HF-8054A Receiver (622-3475-210)

Rockwell International

supplement

Collins Defense Communications Division

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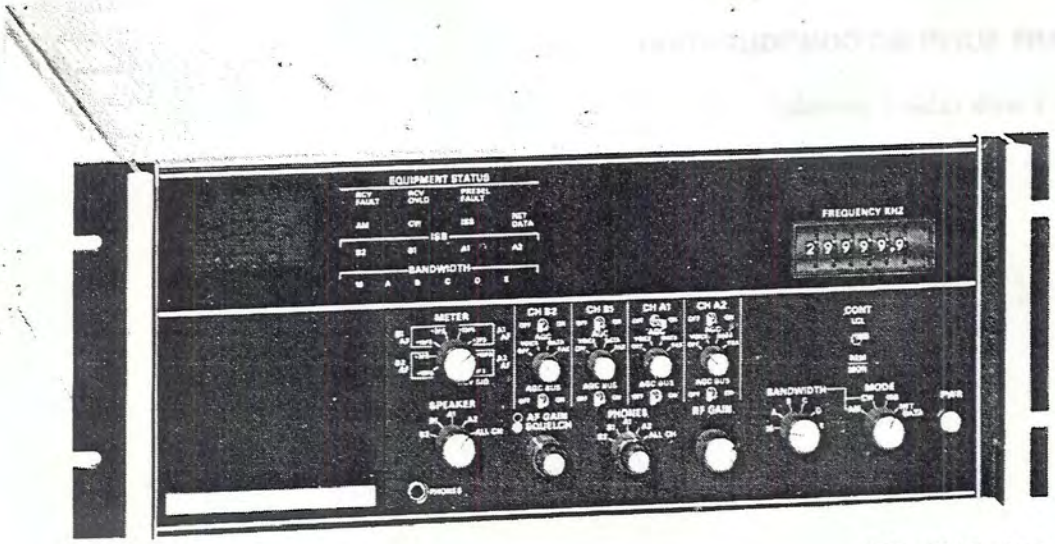
GENERAL

The purpose of this supplement is to provide information for HF-8054A Receiver, Rockwell-Collins part number 622-3475-210 (figure 1). When used with the HF-8054( ) Receiver Instruction Book (523-0770698), this supplement provides the user with a complete instruction book on the HF-8054A Receiver (622-3475-210).



TPA-4227-017

HF-8054A Receiver (622-3475-210)
Figure 1

FRONT MATTER

In the list of instruction books on the title page, place the following entry to correspond with the physical placement of the supplement:

HF-8054A Receiver (622-3475-210) Supplement 523-0773477

INTRODUCTION

The introduction is applicable to the HF-8054A Receiver (622-3475-210) with the exception that the receiver is a 2-channel receiver, and with the addition of the following design feature.

- The HF-8054A Receiver (622-3475-210) is capable of utilizing: 1) serial input data from a remote control to control all receiver functions, 2) parallel binary coded decimal data for frequency control, 3) parallel binary weighted data for rf gain control, 4) parallel coded-frequency input data for frequency control, or 5) the front panel controls while in the local mode.

DESCRIPTION (523-0770699-002218)

1. GENERAL

Add the following paragraph between the first and second paragraphs.

The HF-8054A Receiver (622-3475-210) provides reception of AM, CW, and 2-channel ISB signals over the frequency range of 1.6000 to 29.9999 MHz in 1-Hz steps. The HF-8054A Receiver (622-3475-210) may be controlled locally or controlled remotely using a compatible remote control. The frequency of the HF-8054A Receiver (622-3475-210) may be additionally controlled by parallel data inputs from a compatible parallel formatted remote control or processor.

2. EQUIPMENT SUPPLIED/CONFIGURATION

Replace table 1 with table 1 provided.

Table 1. Equipment Supplied/Configuration.

SUBASSEMBLY/CIRCUIT CARD		RECEIVER			DESCRIPTION/FUNCTION
TITLE	PART NUMBER*	HF-8054 622-3474-001	HF-8054A 622-3475-( )		
			-001	-210	
Main chassis	634-8177-001	X	X	X	
Bottom cover	634-8179-001	X	X	X	
Top cover	634-8181-002	X	X	X	
Rear panel	642-2462-001	X	X		
Rear panel	652-7268-001			X	
Cable assembly W1	634-8226-001	X	X		Interconnects TB1.
	634-8226-002			X	
Cable assembly W2	634-8227-001	X	X		Interconnects TB2.
	634-8227-002			X	
Cable assembly W3	634-8225-001	X	X	X	Interconnects J47, TB3, and audio connections (speaker cable).
Rf cable assembly J40/J22	637-1525-002	X	X	X	Interconnects J40 and J22 (RCV ANT).
Rf cable assembly J38/J23	637-1525-003	X	X	X	Interconnects J38 and J23 (CH B2 IF OUT).
Rf cable assembly J37/J26	637-1525-003	X	X	X	Interconnects J37 and J26 (CH A2 IF OUT).
Rf cable assembly J36/J24	637-1525-003	X	X	X	Interconnects J36 and J24 (CH B1 IF OUT).
Rf cable assembly J35/J25	635-1525-003	X	X	X	Interconnects J35 and J25 (CH A1 IF OUT).
Rf cable assembly A35J2/J28	652-7398-001			X	Interconnects A35J2 to J28.
Ribbon cable assembly	652-7408-001			X	Interconnects A31P5 to A11P2 and A31P5 to A12P2.
Rf cable assembly J41/J42	637-1526-002	X	X	X	Interconnects J41 and J42 (9.45-MHz receive if).
Rf cable assembly, 450-kHz if	642-2454-001	X	X	X	Interconnects J50, J51, J52, and J53 (450-kHz if from channel A1 if).
Rf cable assembly J34/J59	637-1526-003			X	Interconnects J34 and J59 (450-kHz if from vbfo).

Table 1. Equipment Supplied/Configuration (Cont).

SUBASSEMBLY/CIRCUIT CARD		RECEIVER			DESCRIPTION/FUNCTION
TITLE	PART NUMBER*	HF-8054 622-3474-001	HF-8054A 622-3475-( )		
			-001	-210	
Rf cable assembly J32/J58	637-1526-003				Interconnects J32 and J58 (9.9-MHz if from AFC).
Rf cable assembly, AFC	646-6534-001				Interconnects J50, J51, J52, J53, and J56 (450-kHz if from channel A1 for AFC option).
Power supply A1	635-9649-001	X	X	X	Input can be switched for 100, 115, 215, or 230 V ac (47 to 420 Hz).
Front panel assembly A2	634-8200-001	X	X		10-Hz tuning
	634-8200-002				100-Hz tuning, frequency display, AGC = OFF, VOICE, DATA, FAX
	634-8200-003				100-Hz tuning, frequency display, AFC, vbfo
	634-8200-004				100-Hz tuning, frequency display
	634-8200-005			X	10-Hz tuning, channel A2 and B2 if deleted, vbfo, AGC = VOICE, FAX, DATA.
LED status display A2A1	635-0825-013	X	X	X	
Switch mounting board A2A2	638-6873-001			X	AGC = OFF, VOICE, DATA, FAX
	638-6873-002	X	X		AGC = OFF, FAST, MED, SLOW
Frequency switchboard A2A3	635-0830-001				100-Hz tuning
	635-0830-002	X	X	X	10-Hz tuning
Frequency display A2A5	637-1781-006				100-Hz display
	637-1781-007				10-Hz display
	637-1781-008			X	
Frequency display cable A2W1	634-8289-001			X	Interconnects A2P8, A2P2, and cable assembly 634-8210-001 (P2).

Table 1. Equipment Supplied/Configuration (Cont).

SUBASSEMBLY/CIRCUIT CARD		RECEIVER			DESCRIPTION/FUNCTION
TITLE	PART NUMBER*	HF-8054 622-3474-001	HF-8054A 622-3475-( )		
			-001	-210	
AFC A3	642-3224-001				
	642-3224-002				
Vbfo A4	638-6067-002			X	
Channel B2 if A5	638-6975-006	X	X		Same as 638-6975-003 except has AGC decay time constants: FAST = 15 - 30 ms MED = 70 - 150 ms SLOW = 1 - 2 s
	638-6975-003				Includes 2.85-kHz LLSB if filter and CH B2 SSB audio detector. AGC decay time constants: VOICE = 1 - 2 s DATA = 15 - 30 ms FAX = 3 - 6 s
Channel A2 if A6	638-6975-005	X	X		Same as 638-6975-002 except has AGC decay time constants: FAST = 15 - 30 ms MED = 70 - 150 ms SLOW = 1 - 2 s
	638-6975-002				Includes 2.85-kHz UUSB if filter and CH A2 SSB audio detector. AGC decay time constants: VOICE = 1 - 2 s DATA = 15 - 30 ms FAX = 3 - 6 s
Channel B1 if A7	638-6975-004	X	X		Same as 638-6975-001 except has AGC decay time constants: FAST = 15 - 30 ms MED = 70 - 150 ms SLOW = 1 - 2 s
	638-6975-001			X	Includes 2.85-kHz LSB if filter and CH B1 SSB audio detector. AGC decay time constants: VOICE = 1 - 2 s DATA = 15 - 30 ms FAX = 3 - 6 s

Table 1. Equipment Supplied/Configuration (Cont).

SUBASSEMBLY/CIRCUIT CARD		RECEIVER			DESCRIPTION/FUNCTION
TITLE	PART NUMBER*	HF-8054 622-3474-001	HF-8054A 622-3475-( )		
			-001	-210	
Channel A1 if A8	638-6871-002	X	X		Same as 638-6871-001 except has AGC decay time constants: FAST = 15 - 30 ms MED = 70 - 150 ms SLOW = 1 - 2 s
	638-6871-001			X	Includes 2.85-kHz USB and 16-kHz AM if filters and AM and CH A1 SSB audio detector. AGC decay time constants: VOICE = 1 - 2 s DATA = 15 - 30 ms FAX = 3 - 6 s
Filter A8A2					Contains optional bandwidth filters in addition to those included on the channel B and/or channel A if cards. Filters (bandwidths in kHz) available on each filter card are as follows:
					LSB / A / B / C / D / E FL2 / FL3 / FL4 / FL5 / FL6 / FL7
	637-2515-001				NA / 6.0 / 3.0 / 1.0 / 0.5 / 0.2 Part of AC-8055 IF Filters Kit 622-3452-001
	637-2515-002				NA / 6.0 / NA / NA / NA / 0.2 USB Part of AC-8055 IF Filters Kit 622-3452-002
	637-2515-003				NA / 6.0 / 3.0 / 1.0 USB / 0.5 USB / 0.2 USB Part of AC-8055 IF Filters Kit 622-3452-003
	637-2515-004				2.75 / NA / NA / NA / NA / NA (Non-ISB radio)
	637-2515-005				2.75 / 6.0 / 3.0 / 1.0 / 0.5 / 0.2 Part of AC-8055 IF Filters Kit 622-3452-004 (non-ISB radio)
(Cont)					

Table 1. Equipment Supplied/Configuration (Cont).

SUBASSEMBLY/CIRCUIT CARD		RECEIVER			DESCRIPTION/FUNCTION					
TITLE	PART NUMBER*	HF-8054 622-3474-001	HF-8054A 622-3475-( )							
			-001	-210						
Filter A8A2 (Cont)	637-2515-006				LSB	A	B	C	D	E
					FL2	FL3	FL4	FL5	FL6	FL7
					NA	6.0	3.0	1.0	0.5	0.1
					Part of AC-8055 IF Filters Kit 622-3452-005					
	637-2515-007				0.2 USB	NA	NA	NA	NA	NA
					(Non-ISB radio)					
	637-2515-008				NA	NA	NA	NA	NA	0.37 USB
	637-2515-009				2.75 LSB	NA	NA	1.0	NA	0.2
					(Non-ISB radio)					
	637-2515-010				NA	6.0	NA	NA	NA	NA
					Part of AC-8055 IF Filters Kit 622-3452-006					
	637-2515-011				NA	6.0	NA	1.0	NA	0.2
					Part of AC-8055 IF Filters Kit 622-3452-007					
	637-2515-012				2.75 LSB	3.0	1.0	0.5	0.3	0.2
					(Non-ISB radio)					
	637-2515-013				NA	0.25 USB	0.7 USB	0.7 LSB	0.25 LSB	5.0
					Part of AC-8055 IF Filters Kit 622-3452-008					
	637-2515-015				NA	NA	NA	0.3	0.1	NA
					Part of AC-8055 IF Filters Kit 622-3452-009					
	637-2515-016				NA	NA	NA	1.0	0.5	0.2
					Part of AC-8055 IF Filters Kit 622-3452-010					

Table 1. Equipment Supplied/Configuration (Cont).

SUBASSEMBLY/CIRCUIT CARD		RECEIVER			DESCRIPTION/FUNCTION
TITLE	PART NUMBER*	HF-8054 622-3474-001	HF-8054A 622-3475-( )		
			-001	-210	
Rf translator A9	637-1767-002	⟨1⟩	⟨3⟩		Standard
	637-1767-003			X	High performance
	637-1767-004	⟨2⟩	⟨4⟩		Standard
Control A10	638-6629-001	X	X	X	
Parallel input A11	642-3135-001		X		
	642-3135-002			X	
Parallel output A12	642-3137-001		X		
	642-3137-002			X	
Serial interface A13	638-6896-001		X	X	Can be switched for 7-bit ASCII or 8-bit character data format. Can be switched for various serial controls: FSK; EIA RS-232C (CCITT V.24); or MIL-STD-188C. Can be switched for various baud rates: 75, 109, 150, 300, 600, 1200, 2400, 4800, 9600, or 19 200 bauds.
	638-6896-002				Can be switched for 7-bit ASCII or 8-bit character data format. Can be switched for serial controls FSK or RS-422. Can be switched for various baud rates: 75, 109, 150, 300, 600, 1200, 2400, 4800, 9600, or 19 200 bauds.
Synthesizer voltage regulator A14	635-0656-001	X	X		
Synthesizer subcarrier generator A15	638-6962-001	X	X		
Synthesizer reference A16	642-2451-001	X	X		Can be strapped for an internal (INT) or external (EXT) frequency standard. If strapped EXT, external phase lock must be installed.

Table 1. Equipment Supplied/Configuration (Cont).

SUBASSEMBLY/CIRCUIT CARD		RECEIVER			DESCRIPTION/FUNCTION
TITLE	PART NUMBER*	HF-8054 622-3474-001	HF-8054A 622-3475-( )		
			-001	-210	
External phase-lock A16A4	635-0655-001		X		Can be strapped for 100-kHz, 1-MHz, or 5-MHz external frequency standard. Part of AC-8012 Oven Standard Kit (622-3460-001) and AC-8013 External Standard Kit (622-3461-001).
Synthesizer end decade	635-0657-001	⟨5⟩	A18		Installed as A18 provides 10-Hz tuning. Installed as A19 provides 100-Hz tuning. With appropriate decades added, installed as A17 provides 1-Hz tuning.
Synthesizer 100/10-Hz decade A19	623-2080-004	⟨6⟩	X		Installed as A19 for 10-Hz tuning. Not installed for 100-Hz tuning. Two installed, one as A19 and one as A18, for 1-Hz tuning.
Synthesizer 1-kHz decade A20	623-2080-003	X	X		
Synthesizer 10-kHz decade A21	623-2080-002	X	X		
Synthesizer 100-kHz decade A22	623-2080-001	X	X		
Synthesizer output A23	635-4930-002	X	X		
	635-4930-003				
Synthesizer chassis assembly A24	634-8201-001	X	X		
Rf cable assembly J43/J29 (P/O A24)	637-1526-003	X	X		Interconnect J43 and J29 (118.8-MHz inj in).
Rf cable assembly J45/J28 (P/O A24)	637-1526-003	X	X		Interconnects J45 and J28 (variable inj in).
Rf cable assembly J44/J32 (P/O A24)	637-1526-006	X	X		Interconnects J44 and J32 (9.9-MHz inj in).
or Rf cable assembly J44/J57 (P/O A24)					Interconnects J44 and J57 (9.9-MHz inj in, AFC).

Table 1. Equipment Supplied/Configuration (Cont).

SUBASSEMBLY/CIRCUIT CARD		RECEIVER			DESCRIPTION/FUNCTION
TITLE	PART NUMBER*	HF-8054 622-3474-001	HF-8054A 622-3475-( )		
			-001	-210	
Rf cable assembly A1-if (P/O A24)	637-1529-001	X	X		Interconnects A24-E1 and J34 (450-kHz inj in).
or Rf cable assembly vbfo (P/O A24)					Interconnects A24-E1 and J60 (450-kHz inj in, vbfo).
Rf cable assembly B1-if (P/O A24)	637-1529-001	X	X		Interconnects A24-E1 and J39 (450-kHz inj in).
Rf cableassembly A2-if (P/O A24)	637-1529-001	X	X		Interconnects A24-E7 and J54 (456.29 kHz inj in).
Rf cableassembly B2-if (P/O A24)	637-1529-001	X	X		Interconnects A24-E5 and J55 (443.71 kHz inj in).
Synthesizer sideboard (P/O A24)	638-6973-001	X	X		
Synthesizer chassis (P/O A24)	634-8178-001	X	X		
Synthesizer bottom cover (P/O A24)	634-8186-001	X	X		
Synthesizer top cover	642-2409-001	X	X		
Direct Digital Synthesizer A24	652-6615-001			X	
DDS top cover (P/O A24)	651-4502-001			X	
DDS chassis assembly (P/O A24)	652-7263-001			X	
DDS sideboard (P/O A24)	646-6259-002			X	
DDS bottom cover (P/O A24)	651-4499-001			X	
Rf cable assembly (P/O A24)	652-7398-001			X	Interconnects J45 and P2.
Cable assembly ribbon W10 (P/O A24)	652-7365-001			X	Interconnects J1 and J2 of W10.

Table 1. Equipment Supplied/Configuration (Cont).

SUBASSEMBLY/CIRCUIT CARD		RECEIVER			DESCRIPTION/FUNCTION
TITLE	PART NUMBER*	HF-8054 622-3474-001	HF-8054A 622-3475-( )		
			-001	-210	
Frequency standard/power supply A32 (P/O A24)	646-5930-001			X	
VFO/VCO module A33 (P/O A24)	652-1015-002			X	
DDS Control interface A34 (P/O A24)	646-5905-003			X	
Receive audio A25	635-0748-002	X	X	X	
Receive audio A26	635-0748-002	X	X		
Rfi filter A27	637-2712-003	X	X		
Rfi filter modified A27	659-2053-002			X	
Sideboard assembly A28	634-8224-001	X	X		
	634-8224-002				
	634-8224-003			X	
Sideboard (P/O A28)	638-6627-001	X	X	X	
Cable assembly (P/O A28)	634-8210-001	X	X		Interconnects P11, J11, and P2 (frequency control).
	634-8210-002			X	
Cable assembly (P/O A28)	634-8228-001	X	X	X	Interconnects J19, P4, P5, P3, and J12 (status control and display).
Oven standard, oscillator assembly A29	622-3460-001				AC-8012 Oven Standard Kit
	637-9135-001			X	Part of Oven Oscillator/Frequency Standard Switch Kit (652-1966-001)

Table 1. Equipment Supplied/Configuration (Cont).

SUBASSEMBLY/CIRCUIT CARD		RECEIVER			DESCRIPTION/FUNCTION
TITLE	PART NUMBER*	HF-8054 622-3474-001	HF-8054A 622-3475-( )		
			-001	-210	
Frequency standard switch A30	622-3499-001				AC-8015 Frequency Standard Switch Kit. Can be switched for 100-kHz, 1-MHz, or 5-MHz external frequency standard. Automatically switches over from an external frequency reference input to the oven standard upon loss of the external frequency standard. Can be used only if oven standard is installed.
	646-6558-001			X	Part of Oven Oscillator/Frequency Standard Switch Kit (652-1966-001)
Parallel interface A31	646-6329-001			X	Provides interface between parallel format inputs and exciter.
Injection blanker assembly A35	652-6861-001			X	
Power cable	426-1034-010	X	X	X	
Maintenance kit	637-1769-001	X	X	X	2-A fuse installed for 100- or 115-V ac operation. 1-A fuse installed for 215- or 230-V ac operation.
Hexwrench, 0.062 in (1)	024-0058-000				
Hexwrench, 0.050 in (1)	024-0057-000				
2-A fuse (5)	264-0305-000				
1-A fuse (5)	264-4280-000				
Lamps (2)	262-1106-000				
Instruction sheet	637-1777-001				

*All part numbers are Rockwell-Collins.

(1) Effective through REV C, HF-8054.

(2) Effective REV D and later, HF-8054.

(3) Effective through REV J, HF-8054A.

(4) Effective REV K and later, HF-8054A.

(5) Installed as A19 through REV C, installed as A18 at REV D and later, HF-8054.

(6) Effective REV D and later, HF-8054.

4. ACCESSORIES

Add the following manual to the list of manuals.

TITLE	PART NUMBER
HF Radio Set Cabinet	523-0773552

5. OPTIONS

Currently there are no options available for the HF-8054A Receiver (622-3475-210).

6. EQUIPMENT SPECIFICATIONS

Add the following sentence to the paragraph and place table 4A behind table 4.

Specifications for the HF-8054A Receiver (622-3475-210) that are different from the HF-8054( ) are listed in table 4A.

Table 4A. Equipment Specifications.

CHARACTERISTIC	SPECIFICATION
Frequency tune time	100 μs to ±1000 Hz
Parallel frequency control	Capability of parallel bcd frequency input and parallel coded-frequency input through the rear panel. The parallel bcd inputs control the standard bcd bus lines in the receiver. The parallel coded-frequency inputs control the direct digital synthesizer when actuated and ignores all other sources of frequency information.

SUPPLEMENT (523-0770700-002218)

Not applicable.

SUPPLEMENT (523-0770701-002218)

2. DESCRIPTION

Replace table 1 with table 1 provided.

Table 1. HF-8054A Receiver Characteristics.

CHARACTERISTICS	HF-8054A RECEIVER 622-3475- ( )									
	-001	-002	-003	-004	-005	-006	-007	-009	-210	
Tuning										
100 Hz		X		X	X	X		X		
10 Hz	X		X				X			
1 Hz									X	
Bandwidths (kHz)										
USB — A1	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	
UUSB — A2	2.85	2.85	2.85			2.85				
LSB — B1	2.85	2.85	2.85	2.85		2.85	2.85	2.85	2.85	
LLSB — B2	2.85	2.85	2.85			2.85				
A			6.0			6.0				
B										
C			1.0							
D										
E			0.2							
16	X	X	X	X	X	X	X	X	X	
ISB										
2-channel				X			X	X	X	
4-channel	X	X	X			X				
AFC			X							
Dvbfo			X				X			
Remote control	X	X	X	X	X	X	X	X	X	
Oven standard		X	X	X	X	X	X		X	
External standard		X	X	X	X	X	X	X	X	

Table 1. HF-8054A Receiver Characteristics (Cont).

CHARACTERISTICS	HF-8054A RECEIVER 622-3475-( )									
	-001	-002	-003	-004	-005	-006	-007	-009	-210	
Frequency standard switch		X	X	X	X	X	X		X	
Frequency display		X	X	X	X	X	X	X	X	
AGC										
OFF-FAST-MED-SLOW	X		X	X	X			X		
OFF-VOICE-DATA-FAX		X				X	X		X	
Rf translator										
Standard	X		X							
High performance		X		X	X	X	X	X	X	

3. DIFFERENCE DATA

Replace table 2 with table 2 provided.

Table 2. Equipment Supplied/Configuration.

SUBASSEMBLY/CIRCUIT CARD		HF-8054A RECEIVER 622-3475-( )									
TITLE	PART NUMBER*	-001	-002	-003	-004	-005	-006	-007	-009	-210	
Main chassis	634-8177-001	X	X	X	X	X	X	X	X	X	
Bottom cover	634-8179-001	X	X	X	X	X	X	X	X	X	
Top cover	634-8181-002	X	X	X	X	X	X	X	X	X	
Rear panel	642-2462-001	X	X	X	X	X	X	X	X		
	652-7268-001									X	
Cable assembly W1	634-8226-001	X	X	X	X	X	X	X	X		
	634-8226-002									X	
Cable assembly W2	634-8227-001	X	X	X	X	X	X	X	X		
	634-8227-002									X	

Table 2. Equipment Supplied/Configuration (Cont).

SUBASSEMBLY/CIRCUIT CARD		HF-8054A RECEIVER 622-3475-( )									
TITLE	PART NUMBER*	-001	-002	-003	-004	-005	-006	-007	-009	-210	
Cable assembly W3	634-8225-001	X	X	X	X	X	X	X	X	X	
Rf cable assembly J40/J22	637-1525-002	X	X	X	X	X	X	X	X	X	
Rf cable assembly J38/J23	637-1525-003	X	X	X	X	X	X	X	X	X	
Rf cable assembly J37/J26	637-1525-003	X	X	X	X	X	X	X	X	X	
Rf cable assembly J36/J24	637-1525-003	X	X	X	X	X	X	X	X	X	
Rf cable assembly J35/J25	637-1525-003	X	X	X	X	X	X	X	X	X	
Rf cable assembly J41/J42	637-1526-002	X	X	X	X	X	X	X	X	X	
Rf cable assembly, 450-kHz if	642-2454-001	X	X		X	X	X	X	X	X	
Rf cable assembly J34/J59	637-1526-003			X							
Rf cable assembly J32/J58	637-1526-003			X							
Rf cable assembly AFC	646-6534-001			X							
Power supply A1	635-9649-001	X	X	X	X	X	X	X	X	X	
Front panel assembly A2	634-8200-001	X									
	634-8200-002		X				X				
	634-8200-003			X							
	634-8200-004				X	X			X		
	634-8200-005							X		X	
LED status display A2A1	635-0825-013	X	X	X	X	X	X	X	X	X	
Switch mounting board A2A2	638-6873-001		X				X	X		X	
	638-6873-002	X		X	X	X			X		
Frequency switchboard A2A3	635-0830-001		X		X	X	X		X		
	635-0830-002	X		X				X		X	
Dvbfo switchboard A2A4	638-6437-001			X				X		X	

Table 2. Equipment Supplied/Configuration (Cont).

SUBASSEMBLY/CIRCUIT CARD		HF-8054A RECEIVER 622-3475-( )									
TITLE	PART NUMBER*	-001	-002	-003	-004	-005	-006	-007	-009	-210	
Frequency display A2A5	637-1781-006		X		X	X	X		X		
	637-1781-008			X				X		X	
Frequency display cable A2W1	634-8289-001		X	X	X	X	X	X	X	X	
AFC A3	642-3224-001			⟨3⟩							
	642-3224-002			⟨4⟩							
Vbfo A4	638-6067-002			X				X		X	
Channel B2 if A5	638-6975-006	X		X							
	638-6975-003		X				X				
Channel A2 if A6	638-6975-005	X		X							
	638-6975-002		X				X				
Channel B1 if A7	638-6975-004	X		X	X				X		
	638-6975-001		X				X	X		X	
Channel A1 if A8	638-6871-002	X		X	X	X			X		
	638-6871-001		X				X	X		X	
Filter A8A2	637-2515-001										
	637-2515-002										
	637-2515-003										
	637-2515-004										
	637-2515-005										
	637-2515-006										
	637-2515-007										
	637-2515-008										
(Cont)	637-2515-009										

Table 2. Equipment Supplied/Configuration (Cont).

SUBASSEMBLY/CIRCUIT CARD		HF-8054A RECEIVER 622-3475-( )									
TITLE	PART NUMBER*	-001	-002	-003	-004	-005	-006	-007	-009	-210	
Filter A8A2 (Cont)	637-2515-010						X				
	637-2515-011										
	637-2515-012										
	637-2515-013			X							
	637-2515-015										
	637-2515-016										
Rf translator A9	637-1767-002	⟨1⟩		⟨1⟩							
	637-1767-003		X		X	X	X	X	X	X	
	637-1767-004	⟨2⟩		⟨2⟩							
Control A10	638-6629-001	X	X	X	X	X	X	X	X	X	
Parallel input A11	642-3135-001	X	X	X	X	X	X	X	X		
	642-3135-002									X	
Parallel output A12	642-3137-001	X	X	X	X	X	X	X	X		
	642-3137-002									X	
Serial interface A13	638-6896-001	X	X	X	X	X		X	X	X	
	638-6896-002						X				
Synthesizer voltage regulator A14	635-0656-001	X	X	X	X	X	X	X	X		
Synthesizer subcarrier generator A15	638-6962-001	X	X	X			X				
Synthesizer reference A16	642-2451-001	X	X	X	X	X	X	X	X		
External phase-lock A16A4	635-0655-001		X	X	X	X	X	X	X		
Synthesizer end decade	635-0657-001	A18	A19	A18	A19	A19	A19	A18	A19		

Table 2. Equipment Supplied/Configuration (Cont).

SUBASSEMBLY/CIRCUIT CARD		HF-8054A RECEIVER 622-3475-( )									
TITLE	PART NUMBER*	-001	-002	-003	-004	-005	-006	-007	-009	-210	
Synthesizer 100/10-Hz decade A19	623-2080-004	X		X				X			
Synthesizer 1-kHz decade A20	623-2080-003	X	X	X	X	X	X	X	X		
Synthesizer 10-kHz decade A21	623-2080-002	X	X	X	X	X	X	X	X		
Synthesizer 100-kHz decade A22	623-2080-001	X	X	X	X	X	X	X	X		
Synthesizer output A23	635-4930-002	X	X	X	X	X	X	X			
	635-4930-003								X		
Synthesizer chassis assembly A24	634-8201-001	X	X	X	X	X	X	X	X		
Rf cable assembly J43/J29 (P/O A24)	637-1526-003	X	X	X	X	X	X	X	X		
Rf cable assembly J45/J28 (P/O A24)	637-1526-003	X	X	X	X	X	X	X	X		
Rf cable assembly J44/J32 (P/O A24) or Rf cable assembly J44/J57 (P/O A24)	637-1526-006	X	X		X	X	X	X	X		
				X							
Rf cable assembly A1-if (P/O A24) or Rf cable assembly vbfo (P/O A24)	637-1529-001	X	X		X	X	X	X	X		
				X							
Rf cable assembly B1-if (P/O A24)	637-1529-001	X	X	X	X	X	X	X	X		
Rf cable assembly A2-if (P/O A24)	637-1529-001	X	X	X	X	X	X	X	X		
Rf cable assembly B2-if (P/O A24)	637-1529-001	X	X	X	X	X	X	X	X		
Synthesizer sideboard (P/O A24)	638-6973-001	X	X	X	X	X	X	X	X		
Synthesizer chassis (P/O A24)	634-8178-001	X	X	X	X	X	X	X	X		

Table 2. Equipment Supplied/Configuration (Cont).

SUBASSEMBLY/CIRCUIT CARD		HF-8054A RECEIVER 622-3475-( )									
TITLE	PART NUMBER*	-001	-002	-003	-004	-005	-006	-007	-009	-210	
Synthesizer bottom cover (P/O A24)	634-8186-001	X	X	X	X	X	X	X	X		
Synthesizer top cover	642-2409-001	X	X	X	X	X	X	X	X		
Direct Digital Synthesizer A24	652-6615-001									X	
DDS top cover (P/O A24)	651-4502-001									X	
DDS chassis assembly (P/O A24)	652-7263-001									X	
DDS sideboard (P/O A24)	646-6259-002									X	
DDS bottom cover (P/O A24)	651-4499-001									X	
Rf cable assembly (P/O A24)	652-7398-001									X	
Cable ribbon assembly (P/O A24)	652-7365-001									X	
Frequency standard/power supply A32 (P/O A24)	646-5930-001									X	
VFO/VCO module A33 (P/O A24)	652-1015-002									X	
DDS Control interface A34 (P/O A24)	646-5905-003									X	
Receive audio A25	635-0748-002	X	X	X	X	X	X	X	X	X	
Receive audio A26	635-0748-002	X	X	X			X				
Rfi filter A27	637-2712-003	X	X	X	X	X	X	X	X		
Rfi filter modified A27	659-2053-002									X	
Sideboard assembly A28	634-8224-001	X	X		X	X	X		X		
	634-8224-002			X				X			
	634-8224-003									X	
Sideboard (P/O A28)	638-6627-001	X	X	X	X	X	X	X	X	X	

Table 2. Equipment Supplied/Configuration (Cont).

SUBASSEMBLY/CIRCUIT CARD		HF-8054A RECEIVER 622-3475-( )									
TITLE	PART NUMBER*	-001	-002	-003	-004	-005	-006	-007	-009	-210	
Cable assembly (P/O A28)	634-8210-001	X	X	X	X	X	X	X	X		
	634-8210-002									X	
Cable assembly (P/O A28)	634-8228-001	X	X	X	X	X	X	X	X	X	
Oven standard, oscillator assembly A29	637-3460-001		X	X	X	X	X	X			
Frequency standard switch A30	622-3499-001		X	X	X	X	X				
Oven oscillator/frequency standard switch kit	652-1966-001									X	
Parallel interface A31	646-6329-001									X	
Injection blanker assembly A35	652-6861-001									X	
Power cable	426-1034-010	X	X	X	X	X	X	X	X	X	
Maintenance kit	637-1769-001	X	X	X	X	X	X	X	X	X	

*All part numbers are Rockwell-Collins.

(1) Effective through REV J.

(2) Effective REV K and later.

(3) Effective through REV T.

(4) Effective REV U and later.

3. DIFFERENCE DATA

Add the following sentence to the first paragraph.

Only step d is applicable to HF-8054A Receiver (622-3475-210).

INSTALLATION (523-0770722-002218)

1. GENERAL

Add the following entry to the listing of equipment manuals.

TITLE	PART NUMBER
HF Radio Set Cabinet Intermediate Maintenance Instruction Book	523-0773552

3.1.4 Frequency Standard

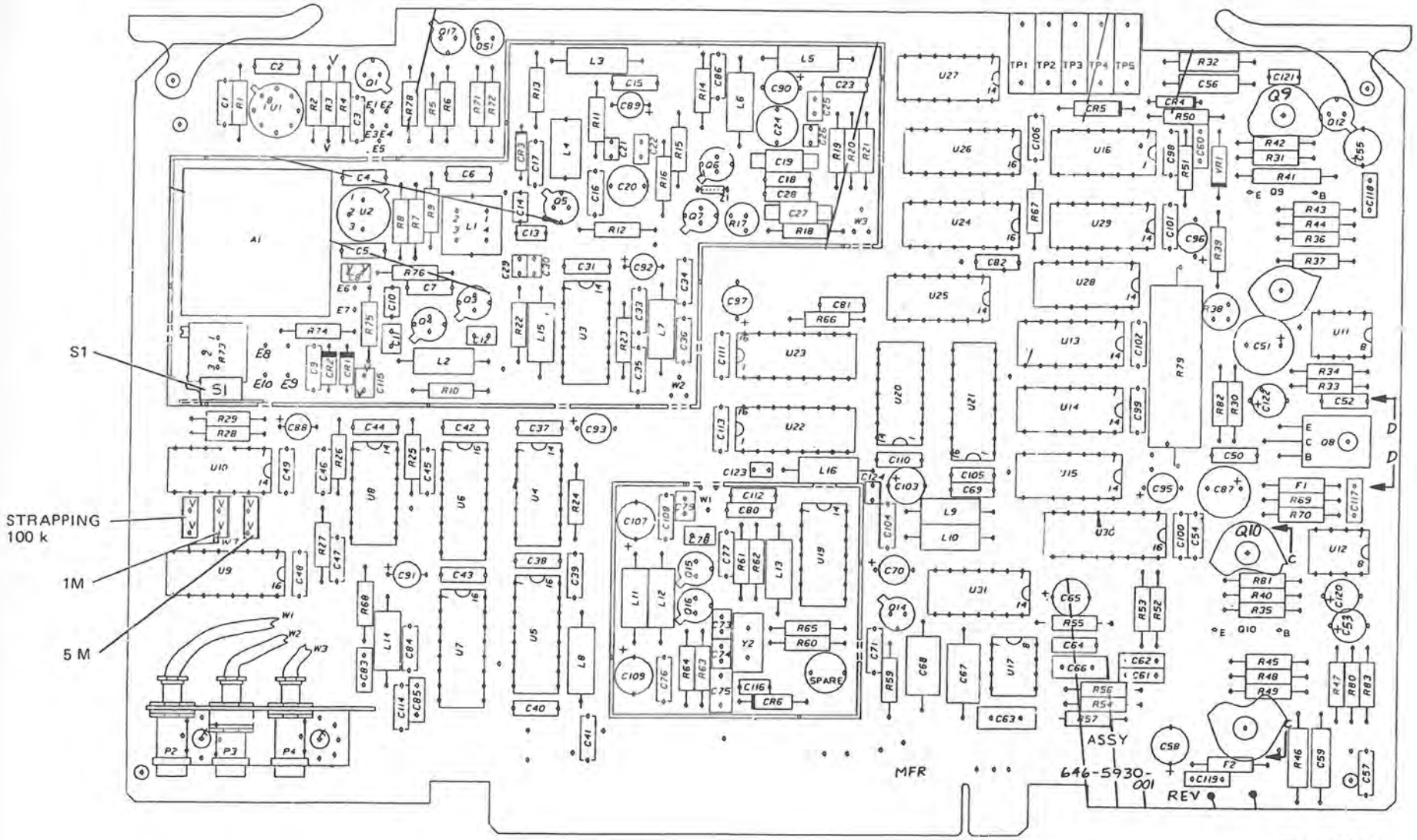
Add paragraph 3.1.4.1A behind paragraph 3.1.4.1 and paragraph 3.1.4.3A behind paragraph 3.1.4.3. Paragraph 3.1.4.2 is not applicable. Add figure 5A behind figure 5.

3.1.4.1A Internal Standard

To use the internal frequency standard, the switch S1 on frequency standard/power supply card A32 in the direct digital synthesizer must be placed in the INT position. Refer to figure 5A for location of the switch.

3.1.4.3A External Frequency Standard

To use the external frequency standard, switch S1 on frequency standard/power supply A34 in the direct digital synthesizer must be placed in the EXT position and the strap moved to the proper position. Refer to figure 5A for location of the switch and position of the straps.



Strapping for External Frequency Standard for HF-8054A Receiver (622-3475-210)
Figure 5A

4. CABLING (Refer to figure 6)

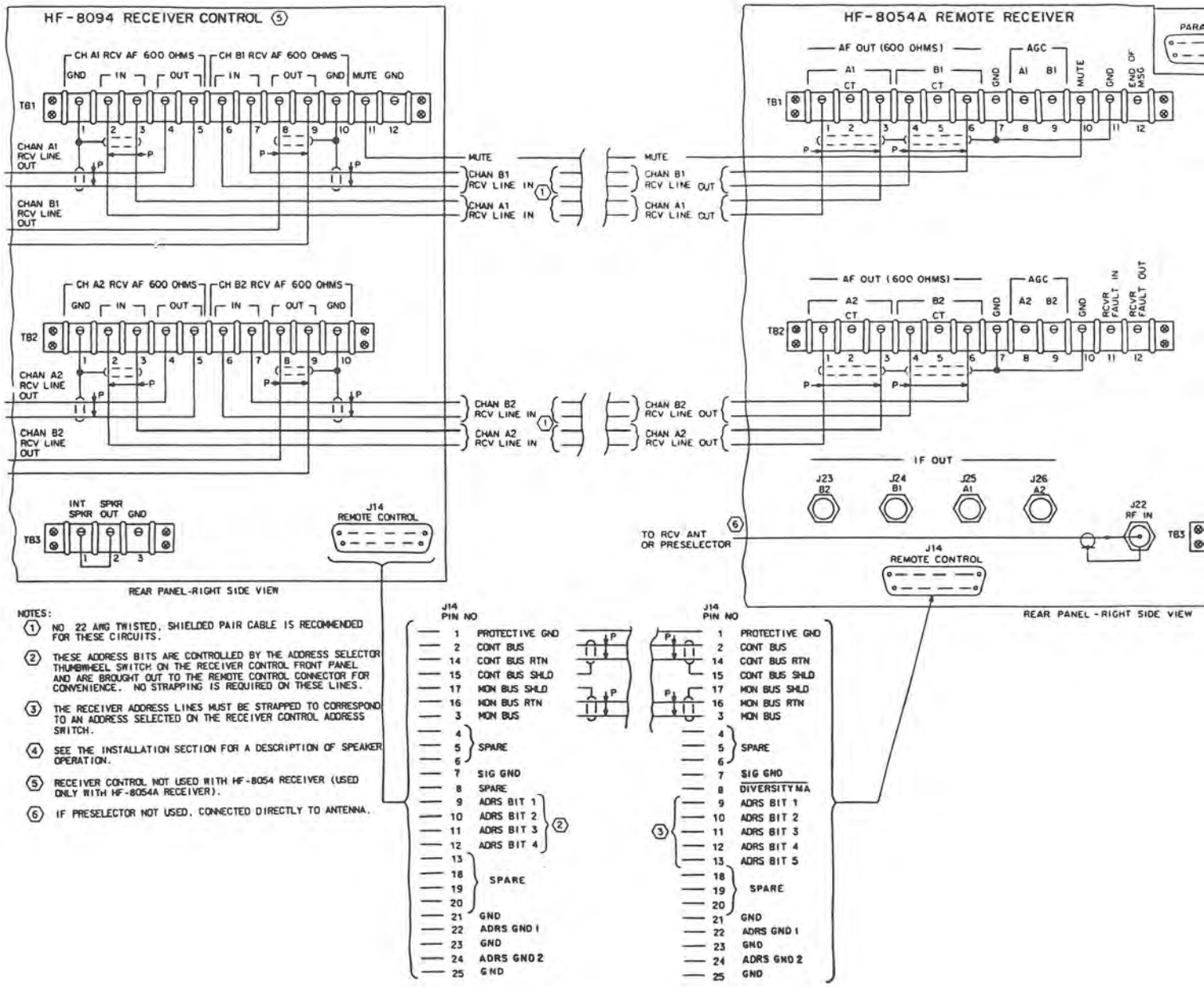
Add the following paragraph after paragraph 4.10.4. Place figure 6A behind figure 6.

4.11 Receiver to Parallel Format Input Device

Separation between the receiver and any parallel format input device should be kept as short as possible. If the parallel format device operates in binary coded decimal (bcd), then it should be connected to J66/A31P1 PARALLEL INPUT. If the parallel format device operates in parallel coded-frequency, then the device should be connected to the J67/A31P2 DDS INPUT at the rear of the exciter. This connection gives direct control over the direct digital synthesizer. Either connection requires a 50-pin connector. Refer to figure 6A for HF-8054A Receiver (622-3475-210) typical installation diagram.

5. INSTALLATION PROCEDURES

Replace figure 7 with figure 7 attached.



NOTES:

(1) NO 22 AWG TWISTED, SHIELDED PAIR CABLE IS RECOMMENDED FOR THESE CIRCUITS.

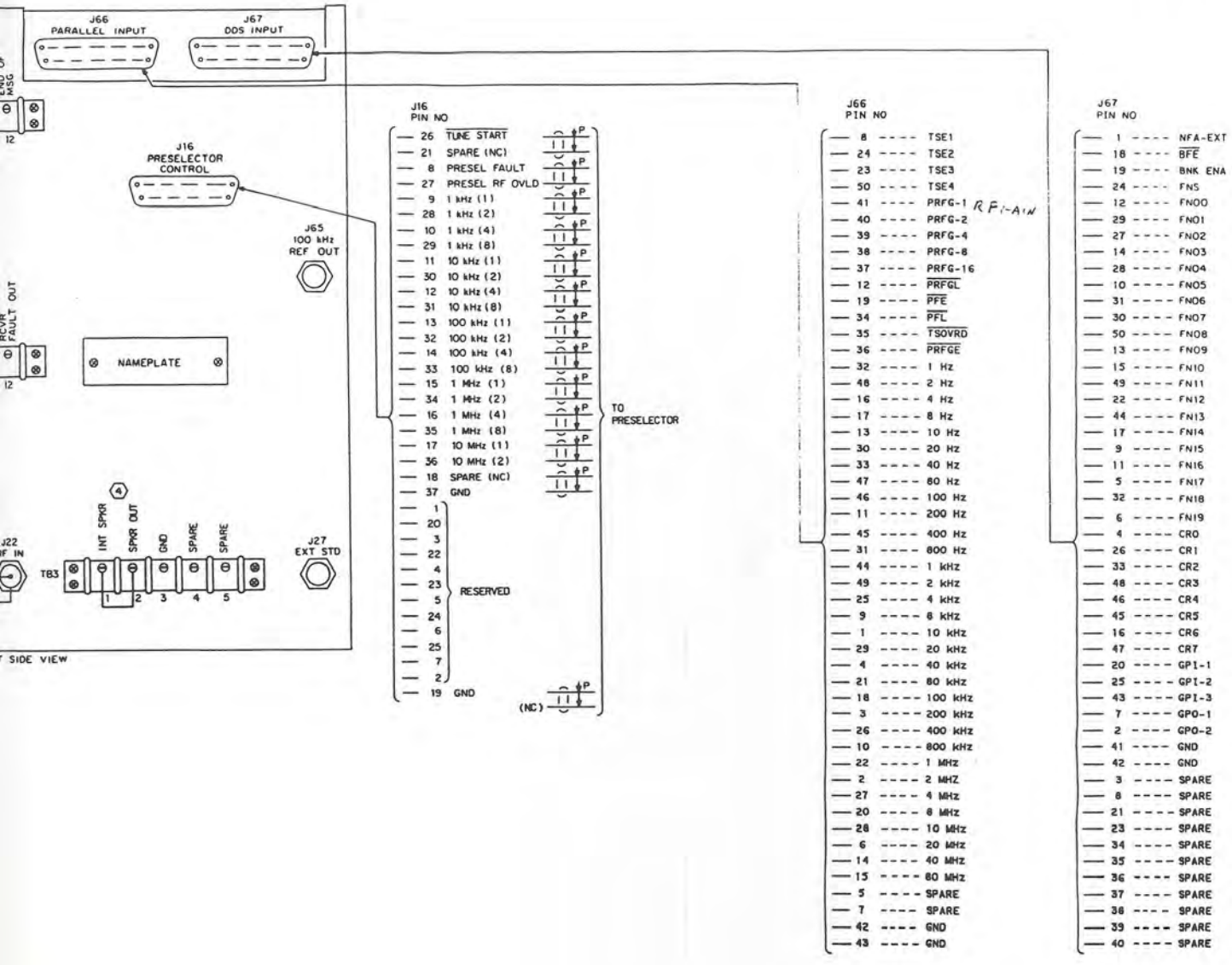
(2) THESE ADDRESS BITS ARE CONTROLLED BY THE ADDRESS SELECTOR THUMBWHEEL SWITCH ON THE RECEIVER CONTROL FRONT PANEL AND ARE BROUGHT OUT TO THE REMOTE CONTROL CONNECTOR FOR CONVENIENCE. NO STRAPPING IS REQUIRED ON THESE LINES.

(3) THE RECEIVER ADDRESS LINES MUST BE STRAPPED TO CORRESPOND TO AN ADDRESS SELECTED ON THE RECEIVER CONTROL ADDRESS SWITCH.

(4) SEE THE INSTALLATION SECTION FOR A DESCRIPTION OF SPEAKER OPERATION.

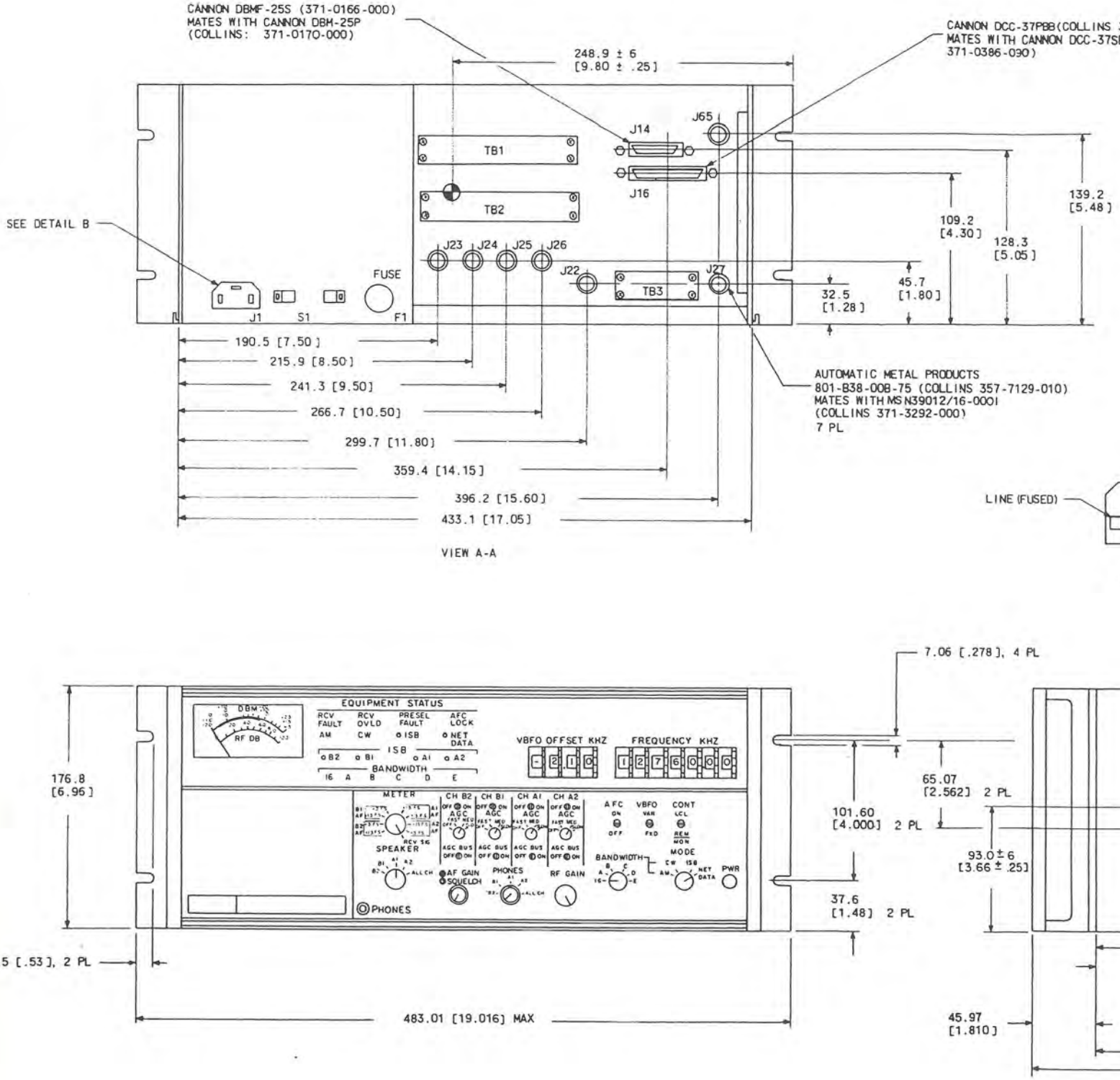
(5) RECEIVER CONTROL NOT USED WITH HF-8054 RECEIVER (USED ONLY WITH HF-8054A RECEIVER).

(6) IF PRESELECTOR NOT USED, CONNECTED DIRECTLY TO ANTENNA.



TPA-7798-015

HF-8054A Receiver (622-3475-210), Typical Installation
Figure 6A


CANNON DBMF-25S (371-0166-000)
MATES WITH CANNON DBM-25P
(COLLINS: 371-0170-000)
CANNON DCC-37PBB(COLLINS 371
MATES WITH CANNON DCC-37SBB
371-0386-090)
248.9 ± 6
[9.80 ± .25]
J14
J65
J16
TB1
TB2
TB3
J23
J24
J25
J26
J22
J27
FUSE
J1
S1
F1
SEE DETAIL B
139.2
[5.48]
109.2
[4.30]
128.3
[5.05]
45.7
[1.80]
32.5
[1.28]
190.5 [7.50]
215.9 [8.50]
241.3 [9.50]
266.7 [10.50]
299.7 [11.80]
359.4 [14.15]
396.2 [15.60]
433.1 [17.05]
AUTOMATIC METAL PRODUCTS
801-B38-008-75 (COLLINS 357-7129-010)
MATES WITH MSN39012/16-0001
(COLLINS 371-3292-000)
7 PL
LINE (FUSED)
VIEW A-A
7.06 [.278], 4 PL
176.8
[6.96]
65.07
[2.562] 2 PL
101.60
[4.000] 2 PL
93.0 ± 6
[3.66 ± .25]
37.6
[1.48] 2 PL
13.5 [.53], 2 PL
483.01 [19.016] MAX
45.97
[1.810]
EQUIPMENT STATUS
RCV FAULT
RCV OVLD
PRESEL FAULT
AFC LOCK
AM
CW
ISB
NET DATA
BANDWIDTH
VBFO OFFSET KHZ
FREQUENCY KHZ
METER
SPEAKER
PHONES
AF GAIN
SQUELCH
RF GAIN
AFC
VBFO
CONT
MODE
PWR

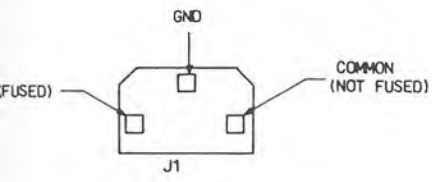
NOTES:
1. UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETRES [INCHES]
2. WEIGHT: 21.8 kg [48 LB] MAX
3. CENTER OF GRAVITY INDICATED BY ⊕
4. MATING CONNECTORS ARE FOR REFERENCE ONLY, WEIGHT AND CENTER OF GRAVITY DOES NOT INCLUDE MATING CONNECTORS.
5. NO EXTERNAL COOLING AIR REQUIRED.
6. PRIMARY POWER REQUIREMENTS: 100/115/215/230 V AC ± 10%, SINGLE PHASE 47-420 Hz; MAX POWER CONSUMPTION: 80 WATTS.

-37PBB(COLLINS 371-0385-001)
CANNON DCC-37SBB (COLLINS
90)

139.2
[5.48]

.3
05]

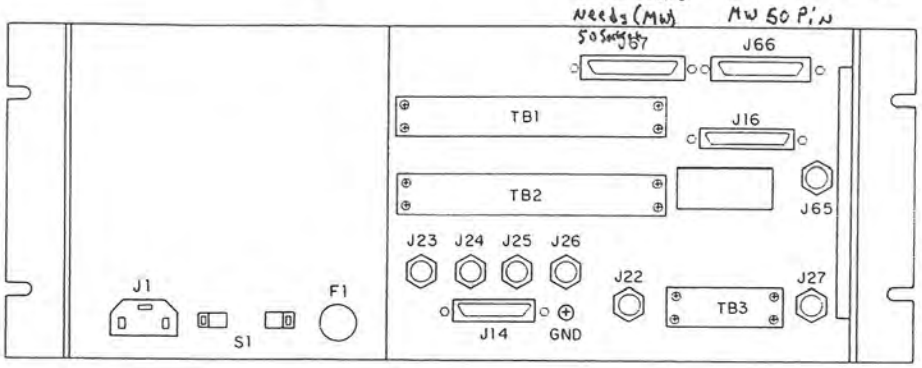
29-010)



DETAIL B

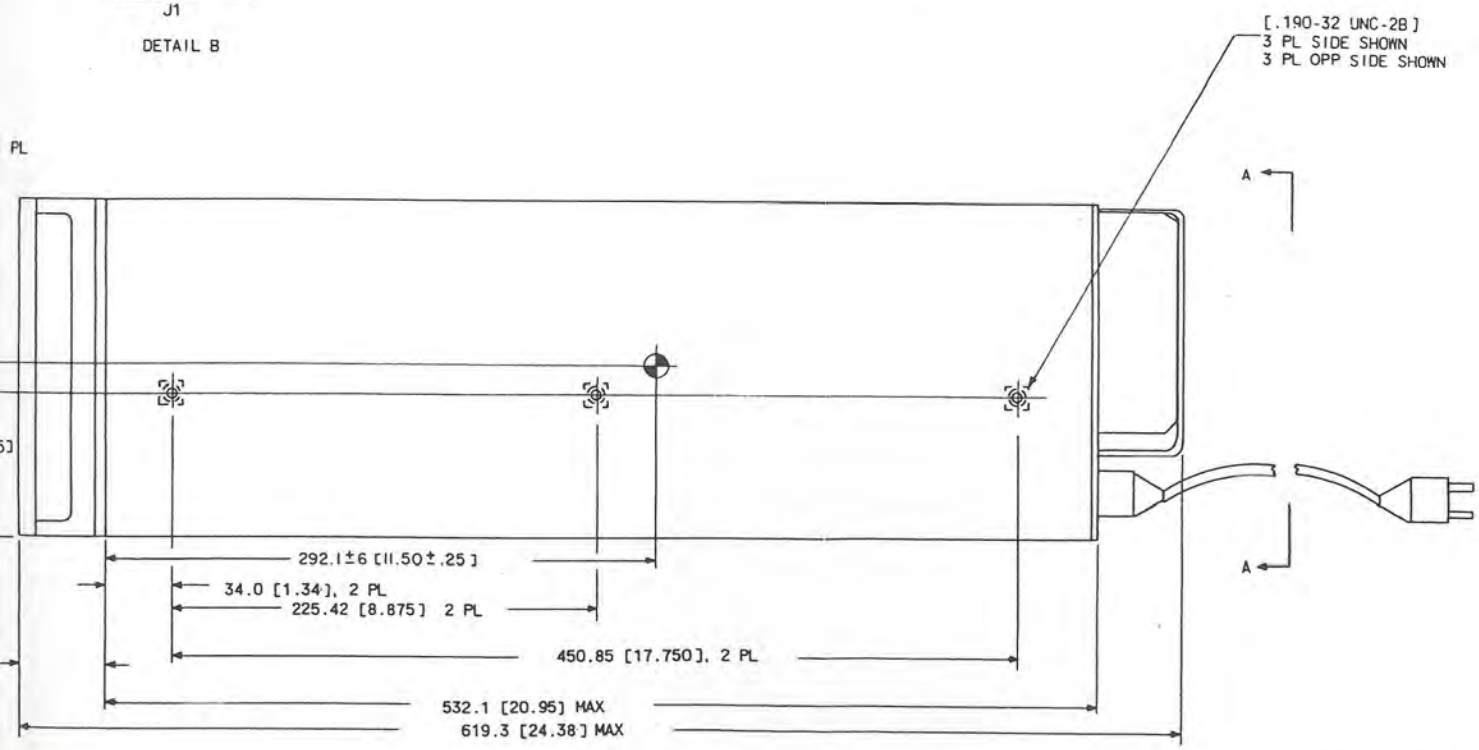
This is 50 Pin Cannon D Needs (MW) 50 Socket J67

This is 50 Socket (Cannon D MW 50 Pin



VIEW A-A
622-3475-008 ONLY

PL



646-6803
TPA-2851-014

HF-8054( ) Receiver, Outline and Mounting Dimensions
Figure 7

OPERATION (523-0770703-002218)

Add the following two paragraphs after paragraph 4.3.7.5.

4.4 Remote Control Operation for HF-8054A Receiver (622-3475-210)

Control data from the remote control or processor is applied to the receiver at one of three inputs depending upon the type of data applied. Serial format data is connected to J14 as in other series HF-8054A receivers. Parallel format data in binary coded decimal is applied to J66/A31P1 PARALLEL INPUT on the rear panel. Parallel coded-frequency data used to directly control the direct digital synthesizer must be in the proper code and applied to J67/A31P2 DDS INPUT on the rear panel.

Input to J14 uses the ASCII on 8-bit format code as covered in the manual with changes as follows. Word 3, character 2, bit 1 becomes the serial parallel frequency select bit (0 = serial and 1 = parallel). Word 3, character 4, bits 1 through 8 are used for parallel rf gain enable, parallel bcd enable, serial tune start override, and general purpose inputs and outputs. In word 4, character 3, bits 1 through 8, the fault statuses have changed to reflect the new direct digital synthesizer faults. The serial bcd frequency inputs are converted to the parallel bcd frequency data by the parallel output card A12 and applied to the direct digital synthesizer. In the direct digital synthesizer, the parallel bcd frequency information is changed to the parallel coded-frequency data input required by the VFO/VCO module in DDS control interface A33.

4.5 Tune Start Enable Control

In the HF-8054A Receiver (622-3475-210), two separate tune start pulses are generated. These signals are then sent out to preselector HF-8064 by way of rear panel connector J16. Exactly when these tune start signals will be initiated by the receiver is covered in the theory section of the supplement.

THEORY (523-0770704-002218)

1. GENERAL

Change the last sentence of the second paragraph to read as follows.

When the CONT switch is in the REM position, the HF-8054A Receiver is operationally controlled by the HF-8094 Receiver Control, a processor, or other compatible serial control applied to the J14 REMOTE connector. The HF-8054A Receiver is frequency controllable by compatible parallel controls applied to the J66/A31P1 PARALLEL INPUT connector, and the J67/A31P2 DDS INPUT connector.

2. FUNCTIONAL THEORY

The first and fourth paragraphs are not applicable. For the HF-8054A Receiver (622-3475-210), substitute the following paragraphs, the first for the first paragraph and the second for the fourth paragraph. Place figure 1A behind figure 1 and refer to figure 1A for the HF-8054A Receiver (622-3475-210).

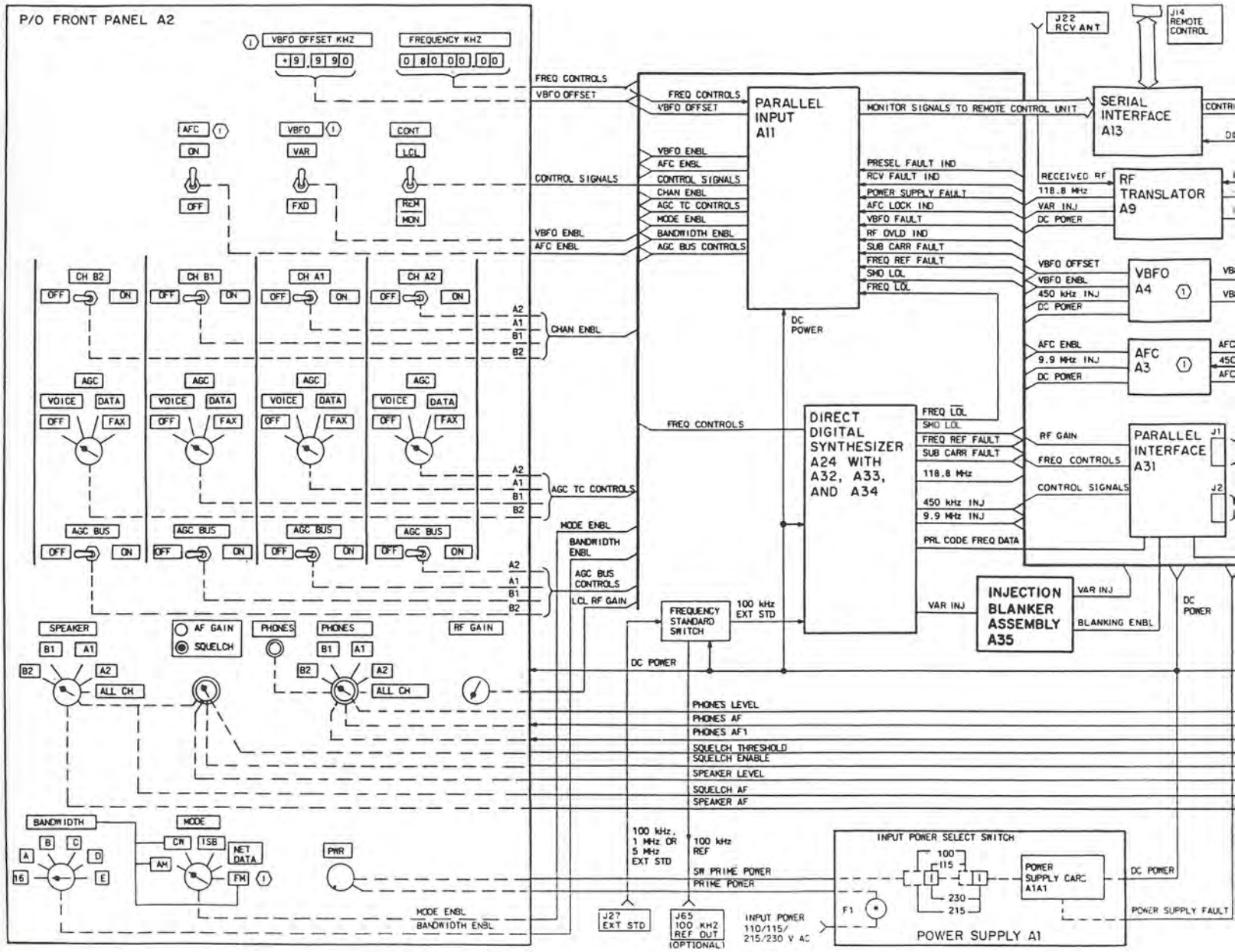
The HF-8054A Receiver (622-3475-210) is frequency-controlled directly from the front panel. Bcd frequency signals from the front panel are applied to the bcd frequency bus for distribution throughout the receiver. In the DDS control interface, the bcd frequency signals are converted to the parallel coded-frequency data required by VFO/VCO module A33, and used to establish the frequency of the vfo output (79.3500 to 109.35 MHz) from the direct digital synthesizer. Control A10 uses the bcd frequency signals to control the front end filter selection.

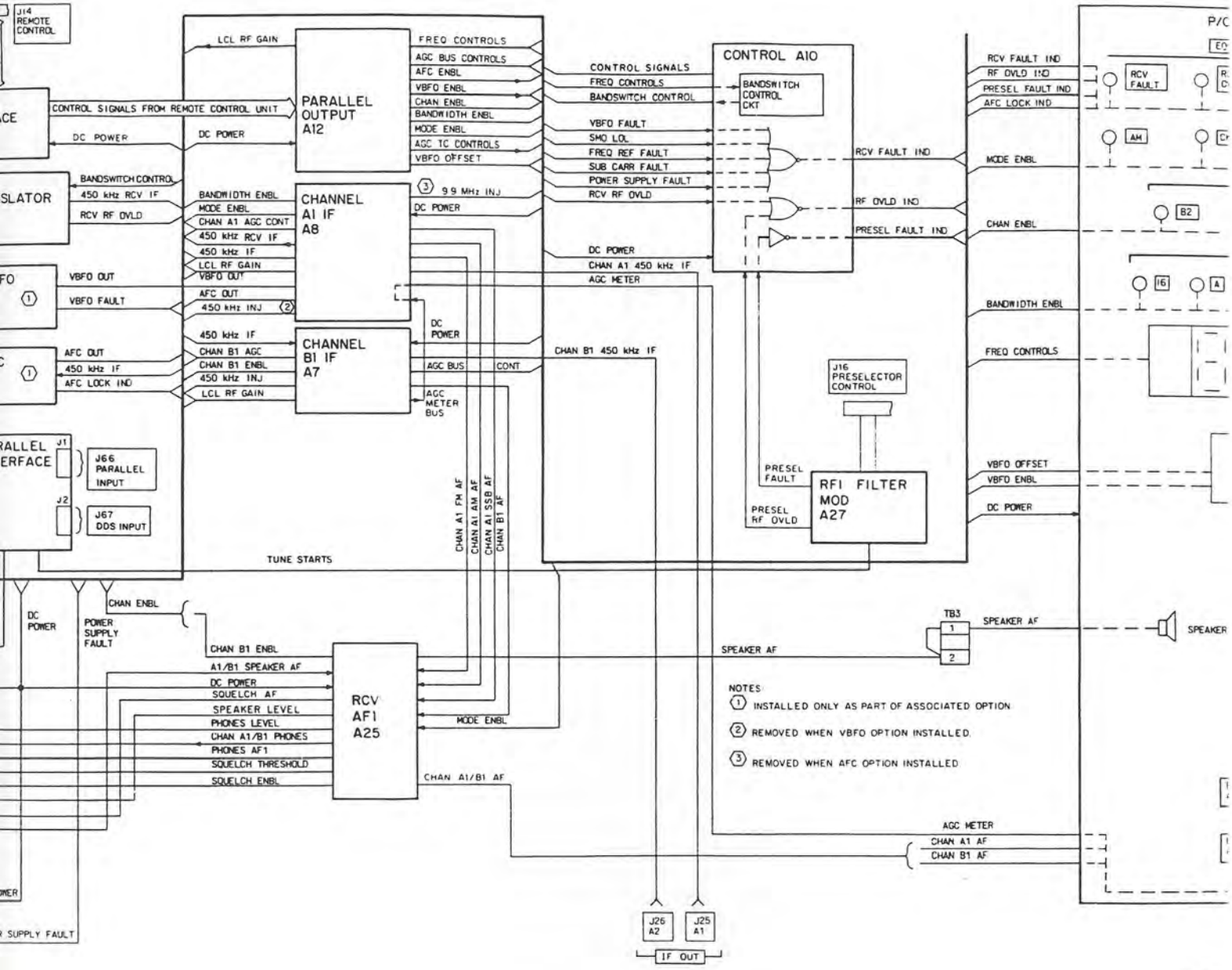
In the ISB mode, the 450-kHz if USB signal is supplied to the channel A1 if circuits and the 450-kHz if LSB signal is supplied to the channel B1 if circuits. The detected USB/LSB audio signals are supplied to the receive audio A25. Receive audio A25 provides separate phones, receive line audio outputs, and audio inputs to the speaker amplifier.

2.1 Receive Function (Refer to figure 2)

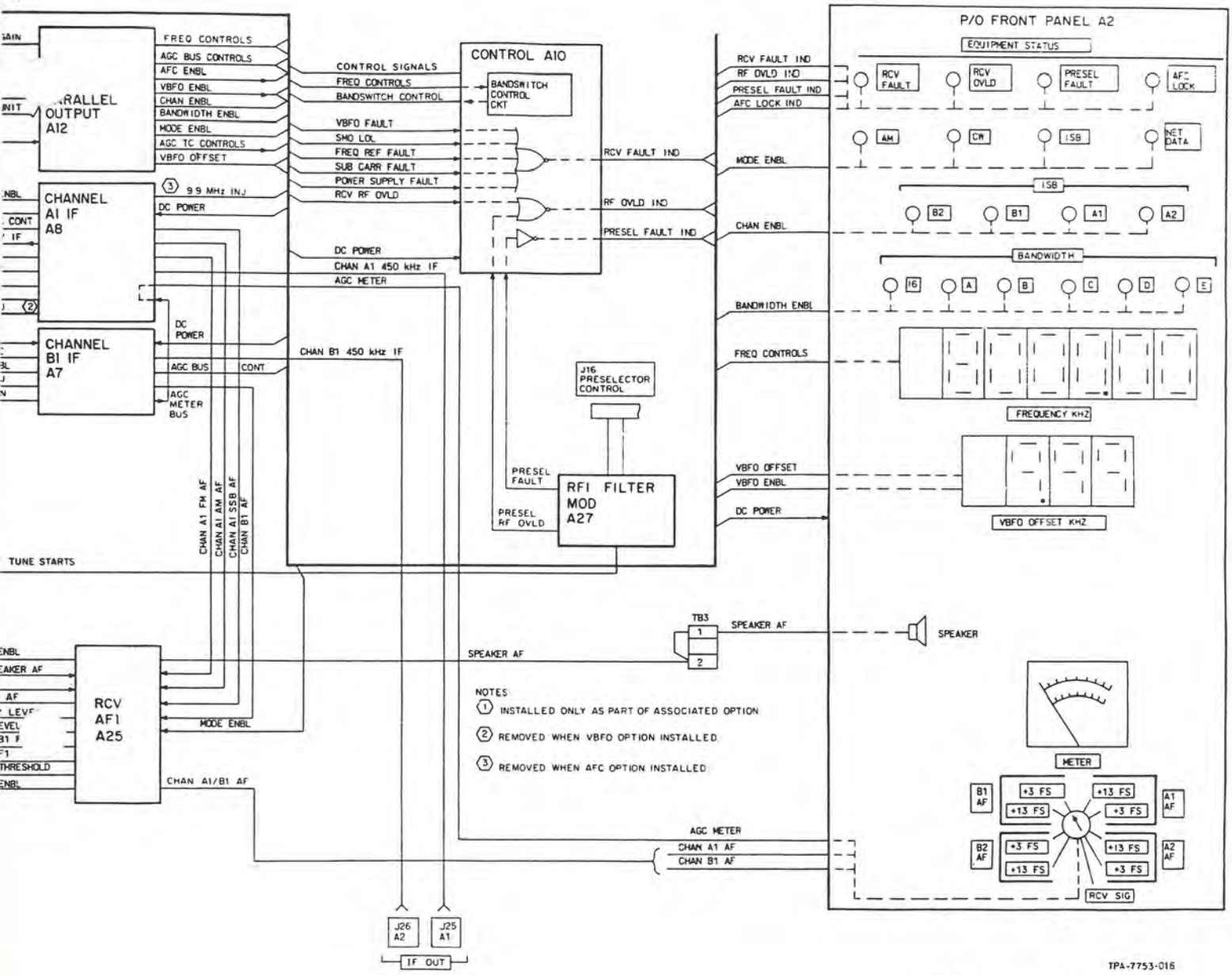
Place figure 2A behind figure 2, and refer to figure 2A in place of figure 2 for the HF-8054A Receiver (622-3475-210). Replace the second paragraph with the paragraph supplied below. The eight and ninth paragraphs are not applicable. Change the second sentence of the third paragraph to read: "The 2.85-kHz USB if filter and selectable 16-kHz if filter are on channel A1 if A8, and the 2.85-kHz LSB if filter (ISB) is located on channel B1 if A7."

From the selected bandpass filter, the received rf signal is mixed with a 109.350 00- to 79.350 01-MHz variable injection signal to produce a 109.35-MHz if signal. The variable injection signal input is controlled by injection blanker A35. During a frequency change, the variable injection signal is gated off by the injection blanker and no receive function is performed until the frequency synthesizer A24 has completed the change to the new frequency. Then the injection blanker is ungated and the new variable injection is applied to the mixer. The resultant if frequency is filtered by a crystal filter and mixed with a 118.8-MHz fixed injection signal to produce a 9.45-MHz receive if output from rf translator A9.


P/O FRONT PANEL A2
VBFO OFFSET KHZ
+9 9 9 0
FREQUENCY KHZ
0 8 0 0 0 0 0
AFC
ON
OFF
VBFO
VAR
FXD
CONT
LCL
REM
MON
CH B2
CH B1
CH A1
CH A2
OFF
ON
AGC
VOICE
DATA
FAX
AGC BUS
SPEAKER
B1
A1
B2
A2
ALL CH
AF GAIN
SQUELCH
PHONES
RF GAIN
BANDWIDTH
A
B
C
D
E
16
MODE
CW
USB
AM
NET DATA
FM
PWR
FREQ CONTROLS
VBFO OFFSET
CONTROL SIGNALS
VBFO ENBL
AFC ENBL
CHAN ENBL
AGC TC CONTROLS
MODE ENBL
BANDWIDTH ENBL
AGC BUS CONTROLS
LCL RF GAIN
PARALLEL INPUT A11
MONITOR SIGNALS TO REMOTE CONTROL UNIT
PRESEL FAULT IND
RCV FAULT IND
POWER SUPPLY FAULT
AFC LOCK IND
VBFO FAULT
RF OVLD IND
SUB CARR FAULT
FREQ REF FAULT
SMD LOL
FREQ LOL
DC POWER
DIRECT DIGITAL SYNTHESIZER A24 WITH A32, A33, AND A34
FREQ LOL
SMD LOL
FREQ REF FAULT
SUB CARR FAULT
118.8 MHz
450 kHz INJ
9.9 MHz INJ
PRL CODE FREQ DATA
FREQUENCY STANDARD SWITCH
100 kHz EXT STD
100 kHz, 1 MHz OR 5 MHz EXT STD
100 kHz REF
SW PRIME POWER
PRIME POWER
VAR INJ
INJECTION BLANKER ASSEMBLY A35
BLANKING ENBL
PHONES LEVEL
PHONES AF
PHONES AF1
SQUELCH THRESHOLD
SQUELCH ENABLE
SPEAKER LEVEL
SQUELCH AF
SPEAKER AF
J22 RCV ANT
J14 REMOTE CONTROL
SERIAL INTERFACE A13
RECEIVED RF
118.8 MHz
VAR INJ
DC POWER
RF TRANSLATOR A9
VBFO OFFSET
VBFO ENBL
450 kHz INJ
VBFO A4
AFC ENBL
9.9 MHz INJ
AFC A3
RF GAIN
FREQ CONTROLS
CONTROL SIGNALS
PARALLEL INTERFACE A31
J1
J2
INPUT POWER SELECT SWITCH
100
115
230
215
POWER SUPPLY CARC A1A1
F1
POWER SUPPLY A1
POWR SUPPLY FAULT
J27 EXT STD
J65 100 KHZ REF OUT (OPTIONAL)
INPUT POWER 110/115/ 215/230 V AC

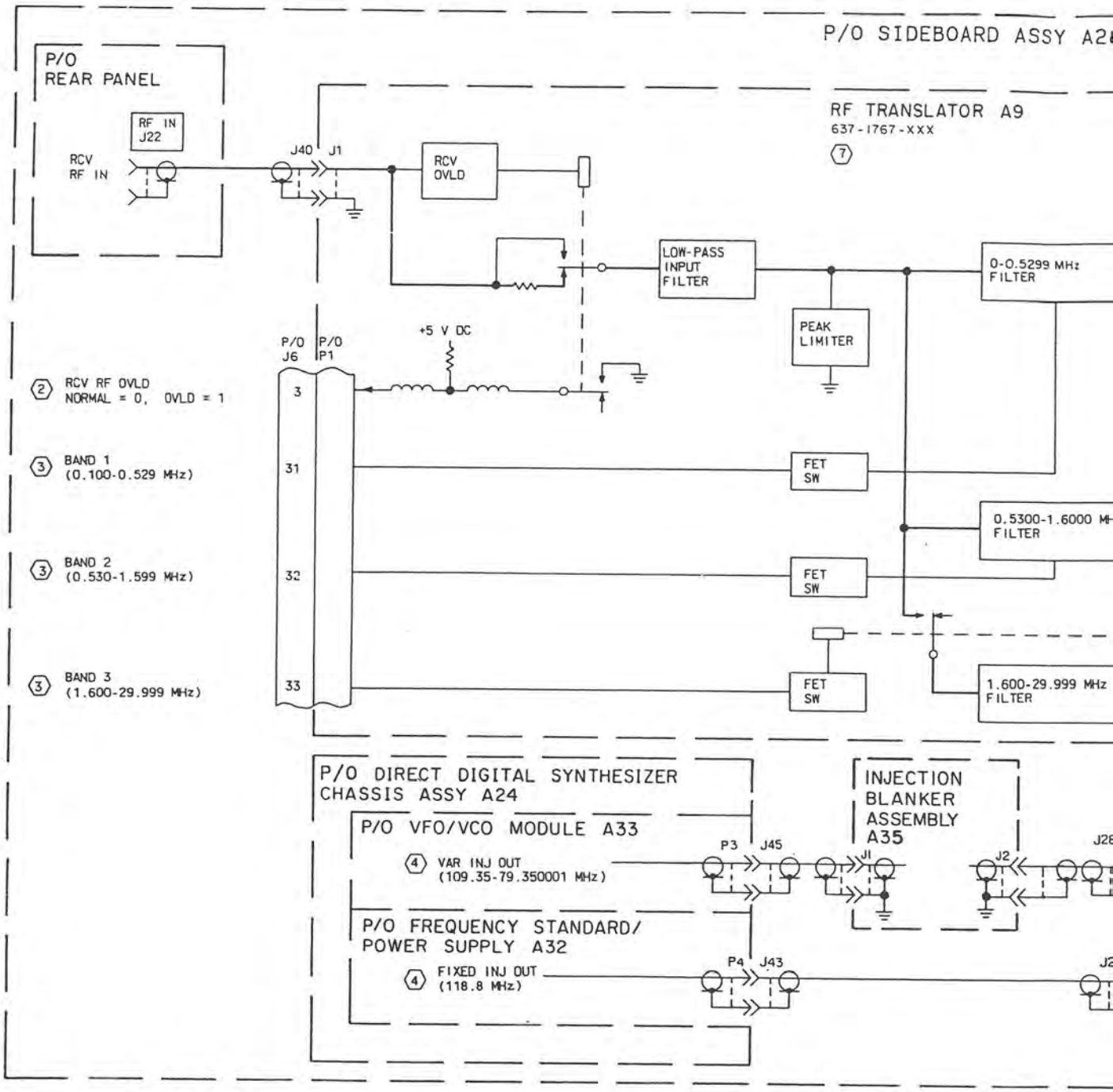

J14 REMOTE CONTROL
CONTROL SIGNALS FROM REMOTE CONTROL UNIT
DC POWER
LCL RF GAIN
PARALLEL OUTPUT A12
FREQ CONTROLS
AGC BUS CONTROLS
AFC ENBL
VBFO ENBL
CHAN ENBL
BANDWIDTH ENBL
MODE ENBL
AGC TC CONTROLS
VBFO OFFSET
CONTROL SIGNALS
FREQ CONTROLS
BANDSWITCH CONTROL
CONTROL A10
BANDSWITCH CONTROL CKT
VBFO FAULT
SMO LOL
FREQ REF FAULT
SUB CARR FAULT
POWER SUPPLY FAULT
RCV RF OVLD
RCV FAULT IND
RF OVLD IND
PRESEL FAULT IND
AFC LOCK IND
BANDSWITCH CONTROL
450 kHz RCV IF
RCV RF OVLD
BANDWIDTH ENBL
MODE ENBL
CHAN A1 AGC CONT
450 kHz RCV IF
450 kHz IF
LCL RF GAIN
VBFO OUT
CHANNEL A1 IF A8
99 MHz INJ
DC POWER
VBFO OUT
VBFO FAULT
AFC OUT
450 kHz INJ
DC POWER
CHAN A1 450 kHz IF
AGC METER
AFC OUT
450 kHz IF
AFC LOCK IND
450 kHz IF
CHAN B1 AGC
CHAN B1 ENBL
450 kHz INJ
LCL RF GAIN
CHANNEL B1 IF A7
AGC BUS CONT
AGC METER BUS
CHAN B1 450 kHz IF
J16 PRESELECTOR CONTROL
PRESEL FAULT
PRESEL RF OVLD
RFI FILTER MOD A27
VBFO OFFSET
VBFO ENBL
DC POWER
J1
J66 PARALLEL INPUT
J2
J67 DDS INPUT
CHAN A1 FM AF
CHAN A1 AM AF
CHAN A1 SSB AF
CHAN B1 AF
TUNE STARTS
CHAN ENBL
DC POWER
POWER SUPPLY FAULT
CHAN B1 ENBL
A1/B1 SPEAKER AF
DC POWER
SQUELCH AF
SPEAKER LEVEL
PHONES LEVEL
CHAN A1/B1 PHONES
PHONES AF1
SQUELCH THRESHOLD
SQUELCH ENBL
RCV AF1 A25
MODE ENBL
CHAN A1/B1 AF
TB3
SPEAKER AF
SPEAKER AF
SPEAKER
AGC METER
CHAN A1 AF
CHAN B1 AF
J26 A2
J25 A1
IF OUT
NOTES
1 INSTALLED ONLY AS PART OF ASSOCIATED OPTION
2 REMOVED WHEN VBFO OPTION INSTALLED
3 REMOVED WHEN AFC OPTION INSTALLED

HF-8054



TPA-7753-016

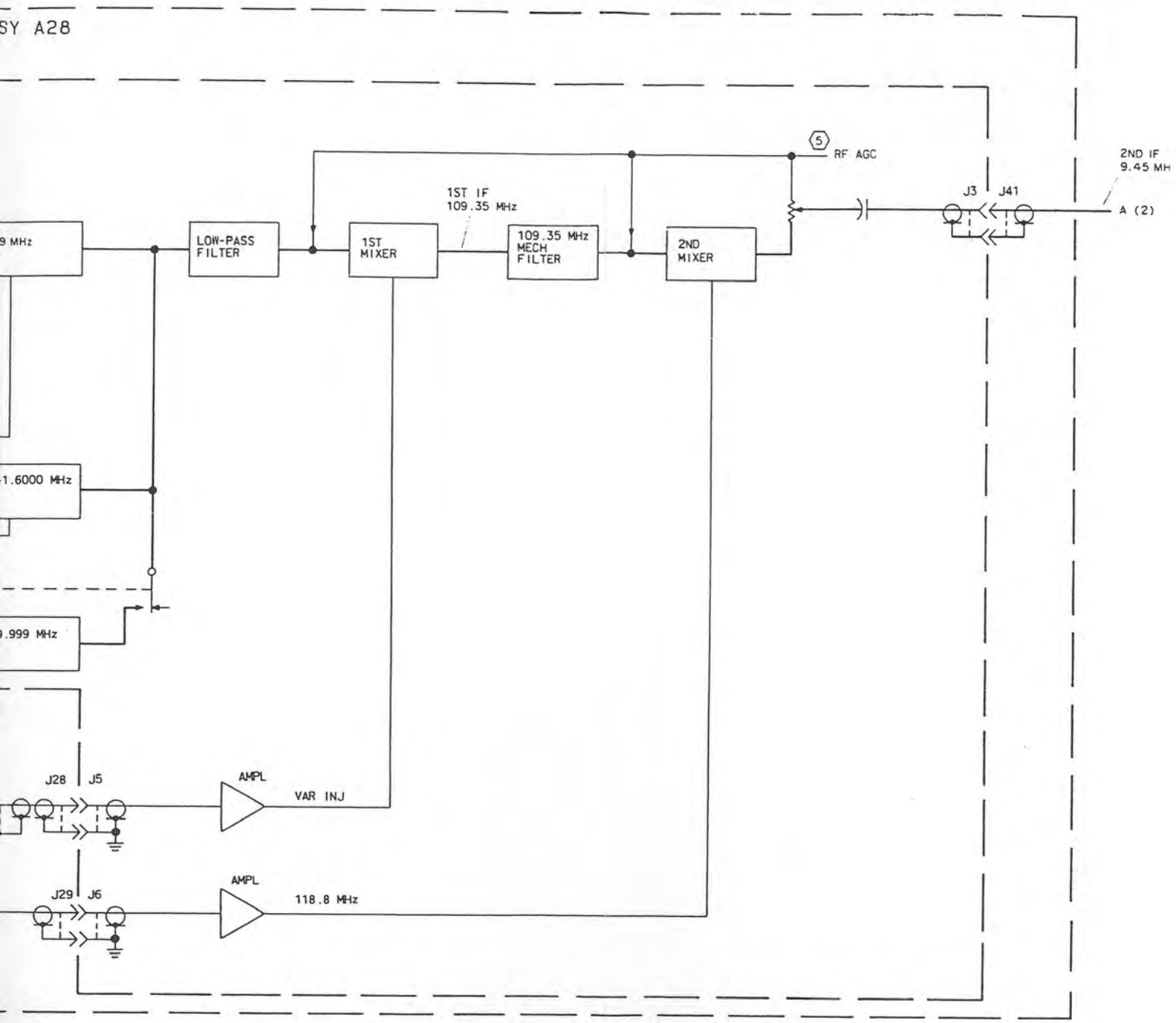
HF-8054 Receiver (622-3475-210), Block Diagram
Figure 1A



NOTES:

1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN: FOR COMPLETE DESIGNATION, PREFIX WITH UNIT AND/OR ASSEMBLY DESIGNATION.
2. REFER TO MONITOR CONTROL FOR FAULT AND STATUS INDICATORS AND METERING CIRCUITS.
3. REFER TO MODE AND OPERATING CONTROLS, FREQUENCY OPERATING CONTROLS FOR BANDPASS FILTER AND FREQUENCY SELECTION.
4. REFER TO FREQUENCY CONTROL (SYNTHESIZER) FOR FREQUENCY GENERATION.
5. REFER TO MODE AND OPERATING CONTROLS, RF AND SQUELCH FOR AGC AND SQUELCH OPERATION.

6. REFER
BANDW
7. STAND
63
63
8.



(6) REFER TO MODE AND OPERATING CONTROLS, MODE AND BANDWIDTH FOR MODE, BANDWIDTH FILTER, AND RECEIVE AF SELECTION.

(7) STANDARD BANDPASS FILTERING:
637-1767-002 BROADBAND 109.35 MHz FILTER (±6.10 kHz AT 0.5 dB POINTS).
637-1767-003 NARROW BAND HIGH PERFORMANCE 109.35 MHz FILTER (±7.50 kHz AT 3 dB POINTS).

(8) INDICATES HARD-WIRED CONNECTIONS.
INDICATES GROUP OF WIRES IN A RIBBON CABLE.

(9) J12 AND J17 ARE SOLDERED INTO AND ARE PART OF SIDEBOARD ASSEMBLY A28 (THERE IS NO MATING CONNECTOR FOR J12 OR J17).

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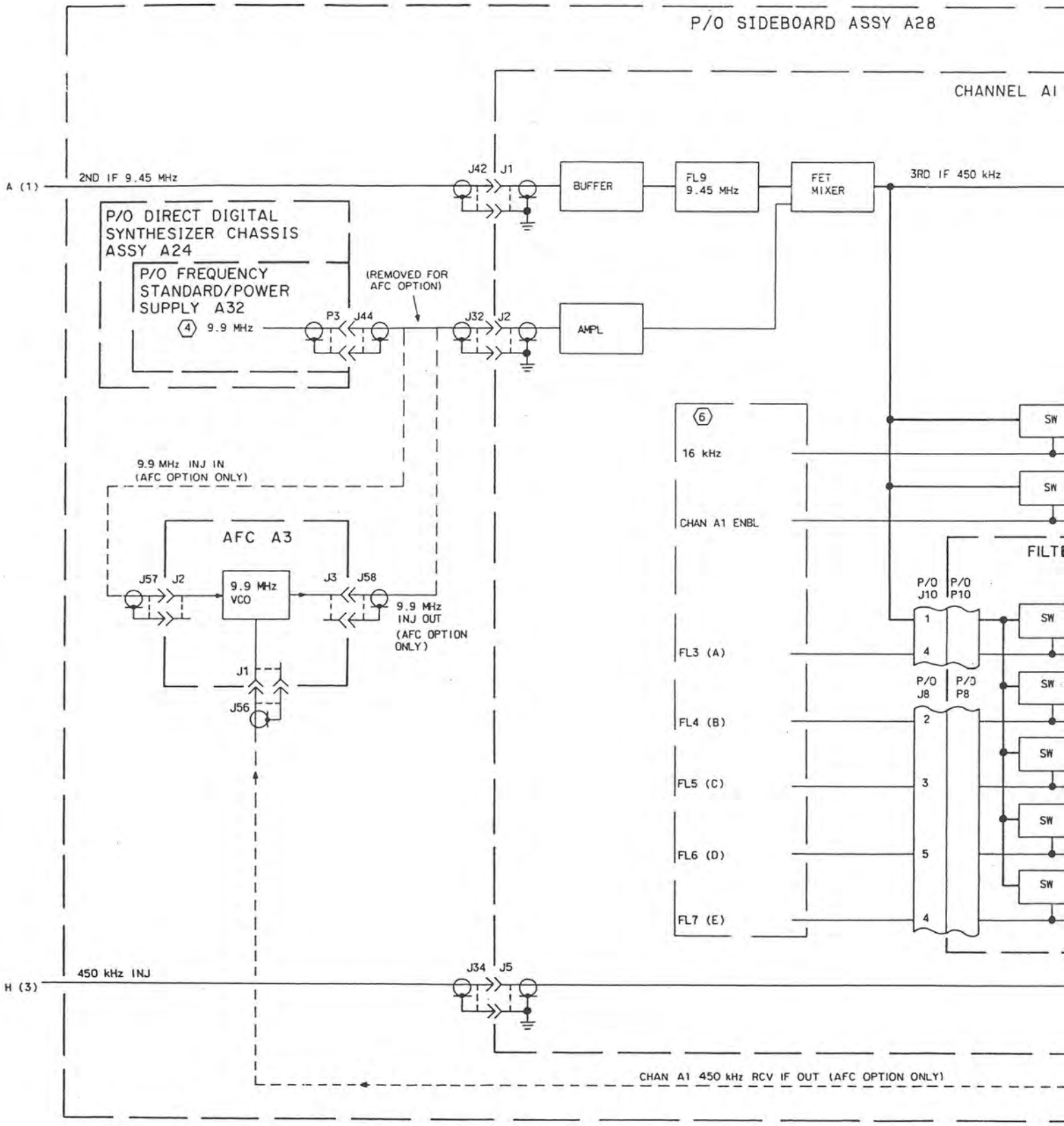
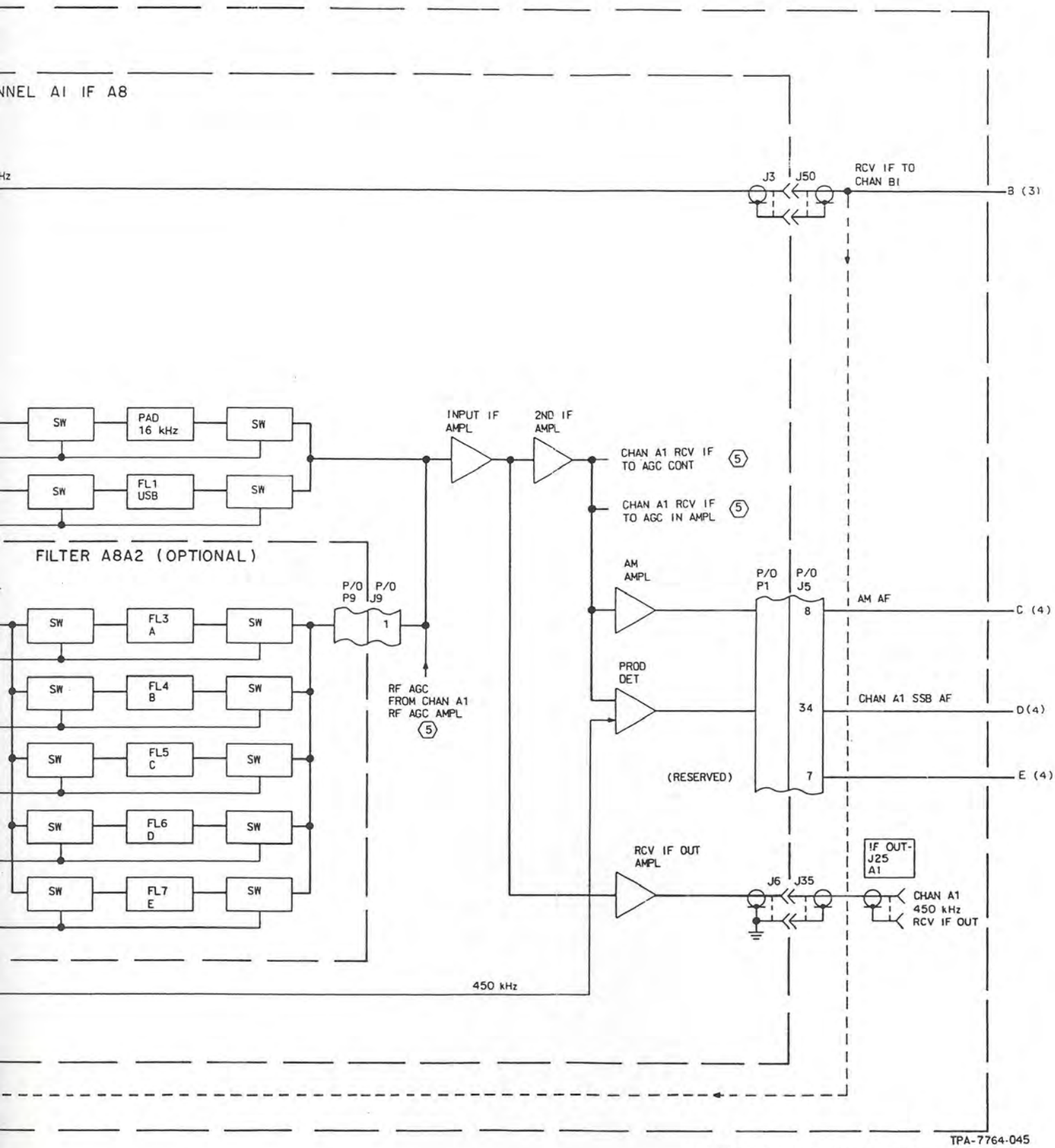
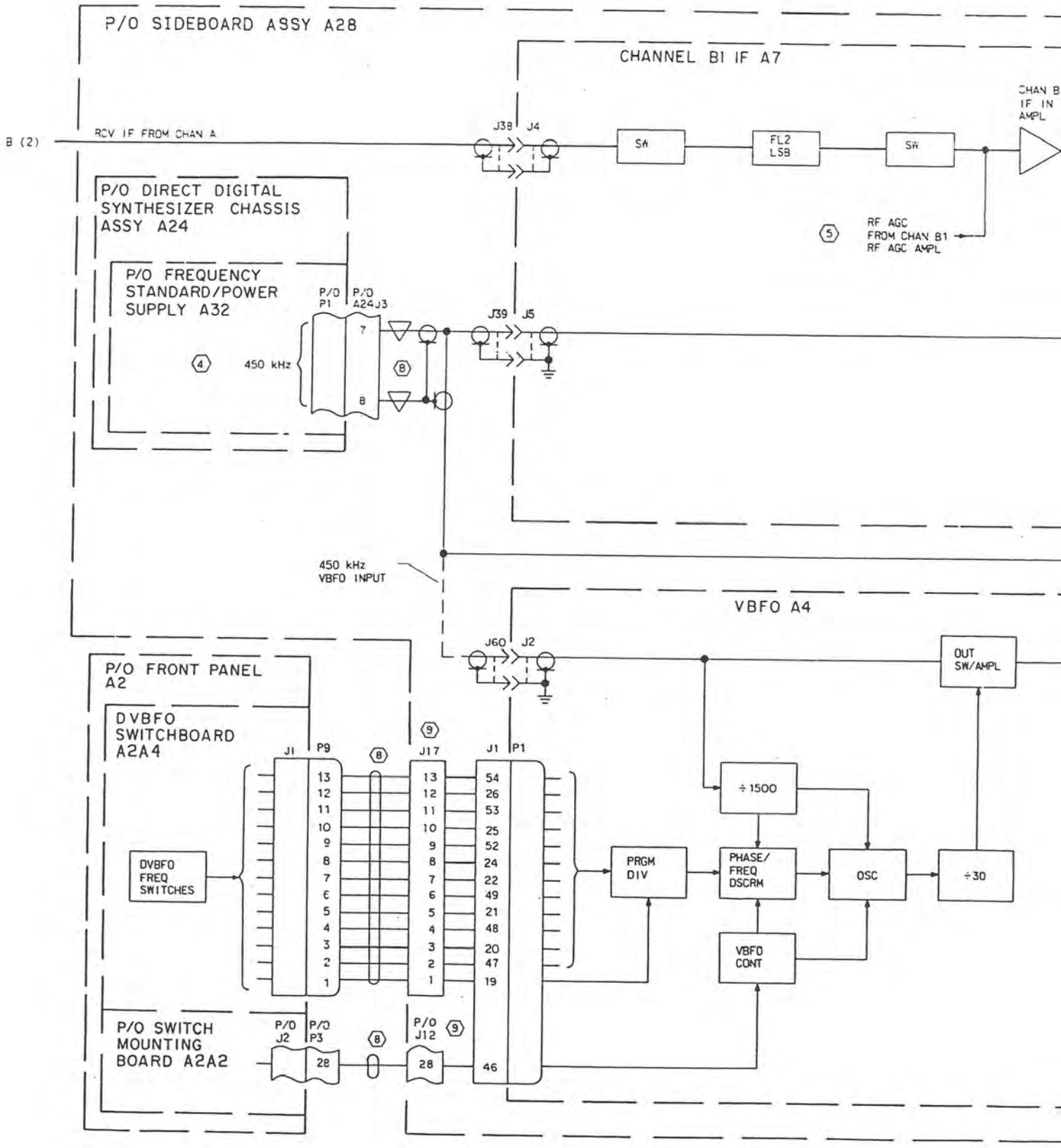
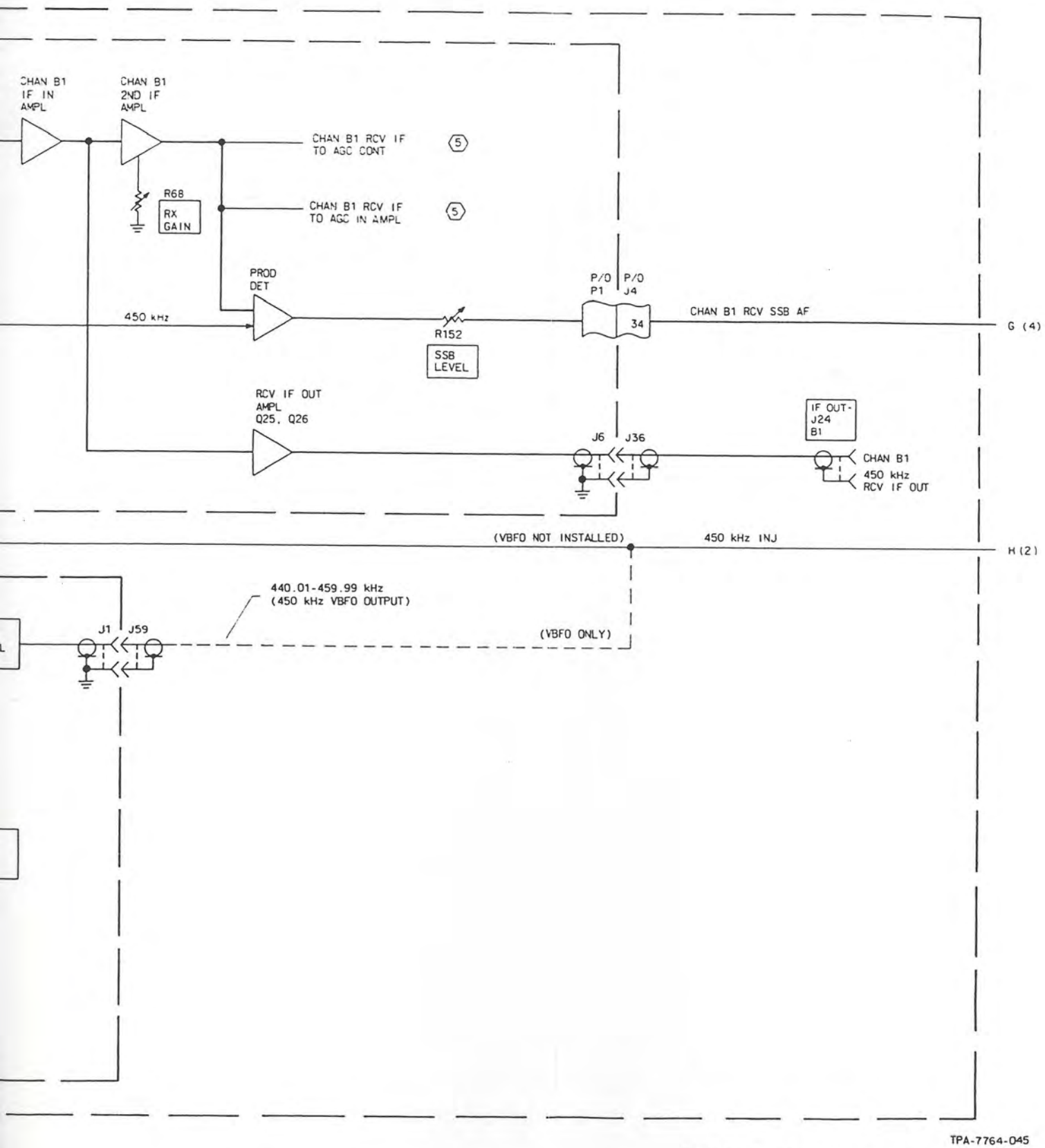
HF-8054A Receiver (622-3475-210), Receive Function, Block Diagram
Figure 2A (Sheet 1 of 4)


P/O SIDEBOARD ASSY A28
CHANNEL A1
A (1)
2ND IF 9.45 MHz
J42
J1
BUFFER
FL9
9.45 MHz
FET
MIXER
3RD IF 450 kHz
P/O DIRECT DIGITAL
SYNTHESIZER CHASSIS
ASSY A24
P/O FREQUENCY
STANDARD/POWER
SUPPLY A32
(REMOVED FOR
AFC OPTION)
4
9.9 MHz
P3
J44
J32
J2
AMPL
6
16 kHz
CHAN A1 ENBL
SW
9.9 MHz INJ IN
(AFC OPTION ONLY)
AFC A3
J57
J2
9.9 MHz
VCO
J3
J58
9.9 MHz
INJ OUT
(AFC OPTION
ONLY)
J1
J56
P/O
J10
P/O
P10
FL3 (A)
1
4
P/O
J8
P/O
P8
FL4 (B)
FL5 (C)
FL6 (D)
FL7 (E)
2
3
5
4
H (3)
450 kHz INJ
J34
J5
CHAN A1 450 kHz RCV IF OUT (AFC OPTION ONLY)



HF-8054A Receiver (622-3475-210), Receive Function, Block Diagram
Figure 2A (Sheet 2)


P/O SIDEBOARD ASSY A28
CHANNEL B1 IF A7
CHAN B
IF IN
AMPL
B (2)
RCV IF FROM CHAN A
J38
J4
SW
FL2
LSB
SW
RF AGC
FROM CHAN B1
RF AGC AMPL
5
P/O DIRECT DIGITAL
SYNTHESIZER CHASSIS
ASSY A24
P/O FREQUENCY
STANDARD/POWER
SUPPLY A32
P/O
P1
P/O
A24J3
J39
J5
4
450 kHz
7
8
8
450 kHz
VBFO INPUT
VBFO A4
J60
J2
OUT
SW/AMPL
P/O FRONT PANEL
A2
DVBFO
SWITCHBOARD
A2A4
J1
P9
9
J17
J1
P1
13
12
11
10
9
8
7
6
5
4
3
2
1
54
26
53
25
52
24
22
49
21
48
20
47
19
÷1500
DVBFO
FREQ
SWITCHES
PRGM
DIV
PHASE/
FREQ
DSCRM
OSC
÷30
VBFO
CONT
P/O SWITCH
MOUNTING
BOARD A2A2
P/O
J2
P/O
P3
P/O
J12
28
28
46



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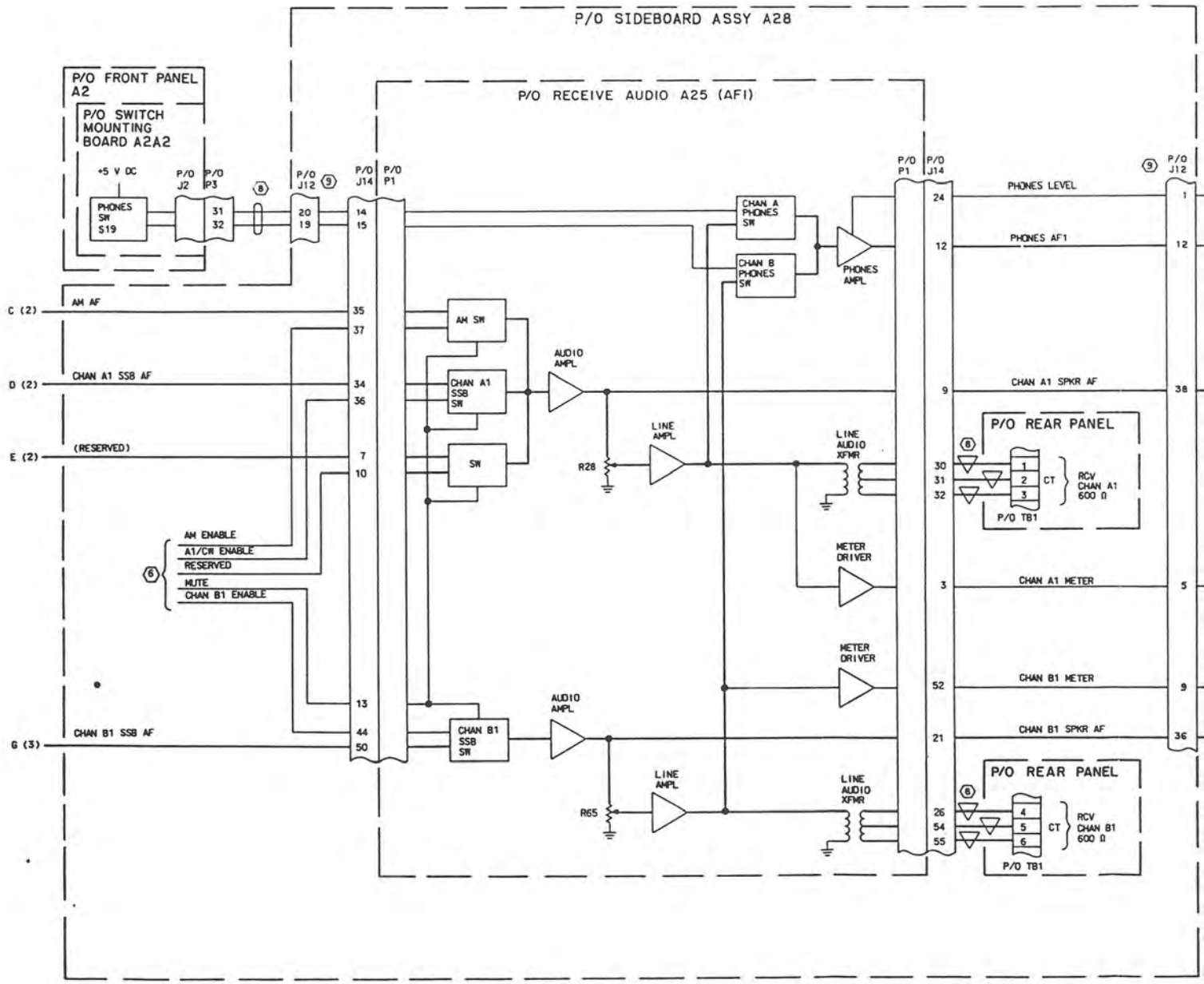
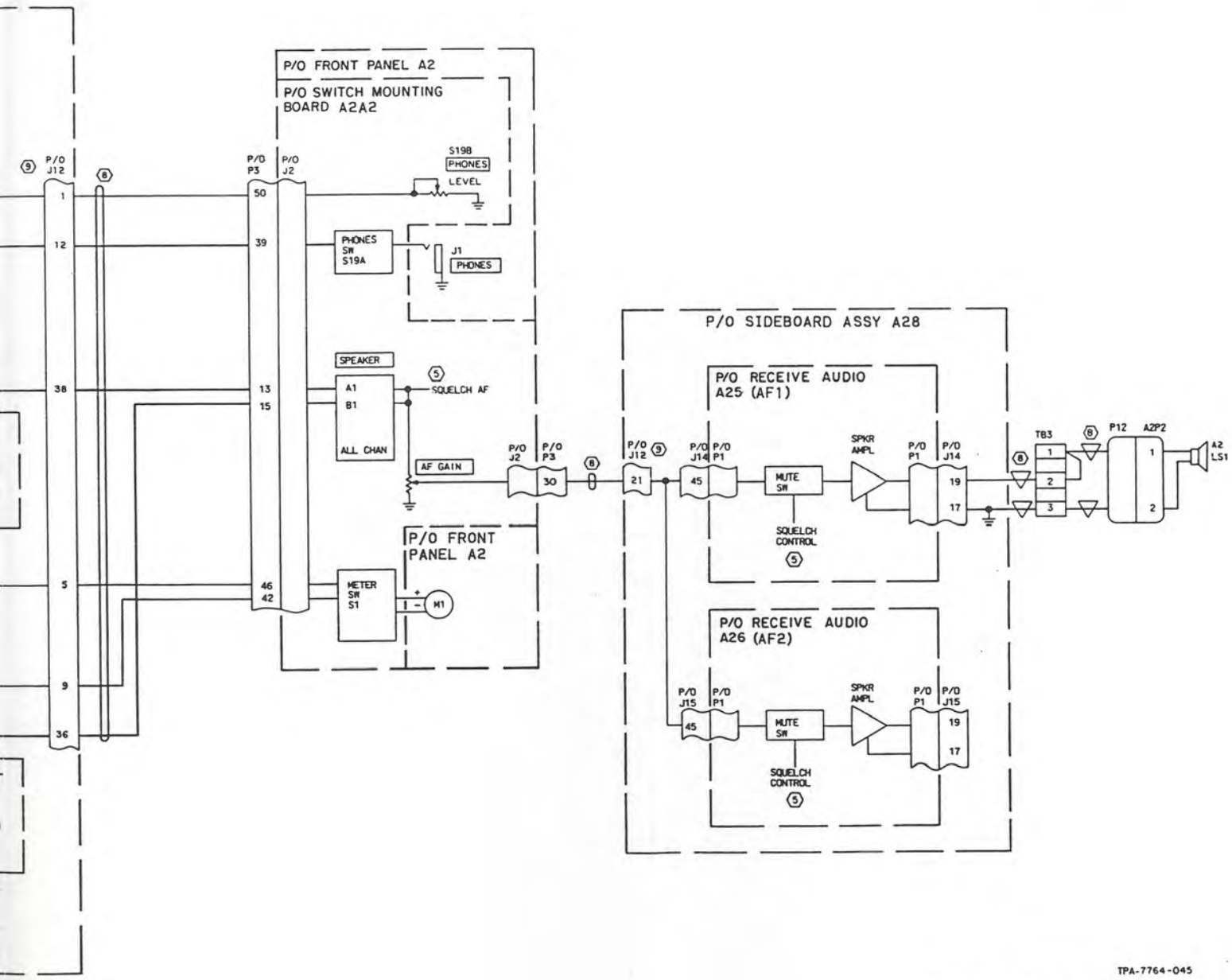
HF-8054A Receiver (622-3475-210), Receive Function, Block Diagram Figure 2A (Sheet 3)


P/O SIDEBOARD ASSY A28
P/O FRONT PANEL A2
P/O SWITCH MOUNTING BOARD A2A2
P/O RECEIVE AUDIO A25 (AF1)
+5 V DC
PHONES SW S19
P/O J2
P/O P3
P/O J12
P/O J14
P/O P1
C (2)
AM AF
D (2)
CHAN A1 SSB AF
E (2)
(RESERVED)
G (3)
CHAN B1 SSB AF
AM ENABLE
A1/CW ENABLE
RESERVED
MUTE
CHAN B1 ENABLE
AM SW
CHAN A1 SSB SW
SW
CHAN B1 SSB SW
AUDIO AMPL
LINE AMPL
R28
R65
CHAN A PHONES SW
CHAN B PHONES SW
PHONES AMPL
LINE AUDIO XFMR
METER DRIVER
PHONES LEVEL
PHONES AF1
CHAN A1 SPKR AF
CHAN A1 METER
CHAN B1 METER
CHAN B1 SPKR AF
P/O REAR PANEL
CT
RCV CHAN A1 600 Ω
RCV CHAN B1 600 Ω
P/O TB1



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HF-8054A Receiver (622-3475-210), Receive Function, Block Diagram Figure 2A (Sheet 4)

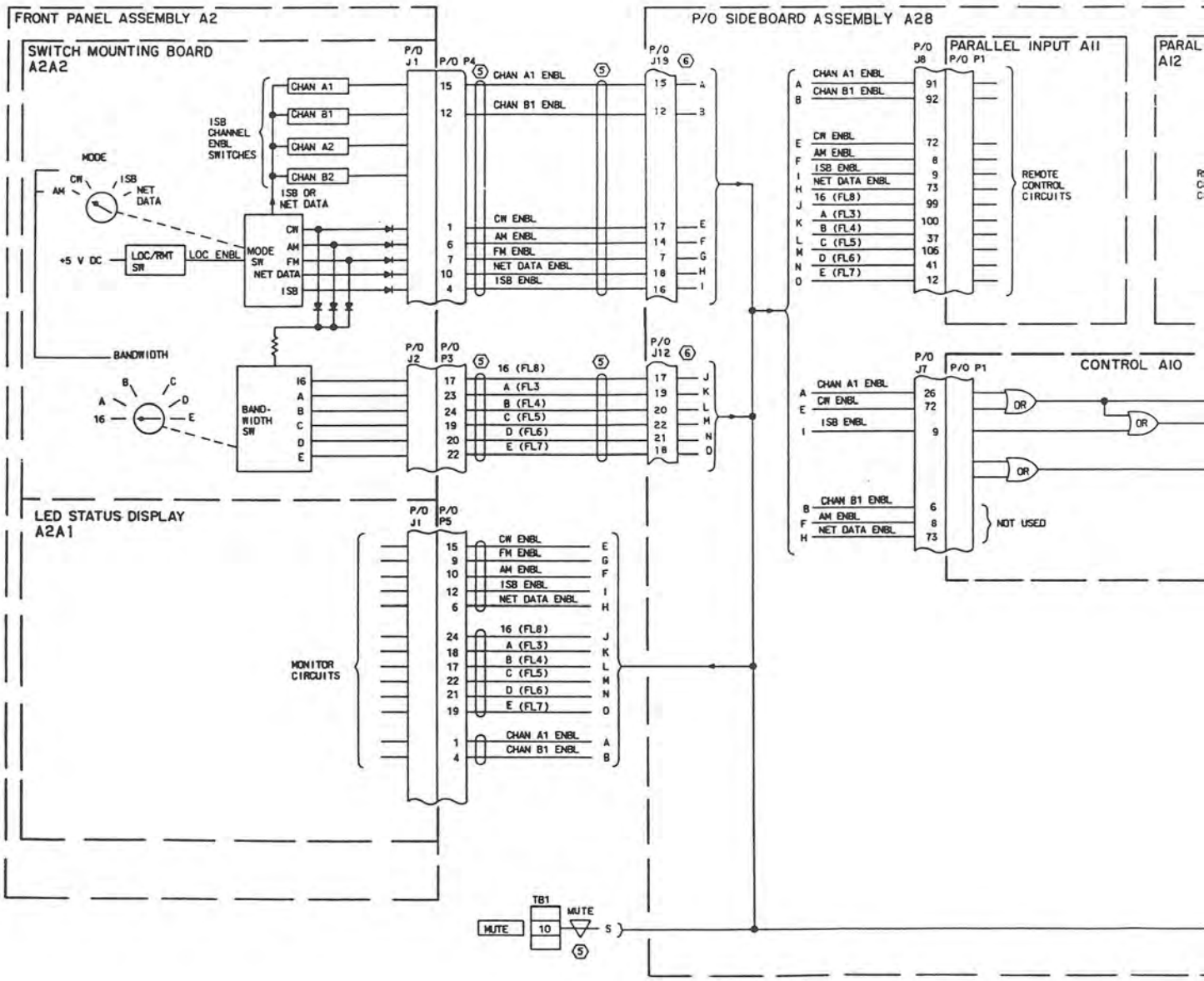
2.2.1 Mode and Bandwidth (Refer to figure 3)

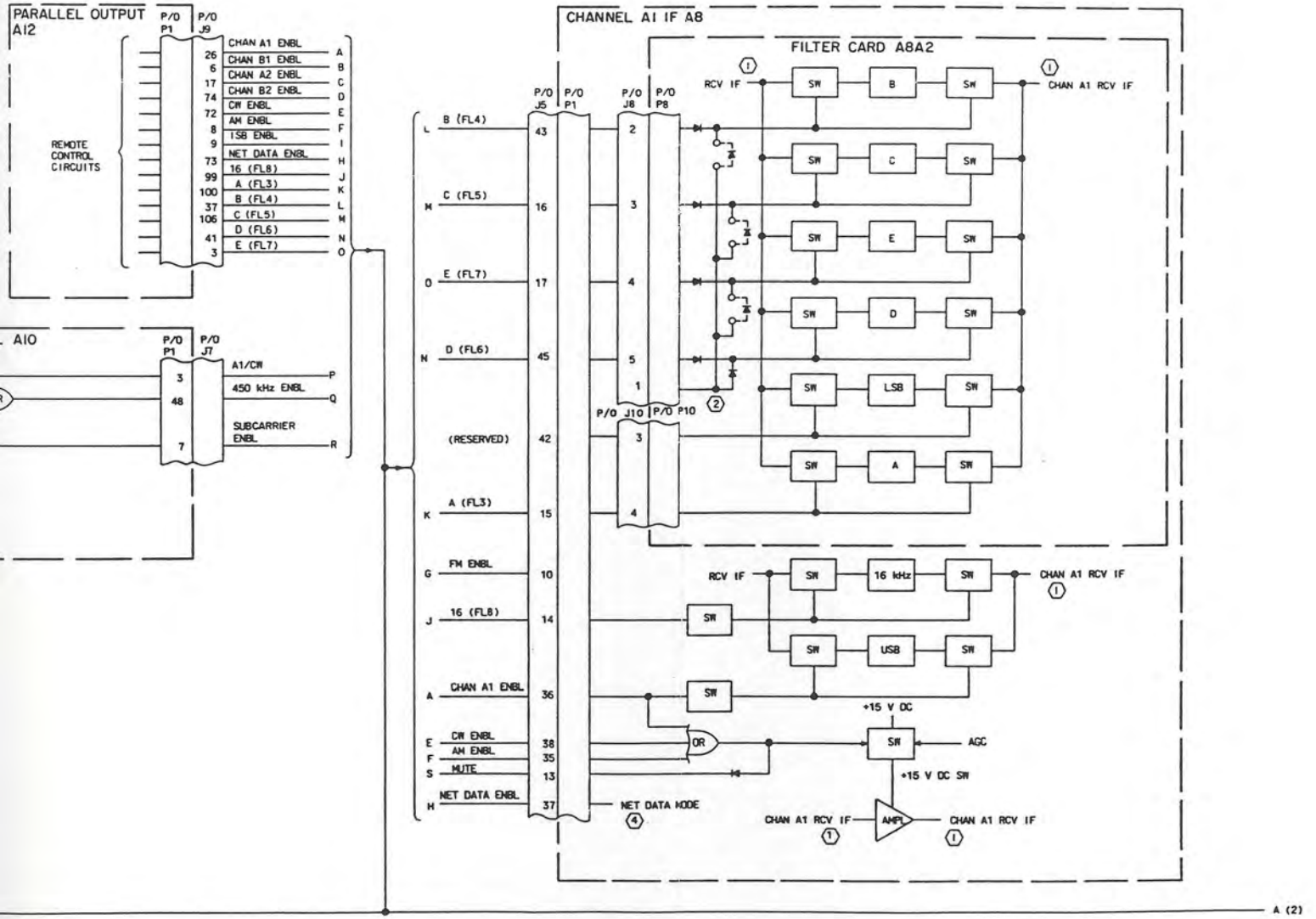
Place figure 3A behind figure 3 and figure 4A behind figure 4. Refer to figure 3A and 4A for HF-8054A Receiver (622-3475-210). Step d of the first paragraph is not applicable. Sentences three and four of paragraph ten are not applicable. Substitute the following paragraph for paragraph twelve.

When an external controlling device is used, the same mode and bandwidth operations apply, except the control signals are supplied as either serial data to serial interface A13 or parallel data to parallel interface A31. The serial data is converted to parallel data on parallel output card A12. The outputs of parallel output A12 are bussed as are the parallel outputs of the parallel interface A31 to the direct digital synthesizer A24 and the control A10. Signals applied to J67/A31P2 DDS INPUT are not applied anywhere except directly to direct digital synthesizer VFO/VCO module A33.

2.2.2 Audio (Refer to figure 5)

Place figure 5A behind figure 5 and refer to figure 5A for HF-8054A Receiver (622-3475-210). In the second paragraph, delete the reference to A26 in sentence 1 and the references to A2 and B2 in sentences 2 and 11. Sentences 7, 8, 9, and 10 are not applicable. In the third paragraph, delete the reference to A26 in sentence 1 and the references to A2 and B2 in sentences 2 and 11. Sentences 7, 8, 9, and 10 are not applicable. In the fifth paragraph, delete the reference to A26 in sentence 1; sentences 8, 9, 10, 11, 12, and 13 are not applicable.

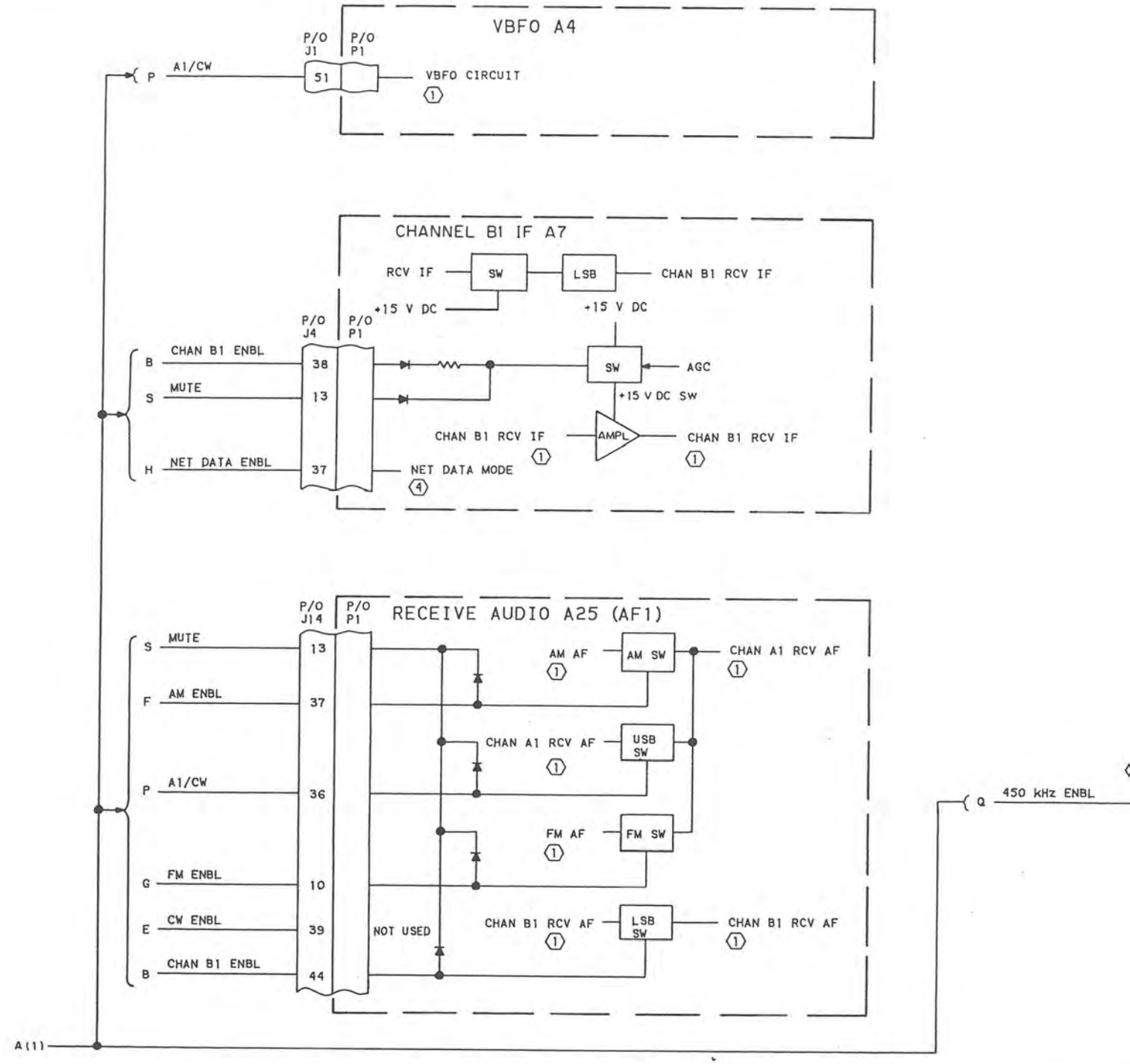

FRONT PANEL ASSEMBLY A2
SWITCH MOUNTING BOARD A2A2
ISB CHANNEL ENBL SWITCHES
CHAN A1
CHAN B1
CHAN A2
CHAN B2
ISB OR NET DATA
MODE
CW
AM
ISB
NET DATA
+5 V DC
LOC/RMT SW
LOC ENBL
MODE SW
CW
AM
FM
NET DATA
ISB
BANDWIDTH
BAND-WIDTH SW
16
A
B
C
D
E
LED STATUS DISPLAY A2A1
MONITOR CIRCUITS
P/O J1
P/O P4
P/O P3
P/O P5
P/O J19
P/O J12
CHAN A1 ENBL
CHAN B1 ENBL
CW ENBL
AM ENBL
FM ENBL
NET DATA ENBL
ISB ENBL
16 (FL8)
A (FL3)
B (FL4)
C (FL5)
D (FL6)
E (FL7)
P/O SIDEBOARD ASSEMBLY A28
PARALLEL INPUT A11
P/O J8
P/O P1
REMOTE CONTROL CIRCUITS
CONTROL A10
P/O J7
OR
NOT USED
TB1
MUTE
10
S

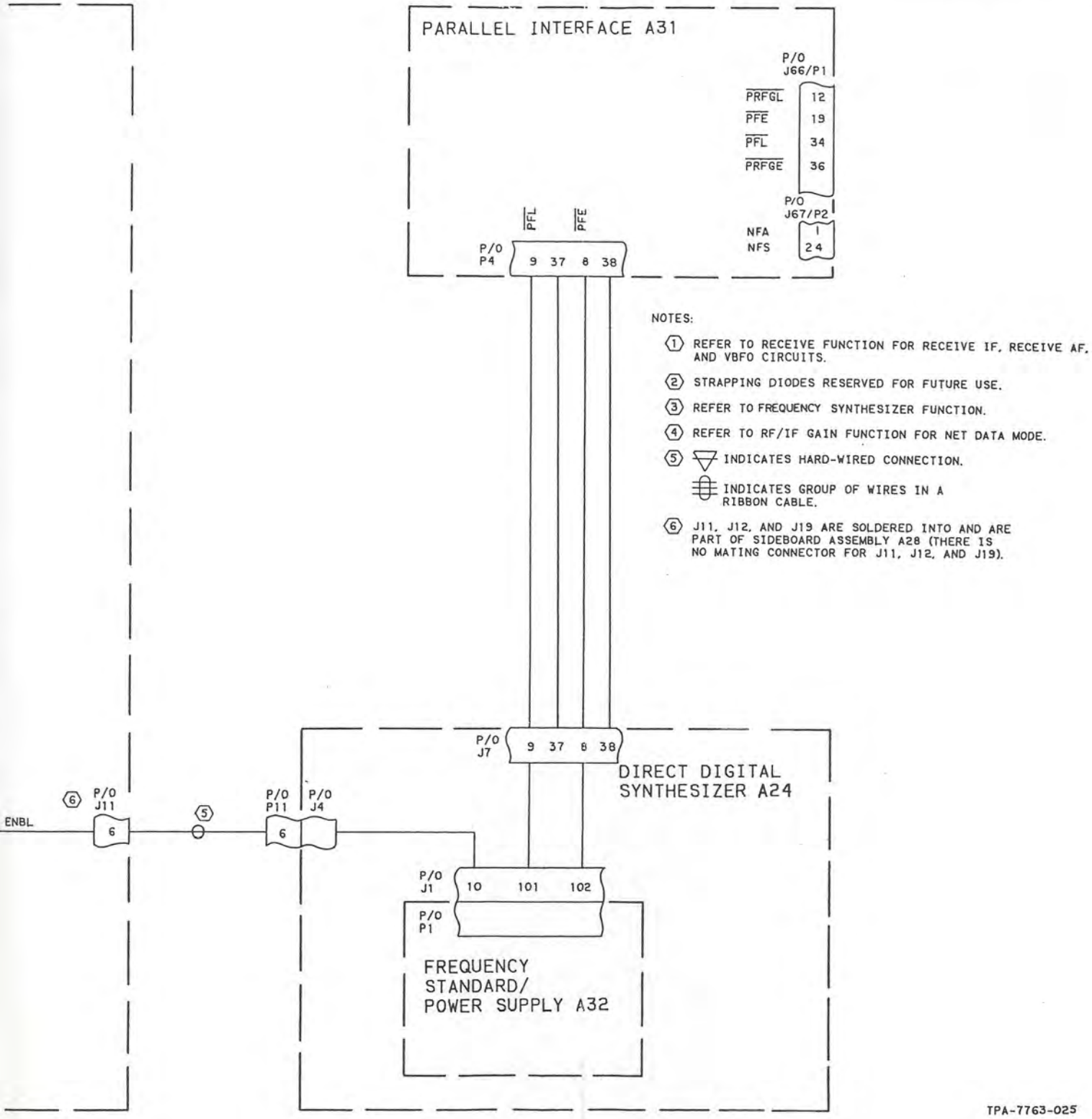


TPA-7763-025

HF-8054A Receiver (622-3475-210), Mode and Bandwidth, Block Diagram Figure 3A (Sheet 1 of 2)

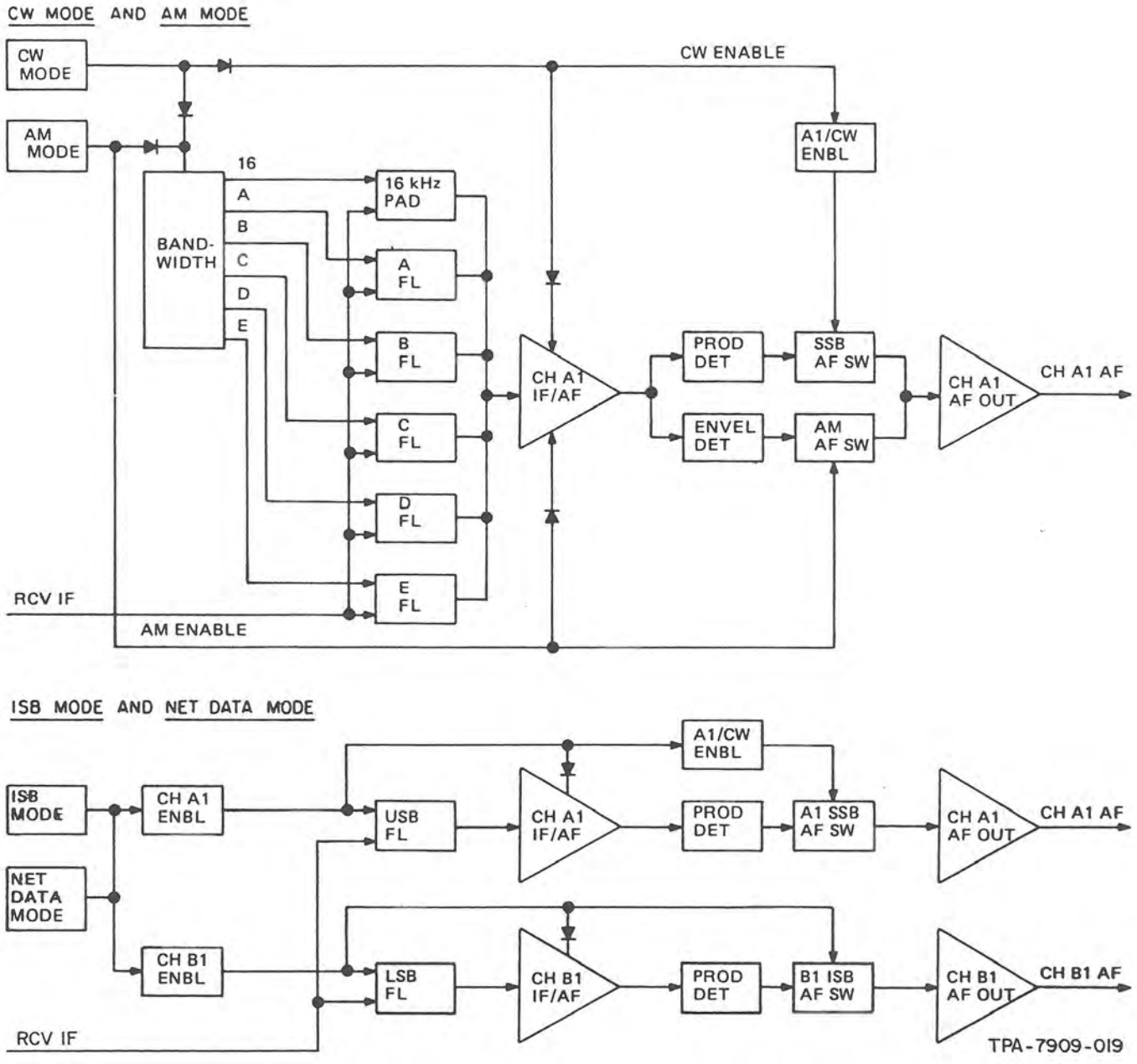
P/O SIDEBOARD ASSEMBLY A28





TPA-7763-025

HF-8054A Receiver (622-3475-210), Mode and Bandwidth, Block Diagram Figure 3A (Sheet 2)



HF-8054A Receiver (622-3475-210), Mode and Bandwidth Selection, Simplified Diagram
Figure 4A

NOTES:

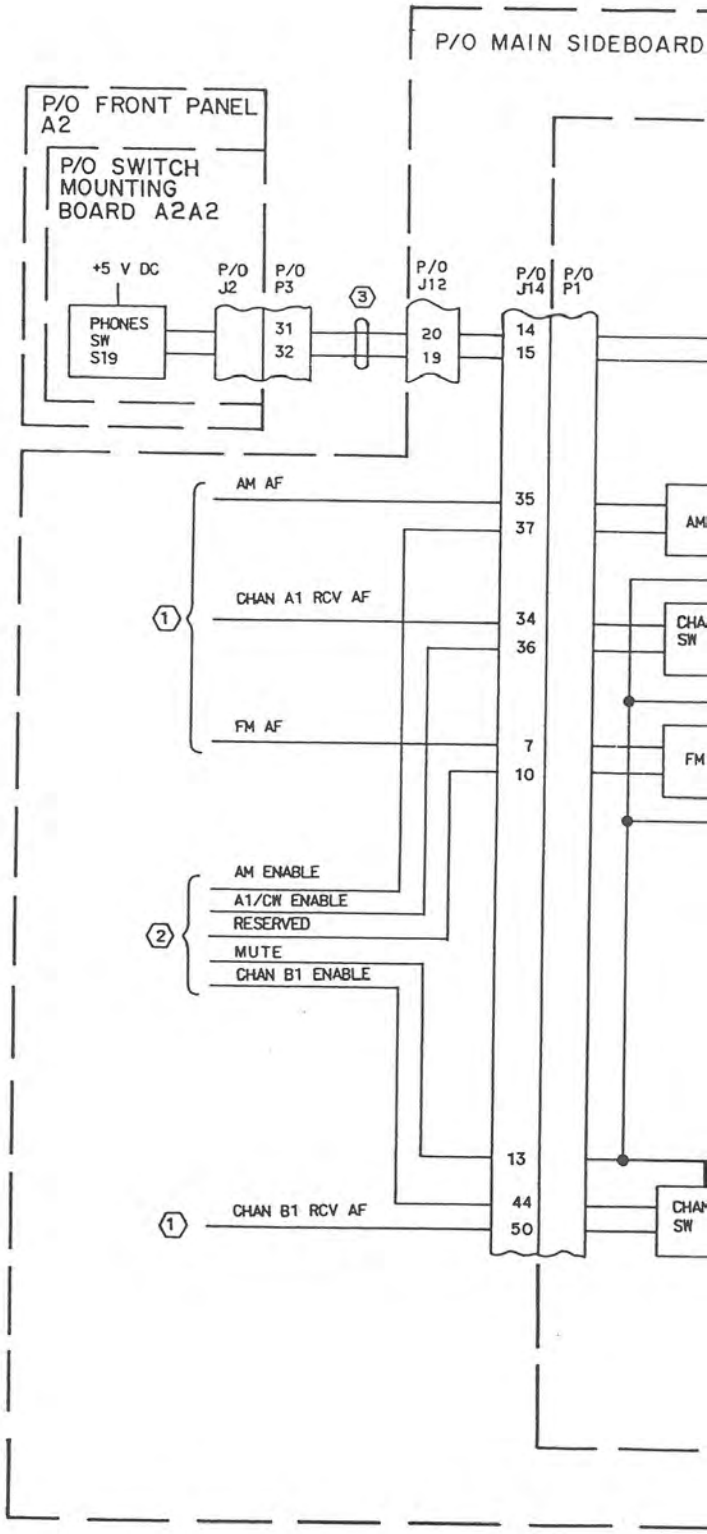
(1) TO RECEIVE FUNCTION.

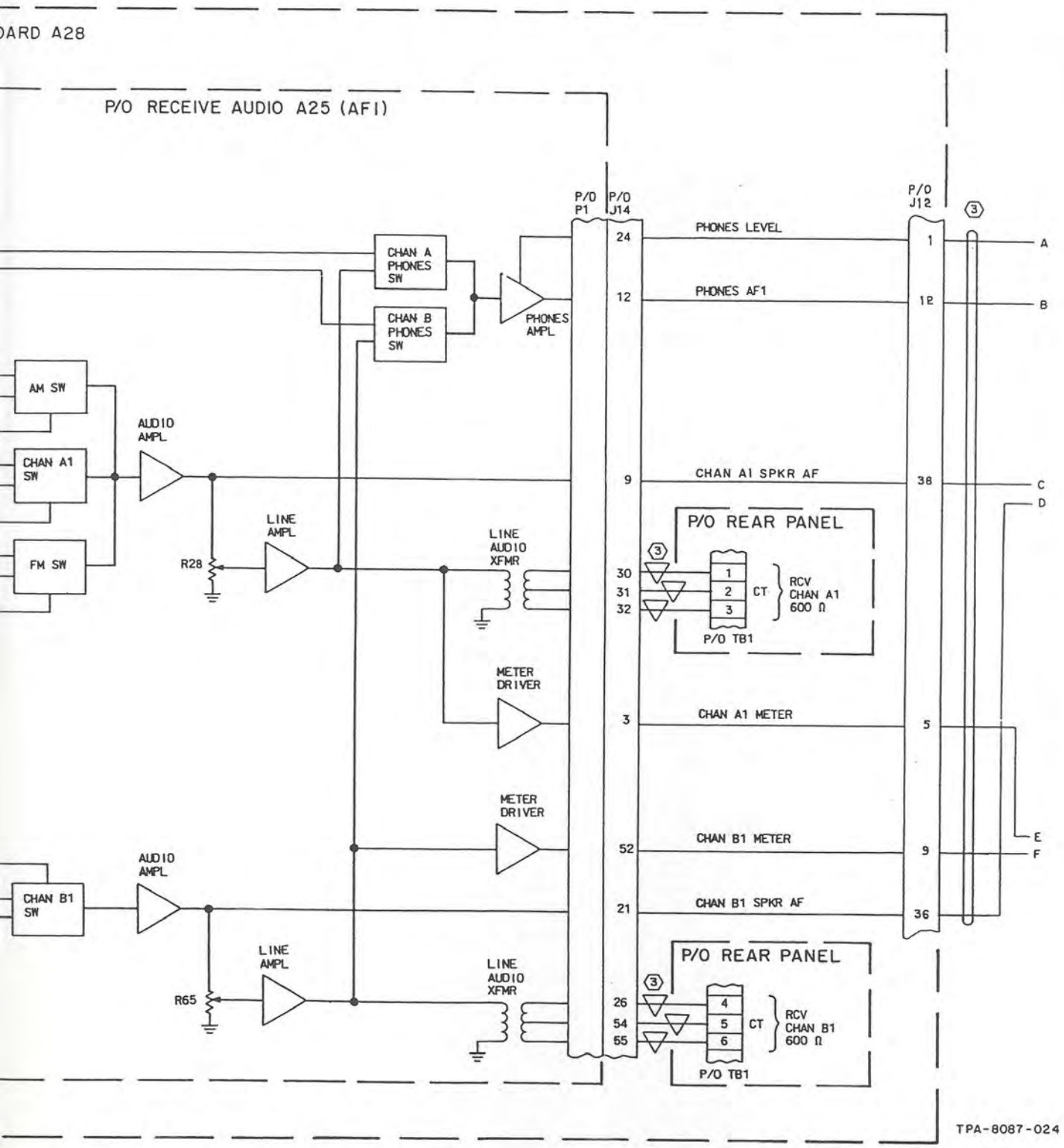
(2) TO MODE AND BANDWIDTH FUNCTION.

(3) INDICATES HARD-WIRED CONNECTION.

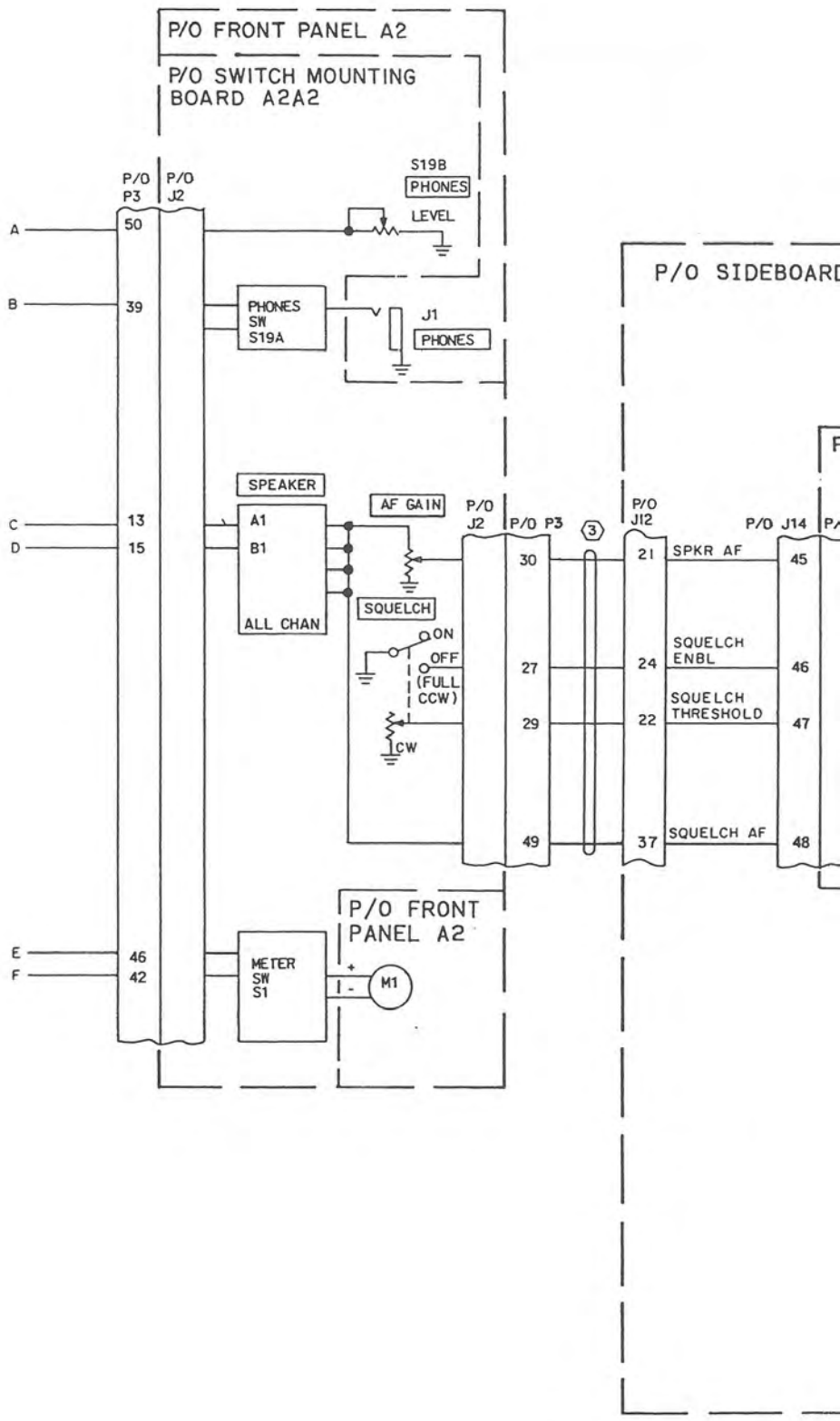
INDICATES GROUP OF WIRES IN A RIBBON CABLE.

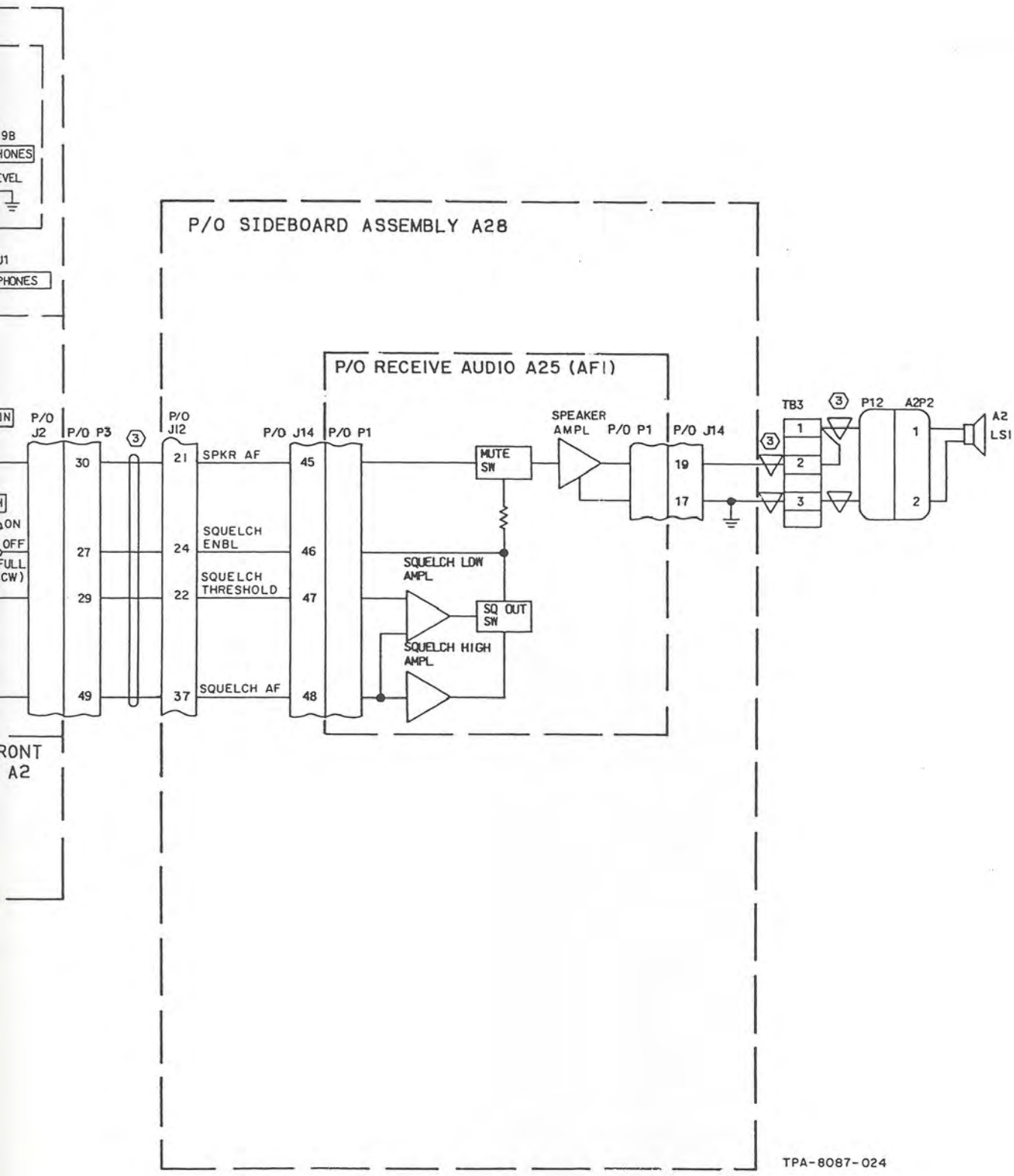
(4) J12 IS SOLDERED INTO AND IS PART OF SIDEBOARD ASSEMBLY A28 (THERE IS NO MATING CONNECTOR FOR J12).





HF-8054A Receiver (622-3475-210), Audio Circuits, Block Diagram Figure 5A (Sheet 1 of 2)


P/O FRONT PANEL A2
P/O SWITCH MOUNTING BOARD A2A2
P/O P3
P/O J2
S19B
PHONES
LEVEL
A
50
B
39
PHONES SW S19A
J1
PHONES
P/O SIDEBOARD
SPEAKER
AF GAIN
C
13
D
15
A1
B1
ALL CHAN
SQUELCH
ON
OFF
(FULL CCW)
CW
P/O J2
P/O P3
3
P/O J12
P/O J14
30
21
SPKR AF
45
27
24
SQUELCH ENBL
46
29
22
SQUELCH THRESHOLD
47
49
37
SQUELCH AF
48
P/O FRONT PANEL A2
E
46
F
42
METER SW S1
+
-
M1



HF-8054A Receiver (622-3475-210), Audio Circuits, Block Diagram Figure 5A (Sheet 2)

2.2.3 IF/RF Gain Control (Refer to figure 6)

Place figure 6A behind figure 6 and refer to figure 6A for HF-8054A Receiver (622-3475-210). In the third paragraph, first sentence, delete reference to A2 and B2. In the seventh paragraph, second sentence, delete reference to channel A2 if A6 and channel B2 if A5. In table 3, the column for A2 and B2 are not applicable. Substitute the following paragraph for paragraph 6.

When the receiver is using remote control with AGC disabled, if/rf gain is controlled by the remote rf gain input. This control voltage has the same sensitivity as the AGC output voltage (50 mV/dB) and originates either in a d/a converter circuit in parallel output A12 for serial input, or the parallel interface A31 for parallel input. The inputs are 5 binary weighted signals (see remote control word format, figures 8 through 10) that provide a total gain control range of 93 dB in 3-dB steps.

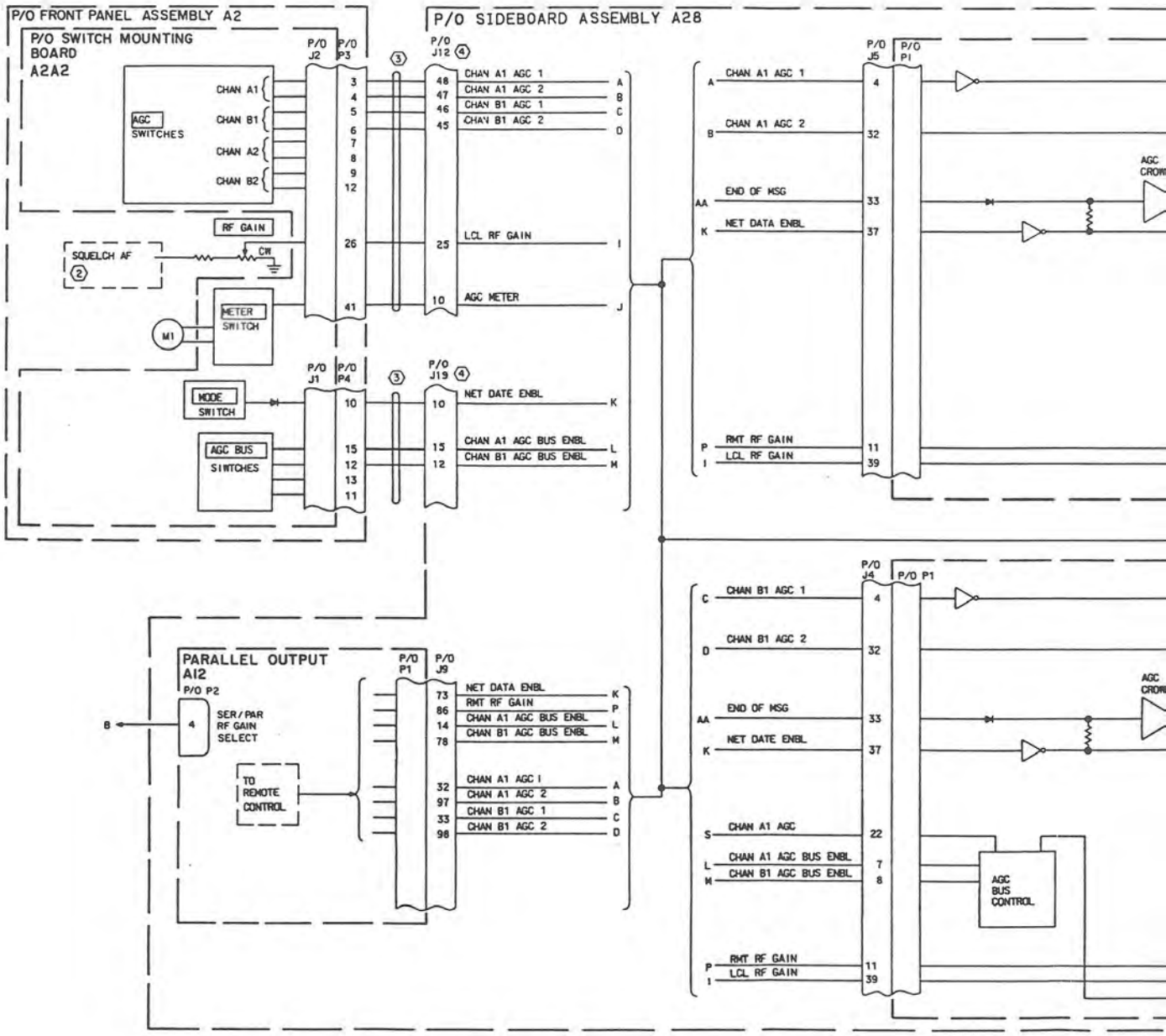
2.2.4 Frequency Control (Refer to figure 7)

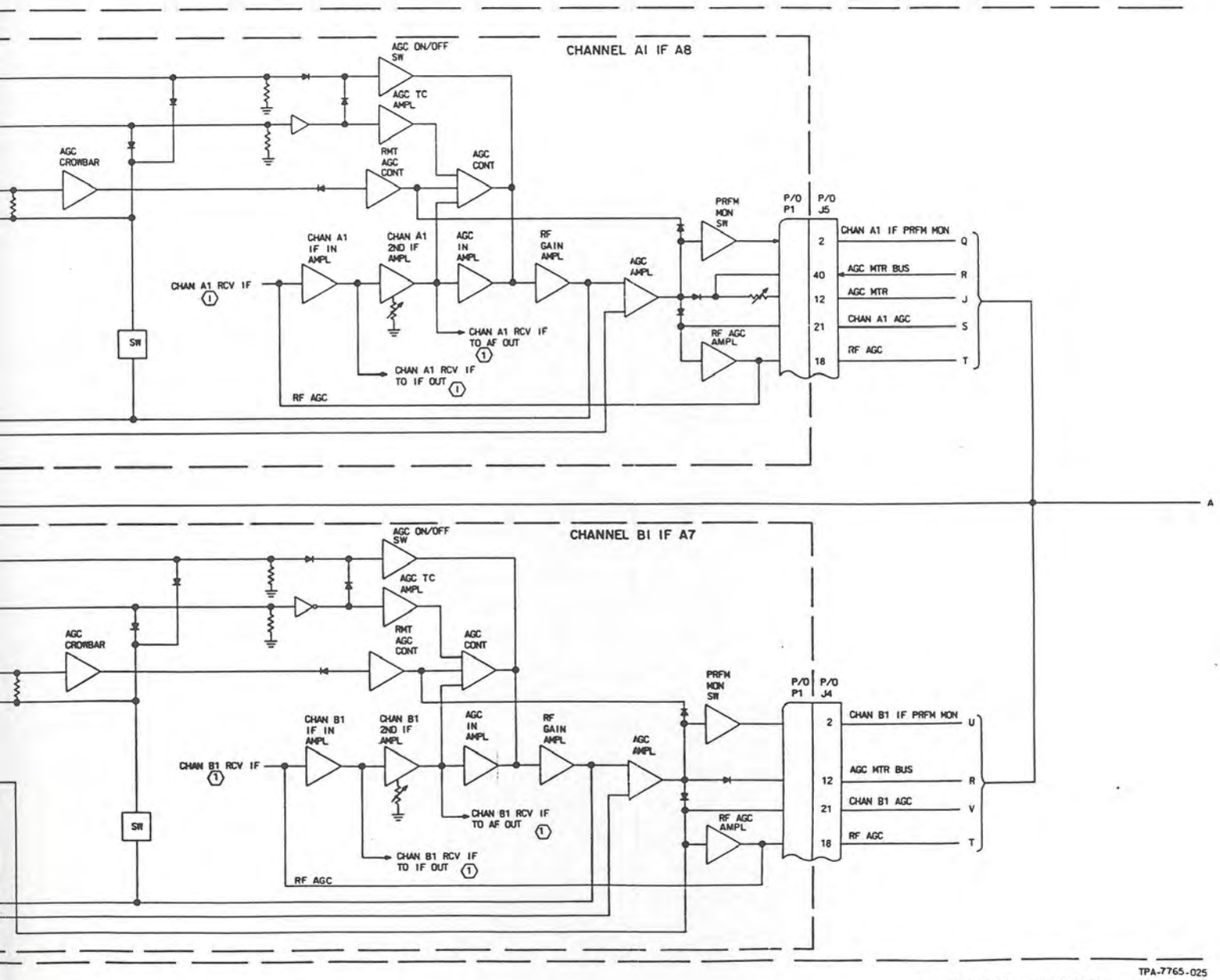
Place figure 7A behind figure 7. Refer to figure 7A for HF-8054A Receiver (622-3475-210). Paragraphs 1, 2, 3, and 4 are not applicable. Add the following paragraphs for coverage of the HF-8054A Receiver (622-3475-210).

The receiver frequency is controlled by parallel coded-frequency inputs to VFO/VCO module A33 in direct digital synthesizer A24. These inputs come from either DDS control interface A33 or parallel interface A31. The signals from the parallel interface enter the receiver at J67/A31P2 DDS input and are supplied by a compatible processor. These signals control the frequency directly and provide the fastest rate of change.

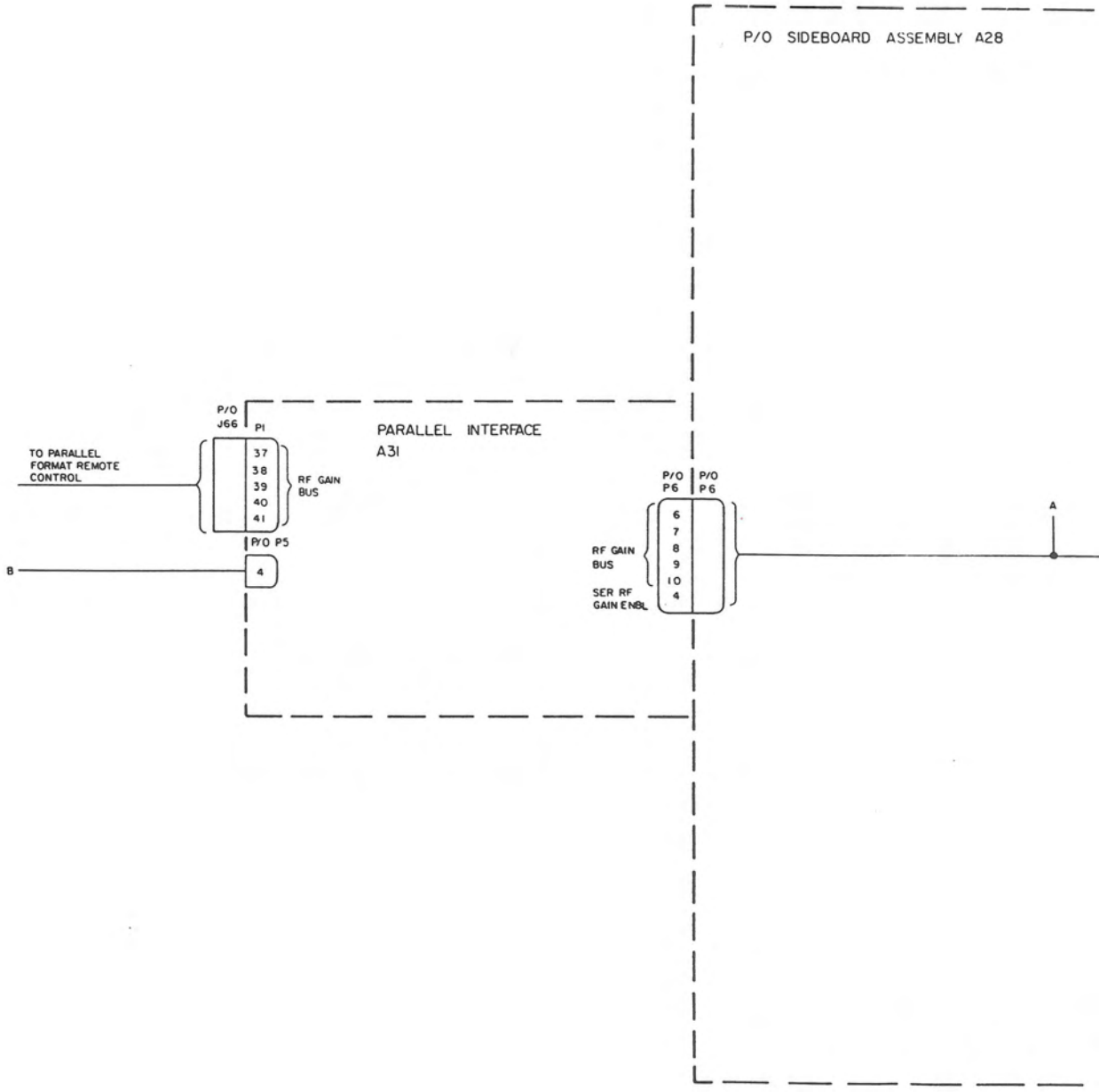
The output of the DDS control interface is derived from parallel bcd frequency signals from either the front-panel controls, parallel output card A12, or parallel interface A31. Parallel bcd frequency inputs in 10-Hz steps are supplied directly from thumbwheel switches on A2A3 through P2 and J11 to J7, J8 and P11 to the direct digital synthesizer. Frequency data in 1-Hz steps is supplied by the serial and parallel remote controls. The parallel output A12 data is the result of a serial-to-parallel conversion of signals applied to J14 REMOTE CONTROL on the rear panel and routed through serial interface A13. The parallel bcd frequency data from parallel interface A31 originate at J66/A31P1 PARALLEL INPUT and are latch-controlled on the A31.

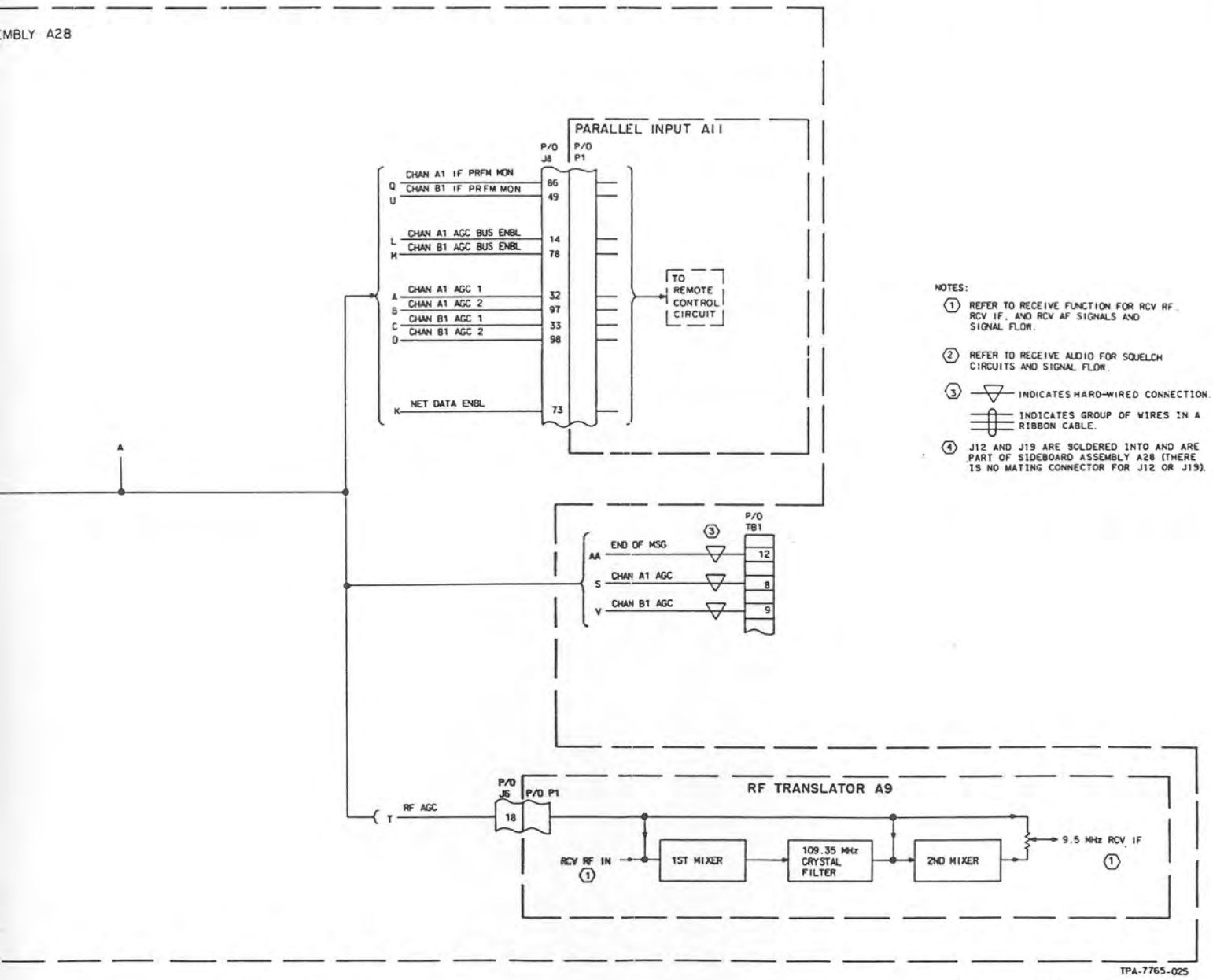
All parallel bcd frequency inputs supplied to the direct digital synthesizer are also supplied through buffer/drivers in control A10 through rfi filters to preselector connector J16. Also, in control A10, the inputs are band-decoded and the resultant band signals are applied to rf translator module A9.


P/O FRONT PANEL ASSEMBLY A2
P/O SWITCH MOUNTING BOARD A2A2
AGC SWITCHES
CHAN A1
CHAN B1
CHAN A2
CHAN B2
RF GAIN
SQUELCH AF
CW
METER SWITCH
M1
MODE SWITCH
AGC BUS SWITCHES
P/O J2
P/O P3
P/O J1
P/O P4
P/O SIDEBOARD ASSEMBLY A28
P/O J12
P/O J19
CHAN A1 AGC 1
CHAN A1 AGC 2
CHAN B1 AGC 1
CHAN B1 AGC 2
LCL RF GAIN
AGC METER
NET DATE ENBL
CHAN A1 AGC BUS ENBL
CHAN B1 AGC BUS ENBL
P/O J5
P/O P1
END OF MSG
RMT RF GAIN
PARALLEL OUTPUT A12
P/O P2
SER/PAR RF GAIN SELECT
TO REMOTE CONTROL
P/O J9
P/O J4
CHAN A1 AGC
AGC BUS CONTROL
AGC CROW

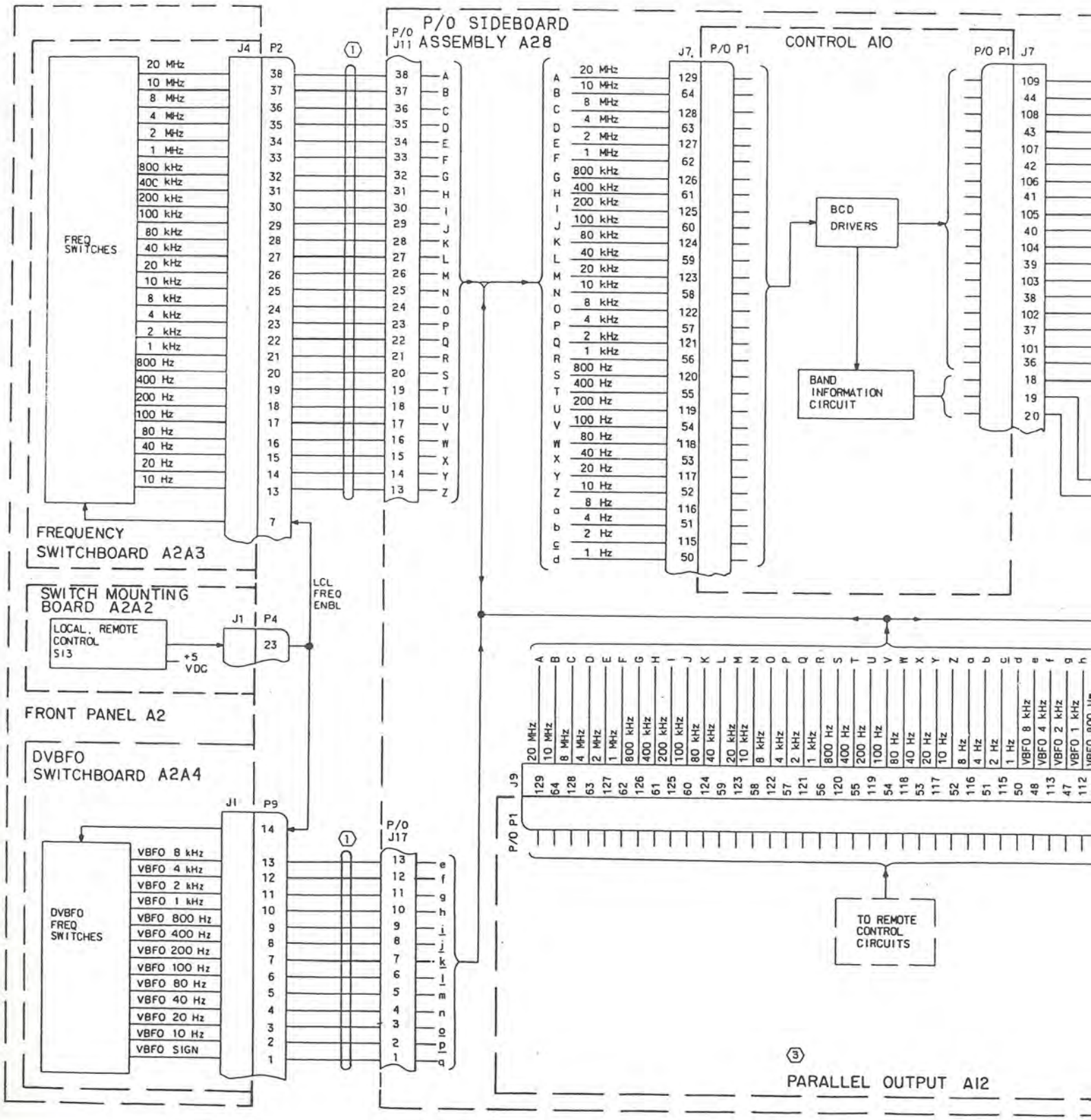


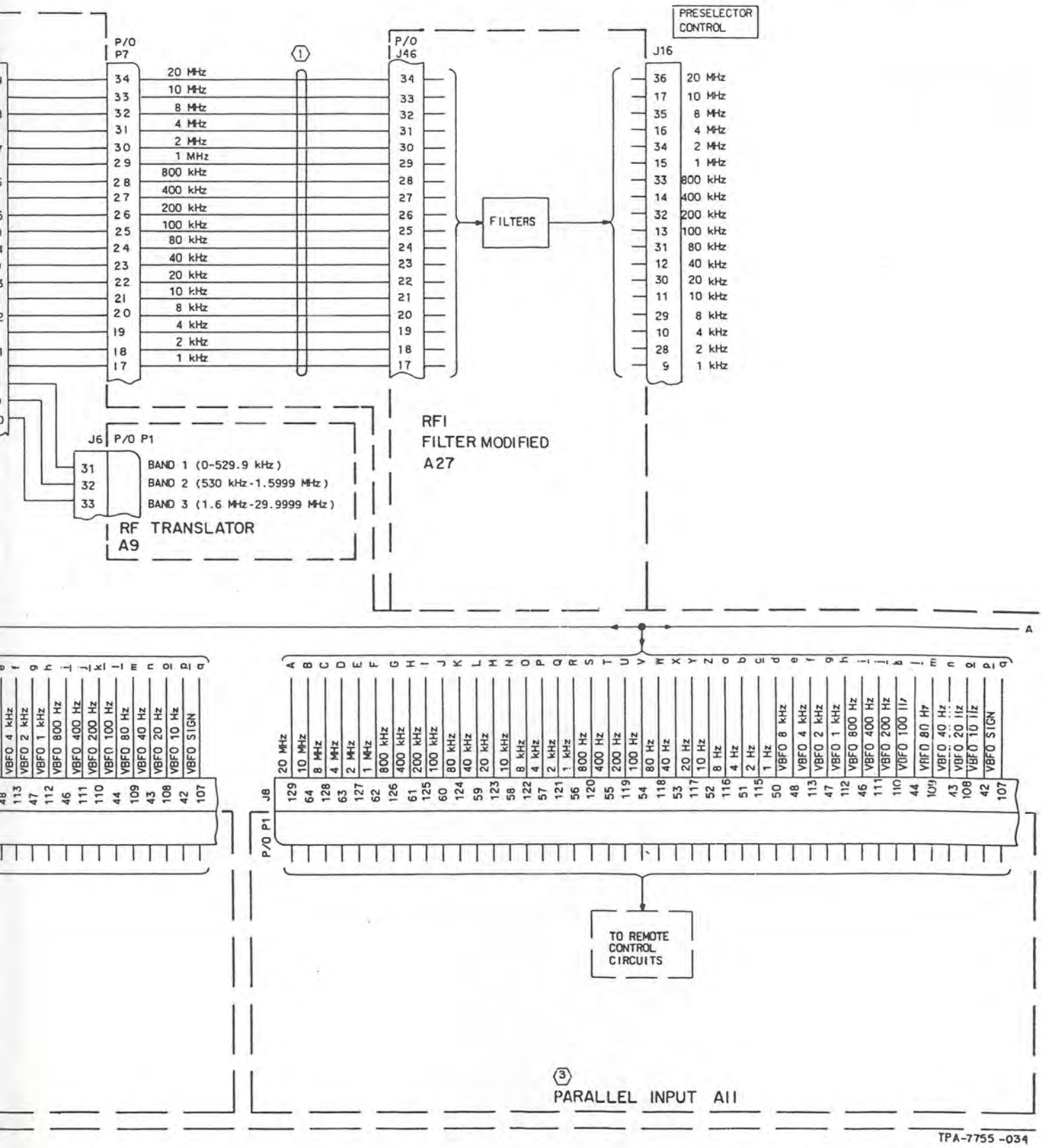
HF-8054A Receiver (622-3475-210), IF/RF Gain Control, Block Diagram Figure 6A (Sheet 1 of 2)


P/O SIDEBOARD ASSEMBLY A28
PARALLEL INTERFACE
A31
P/O
J66
P1
TO PARALLEL
FORMAT REMOTE
CONTROL
37
38
39
40
41
RF GAIN
BUS
P/O P5
B
4
P/O
P6
P/O
P6
6
7
8
9
10
4
RF GAIN
BUS
SER RF
GAIN ENBL
A

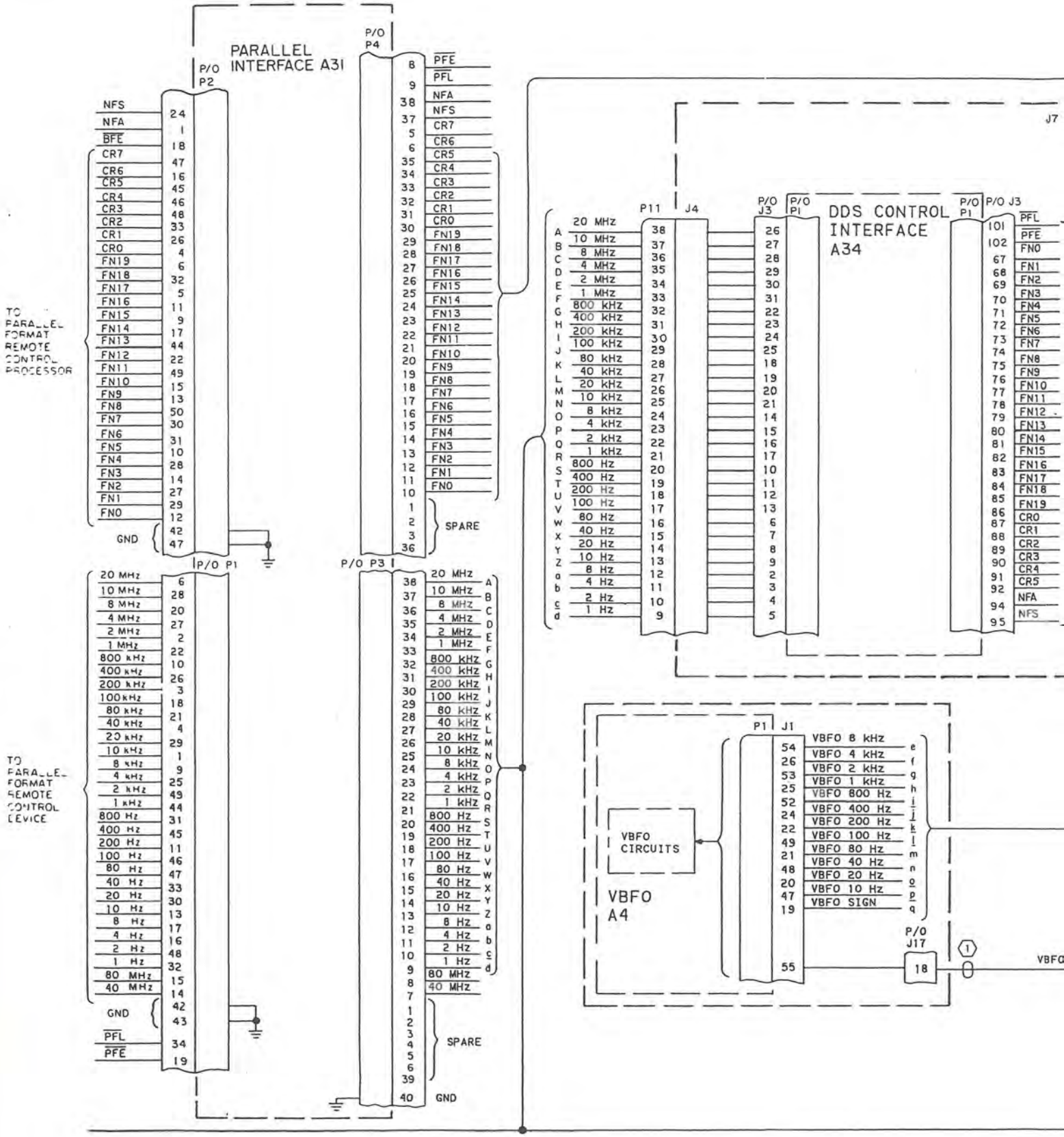


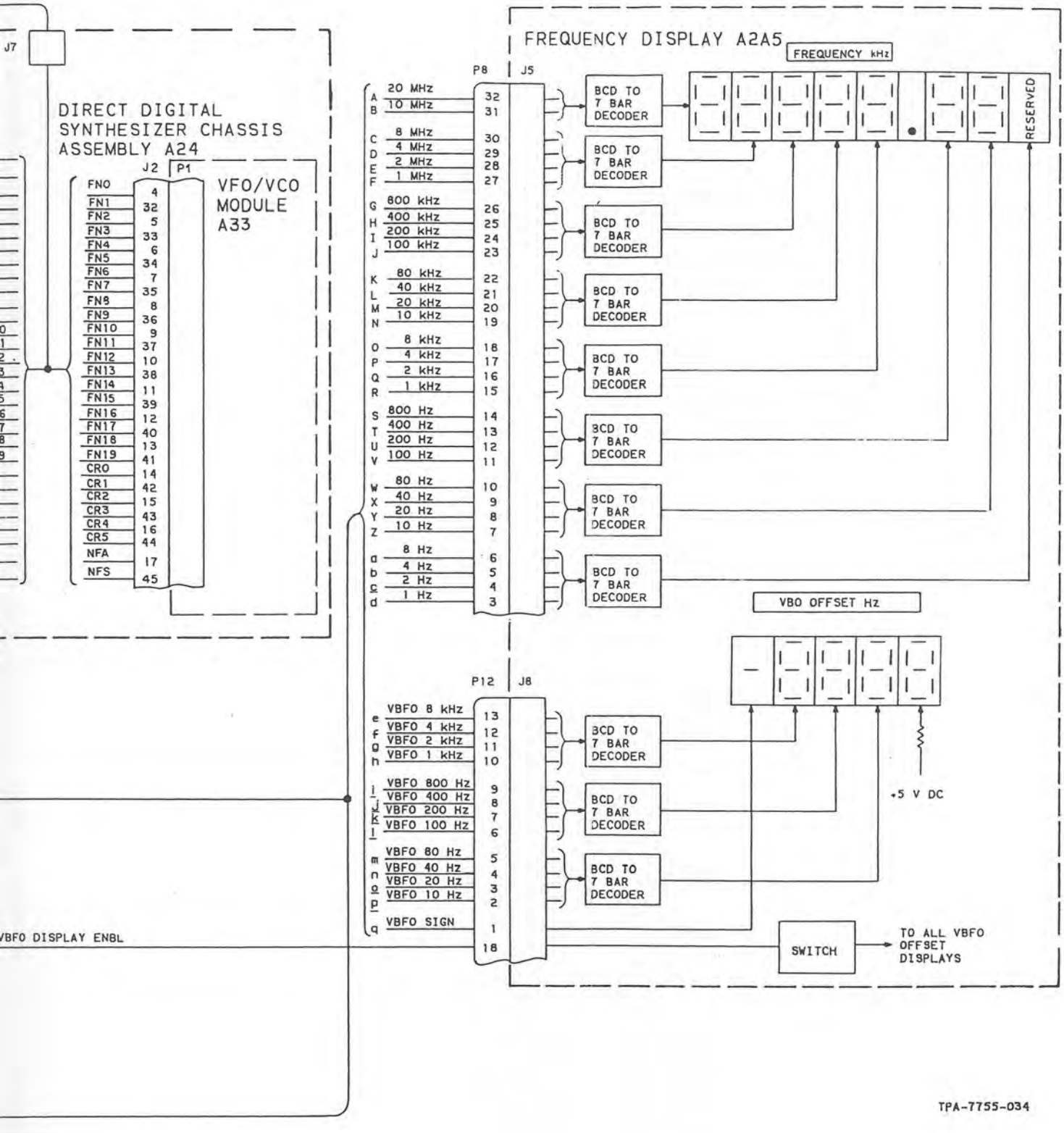
HF-8054A Receiver (622-3475-210), IF/RF Gain Control, Block Diagram
Figure 6A (Sheet 2)


P/O SIDEBOARD ASSEMBLY A28
P/O J11
CONTROL A10
P/O P1
J7
J4
P2
FREQ SWITCHES
20 MHz
10 MHz
8 MHz
4 MHz
2 MHz
1 MHz
800 kHz
400 kHz
200 kHz
100 kHz
80 kHz
40 kHz
20 kHz
10 kHz
8 kHz
4 kHz
2 kHz
1 kHz
800 Hz
400 Hz
200 Hz
100 Hz
80 Hz
40 Hz
20 Hz
10 Hz
BCD DRIVERS
BAND INFORMATION CIRCUIT
FREQUENCY SWITCHBOARD A2A3
SWITCH MOUNTING BOARD A2A2
LOCAL, REMOTE CONTROL S13
+5 VDC
J1
P4
LCL FREQ ENBL
FRONT PANEL A2
DVBFO SWITCHBOARD A2A4
P9
P/O J17
DVBFO FREQ SWITCHES
VBFO 8 kHz
VBFO 4 kHz
VBFO 2 kHz
VBFO 1 kHz
VBFO 800 Hz
VBFO 400 Hz
VBFO 200 Hz
VBFO 100 Hz
VBFO 80 Hz
VBFO 40 Hz
VBFO 20 Hz
VBFO 10 Hz
VBFO SIGN
J9
TO REMOTE CONTROL CIRCUITS
PARALLEL OUTPUT A12



HF-8054A Receiver (622-3475-210), Frequency Control, Block Diagram
Figure 7A (Sheet 1 of 3)


PARALLEL INTERFACE A31
P/O P2
P/O P4
P/O P1
P/O P3
TO PARALLEL FORMAT REMOTE CONTROL PROCESSOR
TO PARALLEL FORMAT REMOTE CONTROL DEVICE
NFS
NFA
BFE
CR7
CR6
CR5
CR4
CR3
CR2
CR1
CR0
FN19
FN18
FN17
FN16
FN15
FN14
FN13
FN12
FN11
FN10
FN9
FN8
FN7
FN6
FN5
FN4
FN3
FN2
FN1
FN0
GND
PFL
PFE
20 MHz
10 MHz
8 MHz
4 MHz
2 MHz
1 MHz
800 kHz
400 kHz
200 kHz
100 kHz
80 kHz
40 kHz
20 kHz
10 kHz
8 kHz
4 kHz
2 kHz
1 kHz
800 Hz
400 Hz
200 Hz
100 Hz
80 Hz
40 Hz
20 Hz
10 Hz
8 Hz
4 Hz
2 Hz
1 Hz
80 MHz
40 MHz
SPARE
J7
P11
J4
P/O J3
P/O P1
DDS CONTROL INTERFACE A34
P/O J3
P1
J1
VBFO CIRCUITS
VBFO A4
VBFO 8 kHz
VBFO 4 kHz
VBFO 2 kHz
VBFO 1 kHz
VBFO 800 Hz
VBFO 400 Hz
VBFO 200 Hz
VBFO 100 Hz
VBFO 80 Hz
VBFO 40 Hz
VBFO 20 Hz
VBFO 10 Hz
VBFO SIGN
P/O J17
VBFO



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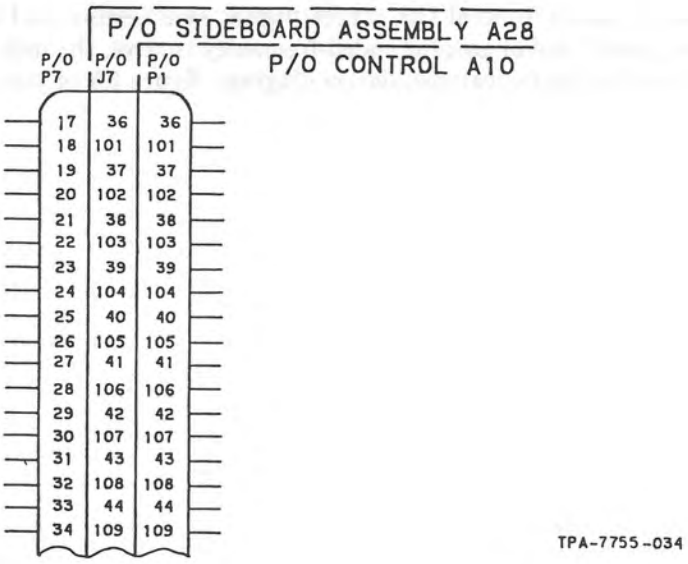
HF-8054A Receiver (622-3475-210), Frequency Control, Block Diagram Figure 7A (Sheet 2)

NOTES:

1. INDICATES GROUP OF WIRES IN A RIBBON CABLE.
2. DIAGRAM SHOWN FOR 1 Hz TUNING FOR 10 Hz TUNING A17 IS NOT USED AND SYNTH END DECADE IS A18. FOR 100 Hz TUNING A17 AND A18 ARE NOT USED AND SYNTH END DECADE IS A19.
3. DIAGRAM SHOWN FOR HF-8054A ASSEMBLIES A11, A12, AND A13 NOT INSTALLED IN HF-8054.
4. J11 AND J17 ARE SOLDERED INTO AND ARE PART OF SIDEBOARD ASSEMBLY A28 (THERE IS NO MATING CONNECTOR FOR J11 OR J17).
5. J46 IS SOLDERED INTO AND IS PART OF RFI FILTER A27 (THERE IS NO MATING CONNECTOR FOR J46).
6. P7 MATES WITH PINS ON ONE SIDE OF J7, A10P1 MATES WITH SOCKET ON OTHER SIDE OF J7 (OPPOSITE SIDES OF SIDEBOARD; EXAMPL SHOWN BELOW).



HF-8054A Receiver (622-3475-210), Frequency Control, Block Diagram Figure 7A (Sheet 3)

2.3 Remote Control Operation (HF-8054A Receiver Only)

Replace the first paragraph with the following paragraph. Place figure 11A behind figure 11.

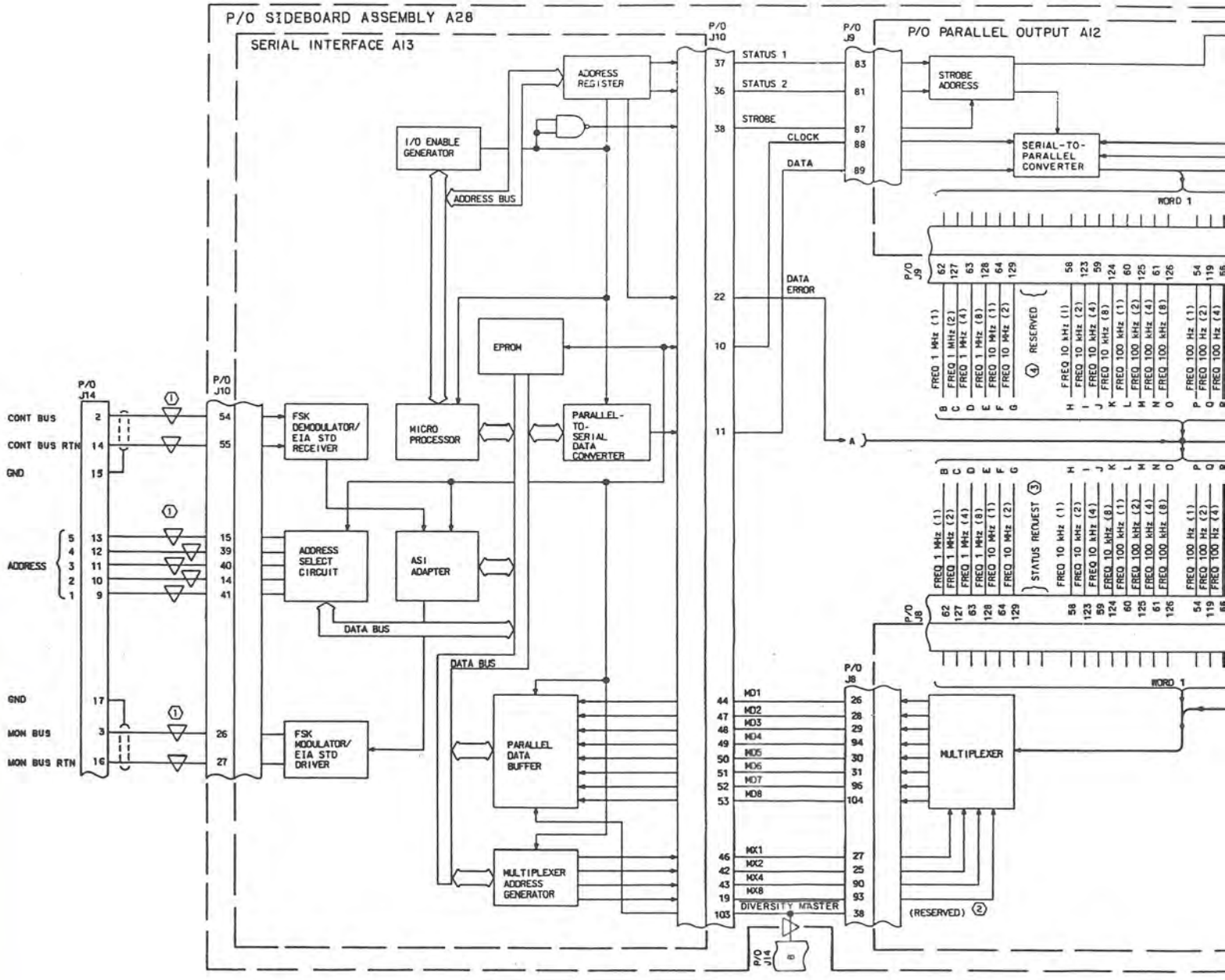
Remote control of the HF-8054A Receiver (622-3475-210) can be accomplished in three ways. A serial format control (such as HF-8094 Receiver Control unit) or processor can be used if connected to J14 REMOTE CONTROL on the rear panel. A parallel bcd format control or processor can be utilized for frequency control only, if connected to J66/A31P1 PARALLEL INPUT on the rear panel. A parallel coded-frequency format control or processor can be used for frequency control only, if connected to J67/A31P2 DDS INPUT on the rear panel (refer to figure 11A). Two or more types of controls/processors can be utilized simultaneously to control the receiver frequency. When serial format data is used, the receiver control interface requirements are similar to a serial data terminal in operation. Formatted messages from the control/processor control operation of the receiver, and messages from the receiver to the control/processor report operating status of the receiver. An RS-232C serial, asynchronous, input/output interface capability is required in the control/processor for remote control of the receiver. Parallel input data must either be compatible bcd format or parallel coded-frequency data format for use in the HF-8054A Receiver (622-3475-210).

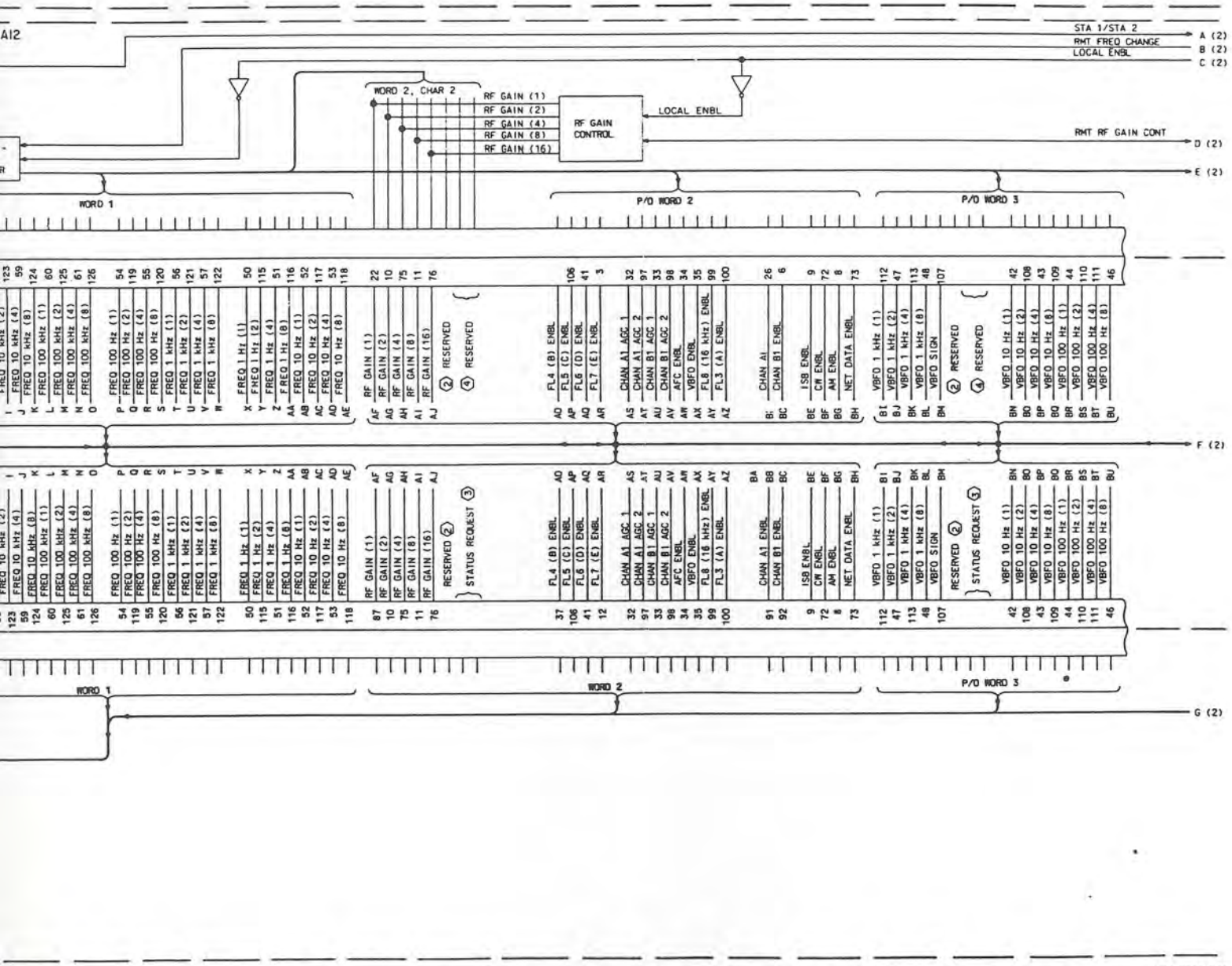
2.3.1 General

Add the following paragraphs to the end of the text.

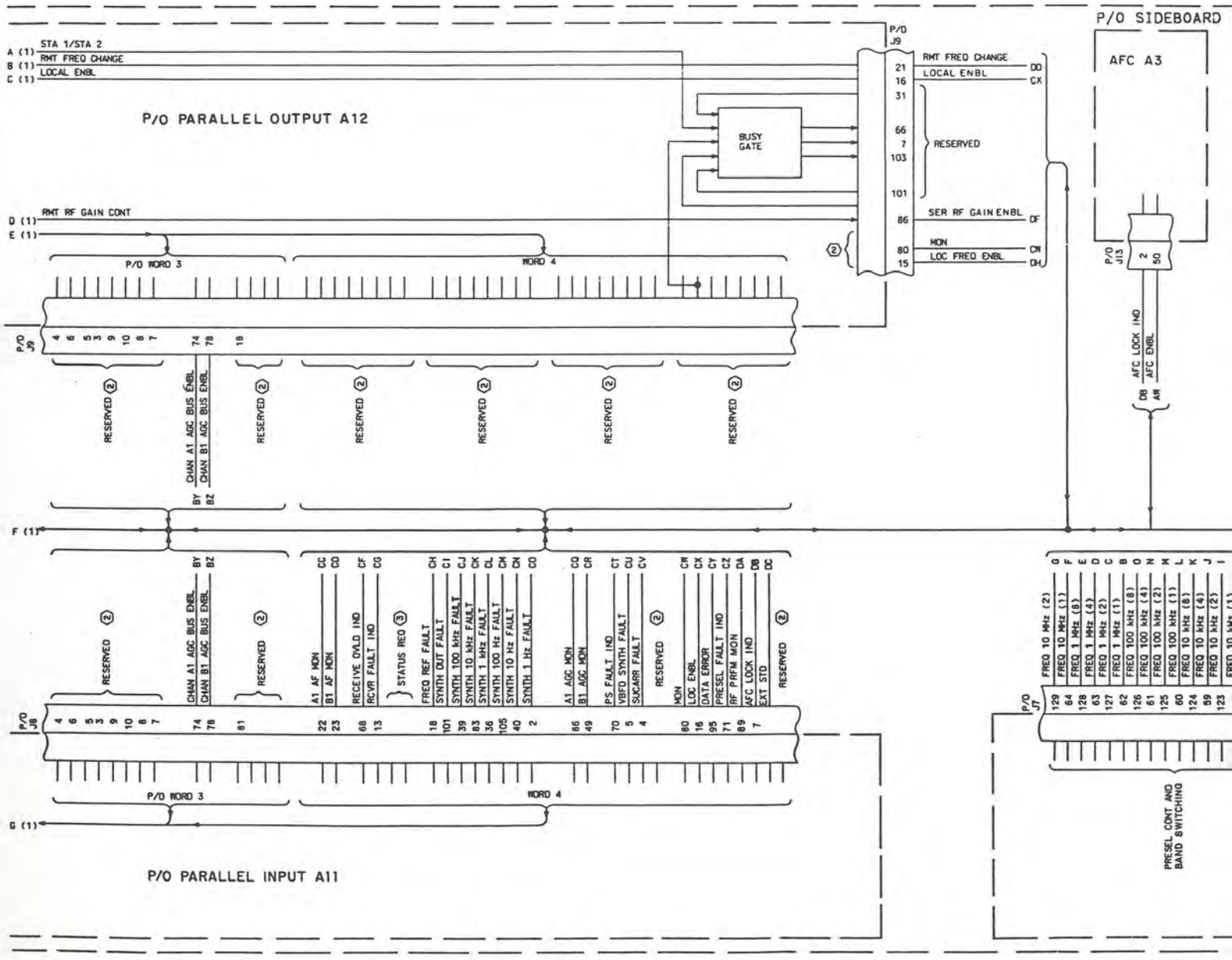
In addition to local front-panel thumbwheel frequency selection and RS-232 serial word frequency selection, the HF-8054A has the capability of parallel bcd frequency input and direct binary frequency input through the rear panel. The parallel bcd inputs control the standard bcd bus lines in the receiver.

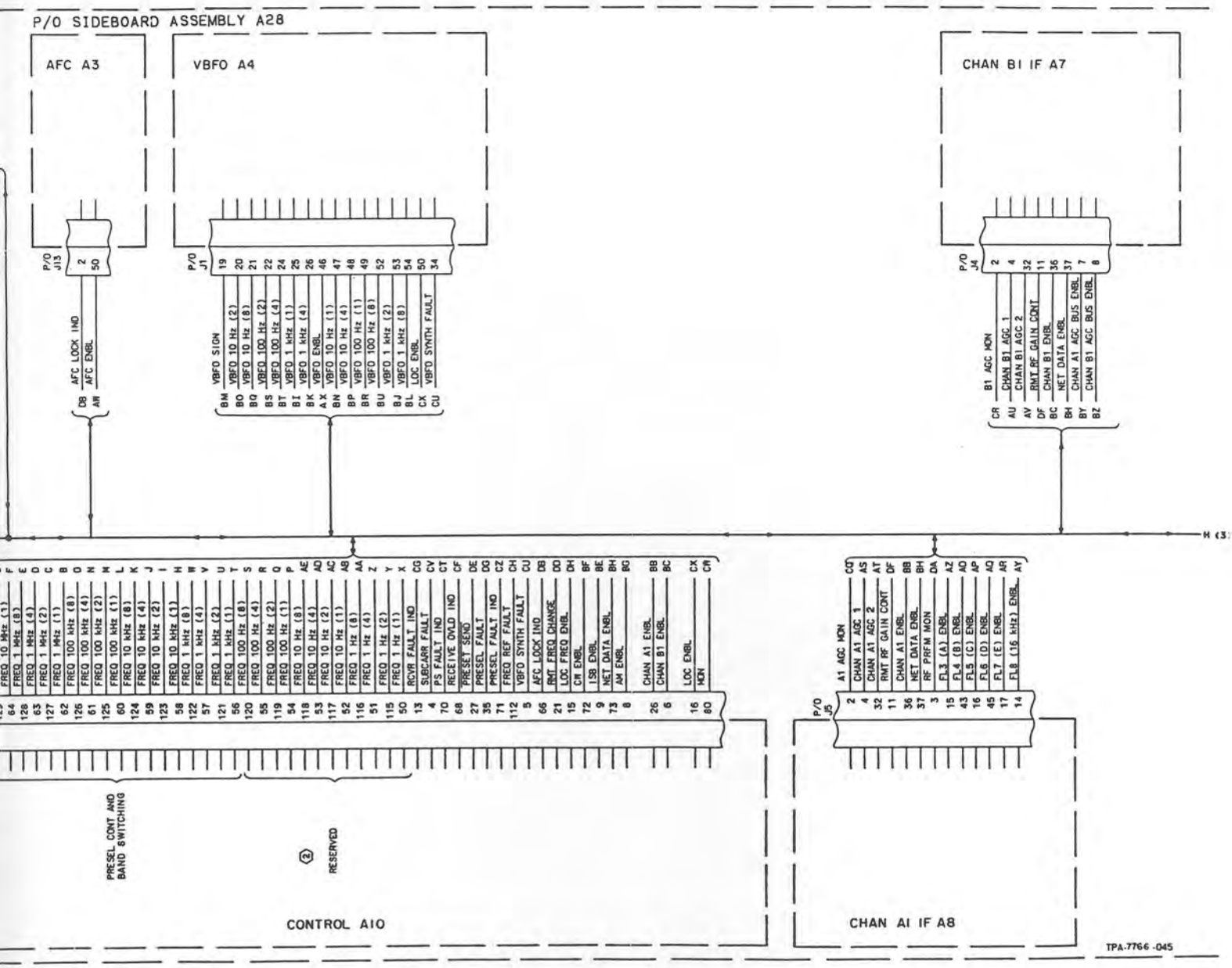
The parallel coded-frequency inputs control the direct digital synthesizer and ignore all other frequency information. To operate the parallel bcd or parallel coded-frequency control, the unit has to be in remote control. The connector pin out is shown in the typical installation diagram, figure 5A of the installation section.


P/O SIDEBOARD ASSEMBLY A28
SERIAL INTERFACE AI3
P/O PARALLEL OUTPUT AI2
P/O J14
P/O J10
P/O J9
P/O J8
CONT BUS
CONT BUS RTN
GND
ADDRESS
GND
MON BUS
MON BUS RTN
FSK DEMODULATOR/ EIA STD RECEIVER
MICRO PROCESSOR
PARALLEL-TO-SERIAL DATA CONVERTER
EPROM
ADDRESS SELECT CIRCUIT
ASI ADAPTER
DATA BUS
FSK MODULATOR/ EIA STD DRIVER
PARALLEL DATA BUFFER
MULTIPLEXER ADDRESS GENERATOR
I/O ENABLE GENERATOR
ADDRESS REGISTER
ADDRESS BUS
STATUS 1
STATUS 2
STROBE
CLOCK
DATA
DATA ERROR
MD1
MD2
MD3
MD4
MD5
MD6
MD7
MD8
MX1
MX2
MX4
MX8
DIVERSITY MASTER
STROBE ADDRESS
SERIAL-TO-PARALLEL CONVERTER
WORD 1
RESERVED
STATUS REQUEST
MULTIPLEXER
(RESERVED)

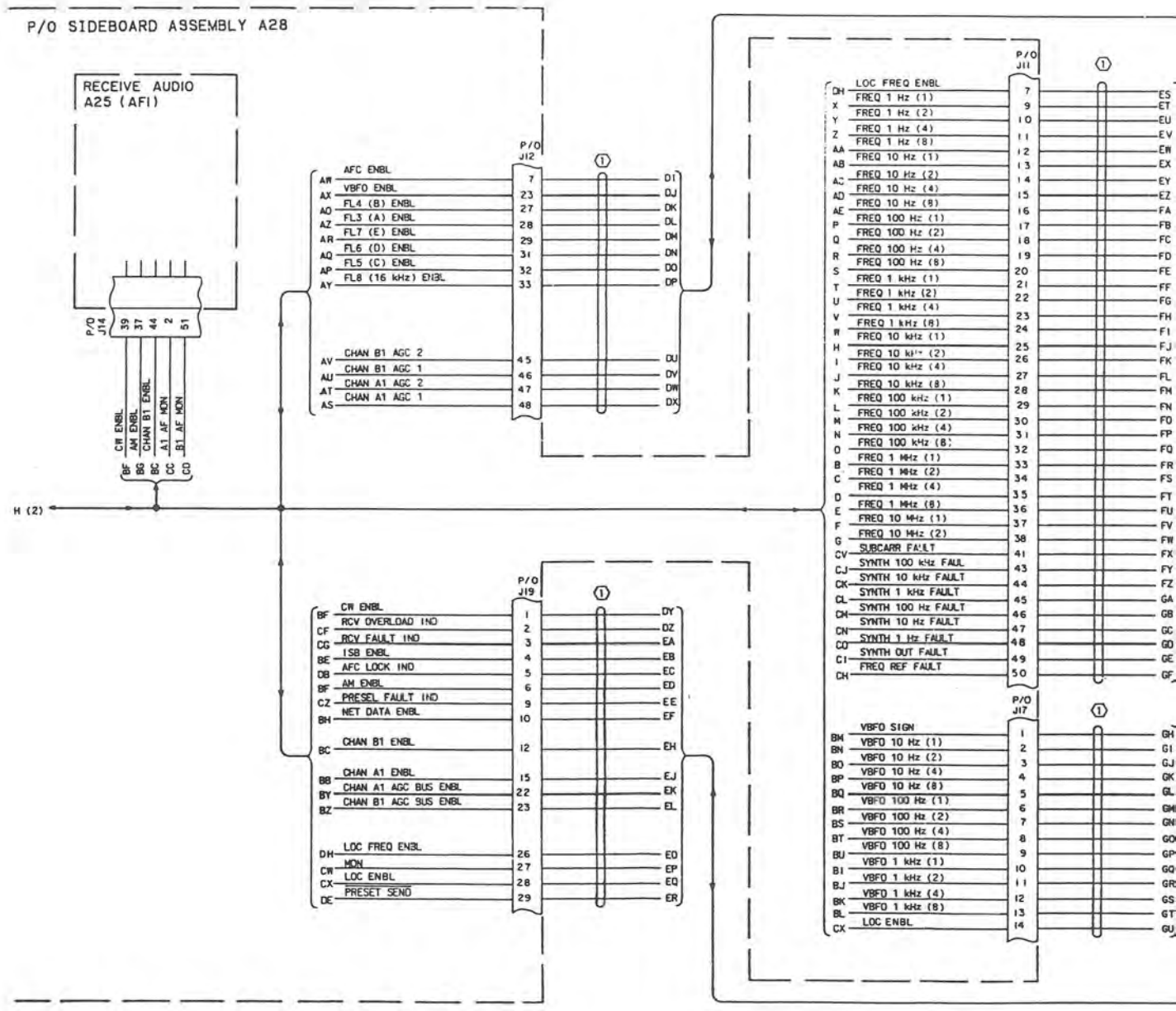


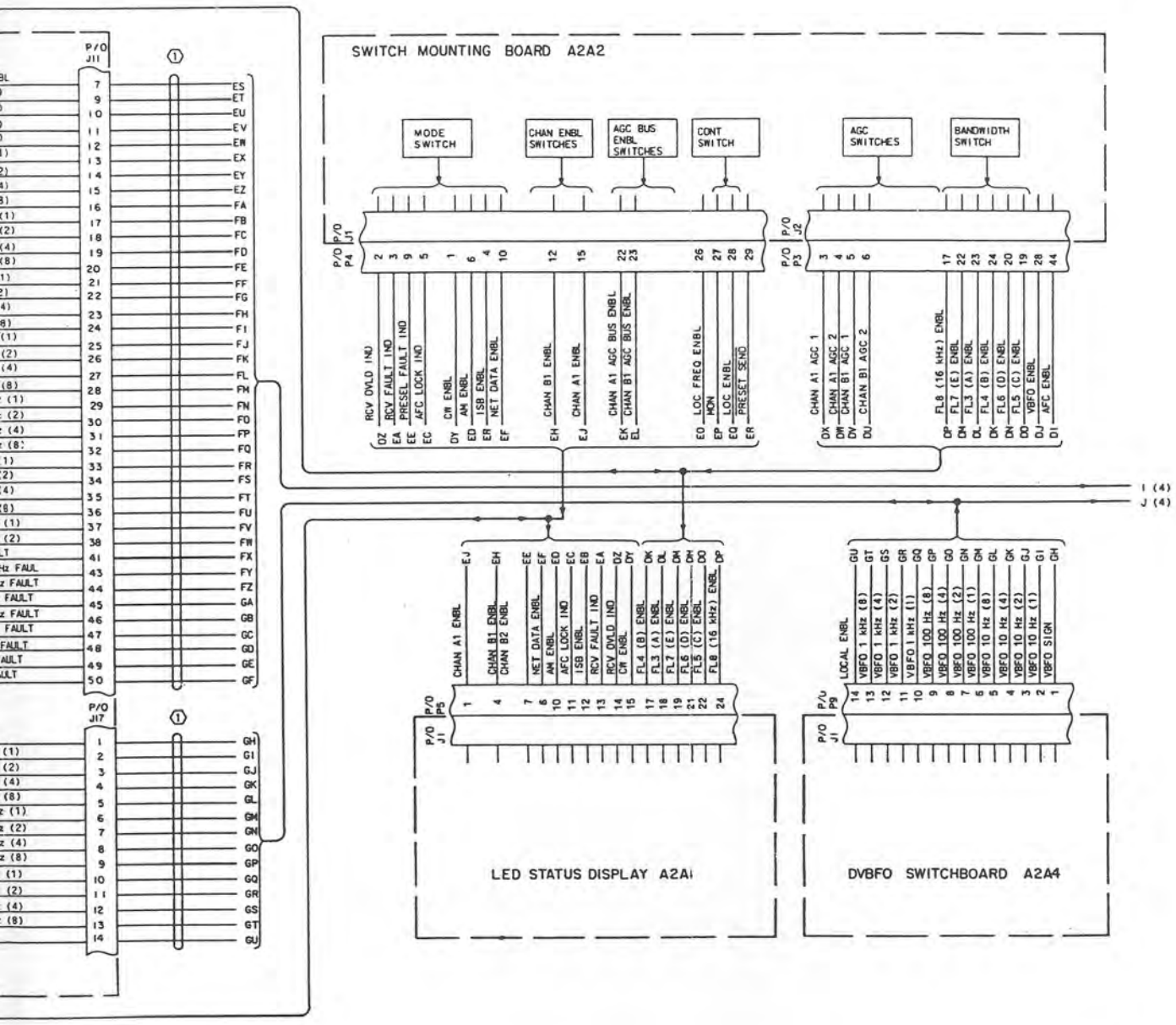
Remote Control, Block Diagram
Figure 11A (Sheet 1 of 4)


P/O SIDEBOARD
AFC A3
P/O PARALLEL OUTPUT A12
P/O PARALLEL INPUT A11
STA 1/STA 2
RMT FREQ CHANGE
LOCAL ENBL
RMT RF GAIN CONT
BUSY GATE
RESERVED
SER RF GAIN ENBL
MON
LOC FREQ ENBL
AFC LOCK IND
AFC ENBL
P/O WORD 3
WORD 4
CHAN A1 AGC BUS ENBL
CHAN B1 AGC BUS ENBL
A1 AF MON
B1 AF MON
RECEIVE OVLD IND
RCVR FAULT IND
STATUS REQ
FREQ REF FAULT
SYNTH OUT FAULT
SYNTH 100 kHz FAULT
SYNTH 10 kHz FAULT
SYNTH 1 kHz FAULT
SYNTH 100 Hz FAULT
SYNTH 10 Hz FAULT
SYNTH 1 Hz FAULT
A1 AGC MON
B1 AGC MON
PS FAULT IND
VBFO SYNTH FAULT
SUCARR FAULT
LOC ENBL
DATA ERROR
PRESEL FAULT IND
RF PRFM MON
AFC LOCK IND
EXT STD
FREQ 10 MHz (2)
FREQ 10 MHz (1)
FREQ 1 MHz (8)
FREQ 1 MHz (4)
FREQ 1 MHz (2)
FREQ 1 MHz (1)
FREQ 100 kHz (8)
FREQ 100 kHz (4)
FREQ 100 kHz (2)
FREQ 100 kHz (1)
FREQ 10 kHz (8)
FREQ 10 kHz (4)
FREQ 10 kHz (2)
PRESEL CONT AND BAND SWITCHING



Remote Control, Block Diagram
Figure 11A (Sheet 2)


P/O SIDEBOARD ASSEMBLY A28
RECEIVE AUDIO
A25 (AFI)
P/O J14
39
37
44
2
51
CW ENBL
AM ENBL
CHAN B1 ENBL
A1 AF MON
B1 AF MON
BF
BG
BC
CC
CD
H (2)
P/O J12
AFC ENBL
VBFO ENBL
FL4 (B) ENBL
FL3 (A) ENBL
FL7 (E) ENBL
FL6 (D) ENBL
FL5 (C) ENBL
FL8 (16 kHz) ENBL
CHAN B1 AGC 2
CHAN B1 AGC 1
CHAN A1 AGC 2
CHAN A1 AGC 1
P/O J19
CW ENBL
RCV OVERLOAD IND
RCV FAULT IND
ISB ENBL
AFC LOCK IND
AM ENBL
PRESEL FAULT IND
NET DATA ENBL
CHAN B1 ENBL
CHAN A1 ENBL
CHAN A1 AGC BUS ENBL
CHAN B1 AGC BUS ENBL
LOC FREQ ENBL
MON
LOC ENBL
PRESET SEND
P/O J11
LOC FREQ ENBL
FREQ 1 Hz (1)
FREQ 1 Hz (2)
FREQ 1 Hz (4)
FREQ 1 Hz (8)
FREQ 10 Hz (1)
FREQ 10 Hz (2)
FREQ 10 Hz (4)
FREQ 10 Hz (8)
FREQ 100 Hz (1)
FREQ 100 Hz (2)
FREQ 100 Hz (4)
FREQ 100 Hz (8)
FREQ 1 kHz (1)
FREQ 1 kHz (2)
FREQ 1 kHz (4)
FREQ 1 kHz (8)
FREQ 10 kHz (1)
FREQ 10 kHz (2)
FREQ 10 kHz (4)
FREQ 10 kHz (8)
FREQ 100 kHz (1)
FREQ 100 kHz (2)
FREQ 100 kHz (4)
FREQ 100 kHz (8)
FREQ 1 MHz (1)
FREQ 1 MHz (2)
FREQ 1 MHz (4)
FREQ 1 MHz (8)
FREQ 10 MHz (1)
FREQ 10 MHz (2)
SUBCARR FAULT
SYNTH 100 kHz FAUL
SYNTH 10 kHz FAULT
SYNTH 1 kHz FAULT
SYNTH 100 Hz FAULT
SYNTH 10 Hz FAULT
SYNTH 1 Hz FAULT
SYNTH OUT FAULT
FREQ REF FAULT
P/O J17
VBFO SIGN
VBFO 10 Hz (1)
VBFO 10 Hz (2)
VBFO 10 Hz (4)
VBFO 10 Hz (8)
VBFO 100 Hz (1)
VBFO 100 Hz (2)
VBFO 100 Hz (4)
VBFO 100 Hz (8)
VBFO 1 kHz (1)
VBFO 1 kHz (2)
VBFO 1 kHz (4)
VBFO 1 kHz (8)
LOC ENBL



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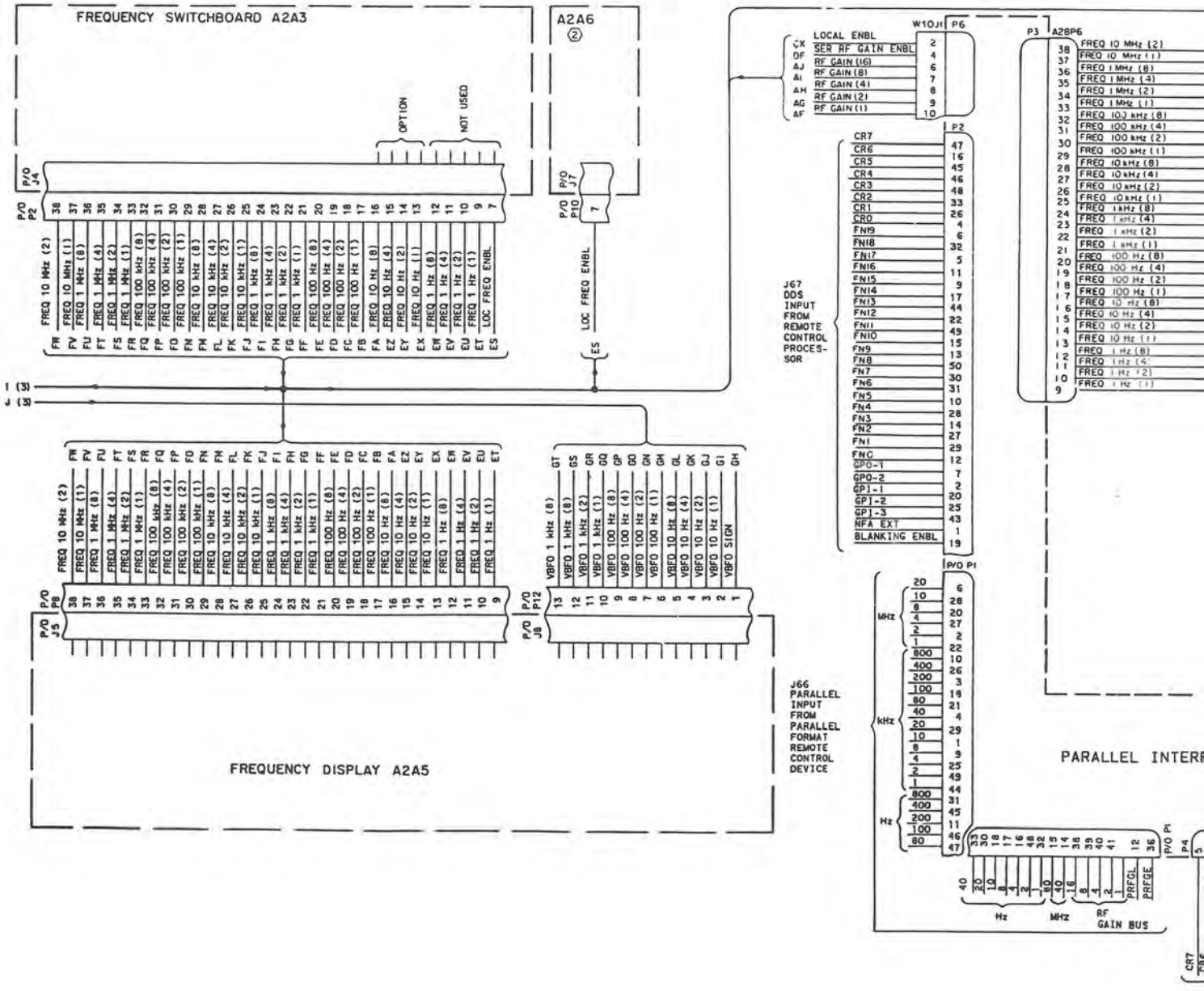
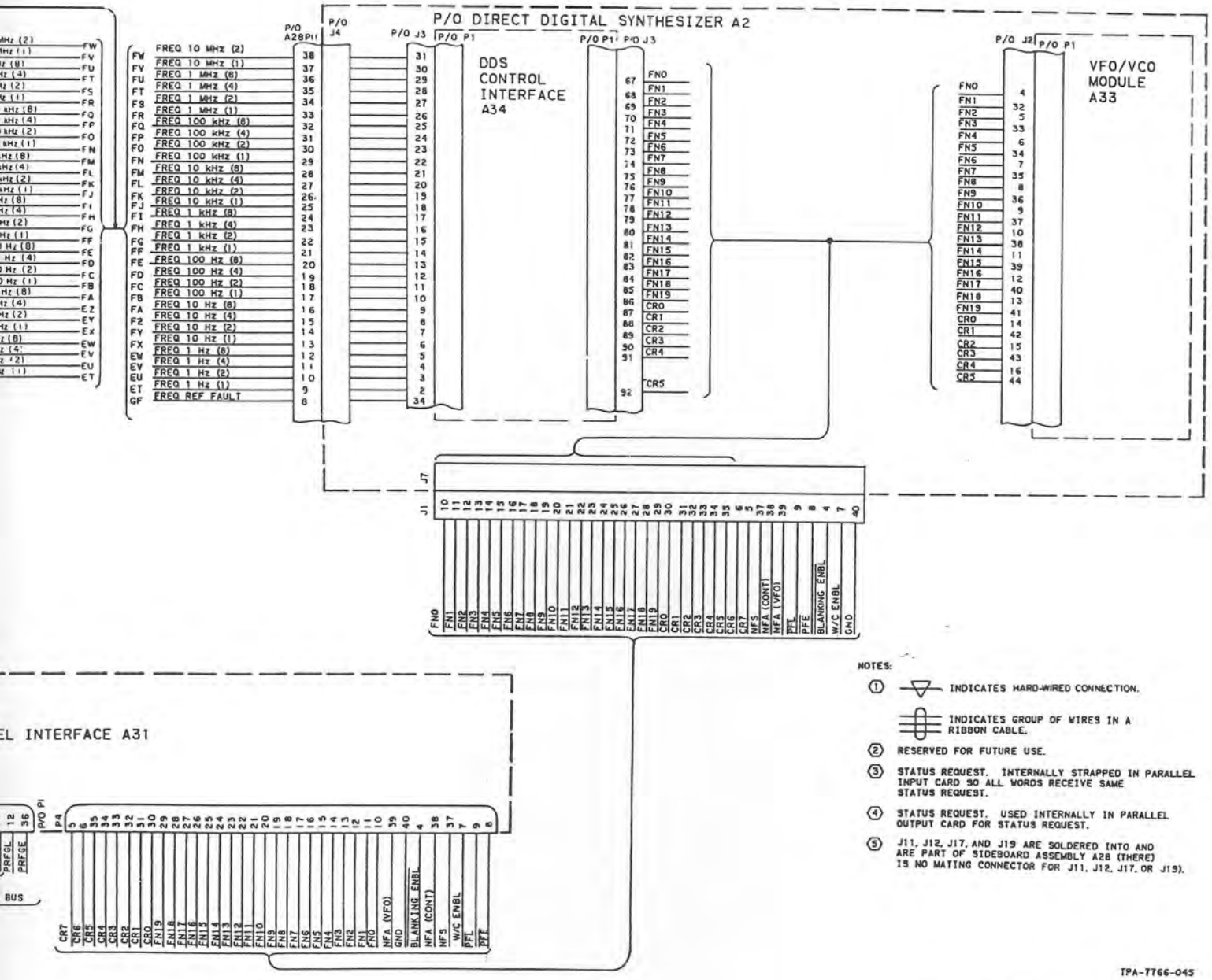
Remote Control, Block Diagram
Figure 11A (Sheet 3)


FREQUENCY SWITCHBOARD A2A3
A2A6
OPTION
NOT USED
LOCAL ENBL
SER RF GAIN ENBL
RF GAIN (16)
RF GAIN (8)
RF GAIN (4)
RF GAIN (2)
RF GAIN (1)
W10J1
P6
P3
A28P6
P2
J67
DDS
INPUT
FROM
REMOTE
CONTROL
PROCES-
SOR
CR7
CR6
CR5
CR4
CR3
CR2
CR1
CR0
FN19
FN18
FN17
FN16
FN15
FN14
FN13
FN12
FN11
FN10
FN9
FN8
FN7
FN6
FN5
FN4
FN3
FN2
FN1
FNC
GPO-1
GPO-2
GPJ-1
GPJ-2
GPJ-3
NFA EXT
BLANKING ENBL
P/O P1
MHz
kHz
Hz
PARALLEL INTERF
P/O J4
P/O P2
P/O J7
P/O P10
LOC FREQ ENBL
P/O J5
P/O P8
P/O J8
P/O P12
J66
PARALLEL
INPUT
FROM
PARALLEL
FORMAT
REMOTE
CONTROL
DEVICE
FREQUENCY DISPLAY A2A5
RF
GAIN BUS
PAFGL
PAFGE



NOTES:

① INDICATES HARD-WIRED CONNECTION.

INDICATES GROUP OF WIRES IN A RIBBON CABLE.

② RESERVED FOR FUTURE USE.

③ STATUS REQUEST. INTERNALLY STRAPPED IN PARALLEL INPUT CARD SO ALL WORDS RECEIVE SAME STATUS REQUEST.

④ STATUS REQUEST. USED INTERNALLY IN PARALLEL OUTPUT CARD FOR STATUS REQUEST.

⑤ J11, J12, J17, AND J19 ARE SOLDERED INTO AND ARE PART OF SIDEBOARD ASSEMBLY A28 (THERE) IS NO MATING CONNECTOR FOR J11, J12, J17, OR J19).

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Remote Control, Block Diagram
Figure 11A (Sheet 4)

2.4 Frequency Synthesizer

Not applicable. Substitute paragraph heading and text with the following for the HF-8054A Receiver (622-3475-210). Substitute figure 12A for figure 12.

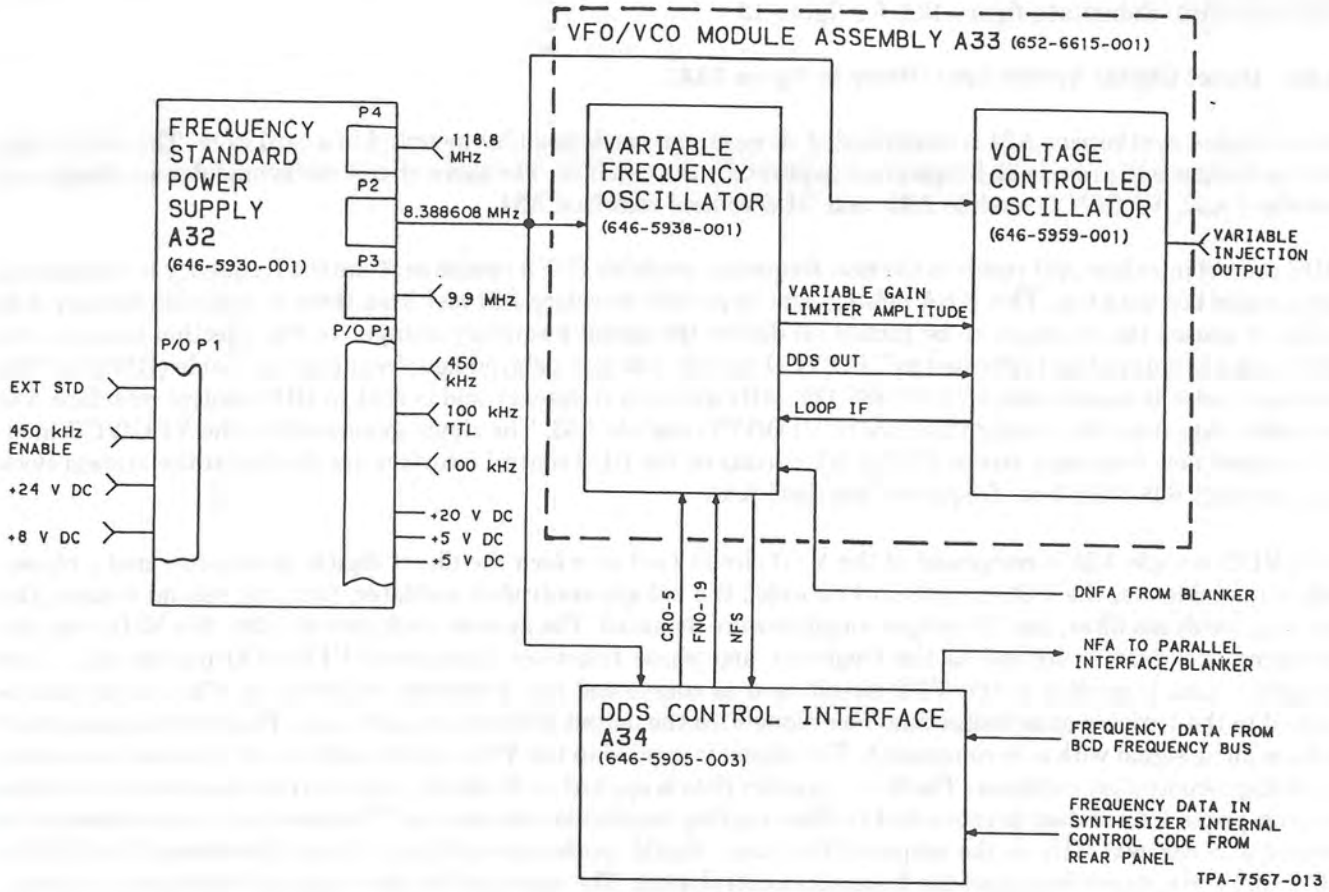
2.4A Direct Digital Synthesizer (Refer to figure 12A)

Direct digital synthesizer A24 is comprised of three circuit cards/modules mounted in a card cage. The direct digital synthesizer will provide all frequencies required by the receiver. The three circuit cards/modules are frequency standard A32, VFO/VCO module A33, and DDS control interface A34.

DDS control interface A34 receives the new frequency available (NFA) pulse anytime the frequency is changed on the parallel bcd data bus. This NFA pulse is sent to parallel interface A31 and from there to injection blanker A35 where it causes the rf output to be turned off during the actual frequency change. In the injection blanker, the NFA pulse is delayed and returned to VFO/VCO module A33 as a delayed new frequency available (DNFA). This returned pulse is synchronized with 8.388 608-MHz injection frequency and is sent to DDS control interface A34 to enable data from the control interface to VFO/VCO module A33. The signal generated by the VFO/VCO module is called new frequency strobe (NFS). All circuits on the DDS control interface are clocked at the system clock rate of 8.388 608 MHz from frequency standard A32.

VFO/VCO module A33 is comprised of the VFO circuit card on which the direct digital synthesizer and a phase-lock loop reside and the VCO circuit card on which the voltage-controlled oscillator, first and second mixers, the tracking bandpass filter, and the output amplifiers are mounted. The system clock rate of 8.388 608 MHz from the frequency standard is utilized as the frequency and phase reference throughout VFO/VCO module A33. The frequency data is applied to the VFO circuit card as coarse and fine frequency information. The coarse data is applied to the variable gain limiter amplifier along with the output of the phase-lock loop. These two signals react to form an ac signal with a dc component. This signal is applied to the VCO circuit card where it is used to control the voltage-controlled oscillator. The fine frequency data is applied to the direct digital synthesizer where the time varying phase information is converted to time varying amplitude information. The direct digital synthesizer is clocked at 8.388 608 MHz so the output of the direct digital synthesizer will be a signal of between 1.048 576 to 2.097 152 MHz, dependent upon the frequency control input. The output of the direct digital synthesizer and system clock is input to the first translator mixer on the VCO circuit card. The output of the first translator mixer will be from 9.437 184 to 10.485 760 MHz. This signal is fed to the second translator mixer along with the output of the voltage-controlled oscillator. The result of this heterodyning is a 69.206 016- to 99.614 72-MHz signal which is passed by the tracking bandpass filter to output amplifier and onto the vfo programmable divider. The signal is divided by 66 to 95 to result in a signal that is phase detected using a divided sample of the system clock. The output of this phase detector feeds into the variable gain limiter amplifier to correct the voltage-controlled oscillator. The voltage-controlled oscillator output is amplified and output at P3 as the variable injection out (79.350 010 to 109.35 MHz).

Frequency standard A32 contains the master crystal oscillator, external standard circuitry frequency multiplier, several frequency dividers, and the 8.388 608-MHz crystal controlled oscillator which is phase locked to master crystal. The master crystal oscillator is voltage controllable and oscillates at 39.6 MHz. This signal is then frequency divided to provide 9.9-MHz, 450-kHz, and 100-kHz signals. The 39.6 MHz is also tripled to obtain the 118.8-MHz fixed injection signal. The 100-kHz signal is utilized to phase lock the 8.388 608-MHz crystal oscillator to the master crystal. Switches and jumper provide the means to use an external frequency standard of 5 MHz, 1 MHz, or 100 kHz to control the master crystal oscillator. The outputs of the frequency standard are output to various circuits within the receiver.

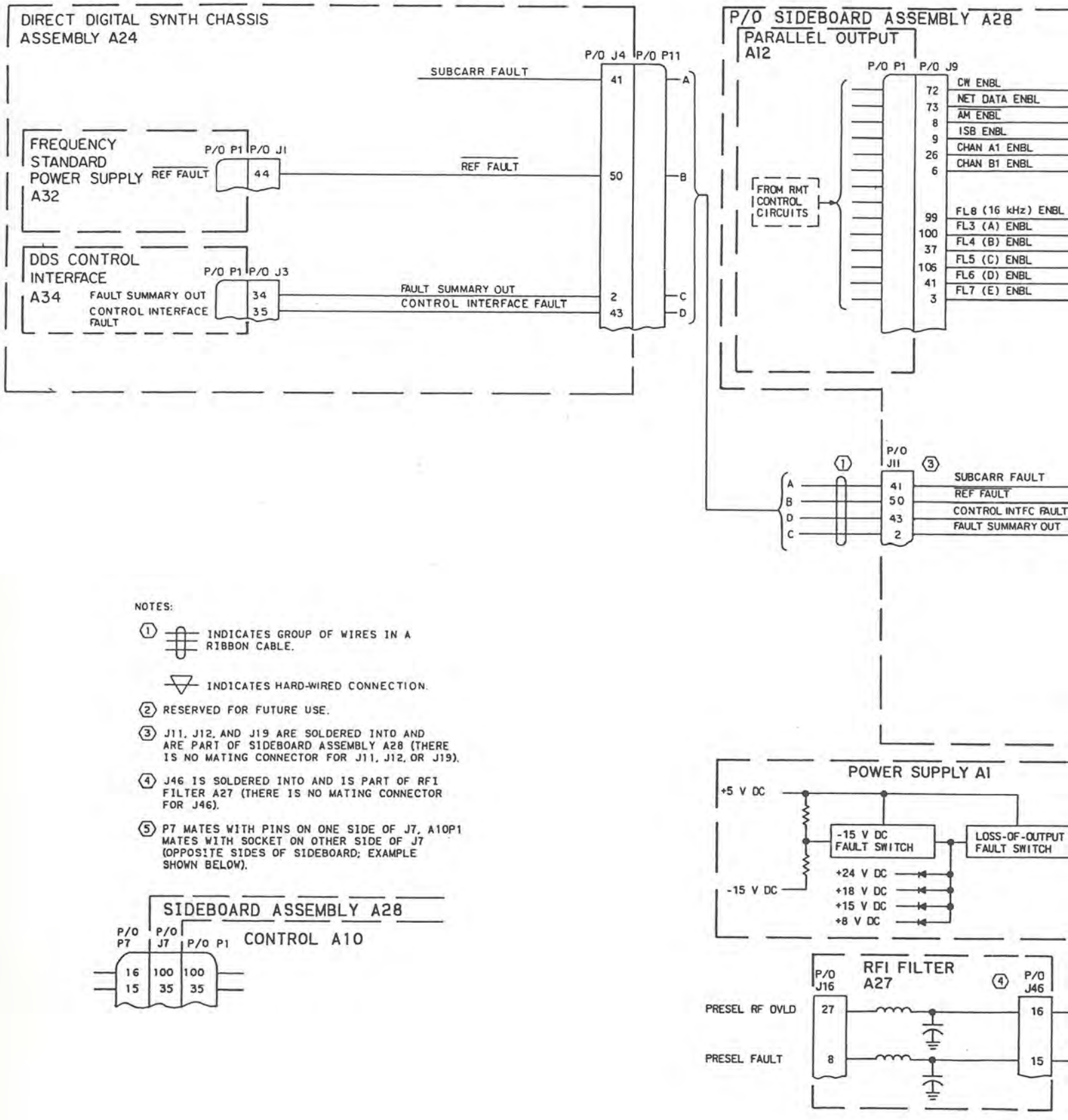


Direct Digital Synthesizer, Block Diagram
Figure 12A

2.5 Monitor Functions (Refer to figure 14)

Change the first sentence in the paragraph to read as follows. Place figure 14A behind figure 14. Refer to figure 14A for HF-8054A Receiver (622-3475-210).

Local monitors in the receiver consist of LED's on LED status display A2A1, frequency display A2A3, the individual circuit cards of the direct digital synthesizer, and the front panel meter indications.



NOTES:

(1) INDICATES GROUP OF WIRES IN A RIBBON CABLE.

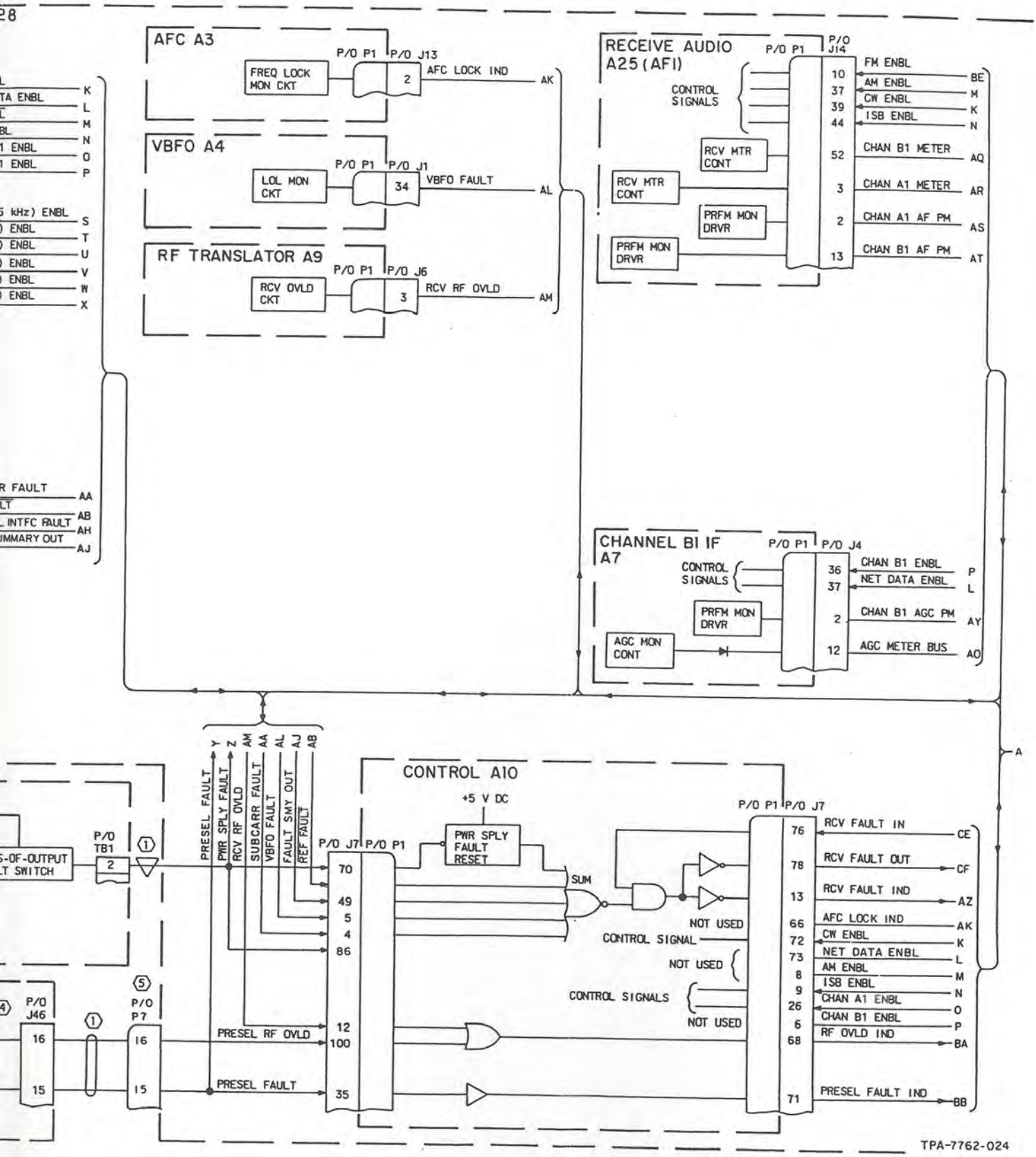
INDICATES HARD-WIRED CONNECTION.

(2) RESERVED FOR FUTURE USE.

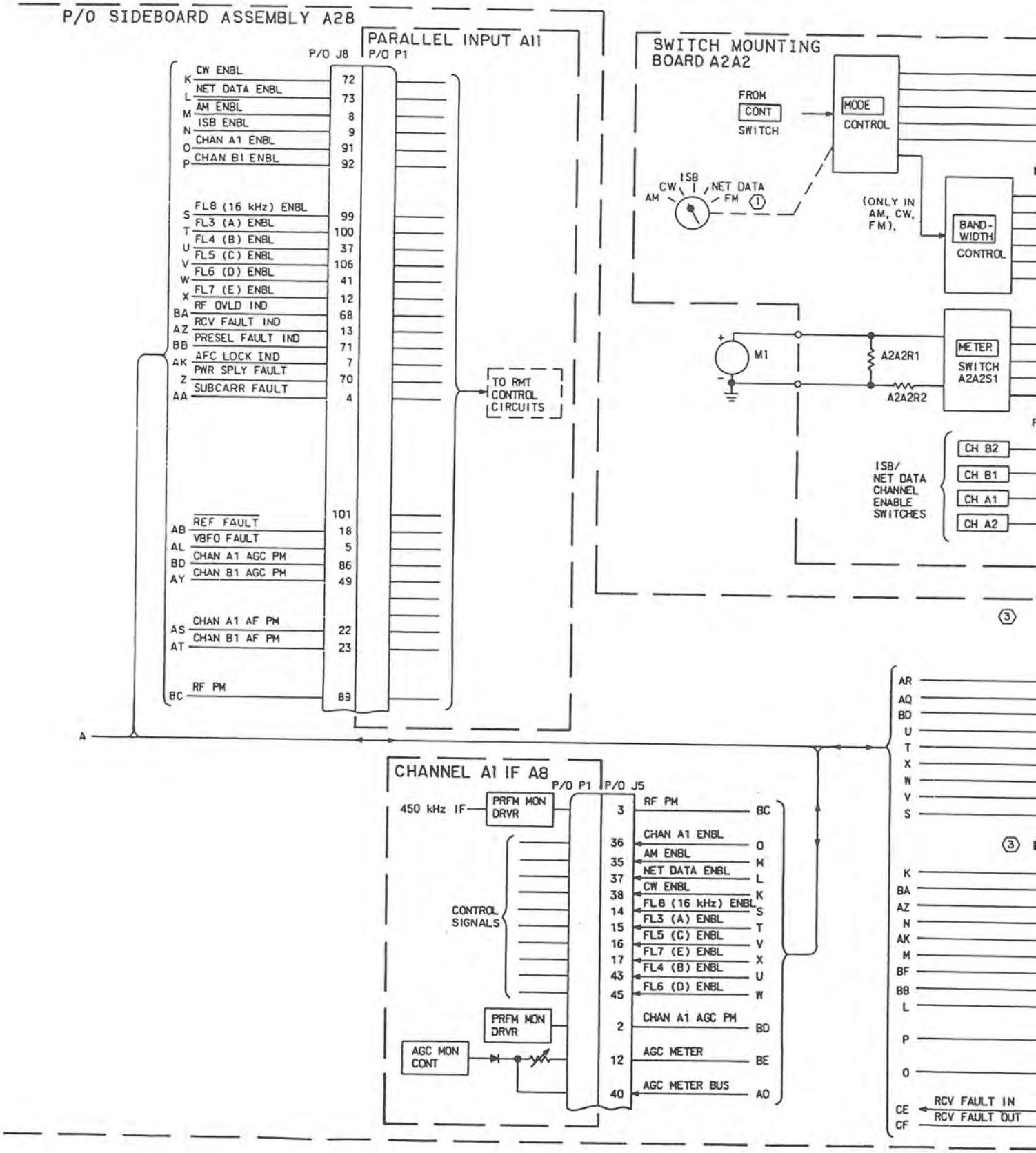
(3) J11, J12, AND J19 ARE SOLDERED INTO AND ARE PART OF SIDEBOARD ASSEMBLY A28 (THERE IS NO MATING CONNECTOR FOR J11, J12, OR J19).

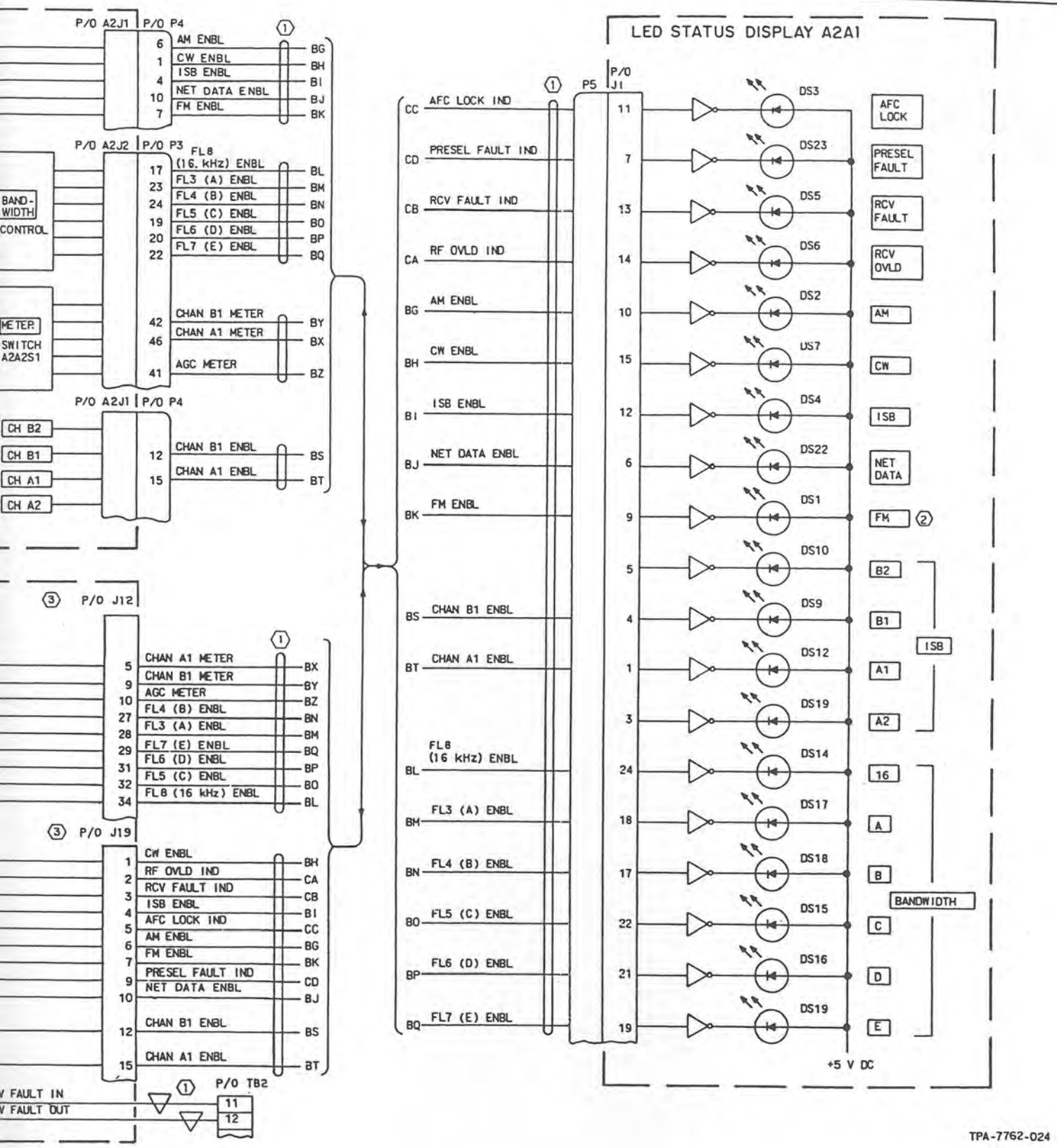
(4) J46 IS SOLDERED INTO AND IS PART OF RFI FILTER A27 (THERE IS NO MATING CONNECTOR FOR J46).

(5) P7 MATES WITH PINS ON ONE SIDE OF J7, A10P1 MATES WITH SOCKET ON OTHER SIDE OF J7 (OPPOSITE SIDES OF SIDEBOARD; EXAMPLE SHOWN BELOW).



HF-8054A Receiver (622-3475-210), Monitor Function, Block Diagram
Figure 14A (Sheet 1 of 2)


P/O SIDEBOARD ASSEMBLY A28
PARALLEL INPUT A11
P/O J8
P/O P1
CW ENBL
NET DATA ENBL
AM ENBL
ISB ENBL
CHAN A1 ENBL
CHAN B1 ENBL
FL8 (16 kHz) ENBL
FL3 (A) ENBL
FL4 (B) ENBL
FL5 (C) ENBL
FL6 (D) ENBL
FL7 (E) ENBL
RF OVLD IND
RCV FAULT IND
PRESEL FAULT IND
AFC LOCK IND
PWR SPLY FAULT
SUBCARR FAULT
REF FAULT
VBFO FAULT
CHAN A1 AGC PM
CHAN B1 AGC PM
CHAN A1 AF PM
CHAN B1 AF PM
RF PM
TO RMT CONTROL CIRCUITS
SWITCH MOUNTING BOARD A2A2
FROM CONT SWITCH
MODE CONTROL
AM
CW
ISB
NET DATA
FM
(ONLY IN AM, CW, FM).
BAND-WIDTH CONTROL
M1
A2A2R1
A2A2R2
METER SWITCH A2A2S1
ISB/ NET DATA CHANNEL ENABLE SWITCHES
CH B2
CH B1
CH A1
CH A2
CHANNEL A1 IF A8
P/O P1
P/O J5
450 kHz IF
PRFM MON DRVR
CONTROL SIGNALS
AGC MON CONT
RF PM
CHAN A1 ENBL
AM ENBL
NET DATA ENBL
CW ENBL
FL8 (16 kHz) ENBL
FL3 (A) ENBL
FL5 (C) ENBL
FL7 (E) ENBL
FL4 (B) ENBL
FL6 (D) ENBL
CHAN A1 AGC PM
AGC METER
AGC METER BUS
RCV FAULT IN
RCV FAULT OUT



TPA-7762-024

HF-8054A Receiver (622-3475-210), Monitor Function, Block Diagram Figure 14A (Sheet 2)

2.5.1 Fault and Status Indicators

Paragraphs 3, 4, 5, and 6 are not applicable. Substitute the following paragraph for paragraphs 3, 4, 5, and 6.

Each card of the direct digital synthesizer contains a fault indicator particular to that card. DDS control interface A34 summarizes the faults from frequency standard/power supply A32, VFO/VCO module A33, and DDS control interface to produce an output to control A10 and parallel input A11. There are four fault outputs from the synthesizer: a summary fault from the DDS control interface, a DDS control interface fault, the VFO/VCO module fault, and a reference fault from the frequency standard/power supply. Each fault will light the LED status indicator on that particular card and due to control A10, the EXCITER FAULT (DS5). The fault will also cause the appropriate fault indication on the remote control after being passed through parallel input A11 and serial interface A13.

2.5.3 ISB Channel Enable Indicators

Steps c and d are not applicable.

2.5.6 Metering

In the first paragraph, the references to B2AF (+13FS and +3FS) and A2AF (+13FS and +3FS) are not applicable. Steps a and d are not applicable. In step e, second sentence, references to channel A2 and channel B2 are not applicable.

2.5.7 Remote Monitors Not Used Internally

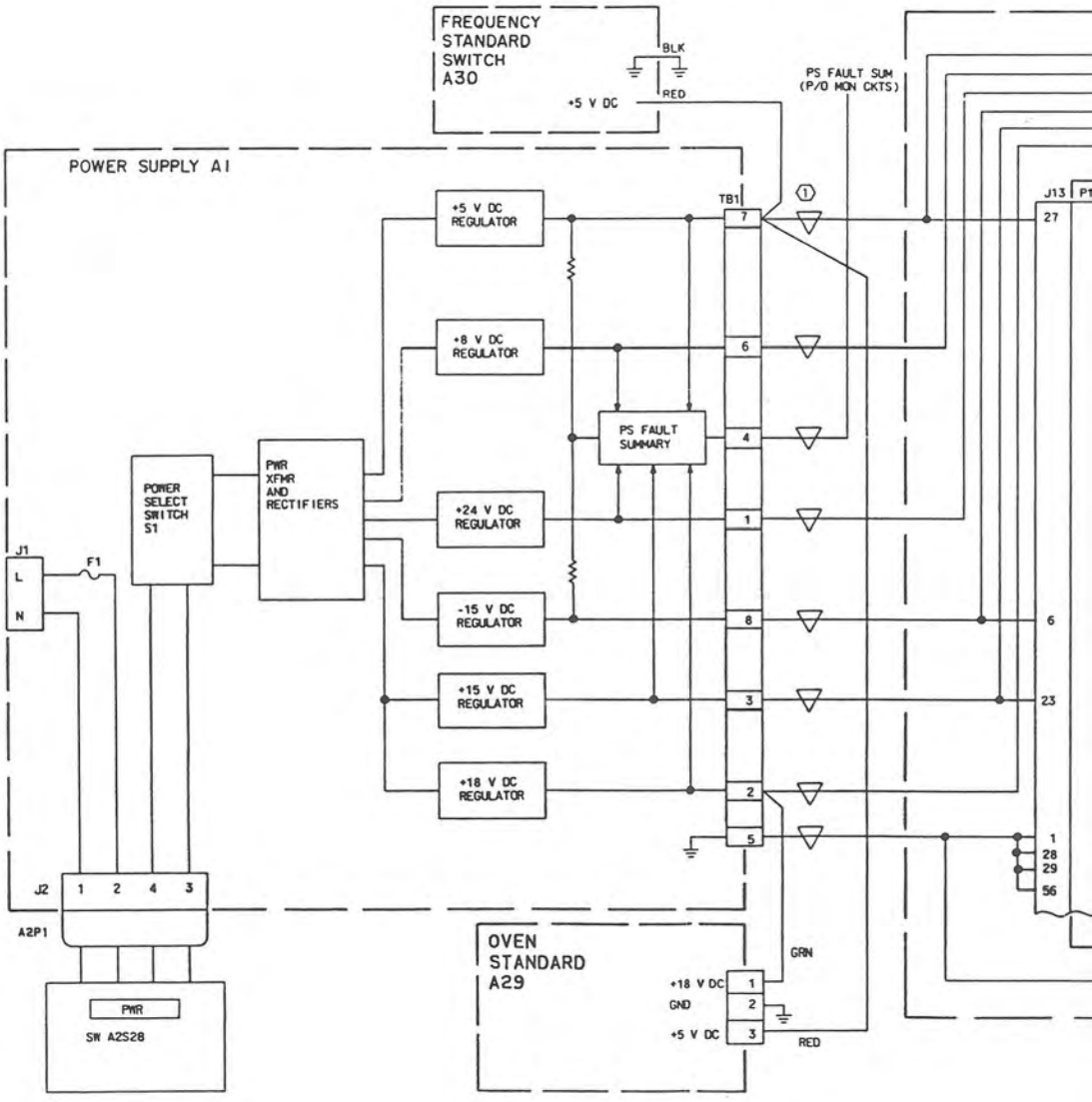
Steps a, b, c, d, e, f, i, j, m, and n are not applicable. Add the following step at the end.

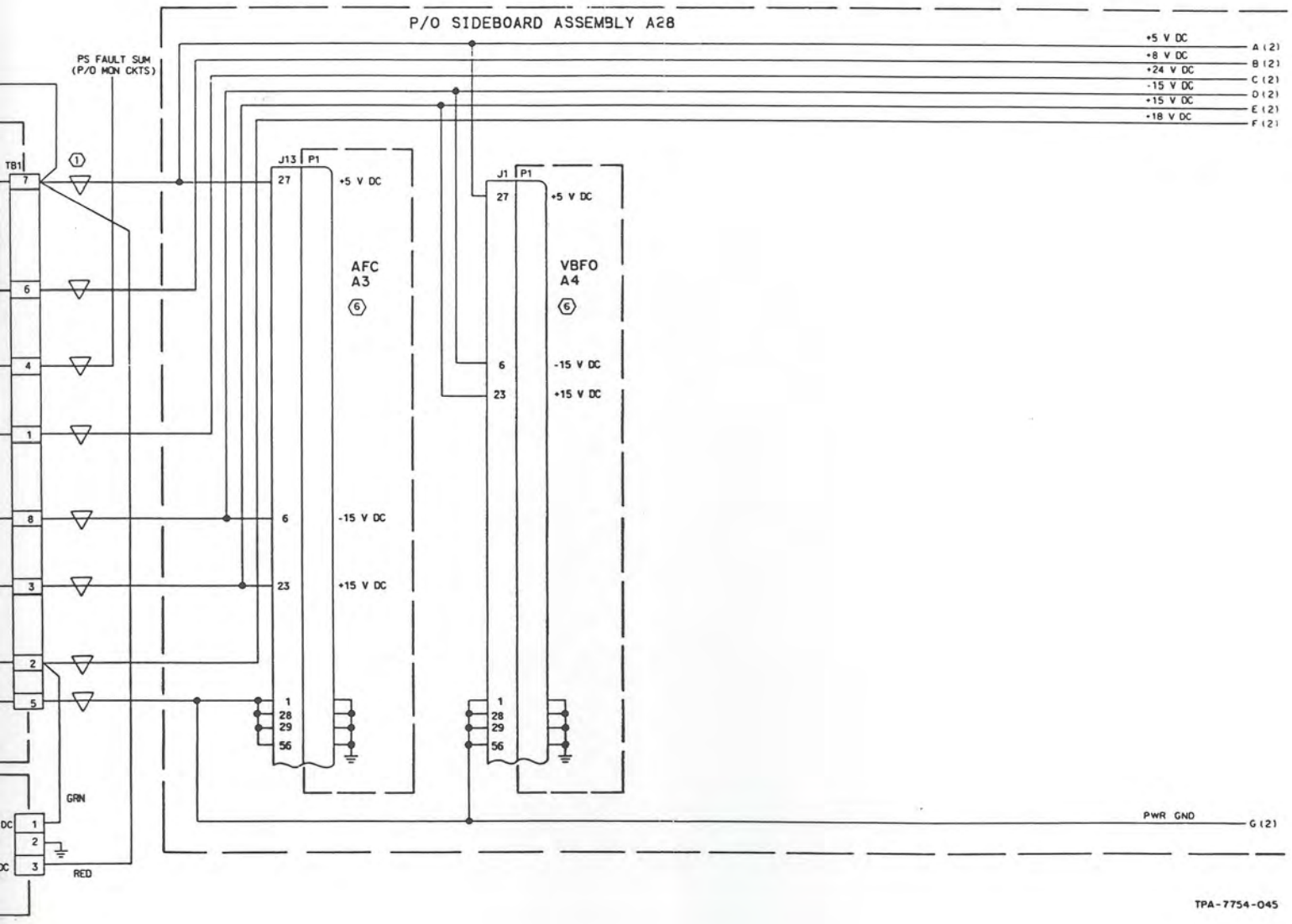
q. LOL signal is supplied by frequency standard/power supply A32 to the parallel input card.

2.6 Power Distribution (Refer to figure 15)

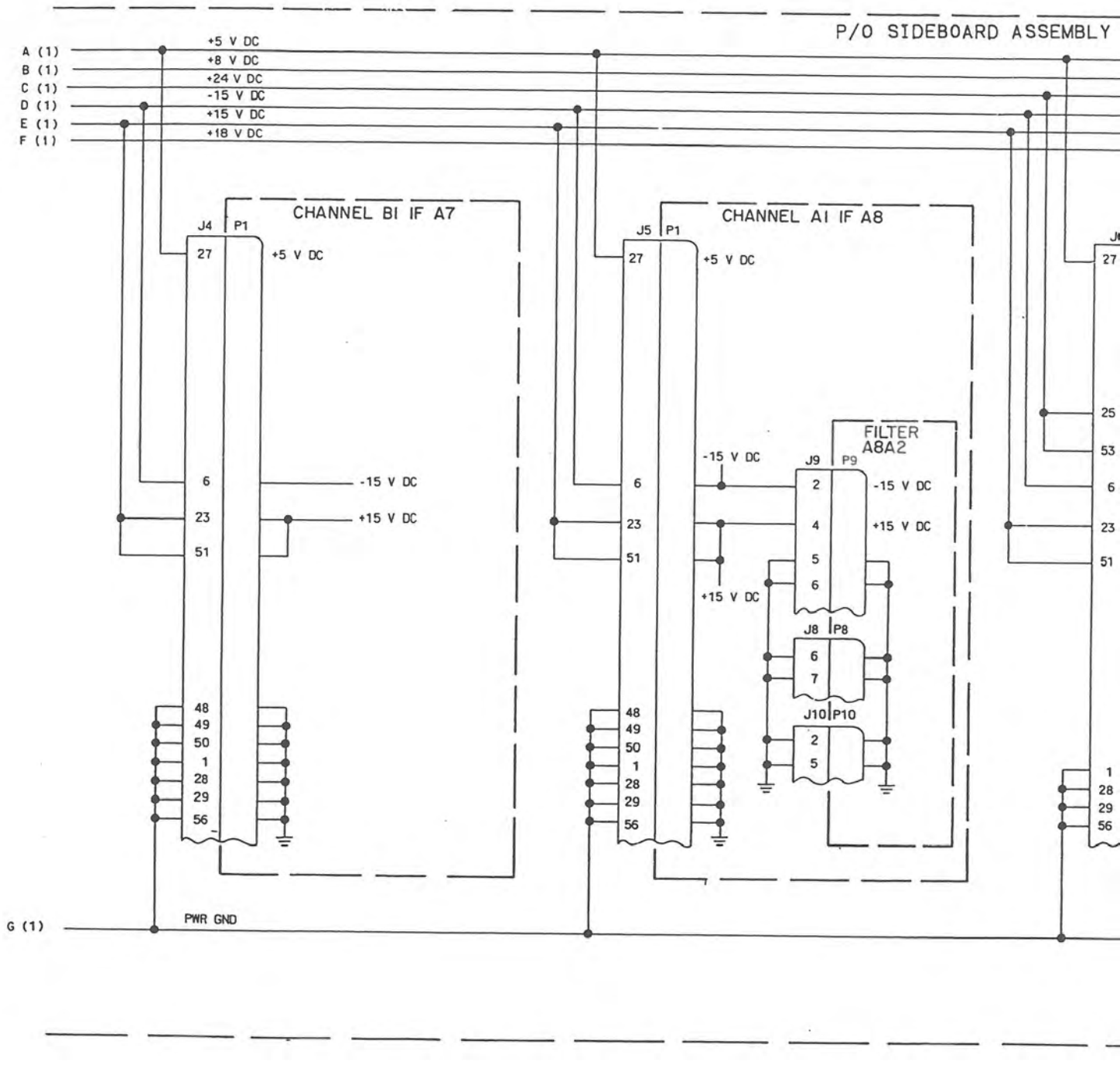
Paragraph 5 is not applicable. Add the following paragraph at the end of the paragraph. Place figure 15A behind figure 15.

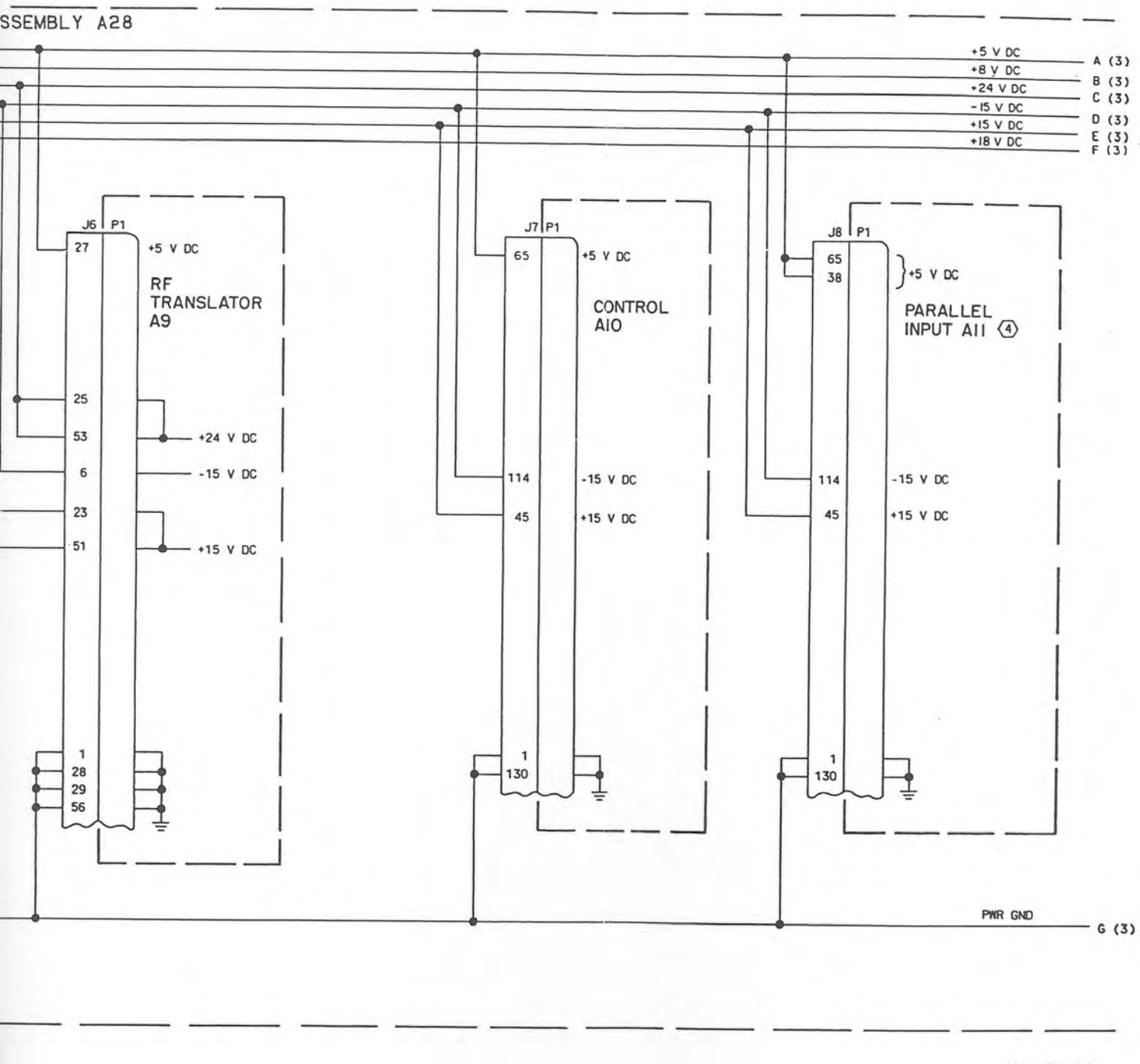
In the direct digital synthesizer, the +8-volt dc input is regulated to +5 volts dc on DDS control interface A34. Refer to figure 15A. The +24-volt dc input is regulated to +20 volts dc and to +5 volts dc in frequency standard/power supply A32. The +20 volts dc is distributed from the A32 to VFO/VCO module A33 where it is regulated to +10 volts dc. The +8 volt dc is regulated to +5 volts dc on frequency standard/power supply A32.


FREQUENCY STANDARD SWITCH A30
BLK
RED
+5 V DC
PS FAULT SUM (P/O MON CKTS)
POWER SUPPLY A1
TB1
J13
+5 V DC REGULATOR
+8 V DC REGULATOR
PS FAULT SUMMARY
POWER SELECT SWITCH S1
PWR XFMR AND RECTIFIERS
+24 V DC REGULATOR
-15 V DC REGULATOR
+15 V DC REGULATOR
+18 V DC REGULATOR
J1
L
N
F1
J2
1 2 4 3
A2P1
PWR
SW A2S28
OVEN STANDARD A29
+18 V DC
GND
+5 V DC
GRN
RED



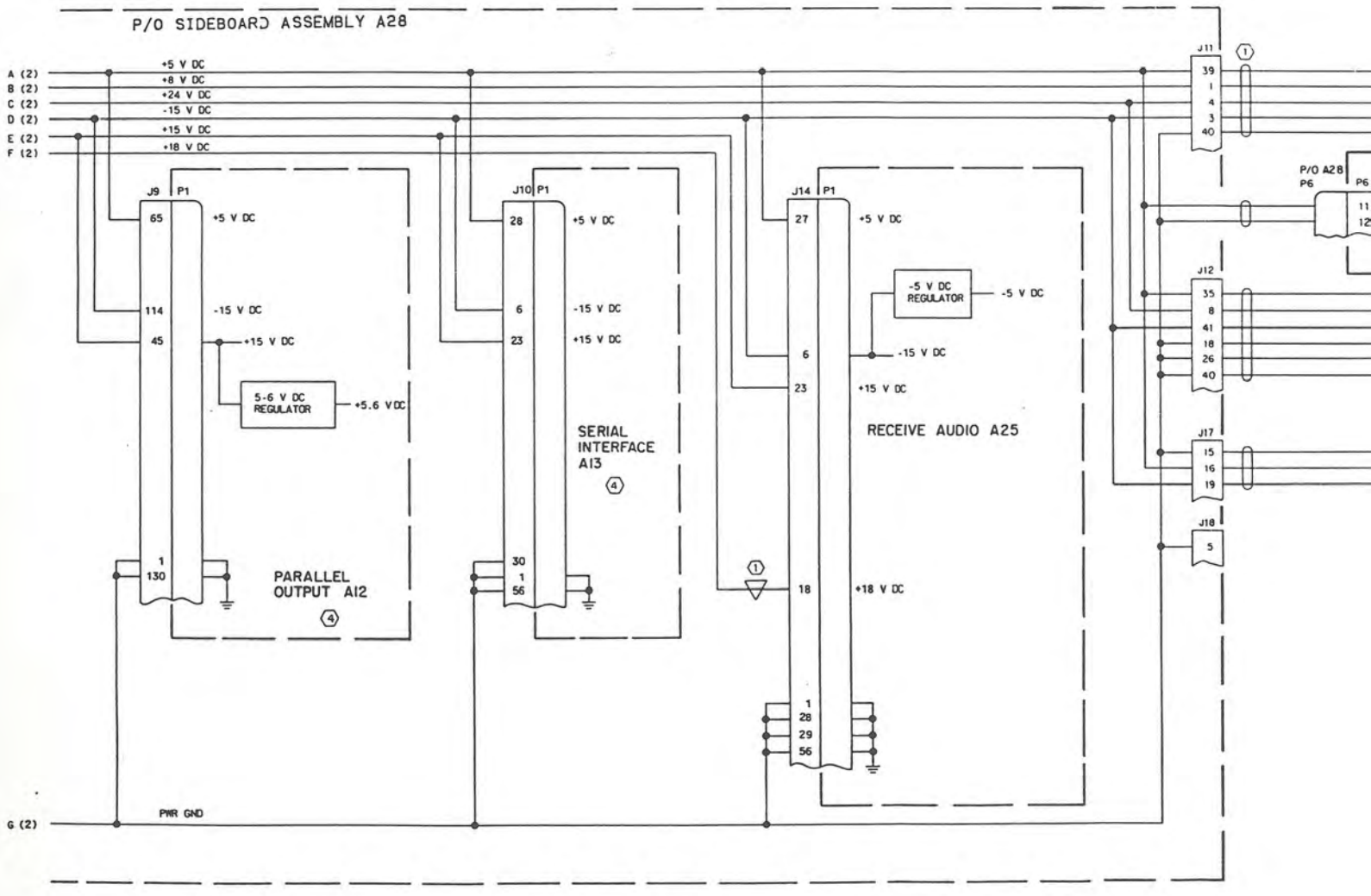
HF-8054A Receiver (622-3475-210),
Power Distribution, Block Diagram
Figure 15A (Sheet 1 of 4)

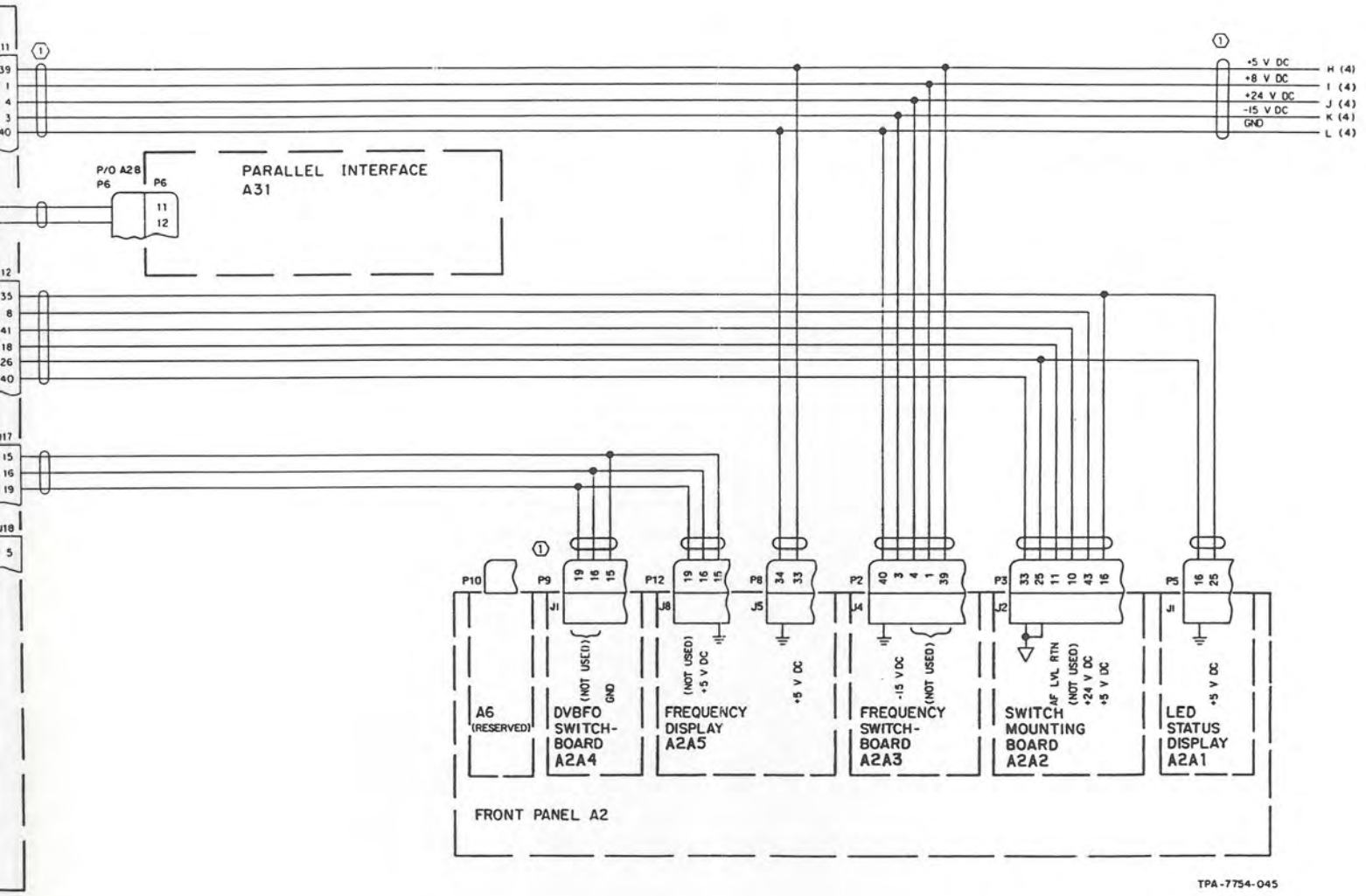

P/O SIDEBOARD ASSEMBLY
A (1)
B (1)
C (1)
D (1)
E (1)
F (1)
+5 V DC
+8 V DC
+24 V DC
-15 V DC
+15 V DC
+18 V DC
CHANNEL BI IF A7
J4
P1
27
+5 V DC
6
-15 V DC
23
+15 V DC
51
48
49
50
1
28
29
56
CHANNEL AI IF A8
J5
P1
27
+5 V DC
6
23
51
-15 V DC
+15 V DC
FILTER
A8A2
J9
P9
2
-15 V DC
4
+15 V DC
5
6
J8
P8
6
7
J10
P10
2
5
48
49
50
1
28
29
56
G (1)
PWR GND



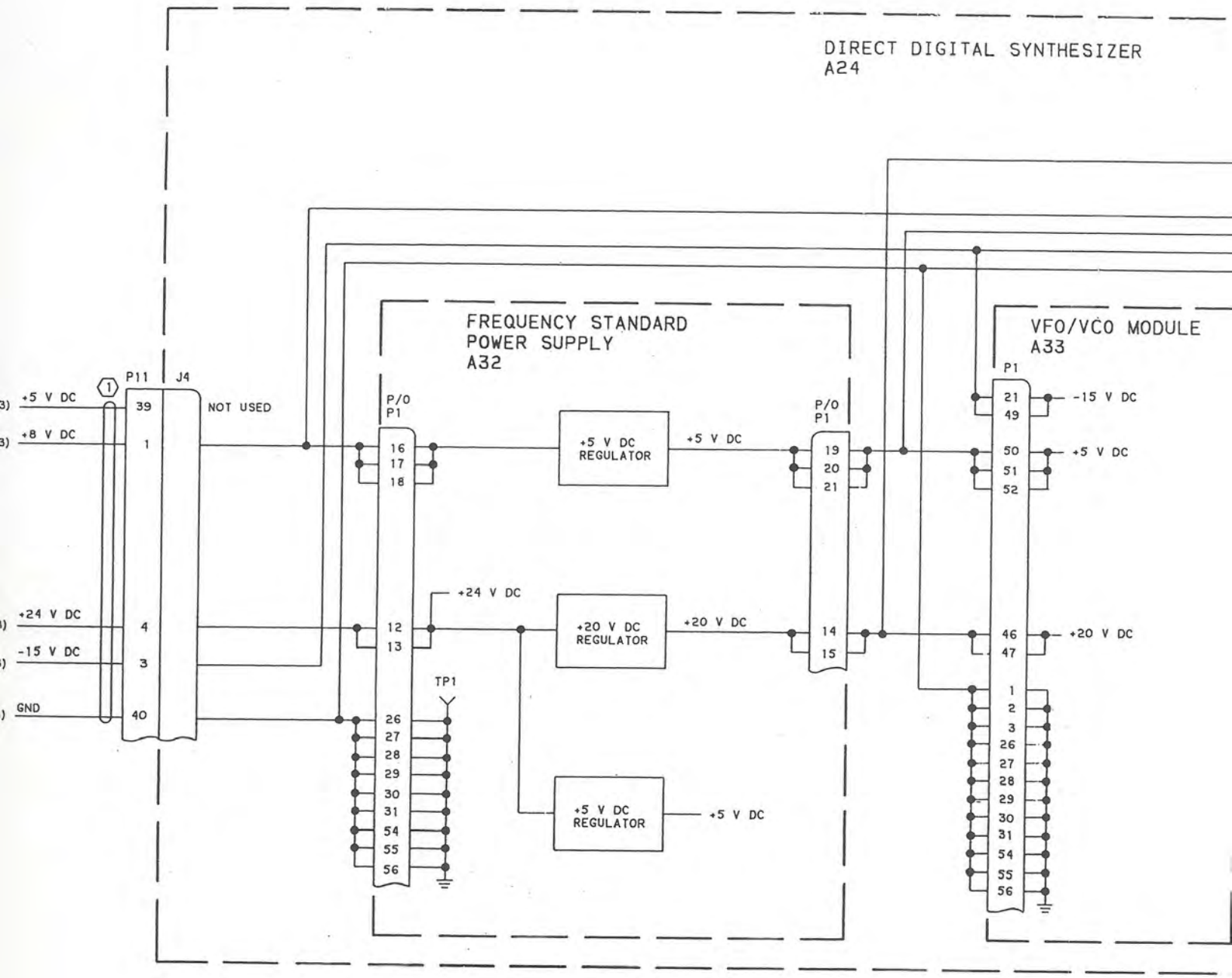
TPA-7754-045

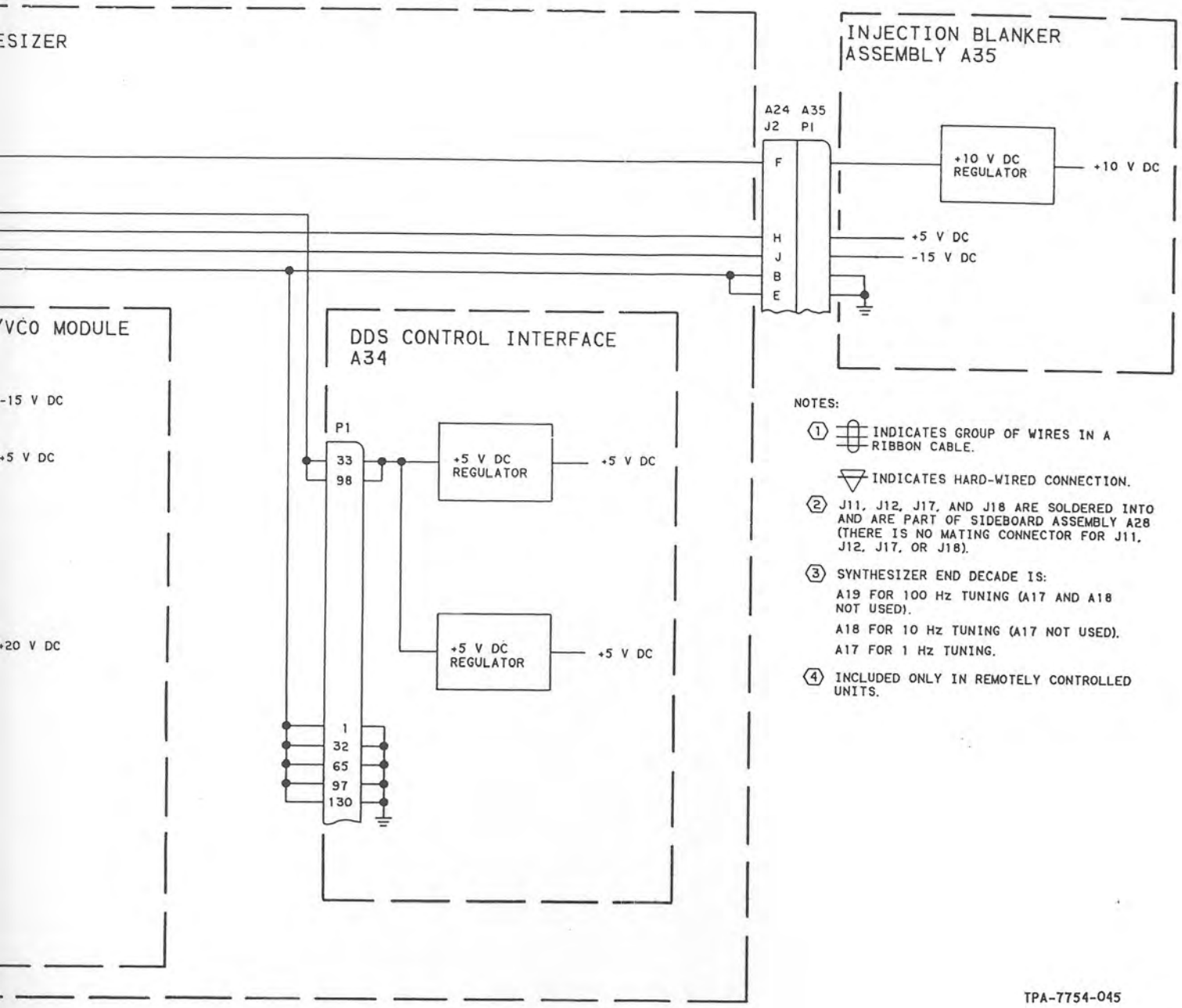
HF-8054A Receiver (622-3475-210),
Power Distribution, Block Diagram
Figure 15A (Sheet 2)


P/O SIDEBOARD ASSEMBLY A28
A (2)
B (2)
C (2)
D (2)
E (2)
F (2)
G (2)
+5 V DC
+8 V DC
+24 V DC
-15 V DC
+15 V DC
+18 V DC
PWR GND
J9 P1
65 +5 V DC
114 -15 V DC
45 +15 V DC
5-6 V DC REGULATOR
+5.6 VDC
1
130
PARALLEL OUTPUT AI2
4
J10 P1
28 +5 V DC
6 -15 V DC
23 +15 V DC
SERIAL INTERFACE AI3
4
30
1
56
J14 P1
27 +5 V DC
-5 V DC REGULATOR
-5 V DC
6 -15 V DC
23 +15 V DC
RECEIVE AUDIO A25
1
18 +18 V DC
1
28
29
56
J11
39
1
4
3
40
1
P/O A28
P6
P6
11
12
J12
35
8
41
18
26
40
J17
15
16
19
J18
5



HF-8054A Receiver (622-3475-210), Power Distribution, Block Diagram Figure 15A (Sheet 3)


DIRECT DIGITAL SYNTHESIZER
A24
FREQUENCY STANDARD
POWER SUPPLY
A32
VFO/VCO MODULE
A33
P11
J4
P/O
P1
P1
+5 V DC
+8 V DC
+24 V DC
-15 V DC
GND
NOT USED
+5 V DC
REGULATOR
+20 V DC
REGULATOR
+5 V DC
REGULATOR
+24 V DC
+20 V DC
+5 V DC
-15 V DC
+5 V DC
+20 V DC
TP1



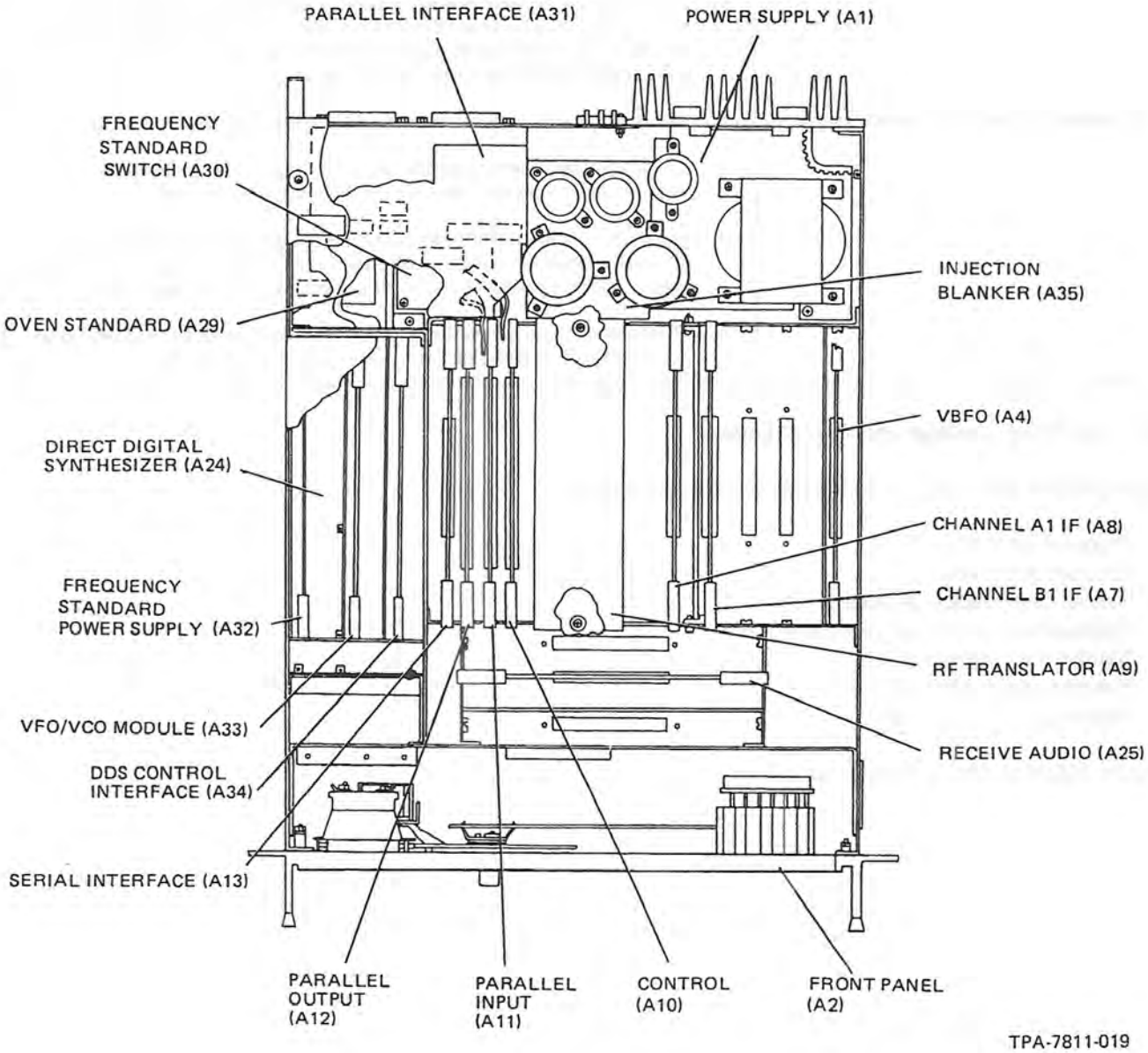
HF-8054A Receiver (622-3475-210), Power Distribution, Block Diagram Figure 15A (Sheet 4)

MAINTENANCE (523-0770705-002218)

1. GENERAL

Change the last sentence of the paragraph to read as follows, and place figure 1A behind figure 1.

Figure 1 shows the location of subassemblies in HF-8054( ) Receivers except for part number 622-3475-210, and figure 1A shows location of subassemblies in HF-8054A Receiver, part number 622-3475-210.



HF-8054A Receiver (622-3475-210), Subassembly Location
Figure 1A

3.1 Fault Isolation

Replace the corresponding steps in table 2 with the following steps.

Table 2. Fault Isolation.

INDICATION	ISOLATION OF APPARENT FAILURE
RCV FAULT indicator lights	c. Remove top cover from receiver and direct digital synthesizer A24. d. Monitor fault lights on synthesizer cards. e. If DDS control interface and any other card both have fault lights lighted, replace the card other than DDS control interface. If fault condition is not corrected, replace DDS control interface. If DDS control interface LED is only light lighted, replace the DDS control interface.
No speaker receive audio (speaker output)	a. Check SPKR switch position (channel B1 operates only in ISB mode). c. Check headphone audio, same channel, or front panel meter indication for audio. If audio is present here, replace A25 receive audio card. d. Set METER switch to RCV SIG position; check that receive signal is indicated. If signal is indicated, replace receive audio card A25. If no signal is present, replace injection blanker A35. If fault remains, replace channel A1 if card A8. e. If audio outputs are normal for channel A1 but not channel B1, replace receive audio card A25. If fault remains, replace channel B1 if card A7.

3.2 Test Point, Voltage and Signal Levels

Listings of the following cards in table 3 are not applicable.

Channel B2 if A5
Channel A2 if A6
Synthesizer voltage regulator A14
Synthesizer subcarrier generator A15
Synthesizer reference A16
Receive audio AF2 A26
Synthesizer output A23

Add the following test points to table 3.

3.3 Testing/Troubleshooting Procedures

Place figure 2A behind figure 2. Refer to figure 2A when testing or troubleshooting an HF-8054A Receiver (622-3475-210). Make the following changes to table 4 and table 5.

Table 4. HF-8054( ) Receiver, Minimum Performance Test Procedures.

TEST	PROCEDURE	NORMAL INDICATION	IF INDICATION IS ABNORMAL
2. Initial checks	c. Measure dc voltages between the following points and ground: Synthesizer voltage regulator A14: A24J1-8.	 Not applicable.	
4. Control inputs	Steps j, k, l, m, r, s, t, and u are not applicable.		
7. Channel enable switches	a. Front panel controls set as follows: PWR to on CONT to LCL MODE to ISB CH A1 enable to ON CH B1 enable to ON FREQUENCY kHz to 2000.00 VBFO to FXD All AGC to FAST or FAX RF GAIN to full cw Steps e and g are not applicable.		
9. Receive performance	Steps p through ac are not applicable.		
10. AGC	Section on channel A2 is not applicable. Section on channel B2 is not applicable.		
12. SQUELCH/AF GAIN control	Section on channel A2/B2 is not applicable.		
13. PHONES check	Section on A2/B2 is not applicable.		
14. SPEAKER	a. Front panel controls set as follows: PWR to on CONT to LCL MODE to ISB BANDWIDTH to any CH A1 enable to ON CH B1 enable to ON VBFO to FXD All AGC to FAST RF GAIN to full cw SQUELCH to off (full ccw) Steps i through n are not applicable.		

Table 3. Test Point, Voltage, and Signal Levels.

CARD/MODULE	TEST POINT	FUNCTION	SIGNAL, DESCRIPTION
DDS Control interface A34	TP1	Clock summary fault	Fault = 0 V dc No fault = +5 V dc
	TP2	Processor fault out	Fault = 0 V dc No fault = +5 V dc
	TP3	Output loop fault	Fault = 0 V dc No fault = +5 V dc
	TP4	8-MHz fault	Fault = 0 V dc No fault = +5 V dc
	TP5	Fault summary	Fault = +5 V dc No fault = 0 V dc
	TP6	+5 V dc	+5 V dc
	TP7	Halt	+5 V dc
	TP8	Memory ready	+5 V dc
	TP9	IRQ	+5 V dc
	TP10	NMI	+5 V dc
	TP11	RAME	+5 V dc
Frequency standard/power supply A32	TP1	Ground	Ground
	TP2	LOL	Fault = +5 V dc No fault = 0 V
	TP3	+5 V dc	+5 V dc
	TP4	+20 V dc	+20 V dc
	TP5	+5 V dc	+5 V dc
Injection blanker A35	TP1		Disabled — approx 0.5 to 1 V dc. Enabled — triangular waveform with 300-400 μs dead time between pulse, approx 5 V amplitude.
	TP2		Disabled — approx 0.8 V dc. Enabled — inverted TP1 signal with amplitude approx 0.8 V dc.
	TP3		Disabled — approx 0.8 V dc. Enabled — inverted TP2 signal.

Table 5. HF-8054( ) Receiver, Detailed Performance Test Procedures (Cont).

TEST	PROCEDURE	NORMAL INDICATION	IF INDICATION IS ABNORMAL
18. External standard test	e. Strap frequency standard/power supply A32 of direct digital synthesizer for external standard 100-kHz input.		
	g.		Check direct digital synthesizer A24.
	i. Strap frequency standard/power supply A32 for external standard 1-MHz input.		
	m. Strap frequency standard/power supply A32 for external standard 5-MHz input.		
20. Frequency standard test	g.		Check frequency standard switch A30 and direct digital synthesizer A24.
	k.		Check direct digital synthesizer A24.
	r. Initiate PILOT CARR to ON from parallel input device.	Unit under test indicator lights.	Check control A10, parallel interface A31.
	s. Initiate PEAK CLIP to ON from parallel input device.	Unit under test PEAK CLIP indicator lights.	Same as step p.
	t. Initiate MODE to AM from parallel input device.	Unit under test AM indicator lights, ISB MODE indicators extinguish.	Same as step p.
	u. Initiate a frequency change with processor.	Frequency counter should reflect new frequency.	Check parallel interface A35, control A10, direct digital synthesizer A27.
	v. Repeat step g over entire frequency spectrum.	Same as step g.	Same as step g.
	w. Turn off power to exciter and frequency counter. Turn off power to remote control, parallel input device, processor, and re ceiver.		

Table 5. HF-8054( ) Receiver, Detailed Performance Test Procedures.

TEST	PROCEDURE	NORMAL INDICATION	IF INDICATION IS ABNORMAL
2. Initial checks	c. Measure dc voltages between the following points and ground: Synthesizer voltage regulator A14: A24J1-8.	 Not applicable.	
3. Sensitivity	Section on channel A2 is not applicable. Section on channel B2 is not applicable. d.		 Check rf translator A9, channel A1 if A8, and injection blanker A35.
4. Gain	e. Section on channel A2 is not applicable. Section on channel B2 is not applicable.		Check channel A1 if A8, receive audio A25, rf translator A9, and injection blanker A35.
5. In-band intermodulation	Section on channel A2 is not applicable. Section on channel B2 is not applicable.		
8. Audio distortion	Section on channel A2 is not applicable. Section on channel B2 is not applicable.		
9. AGC characteristics	Section on channel A2 is not applicable. Section on channel B2 is not applicable.		
10. Cross sideband rejection	Section on channel A2 is not applicable. Section on channel B2 is not applicable.		
11. AGC voltage input/output	Section on channel A2 is not applicable. Section on channel B2 is not applicable.		
14. Bandwidth	Steps q through aa are not applicable.		
15. Frequency accuracy	d.		Check direct digital synthesizer A24.
17. Oven standard test	Not applicable.		

`.1.3 CHAN A2 RCV LINE ADJ (A26R28)

Not applicable.

4.1.4 CHAN B2 RCV LINE ADJ (A26R65)

Not applicable.

4.2.3 Channel A2 Receive Audio Meter Adjustment (A26R43)

Not applicable.

4.2.4 Channel B2 Receive Audio Meter Adjustment (A26R80)

Not applicable.

5.1 Assembly

Add the following text at the end of first paragraph. Add paragraph 5.1.8 between paragraph 5.1.7 and 5.2.

The circuit card/modules of the direct digital synthesizer may be removed by removing the top cover of the direct digital synthesizer and extracting the circuit card/modules as any other plug-in circuit card.

5.1.8 Parallel Interface A31

Remove unit top cover.
b. Remove two attaching screws and associated hardware.
c. Disconnect jacks from P3, P4, P5, P6, P7, and P8. Be sure to properly label jacks (jacks are keyed to facilitate replacement).
d. Carefully remove circuit card from receiver.

5.2 Assembly

Add paragraph 5.2.6 after paragraph 5.2.5.

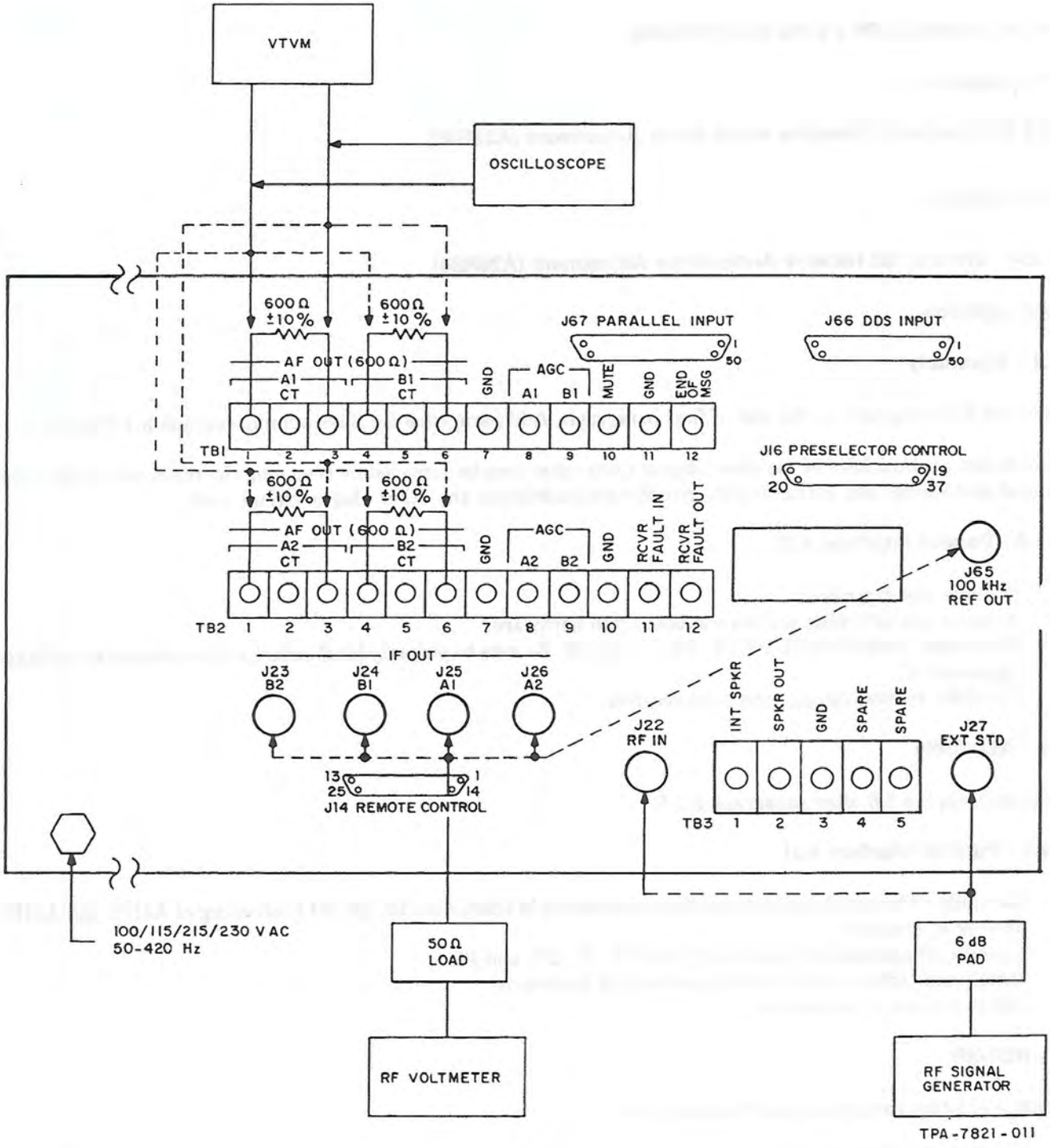
5.2.6 Parallel Interface A31

a. Carefully slide circuit card into position in retaining bracket ensuring proper positioning of A31P1 and A31P2 on rear of receiver.
b. Connect all appropriate jacks to P3, P4, P5, P6, P7, and P8.
c. Install and tighten two attaching screws and hardware.
d. Install top cover on receiver.

6. REPAIR

Replace existing paragraph with following text.

Repair of the HF-8054( ) Receiver consists of replacing subassemblies and chassis-mounted components. Use standard shop practices to replace chassis-mounted components. For circuit card repair, refer to the Circuit Card Repair Instructions (523-0772831) of the HF-80 Exciters, Receivers, and Controls Depot Maintenance instruction book (523-0772963).



HF-8054A Receiver (622-3475-210), Test Setup Diagram
Figure 2A

8 Reference Designation Prefixes

Add the following reference designators, part numbers, and figure references to the existing list.

PREFIX	UNIT PART NUMBER	FIG-ITEM
A11	642-3135-002	1A-20
A12	642-3137-002	1A-19
A24	652-6615-001	1A-45
A27	659-2053-002	1A-89
A28	634-8224-003	1A-49
A31	646-6329-001	1A-43A
A32	646-5930-001	1A-45D
A33	652-1015-002	1A-45C
A34	646-5905-003	1A-45B
A35	652-6861-001	1A-44A

1.9 Configuration Identifiers

Add the following configuration identifiers, part numbers, and figure references to the existing list.

CI/REV LETTER	UNIT PART NUMBER	FIG-ITEM
AH	622-3475-210	1A-
	634-8224-003	1A-49
B	652-7263-001	4A-

2. GROUP ASSEMBLY PARTS LIST

Add Figure 1A and associated Group Assembly Parts List for HF-8054A Receiver, 622-3475-210.

Add Figure 4A and associated Group Assembly Parts List for DDS Chassis Assembly, 652-7263-001.

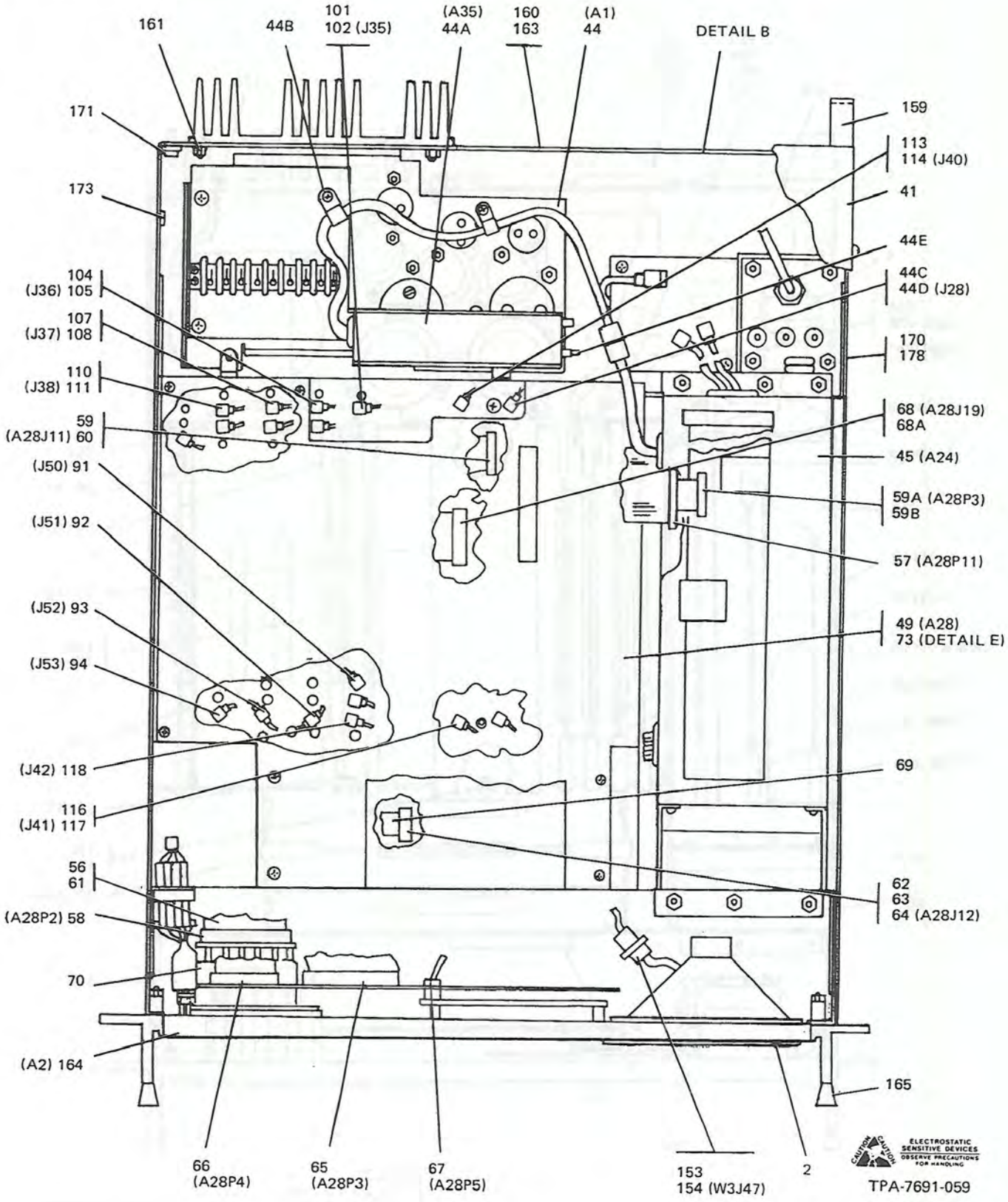
PARTS LIST (523-0770706-002218)

Differences in parts list for HF-8054A Receiver, part number 622-3475-210, from those presently listed for the existing statuses are described below.

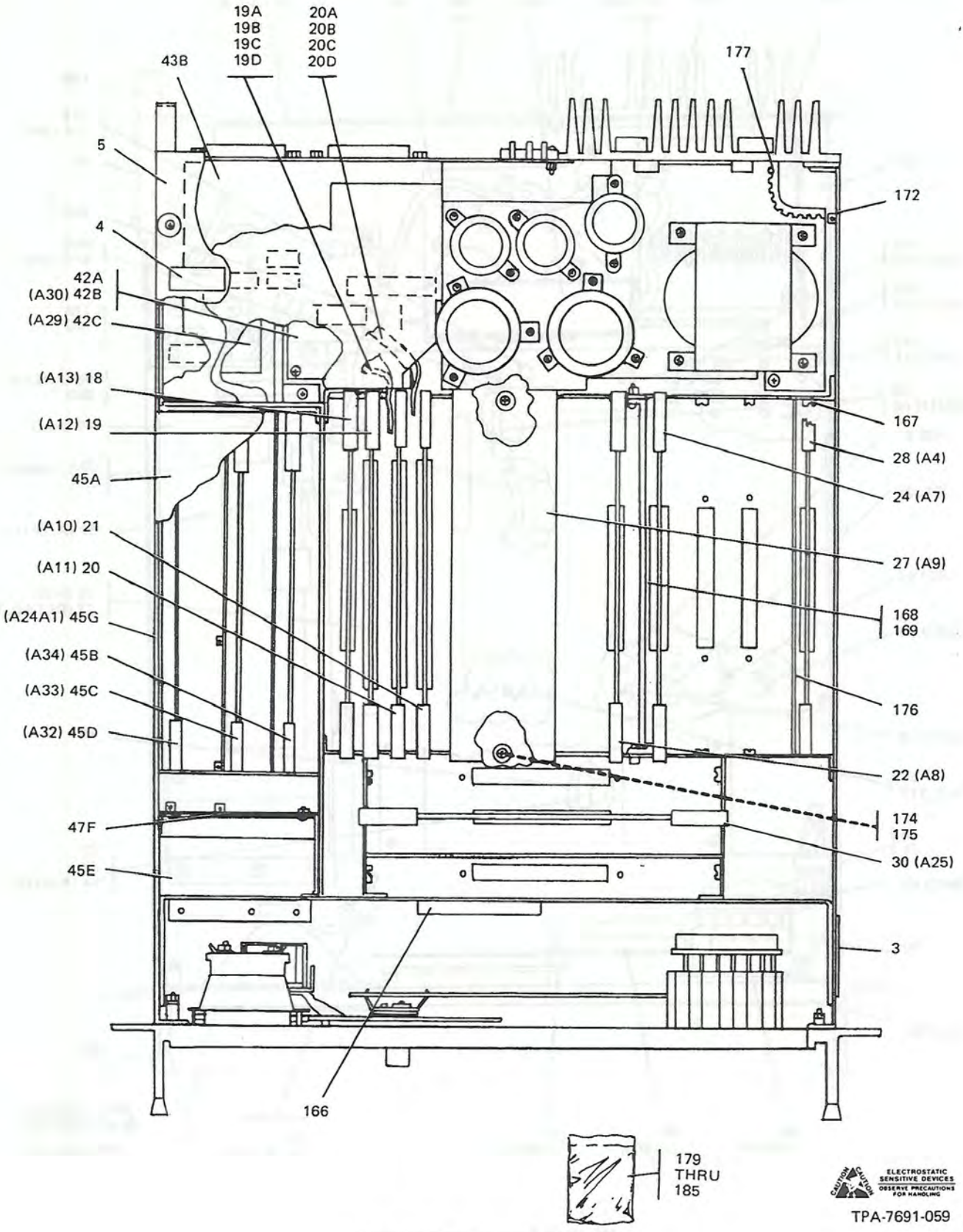
1.7 Manufacturer's Code, Name, and Address

Correct the name and address for manufacturer's code 13499 and add the remaining manufacturer's codes, names, and addresses.

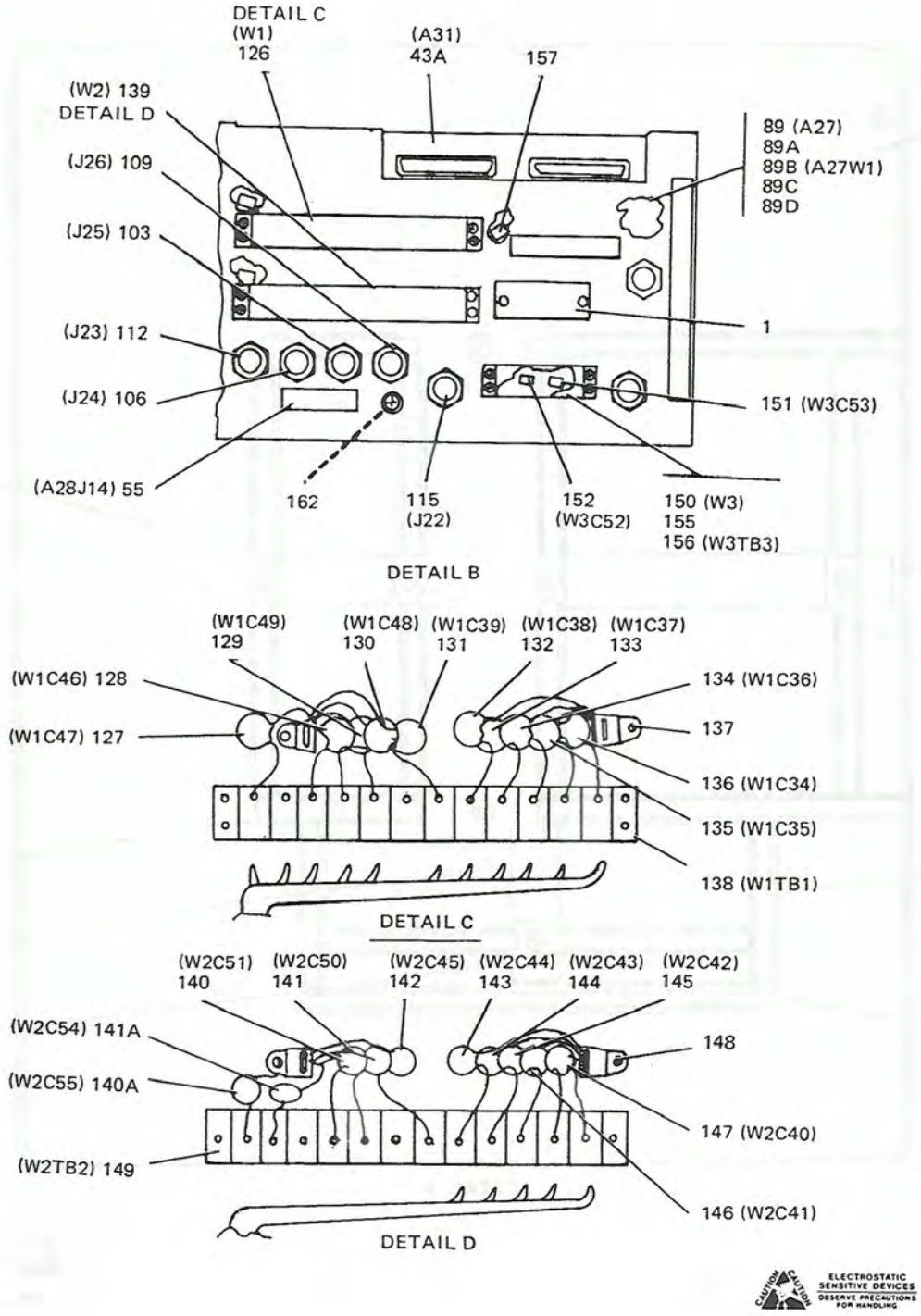
MFR CODE	MANUFACTURER'S NAME AND ADDRESS
02660	Bunker Ramo-Eltra Corp Amphenol Div 2801 S 25th Ave Broadview, IL 60153
13499	Rockwell International Corporation Defense Electronics Operations Collins Defense Communications Division 350 Collins Road NE Cedar Rapids, IA 52498
53387	Minnesota Mining and Mfg Co Electronic Products Div 3M Center St. Paul, MN 55101
55943	Transcon Mfg Co Amrad Div 349 Bonham St P O Box 876 Paris, TX 75460
57863	North American Specialties Corp 120-12 28th Ave Flushing, NY 11354
80205	National Aerospace Stnadard
81483	International Rectifier 9220 Sunset Blvd P O Box 2321 Terminal Annex Los Angeles, CA 90454



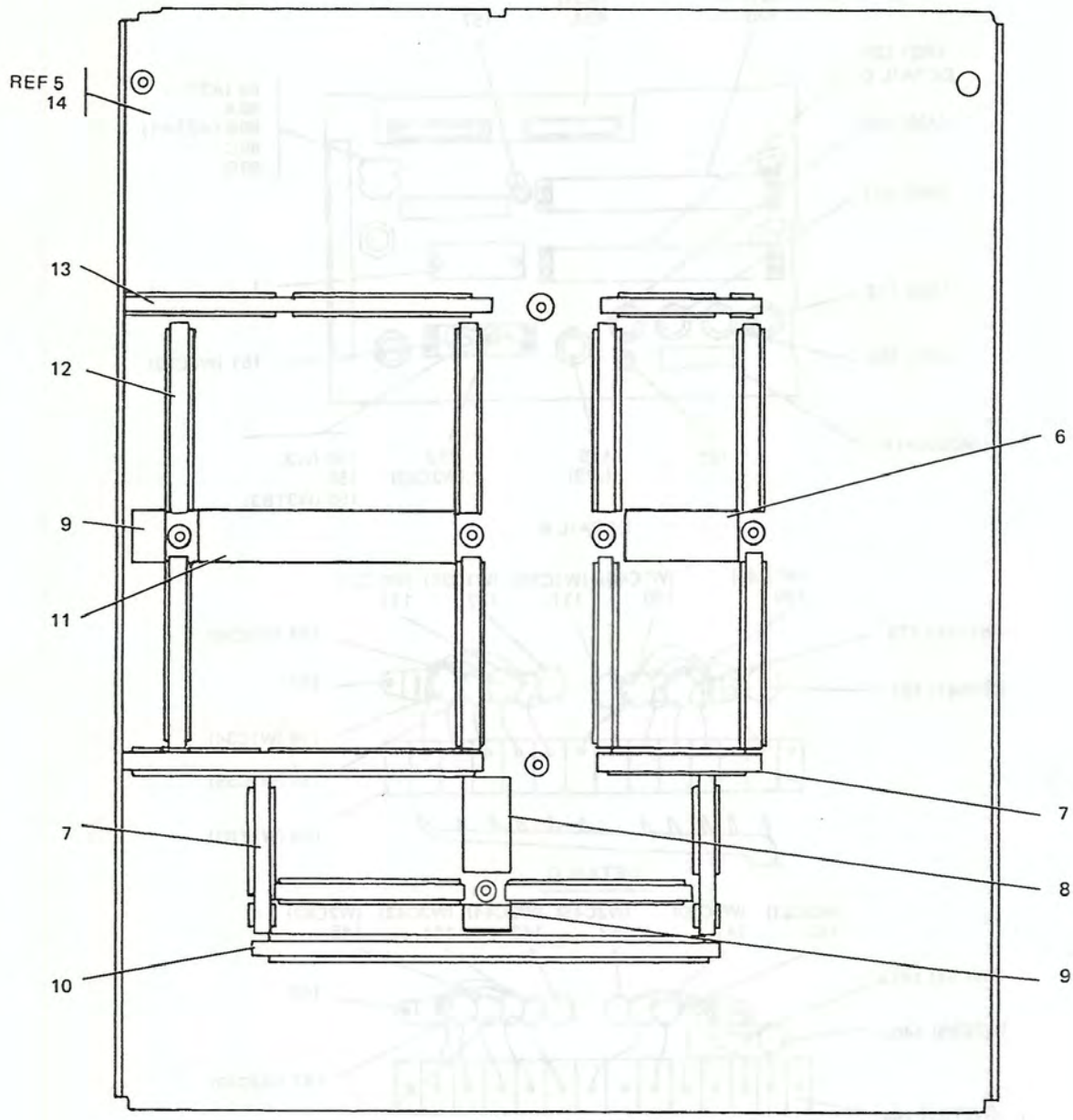
HF-8054A Receiver (622-3475-210)
Figure 1A (Sheet 2)



HF-8054A Receiver (622-3475-210)
Figure 1A (Sheet 1 of 5)



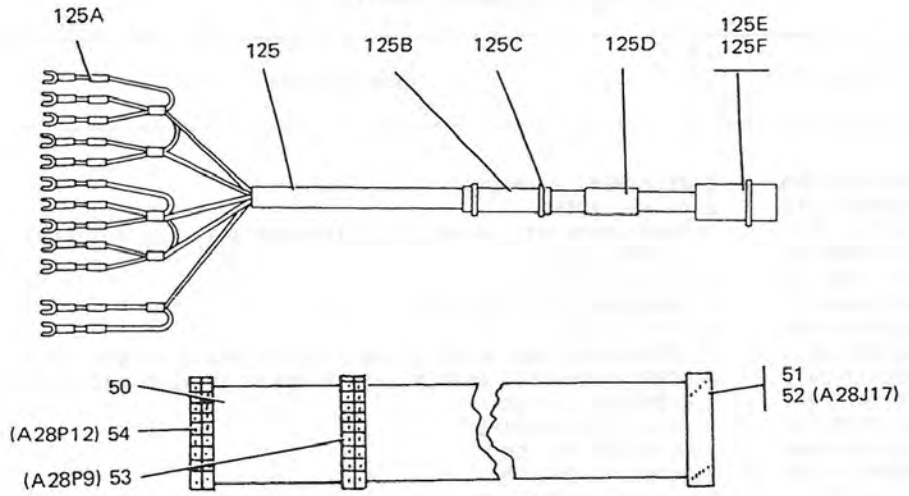
HF-8054A Receiver (622-3475-210)
Figure 1A (Sheet 4)

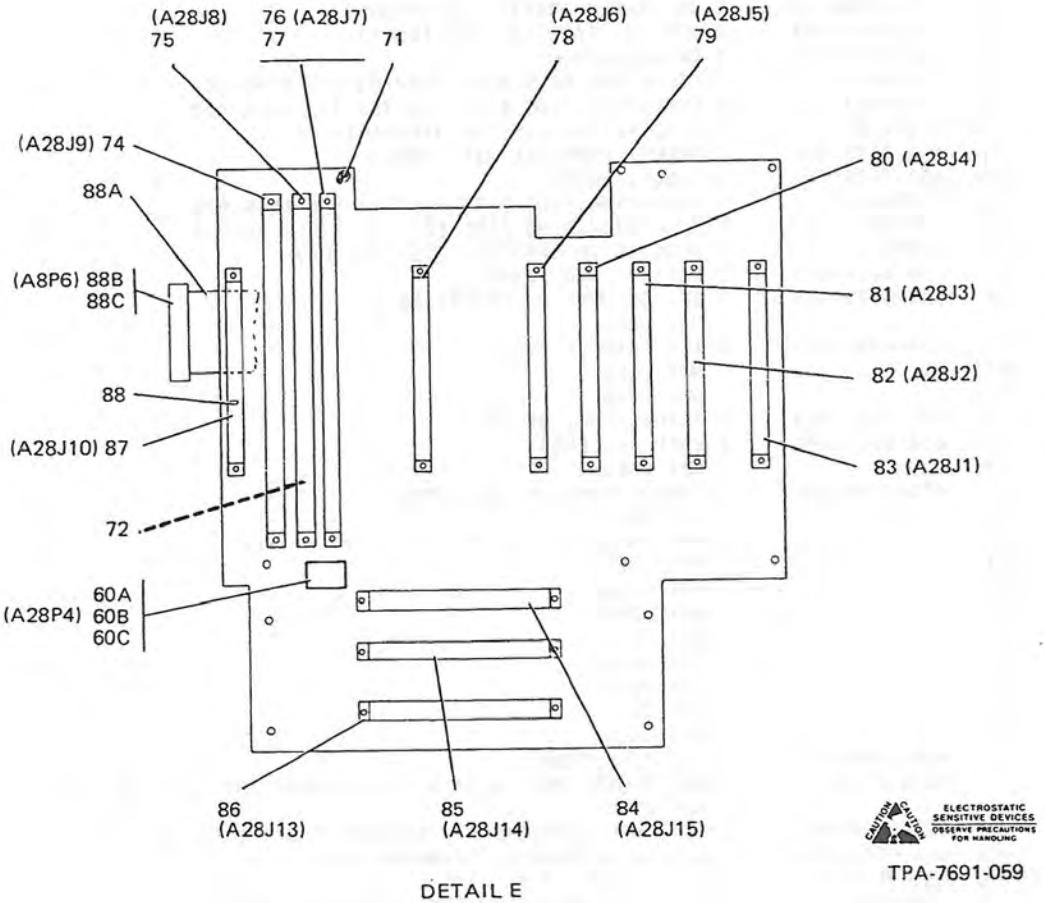


HF-8054A Receiver (622-3475-210)
Figure 1A (Sheet 3)

GROUP ASSEMBLY PARTS LIST

FIG-ITEM	PART NO	INDENT	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
1A-	622-3475-210	1	RECEIVER, HF-8054A	1	
1	642-0023-000	2	PLATE, IDENT	1	
	MS51957-11	2	SCREW,MACH STL, 4-40 X 1/8 (96906) 343-0131-000 (AP)	2	
2	634-8194-001	2	INSERT, IDENT	1	
3	637-9295-001	2	LABEL, FEATURE	1	
4	280-1368-350	2	LABEL,PRESSURE (12998)	1	
5	634-8181-001	2	COVER, TOP	1	
	MS51957-28	2	SCREW,MACH SST, 6-32 X 3/8 (96906) 343-0169-000 (AP)	7	
	MS51957-30	2	SCREW,MACH SST, 6-32 X 1/2 (96906) 343-0171-000 (AP)	2	
6	635-9679-002	3	CUSHION, CKT CD	1	
7	635-9677-003	3	GASKET, SHIELDING	4	
8	635-9679-005	3	CUSHION, CKT CD	1	
9	635-9679-004	3	CUSHION, CKT CD	2	
10	635-9677-008	3	GASKET, SHIELDING	1	
11	635-9679-006	3	CUSHION, CKT CD	1	
12	635-9677-001	3	GASKET, SHIELDING	10	
13	635-9677-002	3	GASKET, SHIELDING	2	
14	634-8180-001	3	COVER, TOP-PRSD	1	
15			NOT USED		
16			NOT USED		
17			NOT USED		
18	638-6896-001	2	INTERFACE, SERIAL A13 (ESDS)	1	
19	642-3137-002	2	OUTPUT, PARALLEL A12 (ESDS)	1	
19A	652-7408-001	2	CABLE,RIBBON	1	
19B	499568-1	3	CONNECTOR,PLUG ELEC (00779) 372-2648-020	1	
19C	499568-1	3	CONNECTOR,PLUG ELEC (00779) 372-2648-020	1	
19D	86286-1	3	PLUG,KEYING (00779) 372-2641-010	1	
20	642-3135-002	2	INPUT, PARALLEL A11 (ESDS)	1	
20A	652-7408-001	2	CABLE,RIBBON	1	
20B	499568-1	3	CONNECTOR,PLUG ELEC (00779) 372-2648-020	1	
20C	499568-1	3	CONNECTOR,PLUG ELEC (00779) 372-2648-020	1	
20D	86286-1	3	PLUG,KEYING (00779) 372-2641-010	1	
21	638-6629-001	2	CONTROL A10 (ESDS)	1	
22	638-6871-001	2	IF, CHANNEL A1 (ESDS) A8	1	
23			NOT USED		
24	638-6975-001	2	IF, CHANNEL B1 A7	1	
25			NOT USED		
26			NOT USED		
27	637-1767-003	2	TRANSLATOR, RF A9	1	
28	638-6067-002	2	VBFO A4 (ESDS)	1	
29			NOT USED		
30	635-0748-002	2	AUDIO, RECEIVE A25 (ESDS)	1	
31			NOT USED		
32			NOT USED		
33			NOT USED		
34			NOT USED		
35			NOT USED		
36			NOT USED		
37			NOT USED		
38			NOT USED		
39			NOT USED		
40			NOT USED		
41	634-8179-001	2	COVER, BOTTOM	1	
	MS51957-28	2	SCREW,MACH SST, 6-32 X 3/8 (96906) 343-0169-000 (AP)	6	
42			NOT USED		
42A	652-1966-001	2	KIT,OVEN OSCILLATOR / FREQUENCY STANDARD SWITCH	1	
42B	646-6558-001	3	SWITCH, FREQUENCY STANDARD A30	1	
42C	637-9135-001	3	OSCILLATOR, OVEN A29	1	
	NAS671C6	3	NUT,PLAIN,HEXAGON CRES, 0.138-32 (80205) 313-0045-000 (AP)	3	
	MS35338-98	3	WASHER,SPRING CD PL BRZ, 0.141 ID X 0.250 OD (96906) 310-0096-000 (AP)	3	





DETAIL E

HF-8054A Receiver (622-3475-210)
Figure 1A (Sheet 5)

GROUP ASSEMBLY PARTS LIST

FIG-ITEM	PART NO	INDENT	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
1A-	MS51957-28	3	SCREW,MACHINE CRES, 0.138-32 X 0.375IN (96906) 343-0169-000 (AP)	1	
	MS51959-28	3	SCREW,MACHINE CRES, 6-32 X 3/8 (96906) 342-0062-000 (AP)	2	
43			NOT USED		
43A	646-6329-001	2	INTERFACE,PARALLEL (ESDS) A31	1	
	MS51957-15	2	SCREW,MACH STL, 4-40 X 3/8 (96906) 343-0135-000 (AP)	2	
	M24308/26-1	2	SCREW,ASMBLD CLIP (81349) 371-0062-000 (AP)	2	
	CRES 0.125IDX0.2 810D	2	WASHER,FLAT CRES, 0.125 ID X 0.281 OD (79807) 310-6340-000 (AP)	2	
	MS35338-135	2	WASHER,LOCK SST, 0.115 ID X 0.209 OD (96906) 310-0279-000 (AP)	2	
43B	652-7372-001	2	SUPPORT,CIRCUIT CARD	1	
	MS51957-28	2	SCREW,MACHINE CRES, 0.138-32 X 0.375IN (96906) 343-0169-000 (AP)	2	
44	635-9649-001	2	POWER SUPPLY A1	1	
44A	652-6861-001	2	BLANKER ASSEMBLY, INJECTION A35	1	
44B	610-0005	2	CLAMP,LOOP (55943) 150-1542-000	2	
	MS51958-63	2	SCREW,MACHINE CRES, 0.190-32 X 0.500IN (96906) 343-0228-000 (AP)	1	
	MS51957-31	2	SCREW,MACHINE CRES, 0.138-32 X 0.625IN (96906) 343-0173-000 (AP)	1	
	CRES-.147IDX.312 ODX.032TH	2	WASHER,FLAT CRES, 0.147 ID X 0.312 OD (79807) 310-0046-000 (AP)	1	
44C	652-7398-001	2	CABLE,RF	1	
	623-1379-001	2	ADAPTER,CONN (AP)	1	
44D	52-312-9040	3	CONNECTOR,RCPT ELEC (98291) 357-7207-220 J28	1	
44E	M39012-55-3006	3	CONNECTOR,PLUG ELEC (81349) 357-7499-020	1	
45	652-6615-001	2	SYNTHESIZER,DIRECT DIGITAL (ESDS) A24	1	
	P313-0045-000	2	NUT,PLAIN,HEX SST, 6-32 (77250) 313-0045-000 (AP)	6	
	310-0071-000	2	WASHER,LOCK SST, 0.151 ID X 0.239 OD (79807) (AP)	6	
	310-0046-000	2	WASHER,FLAT SST, 0.147 ID X 0.312 OD (79807) (AP)	6	
	MS51957-28	2	SCREW,MACH SST, 6-32 X 3/8 (96906) 343-0169-000 (AP)	3	
	MS51957-30	2	SCREW,MACHINE CRES, 0.138-32 X 0.500IN (96906) 343-0171-000 (AP)	3	
	623-1379-001	2	BUSHING, COAX (AP)	6	
45A	651-4502-001	3	COVER,TOP	1	
	MS51957-3	3	SCREW,MACH CD PL STL, 2-56 X 1/4 (96906) 343-0124-000 (AP)	4	
	MS35338-134	3	WASHER,LOCK SST, 0.088 ID X 0.172 OD (96906) 310-0275-000 (AP)	4	
45B	646-5905-003	3	INTERFACE,DDS CONTROL(ESDS) A34	1	
45C	652-1015-002	3	VFO/VCO MODULE (ESDS) A33	1	
45D	646-5930-001	3	FREQUENCY STANDARD/ POWER SUPPLY (ESDS) A32	1	
45E	651-4506-001	3	BRACKET,EXTENDER	1	
	NAS671C6	3	NUT,PLAIN,HEXAGON CRES, 0.138-32 (80205) 313-0045-000 (AP)	4	
	CRES-.145IDX.236 OD	3	WASHER,LOCK CRES, 0.145 ID X 0.236 OD (79807) 310-0071-000 (AP)	4	
	CRES-.147IDX.312 ODX.032TH	3	WASHER,FLAT CRES, 0.147 ID X 0.312 OD (79807) 310-0046-000 (AP)	4	
	MS51957-28	3	SCREW,MACHINE CRES, 0.138-32 X 0.375IN (96906) 343-0169-000 (AP)	4	
45F	280-2745-040	3	LABEL,WARNING (12998)	1	
45G	652-7263-001	3	CHASSIS ASSEMBLY, DDS A24A1 (SEE FIG 4A)	1	
46			NOT USED		
47			NOT USED		
48			NOT USED		
49	634-8224-003	2	SIDEBOARD A28	1	
	M24308-26-1	2	SCREW ASSY (81349) 371-0062-000 (AP)	3	
	MS51957-13	2	SCREW,MACH STL, 4-40 X 1/4 (96906) 343-0133-000 (AP)	16	
	MS35338-135	2	WASHER,LOCK SST, 0.115 ID X 0.209 OD (96906) 310-0279-000 (AP)	16	

GROUP ASSEMBLY PARTS LIST

FIG-ITEM	PART NO	INDENT	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
1A-	310-6340-000	2	WASHER,FLAT SST, 0.125 ID X 0.281 OD (79807) (AP)	8	
	540-9039-003	2	POST, HEX .112-40X.44 (AP)	8	
50	647-7201-001	3	CABLE, DISPLAY-VBFO	1	
51	88089-4	4	CONNECTOR,RCPT ELEC (00779) 372-2653-140	1	
52	499440-3	4	CONNECTOR,RCPT ELEC (00779) 372-2653-130 A28J17	1	
53	88377-4	4	CONNECTOR,RCPT ELEC (00779) 372-2648-040 A28P9	1	
54	88377-4	4	CONNECTOR,RCPT ELEC (00779) 372-2648-040 A28P12	1	
55	DBM25S	3	CONNECTOR,RCPT ELEC (71468) 371-0221-000 A28J14	1	
56	634-8210-002	3	CABLE,SPECIAL PURPOSE	1	
57	88379-8	4	CONNECTOR,RCPT ELEC (00779) 372-2648-080 A28P11	1	
58	88379-7	4	CONNECTOR,RCPT ELEC (00779) 372-2648-070 A28P2	1	
59	1-88203-1	4	CONNECTOR,RCPT ELEC (00779) 372-2653-100	1	
59A	1-499566-0	4	CONNECTOR,PLUG ELEC (00779) 372-2648-070 A28P3	1	
59B	86286-1	4	PLUG,KEYING (00779) 372-2641-010	1	
60	499442-5	4	CONNECTOR,RCPT ELEC (00779) 372-2653-090 A28J11	1	
60A	88203-1	4	COVER,CONNECTOR ELEC (00779) 372-2653-020	1	
60B	499442-1	4	HOUSING,CONNECTOR ELEC (00779) 372-2653-010 A28P4	1	
60C	GTS-810-2807-S-10	4	CABLE,SP,ELECTRICAL (17217) 424-0862-010	AR	
61	3365-50	4	CABLE,SP,ELEC (75037) 424-0307-030	AR	
62	634-8228-001	3	CABLE, SPECIAL PURPOSE	1	
63	1-88203-1	4	CONNECTOR,RCPT ELEC (00779) 372-2653-100	1	
64	499442-5	4	CONNECTOR,RCPT ELEC (00779) 372-2653-090 A28J12	1	
65	88379-8	4	CONNECTOR,RCPT ELEC (00779) 372-2648-080 A28P3	1	
66	3399-6026	4	CONNECTOR,PLUG ELEC (53387) 372-2634-060 A28P4	1	
67	88377-5	4	CONNECTOR,RCPT ELEC (00779) 372-2648-050 A28P5	1	
68	499442-4	4	HOUSING,CONNECTOR ELEC (00779) 372-2653-070 A28J19	1	
68A	88203-7	4	COVER,CONNECTOR ELEC (00779) 372-2653-080	1	
69	3365-50	4	CABLE,SP,ELEC (75037) 424-0307-030	AR	
70	3365-34	4	CABLE,SP,ELEC (75037) 424-0307-010	AR	
71	MS25036-101	3	TERMINAL,LUG (96906) 304-0127-000	7	
72	MS25036-144	3	TERMINAL,LUG (96906) 304-1251-000	1	
73	638-6627-002	3	CIRCUIT BOARD, SIDEBOARD	1	
74	BS1020F65PAF	4	CONNECTOR,RCPT ELEC (55616) 372-2274-050 A28J9	1	
75	BS1020F65PAF	4	CONNECTOR,RCPT ELEC (55616) 372-2274-050 A28J8	1	
76	637-9314-001	4	CONNECTOR,MODIFIED A28J7	1	
77	BW1020F65PAF	5	CONNECTOR,RCPT ELEC (55616) 372-2274-040	1	
78	BS1225F28PFF	4	CONNECTOR,RCPT ELEC (17235) 372-7515-010 A28J6	1	
79	BS1225F28PFF	4	CONNECTOR,RCPT ELEC (17235) 372-7515-010 A28J5	1	
80	BS1225F28PFF	4	CONNECTOR,RCPT ELEC (17235) 372-7515-010 A28J4	1	
81	BS1225F28PFF	4	CONNECTOR,RCPT ELEC (17235) 372-7515-010 A28J3	1	
82	BS1225F28PFF	4	CONNECTOR,RCPT ELEC (17235) 372-7515-010 A28J2	1	
83	BS1225F28PFF	4	CONNECTOR,RCPT ELEC (17235) 372-7515-010 A28J1	1	
84	BS1225F28PFF	4	CONNECTOR,RCPT ELEC (17235) 372-7515-010 A28J15	1	
85	BS1225F28PFF	4	CONNECTOR,RCPT ELEC (17235) 372-7515-010 A28J14	1	
86	BS1225F28PFF	4	CONNECTOR,RCPT ELEC (17235) 372-7515-010 A28J13	1	
87	BS1225F28PFF	4	CONNECTOR,RCPT ELEC (17235) 372-7515-010 A28J10	1	
88	97096900	4	CONNECTOR,RCPT ELEC (17235) 372-7600-280	13	
88A	652-2223-001	3	CABLE ASSEMBLY, RIBBON-NO 4	1	
88B	499568-4	4	CONNECTOR,PLUG ELEC (00779) 372-2648-040 A28P6	1	
88C	86286-1	4	PLUG,KEYING (00779) 372-2641-010	1	
89	659-2053-002	2	FILTER,RFI-MODIFIED A27	1	
	M24308-26-1	2	SCREW ASSY (81349) 371-0062-000 (AP)	1	
	MS51957-3	2	SCREW,MACH CD PL STL, 2-56 X 1/4 (96906) 343-0124-000 (AP)	4	
	MS35338-134	2	WASHER,LOCK SST, 0.088 ID X 0.172 OD (96906) 310-0275-000 (AP)	2	
	540-9006-003	2	POST, ELEC-MECH (AP)	2	
89A	637-2712-003	3	FILTER,RFI (SEE FIG 6)	1	
89B	652-2222-001	3	CABLE ASSEMBLY A27W1	1	
89C	499568-1	4	CONNECTOR,PLUG ELEC (00779) 372-2648-020	1	
89D	86286-1	4	PLUG,KEYING (00779) 372-2641-010	1	
90	642-2454-001	2	CABLE, COAX-RF	1	

GROUP ASSEMBLY PARTS LIST

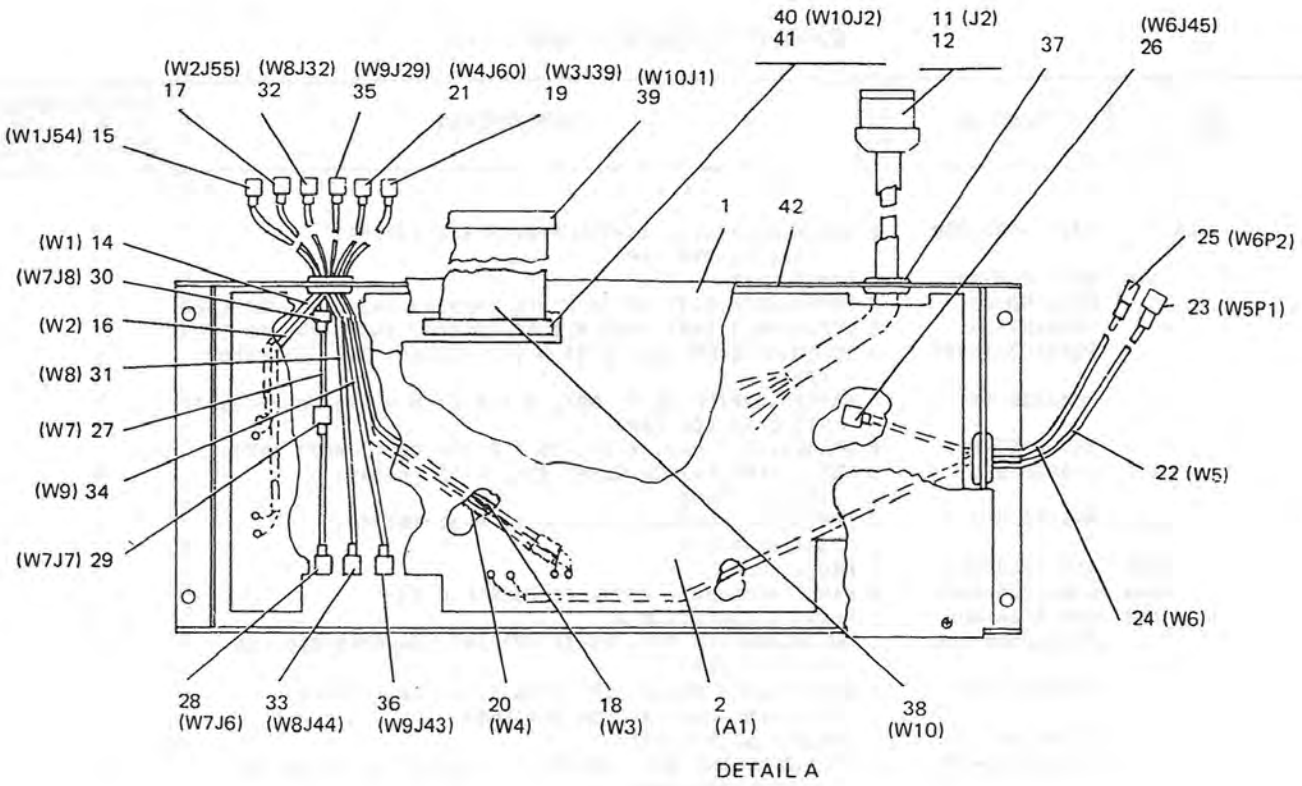
FIG-ITEM	PART NO	INDENT	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
1A-	623-1379-001	2	BUSHING, COAX (AP)	4	
91	51-330-3188	3	CONNECTOR,RCPT ELEC (98291) 357-7374-010 J50	1	
92	51-071-0019	3	CONNECTOR,TEE (98291) 357-7533-010 J51	1	
93	51-330-3188	3	CONNECTOR,RCPT ELEC (98291) 357-7374-010 J52	1	
94	51-071-0019	3	CONNECTOR,TEE (98291) 357-7533-010 J53	1	
95			NOT USED		
96			NOT USED		
97			NOT USED		
98			NOT USED		
99			NOT USED		
100			NOT USED		
101	637-1525-003	2	CABLE, COAX	1	
	646-7008-001	2	SPRING, GND (AP)	2	
	623-1379-001	2	BUSHING, COAX (AP)	1	
102	52-312-9040	3	CONNECTOR,RCPT ELEC (98291) 357-7207-220 J35	1	
103	801-B3800B75	3	CONNECTOR,RCPT ELEC (94375) 357-7129-010 J25	1	
104	637-1525-003	2	CABLE, COAX	1	
	623-1379-001	2	BUSHING, COAX (AP)	1	
105	52-312-9040	3	CONNECTOR,RCPT ELEC (98291) 357-7207-220 J36	1	
106	801-B3800B75	3	CONNECTOR,RCPT ELEC (94375) 357-7129-010 J24	1	
107	637-1525-003	2	CABLE, COAX	1	
	623-1379-001	2	BUSHING, COAX (AP)	1	
108	52-312-9040	3	CONNECTOR,RCPT ELEC (98291) 357-7207-220 J37	1	
109	801-B3800B75	3	CONNECTOR,RCPT ELEC (94375) 357-7129-010 J26	1	
110	637-1525-003	2	CABLE, COAX	1	
	623-1379-001	2	BUSHING, COAX (AP)	1	
111	52-312-9040	3	CONNECTOR,RCPT ELEC (98291) 357-7207-220 J38	1	
112	801-B3800B75	3	CONNECTOR,RCPT ELEC (94375) 357-7129-010 J23	1	
113	637-1525-002	2	CABLE, COAX	1	
	623-1379-001	2	BUSHING, COAX (AP)	1	
114	52-312-9040	3	CONNECTOR,RCPT ELEC (98291) 357-7207-220 J40	1	
115	801-B3800B75	3	CONNECTOR,RCPT ELEC (94375) 357-7129-010 J22	1	
116	637-1526-002	2	CABLE, COAX	1	
	623-1379-001	2	BUSHING, COAX (AP)	2	
117	52-312-9040	3	CONNECTOR,RCPT ELEC (98291) 357-7207-220 J41	1	
118	52-312-9040	3	CONNECTOR,RCPT ELEC (98291) 357-7207-220 J42	1	
119			NOT USED		
120			NOT USED		
121			NOT USED		
122			NOT USED		
123			NOT USED		
124			NOT USED		
125	652-7204-001	2	CABLE, INTERFACE - RECEIVER TERMINAL BOARD	1	
125A	34080	3	TERMINAL,LUG (00779) 304-0414-000	12	
125B	652-7217-014	3	MARKER,IDENT	1	
125C	MS3367-5-9	3	CLAMP LOOP (96906) 435-0002-090	2	
125D	651-7856-082	3	MARKER,IDENT	1	
125E	MS3121F14-19S	3	CONNECTOR,PLUG ELEC (96906) 359-0062-230	1	
125F	M39029/32-259	3	CONTACT,SOCKET (81349) 359-0032-020	19	
126	634-8226-002	2	HARNESS,WIRING W1	1	
	P313-0045-000	2	NUT,PLAIN,HEX SST, 6-32 (77250) 313-0045-000 (AP)	4	
	310-0071-000	2	WASHER,LOCK SST, 0.151 ID X 0.239 OD (79807) (AP)	4	
	MS51957-30	2	SCREW,MACH SST, 6-32 X 1/2 (96906) 343-0171-000 (AP)	4	
127	CK63AW103M	3	CAPACITOR,FXD CER DIEL, 10000PF, 20%, 500V (81349) 913-1188-000 W1C47	1	
128	CK63AW103M	3	CAPACITOR,FXD CER DIEL, 10000PF, 20%, 500V (81349) 913-1188-000 W1C46	1	
129	CK63AW103M	3	CAPACITOR,FXD CER DIEL, 10000PF, 20%, 500V (81349) 913-1188-000 W1C49	1	
130	CK63AW103M	3	CAPACITOR,FXD CER DIEL, 10000PF, 20%, 500V (81349) 913-1188-000 W1C48	1	
131	CK63AW103M	3	CAPACITOR,FXD CER DIEL, 10000PF, 20%, 500V (81349) 913-1188-000 W1C39	1	

GROUP ASSEMBLY PARTS LIST

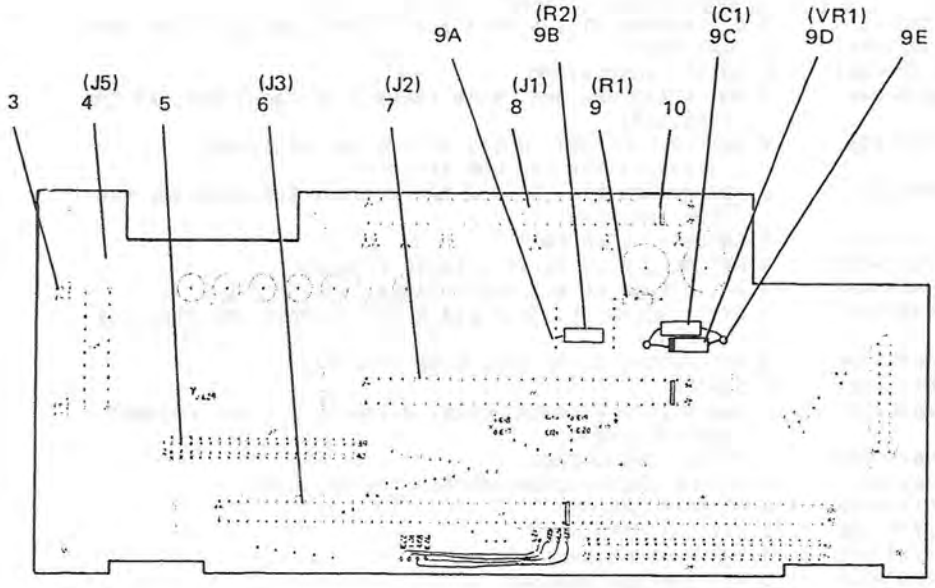
FIG-ITEM	PART NO	INDENT	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
1A-132	CK63AW103M	3	CAPACITOR,FXD CER DIEL, 10000PF, 20%, 500V (81349) 913-1188-000 W1C38	1	
133	CK63AW103M	3	CAPACITOR,FXD CER DIEL, 10000PF, 20%, 500V (81349) 913-1188-000 W1C37	1	
134	CK63AW103M	3	CAPACITOR,FXD CER DIEL, 10000PF, 20%, 500V (81349) 913-1188-000 W1C36	1	
135	CK63AW103M	3	CAPACITOR,FXD CER DIEL, 10000PF, 20%, 500V (81349) 913-1188-000 W1C35	1	
136	CK63AW103M	3	CAPACITOR,FXD CER DIEL, 10000PF, 20%, 500V (81349) 913-1188-000 W1C34	1	
137	403	3	TERMINAL,LUG (79963) 304-1089-000	2	
138	353-18-12-001	3	TERMINAL STRIP (71785) 367-0020-000 W1TB1	1	
139	634-8227-002	2	HARNESS,WIRING W2	1	
	P313-0045-000	2	NUT,PLAIN,HEX SST, 6-32 (77250) 313-0045-000 (AP)	4	
	310-0071-000	2	WASHER,LOCK SST, 0.151 ID X 0.239 OD (79807) (AP)	4	
	MS51957-30	2	SCREW,MACH SST, 6-32 X 1/2 (96906) 343-0171-000 (AP)	4	
	642-2455-001	2	GUARD, CABLE (AP)	1	
	630-2189-001	2	GUARD, CABLE (AP)	1	
	115-0260-003	2	SPACER (74970) 150-1012-030 (AP)	4	
140	CK63AW103M	3	CAPACITOR,FXD CER DIEL, 10000PF, 20%, 500V (81349) 913-1188-000 W2C51	1	
140A	CK63AW103M	3	CAPACITOR,FIXED CER DIEL, 10000PF, 20%, 500V (81349) 913-1188-000 W2C55	1	
141	CK63AW103M	3	CAPACITOR,FXD CER DIEL, 10000PF, 20%, 500V (81349) 913-1188-000 W2C50	1	
141A	CK63AW103M	3	CAPACITOR,FIXED CER DIEL, 10000PF, 20%, 500V (81349) 913-1188-000 W2C54	1	
142	CK63AW103M	3	CAPACITOR,FXD CER DIEL, 10000PF, 20%, 500V (81349) 913-1188-000 W2C45	1	
143	CK63AW103M	3	CAPACITOR,FXD CER DIEL, 10000PF, 20%, 500V (81349) 913-1188-000 W2C44	1	
144	CK63AW103M	3	CAPACITOR,FXD CER DIEL, 10000PF, 20%, 500V (81349) 913-1188-000 W2C43	1	
145	CK63AW103M	3	CAPACITOR,FXD CER DIEL, 10000PF, 20%, 500V (81349) 913-1188-000 W2C42	1	
146	CK63AW103M	3	CAPACITOR,FXD CER DIEL, 10000PF, 20%, 500V (81349) 913-1188-000 W2C41	1	
147	CK63AW103M	3	CAPACITOR,FXD CER DIEL, 10000PF, 20%, 500V (81349) 913-1188-000 W2C40	1	
148	403	3	TERMINAL,LUG (79963) 304-1089-000	2	
149	353-18-12-001	3	TERMINAL STRIP (71785) 367-0020-000 W2TB2	1	
150	634-8225-001	2	CABLE ASSY, SPEAKER W3	1	
	P313-0045-000	2	NUT,PLAIN,HEX SST, 6-32 (77250) 313-0045-000 (AP)	4	
	310-0071-000	2	WASHER,LOCK SST, 0.151 ID X 0.239 OD (79807) (AP)	4	
	MS51957-30	2	SCREW,MACH SST, 6-32 X 1/2 (96906) 343-0171-000 (AP)	4	
151	805-014X5V0103Z	3	CAPACITOR,FXD CER DIEL, 0.01UF, P80%M20%, 100V (12294) 913-3680-000 W3C53	1	
152	805-014X5V0103Z	3	CAPACITOR,FXD CER DIEL, 0.01UF, P80%M20%, 100V (12294) 913-3680-000 W3C52	1	
153	60617-1	3	SOCKET CONTACT (00779) 372-5884-060	2	
154	1-480318-0	3	HOUSING,SOCKET (00779) 372-5884-330 W3J47	1	
155	600J	3	JUMPER,BARRIER (75382) 367-0854-000	1	
156	353-18-05-001	3	TERMINAL STRIP (71785) 367-0013-000 W3TB3	1	
157	403	2	TERMINAL,LUG (79963) 304-1089-000	5	
	NAS671C6	2	NUT,PLAIN,HEXAGON CRES, 0.138-32 (80205) 313-0045-000 (AP)	4	
	CRES-.145IDX.236 OD	2	WASHER,LOCK CRES, 0.145 ID X 0.236 OD (79807) 310-0071-000 (AP)	4	
	MS51957-27	2	SCREW,MACHINE CRES, 0.138-32 X 0.312IN (96906) 343-0168-000 (AP)	4	
158			NOT USED		
159	637-9121-001	2	SUPPORT, RADIO	1	

GROUP ASSEMBLY PARTS LIST

FIG-ITEM	PART NO	INDENT	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
1A-	P325-0051-000	2	SCREW,MACH STL, 10-32UNF-2A X 1/2 (77250) 325-0051-000 (AP)	2	
160	652-7268-001	2	PANEL,REAR	1	
	MS51958-61	2	SCREW,MACH SST, 10-32 X 3/8 (96906) 343-0226-000 (AP)	2	
	MS51957-29	2	SCREW,MACH SST, 6-32 X 7/16 (96906) 343-0170-000 (AP)	7	
	P343-0311-000	2	SCREW,MACH NP BRS, 8-32 X 1/2 (77250) 343-0311-000 (AP)	1	
	MS35338-99	2	WASHER,SPRING CD PL BRZ, 0.168 ID X 0.293 OD (96906) 310-0098-000 (AP)	1	
	310-0057-000	2	WASHER,FLAT BRS, 0.172 ID X 0.375 OD (79807) (AP)	1	
161	M45938/5-6	3	NUT,SLFLKG,CLINCH CD PL STL, 6-32 (81349) 333-0842-000	9	
162	M45938/5-7	3	NUT,SLFLKG,CLINCH CD PL STL, 8-32 (81349) 333-0844-000	1	
163	652-7268-002	3	PANEL,REAR	1	
164	634-8200-005	2	PANEL ASSEMBLY, FRONT A2 (SEE FIG 2)	1	
165	635-9616-001	2	FLANGE, CHASSIS MTG	2	
	P334-0268-000	2	NUT,PLAIN,HEX SST, 10-32 (77250) 334-0268-000 (AP FOR 164,165)	4	
	MS35338-138	2	WASHER,LOCK SST, 0.194 ID X 0.334 OD (96906) 310-0284-000 (AP FOR 164,165)	4	
	541-6106-002	2	SPACER, SLEEVE (AP)	4	
	P312-0116-000	2	STUD,CONT THD STL, 10-32 X 1 (77250) 312-0116-000 (AP FOR 164,165)	4	
166	280-2745-020	2	LABEL,PRESS SENS (12998)	1	
167	23071-4	2	CARD GUIDE,PC (18677) 150-0810-040	26	
	MS51957-13	2	SCREW,MACH STL, 4-40 X 1/4 (96906) 343-0133-000 (AP)	16	
168	646-7013-001	2	PARTITION	1	
169	646-7014-001	2	SHEET, INSULATING	2	
	MS35649-244	2	NUT,PLAIN,HEX SST, 4-40 (96906) 313-0043-000 (AP FOR 168,169)	4	
	MS35338-135	2	WASHER,LOCK SST, 0.115 ID X 0.209 OD (96906) 310-0279-000 (AP FOR 168,169)	4	
	MS51957-13	2	SCREW,MACH STL, 4-40 X 1/4 (96906) 343-0133-000 (AP FOR 168,169)	4	
170	634-8177-001	2	CHASSIS, ELEC EQPT	1	
171	333-1455-050	3	NUT,SLFLKG CD PL STL, 10-32 (27687)	10	
172	68NA7-68-62	3	NUT,SLFLKG,PL AL, 6-32 (72962) 333-5620-000	4	
	MS20470AD3-4	3	RIVET,SOLID AL, 3/32 DIA X 1/4 (96906) 305-1155-000 (AP)	8	
173	333-1455-030	3	NUT,SLFLKG CD PL STL, 6-32 (27687)	4	
174	634-8177-013	3	SPACER	2	
175	MS21209C0615	3	INSERT,SCREW THREAD CRES, 0.138-32 X 0.207 (96906) 012-2111-000	11	
176	638-4566-001	3	PLATE, INSULATING	3	
177	MS21266-1N	3	GROMMET,PLSTC CHAN (96906) 150-0173-000	AR	
178	634-8177-002	3	CHASSIS, WELDED	1	
179	637-1769-001	2	KIT, MAINTENANCE	1	
180	637-1777-001	3	INSTRUCTION SHEET	1	
181	024-0057-000	3	KEY,SCH SCR (08664)	1	
182	024-0058-000	3	KEY,SCH SCR (08664)	1	
183	AGC250-1	3	FUSE,CRTG (71400) 264-0721-000	5	
184	AGC250-2	3	FUSE,CRTG (71400) 264-0723-000	5	
185	MS25237-327-15	3	LAMP,INCAND (96906) 262-1106-000	2	



DETAIL A



DETAIL A

TPA-7726-019

DDS Chassis Assembly A24A1
Figure 4A

GROUP ASSEMBLY PARTS LIST

FIG-ITEM	PART NO	INDENT	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
4A-	652-7263-001	1	CHASSIS ASSEMBLY, DDS A24A1 (SEE FIG 1-45G FOR NHA)	REF	
1	651-4499-001	2	COVER, DDS BOTTOM	1	
	MS51957-3	2	SCREW,MACH CD PL STL, 2-56 X 1/4 (96906) 343-0124-000 (AP)	6	
	MS35338-134	2	WASHER,LOCK SST, 0.088 ID X 0.172 OD (96906) 310-0275-000 (AP)	6	
2	646-6259-002	2	SIDEBOARD, DDS A24A1A1	1	
	MS51957-15	2	SCREW,MACH STL, 4-40 X 3/8 (96906) 343-0135-000 (AP)	8	
	MS35338-135	2	WASHER,LOCK SST, 0.115 ID X 0.209 OD (96906) 310-0279-000 (AP)	8	
3	NA1104-026	3	CONTACT,ELECTRICAL (57863) 372-2601-026	17	
4	BS1225F10PFF	3	CONNECTOR,RCPT ELEC (55616) 372-7515-090 A24A1A1J5	1	
5	NA1104-046	3	CONTACT,ELECTRICAL (57863) 372-2601-046	90	
6	BS1020F65PAF010	3	CONNECTOR,RCPT ELEC (55616) 372-2274-050 A24A1A1J3	1	
7	BS1225F28PFF	3	CONNECTOR,RCPT ELEC (55616) 372-7515-010 A24A1A1J2	1	
8	BS1225F28PFF	3	CONNECTOR,RCPT ELEC (55616) 372-7515-010 A24A1A1J1	1	
9	RCR07G102KS	3	RESISTOR,FIXED CMPSN, 1K, 10%, 1/4W (81349) 745-0749-000 A24A1A1R1	1	
9A	NA1104-027	3	CONTACT,ELECTRICAL (57863) 372-2601-027	1	
9B	RCR32G331KS	3	RESISTOR,FIXED CMPSN, 330 OHMS, 10%, 1W (81349) 745-3331-000 A24A1A1R2	1	
9C	M39003/01-2257	3	CAPACITOR,FIXED ELCTLT, 33UF, 10%, 10V (81349) 184-9086-170 A24A1A1C1	1	
9D	1N756A	3	SEMICOND DEVICE (81483) 353-2720-000 A24A1A1VR1	1	
9E	012-3401-000599W HT	3	TERMINAL,FEEDTHRU (98291) 306-1851-000	2	
10	5000-1710	3	CONNECTOR,RCPT ELEC (55616) 372-7600-280	3	
11	126-1082	2	CONNECTOR,RCPT ELEC (02660) 372-1539-000 A24A1J2	1	
12	126-1063	2	COVER,CONNECTOR (02660) 372-1159-000	1	
13			NOT USED		
14	637-1529-001	2	CABLE ASSY,COAXIAL RF A24A1W1	1	
15	52-312-9040	3	CONNECTOR,RCPT ELEC (98291) 357-7207-220 A24A1W1J54	1	
16	637-1529-001	2	CABLE ASSY,COAXIAL RF A24A1W2	1	
17	52-312-9040	3	CONNECTOR,RCPT ELEC (98291) 357-7207-220 A24A1W2J55	1	
18	637-1529-002	2	CABLE, RF A24A1W3	1	
19	52-312-9040	3	CONNECTOR,RCPT ELEC (98291) 357-7207-220 A24A1W3J39	1	
20	637-1529-003	2	CABLE, RF A24A1W4	1	
21	52-312-9040	3	CONNECTOR,RCPT ELEC (98291) 357-7207-220 A24A1W4J60	1	
22	652-7514-001	2	CABLE, RF A24A1W5	1	
23	M39012-73-0003	3	CONNECTOR,PLUG ELEC (81349) 357-9600-000 A24A1W5P1	1	
24	652-7398-001	2	CABLE, RF A24A1W6	1	
	623-1379-001	2	ADAPTER,CONN (AP)	1	
25	52-312-9040	3	CONNECTOR,RCPT ELEC (98291) 357-7207-220 A24A1W6P2	1	
26	M39012-55-3006	3	CONNECTOR,PLUG ELEC (81349) 357-7499-020 A24A1W6J45	1	
27	651-4504-001	2	CABLE, RF A24A1W7	1	
	623-1379-001	2	ADAPTER,CONN (AP)	3	
28	52-312-9040	3	CONNECTOR,RCPT ELEC (98291) 357-7207-220 A24A1W7J6	1	
29	51-071-0019	3	CONNECTOR,TEE (98291) 357-7533-010 A24A1W7J7	1	
30	52-312-9040	3	CONNECTOR,RCPT ELEC (98291) 357-7207-220 A24A1W7J8	1	
31	637-1526-005	2	CABLE, RF A24A1W8	1	
	623-1379-001	2	ADAPTER,CONN (AP)	1	
32	52-312-9040	3	CONNECTOR,RCPT ELEC (98291) 357-7207-220 A24A1W8J32	1	
33	52-312-9040	3	CONNECTOR,RCPT ELEC (98291) 357-7207-220 A24A1W8J44	1	
34	637-1526-003	2	CABLE ASSY,COAXIAL RF A24A1W9	1	
	623-1379-001	2	ADAPTER,CONN (AP)	1	
35	52-312-9040	3	CONNECTOR,RCPT ELEC (98291) 357-7207-220 A24A1W9J29	1	
36	52-312-9040	3	CONNECTOR,RCPT ELEC (98291) 357-7207-220 A24A1W9J43	1	
37	7-50-60	2	GROMMET,RBR (77969) 201-0088-000	3	
38	652-7365-001	2	CABLE, RIBBON A24A1W10	1	
39	1-499566-0	3	CONNECTOR,PLUG ELEC (00779) 372-2648-070 A24A1W10J1	1	
40	1-499566-0	3	CONNECTOR,PLUG ELEC (00779) 372-2648-070 A24A1W10J2	1	
41	86286-1	3	PLUG,KEYING (00779) 372-2641-010	1	
42	651-4497-001	2	CHASSIS	1	

DIAGRAMS (523-0770707-002218)

List of Illustrations — Replace list of illustrations with the following:

Figure **Page**

1 Chassis, Main Sideboard and Ribbon Cabling Diagram
1A HF-8054A Receiver (622-3475-210) Chassis, Main Sideboard and Ribbon Cabling, Schematic Diagram
2 Front Panel Assembly A2 (634-8200-XXX), Schematic Diagram
3 Synthesizer Chassis A2A4A1 (638-6973-001), Schematic Diagram
3A Direct Digital Synthesizer Chassis A24 (652-6615-001), Schematic Diagram
4 HF-8054( ) Receiver, Cabling, Connector Layout and Pin Numbering
4A HF-8054A Receiver (622-3475-210), Cabling, Connector Layout and Pin Numbering
5 Switch Mounting Board A2A2, Layout and Pin Numbering
6 Remove Control Word Format and Pin Assignments

2. CONFIGURATION EFFECTIVITY

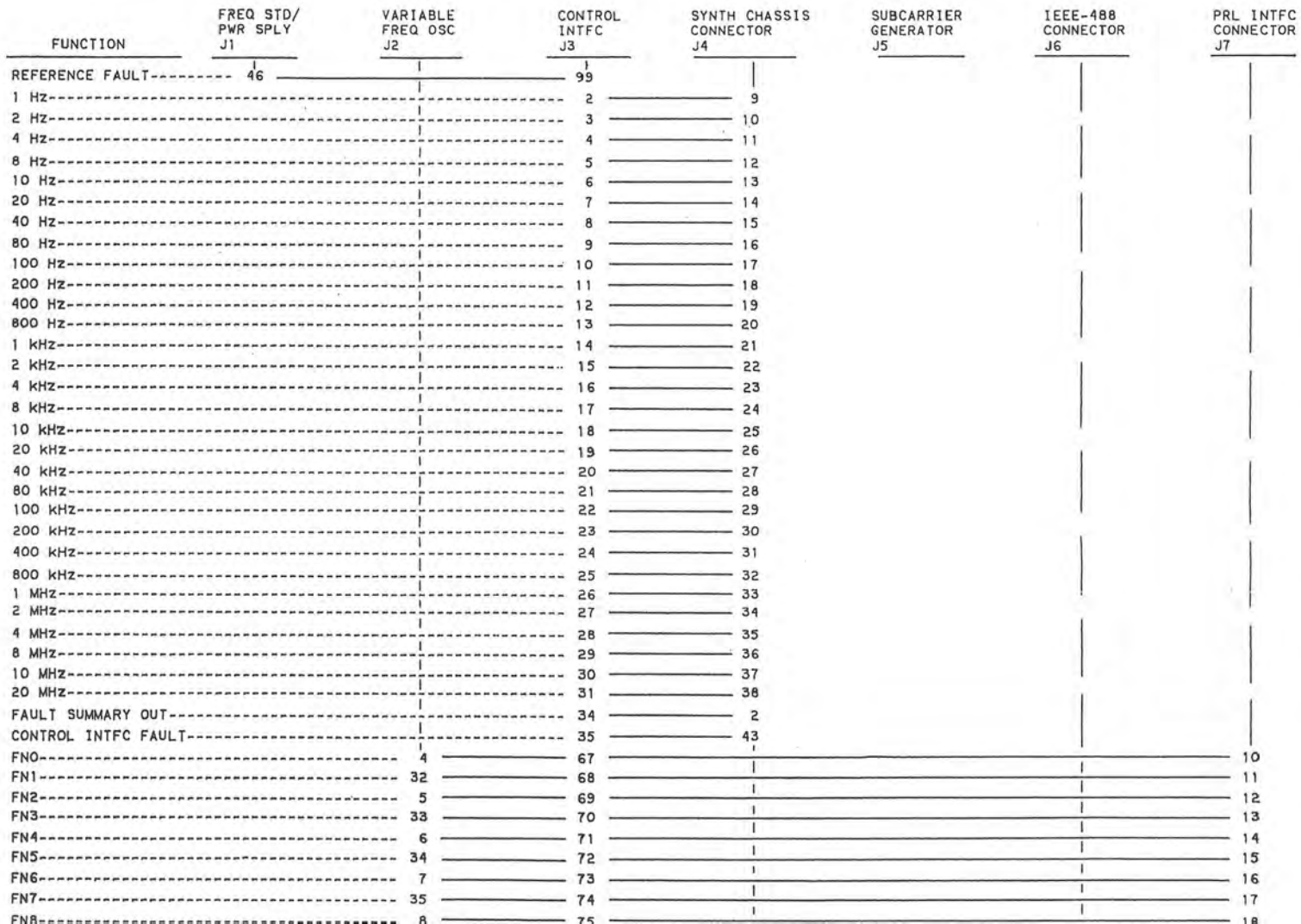
Add the following entries to the list of units subassemblies.

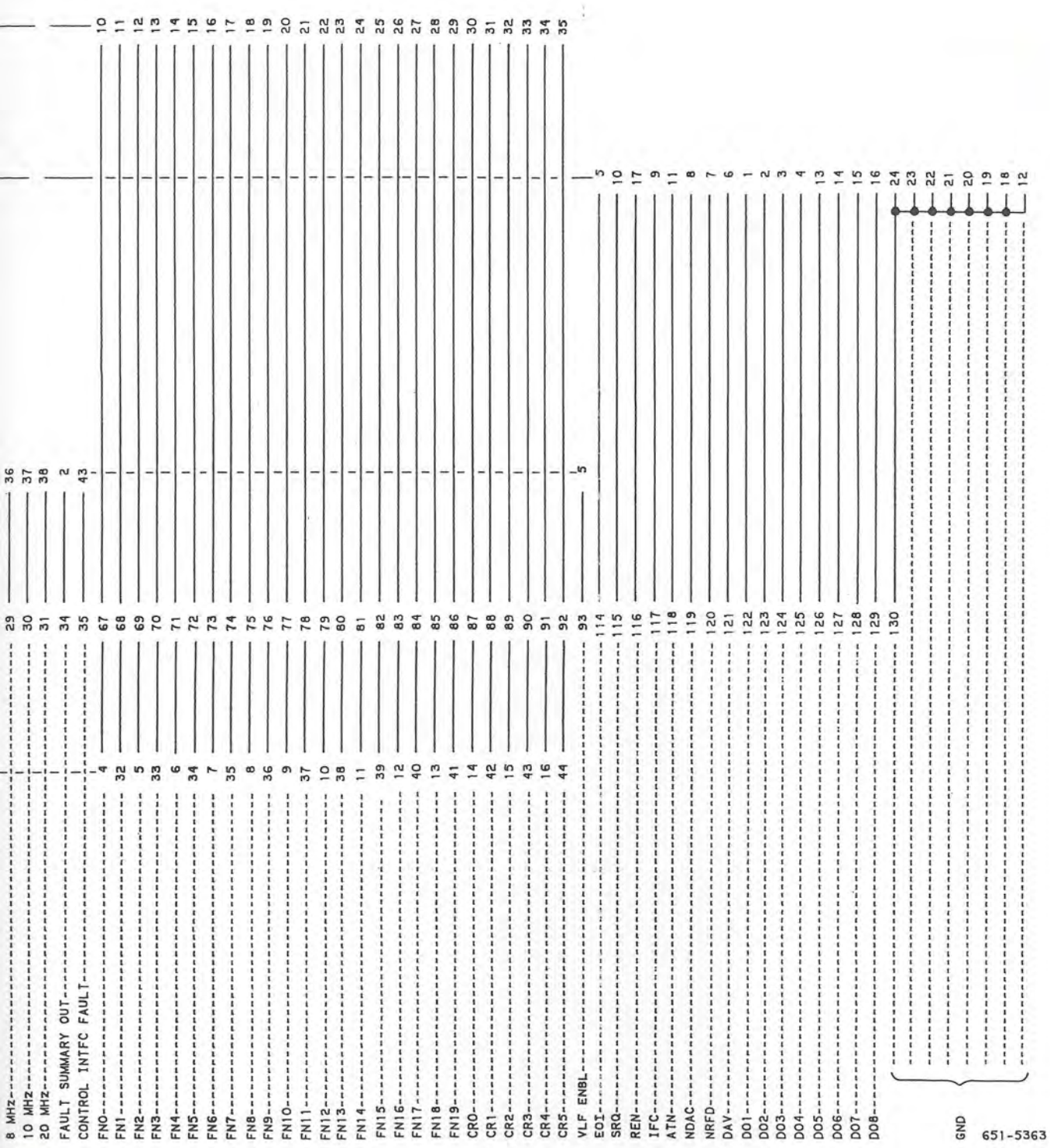
UNIT/SUBASSEMBLY	PART NUMBER	LATEST EFFECTIVITY
HF-8054A Receiver	622-3475-210	AH
RFI Filter Modified	659-2053-002	B
Sideboard Assembly A28	634-8224-003	F
Direct Digital Synthesizer	652-6615-001	A
DS Sideboard A24A1 (P/O A24)	646-6259-001	E
RF Cable Assembly (P/O A24)	652-7398-001	—
Ribbon Cable Assembly (P/O A24)	652-7514-001	—

Place figures 1A, 3A, and 4A behind the appropriate figures. Replace figure 6 with figure 6 provided.

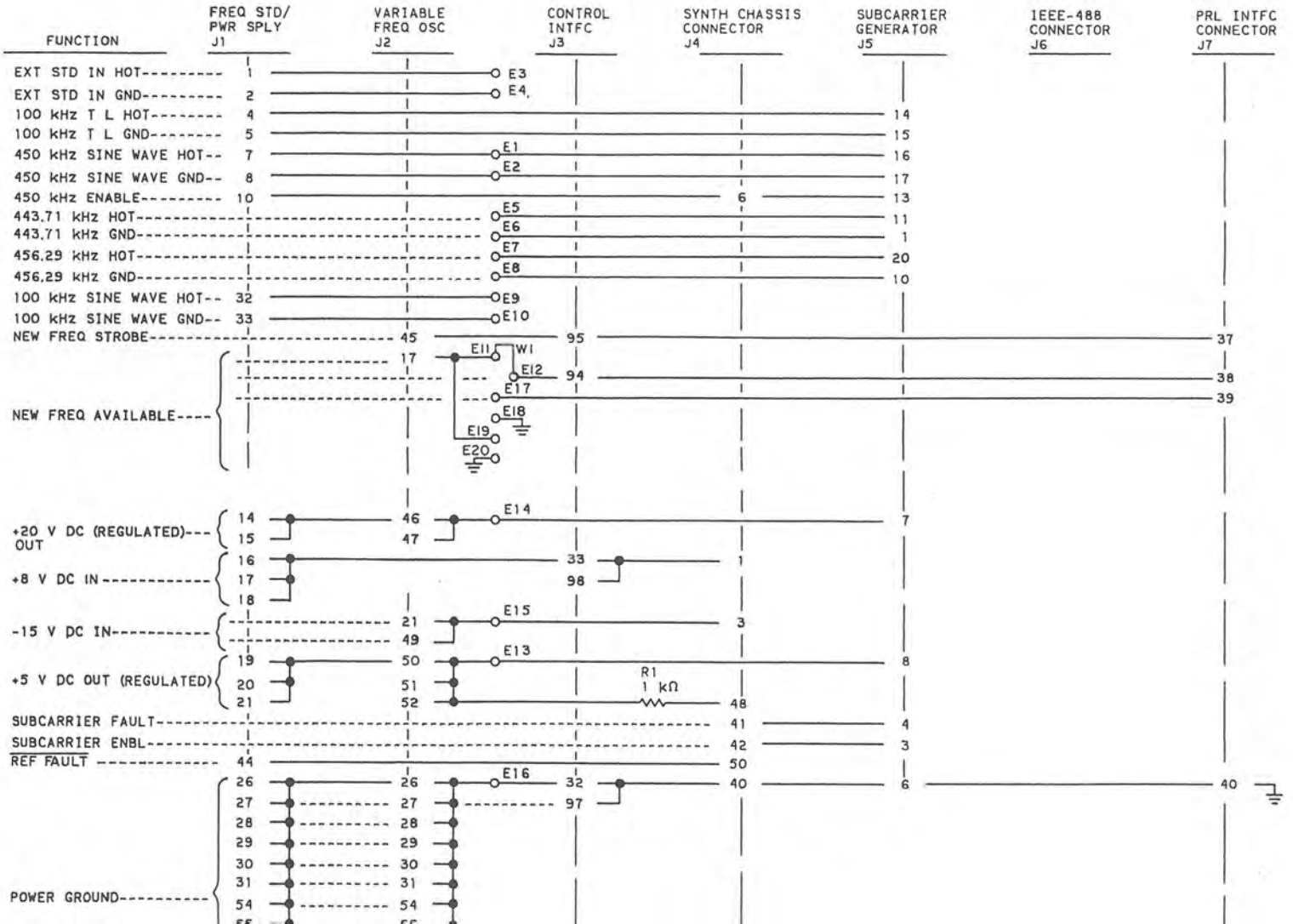
Illustration Not Available

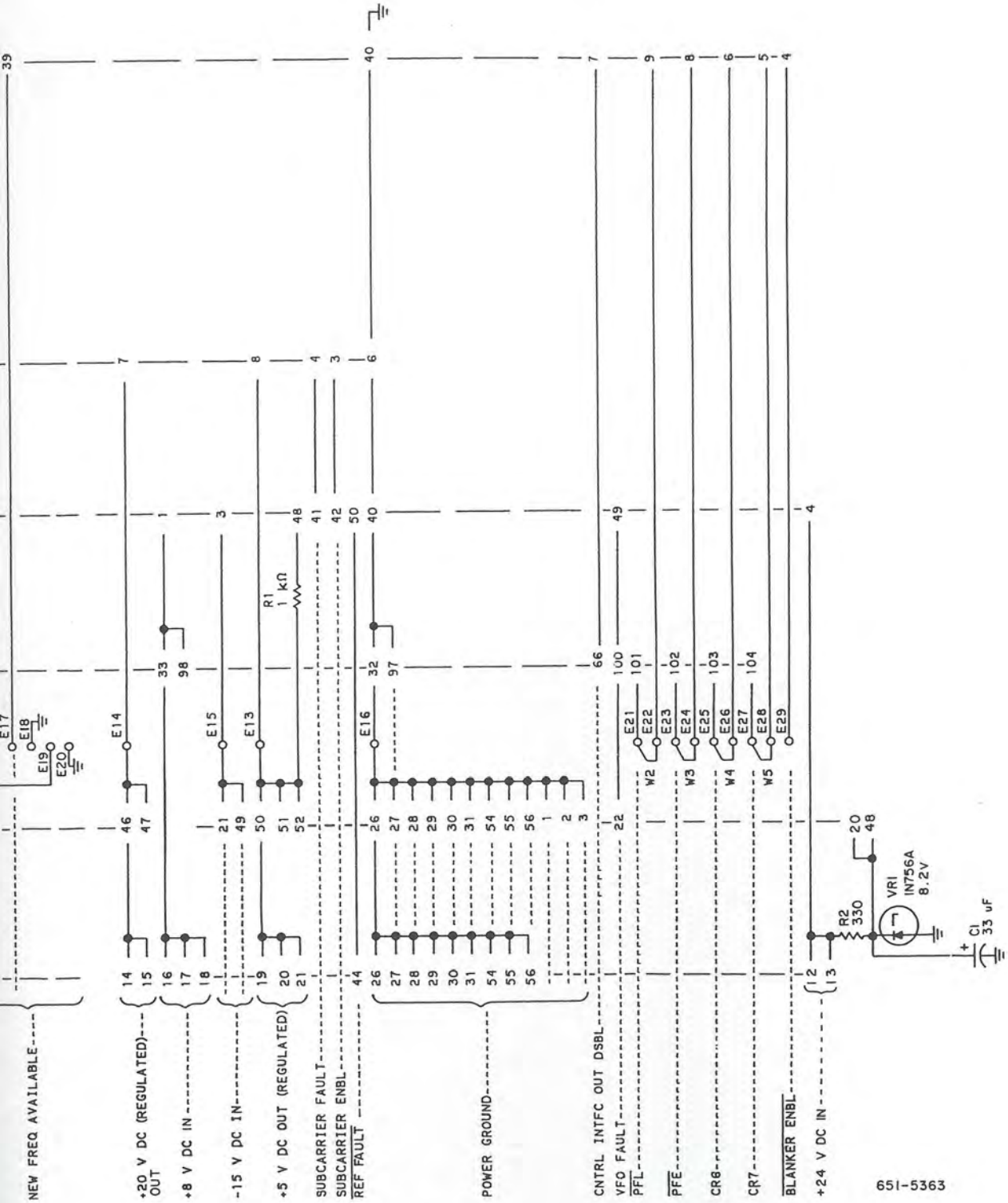
HF-8054A Receiver (622-3475-210) Chassis, Main Sideboard and Ribbon Cabling, Schematic Diagram
Figure 1A


FUNCTION
FREQ STD/ PWR SPLY J1
VARIABLE FREQ OSC J2
CONTROL INTFC J3
SYNTH CHASSIS CONNECTOR J4
SUBCARRIER GENERATOR J5
IEEE-488 CONNECTOR J6
PRL INTFC CONNECTOR J7
REFERENCE FAULT 46 99
1 Hz 2 9
2 Hz 3 10
4 Hz 4 11
8 Hz 5 12
10 Hz 6 13
20 Hz 7 14
40 Hz 8 15
80 Hz 9 16
100 Hz 10 17
200 Hz 11 18
400 Hz 12 19
800 Hz 13 20
1 kHz 14 21
2 kHz 15 22
4 kHz 16 23
8 kHz 17 24
10 kHz 18 25
20 kHz 19 26
40 kHz 20 27
80 kHz 21 28
100 kHz 22 29
200 kHz 23 30
400 kHz 24 31
800 kHz 25 32
1 MHz 26 33
2 MHz 27 34
4 MHz 28 35
8 MHz 29 36
10 MHz 30 37
20 MHz 31 38
FAULT SUMMARY OUT 34 2
CONTROL INTFC FAULT 35 43
FN0 4 67 10
FN1 32 68 11
FN2 5 69 12
FN3 33 70 13
FN4 6 71 14
FN5 34 72 15
FN6 7 73 16
FN7 35 74 17
FN8 8 75 18

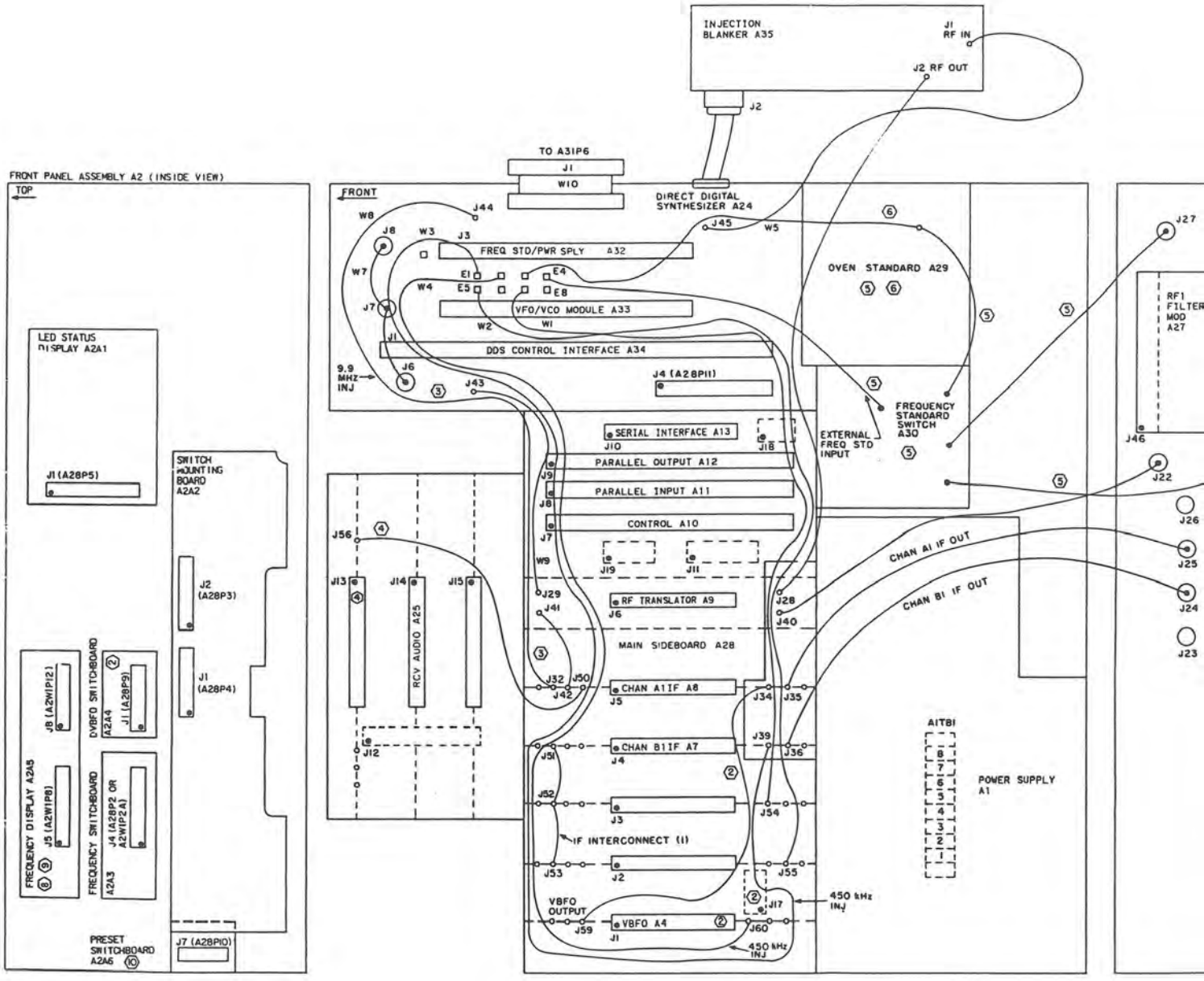


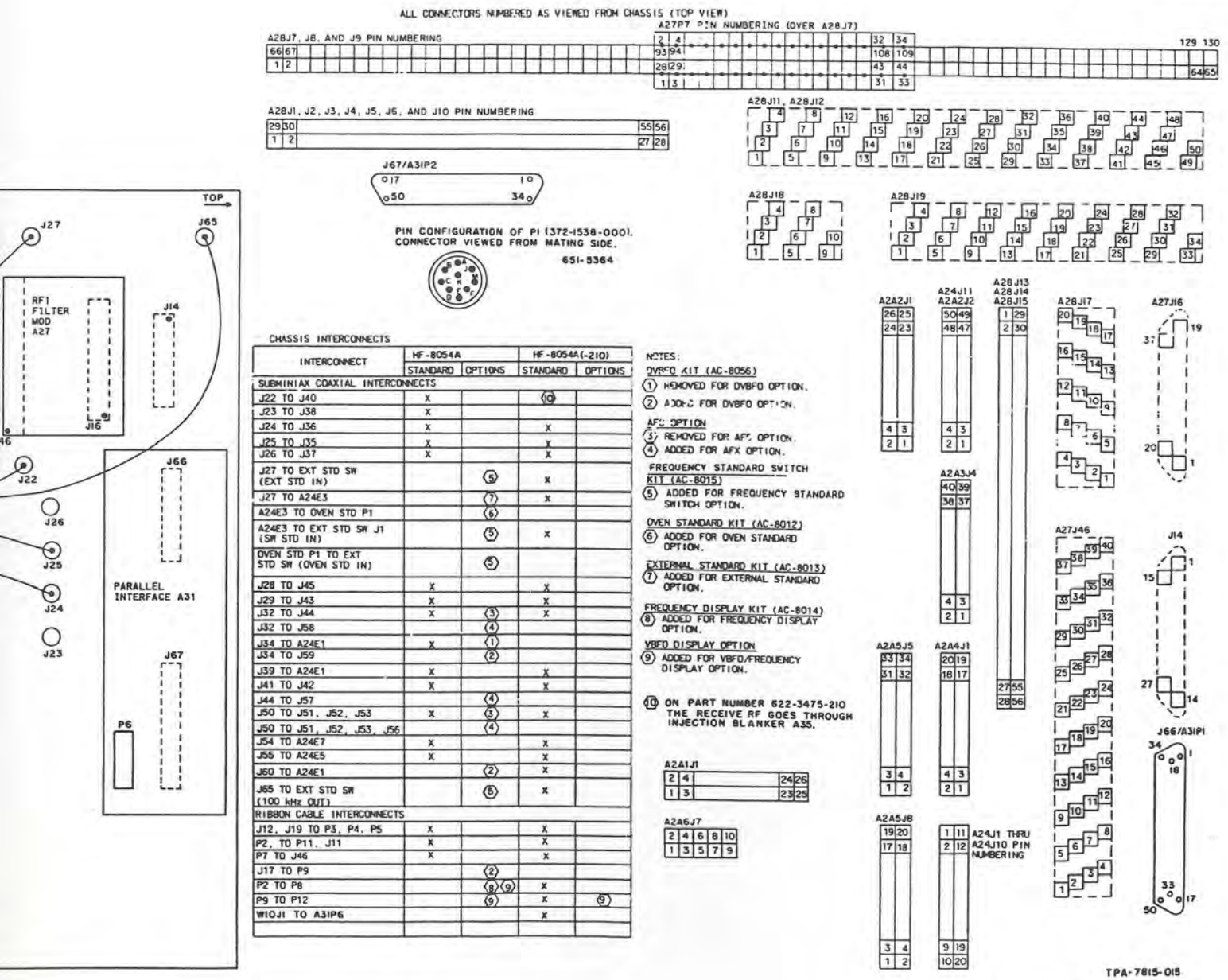
Direct Digital Synthesizer Chassis A24 (652-6615-001), Schematic Diagram Figure 3A (Sheet 1 of 2)


FUNCTION
FREQ STD/ PWR SPLY J1
VARIABLE FREQ OSC J2
CONTROL INTFC J3
SYNTH CHASSIS CONNECTOR J4
SUBCARRIER GENERATOR J5
IEEE-488 CONNECTOR J6
PRL INTFC CONNECTOR J7
EXT STD IN HOT
EXT STD IN GND
100 kHz T L HOT
100 kHz T L GND
450 kHz SINE WAVE HOT
450 kHz SINE WAVE GND
450 kHz ENABLE
443.71 kHz HOT
443.71 kHz GND
456.29 kHz HOT
456.29 kHz GND
100 kHz SINE WAVE HOT
100 kHz SINE WAVE GND
NEW FREQ STROBE
NEW FREQ AVAILABLE
+20 V DC (REGULATED) OUT
+8 V DC IN
-15 V DC IN
+5 V DC OUT (REGULATED)
R1 1 kΩ
SUBCARRIER FAULT
SUBCARRIER ENBL
REF FAULT
POWER GROUND
E1
E2
E3
E4
E5
E6
E7
E8
E9
E10
E11
E12
E13
E14
E15
E16
E17
E18
E19
E20
W1



Direct Digital Synthesizer Chassis A24 (652-6615-001), Schematic Diagram Figure 3A (Sheet 2)


INJECTION BLANKER A35
J1 RF IN
J2 RF OUT
J2
TO A31P6
J1
W10
FRONT PANEL ASSEMBLY A2 (INSIDE VIEW)
TOP
FRONT
DIRECT DIGITAL SYNTHESIZER A24
J44
W8
J8
W3
J3
J45
W5
FREQ STD/PWR SPLY A32
W7
E1
E4
W4
E5
E8
J7
VFO/VCO MODULE A33
W2
W1
J1
DDS CONTROL INTERFACE A34
9.9 MHZ INJ
J6
J43
J4 (A28P11)
OVEN STANDARD A29
FREQUENCY STANDARD SWITCH A30
EXTERNAL FREQ STD INPUT
SERIAL INTERFACE A13
J10
J18
PARALLEL OUTPUT A12
J9
PARALLEL INPUT A11
J8
CONTROL A10
J7
J19
J11
W9
J29
J41
RF TRANSLATOR A9
J6
J28
J40
MAIN SIDEBOARD A28
J56
J13
J14
J15
RCV AUDIO A25
J12
J32
J50
J42
CHAN A1IF A8
J5
J34
J35
J51
CHAN B1IF A7
J4
J39
J36
J52
J3
J54
IF INTERCONNECT (1)
J53
J2
J55
VBFO OUTPUT
J59
VBFO A4
J1
J17
J60
450 kHz INJ
450 kHz INJ
CHAN A1 IF OUT
CHAN B1 IF OUT
A1TB1
POWER SUPPLY A1
J27
RF1 FILTER MOD A27
J46
J22
J26
J25
J24
J23
LED STATUS DISPLAY A2A1
J1(A28P5)
SWITCH MOUNTING BOARD A2A2
J2 (A28P3)
J1 (A28P4)
DVBFO SWITCHBOARD A2A4
J1 (A28P9)
FREQUENCY DISPLAY A2A5
J8 (A2W1P12)
J5 (A2W1P8)
FREQUENCY SWITCHBOARD A2A3
J4 (A28P2 OR A2W1P24)
PRESET SWITCHBOARD A2A6
J7 (A28P10)



CHASSIS INTERCONNECTS

INTERCONNECT	HF-8054A		HF-8054A(-210)	
	STANDARD	OPTIONS	STANDARD	OPTIONS
SUBMINIAX COAXIAL INTERCONNECTS				
J22 TO J40	X		(10)	
J23 TO J38	X			
J24 TO J36	X		X	
J25 TO J35	X		X	
J26 TO J37	X		X	
J27 TO EXT STD SW (EXT STD IN)		(5)	X	
J27 TO A24E3		(7)	X	
A24E3 TO OVEN STD P1		(6)		
A24E3 TO EXT STD SW J1 (SW STD IN)		(5)	X	
OVEN STD P1 TO EXT STD SW (OVEN STD IN)		(5)		
J28 TO J45	X		X	
J29 TO J43	X		X	
J32 TO J44	X	(3)	X	
J32 TO J58		(4)		
J34 TO A24E1	X	(1)		
J34 TO J59		(2)		
J39 TO A24E1	X		X	
J41 TO J42	X		X	
J44 TO J57		(4)		
J50 TO J51, J52, J53	X	(3)	X	
J50 TO J51, J52, J53, J56		(4)		
J54 TO A24E7	X		X	
J55 TO A24E5	X		X	
J60 TO A24E1		(2)	X	
J65 TO EXT STD SW (100 kHz OUT)		(5)	X	
RIBBON CABLE INTERCONNECTS				
J12, J19 TO P3, P4, P5	X		X	
P2, TO P11, J11	X		X	
P7 TO J46	X		X	
J17 TO P9		(2)		
P2 TO P8		(8)(9)	X	
P9 TO P12		(9)	X	(9)
W10J1 TO A31P6			X	

NOTES:

DVBFO KIT (AC-8056)
(1) REMOVED FOR DVBFO OPTION.
(2) ADDED FOR DVBFO OPTION.

AFX OPTION
(3) REMOVED FOR AFX OPTION.
(4) ADDED FOR AFX OPTION.

FREQUENCY STANDARD SWITCH KIT (AC-8015)
(5) ADDED FOR FREQUENCY STANDARD SWITCH OPTION.

OVEN STANDARD KIT (AC-8012)
(6) ADDED FOR OVEN STANDARD OPTION.

EXTERNAL STANDARD KIT (AC-8013)
(7) ADDED FOR EXTERNAL STANDARD OPTION.

FREQUENCY DISPLAY KIT (AC-8014)
(8) ADDED FOR FREQUENCY DISPLAY OPTION.

VBFO DISPLAY OPTION
(9) ADDED FOR VBFO/FREQUENCY DISPLAY OPTION.

(10) ON PART NUMBER 622-3475-210 THE RECEIVE RF GOES THROUGH INJECTION BLANKER A35.

HF-8054A Receiver (622-3475-210), Cabling, Connector Layout and Pin Numbering
Figure 4A

HF-8014A Exciter (622-3473-211) and HF-8054A Receiver (622-3475-210)

Rockwell International

supplement

Collins Defense Communications Division

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GENERAL

This supplement, when used in conjunction with the HF-80 Exciter, Receivers, and Controls Depot Maintenance Instruction Book (Rockwell-Collins part number 523-0772963), will provide complete depot maintenance coverage of the circuit cards in the HF-8014A Exciter (622-3473-211) and HF-8054A Receiver (622-3475-210). These equipments differ from previous configurations in that they contain a direct digital synthesizer (DDS) and parallel data input for control of the frequency synthesizer.

Circuit cards/modules in HF-8014A Exciter (622-3473-211) and HF-8054A Receiver (622-3475-210) are either new, modified versions of those used in non-DDS configurations, or the same as those used in non-DDS configurations. Also, some circuit cards/modules used in non-DDS configurations are not used in the two DDS configurations described in this supplement.

VOLUME 1 CHANGES

FRONT MATTER

In the list of instruction books on the title page, change entry entitled Control (638-6622-001) 523-0770731 to read:

Control (638-6622-001, -002, -003, -004)	523-0770731

INTRODUCTION

TEST EQUIPMENT AND TOOLS

Change the entries listed in the table titled "Test Equipment Usage Chart" as shown.

Test Equipment Usage Chart (Cont).

TEST EQUIPMENT / CIRCUIT CARD/MODULE	Audio Oscillator	Audio Voltmeter	Frequency Counter	RF Voltmeter	Digital Multimeter	Signal Generator	6-dB Pad	EXTENDERS						Oscilloscope	Switching Device	Variable Attenuator	Pulse Generator	Hybrid Transformer	Line Matching Transformer	Spectrum Analyzer	Distortion Analyzer	40-dB Impedance Matching Pad (638-6476-001, -003)
								(1) 635-0913-001	(1) 635-0915-001	(1) 635-0915-002	(1) 637-2843-001	(7) 635-9686-001	(1) 635-9686-002									
Control (638-6622-001, -002, -003, -004)					X			X						X			X					
Parallel Input (642-3135-001, -002)					X			X						X								
Parallel Output (642-3137-001, -002)					X			X														

Add the following entries to the end of the table titled "Test Equipment Usage Chart."

Test Equipment Usage Chart (Cont).

TEST EQUIPMENT / CIRCUIT CARD/MODULE	Audio Oscillator	Audio Voltmeter	Frequency Counter	RF Voltmeter	Digital Multimeter	Signal Generator	6-dB Pad	EXTENDERS						Oscilloscope	Switching Device	Variable Attenuator	Pulse Generator	Hybrid Transformer	Line Matching Transformer	Spectrum Analyzer	Distortion Analyzer	40-dB Impedance Matching Pad (638-6476-001, -003)
								(1) 635-0913-001	(1) 635-0915-001	(1) 635-0915-002	(1) 637-2843-001	(7) 635-9686-001	(1) 635-9686-002									
Volume 3																						
Parallel Interface (646-6329-001)					X									X								
Frequency Standard/Power Supply (646-5930-001)			X		X		X													X		
DDS Control Interface (646-5905-001)					X									X								
VFO/VCO Module (652-1015-001)			X				X													X		
Injection Blanker Assembly (652-6861-001)	X													X			X					

EQUIPMENT USED IN

Change the entries listed in the table titled "HF-80 Exciters, Receivers, and Controls Circuit Card Usage Table" as shown.

HF-80 Exciters, Receivers, and Controls Circuit Card Usage Table (Cont).

EQUIPMENT / CIRCUIT CARD/MODULE	HF-8010 622-3389-( )	HF-8010A 622-3395-( )	HF-8014 622-3472-( )	HF-8014A 622-3473-( )	HF-8050 622-3385-( )	HF-8050A 622-3393-( )	HF-8054 622-3474-( )	HF-8054A 622-3475-( )	HF-8070 622-3387-( )	HF-8070A 622-3394-( )	HF-8090 622-3390-( )	HF-8091 622-3391-( )	HF-8092 622-3392-( )	HF-8093 622-3476-( )	HF-8094 622-3477-( )
Control (638-6622-001, -002, -003, -004)			X	X											
Parallel Input (642-3135-001, -002)		X		X		X		X		X	X	X	X	X	X
Parallel Output (642-3137-001, -002)		X		X		X		X		X	X	X	X	X	X

Add the following entries to the end of the table titled "HF-80 Exciter, Receivers, and Controls Circuit Card Usage Table."

HF-80 Exciters, Receivers, and Controls Circuit Card Usage Table (Cont).

EQUIPMENT / CIRCUIT CARD/MODULE	HF-8010 622-3389-( )	HF-8010A 622-3395-( )	HF-8014 622-3472-( )	HF-8014A 622-3473-( )	HF-8050 622-3385-( )	HF-8050A 622-3393-( )	HF-8054 622-3474-( )	HF-8054A 622-3475-( )	HF-8070 622-3387-( )	HF-8070A 622-3394-( )	HF-8090 622-3390-( )	HF-8091 622-3391-( )	HF-8092 622-3392-( )	HF-8093 622-3476-( )	HF-8094 622-3477-( )
Volume 3															
Parallel Interface (646-6329-001)				X											
Frequency Standard/Power Supply (646-5930-001)				X				X							
DDS Control Interface (646-5905-001)				X				X							
VFO/VCO Module (652-1015-001)				X				X							
Injection Blanker Assembly (652-6861-001)															

CONTROL (638-6622-001, -002, -003, -004) (523-0770731-101211)

Change the heading of the instructions section as shown above.

2.1 General

Step f is not applicable to -004 status.

In figure 2, for -004 status, delete U27D and term FREQ CHG. U29A output is left unterminated. Paragraph 2.4 and figure 3 are not applicable for -004 status.

2.7 ALC/TGC

For -004 status, change the first sentence of the second paragraph to read: The TGC amplifier and control circuit (refer to figure 4) receives reference TGC and produces an output TGC control voltage that is referenced to exciter tune, TGC reset, and rf transmit signals.

In figure 5, for -004 status, delete U27D. Connect U9A bottom lead to an added term at the left entitled "TGC Reset." Terminate U29A output as an open wire. Delete lead from U13E input to "TO TUNE START CIRCUIT." Delete bracket and phrase "TO TUNE START CIRCUIT."

In table 2 (Control, Testing and Troubleshooting Procedures), test 3.g, IF INDICATION IS ABNORMAL column: U27 references are not applicable to -004 status. Test 24, Tune Start, is not applicable for -004 status. This test can be performed, but the tune start signal is actually developed by the parallel interface (646-6329-001). Every place in this test where reference is made to U27, disregard the reference because U27 is not used in -004 status.

5. REPAIR

Substitute the following paragraph for the existing one.

Repair of the control card is accomplished using the procedures in Circuit Card Repair instructions (523-0772831) contained elsewhere within this manual.

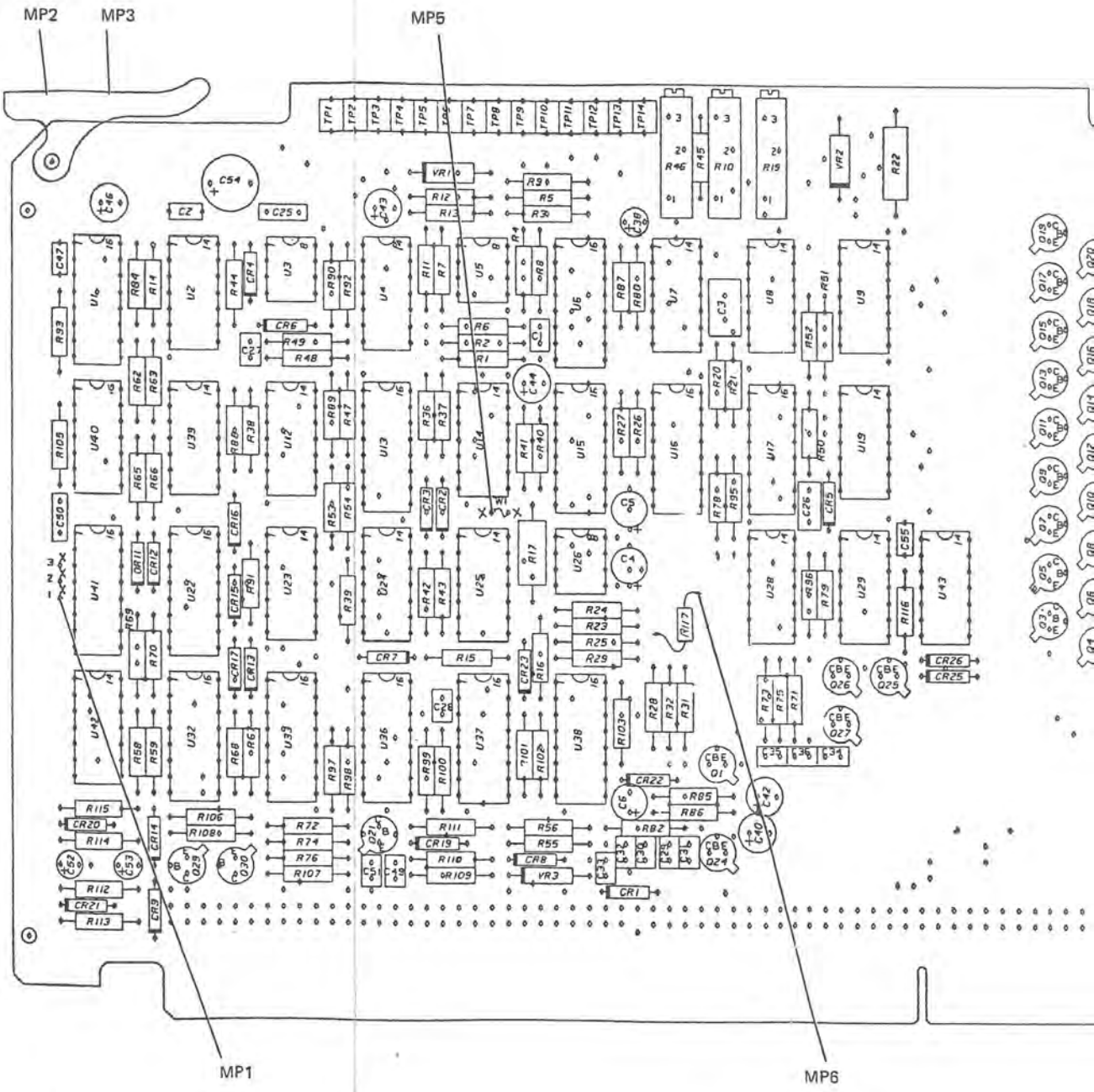
6. PARTS LIST/DIAGRAMS

6.3 Equipment Covered

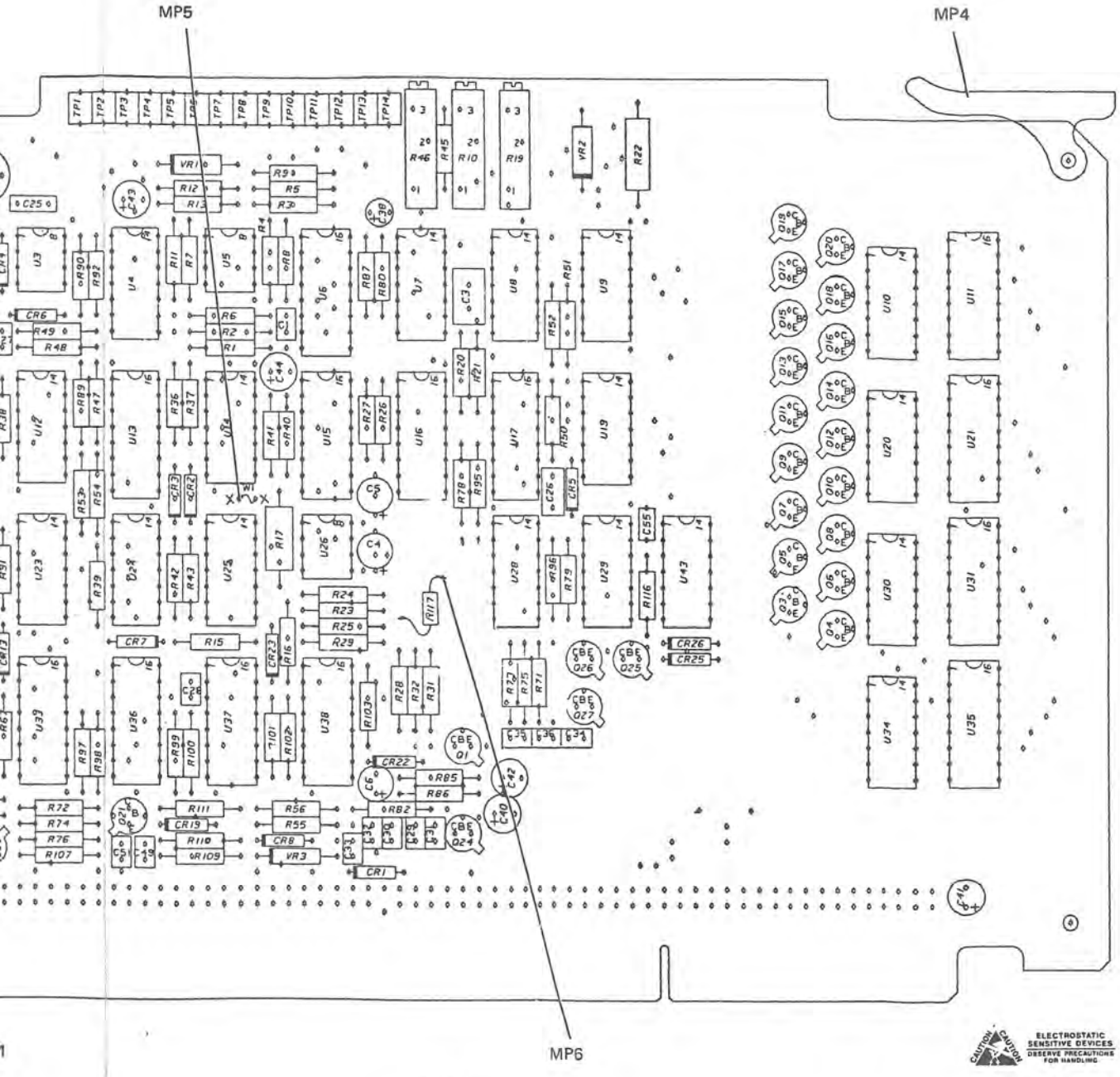
Add the following entry to the list:

CIRCUIT CARD/ SUBASSEMBLY	COLLINS PART NUMBER	LATEST EFFECTIVITY
Control	638-6622-004	REV N

Add figures 11 and 12 following figure 10.



Control (62
Locat
Figure 1



Control (638-6622-004), Parts Location Diagram
Figure 11 (Sheet 1 of 2)

The parts list for Control (638-6622-004) is the same as that for Control (638-6622-003), except for the following differences.

The listed components are NOT USED on 638-6622-004.

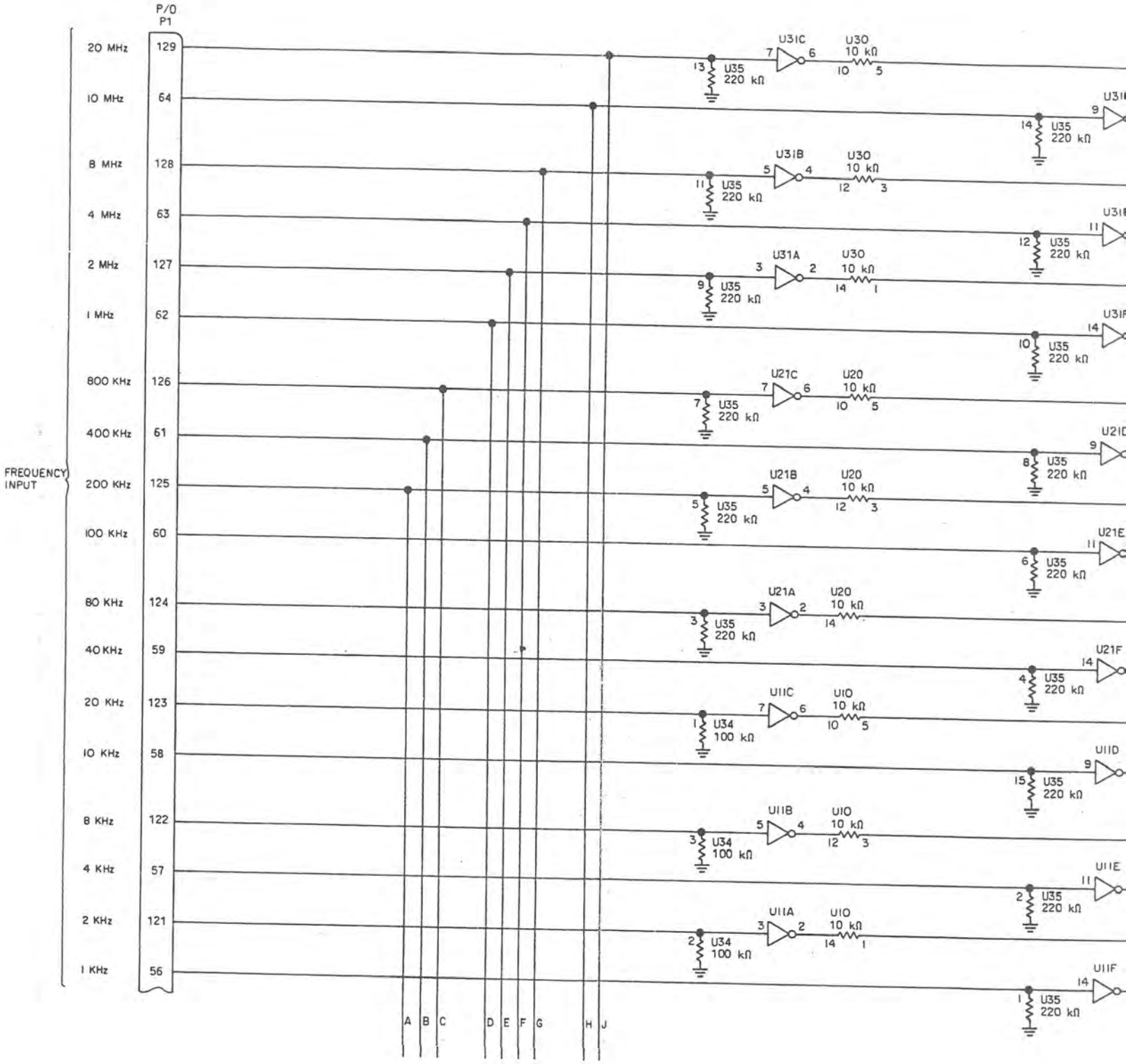
C37
C39
C45
Q28
R77
R81
R83
U27

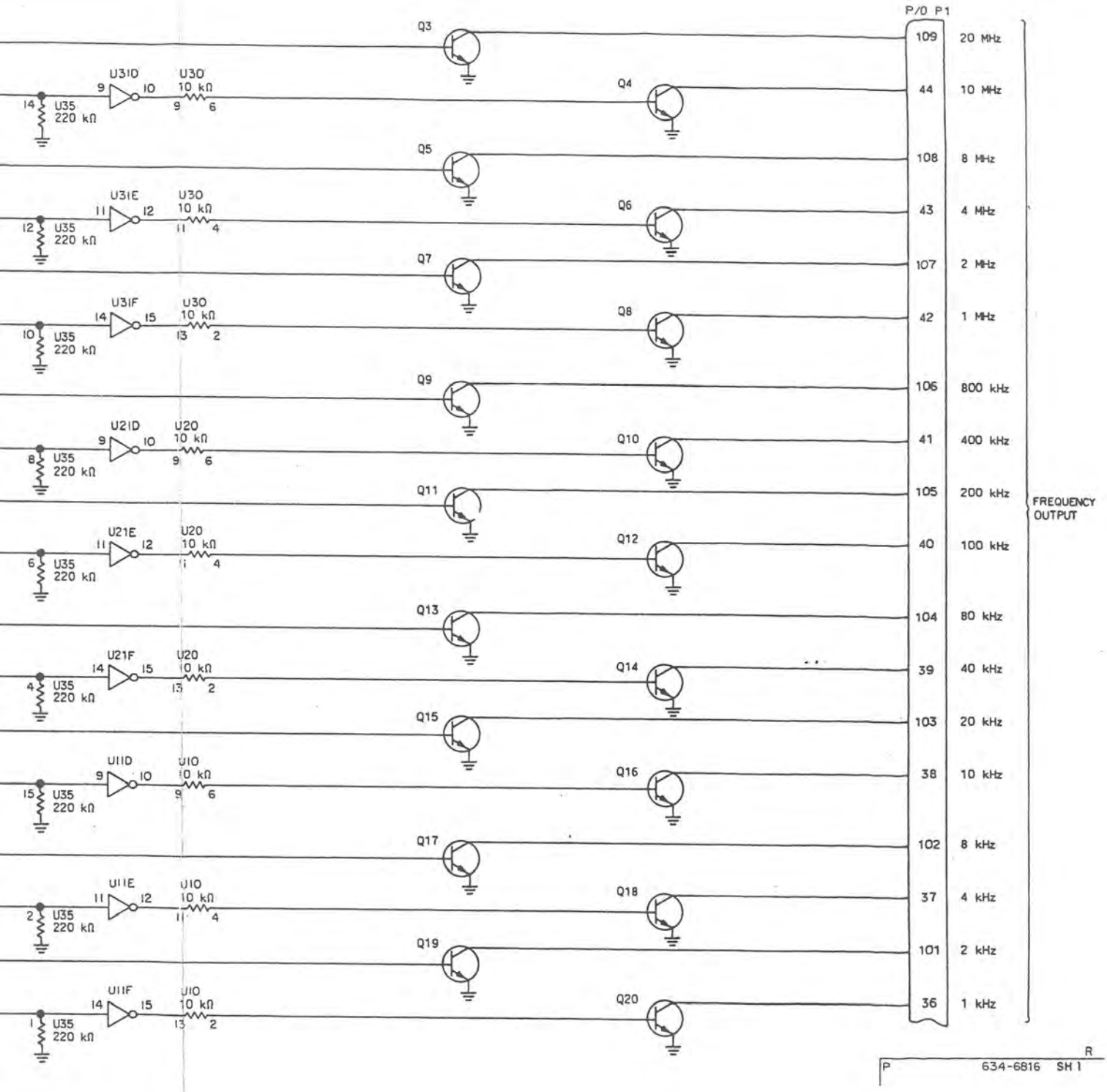
The following components are added to 638-6622-004:

MP6	CONTACT, ELECTRICAL (QTY 1)	372-2601-030
R117	RESISTOR, FIXED CMPSN, 1 MEGO, 10%, 1/4W	745-0857-000

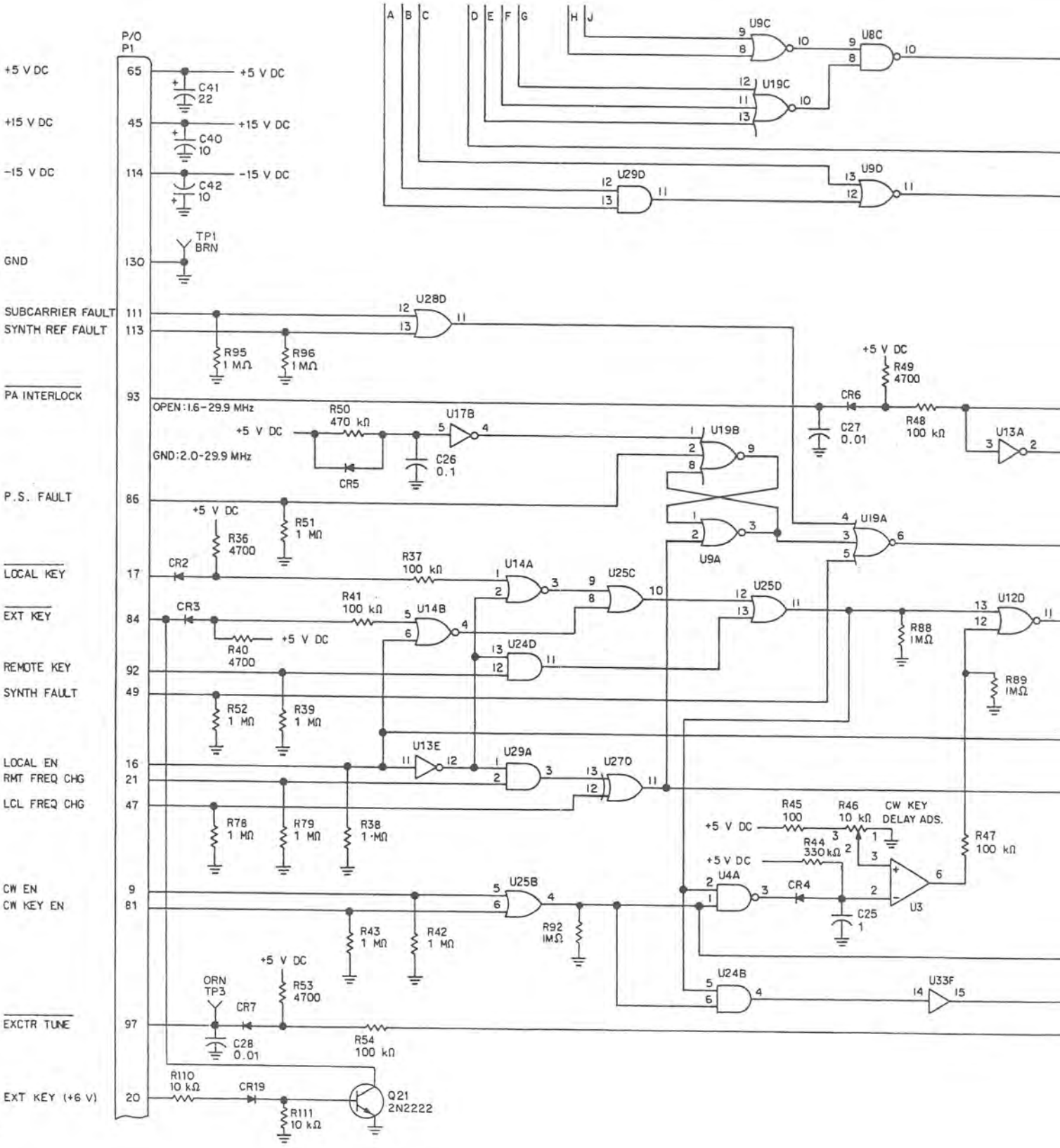
The following components should be changed on both 638-6622-003 and 638-6622-004:

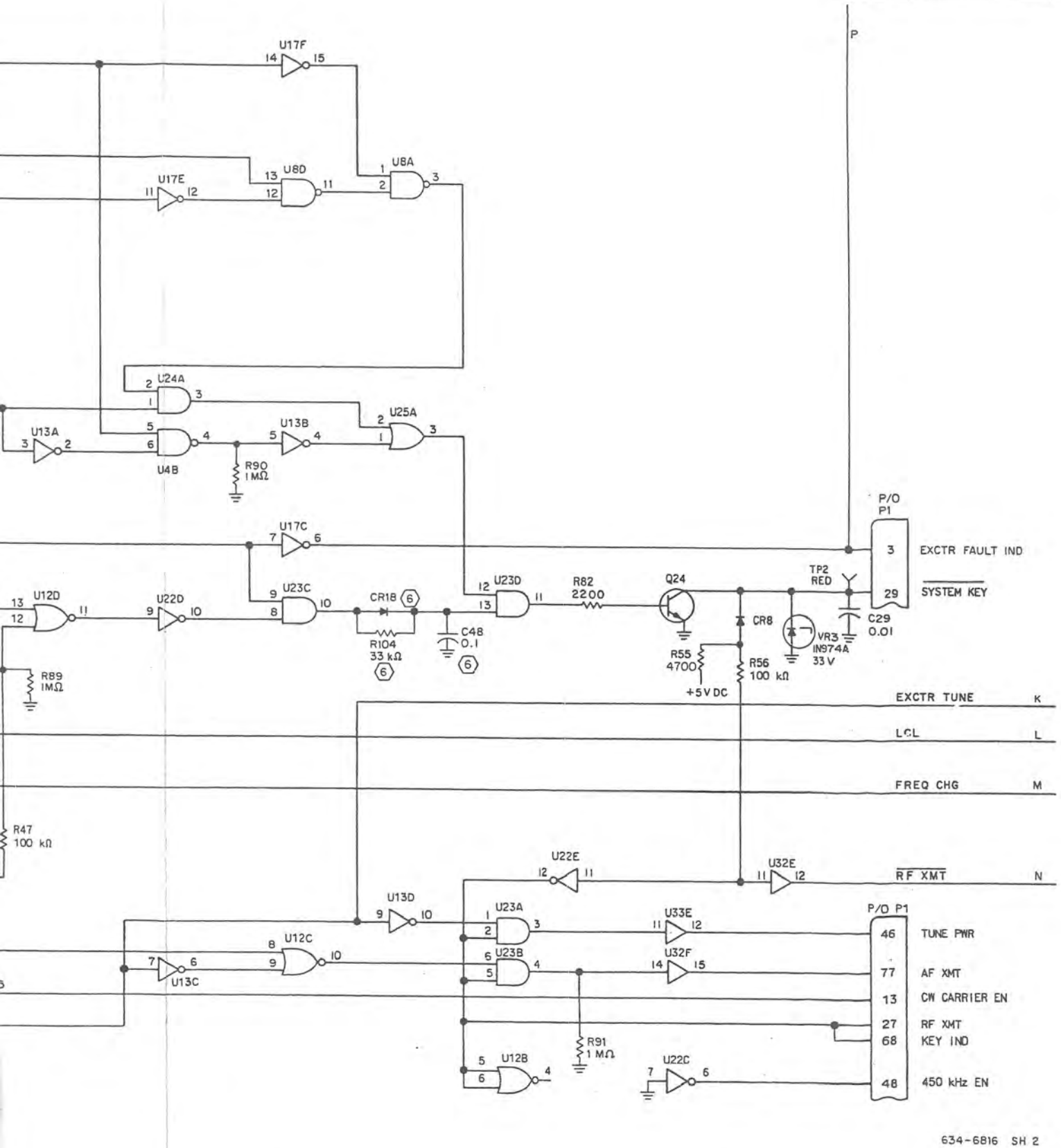
R28	RESISTOR, FIXED CMPSN, 0.18 MEGO, 5%, 1/4W	745-0829-000


P/O P1
FREQUENCY INPUT
20 MHz
10 MHz
8 MHz
4 MHz
2 MHz
1 MHz
800 KHz
400 KHz
200 KHz
100 KHz
80 KHz
40 KHz
20 KHz
10 KHz
8 KHz
4 KHz
2 KHz
1 KHz
129
64
128
63
127
62
126
61
125
60
124
59
123
58
122
57
121
56
A
B
C
D
E
F
G
H
J
U31C
U31B
U31A
U21C
U21B
U21A
U11C
U11B
U11A
U30
U20
U10
10 kΩ
U35
220 kΩ
U34
100 kΩ

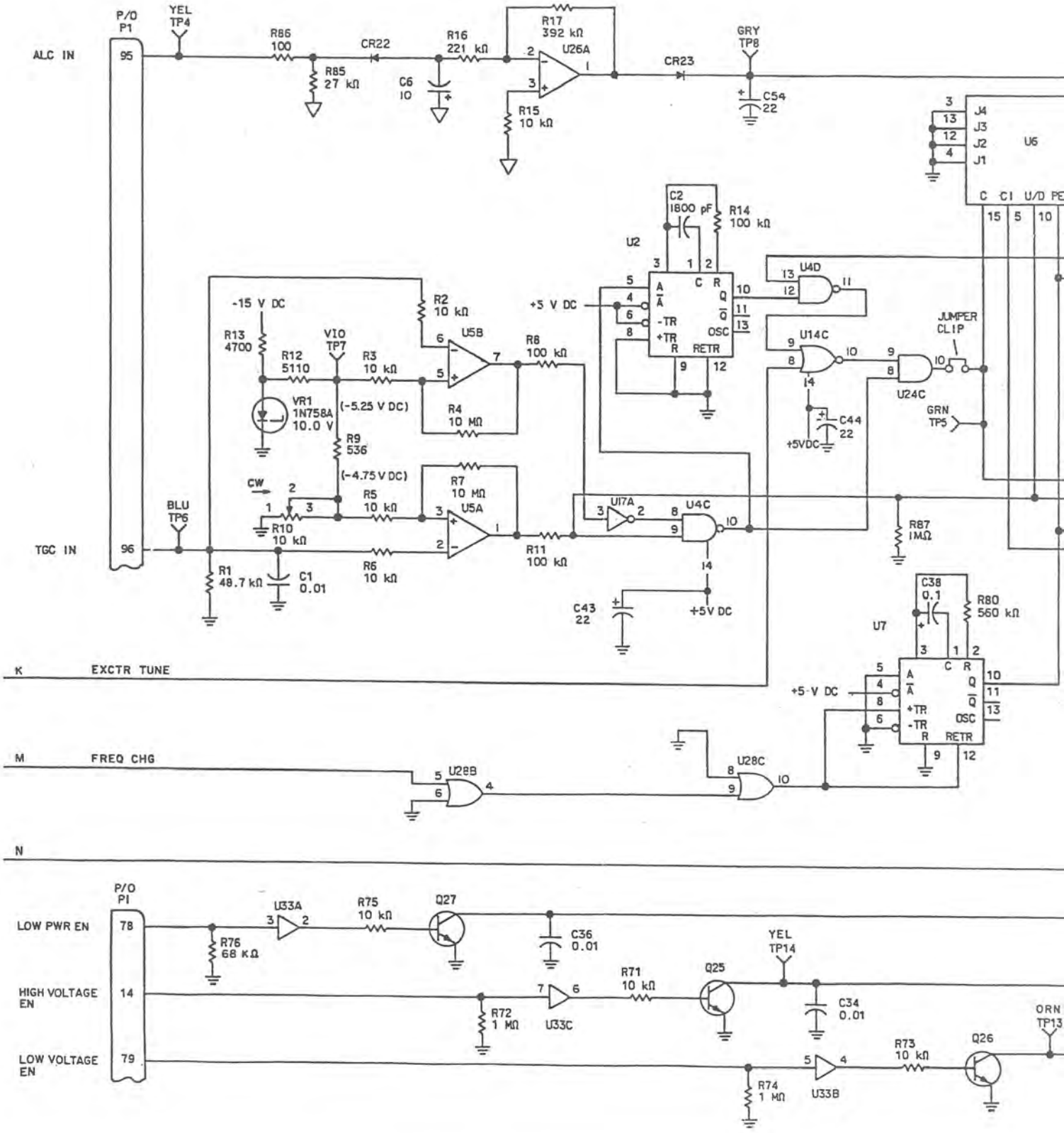


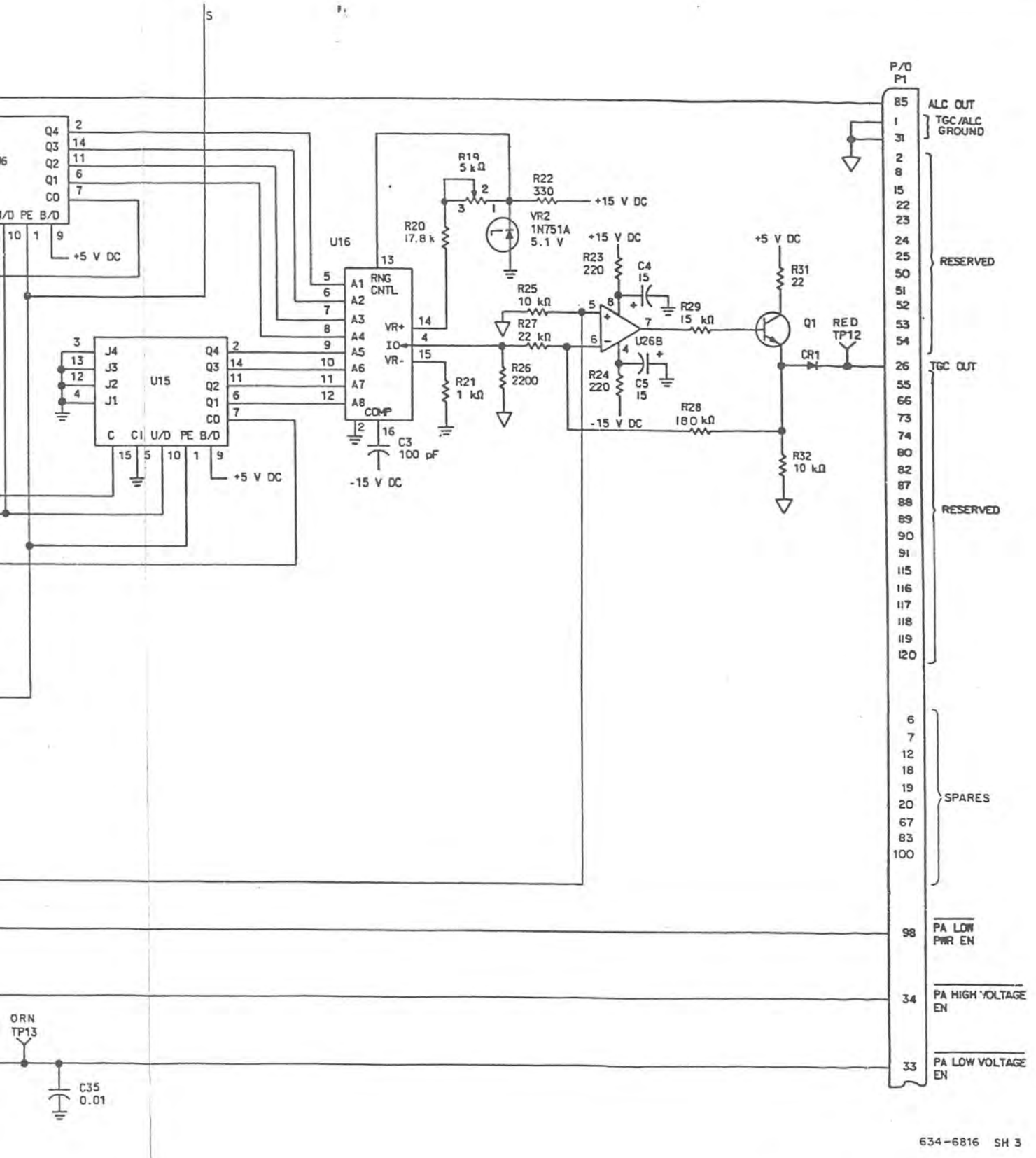
Control (638-6622-004),
Schematic Diagram
Figure 12 (Sheet 1 of 4)


P/O P1
+5 V DC
65
C41 22
+15 V DC
45
C40 10
-15 V DC
114
C42 10
GND
130
TP1 BRN
SUBCARRIER FAULT
111
SYNTH REF FAULT
113
R95 1 MΩ
R96 1 MΩ
PA INTERLOCK
93
OPEN: 1.6-29.9 MHz
GND: 2.0-29.9 MHz
R50 470 kΩ
CR5
C26 0.1
C27 0.01
R48 100 kΩ
R49 4700
CR6
P.S. FAULT
86
R36 4700
R51 1 MΩ
LOCAL KEY
17
CR2
R37 100 kΩ
EXT KEY
84
CR3
R40 4700
R41 100 kΩ
REMOTE KEY
92
SYNTH FAULT
49
R52 1 MΩ
R39 1 MΩ
LOCAL EN
16
RMT FREQ CHG
21
LCL FREQ CHG
47
R78 1 MΩ
R79 1 MΩ
R38 1 MΩ
CW EN
9
CW KEY EN
81
R43 1 MΩ
R42 1 MΩ
R92 1MΩ
R88 1MΩ
R89 1MΩ
R45 100
R46 10 kΩ
CW KEY DELAY ADS.
R44 330 kΩ
R47 100 kΩ
C25 1
CR4
ORN TP3
CR7
R53 4700
C28 0.01
R54 100 kΩ
EXCTR TUNE
97
EXT KEY (+6 V)
20
R110 10 kΩ
CR19
R111 10 kΩ
Q21 2N2222
U9C
U8C
U19C
U29D
U9D
U28D
U17B
U19B
U13A
U9A
U19A
U14A
U25C
U14B
U25D
U12D
U24D
U13E
U29A
U27D
U4A
U3
U25B
U24B
U33F



Control (638-6622-004),
Schematic Diagram
Figure 12 (Sheet 2)


ALC IN
P/O P1
95
YEL TP4
R86 100
CR22
R85 27 kΩ
C6 10
R16 221 kΩ
R17 392 kΩ
U26A
R15 10 kΩ
CR23
GRY TP8
C54 22
J4
J3
J2
J1
U6
C2 1800 pF
R14 100 kΩ
U2
U4D
U14C
JUMPER CLIP
U24C
GRN TP5
C44 22
+5VDC
+5 V DC
-15 V DC
R13 4700
R12 5110
VIO TP7
R3 10 kΩ
R2 10 kΩ
U5B
R8 100 kΩ
VR1 1N758A 10.0 V
(-5.25 V DC)
R4 10 MΩ
R9 536
(-4.75 V DC)
CW
R10 10 kΩ
R5 10 kΩ
R7 10 MΩ
U5A
U17A
U4C
R87 1MΩ
BLU TP6
TGC IN
96
R1 48.7 kΩ
C1 0.01
R6 10 kΩ
R11 100 kΩ
C43 22
+5V DC
C38 0.1
R80 560 kΩ
U7
+5-V DC
K
EXCTR TUNE
M
FREQ CHG
U28B
U28C
N
P/O P1
LOW PWR EN
78
U33A
R75 10 kΩ
Q27
R76 68 KΩ
C36 0.01
YEL TP14
HIGH VOLTAGE EN
14
R71 10 kΩ
Q25
R72 1 MΩ
U33C
C34 0.01
ORN TP13
LOW VOLTAGE EN
79
R73 10 kΩ
Q26
R74 1 MΩ
U33B



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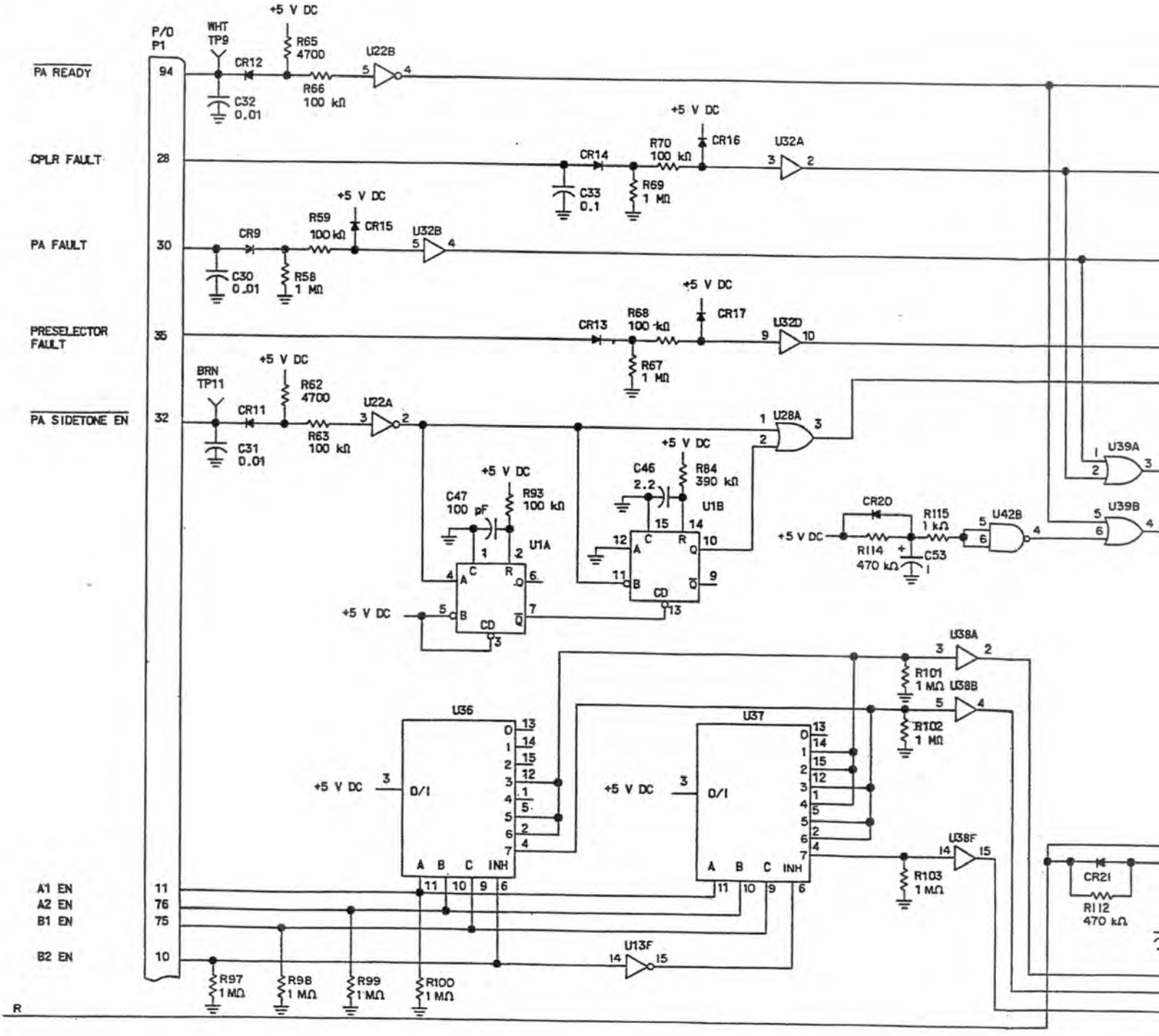
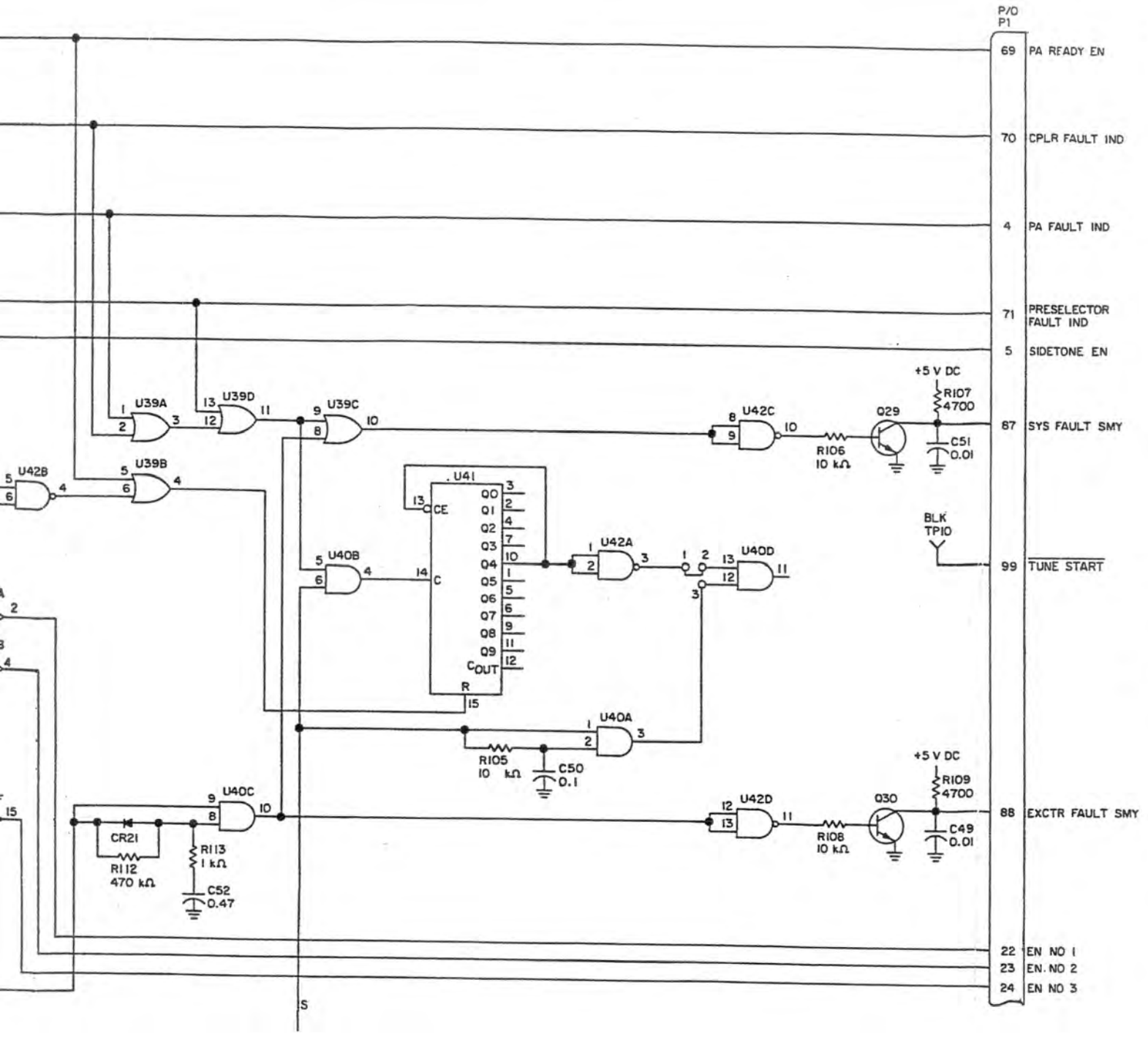
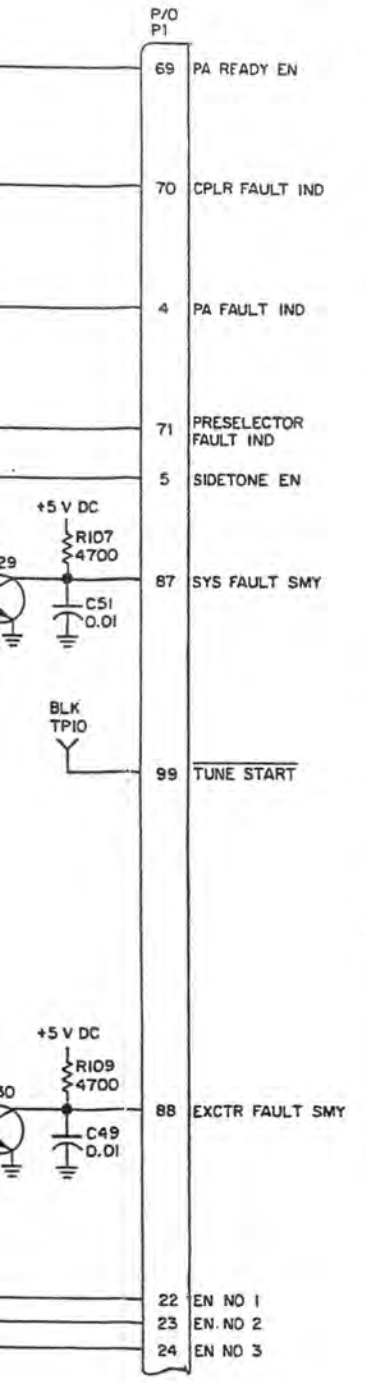
Control (638-6622-004),
Schematic Diagram
Figure 12 (Sheet 3)

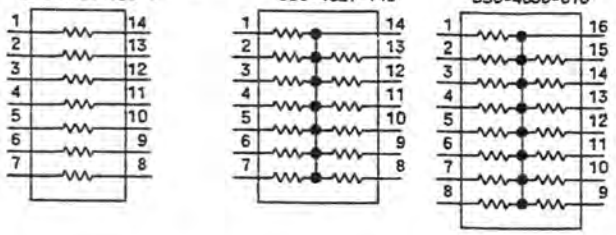

P/O P1
PA READY
94
WHT TP9
CR12
+5 V DC
R65 4700
R66 100 kΩ
C32 0.01
U22B
CPLR FAULT
28
CR14
R70 100 kΩ
CR16
U32A
C33 0.1
R69 1 MΩ
PA FAULT
30
CR9
R59 100 kΩ
CR15
U32B
C30 0.01
R58 1 MΩ
PRESELECTOR FAULT
35
CR13
R68 100 kΩ
CR17
U32D
R67 1 MΩ
PA SIDETONE EN
32
BRN TP11
CR11
R62 4700
R63 100 kΩ
C31 0.01
U22A
U28A
U39A
U39B
C47 100 pF
R93 100 kΩ
U1A
C46 2.2
R84 390 kΩ
U1B
CR20
R115 1 kΩ
R114 470 kΩ
C53
U42B
U38A
R101 1 MΩ
U38B
R102 1 MΩ
U36
U37
U38F
R103 1 MΩ
CR21
R112 470 kΩ
A1 EN
11
A2 EN
76
B1 EN
75
B2 EN
10
U13F
R97 1 MΩ
R98 1 MΩ
R99 1 MΩ
R100 1 MΩ
R


P/O P1
69 PA READY EN
70 CPLR FAULT IND
4 PA FAULT IND
71 PRESELECTOR FAULT IND
5 SIDETONE EN
87 SYS FAULT SMY
99 TUNE START
88 EXCTR FAULT SMY
22 EN NO 1
23 EN. NO 2
24 EN NO 3
NOTE
U39A
U39B
U39C
U39D
U40A
U40B
U40C
U40D
U41
U42A
U42B
U42C
U42D
+5 V DC
R107 4700
R106 10 kΩ
Q29
C51 0.01
BLK TP10
R105 10 kΩ
C50 0.1
R109 4700
R108 10 kΩ
Q30
C49 0.01
CR21
R112 470 kΩ
R113 1 kΩ
C52 0.47



NOTES:

1. UNLESS OTHERWISE SPECIFIED: RESISTANCE VALUES ARE IN OHMS, CAPACITANCE VALUES ARE IN MICROFARADS, DIODES ARE TYPE 1N4454 AND TRANSISTORS ARE TYPE 2N2222A.
2. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION, PREFIX WITH UNIT AND/OR ASSEMBLY DESIGNATION.
3. TYPE DESIGNATIONS SHOWN MAY BE GENERIC IN FORM AND ARE FOR REFERENCE ONLY. SEE APPLICABLE PARTS LIST FOR REPLACEMENT PARTS.
4. THIS EQUIPMENT CONTAINS ELECTROSTATIC DISCHARGE SENSITIVE (ESDS) DEVICES, SPECIAL HANDLING METHODS AND MATERIALS MUST BE USED TO PREVENT EQUIPMENT DAMAGE.
5. RESISTOR ARRAYS:
   U10, U20, U30-10 kΩ 350-4027-090
   U34-100 kΩ 350-4027-140
   U35-220 kΩ 350-4030-010



MICROCIRCUIT INFORMATION

REF DES	COMMON DEVICE	PWR (V DC) +15	-15	+5	GND	SPARE SECTIONS
U1	4528B			16	8	
U2	CD4047B			14	7	
U3	UA1741TC		4	7		
U4	MC14011B			14	7	
U5	MC1458P1	8	4			
U6	F4029B			16	8	
U7	CD4047B			14	7	
U8	MC14011B			14	7	B
U9	MC14001B			14	7	B
(5) U10						
U11	CD4049B			1	8	
U12	MC14001B			14	7	A
U13	F4049B			1	8	
U14	MC14001B			14	7	D
U15	F4029B			16	8	
U16	MC1408L-8		3		2	
U17	F4049B			1	8	D
U18	NOT USED					
U19	MC14025B			14	7	
(5) U20						
U21	F4049B			1	8	

REF DES	COMMON DEVICE	PWR (V DC) +15	-15	+5	GND	SPARE SECTIONS
U22	F4049B			1	8	F
U23	MC14081B			14	7	
U24	MC14081B			14	7	
U25	MC14071B			14	7	
U26	MC1458P1					
U27	NOT USED					
U28	MC14071B			14	7	
U29	MC14081B			14	7	B,C
(5) U30						
U31	F4049B			1	8	
U32	F4050B			1	8	C
U33	F4050B			1	8	D
(5) U34				14		
(5) U35				16		
U36	CD4051B			16	7,8	
U37	CD4051B			16	7,8	
U38	F4050B			1	8	C,D,E
U39	MC14071B			14	7	
U40	MC14081B			14	7	
U41	MC14017B			16	8	
U42	MC14011B			14	7	
U43	CD4047B			14	7	

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Control (638-6622-004), Schematic Diagram Figure 12 (Sheet 4)

VOLUME 2 CHANGES

FRONT MATTER

Add the following entry to the end of the list on the right-hand side:

Injection Blanker Assembly (652-6861-001) 523-0773489

Add the above-mentioned section to the manual following RF Translator (637-1768-( )) 523-0767960-203211.

VOLUME 3 CHANGES

FRONT MATTER

In the list of instructions books on the title page, change:

Parallel Input (642-3135-001) 523-0770711
to
Parallel Input (642-3135-001, -002) 523-0770711

and change:

Parallel Output (642-3137-001) 523-0770712
to
Parallel Output (642-3137-001, -002) 523-0770712

Add the following entries after the last entry on the right-hand side:

Frequency Standard/Power Supply (646-5930-001) 523-0773484

DDS Control Interface (646-5905-003) 523-0773485

VFO/VCO Module (652-1015-002) 523-0773487

Parallel Interface (646-6329-001) 523-0773488

Add these sections to the manual in the order listed above after section entitled Frequency Standard Switch (646-6558-001) 523-0770716.

Parallel Input (642-3135-001, -002) (523-0770711-001211)

Change title as shown above.

1. DESCRIPTION

Add -002 right after part number 642-3135-001 in the first line of the first paragraph.

VOLUME 2 CHANGES

FRONT MATTER

Add the following entry to the end of the list on the right-hand side:

Injection Blanker Assembly (652-6861-001) 523-0773489

Add the above-mentioned section to the manual following RF Translator (637-1768-( )) 523-0767960-203211.

VOLUME 3 CHANGES

FRONT MATTER

In the list of instructions books on the title page, change:

Parallel Input (642-3135-001) 523-0770711
to
Parallel Input (642-3135-001, -002) 523-0770711

and change:

Parallel Output (642-3137-001) 523-0770712
to
Parallel Output (642-3137-001, -002) 523-0770712

Add the following entries after the last entry on the right-hand side:

Frequency Standard/Power Supply (646-5930-001) 523-0773484

DDS Control Interface (646-5905-003) 523-0773485

VFO/VCO Module (652-1015-002) 523-0773487

Parallel Interface (646-6329-001) 523-0773488

Add these sections to the manual in the order listed above after section entitled Frequency Standard Switch (646-6558-001) 523-0770716.

Parallel Input (642-3135-001, -002) (523-0770711-001211)

Change title as shown above.

1. DESCRIPTION

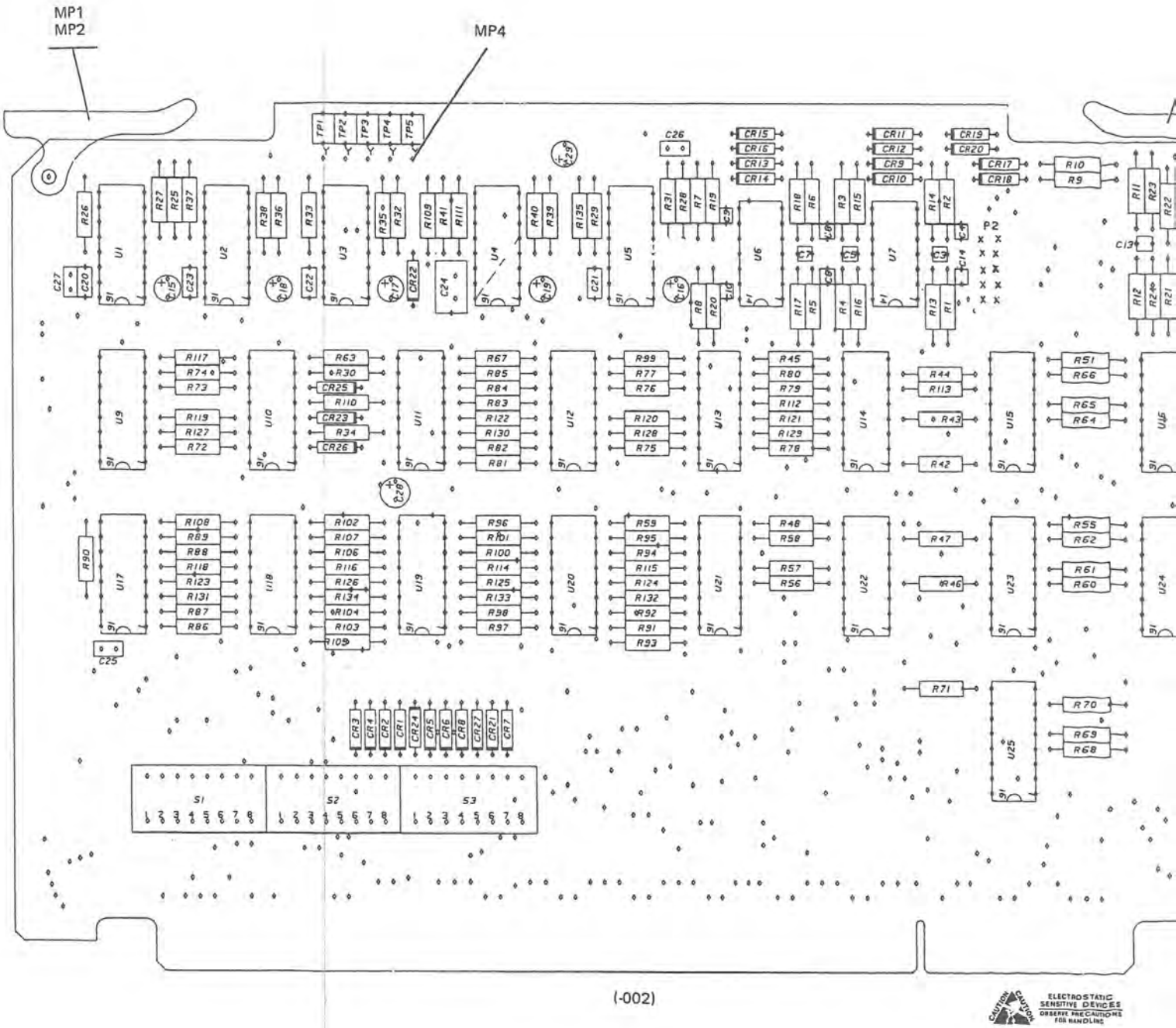
Add -002 right after part number 642-3135-001 in the first line of the first paragraph.

5.3 Equipment Covered

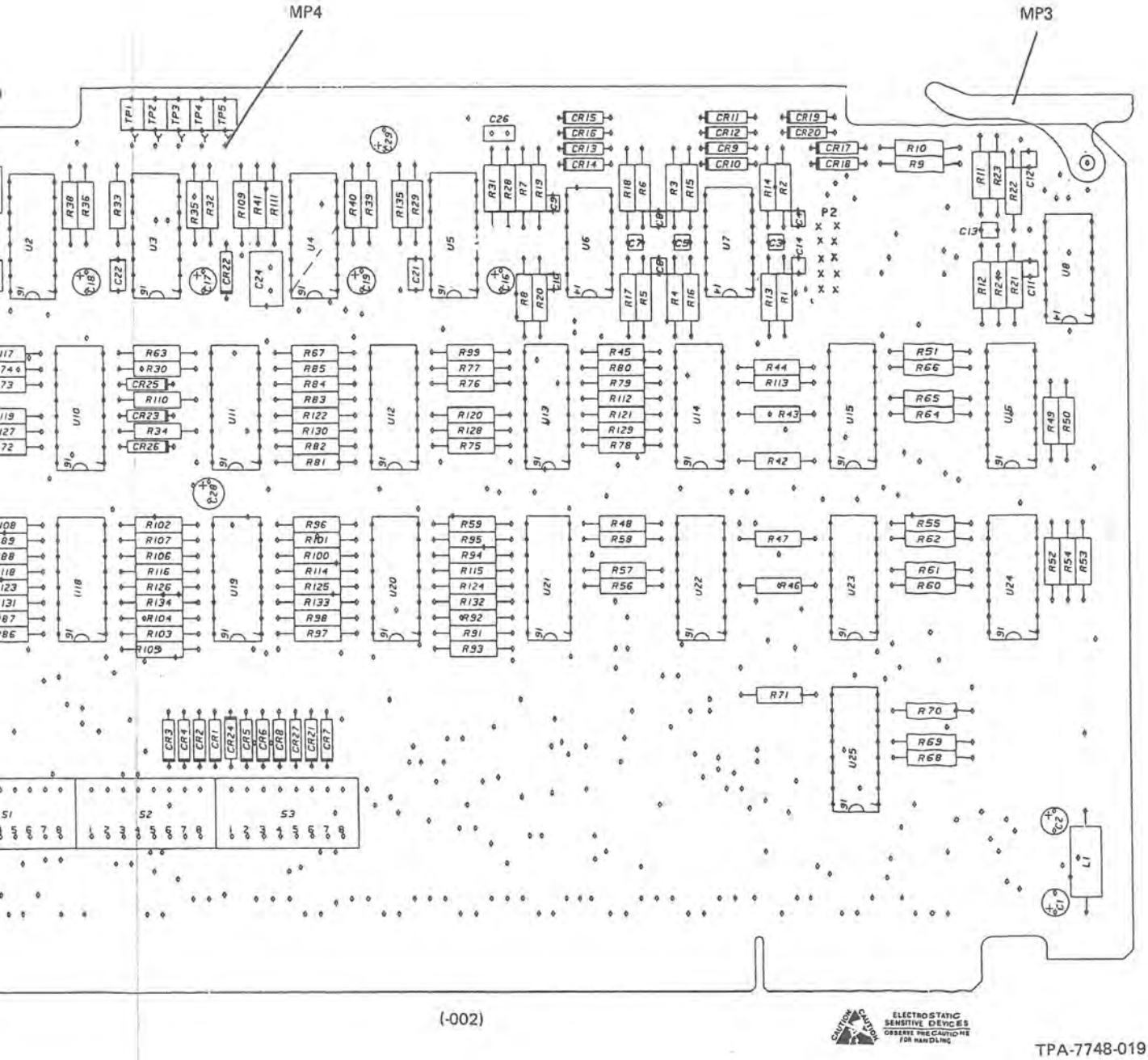
Add the following to the list:

CIRCUIT CARD/ SUBASSEMBLY	COLLINS PART NUMBER	LATEST EFFECTIVITY
Parallel Input	642-3135-002	REV H

In figure 3, Parallel Input, Schematic Diagram (Sheet 1 of 6), change the title to read sheet 1 of 9. Add sheets 2A and 2B behind sheet 2 and sheet 7 behind sheet 6.



Parallel Input, Schematic Diagra
Figure 3 (Sheet 2A)



Parallel Input, Schematic Diagram
Figure 3 (Sheet 2A)

The parts list for Parallel Input (642-3135-002) is the same as that for Parallel Input (642-3135-001), except for the following differences.

For 642-3135-002 only, add:

P2	CONTACTS (QTY 10)	372-2601-045

For both 642-3135-001 and 642-3135-002, add:

MP1	LABEL, WARNING	280-2745-040
MP2	EXTRACTOR, SCREENED (QTY 1)	637-2987-001
MP3	EXTRACTOR, SCREENED (QTY 1)	635-0883-001
MP4	CONTACT, ELECTRICAL (QTY 5)	372-2601-037

PIN FUNCTI

EQUIPMENT TYPE

CONTROL / STATUS BIT WORD FORMAT: HF-80 8-BIT			ASCII 7-BIT			HF-80XX 2-CHANNEL RADIOS AND HF-80XX 2-CHANNEL CONTROLS			851S-1/2, HF-8095			4-CHANNEL EXCITER, AND 4-CHANNEL EXCITER CONTROL			4-CHANNEL RECEIVER, AND 4-CHANNEL RECEIVER CONTROL		
WORD NO.	CHARACTER NO.	BIT NO.	WORD NO.	CHARACTER NO.	BIT WT.	PARALLEL OUTPUT PIN NO.	PARALLEL INPUT PIN NO.	FUNCTION	PARALLEL OUTPUT PIN NO.	PARALLEL INPUT PIN NO.	FUNCTION	PARALLEL OUTPUT PIN NO.	PARALLEL INPUT PIN NO.	FUNCTION	PARALLEL OUTPUT PIN NO.	PARALLEL INPUT PIN NO.	FUNCTION
1	2	8	1	6	8		103	$\overline{\text{COMMAND}}$ ($\overline{C}$)		103	$\overline{\text{COMMAND}}$ ($\overline{C}$)			NOT USED			NOT USED
1	2	7	1	6	4		38	$\overline{\text{STATUS REQUEST}}$ ($\overline{S}$)		38	$\overline{\text{STATUS REQUEST}}$ ($\overline{S}$)			NOT USED			NOT USED
1	2	6	1	6	2	129	129	FREQ 10 MHz (2)	129	129	FREQ 10 MHz (2)	129	129	FREQ 10 MHz (2)	129	129	FREQ 10 MHz (2)
1	2	5	1	6	1	64	64	FREQ 10 MHz (1)	64	64	FREQ 10 MHz (1)	64	64	FREQ 10 MHz (1)	64	64	FREQ 10 MHz (1)
1	2	4	1	7	8	128	128	FREQ 1 MHz (8)	128	128	FREQ 1 MHz (8)	128	128	FREQ 1 MHz (8)	128	128	FREQ 1 MHz (8)
1	2	3	1	7	4	63	63	(4)	63	63	(4)	63	63	(4)	63	63	(4)
1	2	2	1	7	2	127	127	(2)	127	127	(2)	127	127	(2)	127	127	(2)
1	2	1	1	7	1	62	62	(1)	62	62	(1)	62	62	(1)	62	62	(1)
1	3	8	1	8	8	126	126	FREQ 100 kHz (8)	126	126	FREQ 100 kHz (8)	126	126	FREQ 100 kHz (8)	126	126	FREQ 100 kHz (8)
1	3	7	1	8	4	61	61	(4)	61	61	(4)	61	61	(4)	61	61	(4)
1	3	6	1	8	2	125	125	(2)	125	125	(2)	125	125	(2)	125	125	(2)
1	3	5	1	8	1	60	60	(1)	60	60	(1)	60	60	(1)	60	60	(1)
1	3	4	1	9	8	124	124	FREQ 10 kHz (8)	124	124	FREQ 10 kHz (8)	124	124	FREQ 10 kHz (8)	124	124	FREQ 10 kHz (8)
1	3	3	1	9	4	59	59	(4)	59	59	(4)	59	59	(4)	59	59	(4)
1	3	2	1	9	2	123	123	(2)	123	123	(2)	123	123	(2)	123	123	(2)
1	3	1	1	9	1	58	58	(1)	58	58	(1)	58	58	(1)	58	58	(1)
1	4	8	1	10	8	122	122	FREQ 1 kHz (8)	122	122	FREQ 1 kHz (8)	122	122	FREQ 1 kHz (8)	122	122	FREQ 1 kHz (8)
1	4	7	1	10	4	57	57	(4)	57	57	(4)	57	57	(4)	57	57	(4)
1	4	6	1	10	2	121	121	(2)	121	121	(2)	121	121	(2)	121	121	(2)
1	4	5	1	10	1	56	56	(1)	56	56	(1)	56	56	(1)	56	56	(1)
1	4	4	1	11	8	120	120	FREQ 100 Hz (8)	120	120	FREQ 100 Hz (8)	120	120	FREQ 100 Hz (8)	120	120	FREQ 100 Hz (8)
1	4	3	1	11	4	55	55	(4)	55	55	(4)	55	55	(4)	55	55	(4)
1	4	2	1	11	2	119	119	(2)	119	119	(2)	119	119	(2)	119	119	(2)
1	4	1	1	11	1	54	54	(1)	54	54	(1)	54	54	(1)	54	54	(1)
1	5	8	1	12	8	118	118	FREQ 10 Hz (8)	118	118	FREQ 10 Hz (8)	118	118	FREQ 10 Hz (8)	118	118	FREQ 10 Hz (8)
1	5	7	1	12	4	53	53	(4)	53	53	(4)	53	53	(4)	53	53	(4)
1	5	6	1	12	2	117	117	(2)	117	117	(2)	117	117	(2)	117	117	(2)
1	5	5	1	12	1	52	52	(1)	52	52	(1)	52	52	(1)	52	52	(1)
1	5	4	1	13	8	116	116	FREQ 1 Hz (8)	116	116	FREQ 1 Hz (8)	116	116	FREQ 1 Hz (8)	116	116	FREQ 1 Hz (8)
1	5	3	1	13	4	51	51	(4)	51	51	(4)	51	51	(4)	51	51	(4)
1	5	2	1	13	2	115	115	(2)	115	115	(2)	115	115	(2)	115	115	(2)
1	5	1	1	13	1	50	50	(1)	50	50	(1)	50	50	(1)	50	50	(1)
2	2	8	2	6	8		103	$\overline{\text{COMMAND}}$ ($\overline{C}$)		103	$\overline{\text{COMMAND}}$ ($\overline{C}$)			NOT USED			NOT USED
2	2	7	2	6	4		38	$\overline{\text{STATUS REQUEST}}$ ($\overline{S}$)		38	$\overline{\text{STATUS REQUEST}}$ ($\overline{S}$)						NOT USED
2	2	6	2	6	2			NOT USED			NOT USED						NOT USED
2	2	5	2	6	1	76	76	RF GAIN (16)	76	76	RF GAIN (16)	76	76		76	76	RF GAIN (16)
2	2	4	2	7	8	11	11	(8)	11	11	(8)	11	11		11	11	(8)
2	2	3	2	7	4	75	75	(4)	75	75	(4)	75	75		75	75	(4)
2	2	2	2	7	2	10	10	(2)	10	10	(2)	10	10		10	10	(2)
2	2	1	2	7	1	22	87	(1)	22	87	(1)	22	87		22	87	(1)
2	3	8	2	8	8	3		NOT USED	3		NOT USED	3	12	NOT USED	3	12	FL7 (E) ENBL
2	3	7	2	8	4	41	41	VBFO ENBL	41	41	VBFO ENBL	41	41		41	41	FL6 (D) ENBL
2	3	6	2	8	2	106	106	AFC ENBL	106	106	RESERVED	106	106		106	106	FL5 (C) ENBL
2	3	5	2	8	1	37	37	AGC CROWBAR ENBL	37	37	AGC CROWBAR ENBL	37	37		37	37	FL4 (B) ENBL
2	3	4	2	9	8	84	84	USB AGC OFF	84	84	USB AGC OFF	84	84		84	84	B2 AGC (2)
2	3	3	2	9	4	85	85	USB AGC FAST	85	85	USB AGC FAST	85	85		85	85	B2 AGC (1)
2	3	2	2	9	2	19	19	LSB AGC OFF	19	19	LSB AGC OFF	19	19		19	19	A2 AGC (2)
2	3	1	2	9	1	20	20	LSB AGC FAST	20	20	LSB AGC FAST	20	20		20	20	A2 AGC (1)
2	4	8	2	10	8	100	100	FL8 ENBL	100	100	FL8 ENBL	100	100	NOT USED	100	100	FL3 (A) ENBL
2	4	7	2	10	4	99	99	FL7 ENBL	99	99	FL7 ENBL	99	99		99	99	FL1 (16 kHz) ENBL
2	4	6	2	10	2	35	35	FL6 ENBL	35	35	FL6 ENBL	35	35		35	35	VBFO ENBL
2	4	5	2	10	1	34	34	FL5 ENBL	34	34	FL5 ENBL	34	34		34	34	AFC ENBL
2	4	4	2	11	8	98	98	FL4 ENBL	98	98	FL4 ENBL	98	98		98	98	B1 AGC (2)
2	4	3	2	11	4	33	33	FL3 ENBL	33	33	FL3 ENBL	33	33		33	33	B1 AGC (1)
2	4	2	2	11	2	97	97	FL2 ENBL	97	97	FL2 ENBL	97	97		97	97	A1 AGC (2)
2	4	1	2	11	1	32	32	FL1 ENBL	32	32	FL1 ENBL	32	32	PEAK CLIPPER ENBL	32	32	A1 AGC (1)
2	5	8	2	12	8	73	73	FM ENBL	73	73	FM ENBL	73	73	NOT USED	73	73	DATA NET ENBL
2	5	7	2	12	4	8	8	AM ENBL	8	8	AM ENBL	8	8	AM ENBL	8	8	AM ENBL
2	5	6	2	12	2	72	72	SSB ENBL	72	72	SSB ENBL	72	72	CW ENBL	72	72	CW ENBL
2	5	5	2	12	1	9	9	CW ENBL	9	9	CW ENBL	9	9	ISB ENBL	9	9	ISB ENBL
2	5	4	2	13	8	74	74	ISB ENBL	74	74	ISB ENBL	74	74	B2 ENBL	74	74	B2 ENBL
2	5	3	2	13	4	6	92	RESERVED	6	92	RESERVED	6	92	B1 ENBL	6	92	B1 ENBL
2	5	2	2	13	2	26	91	RESERVED	26	91	RESERVED	26	91	A1 ENBL	26	91	A1 ENBL
2	5	1	2	13	1	17	21	RESERVED	17	21	RESERVED	17	21	A2 ENBL	17	21	A2 ENBL

CTION (SIGNAL NAME) TABLE

CONTROL / STATUS BIT WORD FORMAT: HF-80 8-BIT WORD NO.	CHARACTER NO.	BIT NO.	ASCII 7-BIT WORD NO.	CHARACTER NO.	BIT WT.	HF-80XX 2-CHANNEL RADIOS, AND HF-80XX 2-CHANNEL CONTROLS: PARALLEL OUTPUT PIN NO.	PARALLEL INPUT PIN NO.	FUNCTION	851S-1/2, HF-8095: PARALLEL OUTPUT PIN NO.	PARALLEL INPUT PIN NO.	FUNCTION	4-CHANNEL EXCITER, AND 4-CHANNEL EXCITER, CONTROL: PARALLEL OUTPUT PIN NO.	PARALLEL INPUT PIN NO.	FUNCTION	4-CHANNEL RECEIVER, AND 4-CHANNEL RECEIVER CONTROL: PARALLEL OUTPUT PIN NO.	PARALLEL INPUT PIN NO.	FUNCTION
3	2	8	3	6	8		103	COMMAND (C)		103	COMMAND (C)			NOT USED			NOT USED
3	2	7	3	6	4		38	STATUS REQUEST (S)		38	STATUS REQUEST (S)						NOT USED
3	2	6	3	6	2			NOT USED			NOT USED						NOT USED
3	2	5	3	6	1	107	107	VBFO SIGN	107	107	VBFO SIGN	107	107		107	107	VBFO SIGN
3	2	4	3	7	8	48	48	VBFO FREQ 1 kHz (8)	48	48	VBFO FREQ 1 kHz (8)	48	48		48	48	VBFO FREQ 1 kHz (8)
3	2	3	3	7	4	113	113	(4)	113	113	(4)	113	113		113	113	(4)
3	2	2	3	7	2	47	47	(2)	47	47	(2)	47	47		47	47	(2)
3	2	1	3	7	1	112	112	(1)	112	112	(1)	112	112		112	112	(1)
3	3	8	3	8	8	46	46	VBFO FREQ 100 Hz (8)	46	46	VBFO FREQ 100 Hz (8)			NOT USED	46	46	VBFO FREQ 100 Hz (8)
3	3	7	3	8	4	111	111	(4)	111	111	(4)				111	111	(4)
3	3	6	3	8	2	110	110	(2)	110	110	(2)				110	110	(2)
3	3	5	3	8	1	44	44	(1)	44	44	(1)				44	44	(1)
3	3	4	3	9	8	109	109	VBFO FREQ 10 Hz (8)	109	109	VBFO FREQ 10 Hz (8)				109	109	VBFO FREQ 10 Hz (8)
3	3	3	3	9	4	43	43	(4)	43	43	(4)				43	43	(4)
3	3	2	3	9	2	108	108	(2)	108	108	(2)				108	108	(2)
3	3	1	3	9	1	42	42	(1)	42	42	(1)				42	42	(1)
3	4	8	3	10	8	7	7	NOT USED	7	7	NOT USED	7	7	GPI-1 (11)	7	7	GPI-1 (11)
3	4	7	3	10	4	8	8		8	8		8	8	GPI-2	8	8	GPI-2
3	4	6	3	10	2	10	10		10	10		10	10	GPI-3	10	10	GPI-3
3	4	5	3	10	1	9	9		9	9		9	9	GPO-1	9	9	GPO-1
3	4	4	3	11	8	3	3		3	3		3	3	GPO-2	3	3	GPO-2
3	4	3	3	11	4	5	5		5	5		5	5	SER TS OVRD	5	5	SER TS OVRD
3	4	2	3	11	2	6	6		6	6		6	6	PAR BCD ENBL	6	6	SER BCD ENBL
3	4	1	3	11	1	4	4		4	4		4	4	PAR RF GAIN ENBL	4	4	SER RF GAIN ENBL
3	5	8	3	12	8			NOT USED			NOT USED			NOT USED			NOT USED
3	5	7	3	12	4												
3	5	6	3	12	2												
3	5	5	3	12	1	18	81		18	81		18	81		18	81	
3	5	4	3	13	8	82	82	PILOT CARRIER ENBL	82	82	VBFO TUNE	82	82	PILOT CARRIER ENBL	82	82	B2 AGC BUS
3	5	3	3	13	4	78	78	PA L PWR ENBL	78	78	VBFO PARALLEL ENBL	78	78	PA LO PWR ENBL	78	78	B1 AGC BUS
3	5	2	3	13	2	14	14	PA HV ENBL	14	14	FINE TUNE	14	14	PA HV ENBL	14	14	A1 AGC BUS
3	5	1	3	13	1	79	79	PA LV ENBL	79	79	RESERVED	79	79	PA LV ENBL	79	79	A2 AGC BUS
4	2	8	4	6	8		103	COMMAND (C)		103	COMMAND (C)			C			C
4	2	7	4	6	4		38	STATUS REQUEST (S)		38	STATUS REQUEST (S)			S			S
4	2	6	4	6	2			NOT USED	27	105	UP/DOWN	(12)	13	EXCTR FLT	(12)	13	RCV FLT
4	2	5	4	6	1	92 (68)	68	REMOTE KEY (MON)	92	68	TUNE RATE (16)	92 (68)	68	SYSTEM KEY	92 (68)	68	RF OVLD FLT
4	2	4	4	7	8			NOT USED	28	4	(8)		88	B2 AF MON		88	B2 AF MON
4	2	3	4	7	4				29	39	(4)		23	B1 AF MON		23	B1 AF MON
4	2	2	4	7	2				95	5	(2)		22	A1 AF MON		22	A1 AF MON
4	2	1	4	7	1				30	70	(1)		24	A2 AF MON		24	A2 AF MON
4	3	8	4	8	8	(2)	2	AFC LOCK	(2)	2	NOT USED	(2)	2	NOT USED	(2)	2	NOT USED
4	3	7	4	8	4	(40)	40	EXCTR RF MON	(40)	40	NOT USED	(40)	40	NOT USED	(40)	40	NOT USED
4	3	6	4	8	2		105	CHAN A XMT AF MON		105	NOT USED		105	NOT USED		105	NOT USED
4	3	5	4	8	1		36	CHAN A RCV AF MON		36	CHAN A AF MON		36	NOT USED		36	NOT USED
4	3	4	4	9	8		83	CHAN A AGC MON		83	CHAN A AGC MON		83	NOT USED		83	NOT USED
4	3	3	4	9	4		39	CHAN B XMT MON		39	NOT USED		39	CONT INTFC FLT (DDS)		39	CONT INTFC FLT (DDS)
4	3	2	4	9	2		101	CHAN B RCV MON		101	CHAN B AF MON		101	VFO FAULT (DDS)		101	VFO FAULT (DDS)
4	3	1	4	9	1		18	CHAN B AGC MON		18	CHAN B AGC MON		18	RF FAULT (DDS)		18	RF FAULT (DDS)
4	4	8	4	10	8	(69)	69	PA RDY	(69)	69	NOT USED	(69)	69	NOT USED	(69)	69	NOT USED
4	4	7	4	10	4	(77)	4	PA FLT	(77)	4		(77)	4	SUBCARRIER LOCK FLT	(77)	4	SUBCARRIER LOCK FLT
4	4	6	4	10	2	(5)	5	PA RF MON	(5)	5		(5)	5	EXCTR RF MON	(5)	5	VBFO SYNTH FLT
4	4	5	4	10	1	(13)	70	CPLR FLT	(13)	70		(13)	70	EXCTR PS FLT	(13)	70	RCVR PS FLT
4	4	4	4	11	8	(67)	67	RF OVLD FLT	(67)	67	RF OVLD FLT	(67)	67	NOT USED	(67)	67	B2 AGC MON
4	4	3	4	11	4		49	SYNTH FLT		49	SYNTH		49	EXT STANDARD		49	B1 AGC MON
4	4	2	4	11	2		86	PS FLT		86	PS FLT		86	A1 IF MON		86	A1 AGC MON
4	4	1	4	11	1	(12)	3	RCVR/EXCTR FLT	(12)	3	RCVR FLT	(105)	3	NOT USED	(105)	3	A2 AGC MON
4	5	8	4	12	8	(70)		NOT USED	(70)		NOT USED	(70)	77	PA READY	(70)	77	NOT USED
4	5	7	4	12	4	(104)		NOT USED	(104)		NOT USED	(104)	102	PA FLT	(104)	102	EXT STANDARD
4	5	6	4	12	2	(27)	7	VBFO SYNTH FLT	(27)	7	VBFO SYNTH FLT	(27)	7	PA RF MON	(27)	7	AFC LOCK MON
4	5	5	4	12	1	(92)		NOT USED	(92)		NOT USED	(92)	89	CPLR FLT	(92)	89	RF PERF MON
4	5	4	4	13	8	(28)	71	PRESEL FLT	(28)	71	PRESEL FLT	(28)	71	PRESEL FLT	(28)	71	PRESEL FLT
4	5	3	4	13	4	(29)	95	DATA ERROR	(29)	95	DATA ERROR	(29)	95	DATA ERROR	(29)	95	DATA ERROR
4	5	2	4	13	2	(95)	16	LOCAL CONTROL	(95)	16	LOCAL CONTROL	(95)	16	LOCAL CONTROL	(95)	16	LOCAL CONTROL
4	5	1	4	13	1	(30	80	MONITOR	(30)	80	MONITOR	(30)	80	MONITOR	(30)	80	MONITOR

Parallel Input, Schematic Diag
Figure 3 (Sheet 7)

Parallel Output (642-3137-001, -002) (523-0770712-001211)

Change title as shown above.

1. DESCRIPTION

Add -002 behind part number 642-3137-001 in the first line of the first paragraph.

2.3 Serial-to-Parallel Shift Registers

Add the following sentence to the end of the first paragraph: For part number 642-3137-002, refer to the table on the schematic diagram (figure 4).

3.2 Testing

Add the following steps to table 2, test 4.

Table 2. Parallel Output, Testing and Troubleshooting Procedures (Cont).

TEST	PROCEDURE	NORMAL INDICATION	IF INDICATION IS ABNORMAL
4. (Cont)	**Note** Steps l and m are applicable only to 642-3137-002 circuit boards. l. Connect a processor to the local unit. m. Address word 3, character 4, and type all ones. Monitor the pins of P2 for the following indications.		

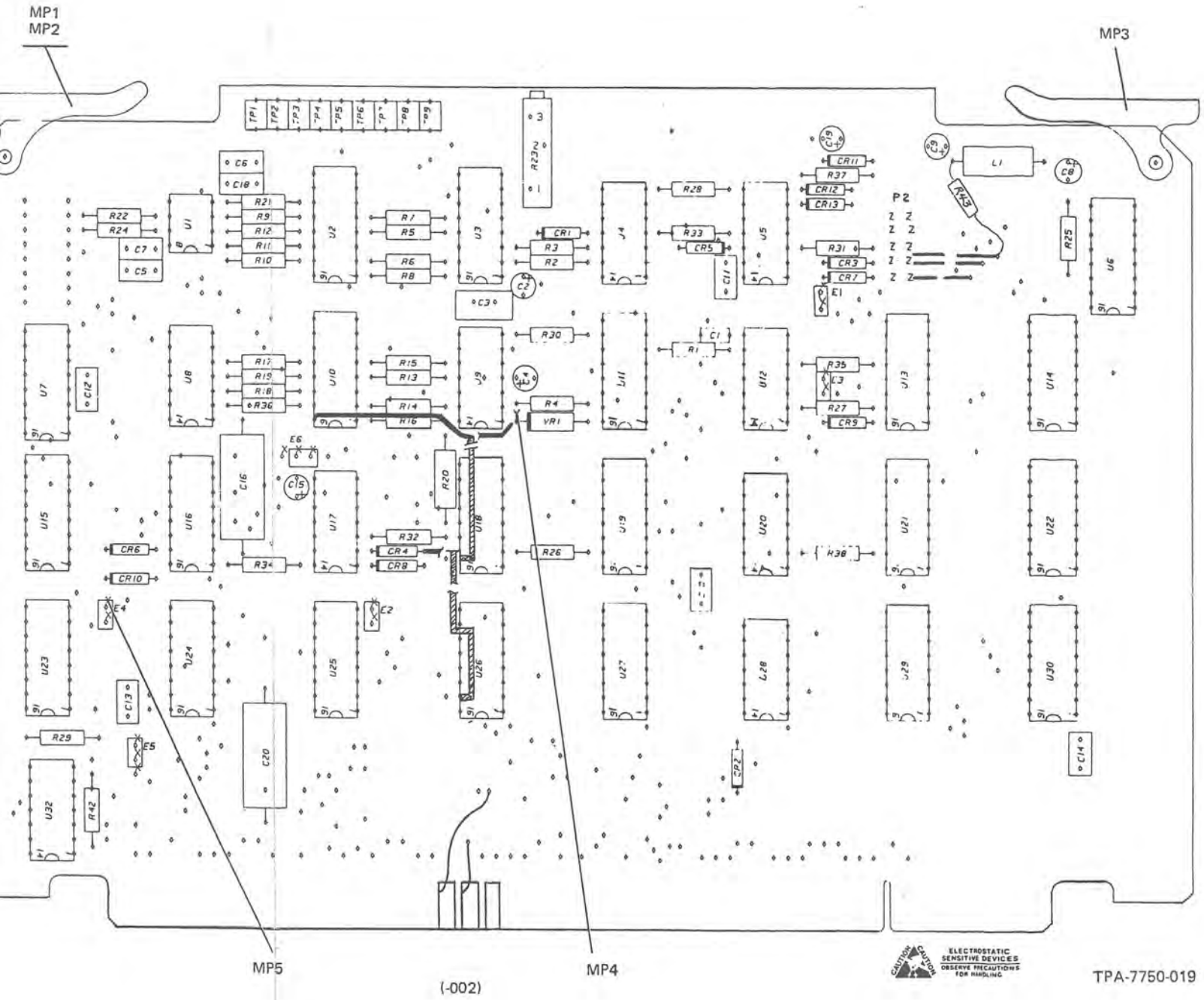
PARALLEL P2 PIN NO	LOGIC PRESENT	IF ABNORMAL, CHECK
3	1	U13
4	1	
5	1	
6	1	
7	1	
8	1	
9	1	
10	1	

6.3 Equipment Covered

Add the following entry to the equipment list:

CIRCUIT CARD/ SUBASSEMBLY	COLLINS PART NUMBER	LATEST EFFECTIVITY
Parallel Output	642-3137-002	REV L

Add figure 4 behind figure 3.



Parallel Output (642-3137-002),
Schematic Diagram
Figure 4 (Sheet 1 of 6)

The parts list for Parallel Output (642-3137-002) is the same as that for Parallel Output (642-3137-001), except for the following differences.

For 642-3137-002 only, add:

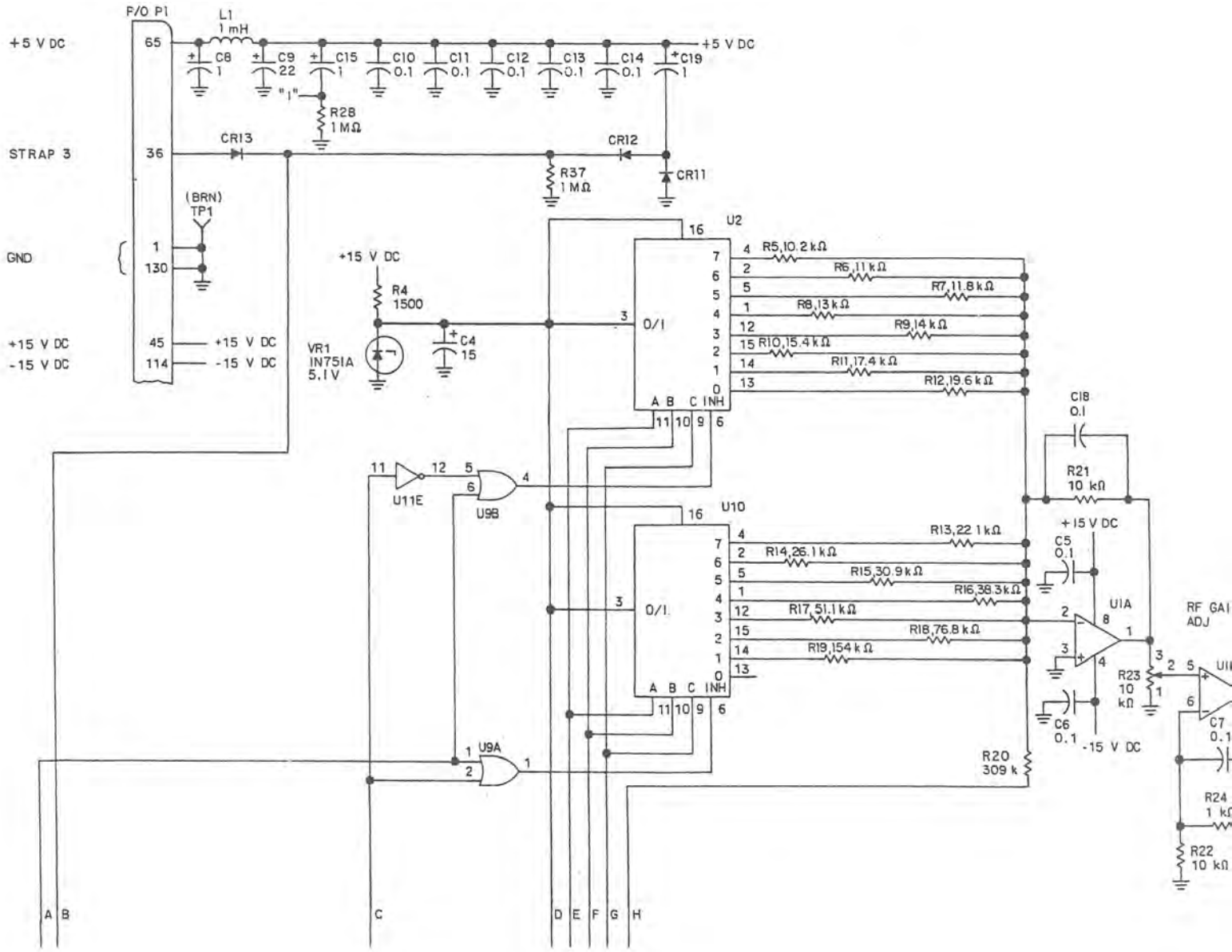
E1	NOT USED	
E2-E6	CONNECTOR, JMPR SYS	372-0046-010
P2	CONTACT, ELECTRICAL (QTY 10)	372-2601-045
R43	RESISTOR, FIXED CMPSN, 1 MEGO, 10%, 1/4 W	745-0857-000

For both 642-3137-001 and 642-3137-002, add:

MP1	LABEL, WARNING (QTY 1)	280-2745-040
MP2	EXTRACTOR, SCREENED (QTY 1)	637-2988-001
MP3	EXTRACTOR, SCREENED (QTY 1)	635-0884-001
MP4	CONTACT, ELECTRICAL (QTY 3)	372-2601-030
MP5	CONTACT, ELECTRICAL (QTY 15)	372-2601-037

NOTES:

1. UNLESS OTHERWISE SPECIFIED, RESISTANCE VALUES ARE IN OHMS AND CAPACITANCE VALUES ARE IN MICROFARADS.
2. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION, PREFIX WITH UNIT AND/OR ASSEMBLY DESIGNATION.
3. TYPE DESIGNATION SHOWN MAY BE GENERIC IN FORM AND ARE FOR REFERENCE ONLY. SEE APPLICABLE PARTS LIST FOR REPLACEMENT PARTS.
4. UNLESS OTHERWISE SPECIFIED, DIODES ARE TYPE IN4454.
5. P2 IS A CABLE CONNECTOR FIELD. THIS CABLE CONNECTOR (372-0043-010) IS NOT IN 642-3137-001 CONFIGURATION.
6. THE FOLLOWING PARTS PROVIDE FOR REMOTE CONTROL OF LOCAL/REMOTE IN A RADIO AND ARE NOT IN 642-3137-001 CONFIGURATION: R39, R40, R41, Q1, Q2, AND U31.
7. SIGNAL NAMES ARE NOT SHOWN FOR P1 AND P2 PINS THAT ARE ASSOCIAT CONTROL/STATUS BITS. THESE PINS HAVE DIFFERENT SIGNAL NAMES DE THE EQUIPMENT THIS CARD IS USED IN. REFER TO TABLE FOR PIN FUN NAMES). ALL PIN NUMBERS IN TABLE ARE ON P1, EXCEPT WORD 3, CHA WHICH ARE ON P2
8. NONSTANDARD ABBREVIATION; FLT = FAULT
9. PIN NUMBERS IN PARENTHESIS IN TABLE ARE STATUS OUTPUTS IN CO
10. THIS EQUIPMENT CONTAINS ELECTROSTATIC DISCHARGE SENSITIVE (ES SPECIAL HANDLING METHODS AND MATERIALS MUST BE USED TO PREVE DAMAGE.



E ASSOCIATED WITH
L NAMES DEPENDING ON
OR PIN FUNCTIONS (SIGNAL
ORD 3. CHARACTER 4

UTS IN CONTROL UNITS ONLY.

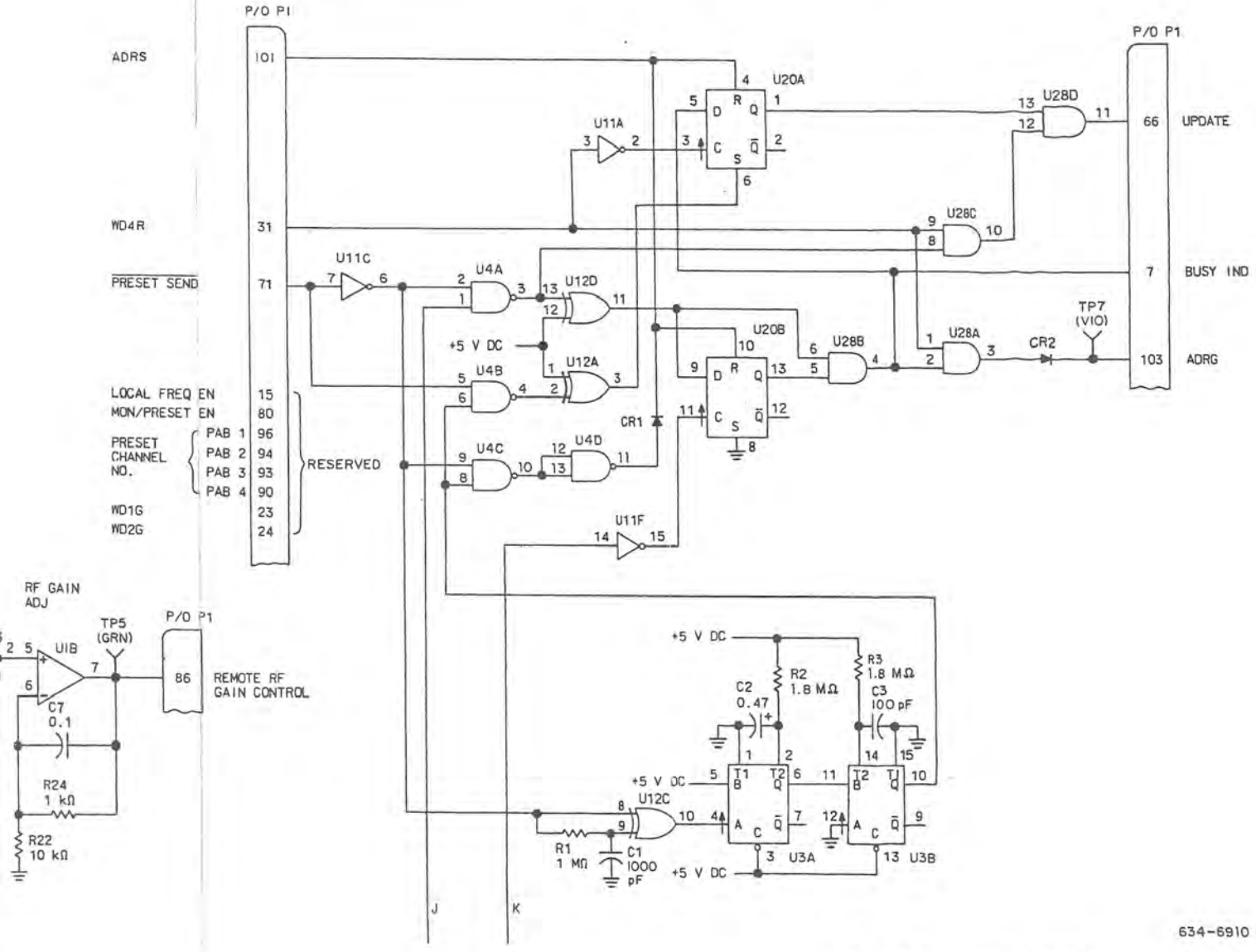
NSITIVE (ESDS) DEVICES.
O TO PREVENT EQUIPMENT

MICROCIRCUIT INFORMATION

REF DES	COMMON DEVICE OR COLLINS PN	PWR (V DC)	
		+5	GND
U1	MC1458P1		
U2	F4051PC	16	8,7
U3	MC14538BCP	16	8
U4	MC14011CP	14	7
U5	F4013BPC	14	7
U6	CD4094BE	16	8
U7	F4051PC	16	8,7
U8	CD4047AE	14	7
U9	MC14071BCP	14	7
U10	F4051PC	16	8,7
U11	F4049BPC	1	8
U12	MC14070BCP	14	7
U13	CD4094BE	16	8
U14	CD4094BE	16	8
U15	CD4094BE	16	8
U16	CD4094BE	16	8

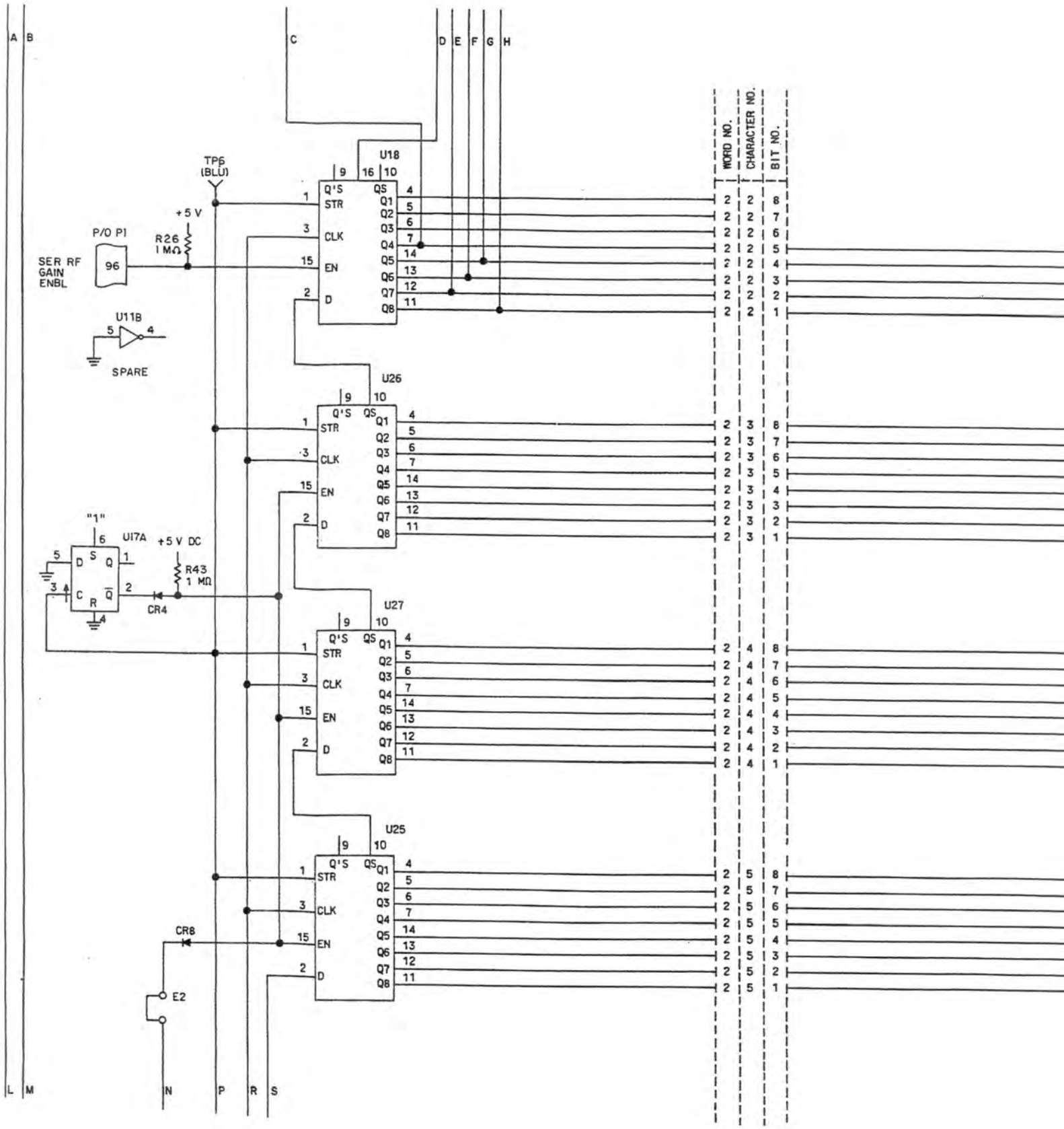
MICROCIRCUIT INFORMATION

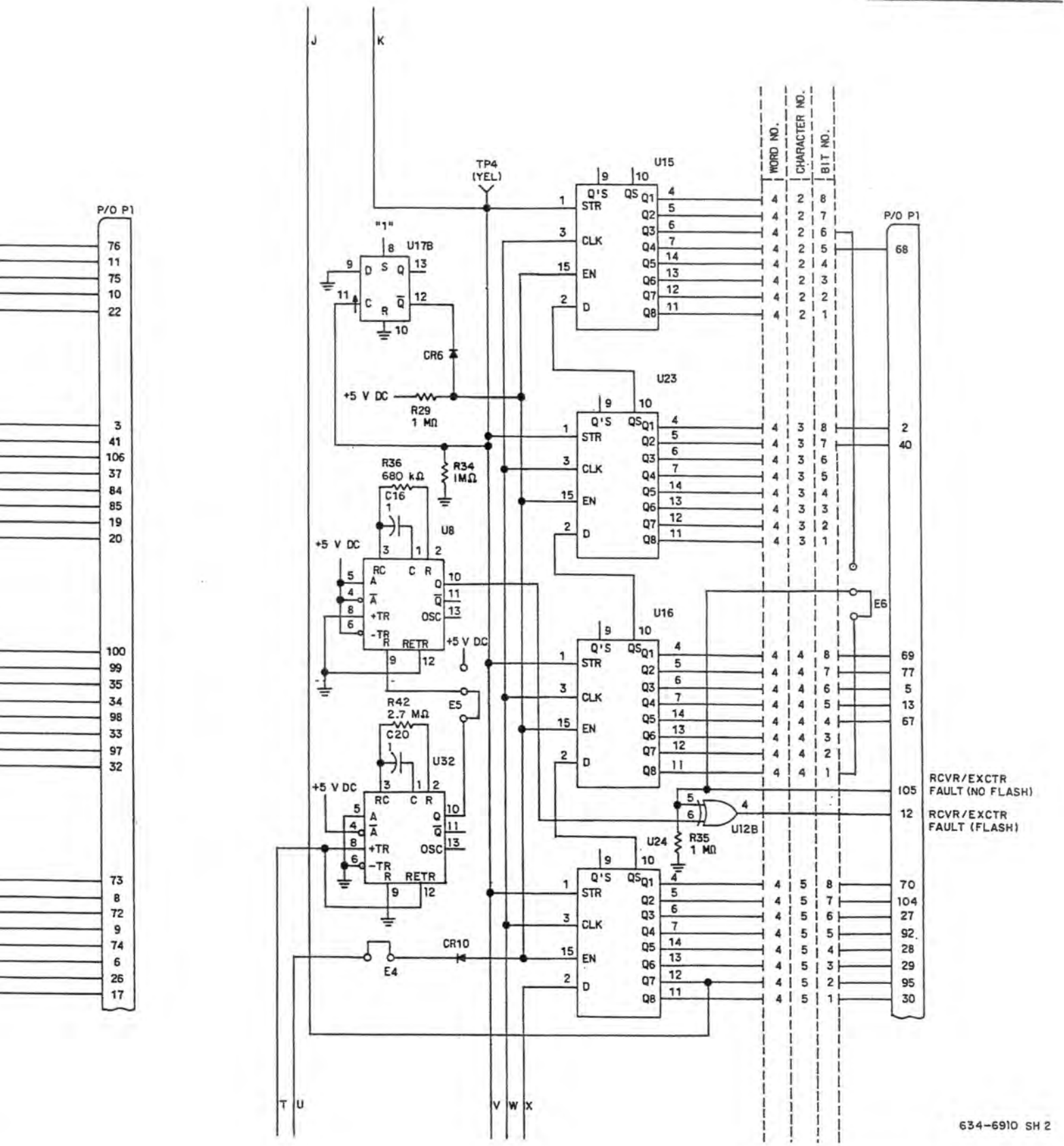
REF DES	COMMON DEVICE OR COLLINS PN	PWR (V DC)	
		+5	GND
U17	F4013BPC	14	7
U18	CD4094BE	16	8
U19	CD4094BE	16	8
U20	F4013BPC	14	7
U21	CD4094BE	16	8
U22	CD4094BE	16	8
U23	CD4094BE	16	8
U24	CD4094BE	16	8
U25	CD4094BE	16	8
U26	CD4094BE	16	8
U27	CD4094BE	16	8
U28	MC14081BCP	14	7
U29	CD4094BE	16	8
U30	CD4094BE	16	8
U31	CD4094BE	16	8
U32	CD4047AE	14	7



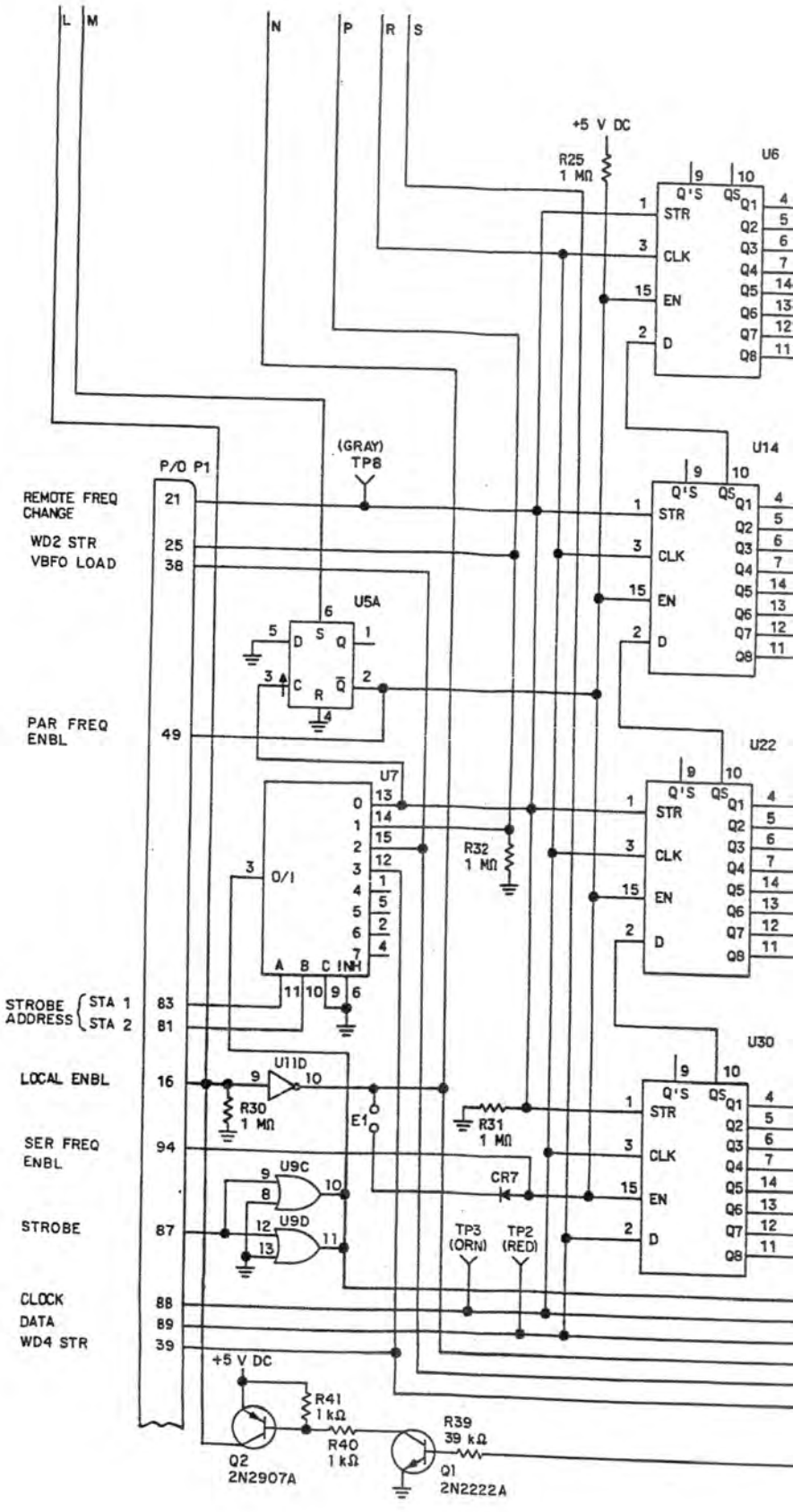
634-6910

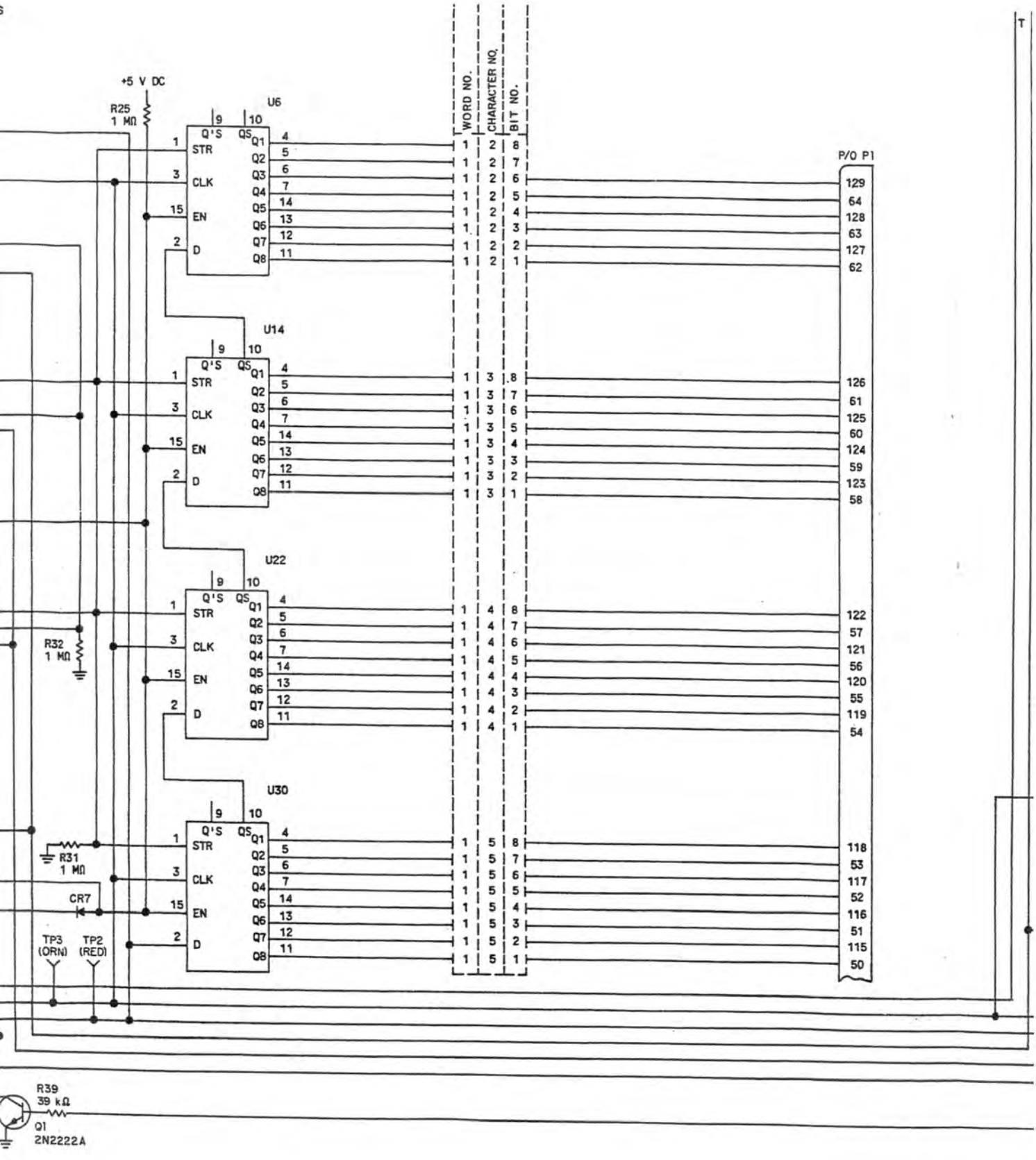
Parallel Output (642-3137-002), Schematic Diagram
Figure 4 (Sheet 3)

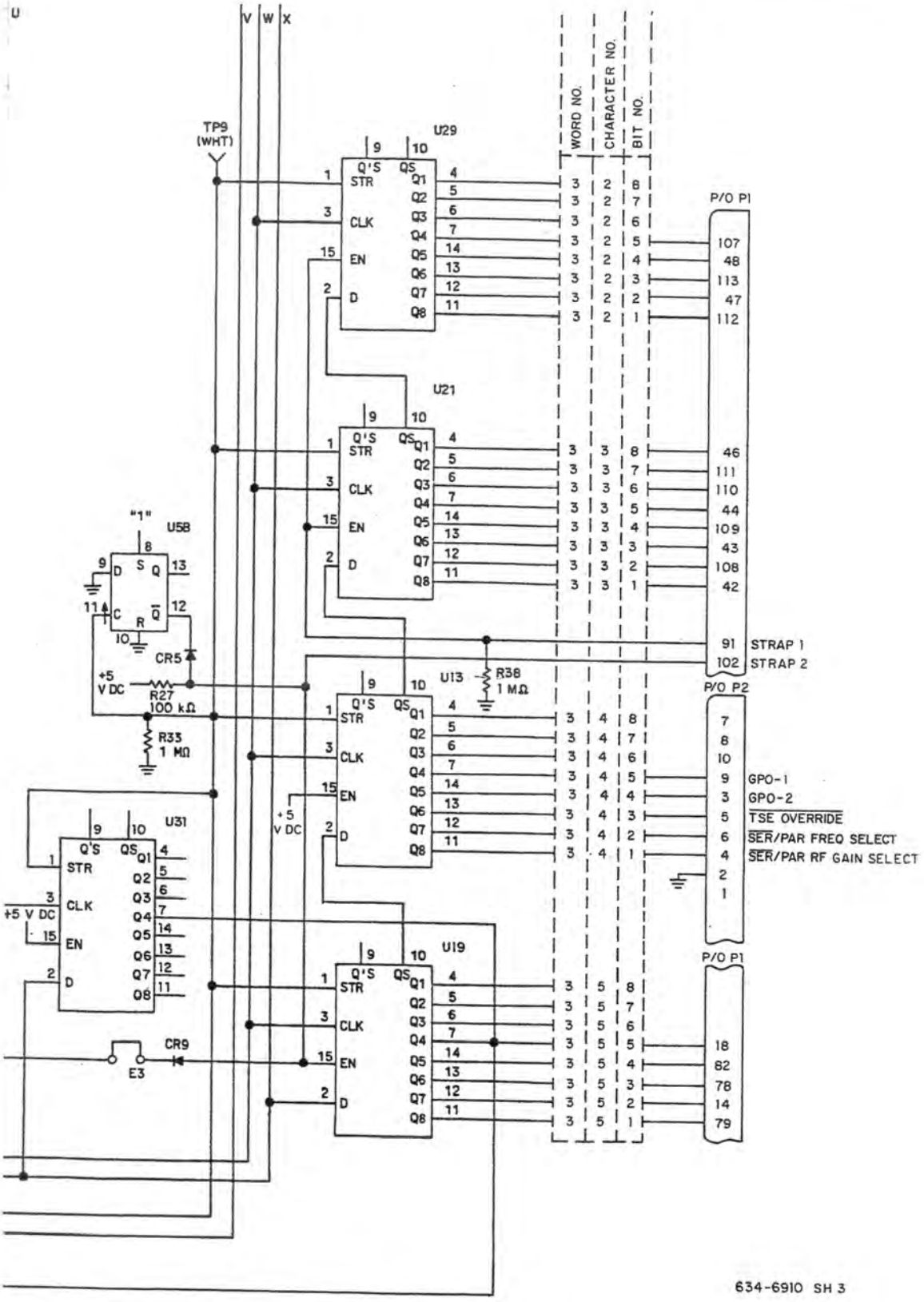

A
B
C
D
E
F
G
H
WORD NO.
CHARACTER NO.
BIT NO.
TP6 (BLU)
+5 V
P/O P1
R26 1 MΩ
SER RF GAIN ENBL
96
U18
U26
U27
U25
U11B
SPARE
"1"
U17A
+5 V DC
R43 1 MΩ
CR4
CR8
E2
STR
CLK
EN
D
Q'S
QS
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
L
M
N
P
R
S



Parallel Output (642-3137-002), Schematic Diagram
Figure 4 (Sheet 4)


L
M
N
P
R
S
+5 V DC
R25
1 MΩ
U6
U14
U22
U30
Q'S
QS
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
STR
CLK
EN
D
P/O P1
(GRAY)
TP8
REMOTE FREQ CHANGE
21
WD2 STR
25
VBFO LOAD
38
U5A
D
S
C
R
PAR FREQ ENBL
49
U7
O/I
A
B
C
INH
R32
1 MΩ
STROBE ADDRESS
STA 1
STA 2
83
81
LOCAL ENBL
16
U11D
R30
1 MΩ
E1
R31
1 MΩ
SER FREQ ENBL
94
U9C
U9D
CR7
STROBE
87
TP3
(ORN)
TP2
(RED)
CLOCK
88
DATA
89
WD4 STR
39
+5 V DC
R41
1 kΩ
R40
1 kΩ
R39
39 kΩ
Q2
2N2907A
Q1
2N2222A


+5 V DC
R25
1 MΩ
U6
U14
U22
U30
Q'S
QS
STR
CLK
EN
D
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
WORD NO.
CHARACTER NO.
BIT NO.
P/O P1
R32
1 MΩ
R31
1 MΩ
CR7
TP3
(ORN)
TP2
(RED)
R39
39 kΩ
Q1
2N2222A



Parallel Output (642-3137-002), Schematic Diagram
Figure 4 (Sheet 5)

CONTROL / STATUS BIT WORD FORMAT								EQUIPMENT TYPE											
HF-80 8-BIT					ASCII 7-BIT			HF-80XX 2-CHANNEL RADIOS AND HF-80XX 2-CHANNEL CONTROLS				851S-1/2, HF-8095				4-CHANNEL EXCITER, AND 4-CHANNEL EXCITER CONTR			
WORD NO.	CHARACTER NO.	BIT NO.		WORD NO.	CHARACTER NO.	BIT WT.		PARALLEL OUTPUT PIN NO.	PARALLEL INPUT PIN NO.	FUNCTION		PARALLEL OUTPUT PIN NO.	PARALLEL INPUT PIN NO.	FUNCTION		PARALLEL OUTPUT PIN NO.	PARALLEL INPUT PIN NO.	FUNCTION	
1	2	8		1	6	8			103	COMMAND	(C)		103	COMMAND	(C)			NOT USED	
1	2	7		1	6	4			38	STATUS REQUEST	(S)		38	STATUS REQUEST	(S)			NOT USED	
1	2	6		1	6	2		129	129	FREQ 10 MHz	(2)	129	129	FREQ 10 MHz	(2)	129	129	FREQ 10 MHz	(
1	2	5		1	6	1		64	64	FREQ 10 MHz	(1)	64	64	FREQ 10 MHz	(1)	64	64	FREQ 10 MHz	(
1	2	4		1	7	8		128	128	FREQ 1 MHz	(8)	128	128	FREQ 1 MHz	(8)	128	128	FREQ 1 MHz	(
1	2	3		1	7	4		63	63		(4)	63	63		(4)	63	63		(
1	2	2		1	7	2		127	127		(2)	127	127		(2)	127	127		(
1	2	1		1	7	1		62	62		(1)	62	62		(1)	62	62		(
1	3	8		1	8	8		126	126	FREQ 100 kHz	(8)	126	126	FREQ 100 kHz	(8)	126	126	FREQ 100 kHz	(
1	3	7		1	8	4		61	61		(4)	61	61		(4)	61	61		(
1	3	6		1	8	2		125	125		(2)	125	125		(2)	125	125		(
1	3	5		1	8	1		60	60		(1)	60	60		(1)	60	60		(
1	3	4		1	9	8		124	124	FREQ 10 kHz	(8)	124	124	FREQ 10 kHz	(8)	124	124	FREQ 10 kHz	(
1	3	3		1	9	4		59	59		(4)	59	59		(4)	59	59		(
1	3	2		1	9	2		123	123		(2)	123	123		(2)	123	123		(
1	3	1		1	9	1		58	58		(1)	58	58		(1)	58	58		(
1	4	8		1	10	8		122	122	FREQ 1 kHz	(8)	122	122	FREQ 1 kHz	(8)	122	122	FREQ 1 kHz	(
1	4	7		1	10	4		57	57		(4)	57	57		(4)	57	57		(
1	4	6		1	10	2		121	121		(2)	121	121		(2)	121	121		(
1	4	5		1	10	1		56	56		(1)	56	56		(1)	56	56		(
1	4	4		1	11	8		120	120	FREQ 100 Hz	(8)	120	120	FREQ 100 Hz	(8)	120	120	FREQ 100 Hz	(
1	4	3		1	11	4		55	55		(4)	55	55		(4)	55	55		(
1	4	2		1	11	2		119	119		(2)	119	119		(2)	119	119		(
1	4	1		1	11	1		54	54		(1)	54	54		(1)	54	54		(
1	5	8		1	12	8		118	118	FREQ 10 Hz	(8)	118	118	FREQ 10 Hz	(8)	118	118	FREQ 10 Hz	(
1	5	7		1	12	4		53	53		(4)	53	53		(4)	53	53		(
1	5	6		1	12	2		117	117		(2)	117	117		(2)	117	117		(
1	5	5		1	12	1		52	52		(1)	52	52		(1)	52	52		(
1	5	4		1	13	8		116	116	FREQ 1 Hz	(8)	116	116	FREQ 1 Hz	(8)	116	116	FREQ 1 Hz	(
1	5	3		1	13	4		51	51		(4)	51	51		(4)	51	51		(
1	5	2		1	13	2		115	115		(2)	115	115		(2)	115	115		(
1	5	1		1	13	1		50	50		(1)	50	50		(1)	50	50		(
2	2	8		2	6	8			103	COMMAND	(C)		103	COMMAND	(C)			NOT USED	
2	2	7		2	6	4			38	STATUS REQUEST	(S)		38	STATUS REQUEST	(S)				
2	2	6		2	6	2				NOT USED				NOT USED					
2	2	5		2	6	1		76	76	RF GAIN	(16)	76	76	RF GAIN	(16)	76	76		
2	2	4		2	7	8		11	11		(8)	11	11		(8)	11	11		
2	2	3		2	7	4		75	75		(4)	75	75		(4)	75	75		
2	2	2		2	7	2		10	10		(2)	10	10		(2)	10	10		
2	2	1		2	7	1		22	87		(1)	22	87		(1)	22	87		
2	3	8		2	8	8		3		NOT USED		3		NOT USED		3	12	NOT USED	
2	3	7		2	8	4		41	41	VBFO ENBL		41	41	VBFO ENBL		41	41		
2	3	6		2	8	2		106	106	AFC ENBL		106	106	RESERVED		106	106		
2	3	5		2	8	1		37	37	AGC CROWBAR ENBL		37	37	AGC CROWBAR ENBL		37	37		
2	3	4		2	9	8		84	84	USB AGC OFF		84	84	USB AGC OFF		84	84		
2	3	3		2	9	4		85	85	USB AGC FAST		85	85	USB AGC FAST		85	85		
2	3	2		2	9	2		19	19	LSB AGC OFF		19	19	LSB AGC OFF		19	19		
2	3	1		2	9	1		20	20	LSB AGC FAST		20	20	LSB AGC FAST		20	20		
2	4	8		2	10	8		100	100	FL8 ENBL		100	100	FL8 ENBL		100	100	NOT USED	
2	4	7		2	10	4		99	99	FL7 ENBL		99	99	FL7 ENBL		99	99		
2	4	6		2	10	2		35	35	FL6 ENBL		35	35	FL6 ENBL		35	35		
2	4	5		2	10	1		34	34	FL5 ENBL		34	34	FL5 ENBL		34	34		
2	4	4		2	11	8		98	98	FL4 ENBL		98	98	FL4 ENBL		98	98		
2	4	3		2	11	4		33	33	FL3 ENBL		33	33	FL3 ENBL		33	33		
2	4	2		2	11	2		97	97	FL2 ENBL		97	97	FL2 ENBL		97	97		
2	4	1		2	11	1		32	32	FL1 ENBL		32	32	FL1 ENBL		32	32	PEAK CLIPPER ENB	
2	5	8		2	12	8		73	73	FM ENBL		73	73	FM ENBL		73	73	NOT USED	
2	5	7		2	12	4		8	8	AM ENBL		8	8	AM ENBL		8	8	AM ENBL	
2	5	6		2	12	2		72	72	SSB ENBL		72	72	SSB ENBL		72	72	CW ENBL	
2	5	5		2	12	1		9	9	CW ENBL		9	9	CW ENBL		9	9	ISB ENBL	
2	5	4		2	13	8		74	74	ISB ENBL		74	74	ISB ENBL		74	74	B2 ENBL	
2	5	3		2	13	4		6	92	RESERVED		6	92	RESERVED		6	92	B1 ENBL	
2	5	2		2	13	2		26	91	RESERVED		26	91	RESERVED		26	91	A1 ENBL	
2	5	1		2	13	1		17	21	RESERVED		17	21	RESERVED		17	21	A2 ENBL	

PIN FUNCTION (SIGNAL NAME) TABLE

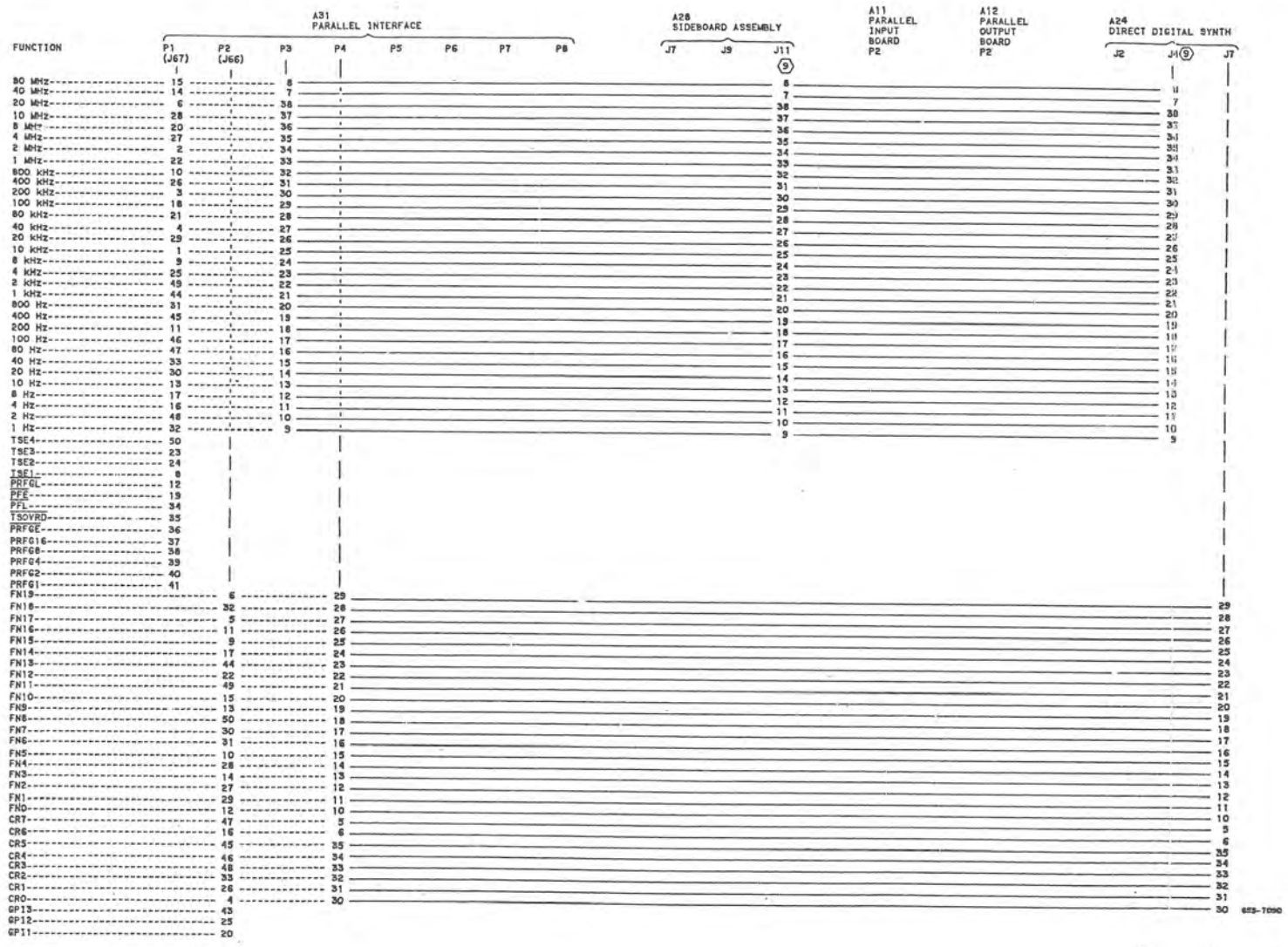
IPMENT TYPE					4-CHANNEL EXCITER, AND 4-CHANNEL EXCITER CONTROL			4-CHANNEL RECEIVER, AND 4-CHANNEL RECEIVER CONTROL			CONTROL / STATUS BIT WORD FORMAT						HF-80XX 2-CHANNEL RADIOS, AND HF-80XX 2-CHANNEL CONTROLS			EQ		
											HF-80 8-BIT			ASCII 7-BIT						851S-1/2, HF-8095		
					PARALLEL OUTPUT PIN NO.	PARALLEL INPUT PIN NO.	FUNCTION	PARALLEL OUTPUT PIN NO.	PARALLEL INPUT PIN NO.	FUNCTION	WORD NO.	CHARACTER NO.	BIT NO.	WORD NO.	CHARACTER NO.	BIT WT.	PARALLEL OUTPUT PIN NO.	PARALLEL INPUT PIN NO.	FUNCTION	PARALLEL OUTPUT PIN NO.	PARALLEL INPUT PIN NO.	FUNCTION
							NOT USED			NOT USED	3	2	8	3	6	8		103	COMMAND (C)		103	COMMAND
							NOT USED			NOT USED	3	2	7	3	6	4		38	STATUS REQUEST (S)		38	STATUS REQUES
											3	2	6	3	6	2			NOT USED			NOT USED
											3	2	5	3	6	1	107	107	VBFO SIGN	107	107	VBFO SIGN
											3	2	4	3	7	8	48	48	VBFO FREQ 1 kHz (8)	48	48	VBFO FREQ 1 k
											3	2	3	3	7	4	113	113	(4)	113	113	
											3	2	2	3	7	2	47	47	(2)	47	47	
											3	2	1	3	7	1	112	112	(1)	112	112	
											3	3	8	3	8	8	46	46	VBFO FREQ 100 Hz (8)	46	46	VBFO FREQ 100
											3	3	7	3	8	4	111	111	(4)	111	111	
											3	3	6	3	8	2	110	110	(2)	110	110	
											3	3	5	3	8	1	44	44	(1)	44	44	
											3	3	4	3	9	8	109	109	VBFO FREQ 10 Hz (8)	109	109	VBFO FREQ 10
											3	3	3	3	9	4	43	43	(4)	43	43	
											3	3	2	3	9	2	108	108	(2)	108	108	
											3	3	1	3	9	1	42	42	(1)	42	42	
											3	4	8	3	10	8	7	7	NOT USED	7	7	NOT USED
											3	4	7	3	10	4	8	8		8	8	
											3	4	6	3	10	2	10	10		10	10	
											3	4	5	3	10	1	9	9		9	9	
											3	4	4	3	11	8	3	3		3	3	
											3	4	3	3	11	4	5	5		5	5	
											3	4	2	3	11	2	6	6		6	6	
											3	4	1	3	11	1	4	4		4	4	
											3	5	8	3	12	8			NOT USED			NOT USED
											3	5	7	3	12	4						
											3	5	6	3	12	2						
											3	5	5	3	12	1	18	81		18	81	
											3	5	4	3	13	8	82	82	PILOT CARRIER ENBL	82	82	VBFO TUNE
											3	5	3	3	13	4	78	78	PA L PWR ENBL	78	78	VBFO PARALLEL
											3	5	2	3	13	2	14	14	PA HV ENBL	14	14	FINE TUNE
											3	5	1	3	13	1	79	79	PA LV ENBL	79	79	RESERVED
											4	2	8	4	6	8		103	COMMAND (C)		103	COMMAND
											4	2	7	4	6	4		38	STATUS REQUEST (S)		38	STATUS REQUES
											4	2	6	4	6	2			NOT USED	27	105	UP/DOWN
											4	2	5	4	6	1	92 (68)	68	REMOTE KEY (MON)	92	68	TUNE RATE
											4	2	4	4	7	8			NOT USED	28	4	
											4	2	3	4	7	4				29	39	
											4	2	2	4	7	2				95	5	
											4	2	1	4	7	1				30	70	
											4	3	8	4	8	8	(2)	2	AFC LOCK	(2)	2	NOT USED
											4	3	7	4	8	4	(40)	40	EXCTR RF MON	(40)	40	NOT USED
											4	3	6	4	8	2		105	CHAN A XMT AF MON		105	NOT USED
											4	3	5	4	8	1		36	CHAN A RCV AF MON		36	CHAN A AF MO
											4	3	4	4	9	8		83	CHAN A AGC MON		83	CHAN A AGC M
											4	3	3	4	9	4		39	CHAN B XMT MON		39	NOT USED
											4	3	2	4	9	2		101	CHAN B RCV MON		101	CHAN B AF MO
											4	3	1	4	9	1		18	CHAN B AGC MON		18	CHAN B AGC M
											4	4	8	4	10	8	(69)	69	PA RDY	(69)	69	NOT USED
											4	4	7	4	10	4	(77)	4	PA FLT	(77)	4	
											4	4	6	4	10	2	(5)	5	PA RF MON	(5)	5	
											4	4	5	4	10	1	(13)	70	CPLR FLT	(13)	70	
											4	4	4	4	11	8	(67)	67	RF OVLD FLT	(67)	67	RF OVLD FLT
											4	4	3	4	11	4		49	SYNTH FLT		49	SYNTH
											4	4	2	4	11	2		86	PS FLT		86	PS FLT
											4	4	1	4	11	1	(12)	3	RCVR/EXCTR FLT	(12)	3	RCVR FLT
											4	5	8	4	12	8	(70)		NOT USED	(70)		NOT USED
											4	5	7	4	12	4	(104)		NOT USED	(104)		NOT USED
											4	5	6	4	12	2	(27)	7	VBFO SYNTH FLT	(27)	7	VBFO SYNTH FL
											4	5	5	4	12	1	(92)		NOT USED	(92)		NOT USED
											4	5	4	4	13	8	(28)	71	PRESEL FLT	(28)	71	PRESEL FLT
											4	5	3	4	13	4	(29)	95	DATA ERROR	(29)	95	DATA ERROR
											4	5	2	4	13	2	(95)	16	LOCAL CONTROL	(95)	16	LOCAL CONTROL
											4	5	1	4	13	1	(30	80	MONITOR	(30	80	MONITOR
		(C)					NOT USED			NOT USED												
		(S)								NOT USED												
		(16)	76	76				76	76	RF GAIN (16)												
		(8)	11	11				11	11	(8)												
		(4)	75	75				75	75	(4)												
		(2)	10	10				10	10	(2)												
		(1)	22	87				22	87	(1)												
			3	12			NOT USED	3	12	FL7 (E) ENBL												
			41	41				41	41	FL6 (D) ENBL												
			106	106				106	106	FL5 (C) ENBL												
			37	37				37	37	FL4 (B) ENBL												
			84	84				84	84	B2 AGC (2)												
			85	85				85	85	B2 AGC (1)												
			19	19				19	19	A2 AGC (2)												
			20	20				20	20	A2 AGC (1)												
			100	100			NOT USED	100	100	FL3 (A) ENBL												
			99	99				99	99	FL1 (16 kHz) ENBL												
			35	35				35	35	VBFO ENBL												
			34	34				34	34	AFC ENBL												
			98	98				98	98	B1 AGC (2)												
			33	33				33	33	B1 AGC (1)												
			97	97				97	97	A1 AGC (2)												
			32	32			PEAK CLIPPER ENBL	32	32	A1 AGC (1)												
			73	73			NOT USED	73	73	DATA NET ENBL												
			8	8			AM ENBL	8	8	AM ENBL												
			72	72			CW ENBL	72	72	CW ENBL												
			9	9			ISB ENBL	9	9	ISB ENBL												
			74	74			B2 ENBL	74	74	B2 ENBL												
			6	92			B1 ENBL	6	92	B1 ENBL												
			26	91			A1 ENBL	26	91	A1 ENBL												
			17	21			A2 ENBL	17	21	A2 ENBL												

EQUIPMENT TYPE

XX 2-CHANNEL RADIOS. AND XX 2-CHANNEL CONTROLS			B5IS-1/2, HF-8095			4-CHANNEL EXCITER, AND 4-CHANNEL EXCITER, CONTROL			4-CHANNEL RECEIVER, AND 4-CHANNEL RECEIVER CONTROL		
PARALLEL INPUT PIN NO.	FUNCTION		PARALLEL OUTPUT PIN NO.	PARALLEL INPUT PIN NO.	FUNCTION	PARALLEL OUTPUT PIN NO.	PARALLEL INPUT PIN NO.	FUNCTION	PARALLEL OUTPUT PIN NO.	PARALLEL INPUT PIN NO.	FUNCTION
03	COMMAND	(C)		103	COMMAND (C)			NOT USED			NOT USED
38	STATUS REQUEST	(S)		38	STATUS REQUEST (S)						NOT USED
	NOT USED				NOT USED						NOT USED
107	VBFO SIGN		107	107	VBFO SIGN	107	107		107	107	VBFO SIGN
48	VBFO FREQ 1 kHz	(8)	48	48	VBFO FREQ 1 kHz (8)	48	48		48	48	VBFO FREQ 1 kHz (8)
113		(4)	113	113	(4)	113	113		113	113	(4)
47		(2)	47	47	(2)	47	47		47	47	(2)
112		(1)	112	112	(1)	112	112		112	112	(1)
46	VBFO FREQ 100 Hz	(8)	46	46	VBFO FREQ 100 Hz (8)			NOT USED	46	46	VBFO FREQ 100 Hz (8)
111		(4)	111	111	(4)				111	111	(4)
110		(2)	110	110	(2)				110	110	(2)
44		(1)	44	44	(1)				44	44	(1)
109	VBFO FREQ 10 Hz	(8)	109	109	VBFO FREQ 10 Hz (8)				109	109	VBFO FREQ 10 Hz (8)
43		(4)	43	43	(4)				43	43	(4)
108		(2)	108	108	(2)				108	108	(2)
42		(1)	42	42	(1)				42	42	(1)
7	NOT USED		7	7	NOT USED	7	7	GPI-1 (11)	7	7	GPI-1 (11)
8			8	8		8	8	GPI-2	8	8	GPI-2
10			10	10		10	10	GPI-3	10	10	GPI-3
9			9	9		9	9	GPO-1	9	9	GPO-1
3			3	3		3	3	GPO-2	3	3	GPO-2
5			5	5		5	5	SER TS OVRD	5	5	SER TS OVRD
6			6	6		6	6	PAR BCD ENBL	6	6	SER BCD ENBL
4			4	4		4	4	PAR RF GAIN ENBL	4	4	SER RF GAIN ENBL
	NOT USED				NOT USED			NOT USED			NOT USED
81			18	81		18	81		18	81	
82	PILOT CARRIER ENBL		82	82	VBFO TUNE	82	82	PILOT CARRIER ENBL	82	82	B2 AGC BUS
78	PA L PWR ENBL		78	78	VBFO PARALLEL ENBL	78	78	PA LO PWR ENBL	78	78	B1 AGC BUS
14	PA HV ENBL		14	14	FINE TUNE	14	14	PA HV ENBL	14	14	AI AGC BUS
79	PA LV ENBL		79	79	RESERVED	79	79	PA LV ENBL	79	79	A2 AGC BUS
03	COMMAND	(C)		103	COMMAND (C)			$\overline{C}$			$\overline{C}$
38	STATUS REQUEST	(S)		38	STATUS REQUEST (S)			$\overline{S}$			$\overline{S}$
	NOT USED		27	105	UP/DOWN	(12)	13	EXCTR FLT	(12)	13	RCV FLT
68	REMOTE KEY (MON)		92	68	TUNE RATE (16)	92 (68)	68	SYSTEM KEY	92 (68)	68	RF OVLD FLT
	NOT USED		28	4	(8)		88	B2 AF MON		88	B2 AF MON
			29	39	(4)		23	B1 AF MON		23	B1 AF MON
			95	5	(2)		22	AI AF MON		22	AI AF MON
			30	70	(1)		24	A2 AF MON		24	A2 AF MON
2	AFC LOCK		(2)	2	NOT USED	(2)	2	NOT USED	(2)	2	NOT USED
0	EXCTR RF MON		(40)	40	NOT USED	(40)	40	NOT USED	(40)	40	NOT USED
5	CHAN A XMT AF MON			105	NOT USED		105	NOT USED		105	NOT USED
6	CHAN A RCV AF MON			36	CHAN A AF MON		36	NOT USED		36	NOT USED
3	CHAN A AGC MON			83	CHAN A AGC MON		83	NOT USED		83	NOT USED
9	CHAN B XMT MON			39	NOT USED		39	CONT INTFC FLT (DDS)		39	CONT INTFC FLT (DDS)
1	CHAN B RCV MON			101	CHAN B AF MON		101	VFO FAULT (DDS)		101	VFO FAULT (DDS)
8	CHAN B AGC MON			18	CHAN B AGC MON		18	RF FAULT (DDS)		18	RF FAULT (DDS)
9	PA RDY		(69)	69	NOT USED	(69)	69	NOT USED	(69)	69	NOT USED
4	PA FLT		(77)	4		(77)	4	SUBCARRIER LOCK FLT	(77)	4	SUBCARRIER LOCK FLT
5	PA RF MON		(5)	5		(5)	5	EXCTR RF MON	(5)	5	VBFO SYNTH FLT
0	CPLR FLT		(13)	70		(13)	70	EXCTR PS FLT	(13)	70	RCVR PS FLT
7	RF OVLD FLT		(67)	67	RF OVLD FLT	(67)	67	NOT USED	(67)	67	B2 AGC MON
9	SYNTH FLT			49	SYNTH		49	EXT STANDARD		49	B1 AGC MON
6	PS FLT			86	PS FLT		86	A1 IF MON		86	A1 AGC MON
3	RCVR/EXCTR FLT		(12)	3	RCVR FLT	(105)	3	NOT USED	(105)	3	A2 AGC MON
	NOT USED		(70)		NOT USED	(70)	77	PA READY	(70)	77	NOT USED
	NOT USED		(104)		NOT USED	(104)	102	PA FLT	(104)	102	EXT STANDARD
7	VBFO SYNTH FLT		(27)	7	VBFO SYNTH FLT	(27)	7	PA RF MON	(27)	7	AFC LOCK MON
	NOT USED		(92)		NOT USED	(92)	89	CPLR FLT	(92)	89	RF PERF MON
1	PRESEL FLT		(28)	71	PRESEL FLT	(28)	71	PRESEL FLT	(28)	71	PRESEL FLT
5	DATA ERROR		(29)	95	DATA ERROR	(29)	95	DATA ERROR	(29)	95	DATA ERROR
6	LOCAL CONTROL		(95)	16	LOCAL CONTROL	(95)	16	LOCAL CONTROL	(95)	16	LOCAL CONTROL
0	MONITOR		(30)	80	MONITOR	(30)	80	MONITOR	(30)	80	MONITOR

TPA-8092-015

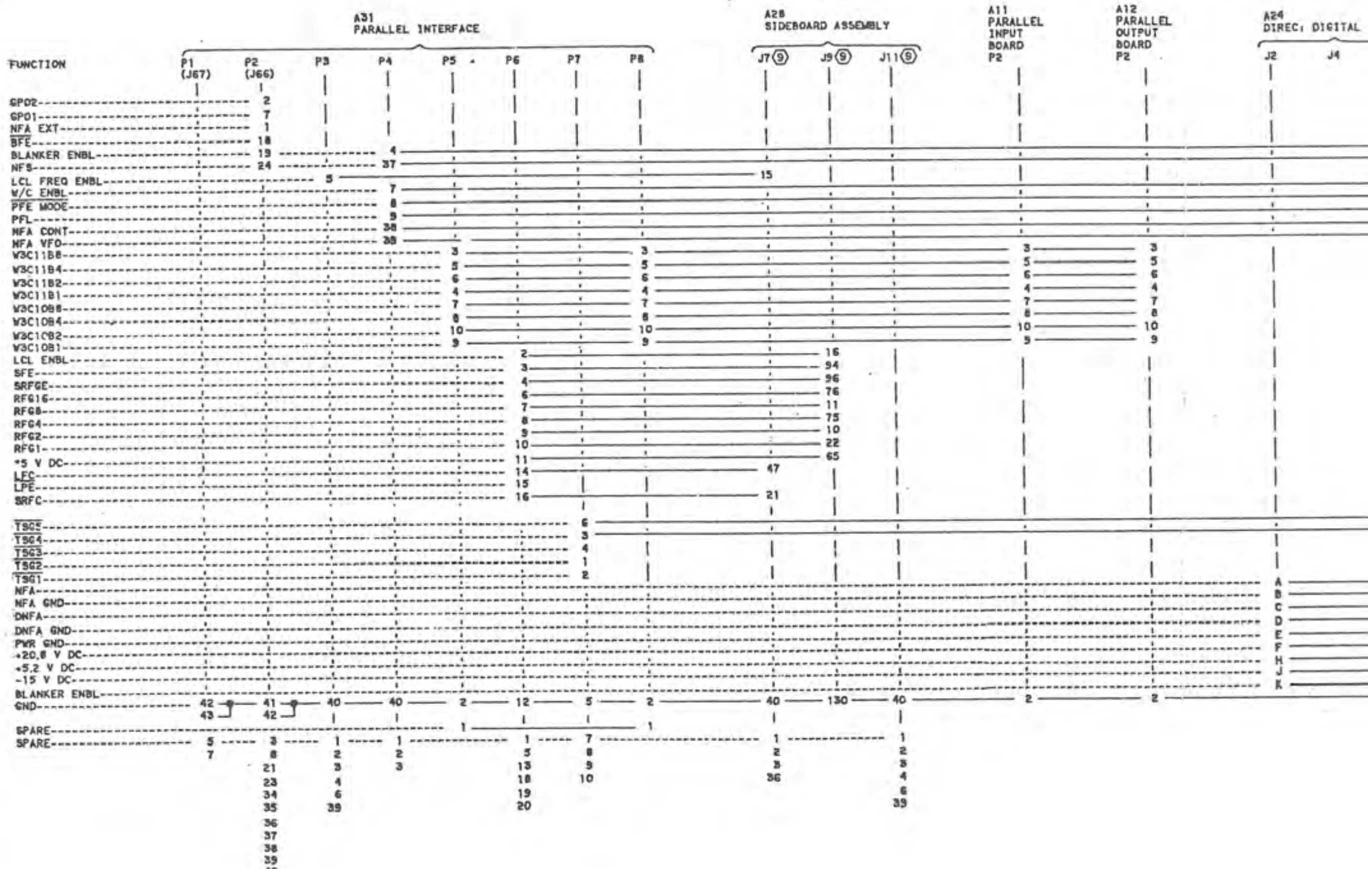
Parallel Output (642-3137-002), Schematic Diagram
Figure 4 (Sheet 6)



MATERIAL			NONE
FINISH			NONE
25½ x 17	120		50
IMAGE AREA W X H	LTR SIZE	PAGE INCR	PCT
PUBN NO. FOR COLLINS DIVISIONS			

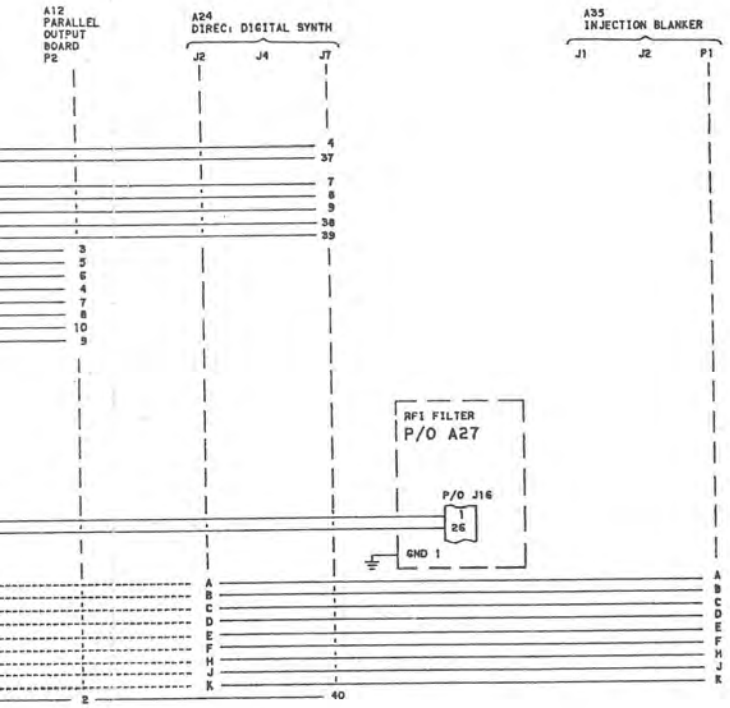
11⅜ x 8½

NOTES:



28 1/4 x ...
IMAGE AR... W X H
PUBN NO.
FOR...

REVISIONS			
LTR	DESCRIPTION	DATE	APVD
	SEE SHEET 1		



659-7090

-001

28½ x 13½	120		50
IMAGE AREA W X H	LTR SIZE	PAGE INCR	PCT
PUBN NO.			
FOR COLLINS DIVISIONS			

14¼ x 6¾

MATERIAL: NONE

FINISH: NONE

UNLESS OTHERWISE SPECIFIED : DUAL DIMENSIONED DWGS ARE IN MILLIMETRES (INCHES). SINGLE DIMENSIONED DWGS ARE IN INCHES.

METRIC

TOL ON METRIC DIMS .X±0.5, .XX±0.2

HOLE DIAMETERS
UNDER 6.35Ø+0.13-0.13
6.35 TO 12.7Ø+0.15-0.13
OVER 12.7Ø+0.20-0.13

ANGLES: ±1.0°

CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN 0.25 Ø.

PART SHALL COMPLY TO 580-5400-001--THIRD ANGLE PROJECTION

US CUSTOMARY[ ]

TOL ON [ ] DIMS .XX±.02, .XX3±.008

HOLE DIAMETERS:
UNDER .25Ø+.005-.005
.25[TO .500Ø+.006-.005
OVER .500Ø+.008-.005

ANGLES: ±1°

CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN .010 Ø.

CONTRACT NO.	
PREP	A. SIPPY 84/6/29
CHK	J. WITMER 84/6/29
APVD	C. ERRINGTON

ROCKWELL INTERNATIONAL CORPORATION
COLLINS GROUPS
DALLAS, TEX 75207 NEWPORT BEACH, CALIF 92663 CEDAR RAPIDS, IA 52404

INTERCONNECT DIAGRAM-
CHASSIS, HF-8041/
HF-8054A, 622-3475-210

METRIC

SIZE	FSCM	DWG NO.	REV LTR
E	13499	659-7090	B

SCALE NONE SHEET 9

659-7090 B1

NOTES:

RECEIVER CABLE/ASSEMBLY CONFIGURATIONS

CABLE/ASSEMBLY	PART NUMBER	HF-8054 RECEIVER					HF-8054A RECEIVER								FUNCTION
		-001					-001	-002	-003	-004	-005	-006	-007	-210	
SIDEBOARD ASSEMBLY A28	634-8224-001	X					X	X		X	X	X			STANDARD SIDEBOARD ASSEMBLY
	634-8224-002								X				X		INCLUDES WIRING FOR YBFO AND AFC
SIDEBOARD	638-6627-001	X					X	X	X	X	X	X	X	X	MAIN SIDEBOARD
CABLE ASSEMBLY	634-8210-001	X					X	X	X	X	X	X	X	X	INCLUDES A28J11, A28P2, AND A28P11
CABLE ASSEMBLY	634-8228-001	X					X	X	X	X	X	X	X	X	INCLUDES A28J19, A28J12, A28P3, A28P4, AND A28P5
CABLE ASSEMBLY W1	634-8226-001	X					X	X	X	X	X	X	X	X	INCLUDES TB1 AND ASSOCIATED WIRING
CABLE ASSEMBLY W2	634-8227-001	X					X	X	X	X	X	X	X	X	INCLUDES TB2 AND ASSOCIATED WIRING
CABLE ASSEMBLY W3	634-8225-001	X					X	X	X	X	X	X	X	X	INCLUDES J47, TB3, AND AUDIO CONNECTIONS (SPEAKER CABLE)
RFI FILTER A27	637-2712-003	X					X	X	X	X	X	X	X	X	RFI FILTER, INCLUDES J15 AND J16
SPECIAL PURPOSE CABLE	637-9313-001	X					X	X	X	X	X	X	X	X	INCLUDES A27J46 AND A27P7
OVEN STANDARD, OSC ASSY A29	637-9135-001							X	X	X	X	X	X	X	
FREQ STANDARD SWITCH A30	646-6558-001							X	X	X	X	X	X	X	
FREQ DISPLAY CABLE A2W1	634-8289-001							X	X	X	X	X	X	X	(P/O AC-8014) INCLUDES A2W1P8 AND A2W1P2A
SYNTHESIZER CHASSIS ASSY A24	634-8201-001	X					X	X	X	X	X	X	X		
SYNTHESIZER SIDEBOARD A24A1	638-6973-001	X					X	X	X	X	X	X	X		
SYNTHESIZER A24	652-6615-001													X	
SIDEBOARD A28	634-8224-003													X	

RF CABLES

RF CABLE ASSY	637-1525-002	X					X	X	X	X	X	X	X	X			INTERCONNECTS J40 AND J22 (RCV ANT)
RF CABLE ASSY	637-1525-005	X					X	X	X	X	X	X	X	X			INTERCONNECTS J38 AND J23 (CH B2 IF OUT)
RF CABLE ASSY	637-1525-003	X					X	X	X	X	X	X	X	X			INTERCONNECTS J37 AND J24 (CH A2 IF OUT)
RF CABLE ASSY	637-1525-003	X					X	X	X	X	X	X	X	X			INTERCONNECTS J36 AND J25 (CH B1 IF OUT)
RF CABLE ASSY	637-1525-003	X					X	X	X	X	X	X	X	X			INTERCONNECTS J35 AND J26 (CH A1 IF OUT)
RF CABLE ASSY	637-1526-002	X					X	X	X	X	X	X	X	X			INTERCONNECTS J41 AND J42 (9.45 MHz IF)
RF CABLE ASSY	637-1526-003								X				X	X			INTERCONNECTS J34 AND J39 (450 kHz IF FROM YBFO)
RF CABLE ASSY	637-1526-003								X								INTERCONNECTS J32 AND J38 (9.9 MHz IF FROM AFC)
RF CABLE ASSY	637-1526-005	X					X	X	X	X	X	X	X	X			INTERCONNECTS J29 AND J43 (118.8 MHz INJ)
RF CABLE ASSY	637-1526-003	X					X	X	X	X	X	X	X	X			INTERCONNECTS J28 AND J45 (VAR INJ)
RF CABLE ASSY	637-1526-006	X					X	X		X	X	X	X	X			INTERCONNECTS J32 AND J44 (9.9 MHz INJ)
									X								INTERCONNECTS J44 AND J57 (9.9 MHz INJ TO AFC)
RF CABLE ASSY	637-1529-001	X					X	X		X	X	X		X			INTERCONNECTS A24E1 AND J34 (450 kHz INJ)
									X				X				INTERCONNECTS A24E1 AND J60 (450 kHz INJ TO YBFO)
RF CABLE ASSY	637-1529-001	X					X	X	X	X	X	X	X	X			INTERCONNECTS A24E1 AND J39 (450 kHz INJ)
RF CABLE ASSY	637-1529-001	X					X	X	X	X	X	X	X	X			INTERCONNECTS A24E7 AND J54 (456.25 kHz INJ)
RF CABLE ASSY	637-1529-001	X					X	X	X	X	X	X	X	X			INTERCONNECTS A24E5 AND J55 (443.71 kHz INJ)
RF CABLE ASSY	642-2454-001	X					X	X		X	X	X	X	X			INTERCONNECTS J50, J51, J52, AND J53 (450 kHz IF)
	646-6534-001								A								INTERCONNECTS J50, J51, J52, J53, AND J56 (450 kHz IF FOR AFC)
RF CABLE ASSY	637-9136-001																(P/O AC-8013) INTERCONNECTS A24E3 AND J27 (EXT STD)
RF CABLE ASSY	P/O A29							X	X	X	X	X	X	X			(P/O AC-8012) INTERCONNECTS A24E3 AND A29W1P1 (1 MHz STD)
RF CABLE ASSY	P/O A30							X	X	X	X	X	A	X			(P/O AC-8015) INTERCONNECTS A30P1 AND A29J1 (1 MHz STD)
RF CABLE ASSY	P/O A30							X	X	X	X	X	X	X			(P/O AC-8015) INTERCONNECTS A30J1 AND A29W1P1 (100 kHz REF)
RF CABLE ASSY	P/O A30							X	X	X	X	X	X	X			(P/O AC-8015) INTERCONNECTS A30J2 AND J27 (EXT STD)
RF CABLE ASSY	P/O A30							X	X	X	X	X	X	X			(P/O AC-8015) INTERCONNECTS A30J3 AND J65 (100 kHz REF OUT)

NOTES:

① RE
IN
CA

② UN
AN

③ PA
PR

④ J1
A5

⑤ A2
MA

⑥ A2
OR
SH

A27P7

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34

⑦ J1

⑧ RE

⑨ PIN

31 x 145
IMAGE AREA
W X H

PUBN NO.

FOR C

REVISIONS			
LTR	DESCRIPTION	DATE	APVD
	SEE SHEET 1		

NCTION
D AFC
A28P11
P3, A28P4, AND A28P5
WIRING
WIRING
CONNECTIONS (SPEAKER CABLE)
D J16
8 AND A2W1P2A

RCV ANT)
CH B2 IF OUT)
CH A2 IF OUT)
CH B1 IF OUT)
CH A1 IF OUT)
9.45 MHz IF)
450 kHz IF FROM VBFO)
9.9 MHz IF FROM AFC)
18.8 MHz INJ)
VAR INJ)
9.9 MHz INJ)
9.9 MHz INJ TO AFC)
(450 kHz INJ)
(450 kHz INJ TO VBFO)
(450 kHz INJ)
(456.25 kHz INJ)
(443.71 kHz INJ)
ND J53 (450 kHz IF)
53, AND J56 (450 kHz IF FOR AFC)
A24E3 AND J27 (EXT STD)
A24E3 AND A29W1P1 (1 MHz STD)
A30P1 AND A25J1 (1 MHz STD)
A30J1 AND A29W1P1 (100 kHz REF)
A30J2 AND J27 (EXT STD)
A30J3 AND J65 (100 kHz REF OUT)

NOTES:

1. REFER TO CONFIGURATION TABLE FOR CABLES/ASSEMBLIES USED IN EACH RECEIVER. INCLUDED IN THIS TABLE ARE ONLY THE CABLES/ASSEMBLIES SHOWN ON THIS SCHEMATIC.
2. UNLESS OTHERWISE SPECIFIED, CAPACITANCE VALUES ARE 0.01 MICROFARADS AND INDUCTANCE VALUES ARE 100 MICROHENRYS.
3. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATION, PREFIX WITH UNIT AND/OR ASSEMBLY DESIGNATION.
4. J11, J12, J17, J18 AND J19 ARE SOLDERED INTO AND ARE PART OF SIDEBOARD ASSEMBLY A28 (THERE IS NO MATING CONNECTOR FOR J11, J12, J17, J18, AND J19).
5. A27J46 IS SOLDERED INTO AND IS PART OF RF1 FILTER A27 (THERE IS NO MATING CONNECTOR FOR A27J46).
6. A27P7 MATES WITH PINS ON ONE SIDE OF J7, A10P1 MATES WITH SOCKET ON OTHER SIDE OF J7 (OPPOSITE SIDES OF SIDEBOARD; PIN NUMBERING SHOWN BELOW).

A27P7	P/O J7	P/O A10P1
1	28	28
2	93	93
3	29	29
4	94	94
5	30	30
6	95	95
7	31	31
8	96	96
9	32	32
10	97	97
11	33	33
12	98	98
13	34	34
14	99	99
15	35	35
16	100	100
17	36	36
18	101	101
19	37	37
20	102	102
21	38	38
22	103	103
23	39	39
24	104	104
25	40	40
26	105	105
27	41	41
28	106	106
29	42	42
30	107	107
31	43	43
32	108	108
33	44	44
34	109	109

7. J14 HARDWIRED TO AND IS PART OF SIDEBOARD ASSEMBLY A28.
8. REFERENCE DESIGNATOR IN PARENTHESIS INDICATES MATING CONNECTOR.
9. PINS DUPLICATED FOR CLARITY.

659-7090

-001

31 x 14½	120		50
IMAGE AREA W x H	LTR SIZE	PAGE INCR	PCT
PUBN NO. FOR COLLINS DIVISIONS			

15½ x 7¼

MATERIAL: NONE

FINISH: NONE

UNLESS OTHERWISE SPECIFIED, DUAL DIMENSIONED DWGS ARE IN MILLIMETRES (INCHES). SINGLE DIMENSIONED DWGS ARE IN INCHES.

METRIC

TOL ON METRIC DIM .X±0.5 .XX±0.2
HOLE DIAMETERS
UNDER 6.35Ø+0.13-0.13
6.35 TO 12.70+0.15-0.13
OVER 12.70+0.20-0.13
ANGLES: ±1.0°
CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN 0.25 Ø.

US CUSTOMARY[ ]

TOL ON [ ] DIM .XX±.02 .XXX±.008
HOLE DIAMETERS:
UNDER .250+.005-.005
251 TO .500+.006-.035
OVER .500+.008-.005
ANGLES: ±1.0°
CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN .010 Ø.

CONTRACT NO.

PREP	A. SIPPY	84/8/21
CHK	J. WITMER	84/8/21
APVD	C. ERRINGTON	

ROCKWELL INTERNATIONAL CORPORATION
COLLINS GROUPS
DALLAS TEX 75207 NEWPORT BEACH,CALIF 92663 CEDAR RAPIDS,IA 52405

INTERCONNECT DIAGRAM-
CHASSIS, HF-8054/HF-8054A
(622-3475-210)

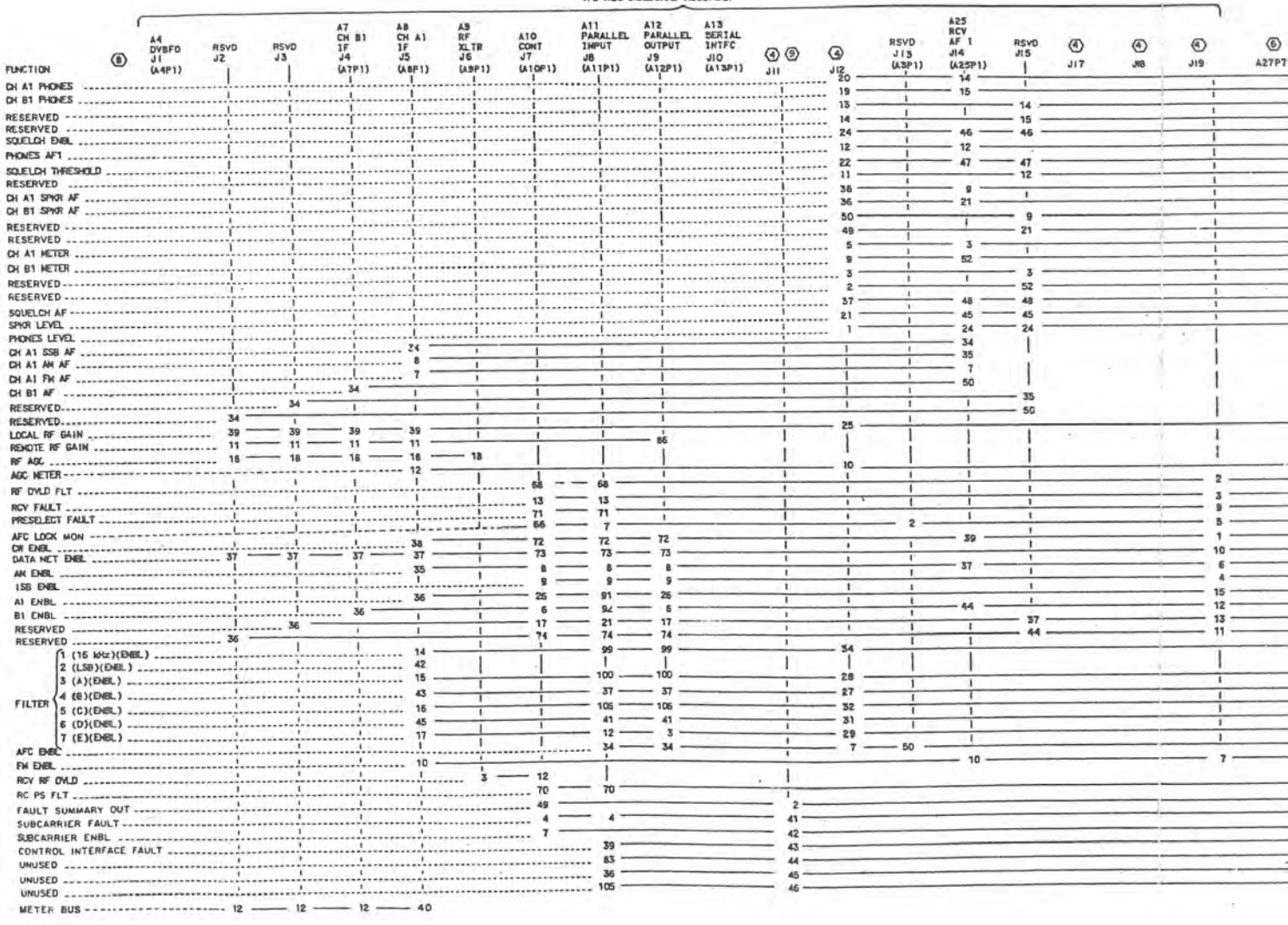
METRIC

SIZE	FSCM	DWG NO.	REV LTR
E	13499	659-7090	8

SCALE NONE SHEET 10

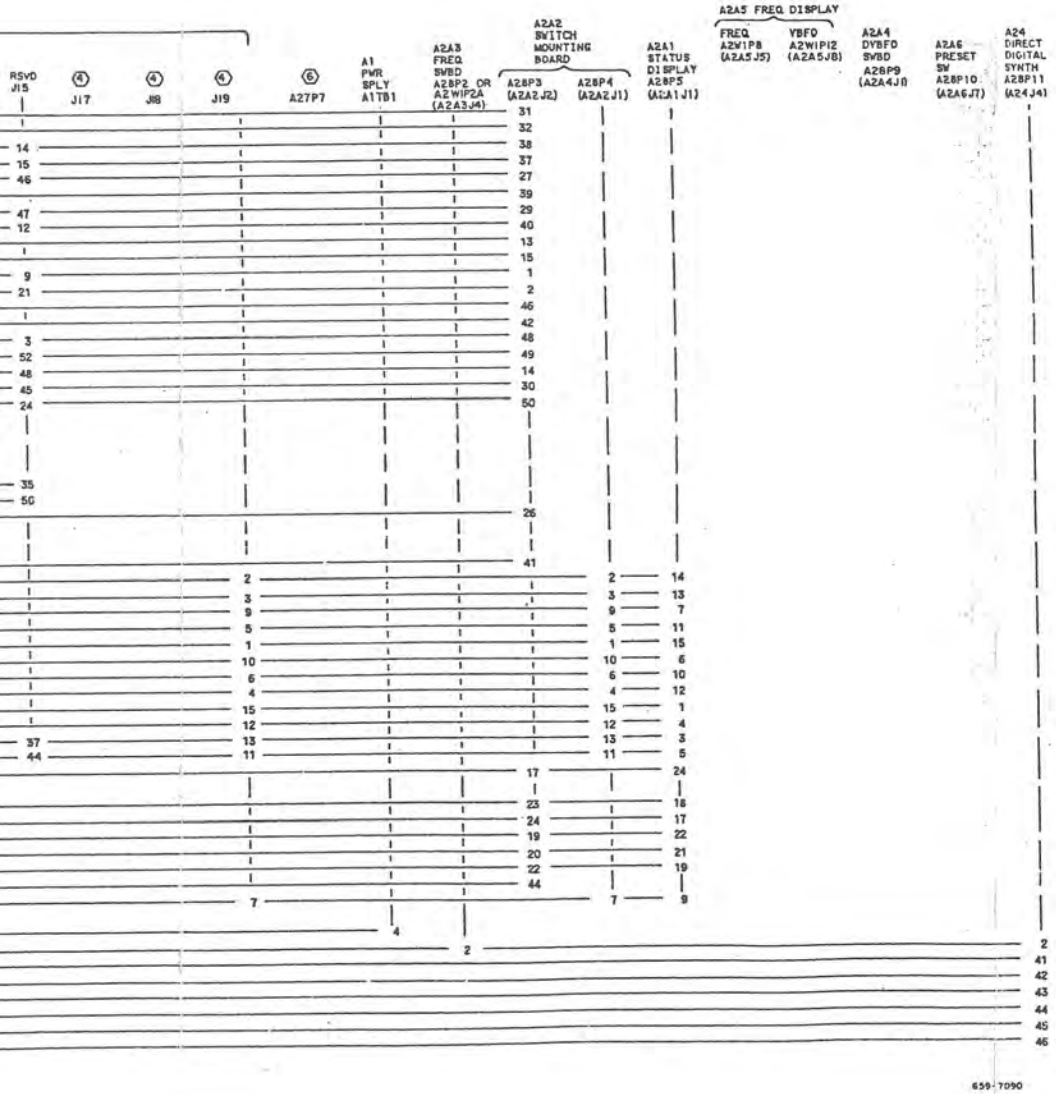
659-7090 10

NOTES:



REV STATUS OF SHEETS	REV		
	SHEET	1	2

REVISIONS			
LTR	DESCRIPTION	DATE	APVD
A	D20708-(CODE 16) REV SH 1,2,9.	84-12-3	CT
B	D21799-(CODE 16) REV SH 1 THRU 10.	85-2-28	CT



-001

REV STATUS OF SHEETS	REV	B	B	B	B	B	B	B	B	B	B
	SHEET	1	2	3	4	5	6	7	8	9	10

17¼ x 8¾

35 x 17	120		50
IMAGE AREA W X H	LTR SIZE	PAGE INCR	PCT

PUBN NO.

FOR COLLINS DIVISIONS

MATERIAL: NONE

FINISH: NONE

UNLESS OTHERWISE SPECIFIED, DUAL DIMENSIONED DWGS ARE IN MILLIMETRES (INCHES). SINGLE DIMENSIONED DWGS ARE IN INCHES.

METRIC

TOL ON METRIC DIM .X=±0.5, .XX=±0.2
HOLE DIAMETERS
UNDER 6.38=+0.13-0.13
6.38 TO 12.78=+0.15-0.13
OVER 12.78=+0.20-0.13
ANGLES: ±1.0°
CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN 0.25 Ø.

US CUSTOMARY[ ]

TOL ON [ ] DIM .XX=±.02, .XXX=±.008
HOLE DIAMETERS:
UNDER .256=+.005-.005
.251 TO .500=+.006-.006
OVER .500=+.008-.005
ANGLES: ±1.0°
CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN .010 Ø.

PART SHALL COMPLY TO 580-5400-001--THIRD ANGLE PROJECTION

CONTRACT NO.

PREP A. SIPPY 84/8/21

CHK J. WITMER 84/8/21

APVD C. ERRINGTON

ROCKWELL INTERNATIONAL CORPORATION
COLLINS GROUPS
DALLAS, TEX 75207 NEWPORT BEACH, CALIF 92663 CEDAR RAPIDS, IA 52406

INTERCONNECT DIAGRAM-CHASSIS, HF-8054/HF-8054A (622-3475-2101)

METRIC

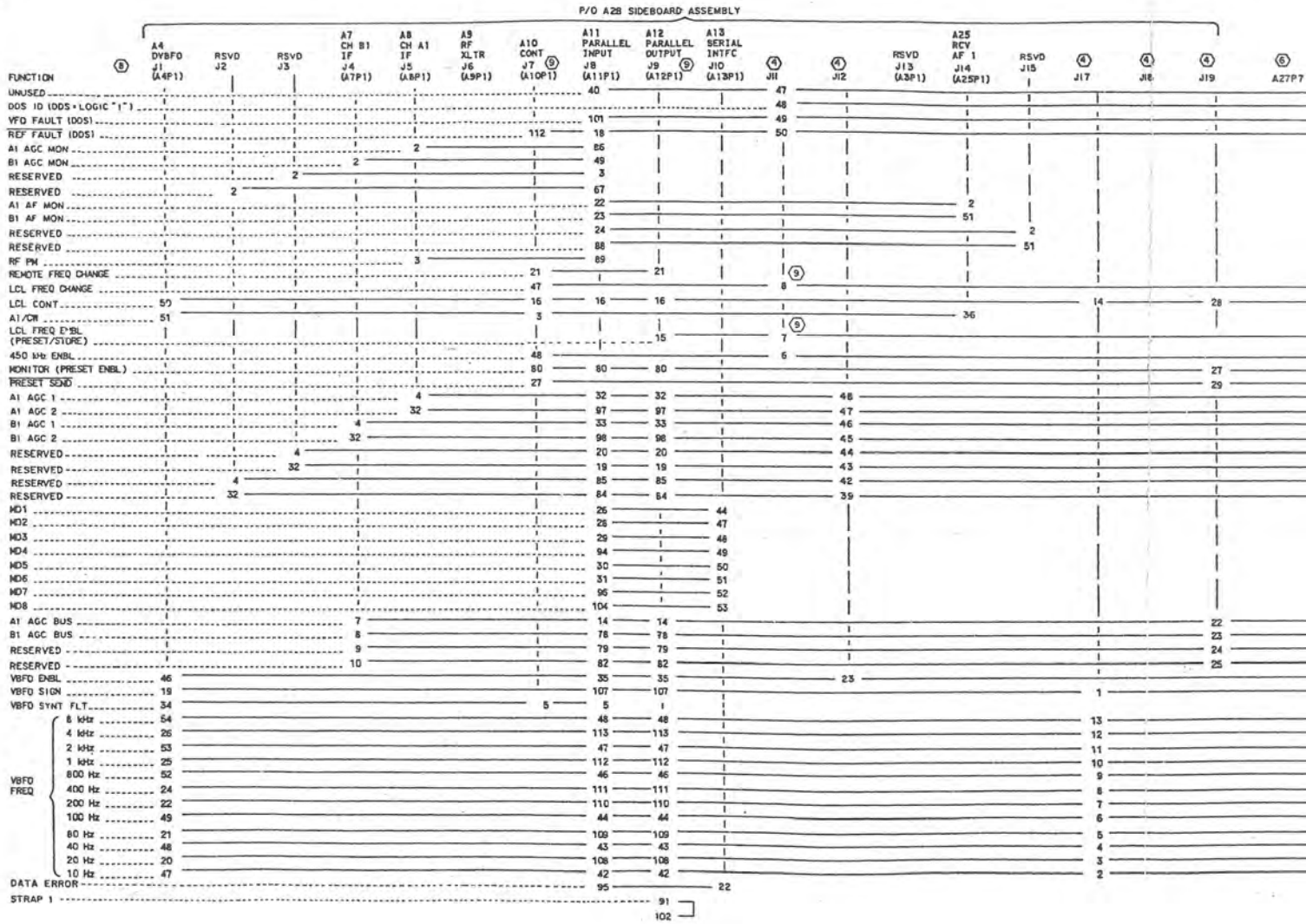
SIZE	FSCM	DWG NO.	REV LTR
E	13499	659-7090	B

SCALE NONE

SHEET 1 OF 10

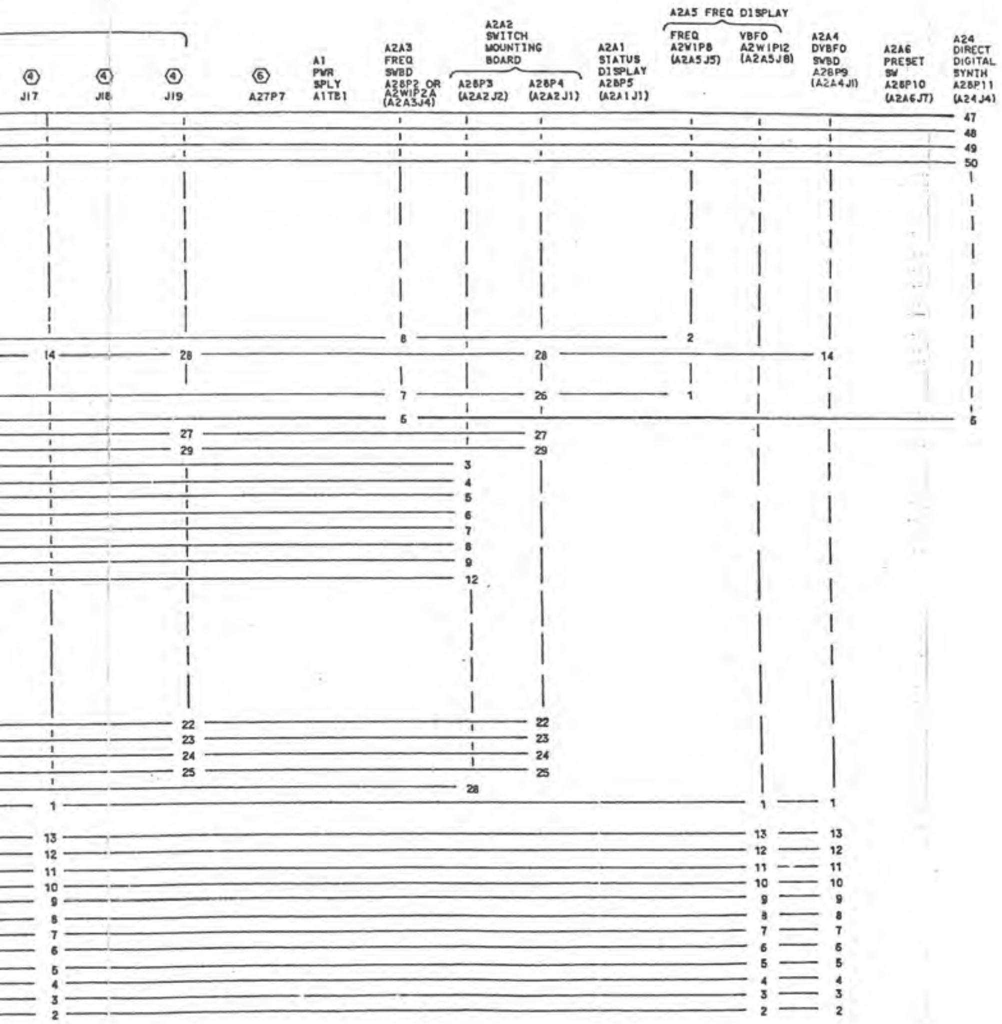
659-7090

NOTES:



55 x
IMAGE AR W X H
PUBN NO.
FOR INTERNAL

LTR	REVISIONS DESCRIPTION	DATE	APVD
	SEE SHEET 1		



659-7090

-001

35 x 16¾	120		50
IMAGE AREA W X H	LTR SIZE	PAGE INCR	PCT

17½ x 8⅜

PUBN NO.

FOR COLLINS DIVISIONS INTERNAL PUBLICATIONS USE ONLY

MATERIAL NONE

FINISH NONE

UNLESS OTHERWISE SPECIFIED, DUAL DIMENSIONED DWGS ARE IN MILLIMETRES (INCHES). SINGLE DIMENSIONED DWGS ARE IN INCHES.

METRIC	US CUSTOMARY[ ]
TOL ON METRIC DIM .X=±0.5, .XX=±0.2	TOL ON [ ] DIM .XX=±.02, .XXX=±.008
HOLE DIAMETERS UNDER 6.38Ø=+0.13-0.13; 6.38 TO 12.78=+0.15-0.13; OVER 12.78=+0.20-0.13	HOLE DIAMETERS: UNDER .251Ø=+.005-.005; .251 TO .500Ø=+.006-.005; OVER .500Ø=+.008-.005
ANGLES: ±1.0°	ANGLES: ±1.0°
CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN 0.25	CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN .010

PART SHALL COMPLY TO 580-5400-001--THIRD ANGLE PROJECTION

CONTRACT NO.

PREP A. SIPPY 84/8/21

CHK J. WITMER 84/8/21

APVD C. ERRINGTON

ROCKWELL INTERNATIONAL CORPORATION
COLLINS GROUPS
DALLAS, TEX 75207 NEWPORT BEACH, CALIF 92663 CEDAR RAPIDS, IA 52406

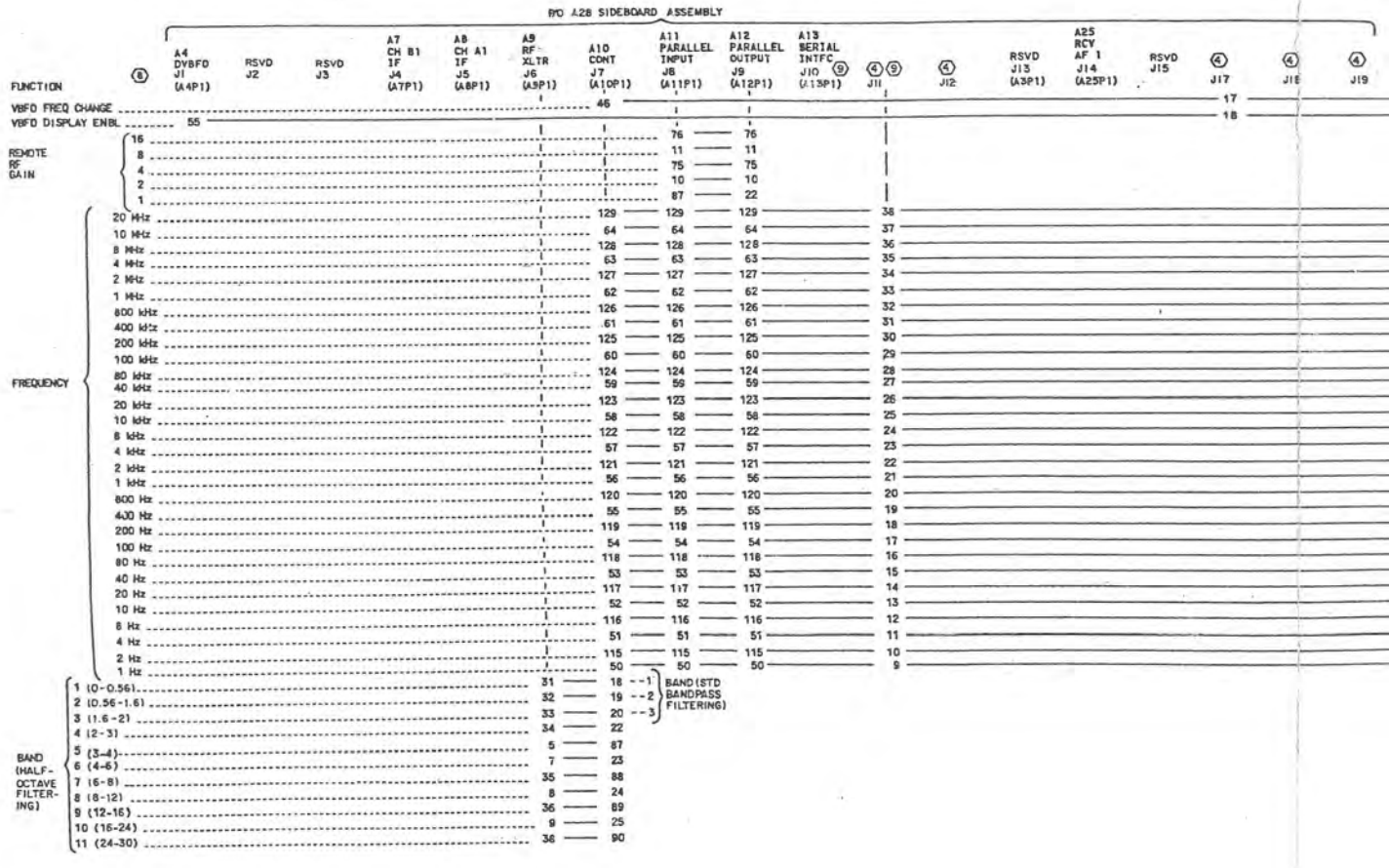
INTERCONNECT DIAGRAM - CHASSIS, HF-8054/HF-8054A (622-3475-210)

METRIC

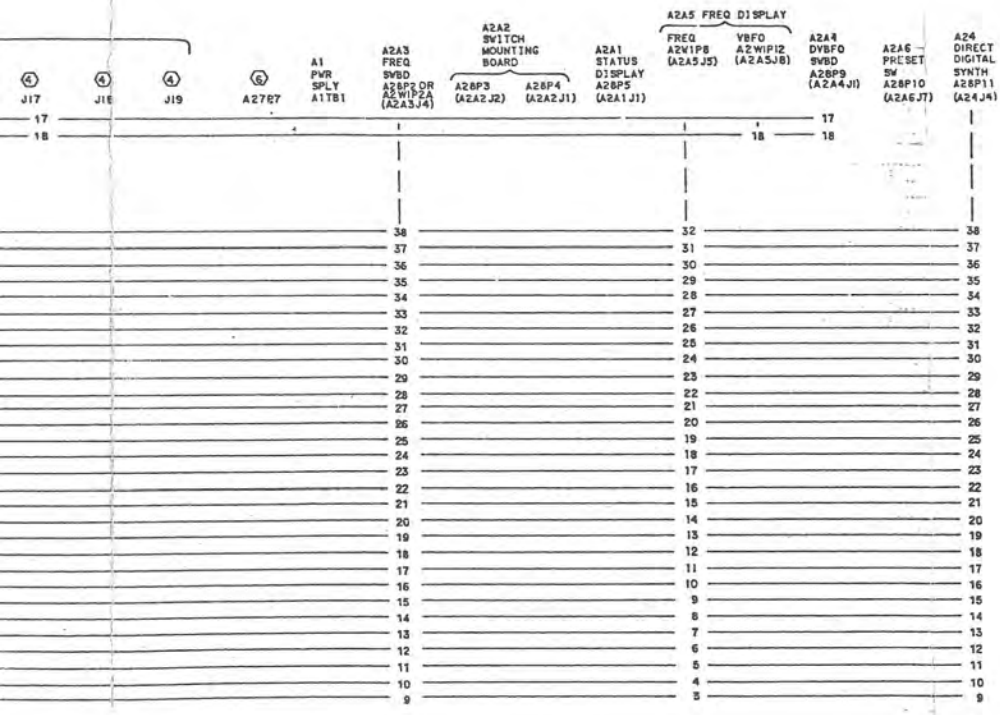
SIZE	FSCM	DWG NO.	REV LTR
E	13499	659-7090	B
SCALE NONE		SHEET 2	

659-7090

NOTES:


RFI A28 SIDEBOARD ASSEMBLY
FUNCTION
A4 DVBFO J1 (A4P1)
RSVD J2
RSVD J3
A7 CH B1 IF J4 (A7P1)
A8 CH A1 IF J5 (A8P1)
A9 RF XLTR J6 (A9P1)
A10 CONT J7 (A10P1)
A11 PARALLEL INPUT J8 (A11P1)
A12 PARALLEL OUTPUT J9 (A12P1)
A13 SERIAL INTFC J10 (A13P1)
J11
J12
RSVD J13 (A3P1)
A25 RCV AF 1 J14 (A25P1)
RSVD J15
J17
J18
J19
VBFO FREQ CHANGE
VBFO DISPLAY ENBL
REMOTE RF GAIN
16
8
4
2
1
FREQUENCY
20 MHz
10 MHz
8 MHz
4 MHz
2 MHz
1 MHz
800 kHz
400 kHz
200 kHz
100 kHz
80 kHz
40 kHz
20 kHz
10 kHz
8 kHz
4 kHz
2 kHz
1 kHz
800 Hz
400 Hz
200 Hz
100 Hz
80 Hz
40 Hz
20 Hz
10 Hz
8 Hz
4 Hz
2 Hz
1 Hz
BAND (HALF-OCTAVE FILTERING)
1 (0-0.56)
2 (0.56-1.6)
3 (1.6-2)
4 (2-3)
5 (3-4)
6 (4-6)
7 (6-8)
8 (8-12)
9 (12-16)
10 (16-24)
11 (24-30)
BAND (STD BANDPASS FILTERING)

REVISIONS			
LTR	DESCRIPTION	DATE	APVD
	SEE SHEET 1		



659-7090

8 4 3

-001

35¼ x 13¾	120		50
IMAGE AREA W X H	LTR SIZE	PAGE INCR	PCT
PUBN NO. FOR COLLINS DIVISIONS			

17⅝ x 6⅞

MATERIAL NONE

FINISH NONE

UNLESS OTHERWISE SPECIFIED, DUAL DIMENSIONED DWGS ARE IN MILLIMETRES (INCHES) SINGLE DIMENSIONED DWGS ARE IN INCHES.

METRIC

TOL ON METRIC DIM .X±0.5, .XX±0.2
HOLE DIAMETERS
UNDER 6.38Ø +0.13 -0.13
6.38 TO 12.78Ø +0.15 -0.13
OVER 12.78Ø +0.20 -0.13
ANGLES: ±1.0°
CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN 0.25 Ø.

US CUSTOMARY[ ]

TOL ON [ ] DIM .XX±.02, .XXX±.008
HOLE DIAMETERS:
UNDER .25Ø +.005 -.005
.251 TO .500Ø +.006 -.005
OVER .500Ø +.008 -.005
ANGLES: ±1.0°
CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN .010 Ø.

CONTRACT NO.

PREP A. SIPPY 84/8/21

CHK J. WITMER 84/8/21

APVD C. ERRINGTON

ROCKWELL INTERNATIONAL CORPORATION
COLLINS GROUPS
DALLAS, TEX 75207 NEWPORT BEACH, CA, IF 92663 CEDAR RAPIDS, IA 52406

INTERCONNECT DIAGRAM - CHASSIS, HF-8054/HF-8054A (622-3475-210)

METRIC

SIZE	FSCM	DWG NO.	REV LTR
E	13499	659-7090	B

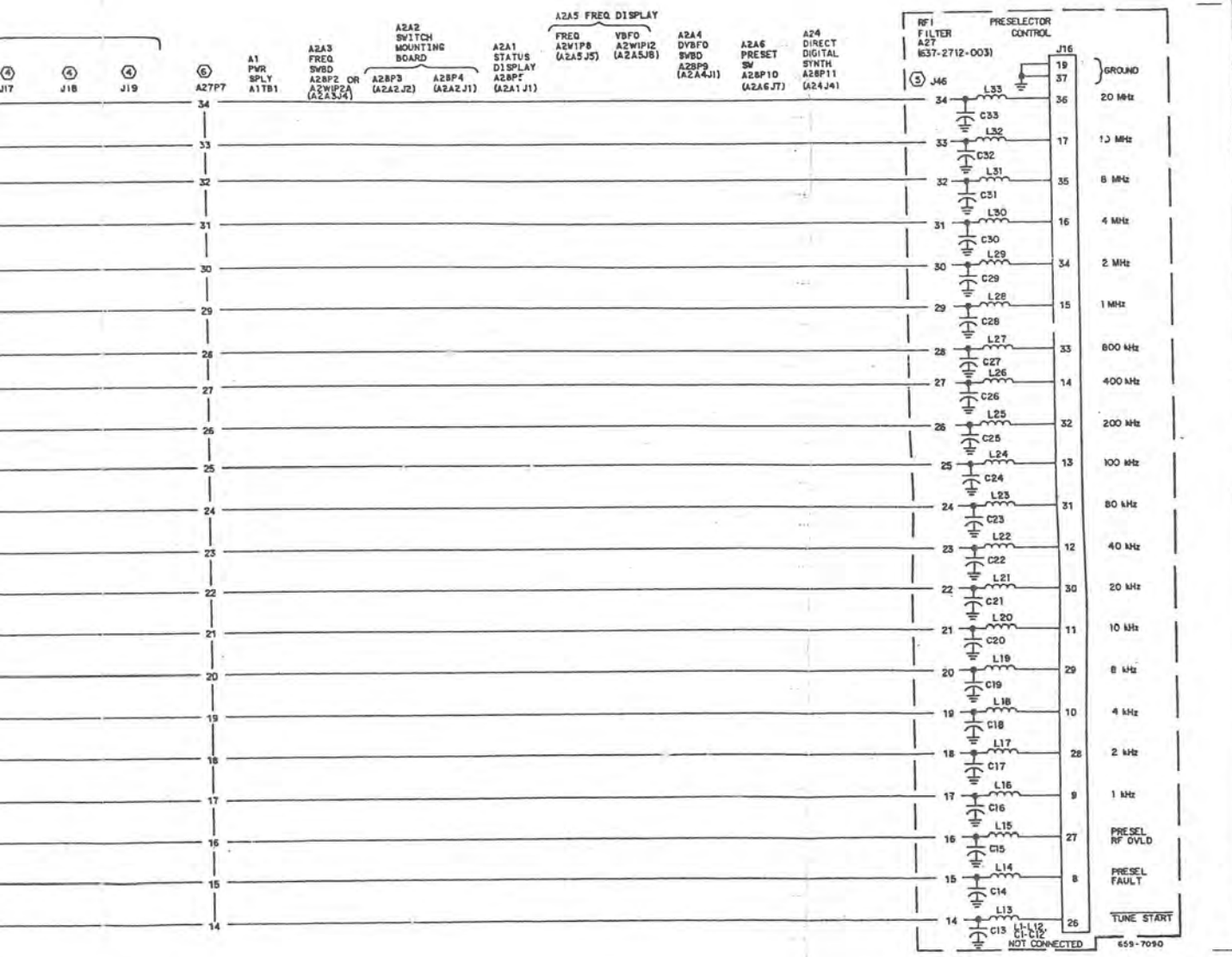
659-7090 SH 3

NOTES:

P/O A28 SIDEBOARD ASSEMBLY

FUNCTION	⑧	A4 DVBFO J1 (A4P1)	RSVD J2	RSVD J3	A7 CH B1 IF J4 (A7P1)	A8 CH A1 IF J5 (A8P1)	A9 RF XLTR J6 (A9P1)	A10 CONT J7 ⑨ (A10P1)	A11 PARALLEL INPUT J8 (A11P1)	A12 PARALLEL OUTPUT J9 (A12P1)	A13 SERIAL INTFC J10 (A13P1)	④ J11	④ J12	RSVD J13 (A3P1)	A25 RCV AF 1 J14 (A25P1)	RSVD J15	④ J17	④ J18	④ J19	⑥ A2
FREQ OUTPUT	20 MHz							109												34
	10 MHz							44												34
	8 MHz							108												33
	4 MHz							43												33
	2 MHz							107												33
	1 MHz							42												2
	800 kHz							106												32
	400 kHz							41												32
	200 kHz							105												31
	100 kHz							40												31
	80 kHz							104												30
	40 kHz							39												30
	20 kHz							103												29
	10 kHz							38												29
	8 kHz							102												28
	4 kHz							37												28
	2 kHz							101												27
	1 kHz							36												27
PRESEL RF OVERLOAD								100												26
PRESEL FAULT								35												26
$\overline{\text{TUNE START}}$								99												25

REVISIONS			
LTR	DESCRIPTION	DATE	APVD
	SEE SHEET 1		



-001

41 X 17	120		50
IMAGE AREA W X H	LTR SIZE	PAGE INCR	PCT

20½ x 8¼

PUBN NO.

FOR COLLINS DIVISIONS

MATERIAL: NONE

FINISH: NONE

UNLESS OTHERWISE SPECIFIED, DUAL DIMENSIONED DWGS ARE IN MILLIMETRES (INCHES). SINGLE DIMENSIONED DWGS ARE IN INCHES.

METRIC

TOL ON METRIC DIM .X±0.5 .XX±0.2

HOLE DIAMETERS
UNDER 6.35Ø++0.13-0.13
6.35 TO 12.7Ø++0.15-0.13
OVER 12.7Ø++0.20-0.13

ANGLES: ±1.0°

CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN 0.25 Ø.

US CUSTOMARY[ ]

TOL ON [ ] DIM .XX±.02 .XXX±.008

HOLE DIAMETERS:
UNDER .25Ø++.005-.005
.251 TO .500Ø++.006-.005
OVER .500Ø++.008-.005

ANGLES: ±1.0°

CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN .010 Ø.

CONTRACT NO.

PREP A. SIPPY 84/8/21

CHK J WITMER 84/8/21

APVD C. ERRINGTON

ROCKWELL INTERNATIONAL CORPORATION
COLLINS GROUPS
DALLAS TEX 75207 NEWPORT BEACH,CA.IF 92663 CEDAR RAPIDS,IA 52406

INTERCONNECT DIAGRAM-
CHASSIS, HF-8054/HF-8054A
(622-3475-2101)

METRIC

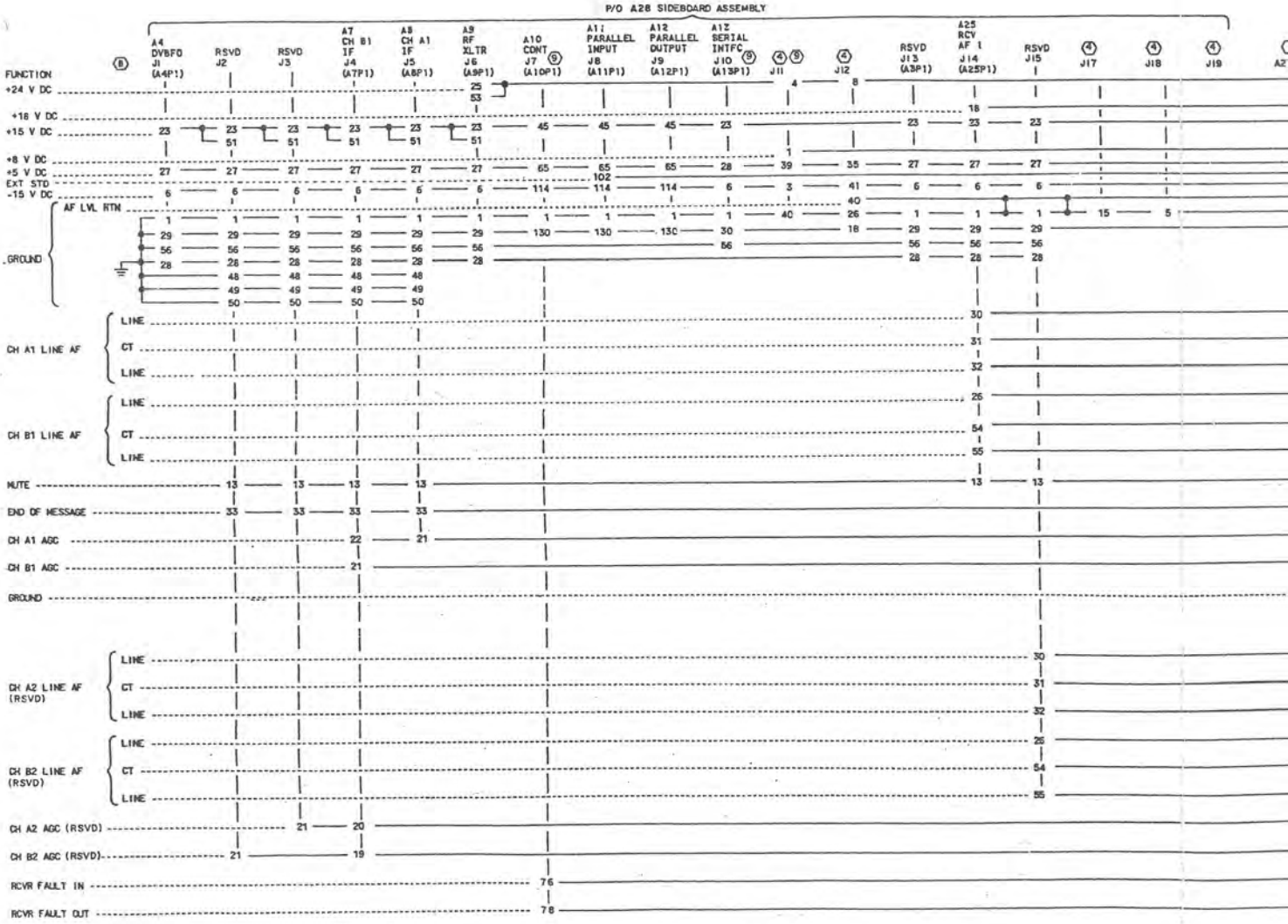
SIZE	FSCM	DWG NO.	REV LTR
E	13499	659-7090	B

SCALE NONE

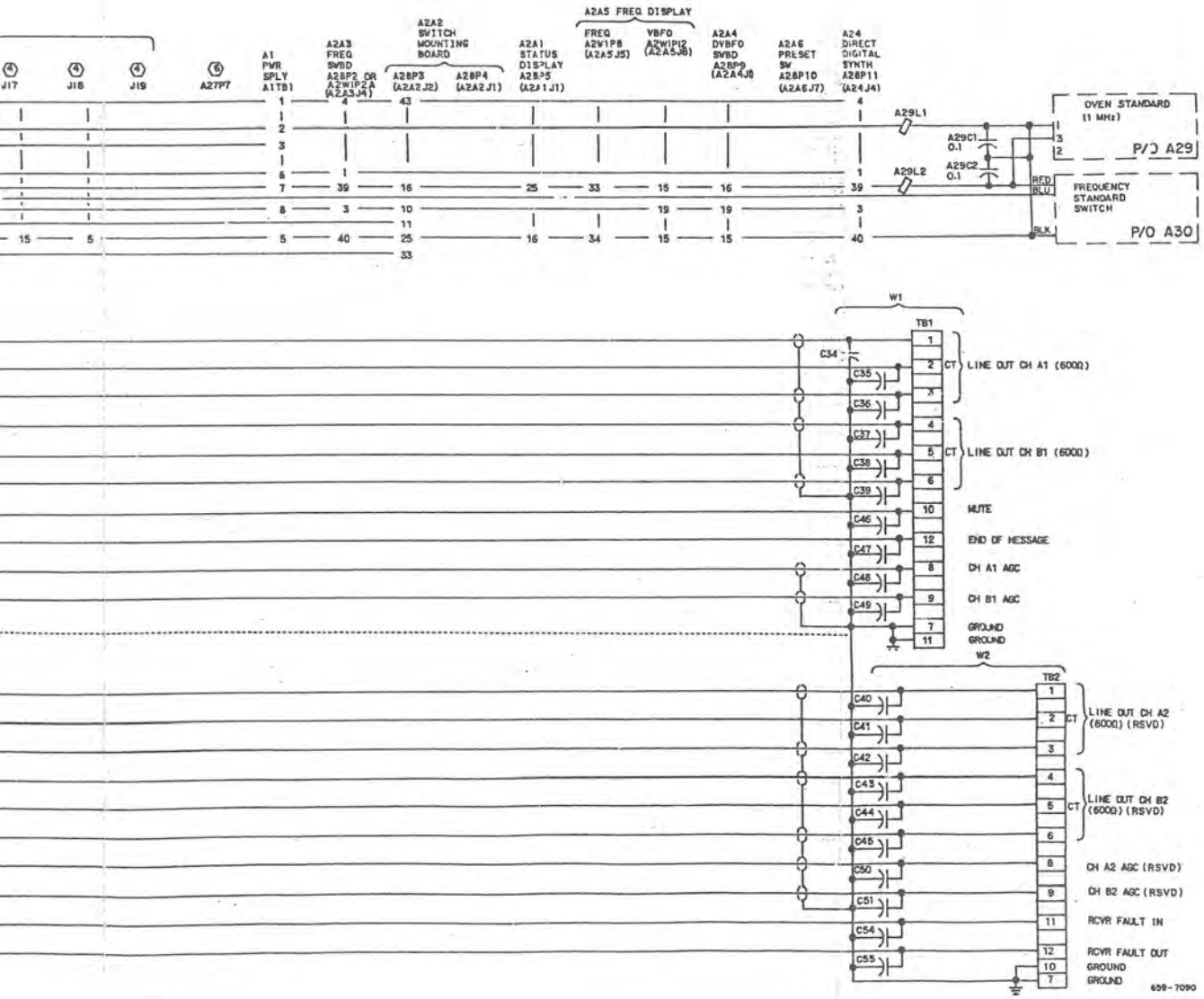
SHEET 4

659-7090 REV B

NOTES:


P/O A28 SIDEBOARD ASSEMBLY
FUNCTION
A4 DVBF0 J1 (A4P1)
RSVD J2
RSVD J3
A7 CH B1 IF J4 (A7P1)
A8 CH A1 IF J5 (A8P1)
A9 RF XLTR J6 (A9P1)
A10 CONT J7 (A10P1)
A11 PARALLEL INPUT J8 (A11P1)
A12 PARALLEL OUTPUT J9 (A12P1)
A13 SERIAL INTFC J10 (A13P1)
J11
J12
RSVD J13 (A3P1)
A25 RCV AF I J14 (A25P1)
RSVD J15
J17
J18
J19
+24 V DC
+18 V DC
+15 V DC
+8 V DC
+5 V DC
EXT STD
-15 V DC
AF LVL RTN
GROUND
CH A1 LINE AF
LINE
CT
LINE
CH B1 LINE AF
LINE
CT
LINE
MUTE
END OF MESSAGE
CH A1 AGC
CH B1 AGC
GROUND
CH A2 LINE AF (RSVD)
LINE
CT
LINE
CH B2 LINE AF (RSVD)
LINE
CT
LINE
CH A2 AGC (RSVD)
CH B2 AGC (RSVD)
RCVR FAULT IN
RCVR FAULT OUT

REVISIONS			
LTR	DESCRIPTION	DATE	APVD
	SEE SHEET 1		



-001

40½ x 17 (20¼ x 8½)	120		50
IMAGE AREA W x H	LTR SIZE	PAGE INCR	PCT
PUBN NO.			
FOR COLLINS DIVISIONS INTERNAL PUBLICATIONS USE ONLY			

MATERIAL: NONE

FINISH: NONE

UNLESS OTHERWISE SPECIFIED, DUAL DIMENSIONED DWGS ARE IN MILLIMETRES (INCHES). SINGLE DIMENSIONED DWGS ARE IN INCHES.

METRIC

TOL ON METRIC DIMS .X±0.5, .XX±0.2
HOLE DIAMETERS
UNDER 6.388=+0.13-0.13
6.38 TO 12.76=+0.15-0.13
OVER 12.76=+0.20-0.13
ANGLES: ±1.0°
CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN 0.25 Ø.

US CUSTOMARY[ ]

TOL ON [ ] DIMS .XX±.02, .XXX±.008
HOLE DIAMETERS:
UNDER .25Ø=+.005-.005
.251 TO .5008=+.006-.005
OVER .5008=+.008-.005
ANGLES: ±1.0°
CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN .010 Ø.

PART SHALL COMPLY TO 580-5400-001--THIRD ANGLE PROJECTION

CONTRACT NO.	
PREP A.SIPPY 84/8/21	
CHK J.WITMER 84/8/21	
APVD C ERRINGTON	

ROCKWELL INTERNATIONAL CORPORATION
COLLINS GROUPS
DALLAS, TEX 75207 NEWPORT BEACH, CALIF 92663 CEDAR RAPIDS, IA 52406

INTERCONNECT DIAGRAM-
CHASSIS, HF-8054/HF-8054A
(622-3475-210)

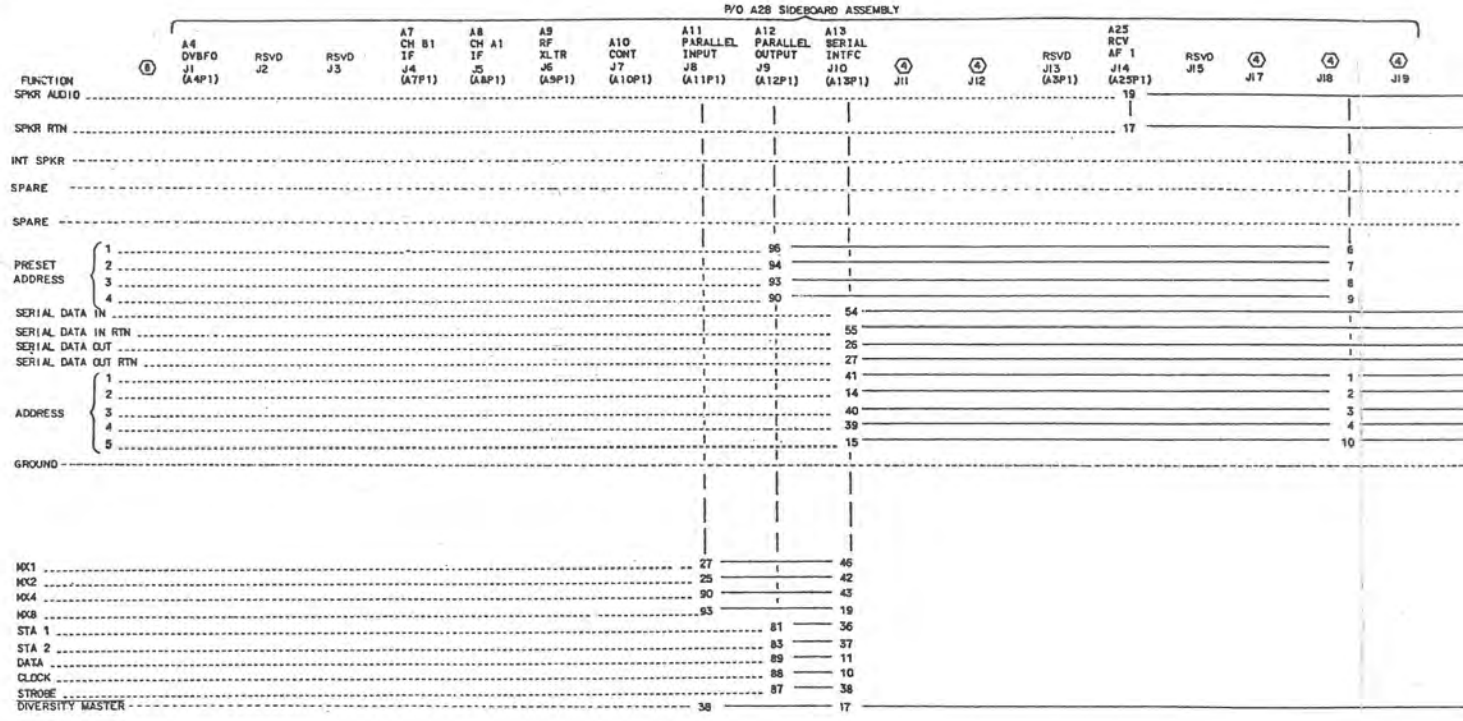
METRIC

SIZE	FSCM	DWG NO.	REV
E	13499	659-7090	LTR 8

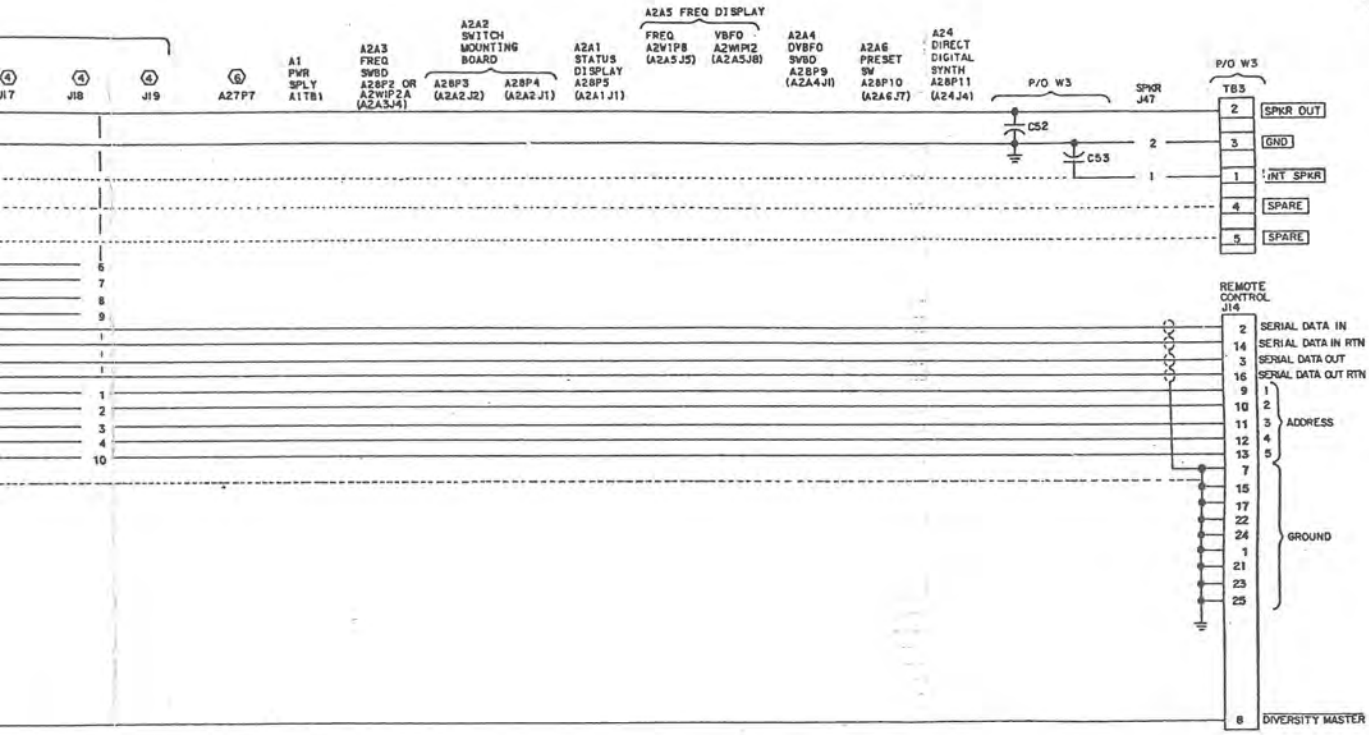
SCALE NONE SHEET 5

659-7090

P/O A28 SIDEBOARD ASSEMBLY



LTR	DESCRIPTION	DATE	APVD
	SEE SHEET 1		



659-7090

-001

41 X 12	120		50	
IMAGE AREA W X H	LTR SIZE	PAGE INCH		PCT

20½ x 6

PUBN NO.

FOR COLLINS DIVISIONS INTERNAL PUBLICATIONS USE ONLY

MATERIAL: NONE

FINISH: NONE

UNLESS OTHERWISE SPECIFIED, DUAL DIMENSIONED DWGS ARE IN MILLIMETRES [INCHES]. SINGLE DIMENSIONED DWGS ARE IN INCHES.

METRIC

TOL ON METRIC DIM: .X±0.5, .XX±0.2

HOLE DIAMETERS
UNDER 6.35=+0.13-0.13
6.35 TO 12.76=+0.15-0.13
OVER 12.76=+0.20-0.13

ANGLES= ±1.0°

CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN 0.25 Ø.

US CUSTOMARY[ ]

TOL ON [ ] DIM: .XX±.02, .XXX±.005

HOLE DIAMETERS=
UNDER .254=+.005-.005
.251 TO .500=+.006-.005
OVER .500=+.008-.005

ANGLES= ±1.0°

CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN .010 Ø.

PART SHALL COMPLY TO 580-5400-001--THIRD ANGLE PROJECTION

CONTRACT NO.		
PREP A. SIPPY	84/8/21	
CHK J. WITMER	84/8/21	
APVD C. ERRINGTON		

ROCKWELL INTERNATIONAL CORPORATION
COLLINS GROUPS
DALLAS, TEX 75207 NEWPORT BEACH, CALIF 92663 CEDAR RAPIDS, IA 52400

INTERCONNECT DIAGRAM - CHASSIS, HF-8054/HF-8054A (622-3475-2101)

METRIC

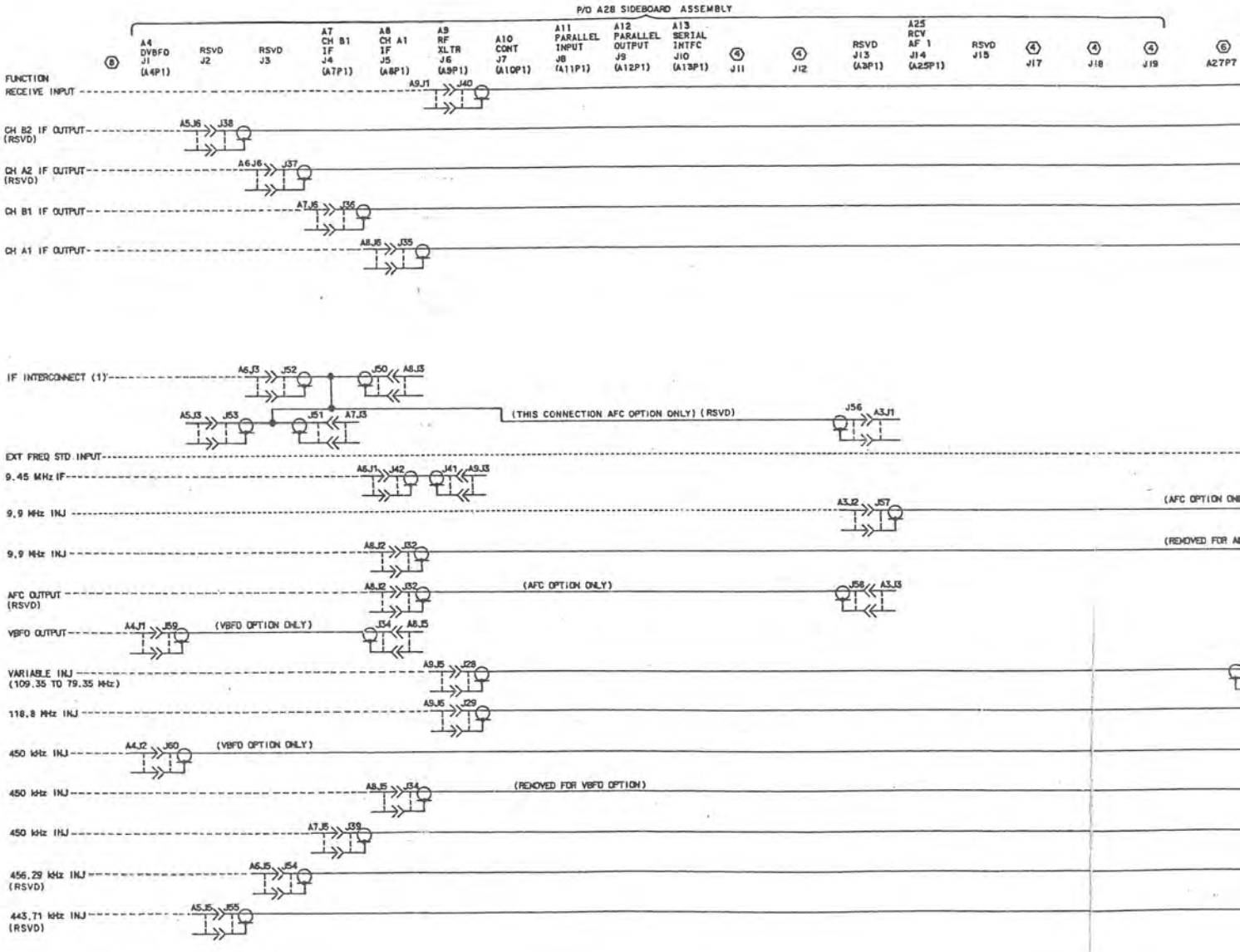
SIZE	FSCM	DWG NO.	REV
E	13499	659-7090	LTR 8

SCALE NONE SHEET 6

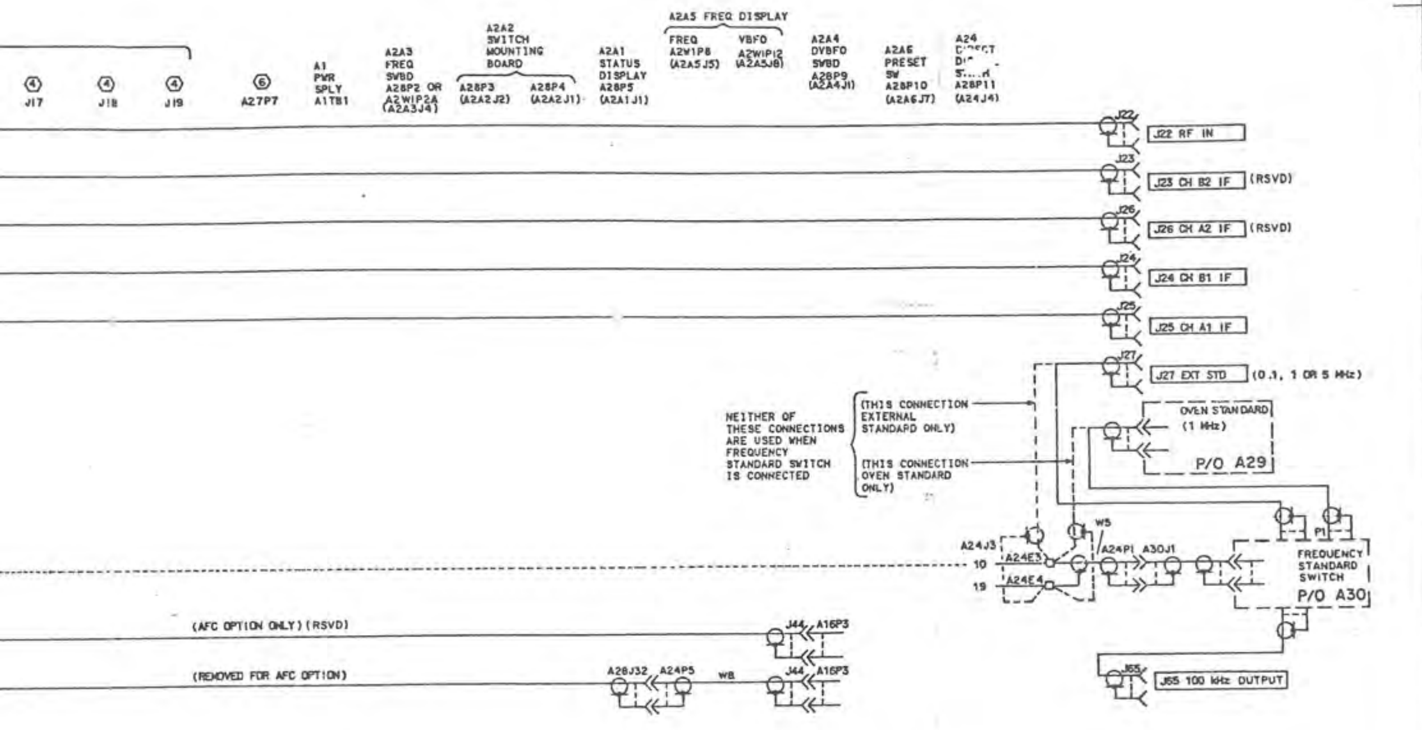
FRO ☐ HFP ☐ REL ☐ CR 2 NB 0 DL 0 TO 1

659-7090 B

NOTES:


P/O A28 SIDEBOARD ASSEMBLY
A4 DVBFO J1 (A4P1)
RSVD J2
RSVD J3
A7 CH B1 IF J4 (A7P1)
A8 CH A1 IF J5 (A8P1)
A9 RF XLTR J6 (A9P1)
A10 CONT J7 (A10P1)
A11 PARALLEL INPUT J8 (A11P1)
A12 PARALLEL OUTPUT J9 (A12P1)
A13 SERIAL INTFC J10 (A13P1)
J11
J12
RSVD J13 (A3P1)
A25 RCV AF 1 J14 (A25P1)
RSVD J15
J17
J18
J19
A27P7
FUNCTION
RECEIVE INPUT
CH B2 IF OUTPUT (RSVD)
CH A2 IF OUTPUT (RSVD)
CH B1 IF OUTPUT
CH A1 IF OUTPUT
IF INTERCONNECT (1)
(THIS CONNECTION AFC OPTION ONLY) (RSVD)
EXT FREQ STD INPUT
9.45 MHz IF
9.9 MHz INJ
9.9 MHz INJ
AFC OUTPUT (RSVD)
(AFC OPTION ONLY)
VBFO OUTPUT
(VBFO OPTION ONLY)
VARIABLE INJ (109.35 TO 79.35 MHz)
118.8 MHz INJ
450 kHz INJ
(VBFO OPTION ONLY)
450 kHz INJ
(REMOVED FOR VBFO OPTION)
450 kHz INJ
456.29 kHz INJ (RSVD)
443.71 kHz INJ (RSVD)

LTR	DESCRIPTION	DATE	APVD
	SEE SHEET 1		



659-7090

-001

40¾ x 17¾	120		48	MATERIAL NONE	
IMAGE AREA W X H	LTR SIZE	PAGE INCR	PCT	FINISH NONE	
PUBN NO.					
FOR COLLINS DIVISIONS INTERNAL PUBLICATIONS USE ONLY					

19½ x 8½

UNLESS OTHERWISE SPECIFIED, DUAL DIMENSIONED DWGS ARE IN MILLIMETRES [INCHES]. SINGLE DIMENSIONED DWGS ARE IN INCHES.

METRIC	US CUSTOMARY[ ]
TOL ON METRIC DIM .X=±0.5, .XX=±0.2	TOL ON [ ] DIM .XX=±.01, .XXX=±.005
HOLE DIAMETERS UNDER 6.35Ø=+0.13-0.13; 6.35 TO 12.7Ø=+0.13-0.13; OVER 12.7Ø=+0.20-0.13	HOLE DIAMETERS UNDER .25Ø=+.005-.005; .251 TO .500Ø=+.005-.005; OVER .500Ø=+.008-.005
ANGLES ±1.0°	ANGLES ±1.0°
CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN 0.25 Ø	CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN .010 Ø

PART SHALL COMPLY TO 580-5400-001--THIRD ANGLE PROJECTION

CONTRACT NO.	
PREP A. SIPPY	84/8/21
CHK J. WITMER	84/8/21
APVD C. ERRINGTON	

ROCKWELL INTERNATIONAL CORPORATION
COLLINS GROUPS

INTERCONNECT DIAGRAM-
CHASSIS, HF-8054/HF-8054A
(622-3475-210)

METRIC

SIZE	FSCM	DWG NO.	REV LTR
E	13499	659-7090	8

SCALE NONE | SHEET 7

NOTES:

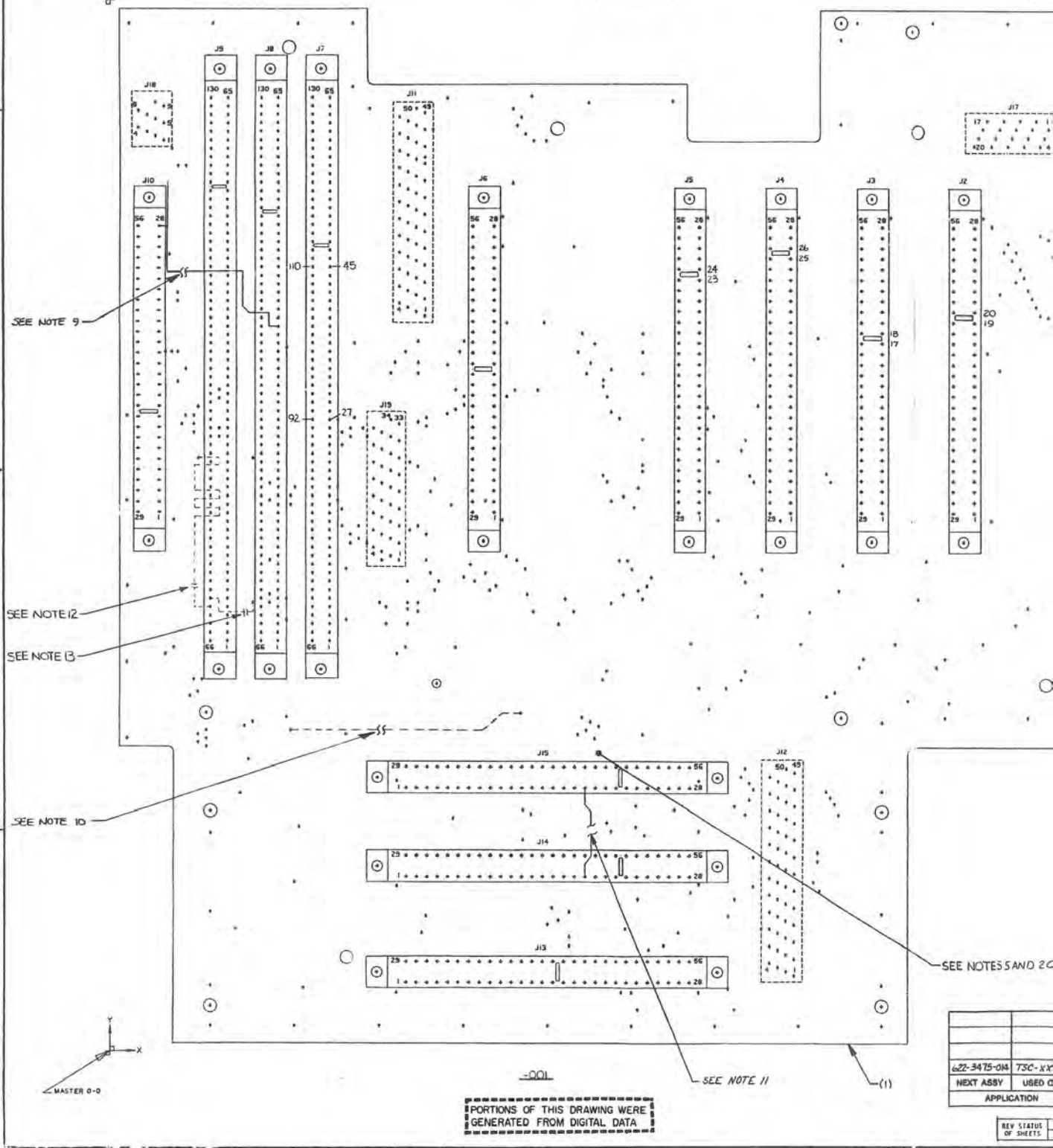
1. PARENTHETICAL ITEM IDENTIFICATION DENOTES: (ITEM NUMBER-QUANTITY).
2. SOLDER PER 580-5178-000.
3. REFERENCE DESIGNATORS ARE USED IN LIEU OF ITEM FIND NUMBERS.
4. J11,12,17,19 AND 1198 REFERENCE ONLY AND WILL BE MOUNTED AT A HIGHER LEVEL.
5. MARK THE REVISION LETTER FOLLOWING THE ETCHED LETTERS REV LOCATED ON OPPOSITE SIDE APPROXIMATELY AS SHOWN PER 580-0497-000.
6. TEST REQUIREMENTS TO BE ADDED AT A HIGHER LEVEL.
7. USE (6) SPARINGLY TO SECURE (5) PER 580-5479-001.
8. CUT PINS 27,15,92,110 ON CONNECTOR J7 FLUSH, OPPOSITE SIDE SHOWN.
9. CUT LINE FROM J10 PIN 28 TO J8 PIN 38 (TOP).
10. CUT LINE FROM J11 PIN 49 TO J8 PIN 2 (BOTTOM).
11. CUT LINE FROM J14 PIN 18 TO J15 PIN 18 ON CIRCUIT 1 (DISCONNECTS J14 18 FROM J15-18.

NOTES CONT. AT RIGHT

12. CUT LINE FROM J9 PIN 70 TO J7 PIN 27 (BOTTOM)
13. CUT LINE FROM J9 PIN 71 TO J7 PIN 35 (BOTTOM)
14. CUT LINE J7 PIN 14 TO J19 PIN 26 (BOTTOM), -002 ONLY.
15. CUT LINE J11 PIN 7 TO J19 PIN 26 (BOTTOM), -002 ONLY.
16. REMOVE THE ETCHED NO 1 AND MARK THE NO 2 FOLLOWING THE NO 638-6627-00, PER 580-0497-000, -002 ONLY.
17. DIM AND TOL SHALL BE IN ACCORDANCE WITH ANSI Y14.5.
18. PAREN INFO IS FOR REF ONLY, EXCEPT FOR ITEM NOS.
19. SEE APPL SPEC CONTROL DWG FOR VENDOR ITEM IN P/L NOT HAVING AN APVD GOVT SPEC.
20. MARK THE NO. 95105 NEAR THE CHAR ASSY, PER 580-0479-000.

.500 MAX

.625 MAX



PORTIONS OF THIS DRAWING WERE GENERATED FROM DIGITAL DATA

622-3475-014	73C-XX
NEXT ASSY	USED O
APPLICATION	

REV STATUS OF SHEETS

NEXT ASSY. TYPE NO. 17-9057

PIN 27 (BOTTOM)
PIN 35 (BOTTOM)
BOTTOM), -002 ONLY.
BOTTOM), -001 ONLY.
THE NO 2
PER

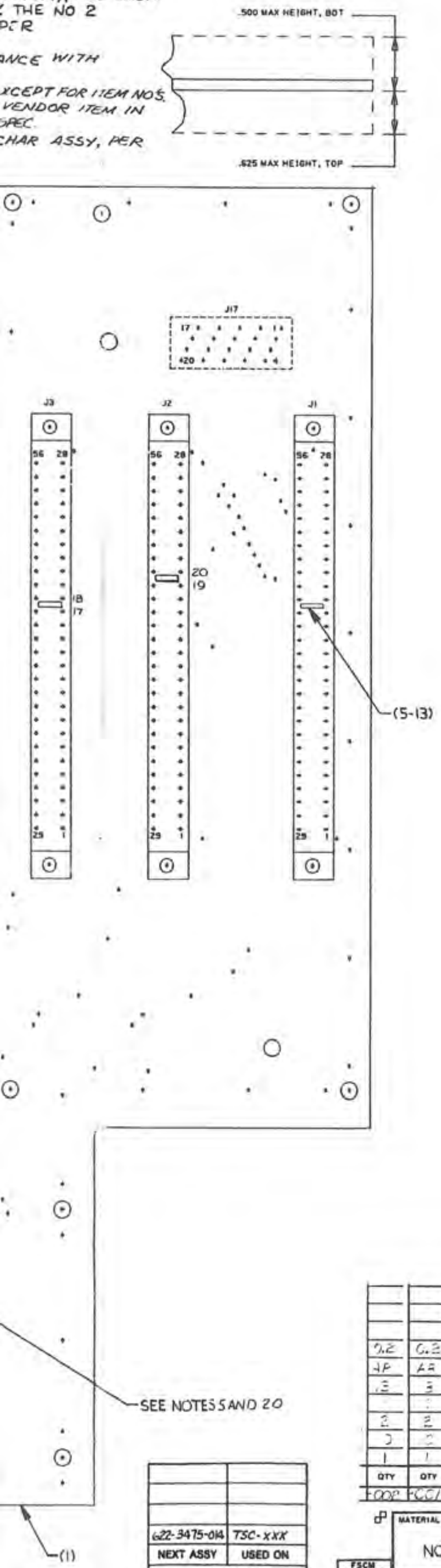
ANCE WITH

XCEPT FOR ITEM NOS.
VENDOR ITEM IN
SPEC.
CHAR ASSY, PER

-002 REV	-001 REV	LTR	DESCRIPTION	DATE	APVD
		B	DESIGN CHANGES	2-8-30	S.D.
		C	DO3719-(CODE 11) ADDED NOTE 7,8, ITEMS 6, ADDED REV E TO ITEM 1, ADDED HOLES AT DIM.'S X=2.100, Y=11.850; X=5.3000, Y=10.900; X=9.600 Y=10.900 X=11.100, Y=4.350; X=2.800, Y=1.100	10-8-80	KW
		D	DO4361-(CODE 11) ADDED NOTES 9 AND 10	11-11-80	S.D.
		E	DO4568-(CODE 11) ADDED NOTE 11, WIRE CHART AND ITEM 7	12-1-80	SD
		F	DO5720-(CODE 11) ADDED NOTES 12 AND 13. CHG TO PICTORIAL VIEW	3-20-81	SD
G	F	G	D19019-(CODE 16) ADDED -002, NOTES 14, 15, 16, AND SH 2, REV SH 1	6-14-84	CT
H	H	H	D27586-(CODE 15) UPDATE PER MIL REQT. REV SH 1, 2.	86-10-5	CT
J	J	J	D29196-(CODE 16) UPDATE PER MIL REQT, REV SH 1	87-2-9	CT

.500 MAX HEIGHT, BOT

.625 MAX HEIGHT, TOP



(1)

WIRE CHART (-001)			
ITEM NO.	FROM	TO	T/B
7	J9-91	J9-102	B

QTY	QTY	ITEM NO.	PART OR IDENTIFYING NO.	COLLINS PART NO.	NOMENCLATURE OR DESCRIPTION	REV LTR	DOCUMENT NO.	CODE IDENT	ALTN PREF	UM	MN	NOTES	REF DESIGNATOR
0.2	0.2	7	429-2080-050		WIRE [illegible]					FT			
AR	AR	6	005-0637-000		ADHESIVE							[illegible]	
3	3	5	532-7600-130		INDEX KEY							7	
[illegible]	[illegible]	4	637-931-001		CONNECTOR [illegible]								J7
2	2	3	372-2274-050		CONNECTOR [illegible]								J8, 9
0	[illegible]	2	372-7565-010		CONNECTOR [illegible]								[illegible]
1	1	1	635-3376-330		PRINTED WIRING BOARD								
-002	-001	DASH NO.	PARTS LIST (US CUSTOMARY MEASUREMENTS ONLY)										

622-3475-014	TSC-XXX
NEXT ASSY	USED ON
APPLICATION	

REV STATUS OF SHEETS	REV	J	H
	SHEET	1	2

FSCM 95105

MATERIAL: NONE

FINISH: NONE

UNLESS OTHERWISE SPECIFIED, DUAL DIMENSIONED DWGS ARE IN MILLIMETRES (INCHES). SINGLE DIMENSIONED DWGS ARE IN INCHES.

METRIC	US CUSTOMARY [ ]
TOL ON METRIC DIM .X=±0.5, .XX=±0.2	TOL ON [ ] DIM .XX=±.02, .XXX=±.008
HOLE DIAMETERS UNDER 6.380=+0.13-0.13; 6.38 TO 12.78=+0.15-0.13; OVER 12.78=+0.20-0.13	HOLE DIAMETERS UNDER .2510=+.005-.003; .251 TO .5000=+.006-.005; OVER .5000=+.008-.005
ANGLES: ±1.0°	ANGLES: ±1.0°
CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN 0.25 Ø.	CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN .010 Ø.

PART SHALL COMPLY TO 580-5400-001--THIRD ANGLE PROJECTION

CONTRACT NO.
PREP T. MARTIN 2-8-80
CHK M. LUKEN 3-4-80
APVD S.D. 3/13/80

ROCKWELL INTERNATIONAL CORPORATION
COLLINS GROUPS
DALLAS, TEX 75207 NEWPORT BEACH, CALIF 92663 CEDAR RAPIDS, IA 52406

PRINTED WIRING BOARD, SIDEBOARD

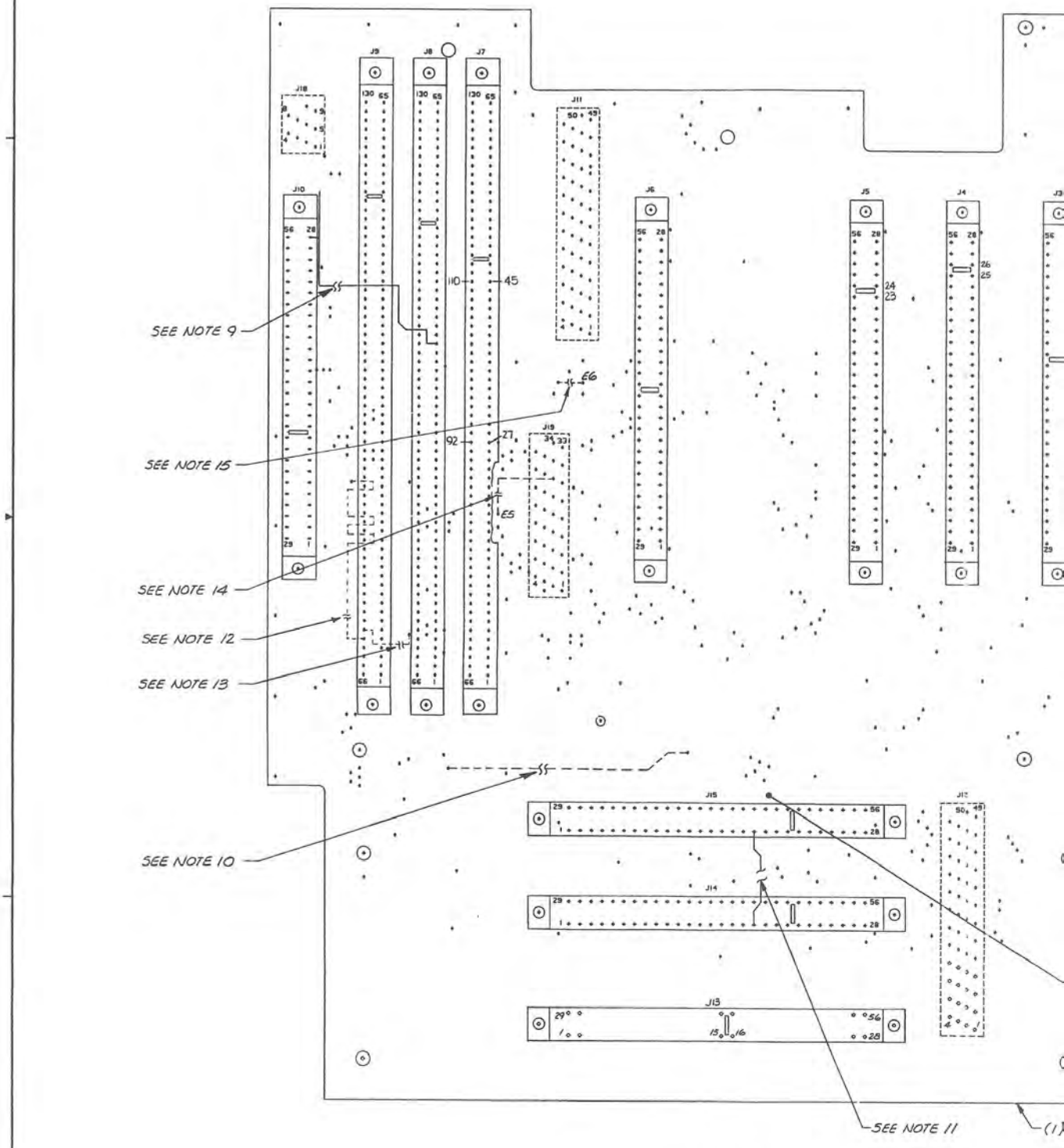
METRIC

SIZE E | FSCM 13499 | DWG NO. 635-3627 | REV LTR J

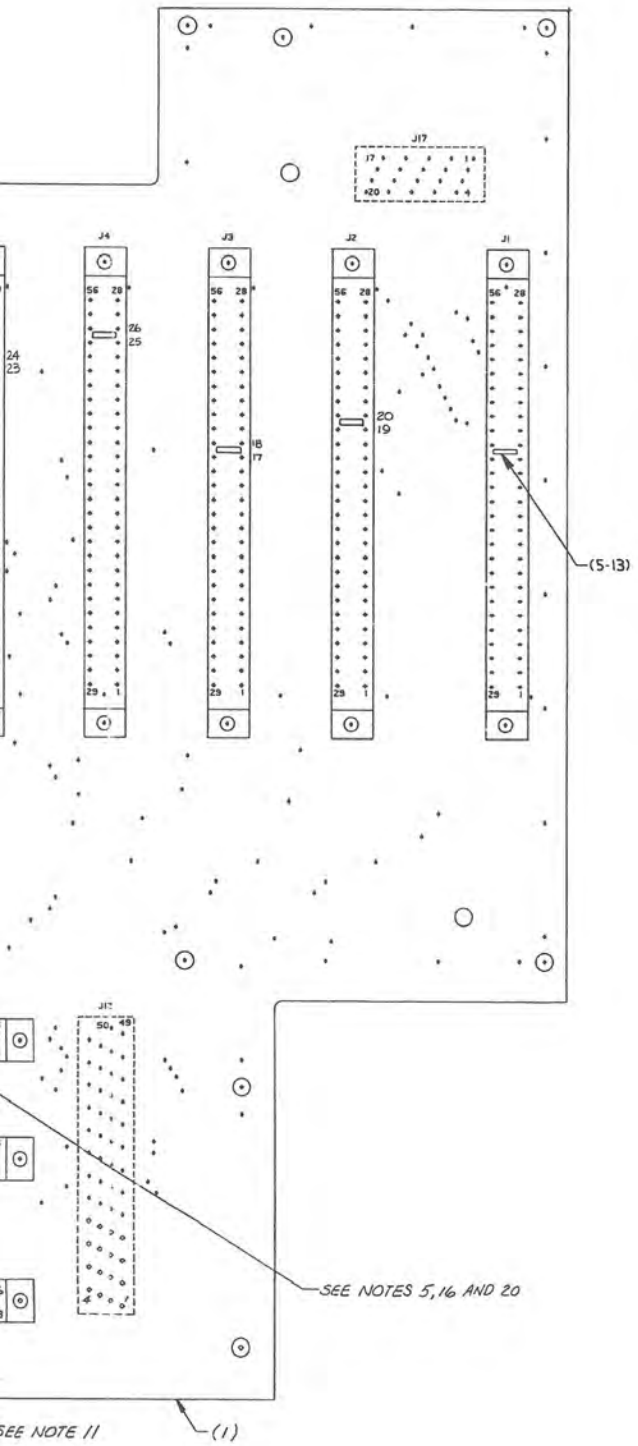
SCALE NONE | SHEET 1 OF 2

PRO ☐ NFP ☐ REL ☒ CR 2 NB C DL 2 TO 1

638-6627


J9
J8
J7
J18
J11
J10
J6
J5
J4
J3
J19
J15
J12
J14
J13
110
45
92
27
24
23
26
25
E6
E5
SEE NOTE 9
SEE NOTE 15
SEE NOTE 14
SEE NOTE 12
SEE NOTE 13
SEE NOTE 10
SEE NOTE 11
(1)

-002



WIRE CHART (-002)			
ITEM NO	FROM	TO	T/B
7	J9-91	J9-102	B
7	E5	E6	B

638-6627 | 2

ROCKWELL INTERNATIONAL CORPORATION COLLINS GROUPS					
FSCM 95105	PREP K. WOLLEAT 5/21/84	SIZE E	FSCM 13499	DWG NO. 638-6627	REV LTR H
	CHK J. MASSEY 5/23/84	SCALE NONE			SHEET 2

NOTES:

1. SOLDER PER 580-5178-000.
2. TERMINATE SHIELDS USING (5) AND (6) WHERE INDICATED BY NC.
3. PARENTHETICAL ITEM IDENT DENOTES: (ITEM NO - QTY).
4. TIE CABLE AT APPROX 1.0 INCH INTERVALS USING (2).
5. MARK ASSY 634-8224-APPLICABLE DASH NO, REV AND REV LTR LOCATED APPROX AS SHOWN PER 580-0497-000.
6. 580-6520-001 MAY BE USED ON THIS ASSY.
7. USE (25) AND (26) ON A1TB1 LEADS WHERE INDICATED
8. EXTENDED WIRES 2, 3, 5, 6, 11, 12, 13 AND 14 TO GND 5 ON TOP LEVEL ASSY.
9. INSULATE TERMINALS OF (3) USING (4) APPROX .31 LONG.
10. * INDICATES WIRES TERM IN NEXT ASSY.
11. USE (34) AS REQD FOR SECURING CABLE W2.
12. POSITION W1P4 APPROX AS SHOWN WITH PINS FACING UP. SECURE IN PLACE USING TAPE (33).
13. DIM AND TOL SHALL BE INTERPRETED IN ACCORDANCE WITH ANSI Y14.5 M-1982.
14. SEE APPL SPEC CONTROL DWG FOR VENDOR ITEMS IN PL NOT HAVING AN APVD GOVT SPEC.
15. PAREN INFO IS FOR REF ONLY, EXCEPT FOR ITEM NO.
16. MARK THE NO 95105 NEAR THE CHAR ASSY PER 580-0497-000.
17. USE ADHESIVE (37) AS REQUIRED TO RETAIN WIRING.

AR					37	005
0.6					36	428-
	1				35	637-
		3			34	150-
		0.2			33	014-
		0.3			32	M168
		1			31	638-
		1			30	652-
2.0	2.0	2.0	2.0	2.0	29	422-
1		1	1		28	647-
2.0	2.0	2.0	2.0	2.0	27	422-
1	1	1	1	1	26	MS2
7	7	7	7	7	25	MS2
2.0	2.0	2.0	2.0	2.0	24	M168
2.0	2.0	2.0	2.0	2.0	23	M168
2.0	2.0	2.0	2.0	2.0	22	M168
2.0	2.0	2.0	2.0	2.0	21	M168
2.0	2.0	2.0	2.0	2.0	20	M168
2.0	2.0	2.0	2.0	2.0	19	M168
2.0	2.0	2.0	2.0	2.0	18	M168
2.0	2.0	2.0	2.0	2.0	17	439-
2.0	2.0	2.0	2.0	2.0	16	439-
2.0	2.0	2.0	2.0	2.0	15	422-
2.0	2.0	2.0	2.0	2.0	14	422-
2.0	2.0	2.0	2.0	2.0	13	422-
		1			12	634-
2.0	2.0	2.0	2.0	2.0	11	422-
2.0	2.0	2.0	2.0	2.0	10	439-
2.0	2.0	2.0	2.0	2.0	9	439-
1	1		1	1	8	634-
1	1	1	1	1	7	634-
0.1	0.1	0.1	0.1	0.1	6	M230
2	2	2	2	2	5	M835
1.0	1.0	1.0	1.0	1.0	4	152-
1	1	1	1	1	3	371-
2.0	2.0	2.0	2.0	2.0	2	TY1512
1	1		1	1	1	638-
QTY	QTY	QTY	QTY	QTY	ITEM NO.	P. IDENT
-005	-004	-003	-002	-001	DASH NO.	

MATERIAL

NONE

FINISH

NONE

REV STATUS OF SHEETS	REV	L	L	J
	SHEET	1	2	3

FSCM 95105

NEXT ASSY 622-3474-001 TYPE NO: HF8054
622-3475-001-2 HF8054A

DWG NO. 634-8224 SH 1

-005 REV	-004 REV	-003 REV	-002 REV	-001 REV
L	J	J	J	J

REVISIONS			
LTR	DESCRIPTION	DATE	APVD
K	D41406-(CODE 16) DEL PREV REV HIST; ADD -005, ITEM 30, WIRE NO 30; REV SH 1,2	89-9-13	CT
L	D41698-(CODE 13) ADD ITEM 37, NOTE 17, E4 AT VIEW; CHG AT WIRE NO 30; REV SH 1,2.	89-10-28	CT

QTY -003	QTY -002	QTY -001	ITEM NO.	PART OR IDENTIFYING NO.	COLLINS PART NO.	NOMENCLATURE OR DESCRIPTION	REV LTR	DOCUMENT NO.	CODE IDENT	ALTN PREF	UM	MN	NOTES	REF DESIGNATOR
			37	005-2434-010		ADHESIVE								
			36	428-0282-050		WIRE, ELEC					FT			W30
			35	637-3761-002		CABLE, VBFO								W3
3			34	150-0873-010		CLAMP, CABLE							11	
0.2			33	014-1315-200		TAPE, ADHESIVE							12	
0.3			32	M16878/6BA1		WIRE, ELEC (D26TA00X1XXX)		MIL-W-16878/6			FT			
1			31	638-6627-002		CKT BD, SIDE BOARD								A28
1			30	652-2223-001		CABLE, ASSY, RIBBON-NC4							11	W2
2.0	2.0	2.0	29	422-0796-000		WIRE, ELEC (D26TA00X2XXX)					FT			
1	1		28	647-7201-001		CABLE, DISPLAY-VBFO								W3
2.0	2.0	2.0	27	422-0800-000		WIRE, ELEC (D26TA00X6XXX)					FT			
1	1	1	26	MS25036-144		LUG, TERM-E6								
7	7	7	25	MS25036-101		LUG, TERM-22								
2.0	2.0	2.0	24	M16878/4BFB8		WIRE, ELEC (A22TA00X8XXX)		MIL-W-16878/4			FT			
2.0	2.0	2.0	23	M16878/4BFB7		7XXX)		MIL-W-16878/4						
2.0	2.0	2.0	22	M16878/4BFB6		6XXX)		MIL-W-16878/4						
2.0	2.0	2.0	21	M16878/4BFB3		3XXX)		MIL-W-16878/4						
2.0	2.0	2.0	20	M16878/4BFB2		2XXX)		MIL-W-16878/4						
2.0	2.0	2.0	19	M16878/4BFB1		1XXX)		MIL-W-16878/4						
2.0	2.0	2.0	18	M16878/4BFB0		(A22TA00X0XXX)		MIL-W-16878/4						
2.0	2.0	2.0	17	439-7302-000		(D26TA00X9XXX)								
2.0	2.0	2.0	16	439-7300-000		9XXX)								
2.0	2.0	2.0	15	422-0802-000		8XXX)								
2.0	2.0	2.0	14	422-0801-000		7XXX)								
2.0	2.0	2.0	13	422-0798-000		WIRE, ELEC (D26TA00X7XXX)					FT			
1			12	634-8210-002		CABLE, SPECIAL PURPOSE								W
2.0	2.0	2.0	11	422-0794-000		WIRE, ELEC (D26TA00X0XXX)					FT			
2.0	2.0	2.0	10	439-0650-000		WIRE, ELEC-TWSH PR26 WHT/RED					FT			
2.0	2.0	2.0	9	439-0649-000		WIRE, ELEC-TWSH PR26 WHT/BRN					FT			
	1	1	8	634-8210-001		CABLE, SPECIAL PURPOSE								
1	1	1	7	634-8228-001		CABLE, SPECIAL PURPOSE								W4
0.1	0.1	0.1	6	M23053/5-105-9		SLEEVING, SHRINK		MIL-I-23053/5			FT		2	
2	2	2	5	M83519/1-3		SLEEVE, SOLDER		MIL-S-[illegible]/1					2	
1.0	1.0	1.0	4	152-2533-000		SLEEVE, INSULATION					FT		7	
1	1	1	3	371-0221-000		CONNECTOR								J14
2.0	2.0	2.0	2	TYISIZE3FINBNAT		TAPE, LACING		MIL-T-[illegible]			FT			
	1	1	1	638-6627-001		CKT BD, SIDEBOARD								A28

DASH NO. — PARTS LIST (US CUSTOMARY MEASUREMENTS ONLY)

MATERIAL: NONE

FINISH: NONE

FSCM 95105

UNLESS OTHERWISE SPECIFIED, DUAL DIMENSIONED DWGS ARE IN MILLIMETRES (INCHES). SINGLE DIMENSIONED DWGS ARE IN INCHES.

METRIC: TOL ON METRIC DIM .X=±0.5, .XX=±0.2; HOLE DIAMETERS UNDER 6.35=+0.13-0.13, 6.35 TO 12.70=+0.15-0.13, OVER 12.70=+0.20-0.13; ANGLES: ±1.0°; CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN 0.25 Ø.

US CUSTOMARY[ ]: TOL ON [ ] DIM .XX=±.02, .XXX=±.008; HOLE DIAMETERS: UNDER .250=+.005-.005, .251 TO .500=+.006-.005, OVER .500=+.008-.005; ANGLES: ±1.0°; CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN .010 Ø.

PART SHALL COMPLY TO 580-5400-001--THIRD ANGLE PROJECTION

CONTRACT NO.

PREP D. JUVE 9/13/79

CHK J. MORGAN 9/20/79

APVD K. Wallace 9-1-79

ROCKWELL INTERNATIONAL CORPORATION
COLLINS GROUPS
DALLAS, TEX 75207 NEWPORT BEACH, CALIF 92663 CEDAR RAPIDS, IA 52406

CIRCUIT BOARD ASSEMBLY, SIDEBOARD A28

METRIC SI

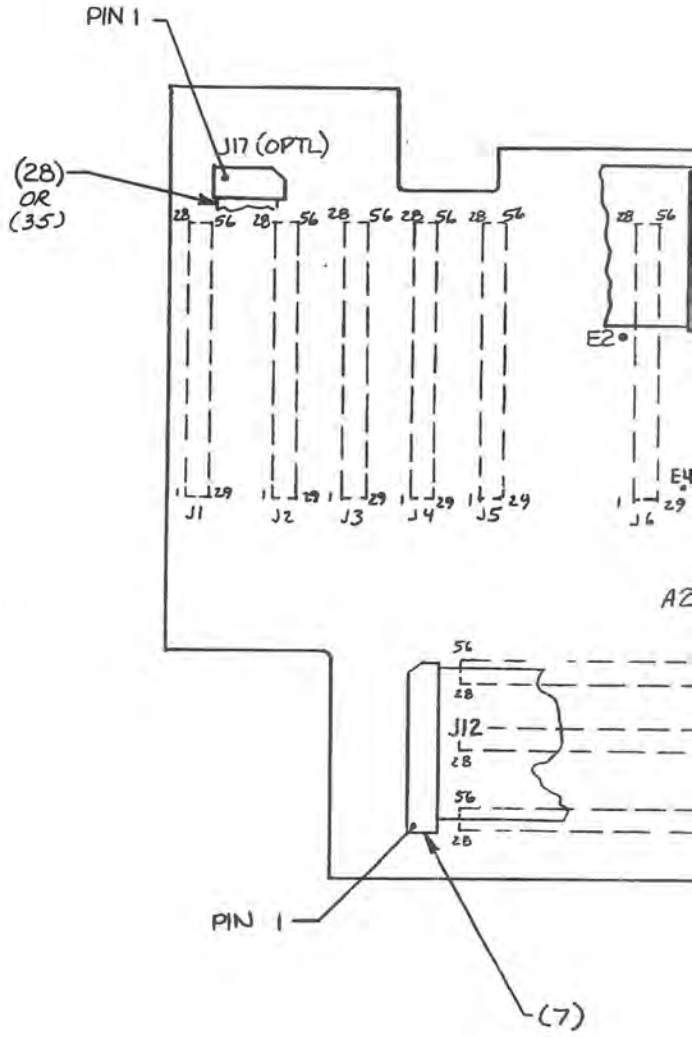
SIZE D | FSCM 13499 | DWG NO. 634-8224 | REV LTR L

SCALE 1/1 | SHEET 1 OF 3

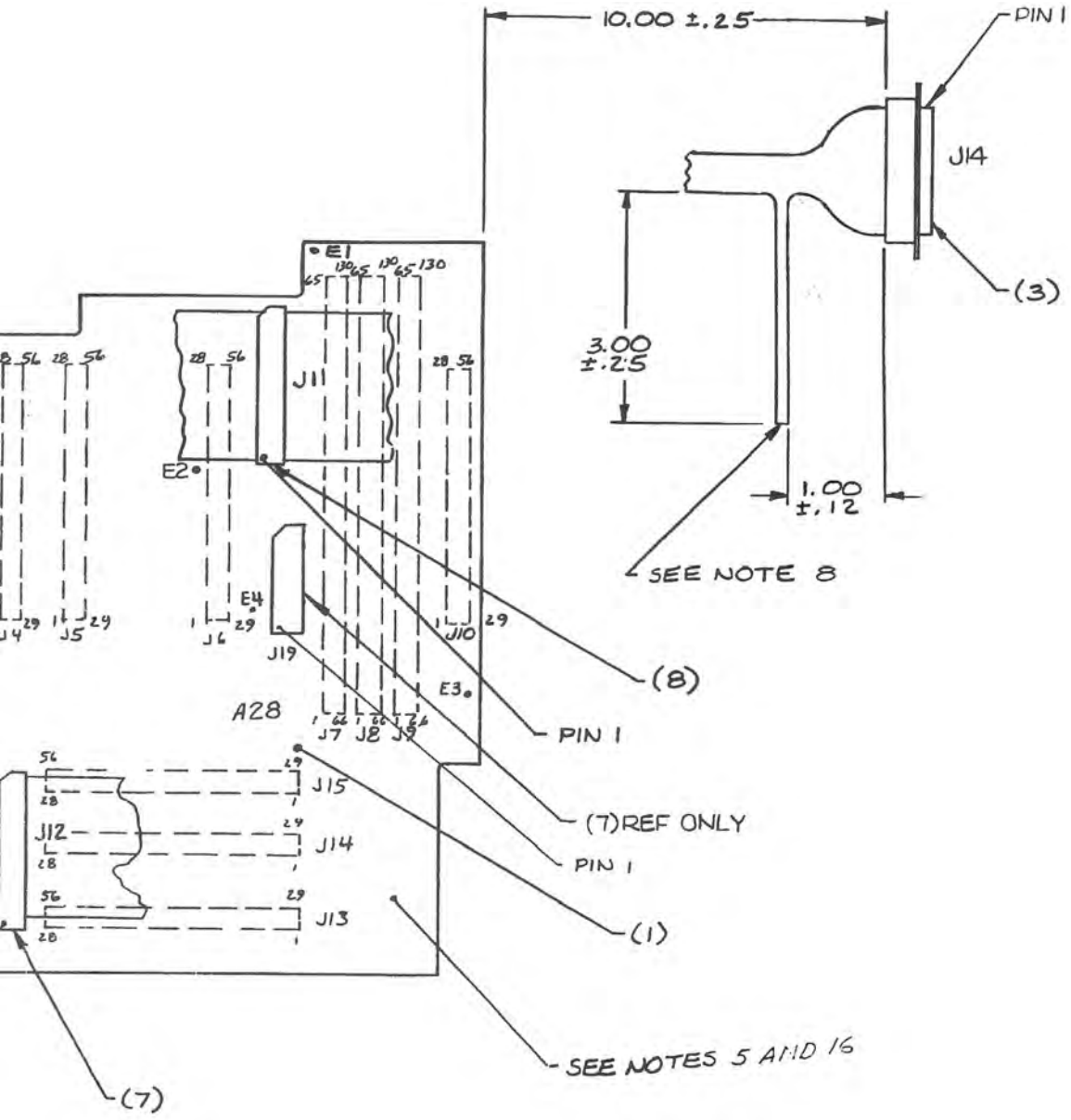
FRO ☐ NFP ☐ REL ☒ CR 3 NC 0 DL 0 TOL

80SVA (E10) uses -003

WIRE CHART FOR -001, -002, -003					
WIRE NO	WIRE CODE		FROM	TO	USED WITH
1A	(9)	WHT	J14-14	A28J10-55	
1B		BRN	J14-2	A28J10-54	
1S		SHIELD	SEE WIRE 2	NC	(6)
2	D26TA00X0XXX		J14 END S1	GND 5 *	(5)
3	D26TA00X0XXX		J14-17	GND 5 *	
4A	(10)	WHT	J14-3	A28J10-26	
4B		RED	J14-16	A28J10-27	
4S		SHIELD	SEE WIRE 5	NC	(6)
5	D26TA00X0XXX		J14 END 4S	GND 5 *	(5)
6	D26TA00X0XXX		J14-15	GND 5 *	
7		7XXX	-9	A28J10-41	
8		8XXX	-10	-14	
9		9XXX	-11	-40	
10		91XX	-12	A28J10-39	
11		0XXX	-1	GND 5 *	
12			-7		
13			-22		
14	D26TA00X0XXX		J14-24	GND 5 *	
15	A22TA00X1XXX		A1TB1-1 *	A28J6-25	(25)
16	A22TA00X2XXX		-2 *	A28J14-18	(25)
17	A22TA00X3XXX		-3 *	A28J5-23	(25)
18	D26TA00X4XXX		-4 *	A28J7-70	(26)
19	A22TA00X0XXX		-5 *	E1	(29)
20		6XXX	-6 *	E2	(25)
21		7XXX	-7 *	A28J5-27	(25)
22	A22TA00X8XXX		A1TB1-8 *	A28J5-6	(25)
24	D26TA00X6XXX		J14-13	A28J10-15	
25	D26TA00X0XXX		J14-21	GND 5 *	
26	D26TA00X0XXX		J14-23	GND 5 *	
27	D26TA00X0XXX		J14-25	GND 5 *	
28	D26TA00X6XXX		A28J10-17	A28J8-38	
29	D26TA00X2XXX		A28J10-17	J14-8	
30	ITEM 36		A29E4	A28J11-5	(-005 ONLY)



-001 OR -00



-001 OR -002 OR -004 OR -005

FSCM 95105	PREP D. JUVE	ROCKWELL INTERNATIONAL CORPORATION COLLINS GROUPS DALLAS, TEX 75207 NEWPORT BEACH, CALIF 92663 CEDAR RAPIDS, IA 52406	
	CHK J.A.	SIZE D / FSCM ~~13499~~ / DWG NO. 634-8224	REV LTR L
		SCALE 1/1	SHEET 2

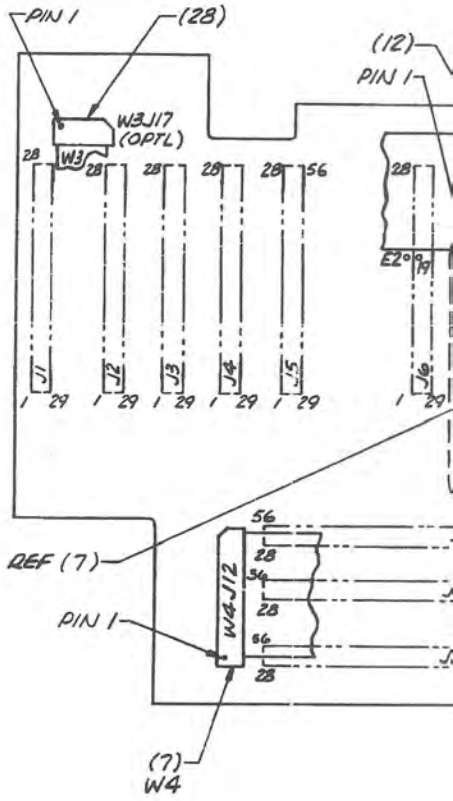
W2 (ITEM 30) HOOK-UP

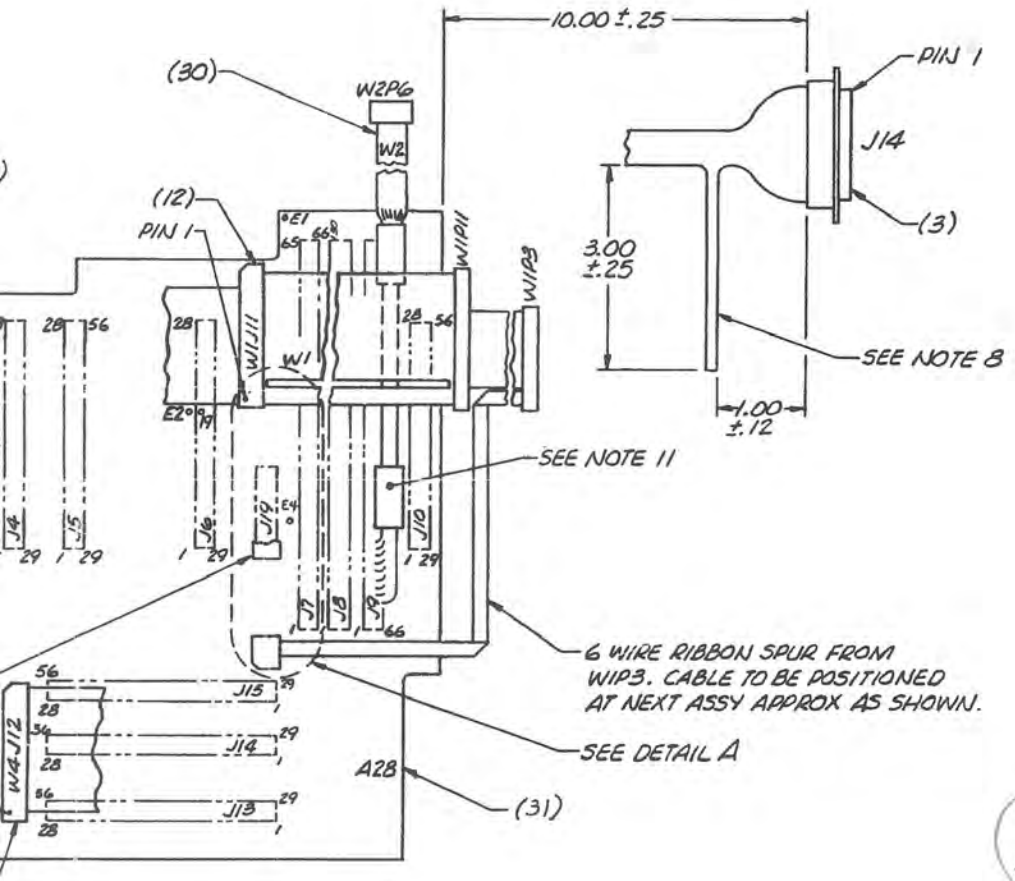
FROM		TO
W2P6-1		NC
	2	A28J9-16
	3	A28J9-94
	4	A28J9-96
	5	NC
	6	A28J9-76
	7	-11
	8	-75
	9	-10
	10	-22
	11	-65
	12	A28J9-130
	13	NC
	14	A28J7-47
	15	NC
	16	A28J7-21
W2P6-17		NC

POINT-TO-POINT WIRING
(-003 ONLY)

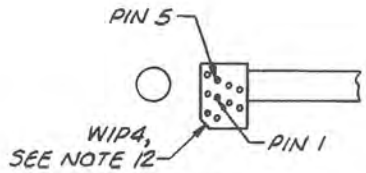
WIRE NO	WIRE CODE	FROM	TO
1	D26TA00X4XXX	W1P4-5	A28E4

FOR ADDITIONAL WIRING INFO
SEE SHEET 2





-003 ONLY



DETAIL A

FSCM 95105	PREP K. WOLLEAT 4/26/84	SIZE D	FSCM 13499	DWG NO. 634-8224 REV LTR T
	CHK J. MORGAN 5/11/84	SCALE 1/1		SHEET 3

ROCKWELL INTERNATIONAL CORPORATION
COLLINS GROUPS
DALLAS, TEX 75207 NEWPORT BEACH, CALIF 92663 CEDAR RAPIDS, IA 52406

NOTES:

P/O A25 SIDEBOARD ASSEMBLY

FUNCTION	A3 CH A2-B2 AUDIO (A3P1) J1	A4 CH A1-B1 AUDIO (A4P1) J2	(RESERVED) A5 CH B2 IF AMPL (A5P1) J3	(RESERVED) A6 CH A2 IF AMPL (A6P1) J4	(RESERVED) A7 CH B1 IF AMPL (A7P1) J5	A8 CH A1 IF AMPL (A8P1) J6	A9 RF XLTR (A9P1) J7	A10 CONTROL LOGIC (A10P1) J8	A11 PARALLEL INPUT (A11P1) J9	A12 PARALLEL OUTPUT (A12P1) J10	A13 SERIAL INTERFACE (A13P1) J11	J12	J13	J17	J18	P6
A1 MIC SEL	15				1							12				
B1 MIC SEL	16											13				
RESERVED	15											11				
RESERVED	16											14				
CH A1 PHONES		44										34				
CH B1 PHONES		43										35				
RESERVED		44										33				
RESERVED		43										36				
A1 METER		34										42				
B1 METER		18										43				
A2 METER	34											41				
B2 METER	18											44				
PHONE AF		11										40				
MIC AF		14										49				
MIC AF RTN		13										48				
PHONE LVL		40										37				
AF LVL RTN																
RESERVED	42	42														
MIC AF OUT	21	21														
CH A1 XMT AF		7				7										
CH B1 XMT AF		45			7											
RESERVED	7			7												
RESERVED	45		7													
ALC						9		85								
TGC							37	26								
XMT RF LVL							20					45				
PRESELECT FAULT IND								71	71							12
CPLR FAULT IND								70	89							10
CW KEY ENBL								81								32
LOCAL KEY								17								33
KEY IND (MON)								68	68							6
REMOTE KEY								92		92						
PA READY IND								69	77							8
PA FAULT IND								4	102	104						7
PRESET SEND								6		71						11
EXCTR FAULT								3	13	4						5
PILOT CARR ENBL						30		73	82	82						16
AF XMT	3	3	3	3	3	3		77								24
SIDETONE ENBL								5	7							9
RF XMT		41	41	41	41	41	41	27								
TUNE POWER						26		46								
XMT RF PM							48		5							
PS FAULT								86	70							
FAULT SUMMARY OUT (RES-FL2)					42	42		49				10	2			
CH A1 AUDIO PM		5							22							
CH B1 AUDIO PM		53							23							
RESERVED		5							24							
RESERVED		53							88							
A1 IF PM						20			86							
VFO FAULT									101				49			
DDS ID BIT (DDS = LOGIC "1")													48			
NOT USED									40				47			
NOT USED									105				46			
NOT USED									36				45			
NOT USED									83				44			
CONTROL INTERFACE FAULT									39				43			
DATA ERROR									95		22					
RMT FREQ CHG			33	33	33	33		21		21						
LCL FREQ CHG								47					8			

(9)

REV STATUS OF SHEETS	REV	A	B	B	B	B	B	B	B	B
	SHEET	1	2	3	4	5	6	7	8	9

-001

15½ x 8½

IMAGE AREA W x H	LTR SIZE	PAGE INCR	PCT
51 x 17	120		50

PUBN NO.

FOR COLLINS DIVISIONS INTERNAL PUBLICATIONS USE ONLY

MATERIAL: NONE

FINISH: NONE

074-5228-002
NEXT ASSY:

TYPE NO: HF-8014/14A (BRENDOOR)

DWG NO. 659-7089 SH 1

LTR	DESCRIPTION	DATE	APVD
A	D20708-(CODE 16) REV SH 1 THRU 5, 7, 8, 9.	84-12-3	CT
B	D21799-(CODE 16) REV SH 1 THRU 9.	85-2-28	CT

CILD ZNBEOLL EMCH

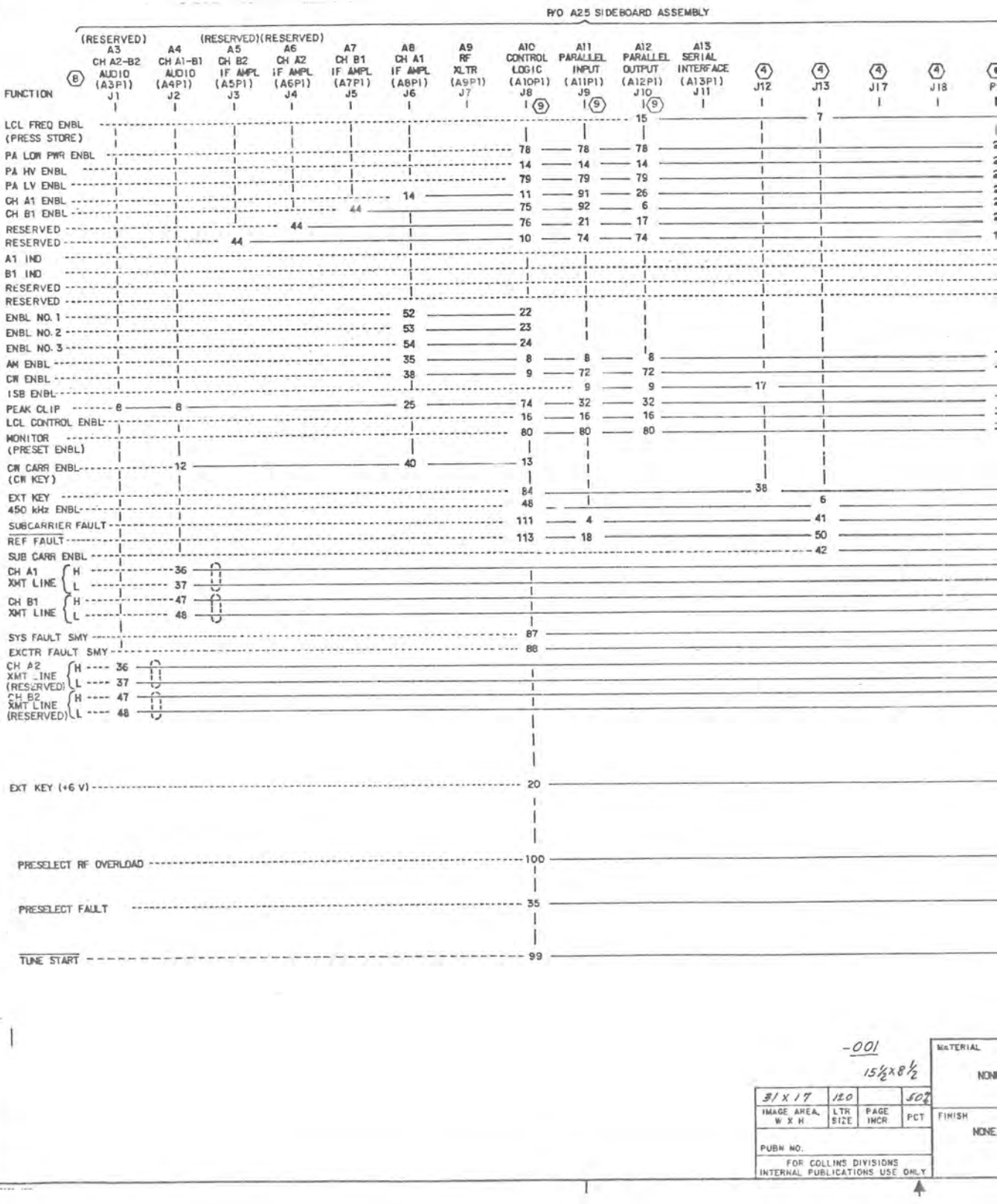
MATERIAL	UNLESS OTHERWISE SPECIFIED, DUAL DIMENSIONED DWGS ARE IN MILLIMETRES [INCHES]. SINGLE DIMENSIONED DWGS ARE IN INCHES.	CONTRACT NO.	ROCKWELL INTERNATIONAL CORPORATION COLLINS GROUPS
NONE	METRIC: TOL ON METRIC DIM .X=±0.5, .XX=±0.2; HOLE DIAMETERS UNDER 6.38=+0.13-0.13, 6.38 TO 12.78=+0.15-0.13, OVER 12.78=+0.20-0.13; ANGLES: ±1.0°; CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN 0.25	PREP G. MESPLAY 84-8-22	DALLAS, TEX 75207 NEWPORT BEACH, CALIF 92663 CEDAR RAPIDS, IA 52406
FINISH NONE	US CUSTOMARY [ ]: TOL ON [ ] DIM .XX=±.02, .XXX=±.008; HOLE DIAMETERS UNDER .2518=+.005-.005, .251 TO .5008=+.006-.005, OVER .5008=+.008-.005; ANGLES: ±1.0°; CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN .010	CHK J. WITMER 84-8-22	INTERCONNECT DIAGRAM-HF-8014/14A EXCITER, CHASSIS, MAIN SIDEBOARD, AND RIBBON CABLING
	PART SHALL COMPLY TO 580-5400-001--THIRD ANGLE PROJECTION	APVD C. ERRINGTON	SIZE D FSCM 13499 DWG NO. 659-7089 REV LTR B
			SCALE NONE SHEET 1 OF 9

15½×8½ 50 PCT

FRO NFP REL X CR 2 NB 0 DL 0 TO 1

NOTES:

P/O A25 SIDEBOARD ASSEMBLY



-001

15½ x 8½

IMAGE AREA W X H	LTR SIZE	PAGE INCR	PCT
31 X 17	120		50%

PUBN NO.

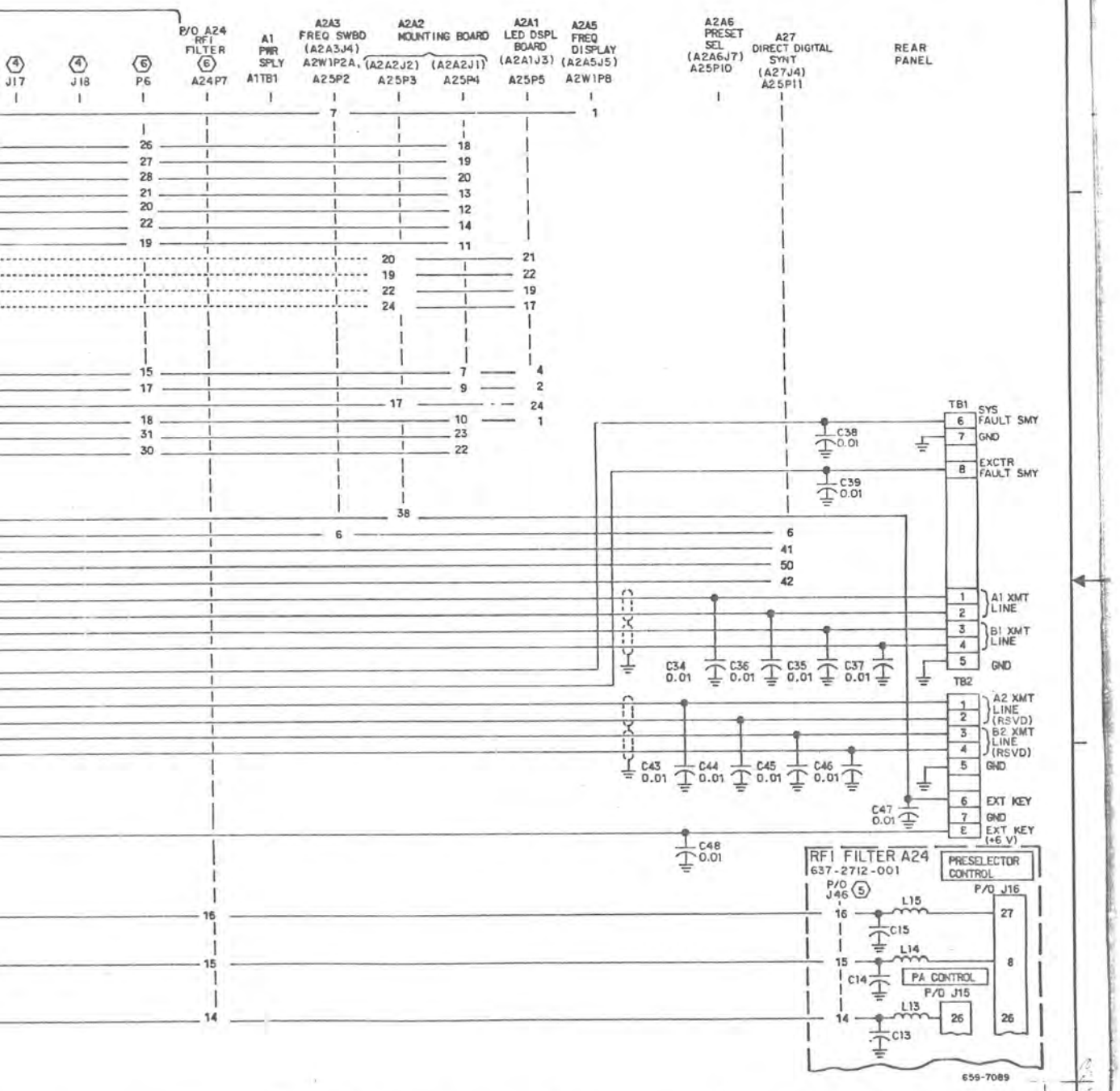
FOR COLLINS DIVISIONS INTERNAL PUBLICATIONS USE ONLY

MATERIAL NONE

FINISH NONE

DWG NO. 659-7089 SH 2

REVISIONS			
LTR	DESCRIPTION	DATE	APVD
	SEE SHEET 1		



MATERIAL: NONE	UNLESS OTHERWISE SPECIFIED, DUAL DIMENSIONED DWGS ARE IN MILLIMETRES [INCHES]. SINGLE DIMENSIONED DWGS ARE IN INCHES.		CONTRACT NO.	ROCKWELL INTERNATIONAL CORPORATION COLLINS GROUPS	
FINISH: NONE	METRIC	US CUSTOMARY[ ]	PREP G. MESPLAY 84-8-22	DALLAS, TEX 75207 NEWPORT BEACH, CALIF 92663 CEDAR RAPIDS, IA 52406	
	TOL ON METRIC DIM .X=±0.5, .XX=±0.2	TOL ON [ ] DIM .XX=±.02, .XXX=±.008	CHK J. RITHER 84-8-22	INTERCONNECT DIAGRAM - HF-5014/144 EXCITER, CHASSIS, MAIN SIDEBOARD, AND RIBBON CABLING	METRIC
	HOLE DIAMETERS UNDER 6.38=+0.13-0.13; 6.38 TO 12.78=+0.15-0.13; OVER 12.78=+0.20-0.13	HOLE DIAMETERS: UNDER .251=+.005-.005; .251 TO .500=+.006-.005; OVER .500=+.008-.005	APVD C. ERRINGTON	SIZE D; FSCM 13499; DWG NO. 659-7089; REV LTR B	
	ANGLES: ±1.0°	ANGLES: ±1.0°		SCALE NONE; SHEET 2	
	CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN 0.25 Ø.	CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN .010 Ø.			
	PART SHALL COMPLY TO 580-5400-001—THIRD ANGLE PROJECTION				

FRO ☐ NFP ☐ REL ☐ CR 2 MB 0 DL 0 TO 1

NOTES:

P/O A25 SIDEBOARD ASSEMBLY

FUNCTION	(RESERVED) A3 CH A2-B2 AUDIO (A3P1) (8) J1	A4 CH A1-B1 AUDIO (A4P1) J2	(RESERVED) A5 CH B2 IF AMPL (A5P1) J3	(RESERVED) A6 CH A2 IF AMPL (A6P1) J4	A7 CH B1 IF AMPL (A7P1) J5	A8 CH A1 IF AMPL (A8P1) J6	A9 RF XLTR (A9P1) J7	A10 CONTROL LOGIC (A10P1) J8	A11 PARALLEL INPUT (A11P1) J9 (9)	A12 PARALLEL OUTPUT (A12P1) J10	A13 SERIAL INTERFACE (A13P1) J11	(4) J12	(4) J13	(4) J17	(4) J18
PA HIGH VOLTAGE ENBL								34							
PA LOW PWR ENBL								98							
PA LOW VOLTAGE ENBL								33							
EXCITER TUNE								97							
PA SIDETONE ENBL								32							
TGC IN								96							
ALC RETURN															J8-31 (SH 5
ALC IN								95							
PA FAULT								30							
PA READY								94							
SYSTEM KEY								29							
PA INTERLOCK								93							
COUPLER FAULT								28							
FREQ 20 MHz								129	129	129			38		
10 MHz								64	64	64			37		
8 MHz								128	128	128			36		
4 MHz								63	63	63			35		
2 MHz								127	127	127			34		
1 MHz								62	62	62			33		
800 kHz								126	126	126			32		
400 kHz								61	61	61			31		
200 kHz								125	125	125			30		
100 kHz								60	60	60			29		
80 kHz								124	124	124			28		
40 kHz								59	59	59			27		
20 kHz								123	123	123			26		
10 kHz								58	58	58			25		
8 kHz								122	122	122			24		
4 kHz								57	57	57			23		
2 kHz								121	121	121			22		
1 kHz								56	56	56			21		
800 Hz								120	120	120			20		
400 Hz								55	55	55			19		
200 Hz								119	119	119			18		

-001
15½×8½

31 X 17	120		60
IMAGE AREA W X H	LTR SIZE	PAGE INCR	PCT

PUBN NO.

FOR COLLINS DIVISIONS INTERNAL PUBLICATIONS USE ONLY

MATERIAL

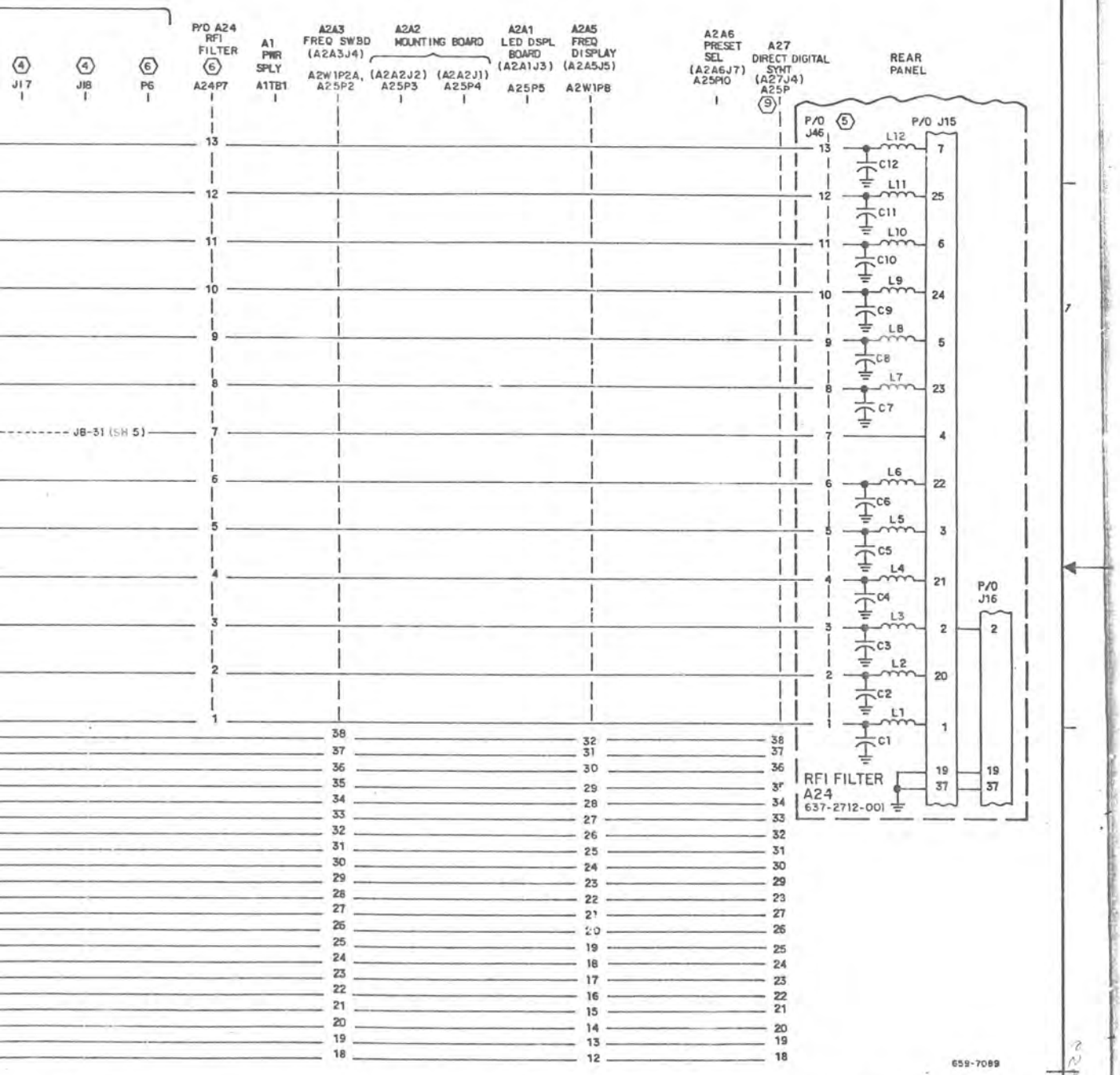
FINISH

074-5276-002
NEXT ASSY:

TYPE NO:

DWG NO. 659-7089 SH 3

REVISIONS			
LTR	DESCRIPTION	DATE	APVD
	SEE SHEET 1		



MATERIAL: NONE	UNLESS OTHERWISE SPECIFIED, DUAL DIMENSIONED DWGS ARE IN MILLIMETRES [INCHES]. SINGLE DIMENSIONED DWGS ARE IN INCHES.		CONTRACT NO.	ROCKWELL INTERNATIONAL CORPORATION COLLINS GROUPS			
	METRIC	US CUSTOMARY[ ]		DALLAS, TEX 75207 NEWPORT BEACH, CALIF 92663 CEDAR RAPIDS, IA 52406			
FINISH: NONE	TOL ON METRIC DIM: .X=±0.5, .XX=±0.2	TOL ON [ ] DIM: .XX=±.02, .XXX=±.008	PREP G. MESPLAY 84-8-22	INTERCONNECT DIAGRAM- HF-8014/146 EXCITER, CHASSIS, MAIN SIDEBOARD, AND RIBBON CABLING			METRIC
	HOLE DIAMETERS: UNDER 6.38=+0.13-0.13; 6.38 TO 12.7=+0.15-0.13; OVER 12.7=+0.20-0.13	HOLE DIAMETERS: UNDER .25=+.005-.005; .25 TO .500=+.006-.005; OVER .500=+.008-.005	CHK J. RITNER 84-8-22				
	ANGLES: ±1.0°	ANGLES: ±1.0°	APVD C. ERRINGTON	SIZE D	FSCM 13499	DWG NO. 659-7089	REV LTR B
	CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN 0.25 Ø.	CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN .010 Ø.		SCALE NONE		SHEET 3	
	PART SHALL COMPLY TO 580-5400-001--THIRD ANGLE PROJECTION						

FRO ☐ NFP ☐ REL ☐ CR 2 MB 0 DL 0 10

NOTES:

P/O A25 SIDEBOARD ASSEMBLY

FUNCTION		(RESERVED) A3 CH A2-B2 AUDIO (A3P1) ⑥ J1	A4 CH A1-B1 AUDIO (A4P1) J2	(RESERVED) A5 CH B2 IF AMPL (A5P1) J3	(RESERVED) A6 CH A2 IF AMPL (A6P1) J4	A7 CH B1 IF AMPL (A7P1) J5	A8 CH A1 IF AMPL (A8P1) J6	A9 RF XLTR (A9P1) J7	A10 CONTROL LOGIC (A10P1) J8	A11 PARALLEL INPUT (A11P1) ⑨ J9	A12 PARALLEL OUTPUT (A12P1) J10	A13 SERIAL INTERFACE (A13P1) J11	④ J12	④ J13	④ J17	④ J18	⑥ P6
FREQ	100 Hz								54	54	54			17			
	80 Hz								118	118	118			16			
	40 Hz								53	53	53			15			
	20 Hz								117	117	117			14			
	10 Hz								52	52	52			13			
	8 Hz								116	116	116			12			
	4 Hz								51	51	51			11			
	2 Hz								115	115	115			10			
	1 Hz								50	50	50			9			
FREQ	20 MHz								109								
	10 MHz								44								
	8 MHz								108								
	4 MHz								43								
	2 MHz								107								
	1 MHz								42								
	800 kHz								106								
	400 kHz								41								
	200 kHz								105								
	100 kHz								40								
	80 kHz								104								
	40 kHz								39								
	20 kHz								103								
	10 kHz								38								
	8 kHz								102								
	4 kHz								37								
	2 kHz								101								
	1 kHz								36								

-001
15½ x 8½

31 X 17	12.0		50
IMAGE AREA W X H	LTR SIZE	PAGE INCR	PCT

PUBN NO.

FOR COLLINS DIVISIONS INTERNAL PUBLICATIONS USE ONLY

MATERIAL: NONE

FINISH: NONE

CI-1228-002
NEXT ASSY:

TYPE NO:

DWG NO. 659-7089 | SH 4

REVISIONS		
LTR	DESCRIPTION	DATE	APVD
	SEE SHEET 1		

(4) J17	(4) J18	(6) P6	P/O A24 RFI FILTER (6) A24P7	A1 PWR SPLY A1TB1	A2A3 FREQ SWBD A2A3J4 A2W1P2A, A25P2	A2A2 MOUNTING BOARD (A2A2J2) A25P3	(A2A2J1) A25P4	A2A1 LED DSPL BOARD (A2A1J3) A25P5	A2A5 FREQ DISPLAY (A2A5J5) A2W1P8	A2A6 PRESET SEL (A2A6J7) A25P10	A27 DIRECT DIGITAL SYNT (A27J4) A25P (9)	REAR PANEL
					17				11		17	
					16				10		16	
					15				9		15	
					14				8		14	
					13				7		13	
					12				6		12	
					11				5		11	
					10				4		10	
					9				3		9	
			34									
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			19									
			18									
			17									

RFI FILTER A24
637-2712-001

P/O J46 (5)		P/O J15	P/O J16
34	L33 C33	36	36
33	L32 C32	17	17
32	L31 C31	35	35
31	L30 C30	16	16
30	L29 C29	34	34
29	L28 C28	15	15
28	L27 C27	33	33
27	L26 C26	14	14
26	L25 C25	32	32
25	L24 C24	13	13
24	L23 C23		31
23	L22 C22		12
22	L21 C21		30
21	L20 C20		11
20	L19 C19		29
19	L18 C18		10
18	L17 C17		28
17	L16 C16		9

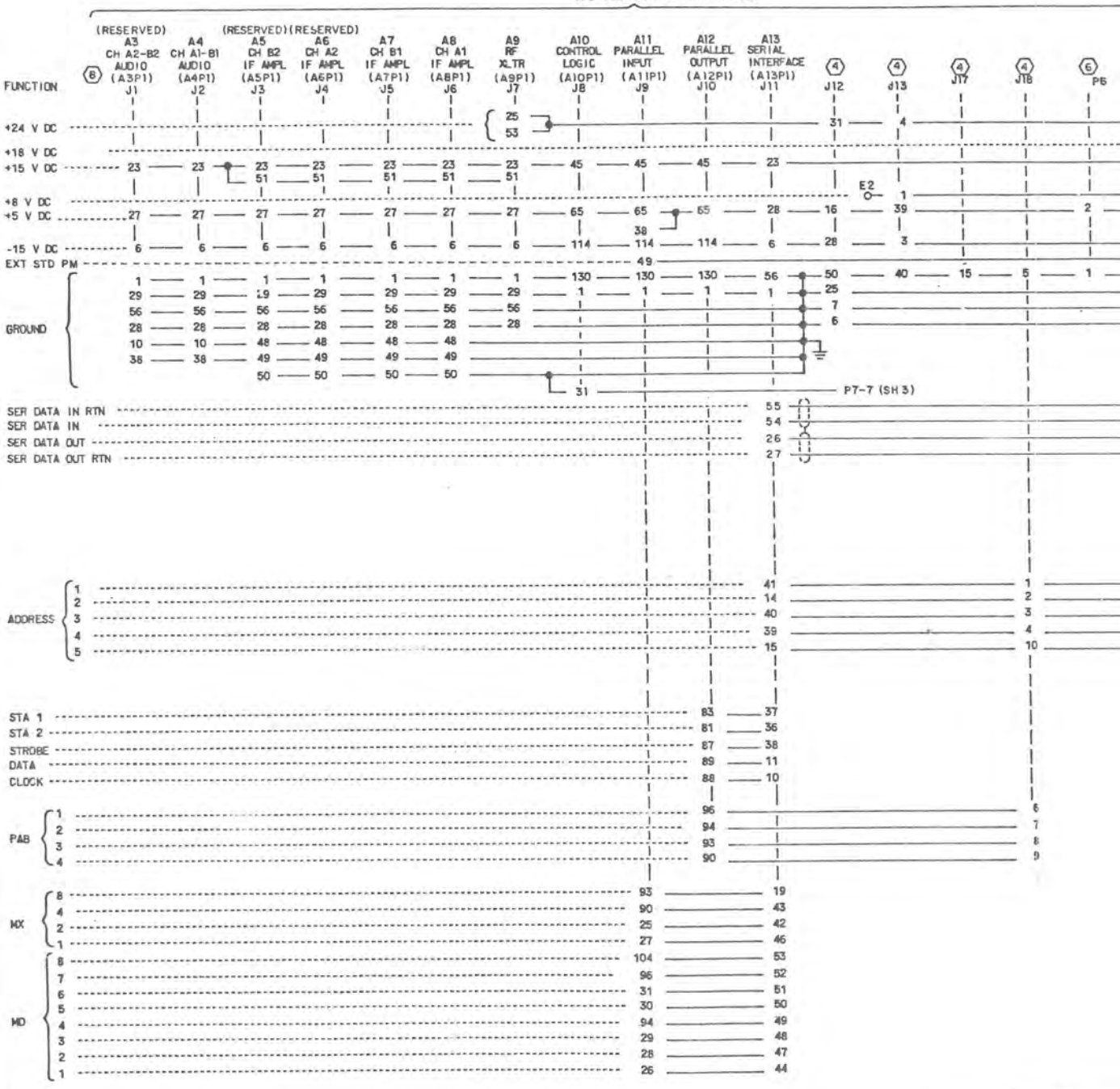
659-7089

01	MATERIAL NONE	UNLESS OTHERWISE SPECIFIED, DUAL DIMENSIONED DWGS ARE IN MILLIMETRES [INCHES]. SINGLE DIMENSIONED DWGS ARE IN INCHES. METRIC: TOL ON METRIC DIM .X±0.5, .XX±0.2; HOLE DIAMETERS UNDER 6.38±0.13-0.13, 6.38 TO 12.78±0.15-0.13, OVER 12.78±0.20-0.13; ANGLES: ±1.0°; CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN 0.25 Ⓜ. US CUSTOMARY[ ]: TOL ON [ ] DIM .XX±.02, .XXX±.008; HOLE DIAMETERS: UNDER .250±.005-.005, .25[TO .500±.006-.005, OVER .500±.008-.005; ANGLES: ±1.0°; CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN .010 Ⓜ. PART SHALL COMPLY TO 580-5400-001—THIRD ANGLE PROJECTION	CONTRACT NO.	ROCKWELL INTERNATIONAL CORPORATION COLLINS GROUPS DALLAS,TEX 75207 NEWPORT BEACH,CALIF 92663 CEDAR RAPIDS,IA 52405	
1/2 x 8 1/2		PREP G. MESPLAY 64-8-21		
50		CHK J. WITMER 64-8-21	INTERCONNECT DIAGRAM — HF-8014/14A EXCITER, CHASSIS, MAIN SIDEBOARD, AND RIBBON CABLING.	METRIC S1
PAGE INCR PCT	FINISH NONE	APVD C. ERRINGTON	SIZE D FSCM 13499 DWG NO. 659-7089	REV LTR B
ISIONS S USE ONLY			SCALE NONE	SHEET 4

FRO ☐ NFP ☐ REL ☐ CR 2 NB 0 DL 0 TO 1

NOTES:

P/O A25 SIDEBOARD ASSEMBLY



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15½ × 8½

91 X 17	12.0	3 1 X 17	50
IMAGE AREA W X H	LTR SIZE	PAGE INCR	PCT

PUBN NO.

FOR COLLINS DIVISIONS INTERNAL PUBLICATIONS USE ONLY

MATERIAL: NONE

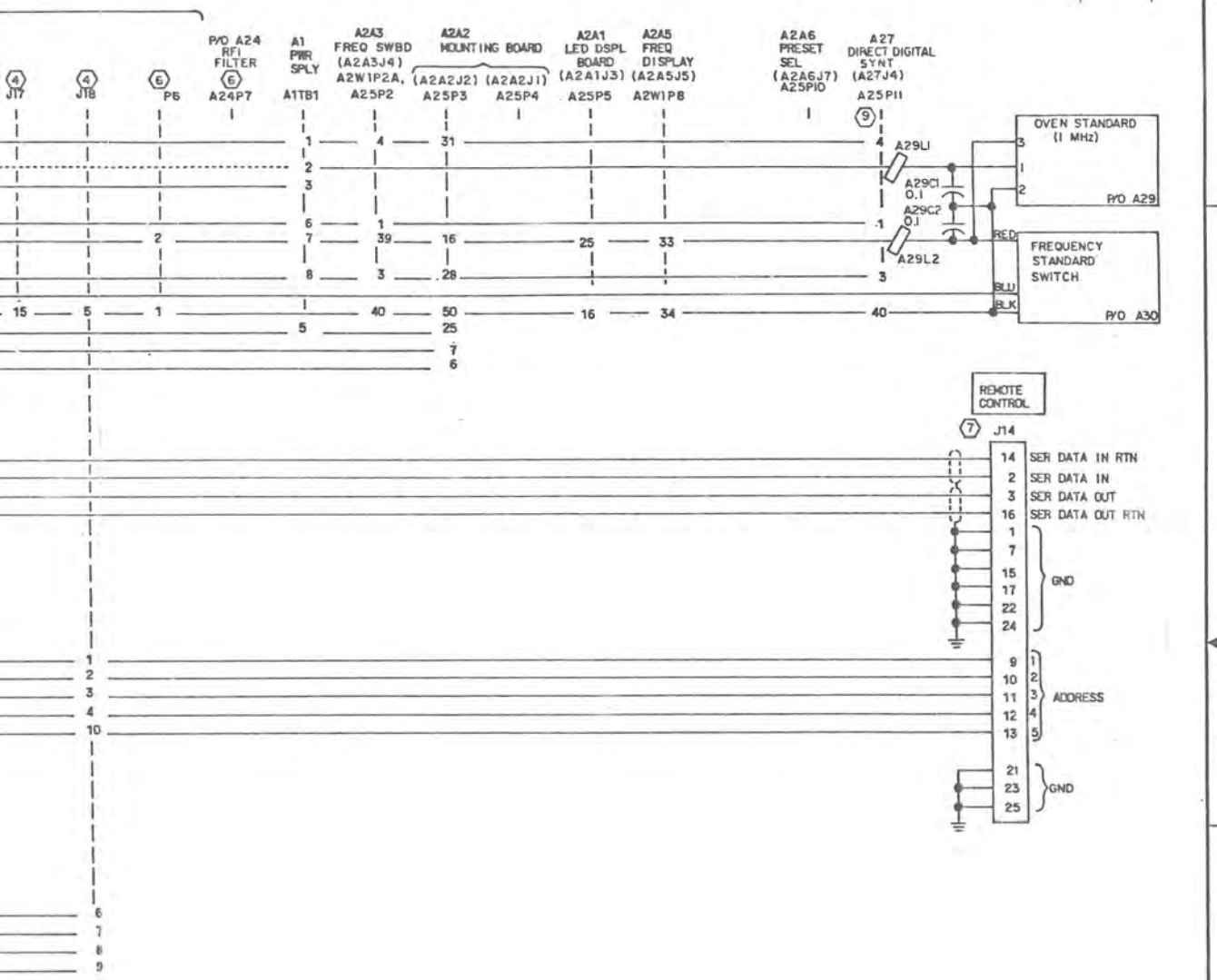
FINISH: NONE

074-5276-002
NEXT ASSY:

TYPE NO:

DWG NO. 659-7089 SH 5

REVISIONS			
LTR	DESCRIPTION	DATE	APVD
	SEE SHEET 1		



659-7089

COLD SUPPORT ENGR

MATERIAL: NONE	UNLESS OTHERWISE SPECIFIED, DUAL DIMENSIONED DWGS ARE IN MILLIMETRES [INCHES]. SINGLE DIMENSIONED DWGS ARE IN INCHES.	CONTRACT NO.	ROCKWELL INTERNATIONAL CORPORATION COLLINS GROUPS
FINISH: NONE	METRIC: TOL ON METRIC DIM .X±0.5, .XX±0.2; HOLE DIAMETERS UNDER 6.38 ±0.13 −0.13, 6.38 TO 12.78 ±0.13 −0.13, OVER 12.78 ±0.20 −0.13; ANGLES: ±1.0°; CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN 0.25 Ⓜ	PREP G. MESPLAY 84-8-21	DALLAS, TEX 75207 NEWPORT BEACH, CALIF 92663 CEDAR RAPIDS, IA 52406
	US CUSTOMARY[]: TOL ON [] DIM .XX±.02, .XXX±.008; HOLE DIAMETERS: UNDER .251 ±.005 −.005, .251 TO .500 Ⓜ ±.006 −.005, OVER .500 ±.008 −.005; ANGLES: ±1.0°; CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN .010 Ⓜ	CHK J. RITNER 84-8-21	INTERCONNECT DIAGRAM — HF-8014/14A EXCITER, CHASSIS, MAIN SIDEBOARD, AND RIBBON CABLING.
	PART SHALL COMPLY TO 580-5400-001 — THIRD ANGLE PROJECTION	APVD C. ERRINGTON	SIZE D; FSCM 13499; DWG NO. 659-7089; REV LTR B; SCALE NONE; SHEET 5

FRO ☐ NFP ☐ REL ☐ CR 2 NB 0 DL 0 TO 1

NOTES:

P/O A25 SIDEBOARD ASSEMBLY

FUNCTION	(8)	(RESERVED) A3 CH A2-B2 AUDIO (A3P1) J1	A4 CH A1-B1 AUDIO (A4P1) J2	(RESERVED) A5 CH B2 IF AMPL (A5P1) J3	(RESERVED) A6 CH A2 IF AMPL (A6P1) J4	A7 CH B1 IF AMPL (A7P1) J5	A8 C1 A1 IF AMPL (A8P1) J6	A9 RF XLTR (A9P1) J7	A10 CONTROL LOGIC (A10P1) J8	A11 PARALLEL INPUT (A11P1) J9	A12 PARALLEL OUTPUT (A12P1) J10	A13 SERIAL INTERFACE (A13P1) J11	(4) J12	(4) J13	(4) J17	(4) J18
XMT OUTPUT								A9J4 J26								
IF INTERCONNECT				A5J1 J53	J52 A6J1											
						J51 A7J1	J50 A8J4									
FREQ STD INPUT																
9.45 MHz OUTPUT							A8J7 J36	J27 A9J2								
118.8 MHz INJ								A9J6 J24								
9.9 MHz INJ							A8J3 J32									
VARIABLE INJ (109.35 TO 79.35 MHz)								A9J5 J28								
450 kHz INJ						A7J5 J39										
450 kHz INJ							A8J5 J34									
456.29 kHz INJ (RESERVED)					A6J5 J54											
443.71 MHz INJ (RESERVED)				A5J5 J55												

-001

15½ × 7½

31 x 19 5/4	120		50
IMAGE AREA W X H	LTR SIZE	PAGE INCR	PCT
PUBN NO.			
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MATERIAL NOM

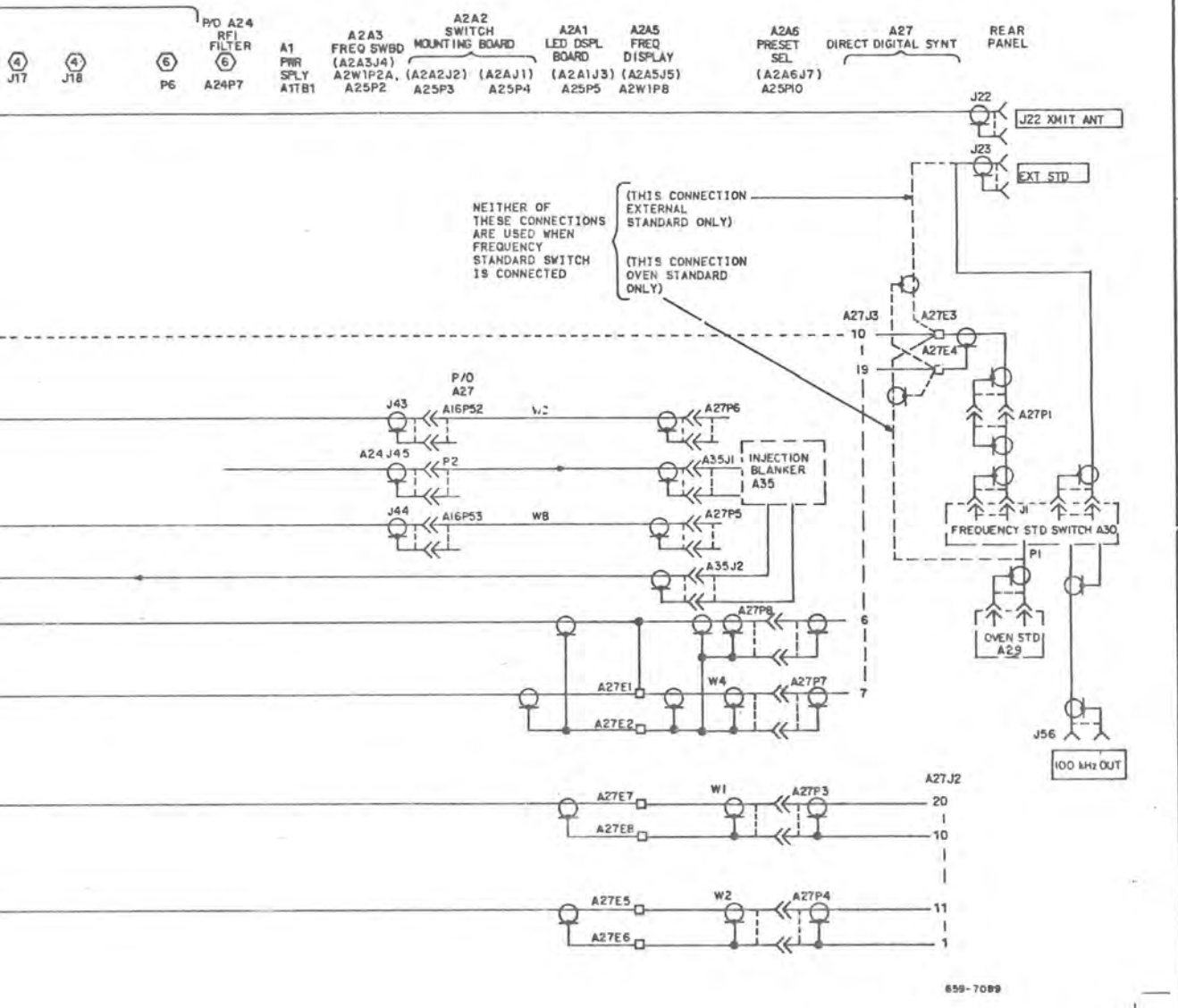
FINISH NOM

074-5226-002
NEXT ASSY:

TYPE NO:

DWG NO. 659-7089 SH 6

REVISIONS			
LTR	DESCRIPTION	DATE	APVD
	SEE SHEET 1		



MATERIAL: NONE	UNLESS OTHERWISE SPECIFIED, DUAL DIMENSIONED DWGS ARE IN MILLIMETRES [INCHES]. SINGLE DIMENSIONED DWGS ARE IN INCHES.		CONTRACT NO.	ROCKWELL INTERNATIONAL CORPORATION COLLINS GROUPS		
FINISH: NONE	METRIC	US CUSTOMARY[ ]	PREP G. MESPLAY 84-8-21	DALLAS, TEX 75207 NEWPORT BEACH, CALIF 92663 CEDAR RAPIDS, IA 52406		
	TOL ON METRIC DIM: .X=±0.5, .XX=±0.2	TOL ON [ ] DIM: .XX=±.02, .XXX=±.008	CHK J. WITMER 84-8-21	INTERCONNECT DIAGRAM-HF-8014/8014A EXCITER, CHASSIS, MAIN SIDEBOARD, AND RIBBON CABLING		METRIC SI
	HOLE DIAMETERS: UNDER 6.350=+0.13-0.13; 6.36 TO 12.70=+0.15-0.13; OVER 12.70=+0.20-0.13	HOLE DIAMETERS: UNDER .250=+.005-.005; .251 TO .500=+.006-.005; OVER .500=+.008-.005	APVD C. ERRINGTON	SIZE D	FSCM 13499	DWG NO. 659-7089 REV LTR B
	ANGLES: ±1.0°	ANGLES: ±1.0°		SCALE NONE		SHEET 6
	CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN 0.25 Ø	CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN .010 Ø				
	PART SHALL COMPLY TO 580-5400-001--THIRD ANGLE PROJECTION					

FRD ☐ NFP ☐ REL ☐ CR 2 NB 0 DL 0 TO 1

NOTES:

EXCITER CABLE/ASSEMBLY CONFIGURATIONS

CABLE/ASSEMBLY	PART NUMBER	HF-8014 EXCITER -001					HF-8014A EXCITER -001	-002	-003	-004	-005	-006	-007			211	
SIDEBOARD ASSEMBLY A25	634-8211-001	X					X	X	X	X	X	X	X			X	MAIN SIDEBOARD ASSEMBLY
SIDEBOARD A25A1	638-6617-001	X					X	X	X	X	X	X	X			X	MAIN SIDEBOARD
CABLE ASSEMBLY	634-8210-001	X					X	X	X	X	X	X	X			X	INCLUDES A25J13, A25P2, AND
CABLE ASSEMBLY	634-8212-001	X					X	X	X	X	X	X	X			X	INCLUDES A25J12, A25P3, A25F
WIRING HARNESS	647-2407-001	X					X	X	X	X	X	X	X			X	INCLUDES TB1 AND ASSOCIATI
WIRING HARNESS	642-2408-001	X					X	X	X	X	X	X	X			X	INCLUDES TB2 AND ASSOCIATI
RFI FILTER A24	637-2712-001	X					X	X	X	X	X	X	X			X	RFI FILTER, INCLUDES J15,
SPECIAL PURPOSE CABLE	637-9313-001	X					X	X	X	X	X	X	X			X	INCLUDES A24J46 AND A24P7
OVEN STANDARD, OSC ASSY A29	637-9135-001							X	X	X	X	X	X			X	
FREQ STANDARD SWITCH A30	646-6558-001							X	X	X	X	X				X	
FREQ DISPLAY CABLE A2W1	634-8289-001							X	X	X	X	X	X			X	(P/O AC-8014) INCLUDES A2W
SYNTHESIZER CHASSIS ASSY A27	634-8201-001	X					X	X	X	X	X	X	X				
SYNTHESIZER SIDEBOARD A27A1	638-6973-001	X					X	X	X	X	X	X	X				
SYNTHESIZER CHASSIS ASSY A27	652-6615-001															X	

RF CABLES

CABLE/ASSEMBLY	PART NUMBER	HF-8014 EXCITER -001					HF-8014A EXCITER -001	-002	-003	-004	-005	-006	-007			211	
RF CABLE ASSY	637-1525-004	X					X	X	X	X	X	X	X			X	INTERCONNECTS J22 AND J26
RF CABLE ASSY	637-1526-003	X					X	X	X	X	X	X	X			X	INTERCONNECTS J27 AND J36
RF CABLE ASSY	637-1526-003	X					X	X	X	X	X	X	X			X	INTERCONNECTS J24 AND J43
RF CABLE ASSY	637-1526-003	X					X	X	X	X	X	X	X			X	INTERCONNECTS J28 SND J45
RF CABLE ASSY	637-1526-004	X					X	X	X	X	X	X	X			X	INTERCONNECTS J32 AND J44
RF CABLE ASSY	637-1529-001	X					X	X	X	X	X	X	X			X	INTERCONNECTS A27E1 AND J
RF CABLE ASSY	637-1529-001	X					X	X	X	X	X	X	X			X	INTERCONNECTS A27E1 AND J
RF CABLE ASSY	637-1529-001	X					X	X	X	X	X	X	X			X	INTERCONNECTS A27E5 AND J
RF CABLE ASSY	637-1529-001	X					X	X	X	X	X	X	X			X	INTERCONNECTS A27E7 AND J
RF CABLE ASSY	624-2454-001	X					X	X	X	X	X	X	X			X	INTERCONNECTS J50, J51, J52
RF CABLE ASSY	637-9136-001																(P/O AC-8013) INTERCONNECT
RF CABLE ASSY	P/O A29							X	X	X	X	X	X			X	(P/O AC-8012) INTERCONNECT
RF CABLE ASSY	P/O A30							X	X	X	X	X				X	(P/O AC-8015) INTERCONNECT
RF CABLE ASSY	P/O A30							X	X	X	X	X				X	(P/O AC-8015) INTERCONNECT
RF CABLE ASSY	P/O A30							X	X	X	X	X				X	(P/O AC-8015) INTERCONNECT
RF CABLE ASSY	P/O A30							X	X	X	X	X				X	(P/O AC-8015) INTERCONNECT

15½ x 8½			
31 X 17	120		50
IMAGE AREA W X H	LTP SIZE	PAGE INCR	PCT
PUBN NO.			
FOR COLLINS DIVISIONS INTERNAL PUBLICATIONS USE ONLY			

MATERIAL

NONE

FINISH

NONE

074-5229-082
NEXT ASSY:

TYPE NO: HF-8014/14A

DWG NO. 659-7089	SH 7

REVISIONS

LTR	DESCRIPTION	DATE	APVD
	SEE SHEET 1		

FUNCTION
MAIN SIDEBOARD ASSEMBLY
MAIN SIDEBOARD
INCLUDES A25J13, A25P2, AND A25P11
INCLUDES A25J12, A25P3, A25P4, A25P5, AND A25P6
INCLUDES TB1 AND ASSOCIATED WIRING
INCLUDES TB2 AND ASSOCIATED WIRING
RFI FILTER, INCLUDES J15, AND J16
INCLUDES A24J46 AND A24P7
(P/O AC-8014) INCLUDES A2W1P8, A2W1P2A, AND A2W1P2B

INTERCONNECTS J22 AND J26 (XMT OUT)
INTERCONNECTS J27 AND J36 (9.45 MHz IF)
INTERCONNECTS J24 AND J43 (118.8 MHz INJ)
INTERCONNECTS J28 SND J45 (VAR INJ)
INTERCONNECTS J32 AND J44 (9.9 MHz INJ)
INTERCONNECTS A27E1 AND J34 (450 kHz INJ)
INTERCONNECTS A27E1 AND J39 (450 kHz INJ)
INTERCONNECTS A27E5 AND J35 (443.71 kHz INJ)
INTERCONNECTS A27E7 AND J54 (456.29 kHz INJ)
INTERCONNECTS J50, J51, J52 AND J53 (450 kHz IF)
(P/O AC-8013) INTERCONNECTS A27E3 AND J23 (EXT STD)
(P/O AC-8012) INTERCONNECTS A27E3 AND A29W1P1 (1 MHz STD)
(P/O AC-8015) INTERCONNECTS A30P1 AND A29J1 (1 MHz STD)
(P/O AC-8015) INTERCONNECTS A30J1 AND A29W1P1 (100 kHz REF)
(P/O AC-8015) INTERCONNECTS A30J2 AND J23 (EXT STD)
(P/O AC-8015) INTERCONNECTS A30J3 AND J56 (100 kHz REF OUT)

NOTES:

1. REFER TO CONFIGURATION TABLE FOR CABLES/ASSEMBLIES USED IN EACH EXCITER. INCLUDED IN THIS TABLE ARE ONLY THE CABLES/ASSEMBLIES SHOWN ON THIS SCHEMATIC.
2. UNLESS OTHERWISE SPECIFIED: CAPACITANCE VALUES ARE 0.01 MICROFARADS AND INDUCTANCE VALUES ARE 100 MICROHENRYS.
3. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN: FOR COMPLETE DESIGNATION, PREFIX WITH UNIT AND/OR ASSEMBLY DESIGNATION.
4. J12, J13, J17, AND J18 ARE SOLDERED INTO AND ARE PART OF SIDEBOARD ASSEMBLY A25 (THERE IS NO MATING CONNECTOR FOR J12, J13, J17, OR J18).
5. A24J46 IS SOLDERED INTO AND IS PART OF RFI FILTER A24 (THERE IS NO MATING CONNECTC., FOR A24J46).
6. A25P6 AND A24P7 MATE WITH ONE SIDE OF J8, A10P1 MATES WITH OTHER SIDE OF J8 (OPPOSITE SIDES OF SIDEBOARD; PIN NUMBERING SHOWN BELOW).

A25P6	P/O J8	P/O A10P1
1	1	
2	66	
3	2	
4	67	
5	3	
6	68	
7	4	
8	69	
9	5	
10	70	
11	6	
12	71	
13	7	
14	72	
15	8	
16	73	
17	9	
18	74	
19	10	
20	75	
21	11	
22	76	
23	12	
24	77	
25	13	
26	78	
27	14	
28	79	
29	15	
30	80	
31	16	
32	81	
33	17	
34	82	

A24P7	P/O J8	P/O A10P1
1	28	28
2	93	93
3	29	29
4	94	94
5	30	30
6	95	95
7	31	31
8	96	96
9	32	32
10	97	97
11	33	33
12	98	98
13	34	34
14	99	99
15	35	35
16	100	100
17	36	36
18	101	101
19	37	37
20	102	102
21	38	38
22	103	103
23	39	39
24	104	104
25	40	40
26	105	105
27	41	41
28	106	106
29	42	42
30	107	107
31	43	43
32	108	108
33	44	44
34	109	109

7. J14 HARDWIRED TO AND IS PART OF SIDEBOARD ASSEMBLY A25.
8. REFERENCE DESIGNATOR IN PARENTHESIS INDICATES MATING CONNECTOR.
9. PINS DUPLICATED FOR CLARITY.

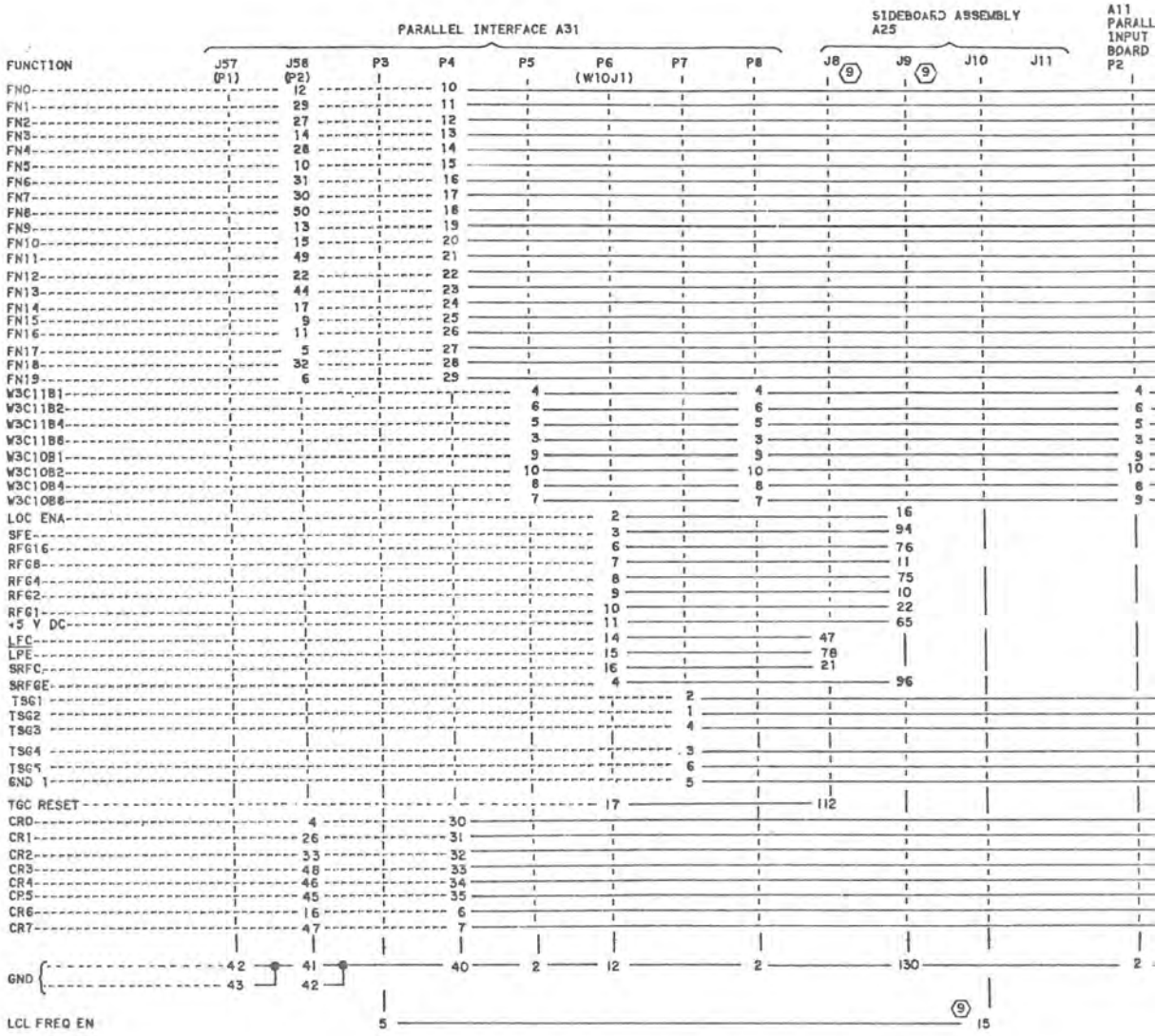
659-7089

-001

	MATERIAL	UNLESS OTHERWISE SPECIFIED, DUAL DIMENSIONED DWGS ARE IN MILLIMETRES [INCHES]. SINGLE DIMENSIONED DWGS ARE IN INCHES.		CONTRACT NO.	ROCKWELL INTERNATIONAL CORPORATION COLLINS GROUPS
5½×8½	NONE	METRIC	US CUSTOMARY[ ]	PREP G. MESPLAY 84-8-22	DALLAS,TEX 75207 NEWPORT BEACH,CALIF 92663 CEDAR RAPIDS,IA 52406
50		TOL ON METRIC DIM .X=±0.5, .XX=±0.2	TOL ON [ ] DIM .XX=±.02, .XXX=±.008	CHK J. WITMER 84-8-22	INTERCONNECT DIAGRAM-HF-8014/14A EXCITER CHASSIS, MAIN SIDEBOARD AND RIBBON CABLING
PAGE INCR / PCT	FINISH	HOLE DIAMETERS UNDER 6.35Ø=+0.13-0.13; 6.35 TO 12.78=+0.15-0.13; OVER 12.78=+0.20-0.13	HOLE DIAMETERS: UNDER .250Ø=+.005-.005; .251 TO .500Ø=+.006-.005; OVER .500Ø=+.008-.005	APVD C. ERRINGTON	METRIC
	NONE	ANGLES: ±1.0°	ANGLES: ±1.0°		SIZE D · FSCM 13499 · DWG NO 659-7089 · REV LTR B
REVISIONS US USE ONLY		CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN 0.25 Ø	CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN .010 Ø		SCALE NONE · SHEET 7
		PART SHALL COMPLY TO 580-5400-001--THIRD ANGLE PROJECTION			

FRO [ ] MFP [ ] REL [ ] CR 2 NB 0 DL 0 TO 1

NOTES:



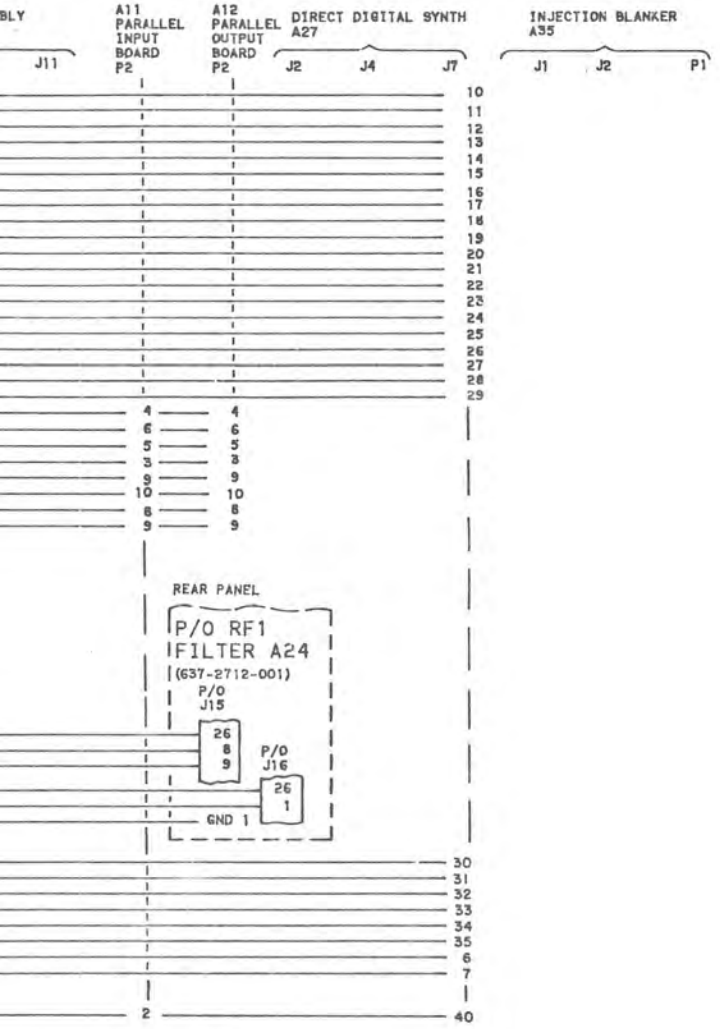
				MATERIAL: NONE
IMAGE AREA W X H	LTR SIZE	PAGE INCR	PCT	FINISH: NONE
PUBN NO.				
FOR COLLINS DIVISIONS INTERNAL PUBLICATIONS USE ONLY				

074-5228-082
NEXT ASSY:

TYPE NO:

DWG NO. 659-7089 | SH 8

REVISIONS			
LTR	DESCRIPTION	DATE	APVD
	SEE SHEET 1		



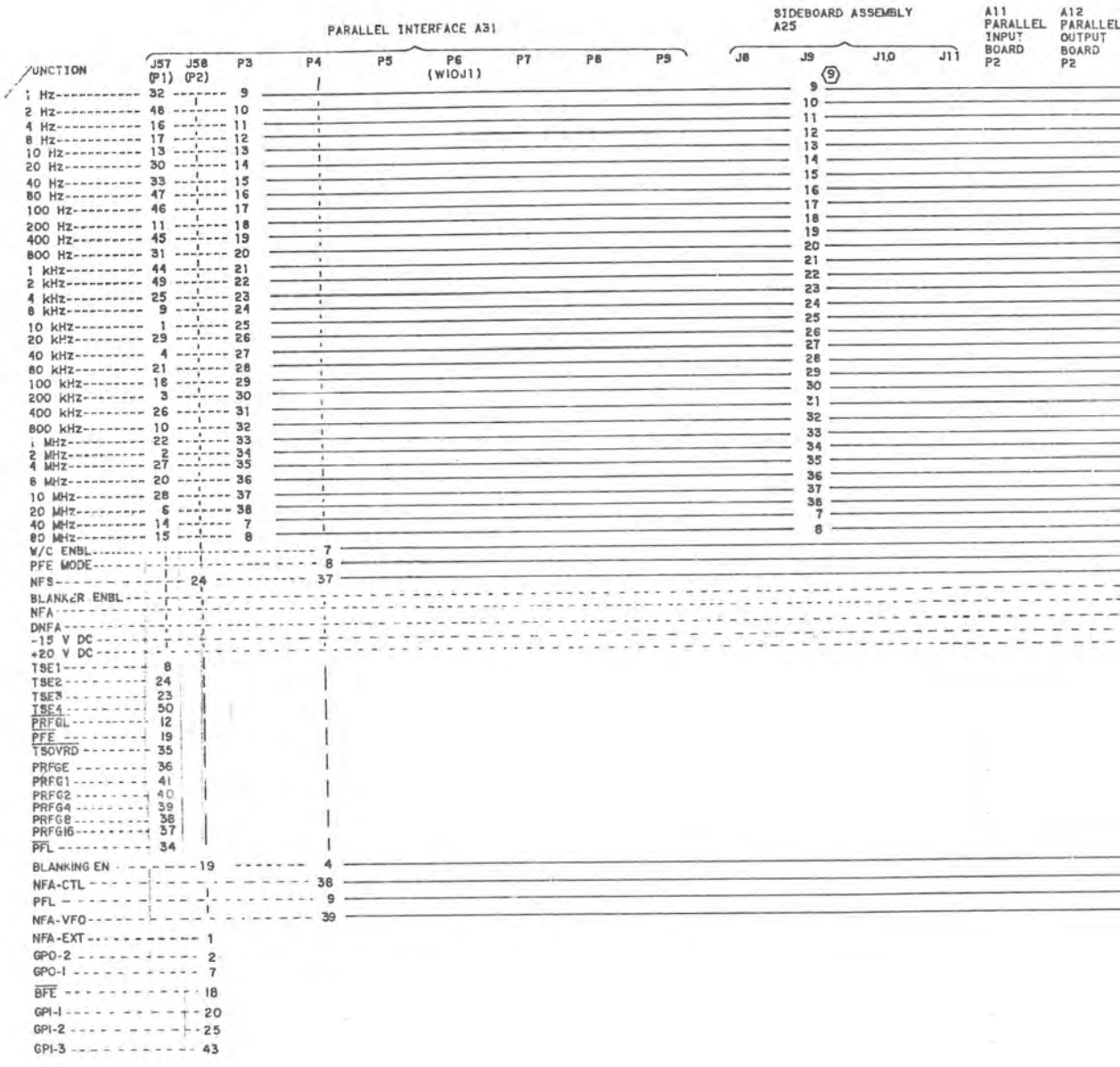
659-7089

-001

MATERIAL: NONE	UNLESS OTHERWISE SPECIFIED, DUAL DIMENSIONED DWGS ARE IN MILLIMETRES [INCHES]. SINGLE DIMENSIONED DWGS ARE IN INCHES.	CONTRACT NO.	ROCKWELL INTERNATIONAL CORPORATION COLLINS GROUPS DALLAS, TEX 75207 NEWPORT BEACH, CALIF 92663 CEDAR RAPIDS, IA 52406		
PCT	METRIC: TOL ON METRIC DIM .X=±0.5, .XX=±0.2; HOLE DIAMETERS: UNDER 6.38=+0.13-0.13, 6.38 TO 12.76=+0.15-0.13, OVER 12.76=+0.20-0.13; ANGLES: ±1.0°; CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN 0.25 Ø.	PREP G. MESPLAY 84/8/31	INTERCONNECT DIAGRAM- HF-8014/14A EXCITER CHASSIS SIDEBOARD AND RIBBON CABLE (622-3473-211)	METRIC	
FINISH: NONE	US CUSTOMARY[ ]: TOL ON [ ] DIM .XX=±.02, .XXX=±.008; HOLE DIAMETERS: UNDER .251=+.005-.005, .251 TO .500=+.006-.005, OVER .500=+.008-.005; ANGLES: ±1.0°; CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN .010 Ø.	CH J. WITMER 84/8/31			
	PART SHALL COMPLY TO 580-5400-001--THIRD ANGLE PROJECTION	APVD C. ERRINGTON	SIZE D / FSCM 13499 / DWG NO. 659-7089	REV LTR B	
ONLY			SCALE NONE	SHEET 8	

FRO ☐ NFP ☐ REL ☐ CR 2 NE 0 DL 0 TO 1

NOTES:



-001

MATERIAL	
	NONE
FINISH	
	NONE

IMAGE AREA W x H	LTR SIZE	PAGE INCR	PCT
PUBN NO.			
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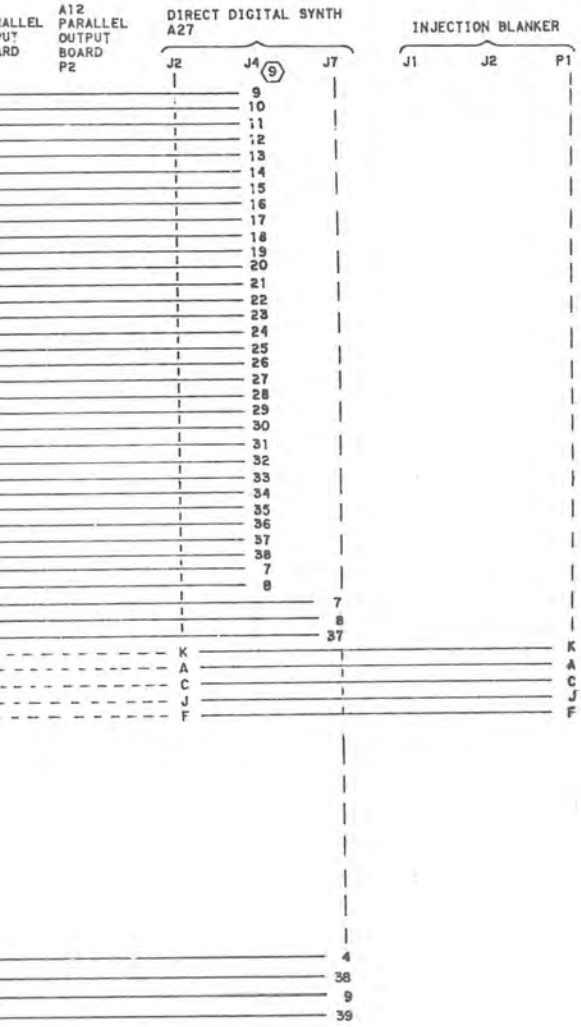
074-5228-002
NEXT ASSY:

TYPE NO:

DWG NO 659-7089 SH 9

REVISIONS			
LTR	DESCRIPTION	DATE	APVD
	SEE SHEET 1		



659-7089

MATERIAL: NONE	UNLESS OTHERWISE SPECIFIED, DUAL DIMENSIONED DWGS ARE IN MILLIMETRES (INCHES). SINGLE DIMENSIONED DWGS ARE IN INCHES.	CONTRACT NO.	ROCKWELL INTERNATIONAL CORPORATION COLLINS GROUPS	
FINISH: NONE	METRIC: TOL ON METRIC DIM: .X=±0.5, .XX=±0.2; HOLE DIAMETERS UNDER 6.38Ø=+0.13-0.13, 6.36 TO 12.7Ø=+0.15-0.13, OVER 12.7Ø=+0.20-0.13; ANGLES: ±1.0°; CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN 0.25 Ø.	PREP G. MESPLAY 84/6/31	DALLAS, TEX 75207 NEWPORT BEACH, CALIF 92663 CEDAR RAPIDS, IA 52406	
N	US CUSTOMARY[ ]: TOL ON [ ] DIM: .XX=±.02, .XXX=±.008; HOLE DIAMETERS: UNDER .25Ø=+.005-.005, .25Ø TO .500Ø=+.006-.005, OVER .500Ø=+.008-.005; ANGLES: ±1.0°; CONCENTRICITY BETWEEN DIA ON A COMMON AXIS TO BE WITHIN .010 Ø.	CHK J. WITMER 84/6/31	INTERCONNECT DIAGRAM-HF-8014/114A EXCITER CHASSIS, MAIN SIDEBOARD, AND RIBBON CABLE (622-3473-211)	METRIC SI
	PART SHALL COMPLY TO 580-5400-001--THIRD ANGLE PROJECTION	APVD C. ERRINGTON	SIZE D / FSCM 13499 / DWG NO. 659-7089 / REV LTR B	
			SCALE NONE / SHEET 9	

FRO ☐ NFP ☐ REL ☐ CR 2 NB 0 DL 0 TO 1