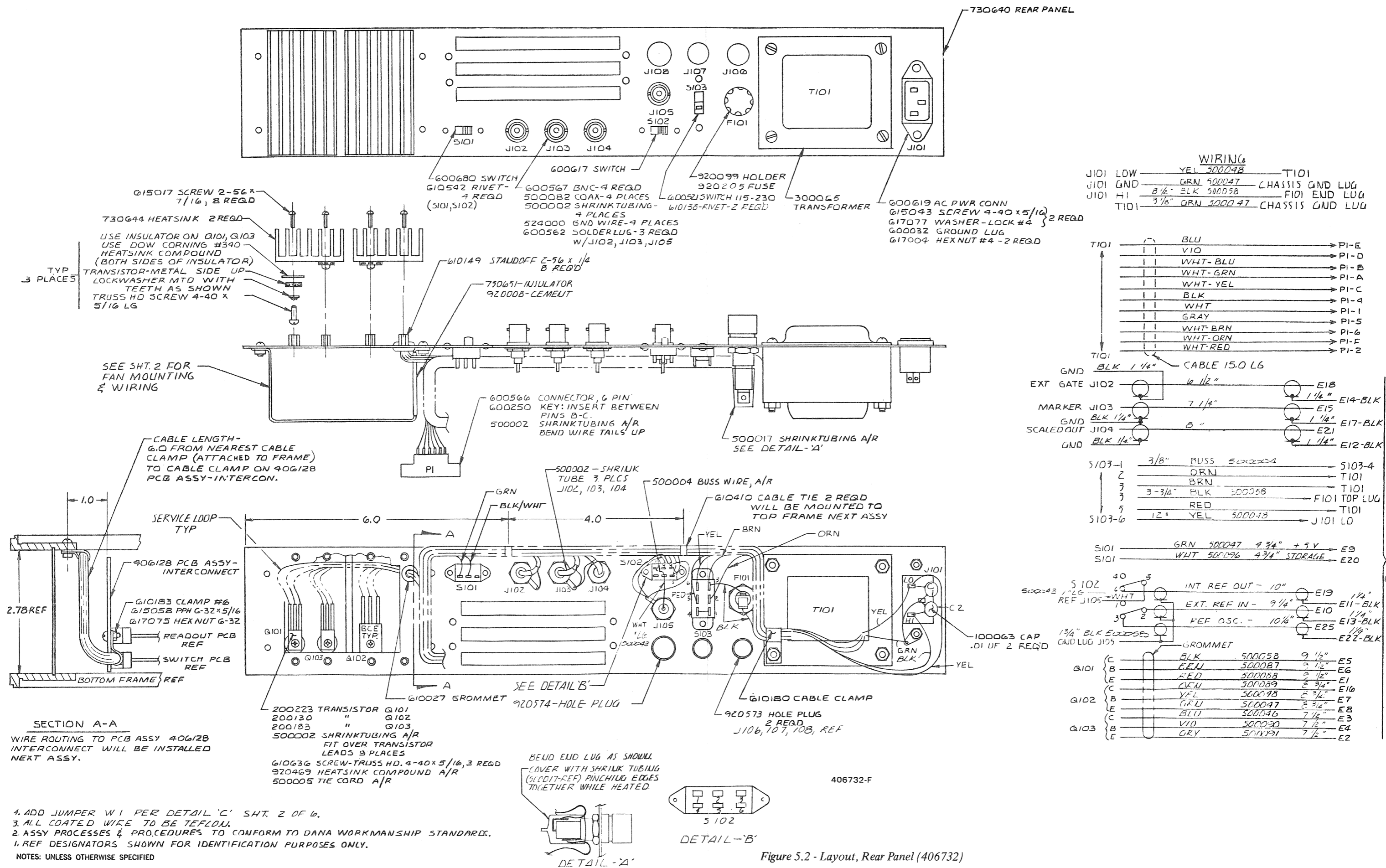
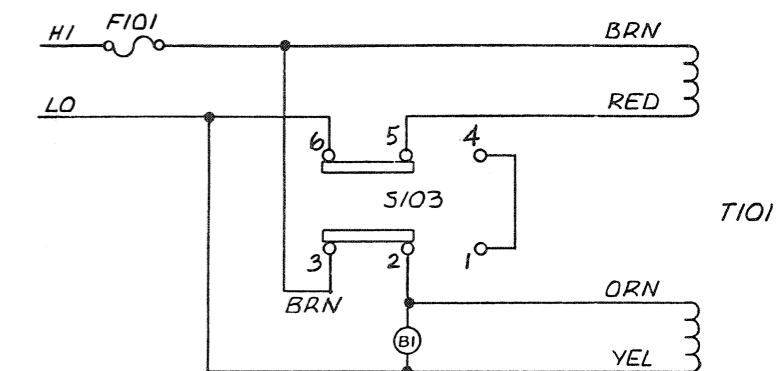
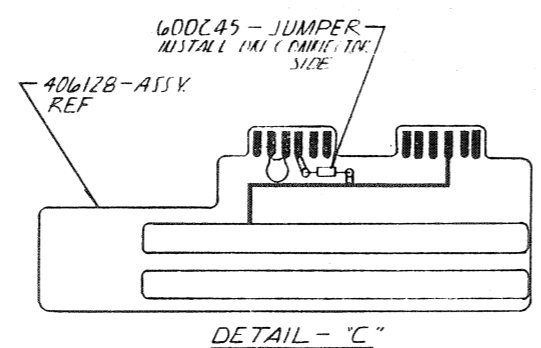
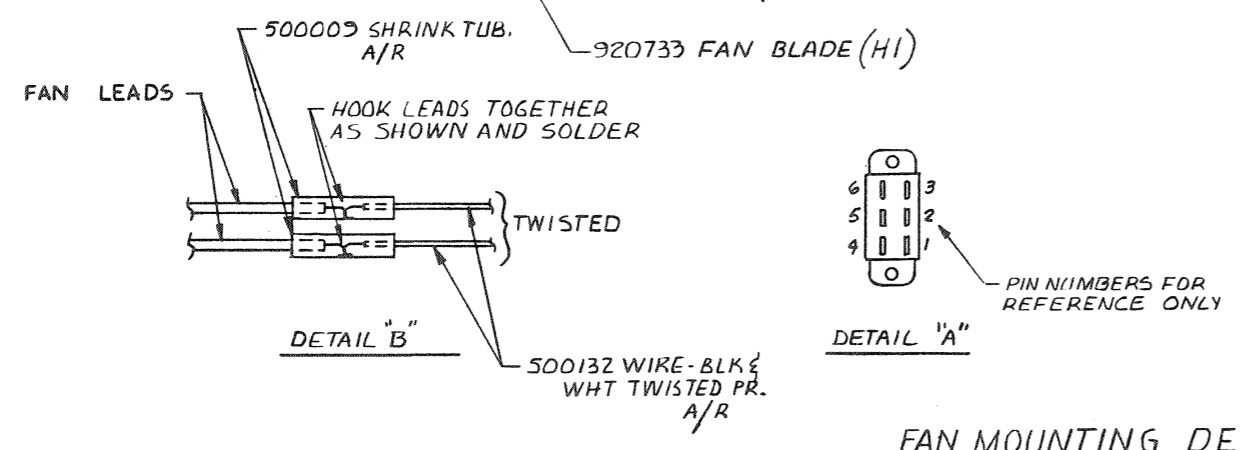
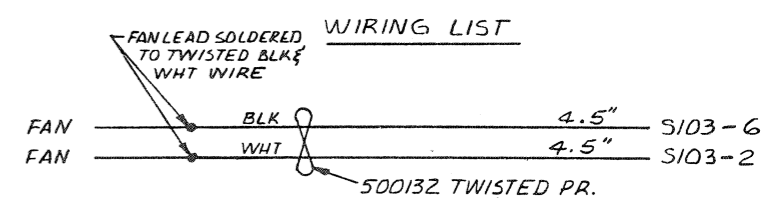
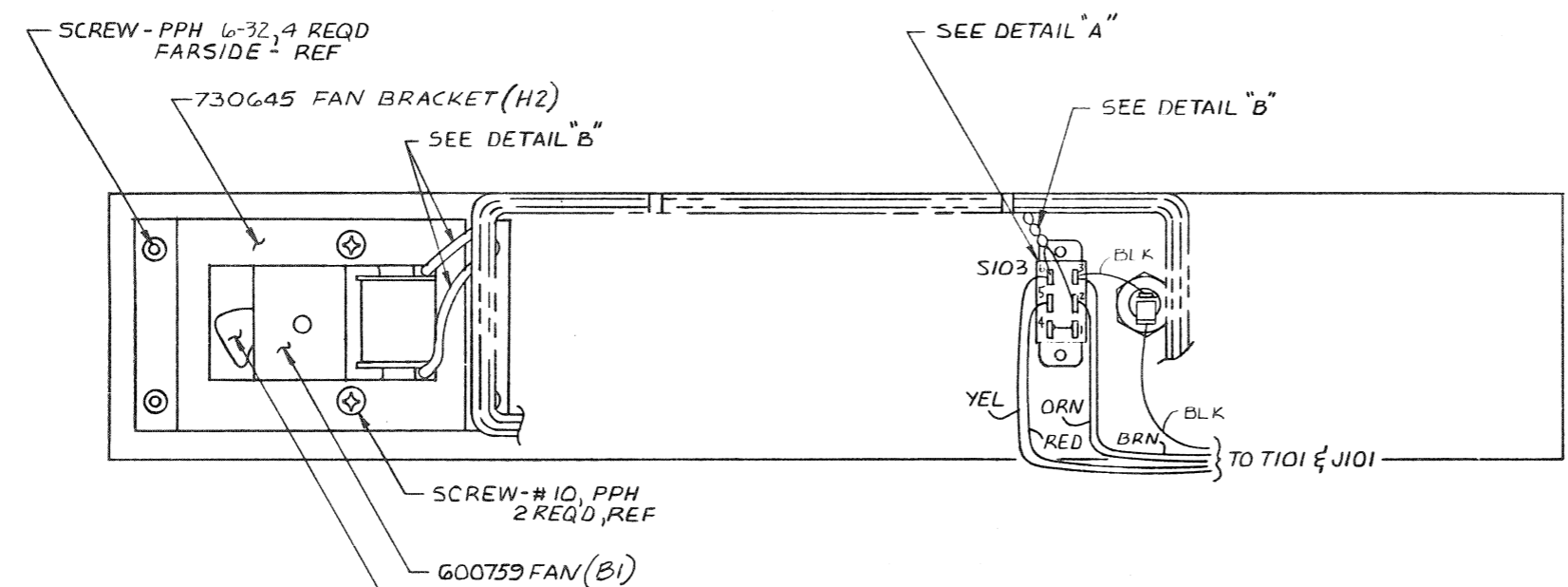


Figure 5.2 - Layout, Rear Panel (406732)

1. REF DESIGNATORS SHOWN FOR IDENTIFICATION PURPOSES ONLY.
 2. ASSY PROCESSES & PROCEDURES TO CONFORM TO DANA WORKMANSHIP STANDARDS.
 3. ALL COATED WIRE TO BE TEFLON.
 4. ADD JUMPER W1 PER DETAIL 'C' SHT. 2 OF 6.
- NOTES: UNLESS OTHERWISE SPECIFIED

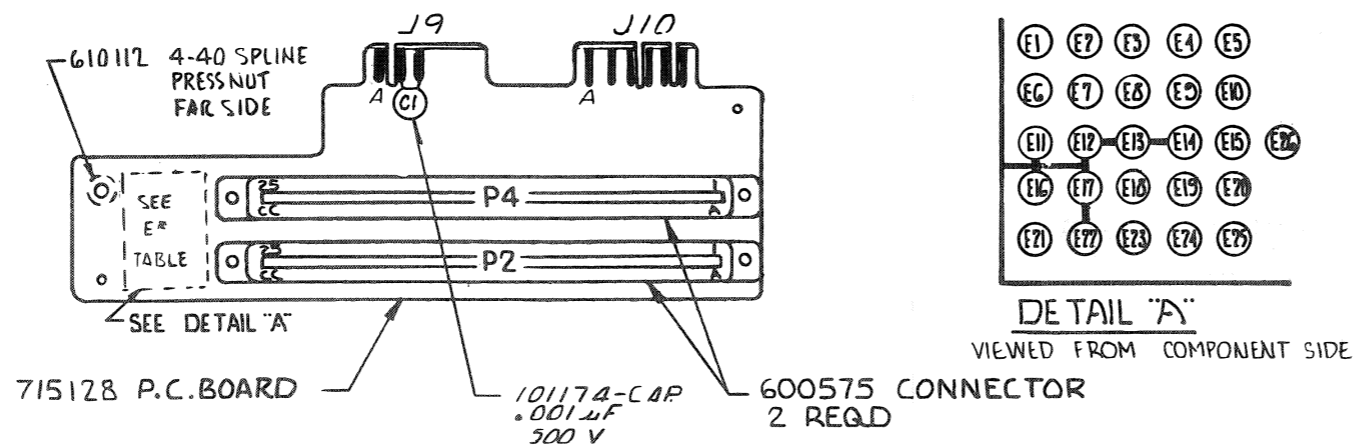


WIRING DIAGRAM FOR FAN & P5



FAN MOUNTING DETAIL

Figure 5.2 - Layout, Rear Panel (406732) continued



P2 PIN ASSIGNMENTS (SWITCH)			
PIN #	E #	PIN #	E #
1		A	$\overline{P_a}$
2		B	$\overline{P_i}$
3		C	A/B
4	E18	D	$\overline{T_o}$
5		E	$\overline{T_{iA}}$
6		F	$\overline{T_i}$
7		H	Dic
8		J	Dio
9		K	Dia
10		L	Dib
11		M	$f_a/10$
12		N	UPDATE
13		P	$\overline{T_2}$ CLEAR
14		R	REMOTE HOLD
15		S	PRINT
16		T	ARM
17		U	REMOTE RESET
18		V	$\overline{F_z}$
19		W	-18VDC
20		X	+5VDC E9
21		Y	GND. E11-E14, E16, E17
22		Z	MARKER OUT E15
23		AA	REF OUT E19
24		BB	EXT REF IN E20
25	E10	CC	f/n (SCALED OUT) E21

P4 PIN ASSIGNMENTS (READOUT)			
PIN #	E #	PIN #	E #
1		A	TCXO (REF OSC)
2		B	REMOTE
3		C	$\overline{T_k}$
4		D	GATE
5		E	$\overline{F_a}$
6		F	$10^3 + 100S$
7		H	$10^8 + 10S$
8		J	$10^7 + 1S$
9		K	$10^6 + 100mS$
10		L	$10^5 + 10mS$
11		M	$10^4 + 1mS$
12		N	$10^3 + 100uS$
13		P	$10^2 + 10uS$
14		R	$10 + 1uS$
15		S	T
16		T	REMOTE HOLD
17		U	PRINT
18		V	REMOTE RESET
19		W	+18V
20	E9	X	+28V
21		Y	Q102 E11-E14, E16, E17
22	E1	Z	Q101 E5
23	E2	AA	Q101 E6
24	E3	BB	Q102 E7
25	E4	CC	Q102 E8

E # ASSIGNMENTS TO REAR PNL.	
E #	FUNCTION
E1	Q101 EMITTER
E2	Q103 EMITTER
E3	Q103 COLLECTOR
E4	Q103 BASE
E5	Q101 COLLECTOR
E6	Q101 BASE
E7	Q102 BASE
E8	Q102 EMITTER
E9	+5
E10	EXT REF IN
E11	GND SHD FROM COAX AT E19
E12	GND SHD FROM COAX AT E10
E13	GND SHD FROM COAX AT E10
E14	GND SHD FROM COAX AT E18
E15	MARKER
E16	Q102 COLLECTOR
E17	GND SHD FROM COAX AT E15
E18	GATE
E19	REF OUT
E20	STORAGE
E21	SCALED OUT
E22	GND SHD FROM COAX AT E2F
E23	CHAN A REMOTE LEVEL
E24	+28VDC
E25	REF. OSC.
E26	CHAN B REMOTE LEVEL

J10 PIN ASSIGNMENTS	
PIN #	(R-F BOARD)
A11	---
B12	$\overline{F_c}$
C13	---
D14	+5V
E15	-18V
F16	+18V

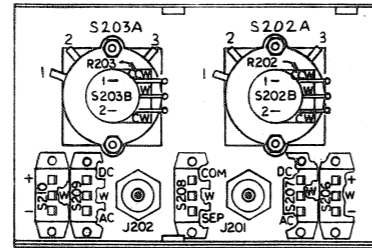
J9 PIN ASSIGNMENTS	
PIN #	(SIGNAL COND)
A11	REMOTE LEVEL 'A'
B12	REMOTE LEVEL 'B'
C13	GND
D14	REMOTE
E15	-18V
F16	+18V

406128-F

Figure 5.3 - Layout, Interconnect (406128)

Signal Conditioning Module Wire List

TO	FROM	WIRE COLOR
S202A-1	E-21	BRN
S202A-2	E-15	GRN
R202-CCW	E-4	YEL
R202-W	E-1	BRN
R202-CW	E-5	GRN
S203A-1	E-20	BLK
S203A-2	E-19	WHT
R203-CCW	E-11	BRN
R203-W	E-7	VIO
R203-CW	E-10	BLK
S202B-1	E-6	BLU
S203B-1	E-12	RED
S202B-2	S203B-2	WHT
S203B-2	E-22	WHT/RED
S206 +	E-2	RED
S206 -	E-3	ORG
S207-W	E-14	YEL
S208-W	E-18	GRY
S209-W	E-13	ORG
S210 +	E-8	GRY
S210 -	E-9	WHT
S206-W	S210-W	BLU
S210-W	E-16	BLU
S207-DC	S202A-3	WHT/BLK
S202A-3	S207-COM	WHT/BLK
S208-COM	S203A-3	WHT/BLK
S203A-3	S209-DC	WHT/BLK
S209-DC	E-17	WHT/BLK
J201	E-23	WHT
J202	E-24	WHT
E-29	P9-3	BLK
E-30	P9-0	GRN
E-31	P9-5	BLU
E-32	P9-6	RED



REFERENCE VIEW FOR WIRING POINT IDENTIFICATION

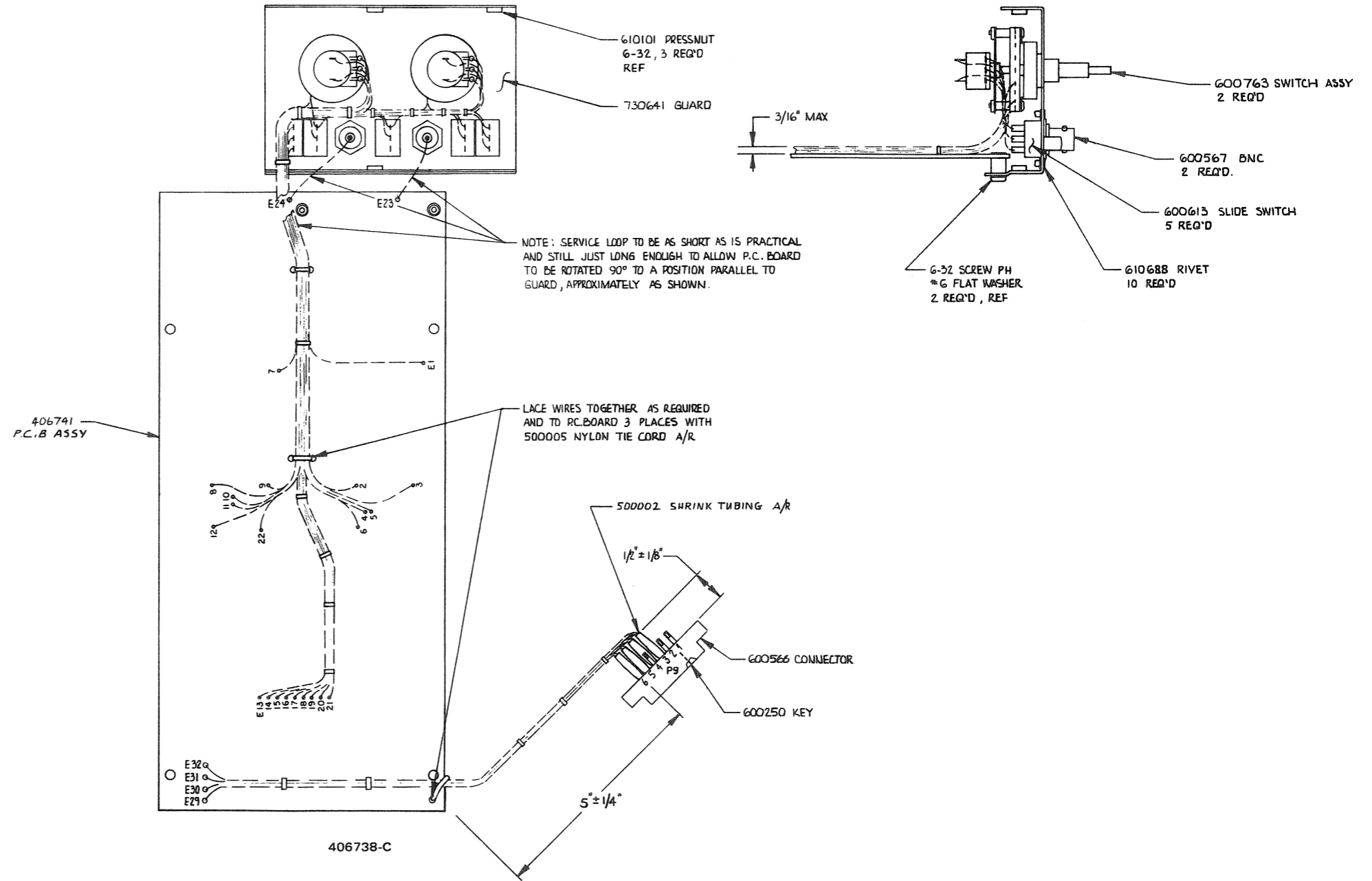
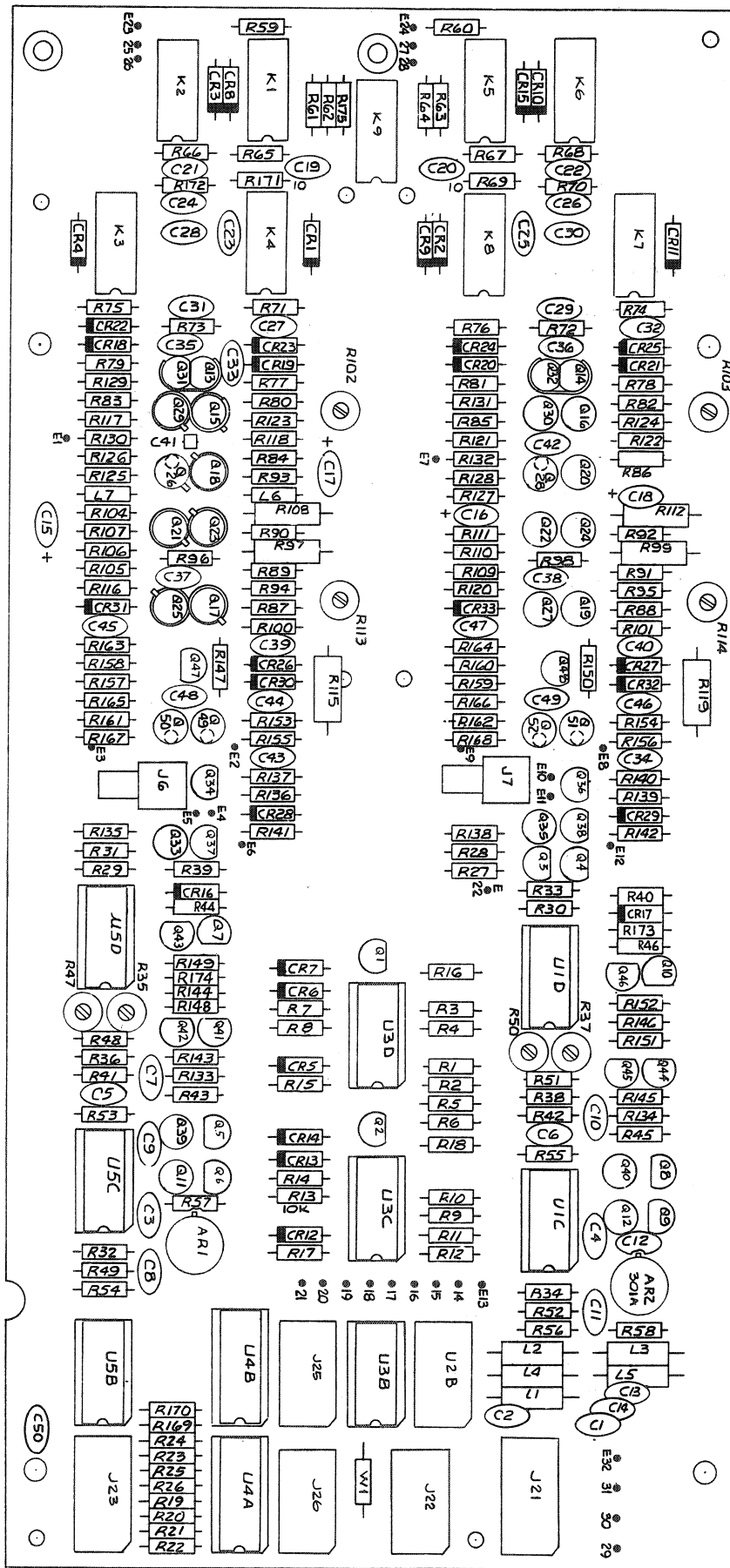
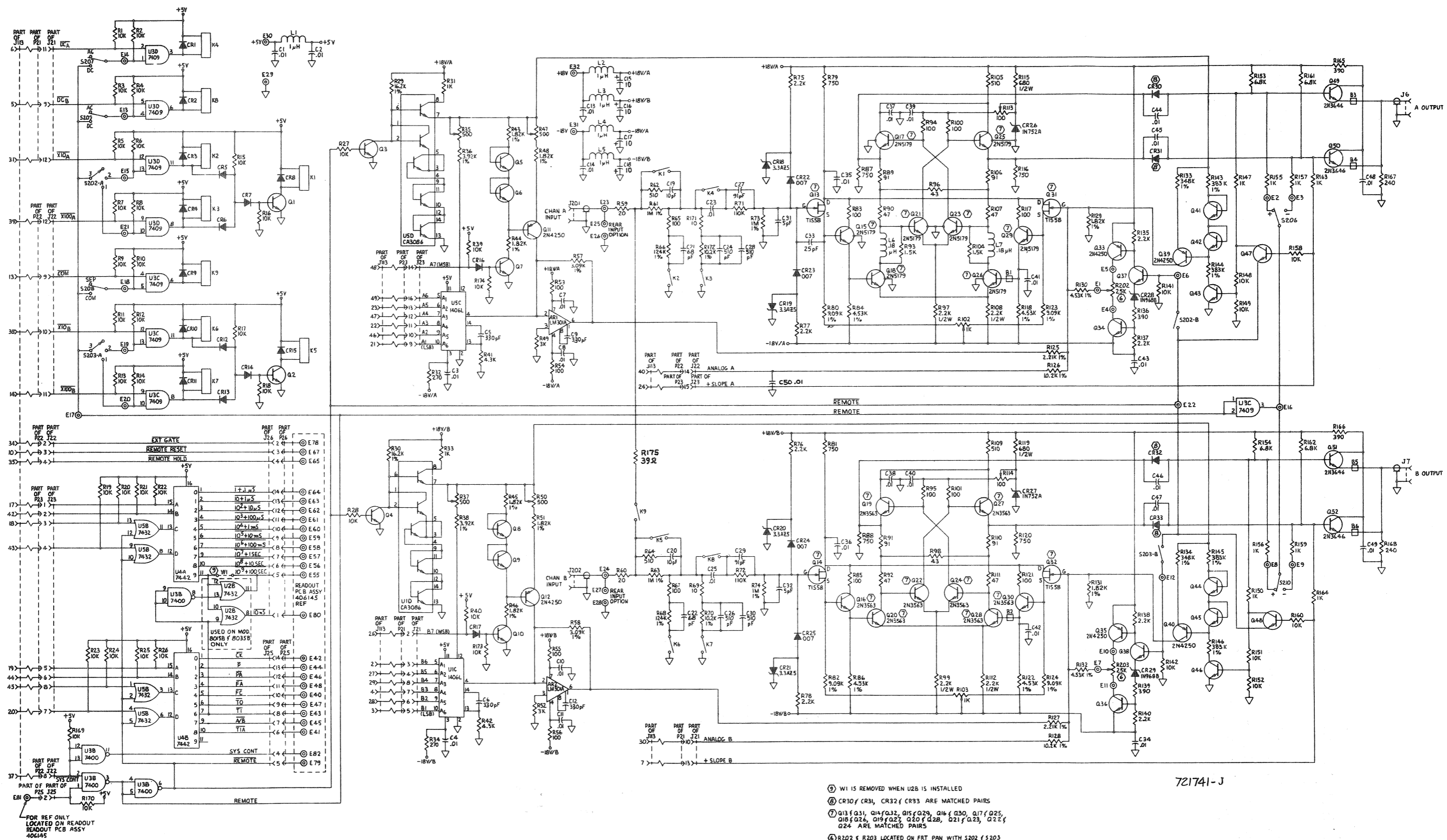


Figure 5.4 - Assembly, Programmable Signal Conditioner Module (406738)



406741-K

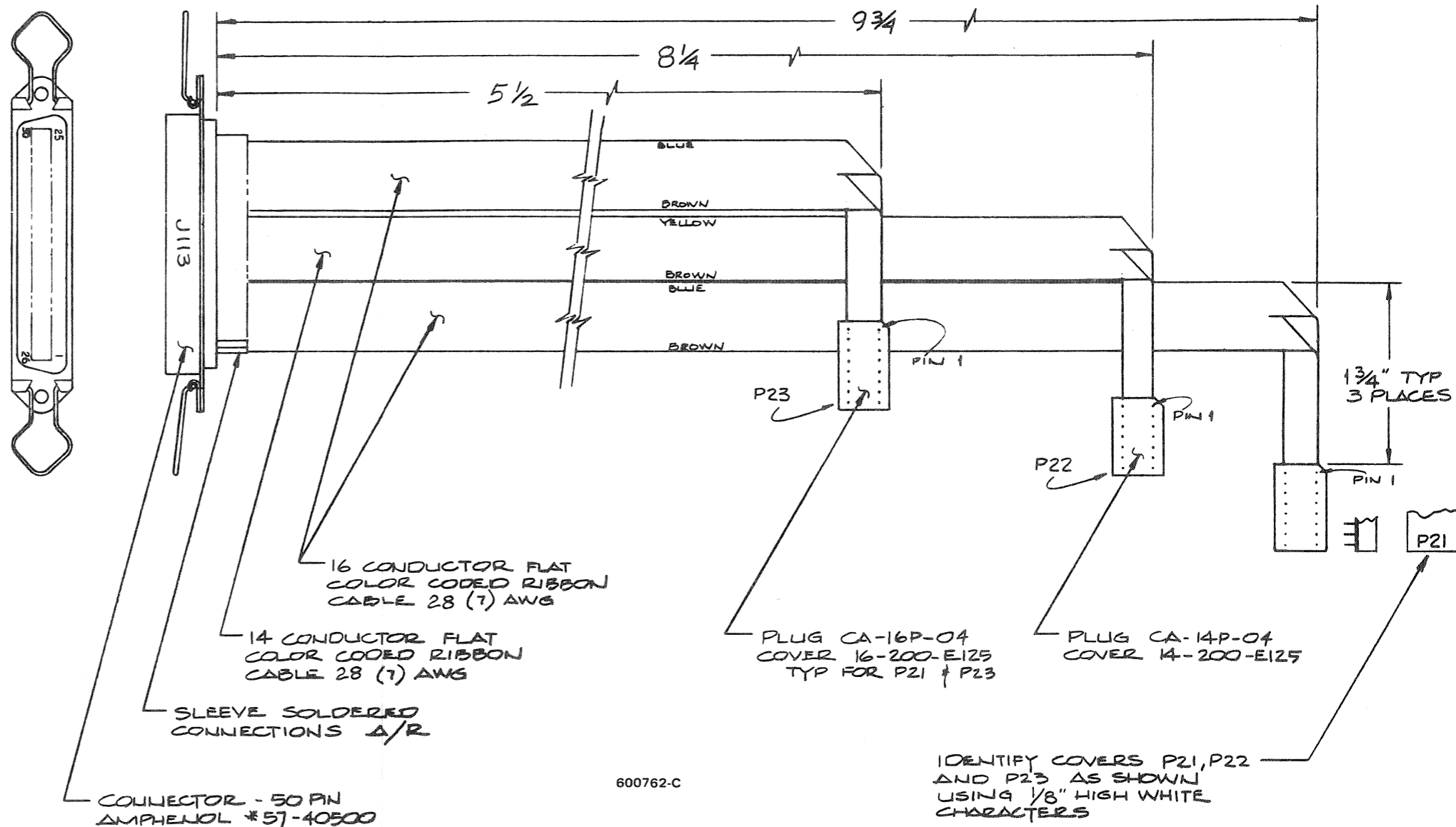
Figure 5.5 - Layout, Programmable Signal Conditioner (406741)



- ① W1 IS REMOVED WHEN U2B IS INSTALLED
 - ② CR30/CR31, CR32/CR33 ARE MATCHED PAIRS
 - ③ Q13/Q31, Q14/Q32, Q15/Q29, Q16/Q30, Q17/Q25, Q18/Q26, Q19/Q27, Q20/Q28, Q21/Q23, Q22/Q24 ARE MATCHED PAIRS
 - ④ R202 & R203 LOCATED ON FR1 PAN WITH S202/S203
 - 5. RELAYS ARE 310123
 - 4. TRANSISTORS ARE 200200
 - 3. DIODES ARE 018
 - 2. CAPACITORS ARE IN MFD
 - 1. RESISTORS ARE IN OHMS ±5%, 1/4 W.
- NOTE: UNLESS OTHERWISE SPECIFIED

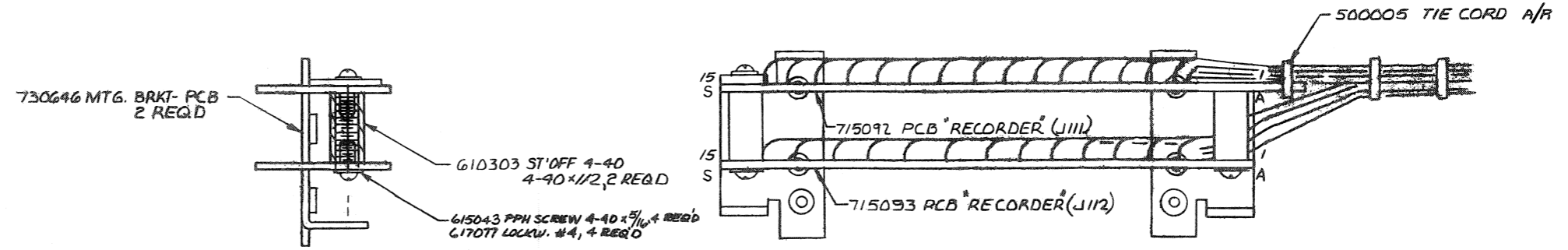
Figure 5.6 - Schematic, Programmable Signal Conditioner

WIRE LIST		
FROM	TO	WIRE COLOR
J21-1	J113-1	BRN
2	26	RED
3	2	ORG
4	27	YEL
5	3	GRN
6	28	BLU
7	4	VIO
8	29	GRY
9	5	WHT
10	30	BLK
11	6	BRN
12	31	RED
13	7	ORG
14	32	YEL
15	8	GRN
J21-16	J113-33	BLU
J22-1	J113-9	BRN
2	34	RED
3	10	ORG
4	35	YEL
5	11	GRN
6	36	BLU
7	12	VIO
8	37	GRY
9	13	WHT
10	38	BLK
11	14	BRN
12	39	RED
13	15	ORG
J22-14	J113-40	YEL
J23-1	J113-17	BRN
2	42	RED
3	18	ORG
4	43	YEL
5	19	GRN
6	44	BLU
7	20	VIO
8	45	GRY
9	21	WHT
10	46	BLK
11	22	BRN
12	47	RED
13	23	ORG
14	48	YEL
15	24	GRN
J23-16	J113-49	BLU



TOLERANCE NOTE:
FRACTION - ± 1/4

Figure 5.7 - Assembly, Remote Programming Cable (600762)



WIRING
ALL WIRES 24 GA, COATED

406738 ASSY- SIG. COND. MODULE	COLOR	FUNCTION	
P25 - 10	0	EC	E40
6	6	TTA	E41
14	9-1-4	CR	E42
8	8	FT	E43
13	9-1-3	PT	E44
7	7	ATB	E45
12	9-2	PA	E46
9	9	TO	E47
11	9-1	EA	E48
5	5	EDMOT	E79
2	2		E81
P25 4	4	SYSTEM CONTROL	E82
P26 14	0	T	E64
13	1	10 ¹ + 1MS	E63
12	2	10 ² + 10MS	E62
11	3	10 ³ + 100MS	E61
10	4	10 ⁴ + 1MS	E60
9	5	10 ⁵ + 10MS	E59
8	6	10 ⁶ + 100MS	E58
7	7	10 ⁷ + 1MS	E57
6	8	10 ⁸ + 10MS	E56
5	9	10 ⁹ + 100MS	E55
4	9-1	REM HOLD	E65
3	9-1-3	REM RESET	E67
2	9-2	EXT GATE	E78
P26 1	9-1-6	T	E80

READOUT
PCB 715145

PCB 715092 RECORDER	COLOR	FUNCTION	
J111 - A	4	V1-4	E1
B	8	V1-8	E3
C	4	V2-4	E5
D	8	V2-8	E7
E	4	V3-4	E9
F	8	V3-8	E11
H	4	V4-4	E13
J	8	V4-8	E15
K	4	V5-4	E17
L	8	V5-8	E19
M	4	V6-4	E21
N	8	V6-8	E23
P	4	V7-4	E25
R	8	V7-8	E27
S	4	V8-4	E29
1	1	V1-1	E4
2	2	V1-2	E8
3	1	V2-1	E8
4	2	V2-2	E6
5	1	V3-1	E6
6	2	V3-2	E12
7	1	V4-1	E16
8	2	V4-2	E14
9	1	V5-1	E20
10	2	V5-2	E18
11	1	V6-1	E24
12	2	V6-2	E22
13	1	V7-1	E28
14	2	V7-2	E26
J111 - 15	1	V8-1	E32

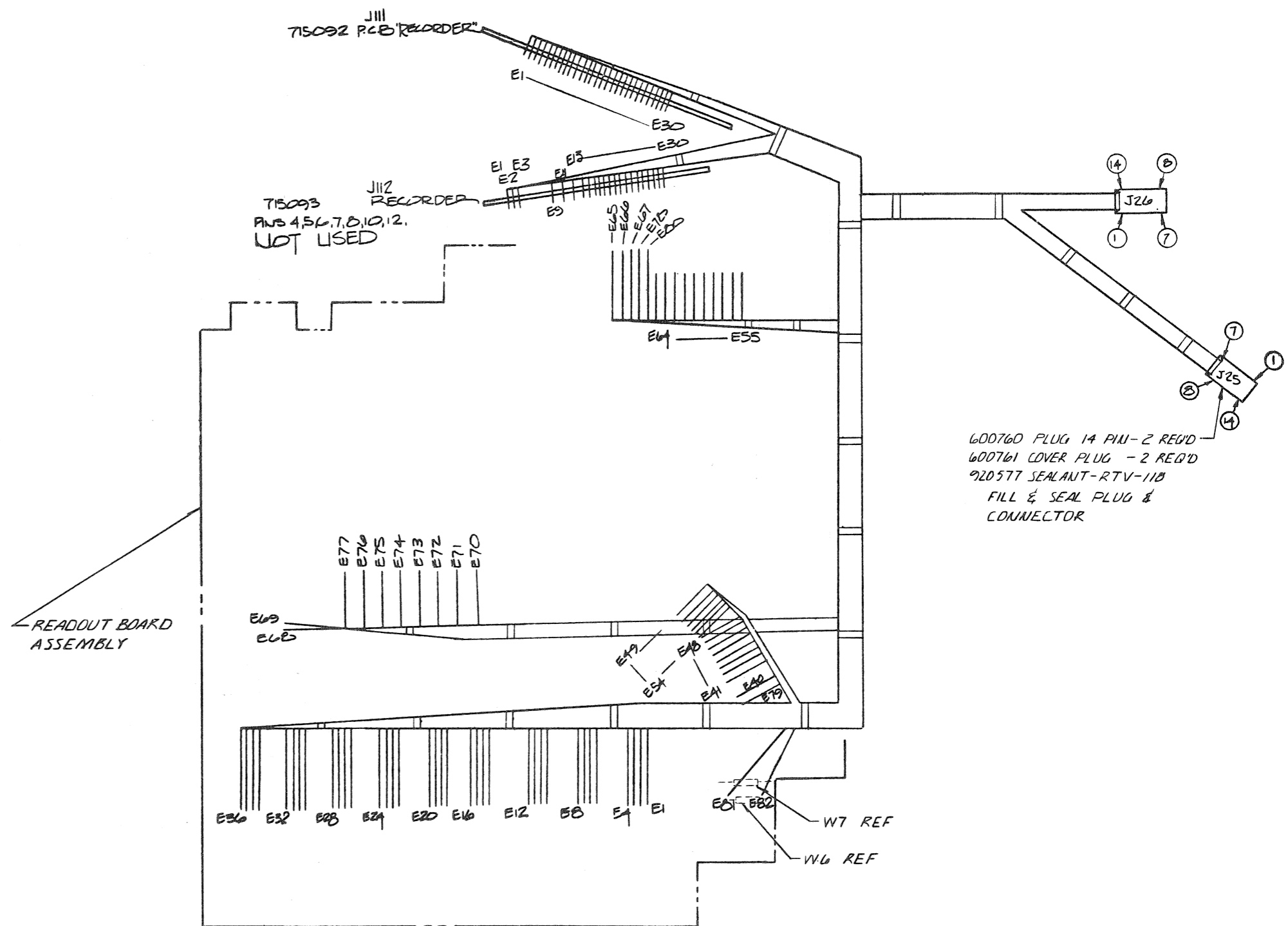
READOUT
PCB 715145

PCB 715093 RECORDER	COLOR	FUNCTION	
J112 - A	8	V8-8	E31
B	4	V9-4	E33
C	8	V9-8	E35
D	3	MHR	E49
E	9-1-3	KHR	E53
F	0	SEC	E51
H	5	N SEC	E52
J	9-1-5	M SEC	E50
K	6	M SEC	E54
L			
M			
N			
P			
R			
S			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
J112 - 15			

READOUT
PCB 715145

3. REMOVE JUMPERS W6&W7 ON READOUT ASSEMBLY.
 2. HARNESS ROUTING DWG. IS SHEET 2 OF THIS DWG.
- ⚠ WILL BE HARD WIRED NEXT ASSEMBLY.
- NOTES: UNLESS OTHERWISE SPECIFIED

Figure 5.9 - Assembly, Remote and Recorder Harness (406733)



406733-B

Figure 5.9 - Assembly, Remote and Recorder Harness (406733) continued

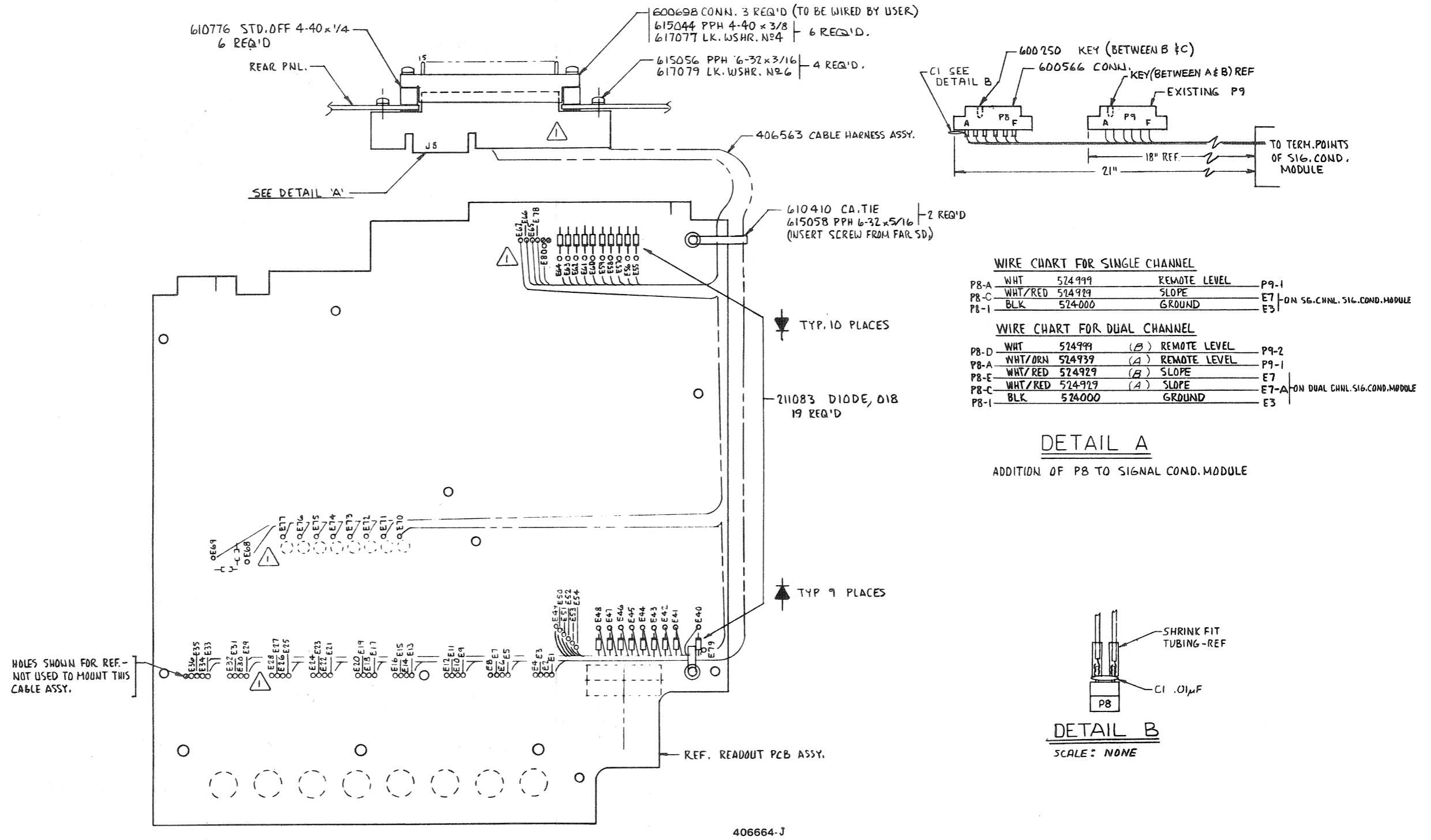
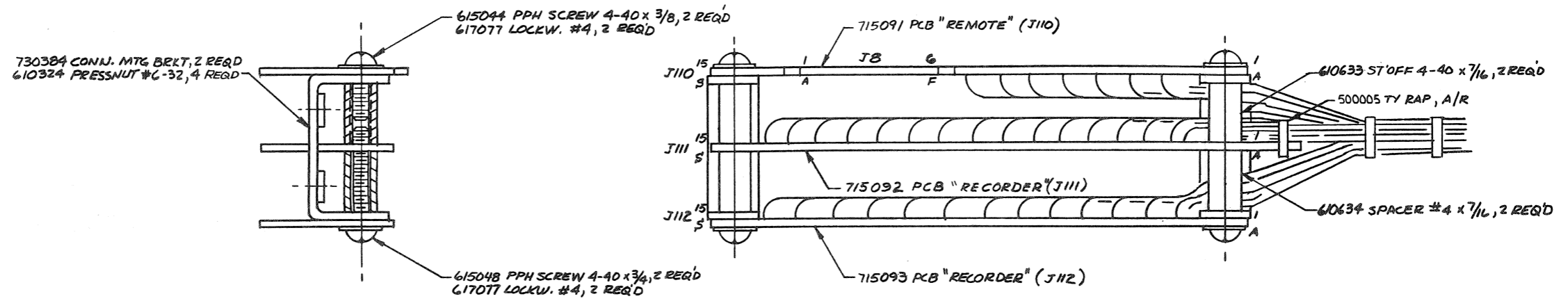


Figure 5.10 - Layout, Systems Interface (406664)



WIRING

ALL WIRES 24 GA, COATED

PCB 715091 REMOTE

POINT	COLOR	FUNCTION	TEST POINT
A	EC	9-0	EC E40
B	7A	9-1	7A E41
C	CK	9-2	CK E42
D	7I	9-2-3	7I E43
E	PI	9-3-4	PI E44
F	A/B	9-3-5	A/B E45
H	PA	9-3-6	PA E46
J	FO	9-1-7	FO E47
K	FA	9-1-8	FA E48
L	REMOTE	9-1-4	REMOTE E79
M	J8-E		
N	J8-D		
P	J8-C		
R	J8-B		
S	J8-A		
1	T	10 ¹ + 1μS	T E64
2		10 ² + 10μS	E63
3		10 ³ + 100μS	E62
4		10 ⁴ + 1μS	E61
5		10 ⁵ + 10μS	E60
6		10 ⁶ + 100μS	E59
7		10 ⁷ + 1μS	E58
8		10 ⁸ + 10μS	E57
9		10 ⁹ + 100μS	E56
10		REM HOLD	E55
11		REM RESET	E65
12		EXT GATE	E67
13			E78
14			E80
15	J8-1		

READOUT PCB 715085

PCB 715092 RECORDER

POINT	COLOR	FUNCTION	TEST POINT
A	VI-4	4	VI-4 E1
B	VI-8	8	VI-8 E3
C	V2-4	4	V2-4 E5
D	V2-8	8	V2-8 E7
E	V3-4	4	V3-4 E9
F	V3-8	8	V3-8 E11
H	V4-4	4	V4-4 E13
J	V4-8	8	V4-8 E15
K	V5-4	4	V5-4 E17
L	V5-8	8	V5-8 E19
M	V6-4	4	V6-4 E21
N	V6-8	8	V6-8 E23
P	V7-4	4	V7-4 E25
R	V7-8	8	V7-8 E27
S	V8-4	4	V8-4 E29
1	V1-1	1	V1-1 E4
2	V1-2	2	V1-2 E7
3	V2-1	1	V2-1 E8
4	V2-2	2	V2-2 E6
5	V3-1	1	V3-1 E12
6	V3-2	2	V3-2 E10
7	V4-1	1	V4-1 E14
8	V4-2	2	V4-2 E16
9	V5-1	1	V5-1 E20
10	V5-2	2	V5-2 E18
11	V6-1	1	V6-1 E24
12	V6-2	2	V6-2 E22
13	V7-1	1	V7-1 E28
14	V7-2	2	V7-2 E26
15	V8-1	1	V8-1 E32

READOUT PCB 715085

PCB 715093 RECORDER

POINT	COLOR	FUNCTION	TEST POINT
A	VB-8	8	VB-8 E31
B	V9-4	4	V9-4 E33
C	V9-8	8	V9-8 E35
D	MHE	9-1-1	MHE E49
E	KHE	9-1-2	KHE E53
F	SEC	9-2-3	SEC E51
H	N SEC	9-2-4	N SEC E52
J	M SEC	9-1-5	M SEC E50
K	M SEC	9-2-6	M SEC E54
L			
M			
N			
P			
R			
S			
1		PRINT	E66
2		VB-2	E30
3		V9-1	E36
4		V9-2	E34
5		DP1	E70
6		DP2	E71
7		DP3	E72
8		DP4	E73
9		DP5	E74
10		DP6	E75
11		DP7	E76
12		DP8	E77
13		DATA OVERFLOW	E83
14		ZERO REF	E69
15		ONE REF	E68

READOUT PCB 715085

406563-H

Figure 5.11 - Assembly, Remote & Recorder Harness (406563)

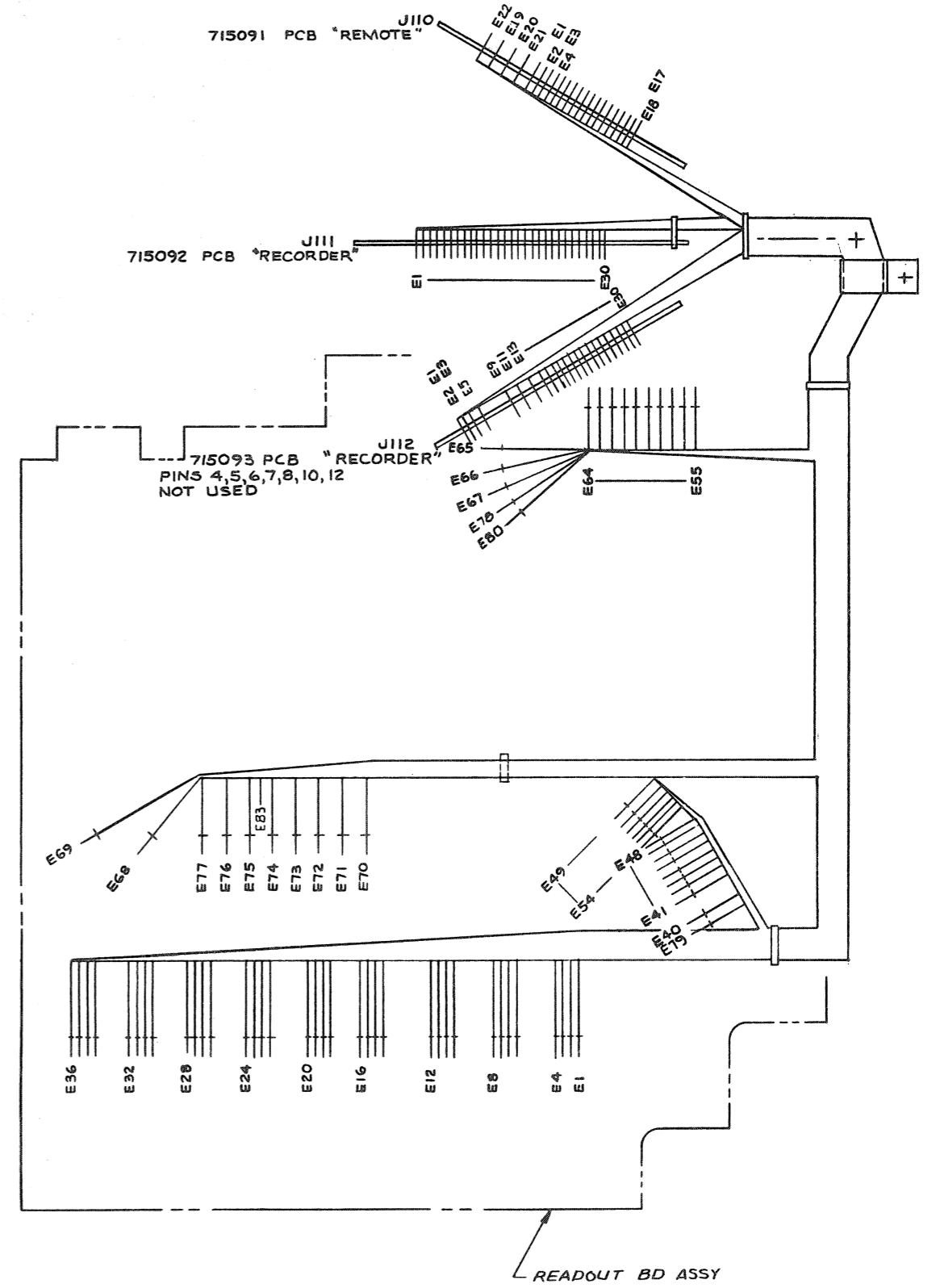


Figure 5.11 - Assembly, Remote & Recorder Harness (406563) continued

6.1 This section contains lists of replaceable parts arranged in the order of the following subassemblies:

Option 009	Page
Full Systems Interface	6-3
Rear Panel	6-4
Interconnect	6-5
Programmable Signal Conditioner Module	6-6
Programmable Signal Conditioner PCB	6-7
Interface Harness	6-16
Remote and Recorder Harness	6-17
Option 008	
Systems Interface	6-18
Remote and Recorder Harness	6-19

6.2 Manufacturers are identified by FSC numbers listed in table 6.2, "List of Suppliers". The code numbers are

from the Federal Supply Code for Manufacturers Cataloging Handbooks H4-1, H4-2, and their supplements.

6.3 Certain parts having 21793 (Dana) listed in the "FSC" column are specially-selected semiconductors. For some of these, standard commercial parts will serve as satisfactory replacements. These Dana parts are identified in table 6.1 along with the commercial equivalent.

Table 6.1

Semiconductor Type:	Equivalent:
007 Diode	Fairchild FD300
018 Diode	Fairchild 1N916B

Table 6.2 - List of Suppliers

FSC	NAME	FSC	NAME
02114	FERROXCUBE CORPORATION SAUGERTIES, NEW YORK	04713	MOTOROLA, INC. (Semiconductor Products Division) PHOENIX, ARIZONA
02660	AMPHENOL CORPORATION BROADVIEW, ILLINOIS	05397	UNION CARBIDE CORP. (Materials Systems Division) CLEVELAND, OHIO
04222	AEROVOX CORP. (Hi-Q Division) MYRTLE BEACH, SOUTH CAROLINA	05624	BARBER & COLMAN CO. ROCKFORD, ILLINOIS

Table 6.2 - List of Suppliers continued

FSC	NAME	FSC	NAME
07263	FAIRCHILD SEMICONDUCTOR MOUNTAIN VIEW, CALIFORNIA	72136	ELECTRO MOTIVE MFG. CO., INC. WILLIMANTIC, CONNECTICUT
11237	CTS KEENE, INC. PASO ROBLES, CALIFORNIA	72982	ERIE TECHNOLOGICAL PRODUCTS, INC. ERIE, PENNSYLVANIA
15636	ELECTROL, INC. SAUGUS, CALIFORNIA	73138	BECKMAN INSTRUMENTS, INC. FULLERTON, CALIFORNIA
21793	DANA LABORATORIES, INC. IRVINE, CALIFORNIA	75915	LITTELFUSE, INC. DES PLAINES, ILLINOIS
23095	AZTEC ELECTRONICS, INC. ANAHEIM, CALIFORNIA	79727	C-W INDUSTRIES WARMINSTER, PENNSYLVANIA
27014	NATIONAL SEMI-CONDUCTOR CORP. SANTA CLARA, CALIFORNIA	80131	ELECTRONICS INDUSTRIES ASSOC. WASHINGTON, D.C.
52072	CIRCUIT ASSY. CORP. COSTA MESA, CALIFORNIA	81349	MILITARY SPECIFICATION
52792	THORGREN TOOL & MOLDING CO. VALPARAISO, INDIANA	82389	SWITCHCRAFT, INC. CHICAGO, ILLINOIS
56289	SPRAGUE ELECTRIC CO. (Pacific Division) LOS ANGELES, CALIFORNIA	86884	RADIO CORP. OF AMERICA (Electronics Components Division) HARRISON, NEW JERSEY
71471	AEROVOX CORPORATION (Cinema Plant) MONCKS CORNER, SOUTH CAROLINA	98291	SEAELECTRO CORPORATION MAMARONECK, NEW YORK
71785	TRW ELECTRONIC COMPONENTS (Cinch Division) ELK GROVE VILLAGE, ILLINOIS	99800	AMERICAN PRECISION INDUSTRIES, INC. (Delevan Division) EAST AURORA, NEW YORK

406737 – Assy., FULL SYSTEMS INTERFACE

REF DES	DANA P/N	DESCRIPTION	FSC	MANU P/N
A1	406732	REAR PANEL ASSY	21793	406732
A2	406736	REMOTE PROGRAMMING CABLE ASSY	21793	406736
A3	406738	SIGNAL CONDITIONING MODULE ASSY	21793	406738
A4	406756	INTERFACE HARNESS ASSY	21793	406756

406732 -- Assy., REAR PANEL, OPTION 009

REF DES	DANA P/N	DESCRIPTION					FSC	MANU P/N
B1	600759	FAN MOTOR	TYPE AYAA	115 V		05624	Type AYAA	
C1	100063	CAP	CERAM	.01 MFD	500V	20%	56289	C023B501E103M
C2	100063	CAP	CERAM	.01 MFD	500 V	20%	56289	C023B501E103M
F101	920205	FUSE	GLASS	.75 AMP	250 V	(115V Operation)	75915	3AG3/4ASB
	920204	FUSE	SLOW	.50 AMP	250 V	(220V Operation)	75915	3AG1/2ASB
H1	920733	FAN BLADE	4 BLADES	.125 MTG HOLE			52792	
H2	730645	FAN BRACKET					21793	730645
J101	600619	CONN	RECEPTACLE		EAC-301		82389	EAC-301
J102	600567	CONN	RECEPTACLE		31-236		02660	31-236
J103	600567	CONN	RECEPTACLE		31-236		02660	31-236
J104	600567	CONN	RECEPTACLE		31-236		02660	31-236
J105	600567	CONN	RECEPTACLE		31-236		02660	31-236
P1	600566	CONN	6 PIN		251-0630160		71785	251-0630160
Q101	200223	TRANS		NPN	MJE521		04713	MJE521
Q102	200130	TRANS	SILICO	NPN	MJE3055		04713	MJE3055
Q103	200183	TRANS	SILICO	PNP	MJE371		04713	MJE371
S101	600680	SWITCH	SLIDE	SPDT	GF-124		79727	GF-124
S102	600617	SWITCH	SLIDE	DPDT	G126		79727	G126
S103	600521	SWITCH	SLIDE	DPDT	46256LFE		82389	46256LFE
T101	300065	TRANS	POWER	115 V	11824		23095	11824

406128 – Assy., PCB, INTERCONNECT

REF DES	DANA P/N	DESCRIPTION					FSC	MANU P/N
C1	101174	CAP	CERAM	.001 MFD	500 V	10%	04222	SCD-DI-2X5F-1000
P2	600575	CONN	25 PIN				71785	252-25-30-160
P4	600575	CONN	25 PIN				71785	252-25-30-160

406738 – Assy., SIGNAL CONDITIONING MODULE (009 OPTION)

REF DES	DANA P/N	DESCRIPTION				FSC	MANU P/N
J201	600567	CONN	RECEPTLE		31-236	02660	31-236
J202	600567	CONN	RECEPTLE		31-236	02660	31-236
P9	600566	CONN	6 PIN		251-0630160	71785	251-0630160
S202	600763	SWITCH			X5P6081	11237	X5P6081
S203	600763	SWITCH			X5P6081	11237	X5P6081
S206	600613	SWITCH	SLIDE	SPDT	GF-124	79727	GF-124
S207	600613	SWITCH	SLIDE	SPDT	GF-124	79727	GF-124
S208	600613	SWITCH	SLIDE	SPDT	GF-124	79727	GF-124
S209	600613	SWITCH	SLIDE	SPDT	GF-124	79727	GF-124
S210	600613	SWITCH	SLIDE	SPDT	GF-124	79727	GF-124

406741 – Assy., PCB, PROGRAMMABLE SIGNAL CONDITIONER (009 OPTION)

REF DES	DANA P/N	DESCRIPTION					FSC	MANU P/N
C1	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M
C2	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M
C3	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M
C4	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M
C5	101098	CAP	CERAM	330 PFD	500 V	10%	71471	C016B102E331K
C6	101098	CAP	CERAM	330 PFD	500 V	10%	71471	C016B102E331K
C7	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M
C8	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M
C9	101098	CAP	CERAM	330 PFD	500 V	10%	71471	C016B102E331K
C10	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M
C11	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M
C12	101098	CAP	CERAM	330 PFD	500 V	10%	71471	C016B102E331K
C13	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M
C14	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M
C15	110158	CAP	TANTA	10 MFD	50 V	10%	05397	T362C106K050A
C16	110158	CAP	TANTA	10 MFD	50 V	10%	05397	T362C106K050A
C17	110158	CAP	TANTA	10 MFD	50 V	10%	05397	T362C106K050A
C18	110158	CAP	TANTA	10 MFD	50 V	10%	05397	T362C106K050A
C19	130151	CAP	MICA	0.5 PFD	500 V		72136	DM15CD100D04CR
C20	130151	CAP	MICA	0.5 PFD	500 V		72136	DM15CD100D04CR
C21	130156	CAP	MICA	68 PFD	500 V	1%	72136	DM15ED068F04CR
C22	130156	CAP	MICA	68 PFD	500 V	1%	72136	DM15ED068F04CR
C23	100063	CAP	CERAM	.01 MFD	500 V	20%	56289	C023B501E103M
C24	130155	CAP	MICA	510 PFD	500 V	1%	72136	DM15ED511F04CR
C25	100063	CAP	CERAM	.01 MFD	500 V	20%	56289	C023B501E103M
C26	130155	CAP	MICA	510 PFD	500 V	1%	72136	DM15ED511F04CR
C27	130153	CAP	MICA	91 PFD	500 V	1%	72136	DM15ED910F04CR
C28	130155	CAP	MICA	510 PFD	500 V	1%	72136	DM15ED511F04CR
C29	130153	CAP	MICA	91 PFD	500 V	1%	72136	DM15ED910F04CR
C30	130155	CAP	MICA	510 PFD	500 V	1%	72136	DM15ED511F04CR
C31	130150	CAP	MICA	0.5 PFD	500 V		72136	DM15CD050D04CR
C32	130150	CAP	MICA	0.5 PFD	500 V		72136	DM15CD050D04CR
C33	100041	CAP	CERAM	25 PFD	1 KV	5%	56289	C030B102F250J
C34	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M
C35	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M
C36	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M
C37	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M
C38	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M
C39	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M
C40	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M
C41	100062	CAP	CERAM	.01 MFD	100 V	10%	72982	8121-100-W5R0-103K
C42	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M

406741 – Assy., PCB, PROGRAMMABLE SIGNAL CONDITIONER (009 OPTION) *continued*

REF DES	DANA P/N	DESCRIPTION					FSC	MANU P/N
C43	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M
C44	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M
C45	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M
C46	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M
C47	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M
C48	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M
C49	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M
C50	100063	CAP	CERAM	.01 MFD	500 V	20%	56289	C023B501E103M
CR1	211083	DIODE	SILICO		018		21793	211083
CR2	211083	DIODE	SILICO		018		21793	211083
CR3	211083	DIODE	SILICO		018		21793	211083
CR4	211083	DIODE	SILICO		018		21793	211083
CR5	211083	DIODE	SILICO		018		21793	211083
CR6	211083	DIODE	SILICO		018		21793	211083
CR7	211083	DIODE	SILICO		018		21793	211083
CR8	211083	DIODE	SILICO		018		21793	211083
CR9	211083	DIODE	SILICO		018		21793	211083
CR10	211083	DIODE	SILICO		018		21793	211083
CR11	211083	DIODE	SILICO		018		21793	211083
CR12	211083	DIODE	SILICO		018		21793	211083
CR13	211083	DIODE	SILICO		018		21793	211083
CR14	211083	DIODE	SILICO		018		21793	211083
CR15	211083	DIODE	SILICO		018		21793	211083
CR16	211083	DIODE	SILICO		018		21793	211083
CR17	211083	DIODE	SILICO		018		21793	211083
CR18	220031	DIODE	SILICO	ZENER	3.3 V		04713	1/4M3.3AZ5
CR19	220031	DIODE	SILICO	ZENER	3.3 V		04713	1/4M3.3AZ5
CR20	220031	DIODE	SILICO	ZENER	3.3 V		04713	1/4M3.3AZ5
CR21	220031	DIODE	SILICO	ZENER	3.3 V		04713	1/4M3.3AZ5
CR22	211236	DIODE	SILICO		007		21793	211236
CR23	211236	DIODE	SILICO		007		21793	211236
CR24	211236	DIODE	SILICO		007		21793	211236
CR25	211236	DIODE	SILICO		007		21793	211236
CR26	220019	DIODE	SILICO	ZENER	1N752A		81349	1N752A
CR27	220019	DIODE	SILICO	ZENER	1N752A		81349	1N752A
CR28	220011	DIODE	SILICO	ZENER	1N968B		81349	1N968B
CR29	220011	DIODE	SILICO	ZENER	1N968B		81349	1N968B
CR30	210064	DIODE	Matched Pair with CR31		018 TYPE		21793	210064
CR31	210064	DIODE	Matched Pair with CR30		018 TYPE		21793	210064
CR32	210064	DIODE	Matched Pair with CR33		018 TYPE		21793	210064
CR33	210064	DIODE	Matched Pair with CR32		018 TYPE		21793	210064

406741 – Assy., PCB, PROGRAMMABLE SIGNAL CONDITIONER (009 OPTION) *continued*

REF DES	DANA P/N	DESCRIPTION			FSC	MANU P/N	
J6	600610	CONN	RECEPTACLE	50-053-0000	98291	50-053-0000	
J7	600610	CONN	RECEPTACLE	50-053-0000	98291	50-053-0000	
J21	920735	SOCKET	16 PIN	133-51-02-006	71785	133-51-02-006	
J22	920734	SOCKET	14 PIN	133-51-02-003	71785	133-51-02-003	
J23	920735	SOCKET	16 PIN	133-51-02-006	71785	133-51-02-006	
J25	920734	SOCKET	14 PIN	133-51-02-003	71785	133-51-02-003	
J26	920734	SOCKET	14 PIN	133-51-02-003	71785	133-51-02-003	
K1	310123	RELAY	REED	RA30381051-02	15636	RA30381051-02	
K2	310123	RELAY	REED	RA30381051-02	15636	RA30381051-02	
K3	310123	RELAY	REED	RA30381051-02	15636	RA30381051-02	
K4	310123	RELAY	REED	RA30381051-02	15636	RA30381051-02	
K5	310123	RELAY	REED	RA30381051-02	15636	RA30381051-02	
K6	310123	RELAY	REED	RA30381051-02	15636	RA30381051-02	
K7	310123	RELAY	REED	RA30381051-02	15636	RA30381051-02	
K8	310123	RELAY	REED	RA30381051-02	15636	RA30381051-02	
K9	310123	RELAY	REED	RA30381051-02	15636	RA30381051-02	
L1	310068	CHOKE	RF	1 μ H	10%	99800	1537-12
L2	310068	CHOKE	RF	1 μ H	10%	99800	1537-12
L3	310068	CHOKE	RF	1 μ H	10%	99800	1537-12
L4	310068	CHOKE	RF	1 μ H	10%	99800	1537-12
L5	310068	CHOKE	RF	1 μ H	10%	99800	1537-12
L6	310108	CHOKE		.18 μ H	10%	99800	1025-02
L7	310108	CHOKE		.18 μ H	10%	99800	1025-02
Q1	200200	TRANS	NPN	200200		21793	200200
Q2	200200	TRANS	NPN	200200		21793	200200
Q3	200200	TRANS	NPN	200200		21793	200200
Q4	200200	TRANS	NPN	200200		21793	200200
Q5	200200	TRANS	NPN	200200		21793	200200
Q6	200200	TRANS	NPN	200200		21793	200200
Q7	200200	TRANS	NPN	200200		21793	200200
Q8	200200	TRANS	NPN	200200		21793	200200
Q9	200200	TRANS	NPN	200200		21793	200200
Q10	200200	TRANS	NPN	200200		21793	200200
Q11	200068	TRANS	PNP	2N4250		80131	2N4250
Q12	200068	TRANS	PNP	2N4250		80131	2N4250
Q13	200189	TRANS	Matched Pair with Q31			21793	200189
Q14	200189	TRANS	Matched Pair with Q32			21793	200189
Q15	200186	TRANS	Matched Pair with Q29			21793	200186
Q16	200219	TRANS	Matched Pair with Q30	2N3563		21793	200219

406741 – Assy., PCB, PROGRAMMABLE SIGNAL CONDITIONER (009 OPTION) *continued*

REF DES	DANA P/N	DESCRIPTION				FSC	MANU P/N
Q17	200186	TRANS	Matched Pair with Q25			21793	200186
Q18	200186	TRANS	Matched Pair with Q26			21793	200186
Q19	200219	TRANS	Matched Pair with Q27	2N3563	21793	200219	
Q20	200219	TRANS	Matched Pair with Q28	2N3563	21793	200219	
Q21	200186	TRANS	Matched Pair with Q23			21793	200186
Q22	200219	TRANS	Matched Pair with Q24	2N3563	21793	200219	
Q23	200186	TRANS	Matched Pair with Q21			21793	200186
Q24	200219	TRANS	Matched Pair with Q22	2N3563	21793	200219	
Q25	200186	TRANS	Matched Pair with Q17			21793	200186
Q26	200186	TRANS	Matched Pair with Q18			21793	200186
Q27	200219	TRANS	Matched Pair with Q19	2N3563	21793	200219	
Q28	200219	TRANS	Matched Pair with Q20	2N3563	21793	200219	
Q29	200186	TRANS	Matched Pair with Q15			21793	200186
Q30	200219	TRANS	Matched Pair with Q16	2N3563	21793	200219	
Q31	200189	TRANS	Matched Pair with Q13			21793	200189
Q32	200189	TRANS	Matched Pair with Q14			21793	200189
Q33	200068	TRANS	PNP	2N4250	80131	2N4250	
Q34	200200	TRANS	NPN	200200	21793	200200	
Q35	200068	TRANS	PNP	2N4250	80131	2N4250	
Q36	200200	TRANS	NPN	200200	21793	200200	
Q37	200200	TRANS	NPN	200200	21793	200200	
Q38	200200	TRANS	NPN	200200	21793	200200	
Q39	200068	TRANS	PNP	2N4250	80131	2N4250	
Q40	200068	TRANS	PNP	2N4250	80131	2N4250	
Q41	200200	TRANS	NPN	200200	21793	200200	
Q42	200200	TRANS	NPN	200200	21793	200200	
Q43	200200	TRANS	NPN	200200	21793	200200	
Q44	200200	TRANS	NPN	200200	21793	200200	
Q45	200200	TRANS	NPN	200200	21793	200200	
Q46	200200	TRANS	NPN	200200	21793	200200	
Q47	200200	TRANS	NPN	200200	21793	200200	
Q48	200200	TRANS	NPN	200200	21793	200200	
Q49	200037	TRANS	SILICO	NPN	2N3646	80131	2N3646
Q50	200037	TRANS	SILICO	NPN	2N3646	80131	2N3646
Q51	200037	TRANS	SILICO	NPN	2N3646	80131	2N3646
Q52	200037	TRANS	SILICO	NPN	2N3646	80131	2N3646
B1	920563	BEAD	SHIELDING	56-59065/4B	02114	56-59065/4B	
B2	920563	BEAD	SHIELDING	56-59065/4B	02114	56-59065/4B	
B3	920563	BEAD	SHIELDING	56-59065/4B	02114	56-59065/4B	
B4	920563	BEAD	SHIELDING	56-59065/4B	02114	56-59065/4B	

406741 – Assy., PCB, PROGRAMMABLE SIGNAL CONDITIONER (009 OPTION) *continued*

REF DES	DANA P/N	DESCRIPTION				FSC	MANU P/N
B5	920563	BEAD	SHIELDING		56-59065/4B	02114	56-59065/4B
B6	920563	BEAD	SHIELDING		56-59065/4B	02114	56-59065/4B
R1	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R2	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R3	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R4	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R5	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R6	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R7	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R8	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R9	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R10	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R11	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R12	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R13	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R14	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R15	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R16	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R17	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R18	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R19	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R20	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R21	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R22	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R23	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R24	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R25	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R26	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R27	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R28	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R29	010719	RES	METAL	16.2 K	1% 1/10W	81349	RN55C1622F
R30	010719	RES	METAL	16.2 K	1% 1/10W	81349	RN55C1622F
R31	000102	RES	CARBON	1 K	5% 1/4W	81349	RC07GF102J
R32	000271	RES	CARBON	270 OHM	5% 1/4W	81349	RC07GF271J
R33	000102	RES	CARBON	1 K	5% 1/4W	81349	RC07GF102J
R34	000271	RES	CARBON	270 OHM	5% 1/4W	81349	RC07GF271J
R35	040115	POT	CERMET	500 OHM	10%	73138	62PR500
R36	010874	RES	METAL	3.92 K	1% 1/10W	81349	RN55C3921F
R37	040115	POT	CERMET	500 OHM	10%	73138	62PR500
R38	010874	RES	METAL	3.92 K	1% 1/10W	81349	RN55C3921F
R39	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J

406741 – Assy., PCB, PROGRAMMABLE SIGNAL CONDITIONER (009 OPTION) *continued*

REF DES	DANA P/N	DESCRIPTION				FSC	MANU P/N
R40	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R41	000432	RES	CARBON	4.3 K	5% 1/4W	81349	RC07GF432J
R42	000432	RES	CARBON	4.3 K	5% 1/4W	81349	RC07GF432J
R43	010555	RES	METAL	1.82 K	1% 1/10W	81349	RN55C1821F
R44	010555	RES	METAL	1.82 K	1% 1/10W	81349	RN55C1821F
R45	010555	RES	METAL	1.82 K	1% 1/10W	81349	RN55C1821F
R46	010555	RES	METAL	1.82 K	1% 1/10W	81349	RN55C1821F
R47	040115	POT	CERMET	500 OHM	10%	73138	62PR500
R48	010555	RES	METAL	1.82 K	1% 1/10W	81349	RN55C1821F
R49	000302	RES	CARBON	3 K	5% 1/4W	81349	RC07GF302J
R50	040115	POT	CERMET	500 OHM	10%	73138	62PR500
R51	010555	RES	METAL	1.82 K	1% 1/10W	81349	RN55C1821F
R52	000302	RES	CARBON	3 K	5% 1/4W	81349	RC07GF302J
R53	000101	RES	CARBON	100 OHM	5% 1/4W	81349	RC07GF101J
R54	000101	RES	CARBON	100 OHM	5% 1/4W	81349	RC07GF101J
R55	000101	RES	CARBON	100 OHM	5% 1/4W	81349	RC07GF101J
R56	000101	RES	CARBON	100 OHM	5% 1/4W	81349	RC07GF101J
R57	010880	RES	METAL	3.09 K	1% 1/10W	81349	RN55C3091F
R58	010880	RES	METAL	3.09 K	1% 1/10W	81349	RN55C3091F
R59	000200	RES	CARBON	20 OHM	5% 1/4W	81349	RC07GF200J
R60	000200	RES	CARBON	20 OHM	5% 1/4W	81349	RC07GF200J
R61	010879	RES	METAL	1 M	1% 1/10W	81349	RN55D1004F
R62	000511	RES	CARBON	510 OHM	5% 1/4W	81349	RC07GF511J
R63	010879	RES	METAL	1 M	1% 1/10W	81349	RN55D1004F
R64	000511	RES	CARBON	510 OHM	5% 1/4W	81349	RC07GF511J
R65	000101	RES	CARBON	100 OHM	5% 1/4W	81349	RC07GF101J
R66	010875	RES	METAL	124 K	1% 1/10W	81349	RN55C1243F
R67	000620	RES	CARBON	62 OHM	5% 1/4W	81349	RC07GF620J
R68	010875	RES	METAL	124 K	1% 1/10W	81349	RN55C1243F
R69	000100	RES	CARBON	10 OHM	5% 1/4W	81349	RC07GF100J
R70	010631	RES	METAL	10.2 K	1% 1/10W	81349	RN55C1022F
R71	000114	RES	CARBON	110 K	5% 1/4W	81349	RC07GF114J
R72	000114	RES	CARBON	110 K	5% 1/4W	81349	RC07GF114J
R73	010879	RES	METAL	1 M	1% 1/10W	81349	RN55D1004F
R74	010879	RES	METAL	1 M	1% 1/10W	81349	RN55D1004F
R75	000222	RES	CARBON	2.2 K	5% 1/4W	81349	RC07GF222J
R76	000222	RES	CARBON	2.2 K	5% 1/4W	81349	RC07GF222J
R77	000222	RES	CARBON	2.2 K	5% 1/4W	81349	RC07GF222J
R78	000222	RES	CARBON	2.2 K	5% 1/4W	81349	RC07GF222J
R79	000751	RES	CARBON	750 OHM	5% 1/4W	81349	RC07GF751J
R80	010630	RES	METAL	9.09 K	1% 1/10W	81349	RN55C9091F
R81	000751	RES	CARBON	750 OHM	5% 1/4W	81349	RC07GF751J

406741 – Assy., PCB, PROGRAMMABLE SIGNAL CONDITIONER (009 OPTION) *continued*

REF DES	DANA P/N	DESCRIPTION				FSC	MANU P/N
R82	010630	RES	METAL	9.09 K	1% 1/10W	81349	RN55C9091F
R83	000101	RES	CARBON	100 OHM	5% 1/4W	81349	RC07GF101J
R84	010705	RES	METAL	4.53 K	1% 1/10W	81349	RN55C4531F
R85	000101	RES	CARBON	100 OHM	5% 1/4W	81349	RC07GF101J
R86	010705	RES	METAL	4.53 K	1% 1/10W	81349	RN55C4531F
R87	000751	RES	CARBON	750 OHM	5% 1/4W	81349	RC07GF751J
R88	000751	RES	CARBON	750 OHM	5% 1/4W	81349	RC07GF751J
R89	000910	RES	CARBON	91 OHM	5% 1/4W	81349	RC07GF910J
R90	000470	RES	CARBON	47 OHM	5% 1/4W	81349	RC07GF470J
R91	000910	RES	CARBON	91 OHM	5% 1/4W	81349	RC07GF910J
R92	000470	RES	CARBON	47 OHM	5% 1/4W	81349	RC07GF470J
R93	000152	RES	CARBON	1.5 K	5% 1/4W	81349	RC07GF152J
R94	000101	RES	CARBON	100 OHM	5% 1/4W	81349	RC07GF101J
R95	000101	RES	CARBON	100 OHM	5% 1/4W	81349	RC07GF101J
R96	000430	RES	CARBON	43 OHM	5% 1/4W	81349	RC07GF430J
R97	001100	RES	CARBON	2.2 K	5% 1/2W	81349	RC20GF222J
R98	000430	RES	CARBON	43 OHM	5% 1/4W	81349	RC07GF430J
R99	001100	RES	CARBON	2.2 K	5% 1/2W	81349	RC20GF222J
R100	000101	RES	CARBON	100 OHM	5% 1/4W	81349	RC07GF101J
R101	000101	RES	CARBON	100 OHM	5% 1/4W	81349	RC07GF101J
R102	040123	POT	CERMET	1 K	62-1-1-102	73138	62-1-1-102
R103	040123	POT	CERMET	1 K	62-1-1-102	73138	62-1-1-102
R104	000152	RES	CARBON	1.5 K	5% 1/4W	81349	RC07GF152J
R105	000511	RES	CARBON	510 OHM	5% 1/4W	81349	RC07GF511J
R106	000910	RES	CARBON	91 OHM	5% 1/4W	81349	RC07GF910J
R107	000470	RES	CARBON	47 OHM	5% 1/4W	81349	RC07GF470J
R108	001100	RES	CARBON	2.2 K	5% 1/2W	81349	RC20GF222J
R109	000511	RES	CARBON	510 OHM	5% 1/4W	81349	RC07GF511J
R110	000910	RES	CARBON	91 OHM	5% 1/4W	81349	RC07GF910J
R111	000470	RES	CARBON	47 OHM	5% 1/4W	81349	RC07GF470J
R112	001100	RES	CARBON	2.2 K	5% 1/2W	81349	RC20GF222J
R113	040110	POT		100 OHM	62PR100	73138	62PR100
R114	040110	POT		100 OHM	62PR100	73138	62PR100
R115	001874	RES	CARBON	680 OHM	5% 1/2W	81349	RC20GF681J
R116	000751	RES	CARBON	750 OHM	5% 1/4W	81349	RC07GF751J
R117	000101	RES	CARBON	100 OHM	5% 1/4W	81349	RC07GF101J
R118	010705	RES	METAL	4.53 K	1% 1/10W	81349	RN55C4531F
R119	001874	RES	CARBON	680 OHM	5% 1/2W	81349	RC20GF681J
R120	000751	RES	CARBON	750 OHM	5% 1/4W	81349	RC07GF751J
R121	000101	RES	CARBON	100 OHM	5% 1/4W	81349	RC07GF101J
R122	010705	RES	METAL	4.53 K	1% 1/10W	81349	RN55C4531F
R123	010630	RES	METAL	9.09 K	1% 1/10W	81349	RN55C9091F

406741 - Assy., PCB, PROGRAMMABLE SIGNAL CONDITIONER (009 OPTION) *continued*

REF DES	DANA P/N	DESCRIPTION				FSC	MANU P/N
R124	010630	RES	METAL	9.09 K	1% 1/10W	81349	RN55C9091F
R125	010873	RES	METAL	2.21 K	1% 1/10W	81349	RN55C2211F
R126	010631	RES	METAL	10.2 K	1% 1/10W	81349	RN55C1022F
R127	010873	RES	METAL	2.21 K	1% 1/10W	81349	RN55C2211F
R128	010631	RES	METAL	10.2 K	1% 1/10W	81349	RN55C1022F
R129	010555	RES	METAL	1.82 K	1% 1/10W	81349	RN55C1821F
R130	010705	RES	METAL	4.53 K	1% 1/10W	81349	RN55C4531F
R131	010555	RES	METAL	1.82 K	1% 1/10W	81349	RN55C1821F
R132	010705	RES	METAL	4.53 K	1% 1/10W	81349	RN55C4531F
R133	010878	RES	METAL	348 K	1% 1/10W	81349	RN55C3483F
R134	010878	RES	METAL	348 K	1% 1/10W	81349	RN55C3483F
R135	000222	RES	CARBON	2.2 K	5% 1/4W	81349	RC07GF222J
R136	000391	RES	CARBON	390 OHM	5% 1/4W	81349	RC07GF391J
R137	000222	RES	CARBON	2.2 K	5% 1/4W	81349	RC07GF222J
R138	000222	RES	CARBON	2.2 K	5% 1/4W	81349	RC07GF222J
R139	000391	RES	CARBON	390 OHM	5% 1/4W	81349	RC07GF391J
R140	000222	RES	CARBON	2.2 K	5% 1/4W	81349	RC07GF222J
R141	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R142	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R143	010892	RES	METAL	383 K	1% 1/10W	81349	RN55C3833F
R144	010892	RES	METAL	383 K	1% 1/10W	81349	RN55C3833F
R145	010892	RES	METAL	383 K	1% 1/10W	81349	RN55C3833F
R146	010892	RES	METAL	383 K	1% 1/10W	81349	RN55C3833F
R147	000102	RES	CARBON	1 K	5% 1/4W	81349	RC07GF102J
R148	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R149	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R150	000102	RES	CARBON	1 K	5% 1/4W	81349	RC07GF102J
R151	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R152	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R153	000682	RES	CARBON	6.8 K	5% 1/4W	81349	RC07GF682J
R154	000682	RES	CARBON	6.8 K	5% 1/4W	81349	RC07GF682J
R155	000102	RES	CARBON	1 K	5% 1/4W	81349	RC07GF102J
R156	000102	RES	CARBON	1 K	5% 1/4W	81349	RC07GF102J
R157	000102	RES	CARBON	1 K	5% 1/4W	81349	RC07GF102J
R158	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R159	000102	RES	CARBON	1 K	5% 1/4W	81349	RC07GF102J
R160	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R161	000682	RES	CARBON	6.8 K	5% 1/4W	81349	RC07GF682J
R162	000682	RES	CARBON	6.8 K	5% 1/4W	81349	RC07GF682J
R163	000102	RES	CARBON	1 K	5% 1/4W	81349	RC07GF102J
R164	000102	RES	CARBON	1 K	5% 1/4W	81349	RC07GF102J
R165	000391	RES	CARBON	390 OHM	5% 1/4W	81349	RC07GF391J

406741 – Assy., PCB, PROGRAMMABLE SIGNAL CONDITIONER (009 OPTION) *continued*

REF DES	DANA P/N	DESCRIPTION				FSC	MANU P/N
R166	000391	RES	CARBON	390 OHM	5% 1/4W	81349	RC07GF391J
R167	000241	RES	CARBON	240 OHM	5% 1/4W	81349	RC07GF241J
R168	000241	RES	CARBON	240 OHM	5% 1/4W	81349	RC07GF241J
R169	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R170	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R171	000100	RES	CARBON	10 OHM	5% 1/4W	81349	RC07GF100J
R172	010631	RES	METAL	10.2 K	1% 1/10W	81349	RN55C1022F
R173	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R174	000103	RES	CARBON	10 K	5% 1/4W	81349	RC07GF103J
R175	000390	RES	CARBON	39 OHM	5% 1/4W	81349	RC07GF390J
AR1	230110	INTEGRATED CIRCUIT		OP AMP		27014	LM301A
AR2	230110	INTEGRATED CIRCUIT		OP AMP		27014	LM301A
U1C	230187	INTEGRATED CIRCUIT		MC1406L		04713	MC1406L
U1D	230118	INTEGRATED CIRCUIT		NPN CA3086		86884	CA3086
U2B*	230116	INTEGRATED CIRCUIT		7432		07263	7432
U3B	230028	INTEGRATED CIRCUIT		CERAM 7400		07263	7400
U3C	230115	INTEGRATED CIRCUIT		7409		07263	7409
U3D	230115	INTEGRATED CIRCUIT		7409		07263	7409
U4A	230074	INTEGRATED CIRCUIT		7442		07263	7442
U4B	230074	INTEGRATED CIRCUIT		7442		07263	7442
U5B	230116	INTEGRATED CIRCUIT		7432		07263	7432
U5C	230187	INTEGRATED CIRCUIT		MC1406L		04713	MC1406L
U5D	230118	INTEGRATED CIRCUIT		NPN CA3086		86884	CA3086
W1	600245	JUMPER		L-2007-1LP		01295	L-2007-1LP

*Used on 8015B and 8035B Units only

406756 – Assy., HARNESS INTERFACE

REF DES	DANA P/N	DESCRIPTION	FSC	MANU P/N
A1	406733	CABLE HARNESS ASSY	21793	406733
CR31	211083	DIODE SILICO 018	21793	211083
CR32	211083	DIODE SILICO 018	21793	211083
CR33	211083	DIODE SILICO 018	21793	211083
CR34	211083	DIODE SILICO 018	21793	211083
CR35	211083	DIODE SILICO 018	21793	211083
CR36	211083	DIODE SILICO 018	21793	211083
CR37	211083	DIODE SILICO 018	21793	211083
CR38	211083	DIODE SILICO 018	21793	211083
CR39	211083	DIODE SILICO 018	21793	211083
CR40	211083	DIODE SILICO 018	21793	211083
CR41	211083	DIODE SILICO 018	21793	211083
CR42	211083	DIODE SILICO 018	21793	211083
CR43	211083	DIODE SILICO 018	21793	211083
CR44	211083	DIODE SILICO 018	21793	211083
CR45	211083	DIODE SILICO 018	21793	211083
CR46	211083	DIODE SILICO 018	21793	211083
CR47	211083	DIODE SILICO 018	21793	211083
CR48	211083	DIODE SILICO 018	21793	211083
CR49	211083	DIODE SILICO 018	21793	211083
CR50	211083	DIODE SILICO 018	21793	211083
CR51	211083	DIODE SILICO 018	21793	211083
CR52	211083	DIODE SILICO 018	21793	211083

406733 – Assy., REMOTE & RECORDER, OPTION 009

REF DES	DANA P/N	DESCRIPTION	FSC	MANU P/N
J111	715092	PCB FINGER BOARD, RECORDER	21793	715092
J112	715093	PCB FINGER BOARD, RECORDER	21793	715093
P25	600760	PLUG 14 PIN CA-14P-05	52072	CA-14P-05
P26	600760	PLUG 14 PIN CA-14P-05	52072	CA-14P-05

406664 – Assy., PCB, SYSTEMS INTERFACE, OPTION 008

REF DES	DANA P/N	DESCRIPTION					FSC	MANU P/N
A1	406563	HARNESS ASSY					21793	406563
C1	100017	CAP	CERAM	.01 MFD	100 V	20%	56289	C023B101F103M
CR31	211083	DIODE	SILICO		018		21793	211083
CR32	211083	DIODE	SILICO		018		21793	211083
CR33	211083	DIODE	SILICO		018		21793	211083
CR34	211083	DIODE	SILICO		018		21793	211083
CR35	211083	DIODE	SILICO		018		21793	211083
CR36	211083	DIODE	SILICO		018		21793	211083
CR37	211083	DIODE	SILICO		018		21793	211083
CR38	211083	DIODE	SILICO		018		21793	211083
CR39	211083	DIODE	SILICO		018		21793	211083
CR41	211083	DIODE	SILICO		018		21793	211083
CR42	211083	DIODE	SILICO		018		21793	211083
CR43	211083	DIODE	SILICO		018		21793	211083
CR44	211083	DIODE	SILICO		018		21793	211083
CR45	211083	DIODE	SILICO		018		21793	211083
CR46	211083	DIODE	SILICO		018		21793	211083
CR47	211083	DIODE	SILICO		018		21793	211083
CR48	211083	DIODE	SILICO		018		21793	211083
CR49	211083	DIODE	SILICO		018		21793	211083
CR50	211083	DIODE	SILICO		018		21793	211083
P8	600566	CONN	6 PIN		251-0630160		71785	251-0630160
P110	600698	CONN	15 PIN		251-15-30-260		71785	251-15-30-260
P111	600698	CONN	15 PIN		251-15-30-260		71785	251-15-30-260
P112	600698	CONN	15 PIN		251-15-30-260		71785	251-15-30-260

406563 – Assy., REMOTE & RECORDER HARNESS

REF DES	DANA P/N	DESCRIPTION	FSC	MANU P/N
J110	715091	FINGER BOARD, REMOTE	21793	715091
J111	715092	FINGER BOARD, RECORDER	21793	715092
J112	715093	FINGER BOARD, RECORDER	21793	715093

Steckerbelegung DATA OUT (50-pol. Stecker)

Pin:	Funktion:
1	lo ⁰ A
2	lo ⁰ B
3	lo ¹ A
4	lo ¹ B
5	lo ² A
6	lo ² B
7	lo ³ A
8	lo ³ B
9	lo ⁴ A
10	lo ⁴ B
11	lo ⁵ A
12	lo ⁵ B
13	lo ⁶ A
14	lo ⁶ B
15	lo ⁷ A
16	lo ⁷ B
17	Dimension " MHz "
18	Dimension " KHz "
19	Dimension " Sec "
20	Dimension " nsec "
21	Dimension " msec "
22	Dimension " usec "
23	Print - Kommando
24	
25	Ground (0 Volt)
26	lo ⁰ C
27	lo ⁰ D
28	lo ¹ C
29	lo ¹ D
30	lo ² C
31	lo ² D
32	lo ³ C
33	lo ³ D
34	lo ⁴ C
35	lo ⁴ D
36	lo ⁵ C
37	lo ⁵ D
38	lo ⁶ C
39	lo ⁶ D
40	lo ⁷ C
41	lo ⁷ D
42	Dezimalpunkt 1
43	Dezimalpunkt 2
44	Dezimalpunkt 3
45	Dezimalpunkt 4
46	Dezimalpunkt 5
47	Dezimalpunkt 6
48	Dezimalpunkt 7
49	Dezimalpunkt 8
50	+ 5 Volt (Reference only)

DANA Counter

Steckerbelegung PROGR. (36-pol. Stecker)

Pin:	Funktion:
1	FC (Frequency C)
2	TIA (Time Interval Average)
3	SC (Self Check)
4	TI (Time Interval)
5	PI (Period)
6	A/B (Frequency Ratio)
7	PA (Period Average)
8	TO (Totalize)
9	FA (Frequency A)
10	REM (Remote)
11	Chan. B Slope
12	Chan. B Triggerlevel
13.	Chan. A Slope
14	Chan. A Triggerlevel
15	10^0
16	10^1
17	10^2
18	10^3
19	10^4 Timebase
20	10^5
21	10^6
22	10^7
23	10^8
24	10^9
25	Hold
26	Reset
27	Ext. Gate
36	Ground