T.O. 31W1-2FCC-103

20 APR 1976

TECHNICAL MANUAL

CIRCUIT DIAGRAMS

MULTIPLEXER SET AN/FCC-17, AN/FCC-21, AN/FCC-22, AND ASSOCIATED EQUIPMENT

AF30(635)-33973
F34601-67-C-4452

THIS PUBLICATION REPLACES T.O. 31W1-2FCC-103 DATED 22 MAY 1964

PUBLISHED UNDER AUTHORITY OF THE SECRETARY OF THE AIR FORCE

AIR FORCE—18 SEP 72—350

15 MAY 1969

Technical orders are normally distributed promptly after printing. Date(s) shown on the title page (lower right) are for identification only. This is not a distribution date. Processing time sometimes causes distribution to only appear to have been delayed.

LIST OF EFFECTIVE PAGES

INSERT LATEST CHANGED PAGES. DESTROY SUPERSEDED PAGES.

NOTE: # The portion of the text affected by the changes is indicated by the vertical line in the outer margins of the page. Changes to illustrations are indicated by miniature pointing hands. Changes to wiring diagrams are indicated by shaded areas.

Dates of issue for original and changed pages are:
Original..0..15 May 69

TOTAL NUMBER OF PAGES IN THIS PUBLICATION IS 98 CONSISTING OF THE FOLLOWING:

Page No.	*Change No.*
Title	0
A	0
i-iii	0
iv Blank	0
v-vii	0
viii Blank	0
ix-xiii	0
xiv Blank	0
1-82	0

Upon receipt of the second and subsequent changes to this technical order, personnel responsible for maintaining this publication in current status will ascertain that all previous changes have been received and incorporated. Action should be taken promptly if the publication is incomplete.

*The asterisk indicates pages changed, added, or deleted by the current change.

TABLE OF CONTENTS

TABLE OF CONTENTS (Cont)

TABLE OF CONTENTS (Cont)

INTRODUCTION

PURPOSE. This manual provides circuit diagrams necessary to support installation and maintenance of Multiplexer Sets AN/FCC-21, -22, and -17, and associated equipment.

SCOPE. The manual includes the following diagrams: block diagrams of the transmission equipment and carrier supply equipment; schematic diagrams of major components; cabling diagrams for the three multiplexer sets.

Circuits of reparable modules are usually shown in simplified form by a combination of graphical and block symbols. For the complete schematic diagram, refer to the technical publication for the module, which is listed in Chapter 1 of the Service manual, T.O. 31W1-2FCC-102.

ARRANGEMENT. The schematic diagrams of major components are divided into equipment groups and arranged in signal flow sequence in each group. In the transmission equipment schematics, the diagram of each major component in the transmitting branch is followed by its counterpart in the receiving branch.

Jackfields and terminal board panels do not have separate schematic diagrams, but circuits through them are included in the cabling diagrams.

A separate cabling diagram is provided for each of the three multiplexer sets. Each diagram shows complete details of wiring within the rack and identifies external and inter-rack connections.

ALTERED-CIRCUIT DIAGRAMS. When applicable, changes in basic circuitry between different models or serial numbers of the equipment will be shown by altered-circuit diagrams. An altered-circuit diagram will have the same figure number and title as the basic diagram. The page number will be the same as the basic diagram followed by a decimal point and an Arabic numeral. The numerals will identify different variations of the same basic diagram; for example: 12.1, 12.2, and 12.3.

ABBREVIATIONS. Because of their frequent use in this and associated manuals, the following abbreviations are defined below:

BE	Band elimination
DEM	Demodulator
DMX	Demultiplexer
COND	Conductor
EQ	Equalizer
EQUIP.	Equipment
FIL	Filter
GR	Group
GRD	Ground
JK	Jackfield
MFG	Master frequency generator
MX	Multiplexer

NET.	Network
SGR	Supergroup
SUP.	Supply
PAR	Parallel
XMFR	Transformer

GRAPHIC SYMBOLS. Electrical and electronic symbols are in accordance with MIL-STD-15-1A. A pin jack, telephone jack, or coaxial jack used as a test point is emphasized by a 3/16-inch diameter solid circle.

DEFINITIONS OF EQUIPMENT TERMS. Components of the multiplexer set are classified by size, method of mounting, and type of electrical interface according to the terms defined below. These terms appear in many of the common names of components; on diagrams, they may be omitted from the name where space is limited.

a. Rack. This term may refer to the rack as a mounting frame, but when used with modifiers, it means the rack and its complement of equipment (channel equipment rack, for example).

b. Shelf. A shelf is a rack-mounted drawer of equipment that can be extended outward on a slide-rail mechanism without interrupting its operation. The height of the shelf is a multiple of 1-3/4 inches (standard rack mounting space); weights are in the range of 15 to 90 pounds. Intra-rack wiring enters through one or more electrical receptacles at the rear of the shelf.

c. Panel. A panel is an immobile rack-mounted chassis; panel heights are in multiples of 1-3/4 inches. Intra-rack wiring is soldered to terminals on the electrical components of the panel.

d. Jackfield. A jackfield is a rack-mounted chassis, similar to a panel, on which groups of telephone jacks or coaxial jacks are mounted. The jacks provide access to the transmitting and receiving circuits of the multiplexer set.

e. Tray. The multiplexer set has two types of trays. One type (power supply tray and master frequency generator tray) is the major subassembly of a shelf; two identical trays are mounted side-by-side and plug into the shelf. The second type (supergroup modulator tray and supergroup demodulator tray) is similar to the first in size but uses a different electrical interface. Two of these supergroup trays are mounted on an equipment support, which has slide rails like a shelf but no electrical circuitry; intra-rack wiring enters through electrical receptacles at the rear of the tray.

f. Module. A module is an enclosed (usually hermetically-sealed) electrical subassembly of a shelf, panel, or tray. Most modules have 7-pin or 9-pin headers, which plug into mating sockets on the chassis; others (usually filters and networks) have header terminals to which soldered connections are made.

LEVELS. A level in dbm means actual power. A level in db means a reading on a meter calibrated in dbm referenced to 600 ohms.

On a meter calibrated to read dbm in a 600-ohm circuit, the level in dbm for other circuit impedances can be determined by algebraically adding to the meter reading as follows:

75 ohms: add +9 db

135 ohms: add +6.5 db

150 ohms: add +6 db

In the transmission path, signal levels specified are for a single-channel test tone. Group pilot levels and 96-kc sync pilot level are -16 dbm0 (16 db below test tone level).

PART NUMBERS. For equipment having optional configurations, a suffix "-xx" is used in the part number to indicate that more than one dash number is applicable.

STRAPPING. Optional strapping, which is indicated on the schematic diagrams by the letter S in a triangular symbol, is described in Chapter 2 of the Service manual.

GENERAL NOTES. The following are general notes for the circuit diagrams in this manual.

a. Reference designations. Reference designations are abbreviated. Prefix with assembly designation to form the complete reference designation.

b. Component values. Unless otherwise specified, values are in ohms and microfarads.

c. Dc resistance. The dc resistance of a coil or transformer winding is shown if it is one ohm or more. However, resistance is not shown if the coil or winding is inside a sealed module.

d. Waveforms. Waveforms on the schematic diagrams are typical for normal operation but are not intended to be used as performance standards.

e. Alarm circuit power. Alarm circuit power leads are designated as 40V and COM. The voltage between these leads may be 40 vac or 48 vdc, depending on whether the master alarm panel obtains power from an external 120-volt ac source or from a 48-volt office battery. (The 400-cps master alarm panel produces 40-volt dc alarm circuit power.)

f. Relays. Relays are shown in normal operating position.

g. Terminal symbol. Where necessary to maintain signal flow on schematic diagrams, a terminal symbol may be repeated. At its second appearance, the symbol is broken.

CROSS REFERENCE INDEX

NOTE: For asterisked (*) items, schematic diagram lists additional part numbers or nomenclature.

CROSS REFERENCE INDEX (Cont)

CROSS-REFERENCE INDEX (Cont)

CROSS-REFERENCE INDEX (Cont)

CROSS-REFERENCE INDEX (Cont)

☆ U.S. GOVERNMENT PRINTING OFFICE: 1972—769-718/OC 7598

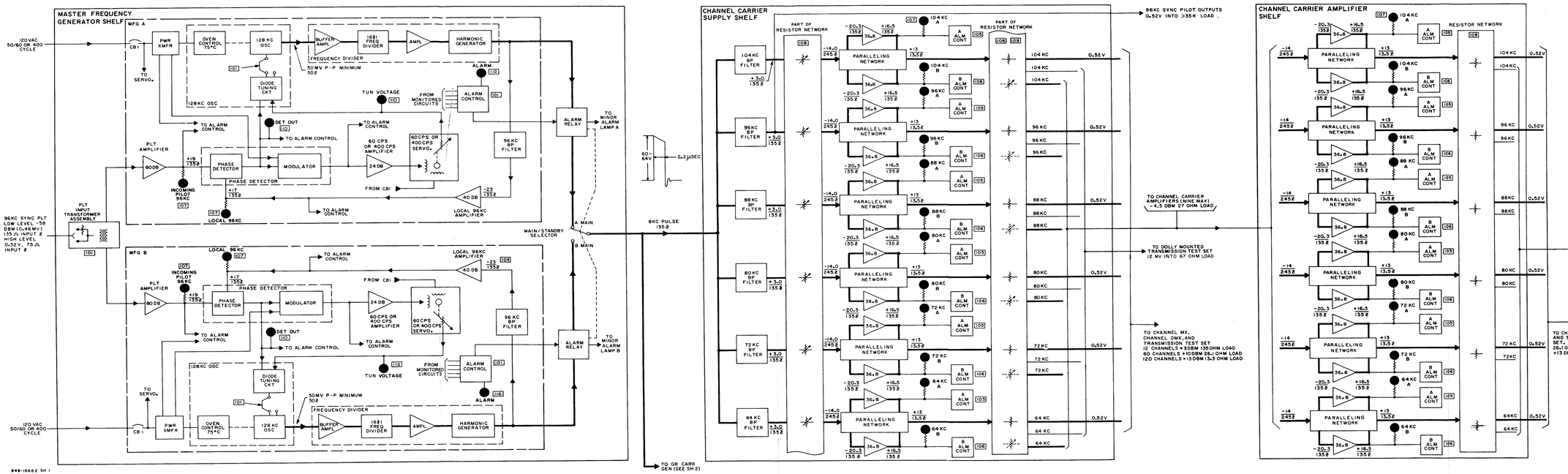
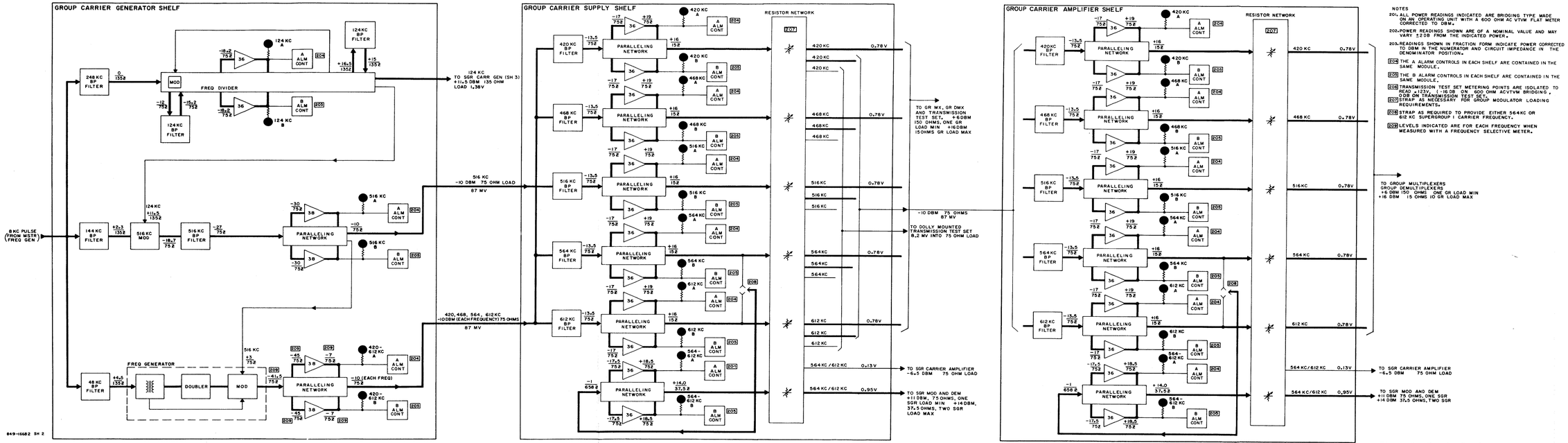


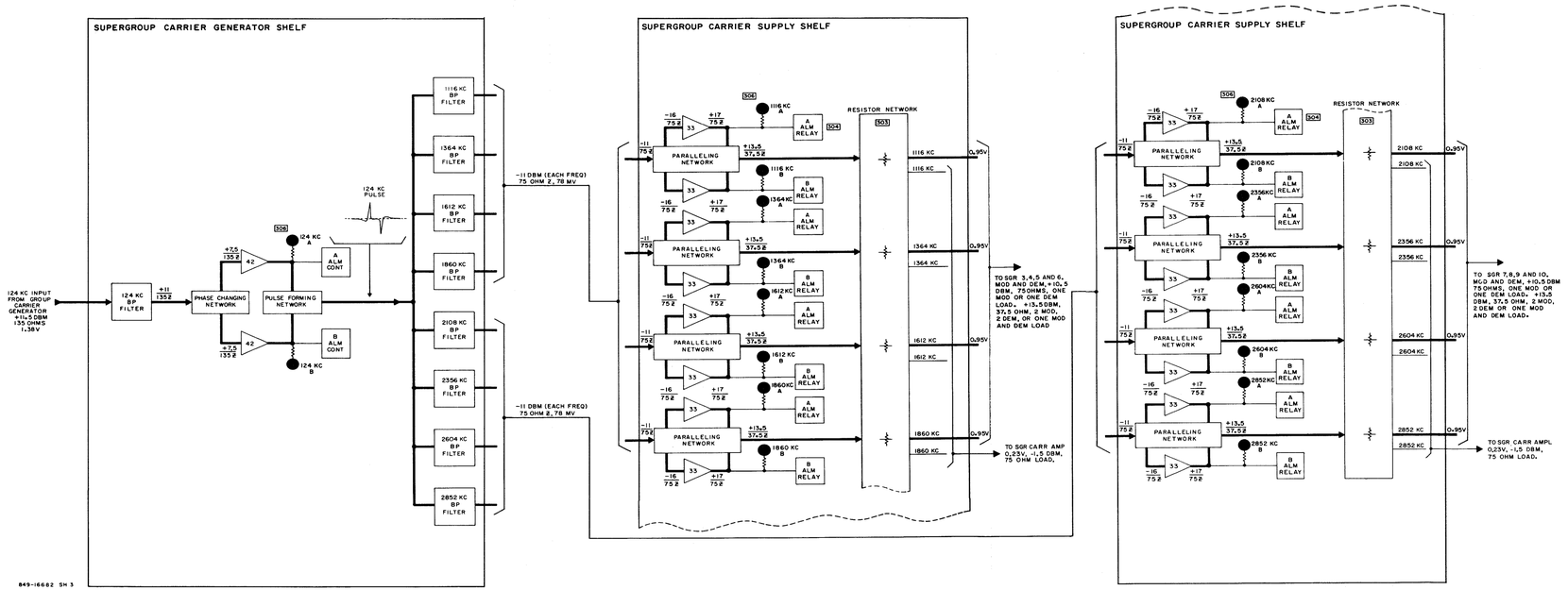
Figure 2. Carrier Supply Equipment, Block Diagram (Sheet 1 of 3)

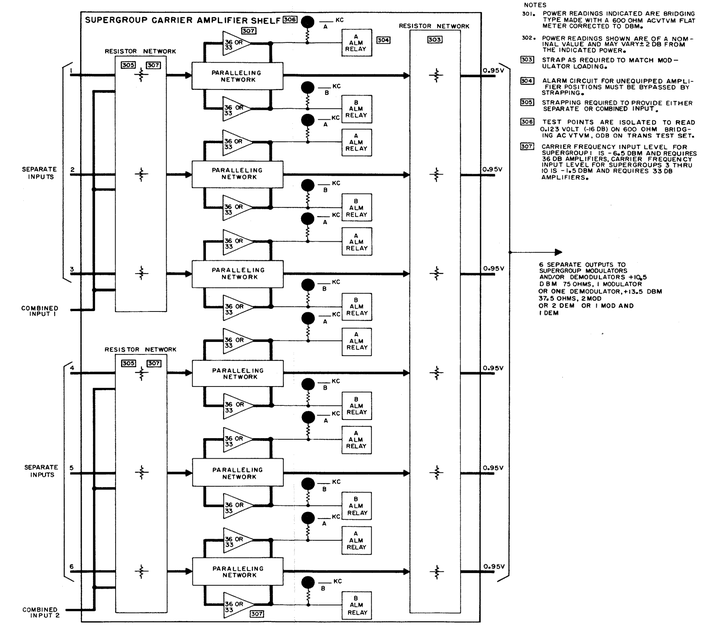


NOTES

201. ALL POWER READINGS INDICATED ARE BRIDGING TYPE MADE ON AN OPERATING UNIT WITH A 600 OHM AC VTVM FLAT METER CORRECTED TO DBM.
202. POWER READINGS SHOWN ARE OF A NOMINAL VALUE AND MAY VARY ±2 DB FROM THE INDICATED POWER.
203. READINGS SHOWN IN FRACTION FORM INDICATE POWER CORRECTED TO DBM IN THE NUMERATOR AND CIRCUIT IMPEDANCE IN THE DENOMINATOR POSITION.
204. THE A ALARM CONTROLS IN EACH SHELF ARE CONTAINED IN THE SAME MODULE.
205. THE B ALARM CONTROLS IN EACH SHELF ARE CONTAINED IN THE SAME MODULE.
206. TRANSMISSION TEST SET METERING POINTS ARE ISOLATED TO READ +123V, (-16 DB ON 600 OHM ACVTVM BRIDGING, 0DB ON TRANSMISSION TEST SET.
207. STRAP AS NECESSARY FOR GROUP MODULATOR LOADING REQUIREMENTS.
208. STRAP AS REQUIRED TO PROVIDE EITHER 564 KC OR 612 KC SUPERGROUP I CARRIER FREQUENCY.
209. LEVELS INDICATED ARE FOR EACH FREQUENCY WHEN MEASURED WITH A FREQUENCY SELECTIVE METER.

Figure 2. Carrier Supply Equipment, Block Diagram (Sheet 2 of 3)





NOTES

301. POWER READINGS INDICATED ARE BRIDGING TYPE MADE WITH A 600 OHM ACVTVM FLAT METER CORRECTED TO DBM.

302. POWER READINGS SHOWN ARE OF A NOMINAL VALUE AND MAY VARY± 2 DB FROM THE INDICATED POWER.

303 STRAP AS REQUIRED TO MATCH MODULATOR LOADING.

304 ALARM CIRCUIT FOR UNEQUIPPED AMPLIFIER POSITIONS MUST BE BYPASSED BY STRAPPING.

305 STRAPPING REQUIRED TO PROVIDE EITHER SEPARATE OR COMBINED INPUT.

306 TEST POINTS ARE ISOLATED TO READ 0.123 VOLT (-16 DB) ON 600 OHM BRIDGING AC VTVM, 0.08 ON TRANS TEST SET.

307 CARRIER FREQUENCY INPUT LEVEL FOR SUPERGROUP 1, 2 = -6.5 DBM AND REQUIRES 30 DB AMPLIFIERS. CARRIER FREQUENCY INPUT LEVEL FOR SUPERGROUPS 3 THRU 10 IS -1.5 DBM AND REQUIRES 33 DB AMPLIFIERS.

Figure 2. Carrier Supply Equipment, Block Diagram (Sheet 3 of 3)

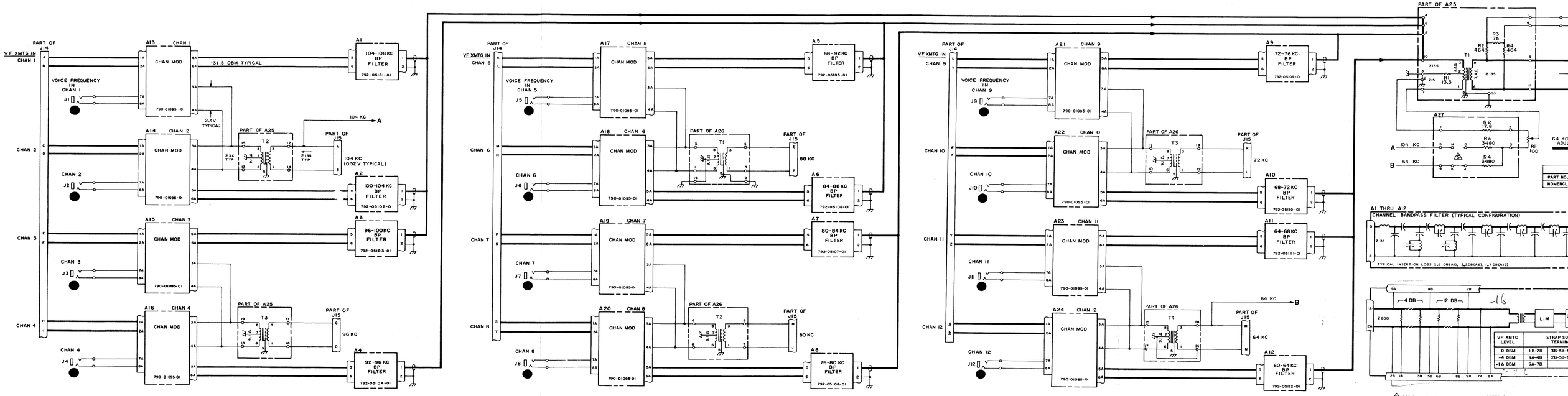
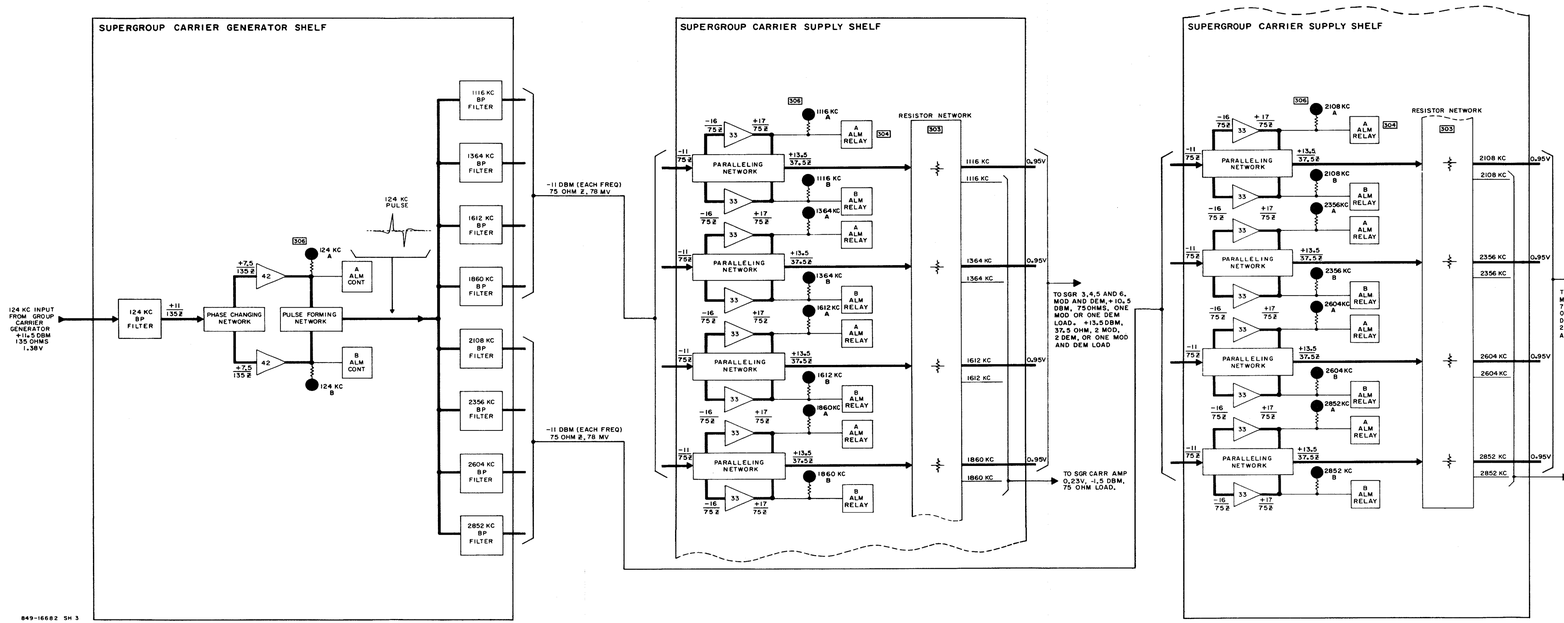

PART OF J14
V.F XMTG IN CHAN 1
VOICE FREQUENCY IN CHAN 1
J1
A13 CHAN 1
CHAN MOD
790-01095-01
-31.5 DBM TYPICAL
2.4V TYPICAL
A1
104-108 KC BP FILTER
792-05101-01
104 KC
A
PART OF A25
T2
PART OF J15
104 KC (0.52 V TYPICAL)
CHAN 2
J2
A14 CHAN 2
790-01095-01
A2
100-104 KC BP FILTER
792-05102-01
CHAN 3
J3
A15 CHAN 3
790-01095-01
A3
96-100 KC BP FILTER
792-05103-01
CHAN 4
J4
A16 CHAN 4
790-01095-01
T3
96 KC
A4
92-96 KC BP FILTER
792-05104-01
19-16683
PART OF J14
VF XMTG IN CHAN 5
VOICE FREQUENCY IN CHAN 5
J5
A17 CHAN 5
790-01095-01
A5
88-92 KC BP FILTER
792-05105-01
CHAN 6
J6
A18 CHAN 6
790-01095-01
PART OF A26
T1
88 KC
A6
84-88 KC BP FILTER
792-05106-01
CHAN 7
J7
A19 CHAN 7
790-01095-01
A7
80-84 KC BP FILTER
792-05107-01
CHAN 8
J8
A20 CHAN 8
790-01095-01
T2
80 KC
A8
76-80 KC BP FILTER
792-05108-01
PART OF J14
VF XMTG IN CHAN 9
VOICE FREQUENCY IN CHAN 9
J9
A21 CHAN 9
790-01095-01
A9
72-76 KC. BP FILTER
792-05109-01
CHAN 10
J10
A22 CHAN 10
790-01095-01
T3
72 KC
A10
68-72 KC BP FILTER
792-05110-01
CHAN 11
J11
A23 CHAN 11
790-01095-01
A11
64-68 KC BP FILTER
792-05111-01
CHAN 12
J12
A24 CHAN 12
790-01096-01
T4
64 KC
B
A12
60-64 KC BP FILTER
792-05112-01
PART OF A25
T1
R1 13.3
R2 464
R3 75
R4 464
A27
R1 100
R2 17.8
R3 3480
R4 3480
64 KC ADJ
A1 THRU A12
CHANNEL BANDPASS FILTER (TYPICAL CONFIGURATION)
TYPICAL INSERTION LOSS 2.5 DB(A1), 2.208(A6), 1.7 DB(A12)
4 DB
12 DB
LIM
2600
2135
VF XMTG LEVEL
STRAP SO TERMIN
0 DBM 1B-2B 3B-5B-6
-4 DBM 9A-4B 2B-5B-6
+16 DBM 9A-7B
OPTIONAL STRAPPING. REFER TO CHAPTER 2 OF SERVICE MANUAL.

Figure 3


SUPERGROUP CARRIER GENERATOR SHELF
124 KC INPUT FROM GROUP CARRIER GENERATOR +11.5 DBM 135 OHMS 1.38V
124 KC BP FILTER
+11 135Ω
PHASE CHANGING NETWORK
PULSE FORMING NETWORK
124 KC PULSE
+7.5 135Ω
42
106
124 KC A
A ALM CONT
B ALM CONT
124 KC B
1116 KC BP FILTER
1364 KC BP FILTER
1612 KC BP FILTER
1860 KC BP FILTER
2108 KC BP FILTER
2356 KC BP FILTER
2604 KC BP FILTER
2852 KC BP FILTER
-11 DBM (EACH FREQ) 75 OHM Z, 78 MV
-11 DBM (EACH FREQ) 75 OHM Z, 78 MV
849-16682 SH 3
SUPERGROUP CARRIER SUPPLY SHELF
RESISTOR NETWORK
504
503
1116 KC A
A ALM RELAY
-11 75Ω
-16 75Ω
+17 75Ω
33
PARALLELING NETWORK
+13.5 37.5Ω
1116 KC B
B ALM RELAY
1364 KC A
1364 KC B
1612 KC A
1612 KC B
1860 KC A
1860 KC B
1116 KC
1364 KC
1612 KC
1860 KC
0.95V
TO SGR 3,4,5 AND 6, MOD AND DEM, +10.5 DBM, 75 OHMS, ONE MOD OR ONE DEM LOAD. +13.5 DBM, 37.5 OHM, 2 MOD, 2 DEM, OR ONE MOD AND DEM LOAD
TO SGR CARR AMP 0.23V, -1.5 DBM, 75 OHM LOAD.
SUPERGROUP CARRIER SUPPLY SHELF
RESISTOR NETWORK
2108 KC A
2356 KC A
2604 KC A
2852 KC A
2108 KC B
2356 KC B
2604 KC B
2852 KC B
2108 KC
2356 KC
2604 KC
2852 KC
0.95V

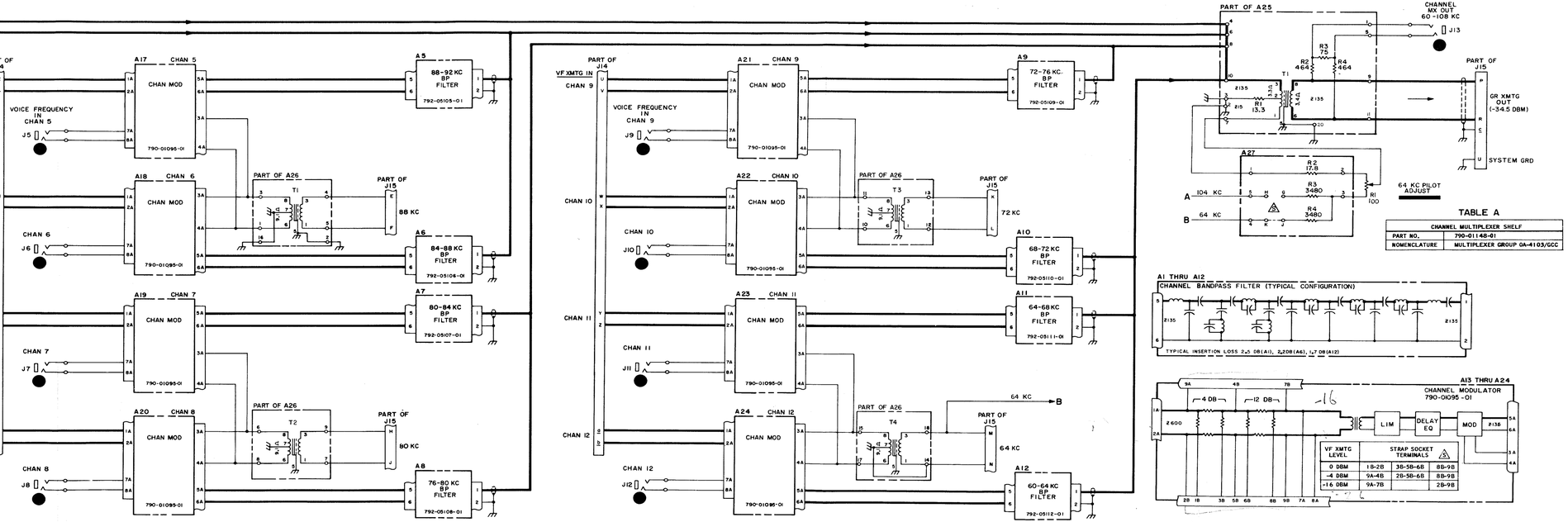


TABLE A

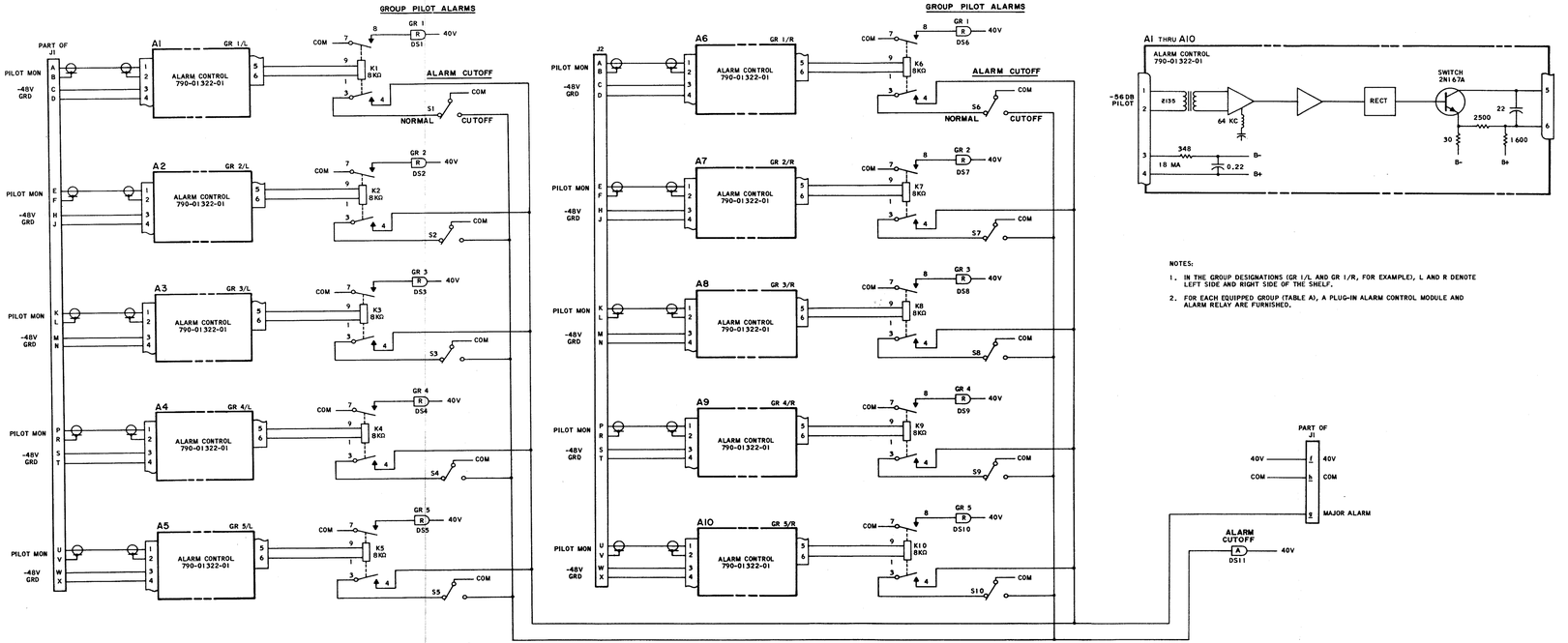
CHANNEL MULTIPLEXER SHELF	
PART NO.	790-01148-01
NOMENCLATURE	MULTIPLEXER GROUP OA-4103/GCC

Figure 3. Channel Multiplexer Shelf, Schematic Diagram

TABLE A

GROUP PILOT ALARM SHELF		GROUPS EQUIPPED (X)									
PART NO. 790-01351-	NOMENCLATURE; CONTROL-MONITOR GROUP	1/L	2/L	3/L	4/L	5/L	1/R	2/R	3/R	4/R	5/R
-01	OA-4106/MCC-12	X	X	X	X	X					
-02	OK-16/FCC	X	X	X	X	X	X	X	X	X	X
-03		X	X	X	X	X	X				
-04	OA-4599/MRC-98			X	X						
-05					X	X					
-06	OA-6448/FCC-30	X	X	X							
-07			X	X	X	X					
-08	OA-7036/FCC-28	X									
-09	OA-7502/FCC					X					
-10				X	X	X					
-11		X	X								
-12	OA-6451/FCC-27	X	X	X	X						
-13		X	X	X	X	X	X	X	X	X	
-14			X								
-15		X		X	X	X	X	X	X	X	X
-16				X	X	X	X	X	X	X	X
-17		X	X	X	X	X	X	X	X		
-18		X	X	X	X		X	X			
-19					X						
-20											
-21		X	X	X	X	X	X	X			
-22		X	X					X	X	X	X
-23		X	X	X	X	X		X	X	X	X
-24							X				
-25		X	X					X	X		
-26							X	X	X	X	X
-27							X	X			
-28		X	X	X	X	X			X	X	X
-29		X	X	X			X	X	X	X	
-30		X					X	X	X	X	X
-31		X	X	X	X		X	X	X	X	X
-32										X	X
-33							X	X	X		
-34		X	X	X	X		X				
-35		X	X	X			X	X			
-36		X	X	X	X	X	X	X		X	X
-37		X		X	X		X	X	X	X	X
-38		X	X				X	X	X	X	
-39		X	X	X			X	X	X		
-40											X
-41			X	X			X	X			
-42							X	X			X
-43						X	X	X	X	X	
-44		X					X	X	X	X	
-45							X	X	X		
-46		X	X	X			X				

849-16685



NOTES:

1. IN THE GROUP DESIGNATIONS (GR 1/L AND GR 1/R, FOR EXAMPLE), L AND R DENOTE LEFT SIDE AND RIGHT SIDE OF THE SHELF.
2. FOR EACH EQUIPPED GROUP (TABLE A), A PLUG-IN ALARM CONTROL MODULE AND ALARM RELAY ARE FURNISHED.

Figure 5. Group Pilot Alarm Shelf, Schematic Diagram

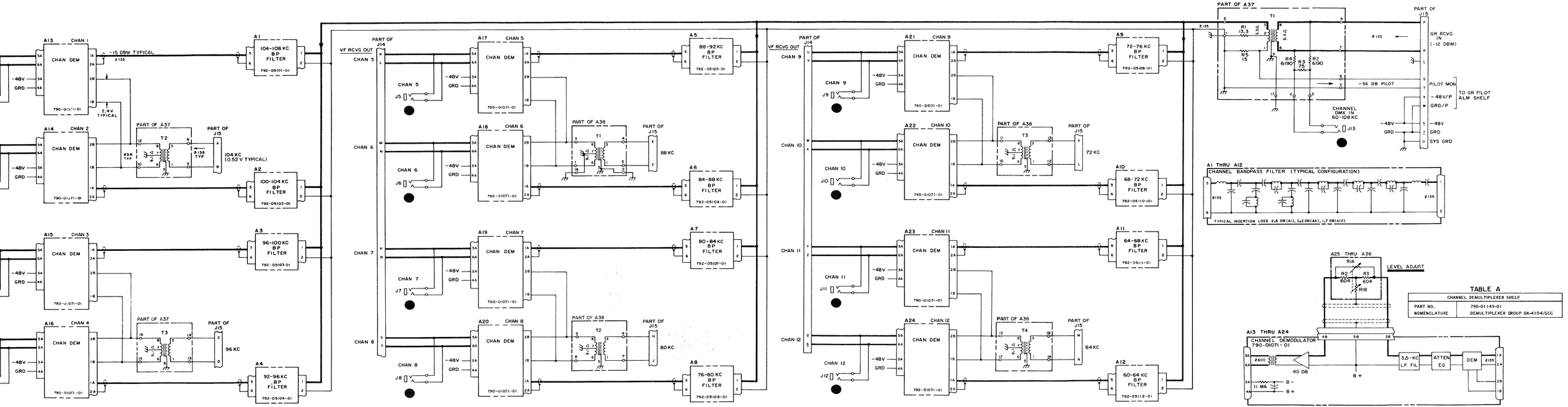


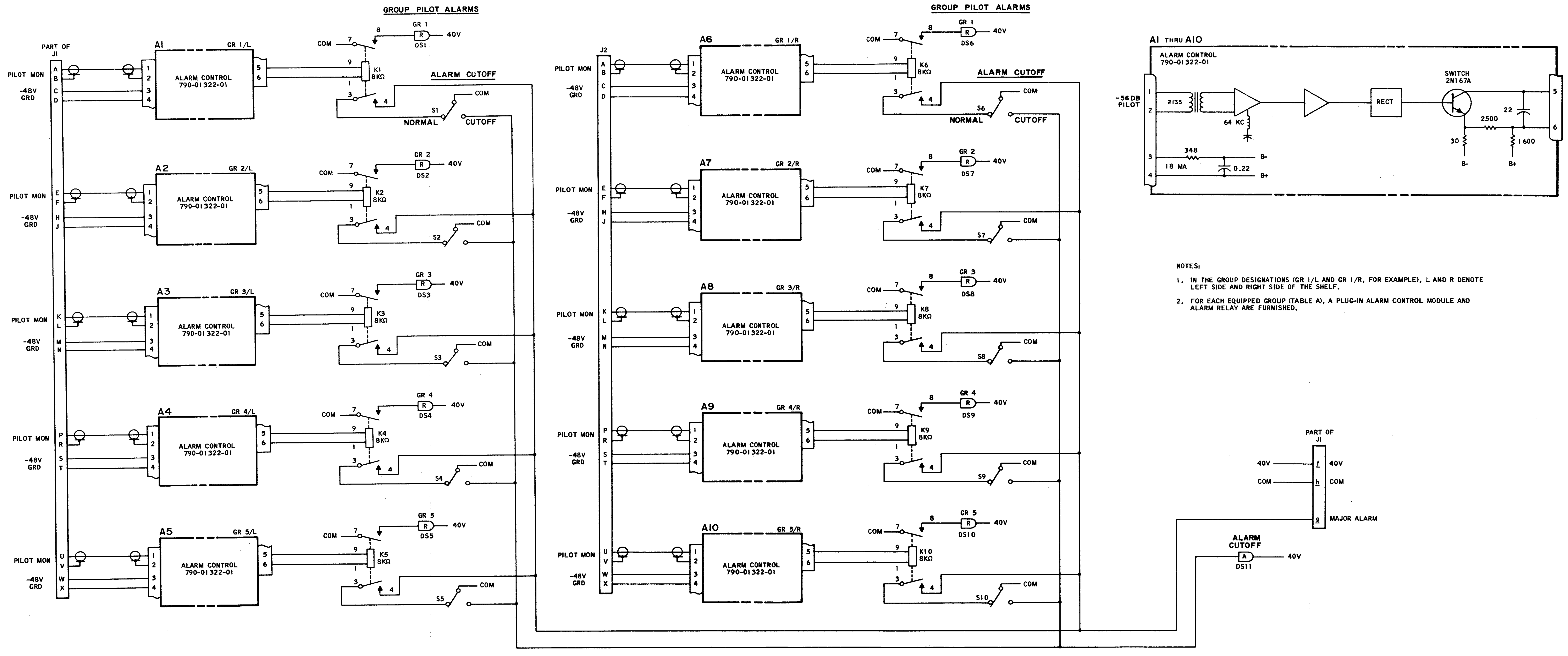
TABLE A

CHANNEL DEMULTIPLEXER SHELF	
PART NO.	790-01149-01
NOMENCLATURE	DEMULTIPLEXER GROUP OA-4104/GCC

Figure 4. Channel Demultiplexer Shelf, Schematic Diagram

TABLE A

GROUPS EQUIPPED (X)									
1/L	2/L	3/L	4/L	5/L	1/R	2/R	3/R	4/R	5/R
X	X	X	X	X					
X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X				
		X	X						
			X	X					
X	X	X							
	X	X	X	X					
X									
				X					
		X	X	X					
X	X								
X	X	X	X						
X	X	X	X	X	X	X	X	X	
	X								
X		X	X	X	X	X	X	X	X
		X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X		
X	X	X	X		X	X			
			X						
X	X	X	X	X	X	X			
X	X				X	X	X	X	X
X	X	X	X	X		X	X	X	X
					X				
X	X				X	X	X		
					X	X	X	X	X
					X	X			
X	X	X	X	X			X	X	X
X	X	X			X	X	X	X	
X					X	X	X	X	X
X	X	X	X		X	X	X	X	X
								X	X
					X	X	X	X	
X	X	X	X		X				
X	X	X			X	X			
X	X	X	X	X	X	X		X	X
X		X	X		X	X	X	X	X
X	X				X	X	X	X	
X	X	X			X	X	X		
									X
	X	X			X	X			
					X	X			X
			X	X	X	X	X	X	
X					X	X	X	X	
					X	X	X		
X	X	X			X				



NOTES:

1. IN THE GROUP DESIGNATIONS (GR 1/L AND GR 1/R, FOR EXAMPLE), L AND R DENOTE LEFT SIDE AND RIGHT SIDE OF THE SHELF.
2. FOR EACH EQUIPPED GROUP (TABLE A), A PLUG-IN ALARM CONTROL MODULE AND ALARM RELAY ARE FURNISHED.

Figure 5. Group Pilot Alarm Shelf, Schematic Diagram

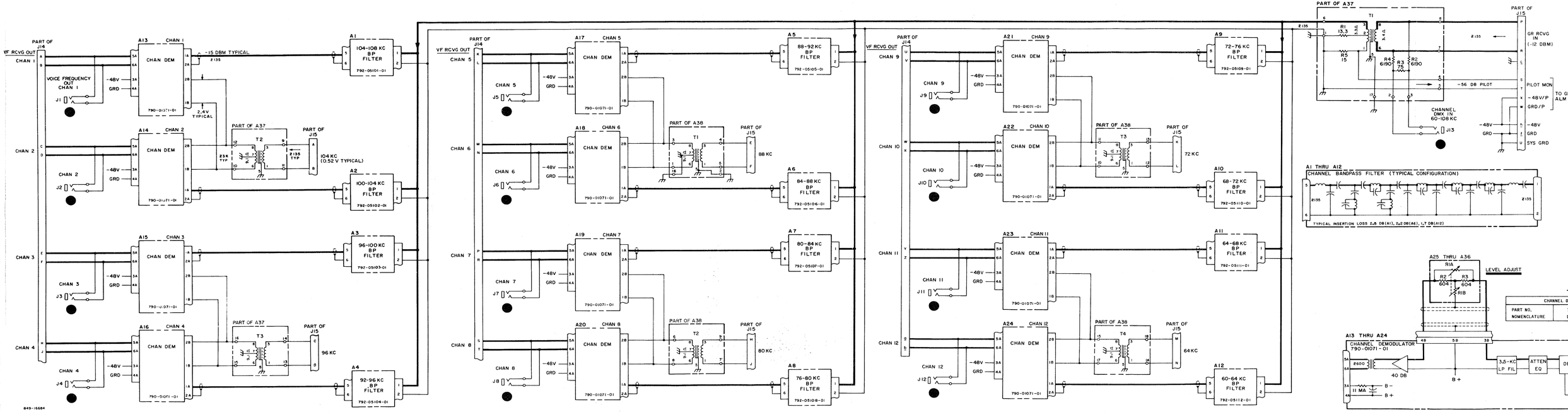
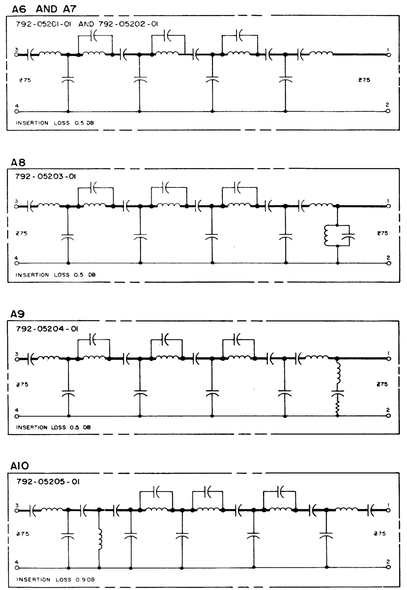


Figure 4. Chann
Schem



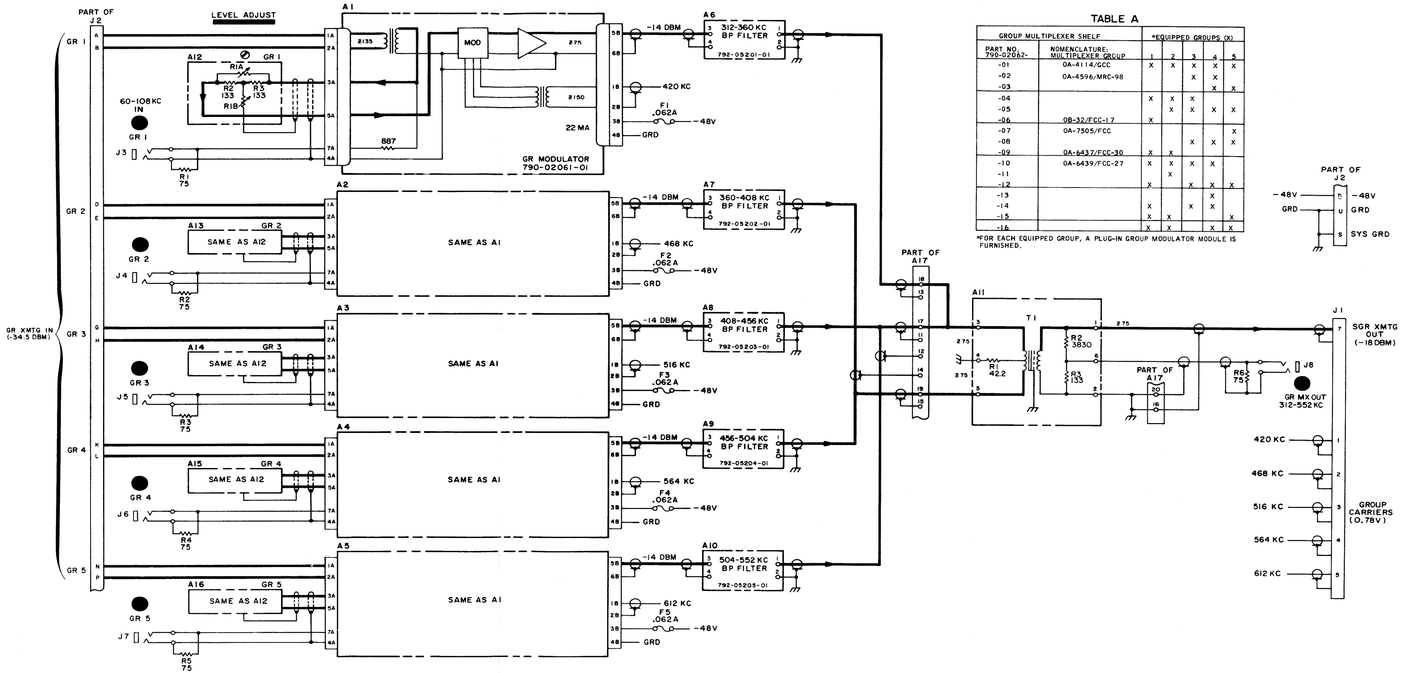


TABLE A

GROUP MULTIPLEXER SHELF		*EQUIPPED GROUPS (X)				
PART NO. 790-02062-	NOMENCLATURE: MULTIPLEXER GROUP	1	2	3	4	5
-01	0A-4114/GCC	X	X	X	X	X
-02	0A-4596/MRC-98			X	X	X
-03					X	X
-04		X	X	X		
-05			X	X	X	X
-06	0B-32/FCC-17	X				
-07	0A-7505/FCC					X
-08				X	X	X
-09	0A-6437/FCC-30	X	X			
-10	0A-6439/FCC-27	X	X	X	X	
-11			X			
-12		X		X	X	X
-13					X	
-14		X		X	X	
-15		X	X			X
-16		X	X		X	X

*FOR EACH EQUIPPED GROUP, A PLUG-IN GROUP MODULATOR MODULE IS FURNISHED.

Figure 6. Group Multiplexer Shelf, Schematic Diagram

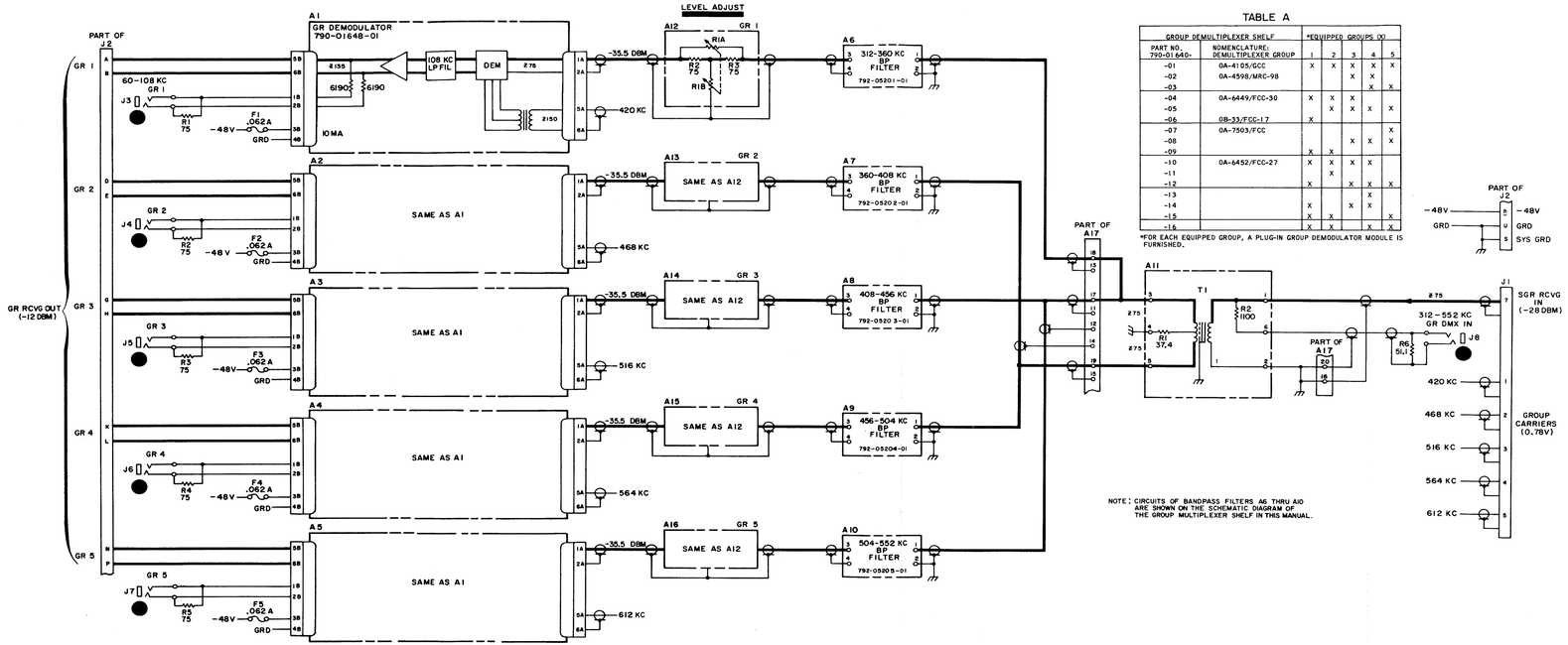


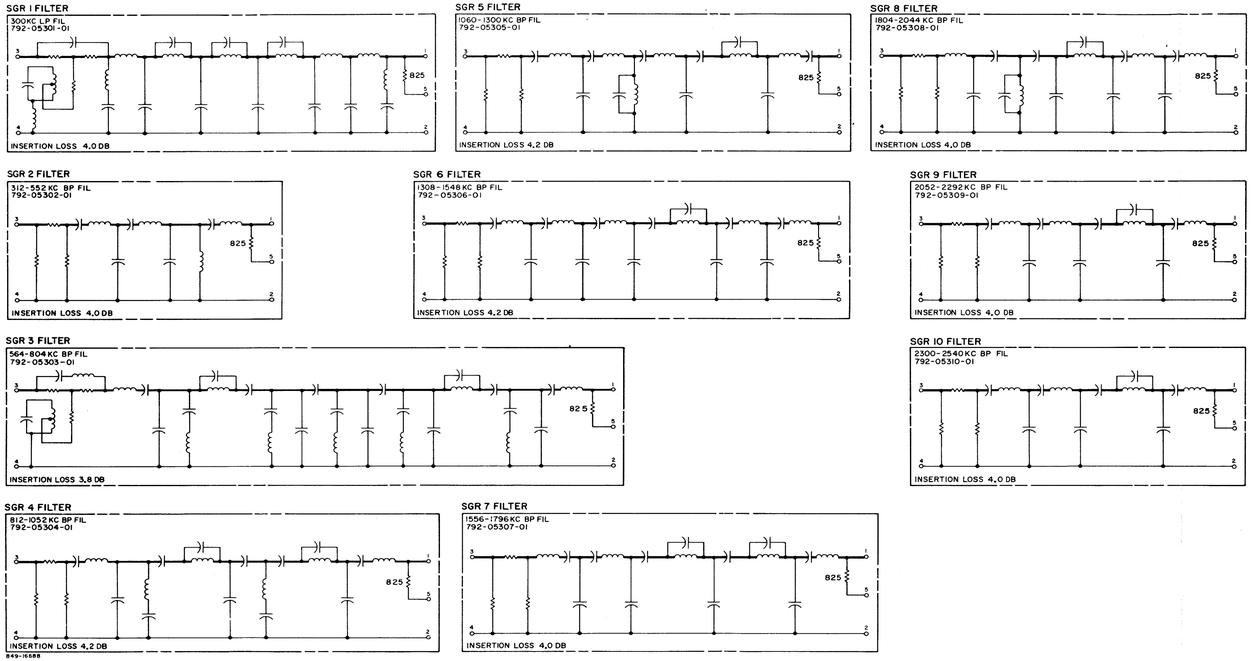
TABLE A

GROUP DEMULTIPLEXER SHELF		*EQUIPPED GROUPS (X)				
PART NO. 790-01640-	NOMENCLATURE: DEMULTIPLEXER GROUP	1	2	3	4	5
-01	OA-4105/GCC	X	X	X	X	X
-02	OA-4598/MRC-98			X	X	
-03					X	X
-04	OA-6449/FCC-30	X	X	X		
-05			X	X	X	X
-06	OB-33/FCC-17	X				
-07	OA-7503/FCC					X
-08				X	X	X
-09		X	X			
-10	OA-6452/FCC-27	X	X	X	X	
-11			X			
-12		X		X	X	X
-13					X	
-14		X		X	X	
-15		X	X			X
-16		X	X		X	X

*FOR EACH EQUIPPED GROUP, A PLUG-IN GROUP DEMODULATOR MODULE IS FURNISHED.

NOTE: CIRCUITS OF BANDPASS FILTERS A6 THRU A10 ARE SHOWN ON THE SCHEMATIC DIAGRAM OF THE GROUP MULTIPLEXER SHELF IN THIS MANUAL.

Figure 7. Group Demultiplexer Shelf, Schematic Diagram



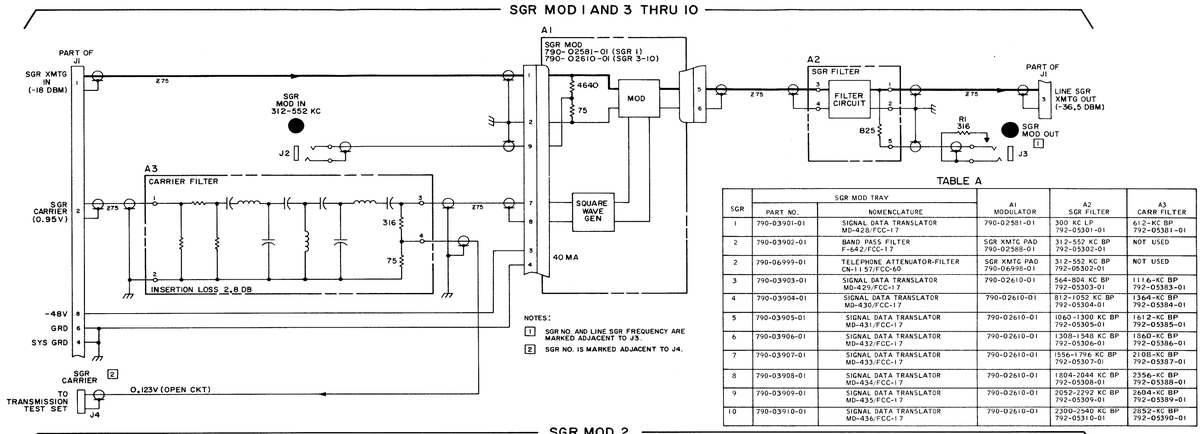


TABLE A

SGR	SGR MOD TRAY		A1	A2	A3
	PART NO.	NOMENCLATURE	MODULATOR	SGR FILTER	CARR FILTER
1	790-03901-01	SIGNAL DATA TRANSLATOR MD-428/FCC-17	790-02581-01	300 KC LP 792-05301-01	612-KC BP 792-05381-01
2	790-03902-01	BAND PASS FILTER F-642/FCC-17	SGR XMTG PAD 790-02588-01	312-552 KC BP 792-05302-01	NOT USED
2	790-06999-01	TELEPHONE ATTENUATOR-FILTER CN-1157/FCC-60	SGR XMTG PAD 790-06998-01	312-552 KC BP 792-05302-01	NOT USED
3	790-03903-01	SIGNAL DATA TRANSLATOR MD-429/FCC-17	790-02610-01	564-804 KC BP 792-05303-01	1116-KC BP 792-05383-01
4	790-03904-01	SIGNAL DATA TRANSLATOR MD-430/FCC-17	790-02610-01	812-1052 KC BP 792-05304-01	1364-KC BP 792-05384-01
5	790-03905-01	SIGNAL DATA TRANSLATOR MD-431/FCC-17	790-02610-01	1060-1300 KC BP 792-05305-01	1612-KC BP 792-05385-01
6	790-03906-01	SIGNAL DATA TRANSLATOR MD-432/FCC-17	790-02610-01	1308-1548 KC BP 792-05306-01	1860-KC BP 792-05386-01
7	790-03907-01	SIGNAL DATA TRANSLATOR MD-433/FCC-17	790-02610-01	1556-1796 KC BP 792-05307-01	2108-KC BP 792-05387-01
8	790-03908-01	SIGNAL DATA TRANSLATOR MD-434/FCC-17	790-02610-01	1804-2044 KC BP 792-05308-01	2356-KC BP 792-05388-01
9	790-03909-01	SIGNAL DATA TRANSLATOR MD-435/FCC-17	790-02610-01	2052-2292 KC BP 792-05309-01	2604-KC BP 792-05389-01
10	790-03910-01	SIGNAL DATA TRANSLATOR MD-436/FCC-17	790-02610-01	2300-2540 KC BP 792-05310-01	2852-KC BP 792-05390-01

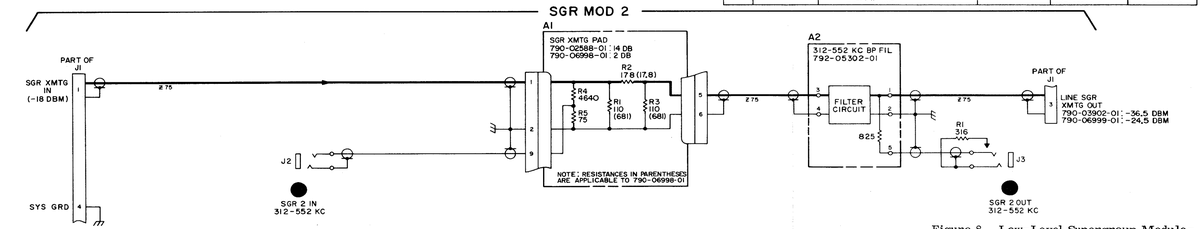


Figure 8. Low-Level Supergroup Modulator Tray (Supergroups 1 through 10), Schematic Diagram

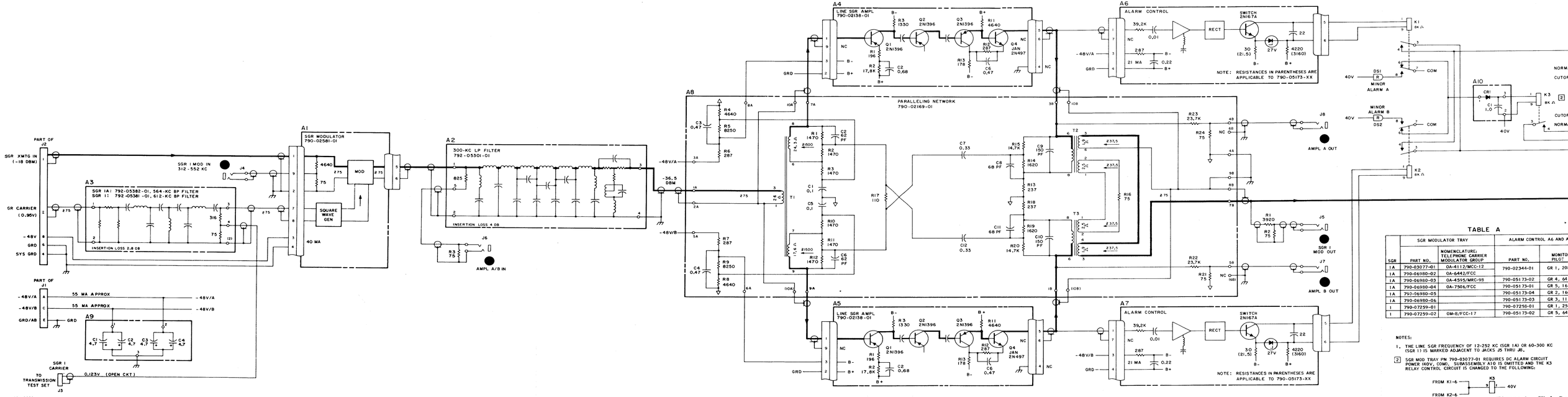


TABLE A

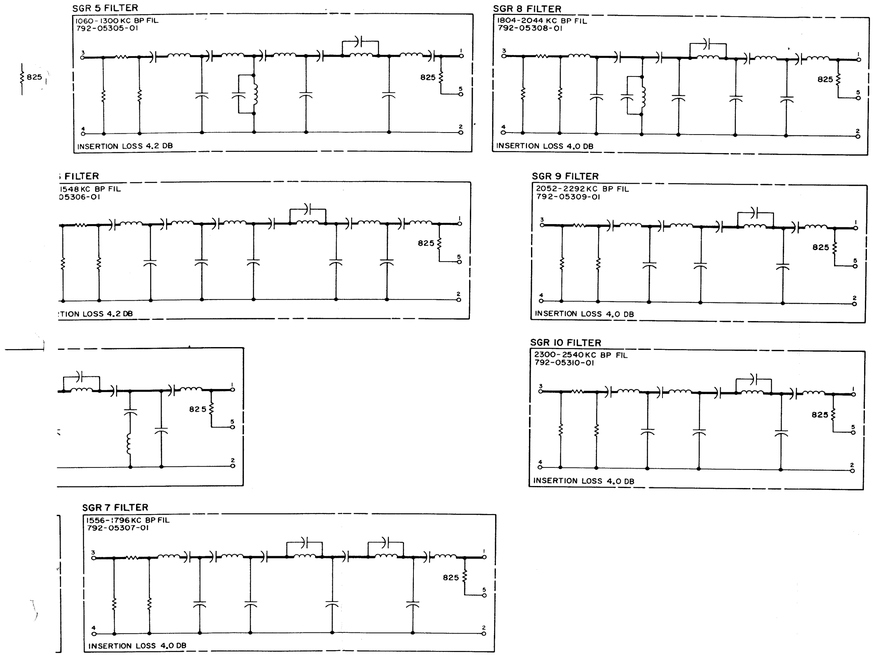
SGR	SGR MODULATOR TRAY PART NO.	SGR MODULATOR TRAY NOMENCLATURE; TELEPHONE CARRIER MODULATOR GROUP	ALARM CONTROL A6 AND A7 PART NO.	ALARM CONTROL A6 AND A7 MONITOR PILOT
1A	790-03077-01	OA-4112/MCC-12	790-02344-01	GR 1, 20
1A	790-06980-02	OA-6442/FCC		
1A	790-06980-03	OA-4595/MRC-98	790-05173-02	GR 4, 64
1A	790-06980-04	OA-7506/FCC	790-05173-01	GR 5, 16
1A	790-06980-05		790-05173-04	GR 2, 16
1A	790-06980-06		790-05173-03	GR 3, 11
1	790-07259-01		790-07258-01	GR 1, 25
1	790-07259-02	OM-8/FCC-17	790-05173-02	GR 5, 64

NOTES:

1. THE LINE SGR FREQUENCY OF 12-252 KC (SGR 1A) OR 60-300 KC (SGR 1) IS MARKED ADJACENT TO JACKS J5 THRU J8.

[2] SGR MOD TRAY PN 790-03077-01 REQUIRES DC ALARM CIRCUIT POWER (40V, COM), SUBASSEMBLY A10 IS OMITTED AND THE K3 RELAY CONTROL CIRCUIT IS CHANGED TO THE FOLLOWING:

Figure 9. High-Le
Tray (Su
Schemat



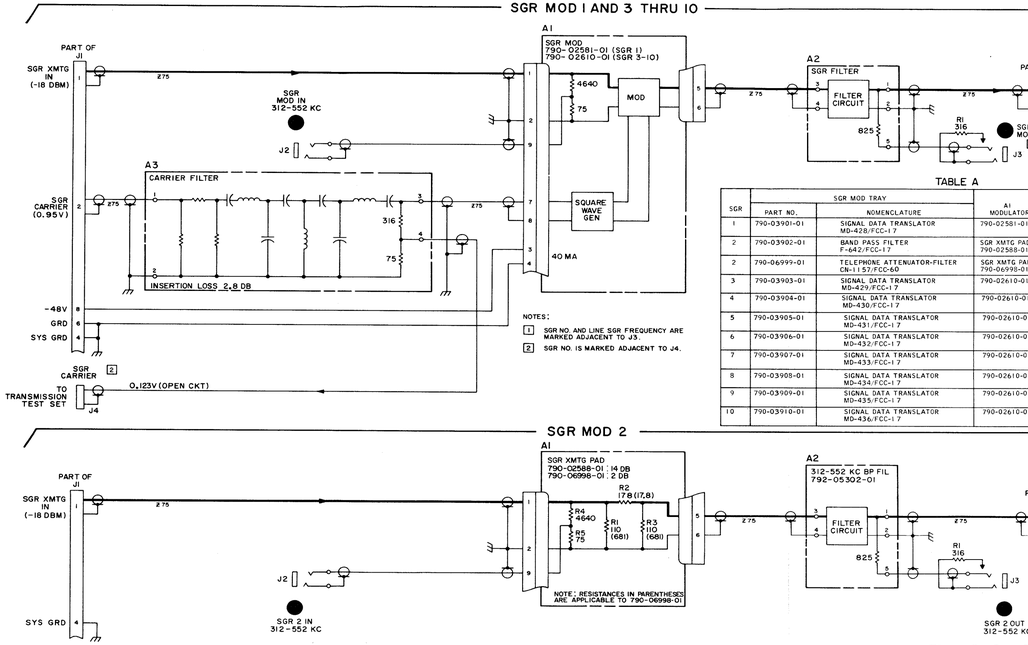


TABLE A

SGR	SGR MOD TRAY		A1
	PART NO.	NOMENCLATURE	MODULATOR
1	790-03901-01	SIGNAL DATA TRANSLATOR MD-428/FCC-17	790-02581-01
2	790-03902-01	BAND PASS FILTER F-642/FCC-17	SGR XMTG PAD 790-02588-01
2	790-06999-01	TELEPHONE ATTENUATOR-FILTER CN-1157/FCC-60	SGR XMTG PAD 790-06998-01
3	790-03903-01	SIGNAL DATA TRANSLATOR MD-429/FCC-17	790-02610-01
4	790-03904-01	SIGNAL DATA TRANSLATOR MD-430/FCC-17	790-02610-01
5	790-03905-01	SIGNAL DATA TRANSLATOR MD-431/FCC-17	790-02610-01
6	790-03906-01	SIGNAL DATA TRANSLATOR MD-432/FCC-17	790-02610-01
7	790-03907-01	SIGNAL DATA TRANSLATOR MD-433/FCC-17	790-02610-01
8	790-03908-01	SIGNAL DATA TRANSLATOR MD-434/FCC-17	790-02610-01
9	790-03909-01	SIGNAL DATA TRANSLATOR MD-435/FCC-17	790-02610-01
10	790-03910-01	SIGNAL DATA TRANSLATOR MD-436/FCC-17	790-02610-01

Figure 8. Low-l
tor Tr
throug

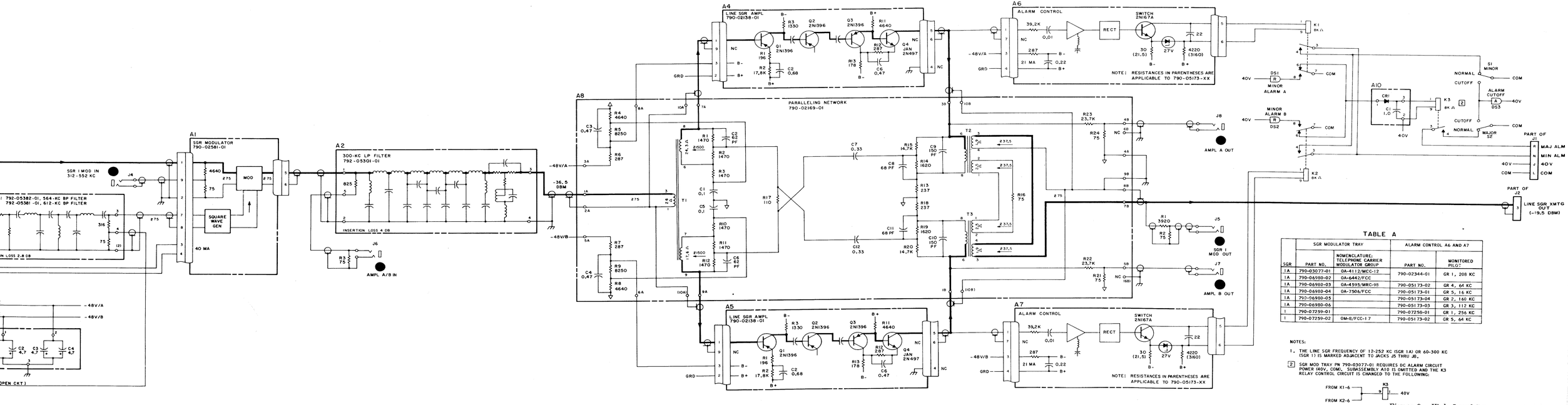


TABLE A

SGR	SGR MODULATOR TRAY PART NO.	SGR MODULATOR TRAY NOMENCLATURE: TELEPHONE CARRIER MODULATOR GROUP	ALARM CONTROL A6 AND A7 PART NO.	ALARM CONTROL A6 AND A7 MONITORED PILOT
1A	790-03077-01	OA-4112/MCC-12	790-02344-01	GR 1, 208 KC
1A	790-06980-02	OA-6442/FCC		
1A	790-06980-03	OA-4595/MRC-98	790-05173-02	GR 4, 64 KC
1A	790-06980-04	OA-7506/FCC	790-05173-01	GR 5, 16 KC
1A	790-06980-05		790-05173-04	GR 2, 160 KC
1A	790-06980-06		790-05173-03	GR 3, 112 KC
1	790-07259-01		790-07258-01	GR 1, 256 KC
1	790-07259-02	OM-8/FCC-17	790-05173-02	GR 5, 64 KC

NOTES:

1. THE LINE SGR FREQUENCY OF 12-252 KC (SGR 1A) OR 60-300 KC (SGR 17) IS MARKED ADJACENT TO JACKS J5 THRU J8.

[2] SGR MOD TRAY PN 790-03077-01 REQUIRES DC ALARM CIRCUIT POWER (40V, COM). SUBASSEMBLY A10 IS OMITTED AND THE K3 RELAY CONTROL CIRCUIT IS CHANGED TO THE FOLLOWING:

Figure 9. High-Level Supergroup Modulator Tray (Supergroups 1 and 1A), Schematic Diagram

C2-L2 ARE NOT USED ON
273-XX, 790-07226-01,

ARE NOT USED ON SGR 2
POWER CIRCUITS (-48V
G PAD) ARE OMITTED.

SGR 3, 4, 6, 7, AND 8,
OUND CONNECTION ON
2 AS SHOWN. (THE
TION BETWEEN TERMINALS

ED ADJACENT TO JACKS J2

E SGR FREQUENCY ARE

A9 MONITOR ONE OF THE
52 KC SGR FREQUENCY
HE SGR DEM TRAY IN
NUMBER, REFER TO
E C (790-03931-XX THRU
RT NUMBERS OF SGR DEM
E APPLICABLE TO A

AVE BEEN ASSIGNED
BLE D.

92-05301-01 THRU
E SCHEMATIC DIAGRAM
OR TRAY IN THIS

D [7]
NCLATURE
ER DEMODULATOR GROUP
ER DEMODULATOR GROUP
ER DEMODULATOR GROUP
NSLATOR
ER DEMODULATOR GROUP
NSLATOR
NSLATOR
NSLATOR
NSLATOR
NSLATOR
NSLATOR
NSLATOR
ER DEMODULATOR GROUP
ATOR GROUP

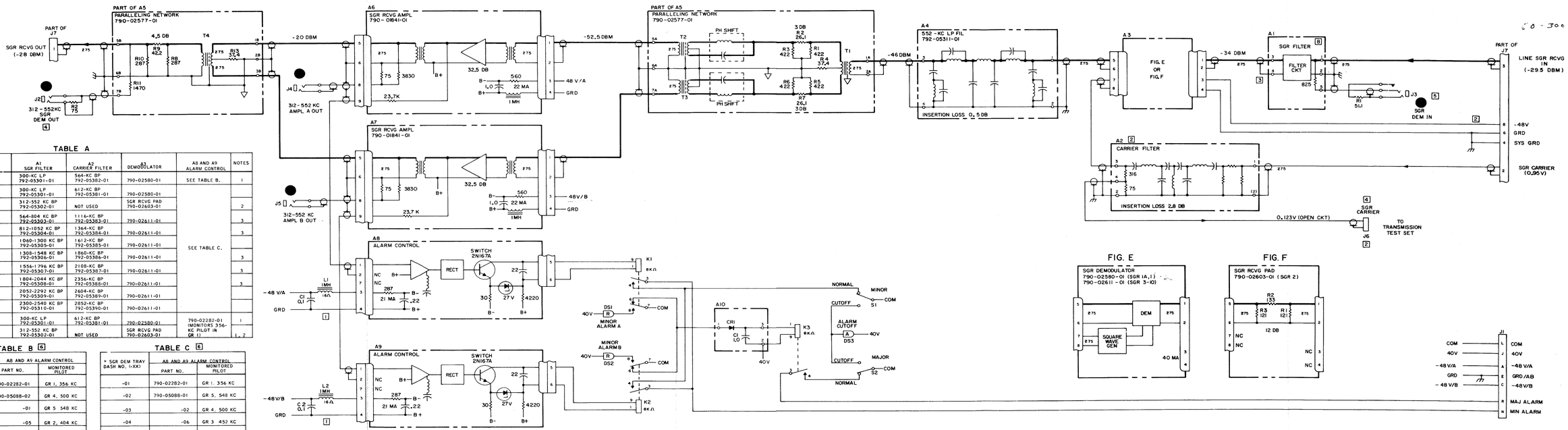


TABLE A

SGR	SGR DEM TRAY [6]	A1 SGR FILTER	A2 CARRIER FILTER	A5 DEMODULATOR	A8 AND A9 ALARM CONTROL	NOTES
1A	790-03273-XX	300-KC LP 792-05301-01	564-KC BP 792-05382-01	790-02580-01	SEE TABLE B.	1
1	790-03931-XX	300-KC LP 792-05301-01	612-KC BP 792-05381-01	790-02580-01	SEE TABLE C.	
2	790-03932-XX	312-552 KC BP 792-05302-01	NOT USED	SGR RCVG PAD 790-02603-01		2
3	790-03933-XX	564-804 KC BP 792-05303-01	1116-KC BP 792-05383-01	790-02611-01		3
4	790-03934-XX	812-1052 KC BP 792-05304-01	1364-KC BP 792-05384-01	790-02611-01		3
5	790-03935-XX	1060-1300 KC BP 792-05305-01	1612-KC BP 792-05385-01	790-02611-01		
6	790-03936-XX	1308-1548 KC BP 792-05306-01	1860-KC BP 792-05386-01	790-02611-01		3
7	790-03937-XX	1556-1796 KC BP 792-05307-01	2108-KC BP 792-05387-01	790-02611-01		3
8	790-03938-XX	1804-2044 KC BP 792-05308-01	2356-KC BP 792-05388-01	790-02611-01		3
9	790-03939-XX	2052-2292 KC BP 792-05309-01	2604-KC BP 792-05389-01	790-02611-01		
10	790-03940-XX	2300-2540 KC BP 792-05310-01	2852-KC BP 792-05390-01	790-02611-01		
1	790-07226-01	300-KC LP 792-05301-01	612-KC BP 792-05381-01	790-02580-01	790-02282-01 (MONITORS 356-KC PILOT IN GR 1)	1
2	790-07227-01	312-552 KC BP 792-05302-01	NOT USED	SGR RCVG PAD 790-02603-01		1, 2

TABLE B [6]

SGR 1A DEM TRAY	A8 AND A9 ALARM CONTROL PART NO.	A8 AND A9 ALARM CONTROL MONITORED PILOT
790-03273-01	790-02282-01	GR 1, 356 KC
-02	790-05088-02	GR 4, 500 KC
-03	-01	GR 5 548 KC
-04	-05	GR 2, 404 KC
-05	-06	GR 3, 452 KC

TABLE C [6]

* SGR DEM TRAY DASH NO. (-XX)	A8 AND A9 ALARM CONTROL PART NO.	A8 AND A9 ALARM CONTROL MONITORED PILOT
-01	790-02282-01	GR 1, 356 KC
-02	790-05088-01	GR 5, 548 KC
-03	-02	GR 4, 500 KC
-04	-06	GR 3, 452 KC
-05	-05	GR 2, 404 KC

* APPLICABLE TO 790-03931-XX THRU 790-03940-XX

Figure 10. Supergroup Demodulator Tray, Schematic Diagram

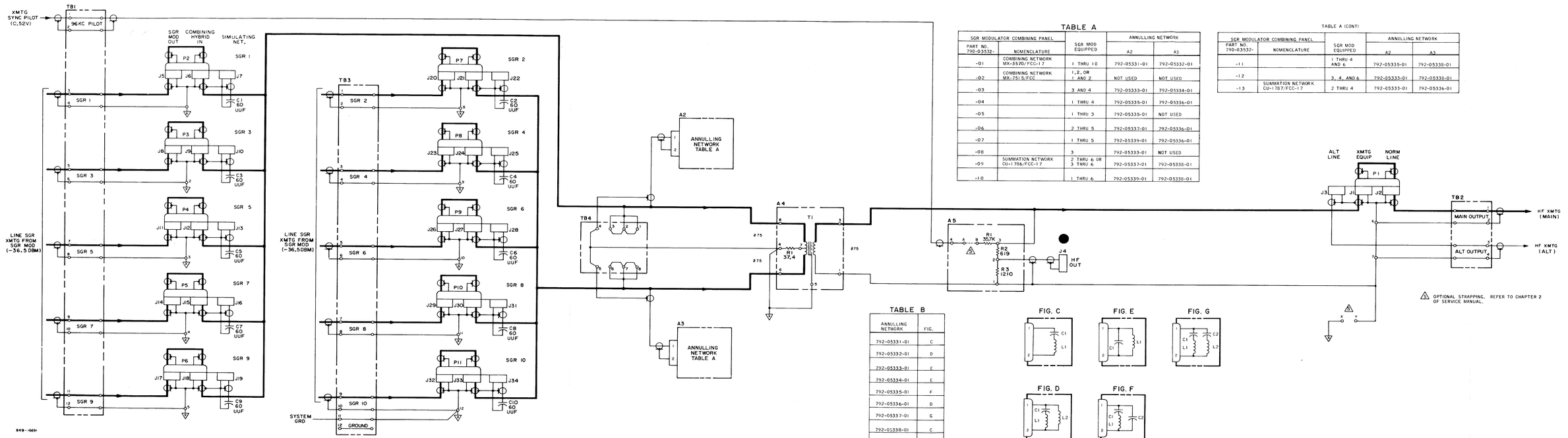


TABLE A

SGR MODULATOR COMBINING PANEL PART NO 790-03532-	NOMENCLATURE	SGR MOD EQUIPPED	ANNULLING NETWORK A2	ANNULLING NETWORK A3
-01	COMBINING NETWORK MX-3570/FCC-17	1 THRU 10	792-05331-01	792-05332-01
-02	COMBINING NETWORK MX-7515/FCC	1, 2, OR 1 AND 2	NOT USED	NOT USED
-03		3 AND 4	792-05333-01	792-05334-01
-04		1 THRU 4	792-05335-01	792-05336-01
-05		1 THRU 3	792-05335-01	NOT USED
-06		2 THRU 5	792-05337-01	792-05336-01
-07		1 THRU 5	792-05339-01	792-05336-01
-08		3	792-05333-01	NOT USED
-09	SUMMATION NETWORK CU-1786/FCC-17	2 THRU 6 OR 3 THRU 6	792-05337-01	792-05338-01
-10		1 THRU 6	792-05339-01	792-05338-01

TABLE A (CONT)

SGR MODULATOR COMBINING PANEL PART NO 790-03532-	NOMENCLATURE	SGR MOD EQUIPPED	ANNULLING NETWORK A2	ANNULLING NETWORK A3
-11		1 THRU 4 AND 6	792-05335-01	792-05338-01
-12		3, 4, AND 6	792-05333-01	792-05338-01
-13	SUMMATION NETWORK CU-1787/FCC-17	2 THRU 4	792-05333-01	792-05336-01

TABLE B

ANNULLING NETWORK	FIG.
792-05331-01	C
792-05332-01	D
792-05333-01	E
792-05334-01	E
792-05335-01	F
792-05336-01	D
792-05337-01	G
792-05338-01	C
792-05339-01	C

Figure 11. Supergroup Modulator Combining Panel, Schematic Diagram

NOTES:

1. DECOUPLING NETWORKS C1-L1 AND C2-L2 ARE NOT USED ON SGR DEMODULATOR TRAYS 790-03273-XX, 790-07226-01, AND 790-07227-01.
2. CARRIER FILTER A2 AND JACK J6 ARE NOT USED ON SGR 2 DEMODULATOR TRAYS. ALSO, DC POWER CIRCUITS (-48V AND GRD) TO MODULE A3 (SGR RCVG PAD) ARE OMITTED.
3. ON SGR DEMODULATOR TRAYS FOR SGR 3, 4, 6, 7, AND 8, SGR FILTER A1 HAS A CHASSIS GROUND CONNECTION ON TERMINAL 4 INSTEAD OF TERMINAL 2 AS SHOWN. (THE FILTER HAS AN INTERNAL CONNECTION BETWEEN TERMINALS 2 AND 4.)
4. THE APPLICABLE SGR NO. IS MARKED ADJACENT TO JACKS J2 AND J6.
5. THE APPLICABLE SGR NO. AND LINE SGR FREQUENCY ARE MARKED ADJACENT TO JACK J3.
6. ALARM CONTROL MODULES A8 AND A9 MONITOR ONE OF THE FIVE GROUP PILOTS IN THE 312-552 KC SGR FREQUENCY BAND. WHEN THE PART NO. OF THE SGR DEM TRAY IN TABLE A INCLUDES -XX AS A DASH NUMBER, REFER TO TABLE B (790-03273-XX) OR TABLE C (790-03931-XX THRU 790-03940-XX) TO DETERMINE PART NUMBERS OF SGR DEM TRAY AND ALARM CONTROL MODULE APPLICABLE TO A PARTICULAR GROUP PILOT.
7. SGR DEMODULATOR TRAYS THAT HAVE BEEN ASSIGNED NOMENCLATURE ARE LISTED IN TABLE D.
8. CIRCUITS OF THE SGR FILTERS (792-05301-01 THRU 792-05310-01) ARE SHOWN ON THE SCHEMATIC DIAGRAM OF THE LOW-LEVEL SGR MODULATOR TRAY IN THIS MANUAL.

TABLE D [7]

PART NO.	NOMENCLATURE
790-03273-01	TELEPHONE CARRIER DEMODULATOR GROUP OA-4111/MCC-12
790-03273-02	TELEPHONE CARRIER DEMODULATOR GROUP OA-4597/MRC-98
790-03273-03	TELEPHONE CARRIER DEMODULATOR GROUP OA-7504/FCC
790-03931-01	SIGNAL DATA TRANSLATOR OM-5/FCC-64
790-03931-02	TELEPHONE CARRIER DEMODULATOR GROUP OM-3/FCC-65
790-03931-03	SIGNAL DATA TRANSLATOR CV-2262/FCC-63
790-03932-01	AMPLIFIER-FILTER AM-3182/FCC-17
790-03933-01	SIGNAL DATA TRANSLATOR MD-439/FCC-17
790-03934-01	SIGNAL DATA TRANSLATOR MD-440/FCC-17
790-03935-01	SIGNAL DATA TRANSLATOR MD-441/FCC-17
790-03936-01	SIGNAL DATA TRANSLATOR MD-442/FCC-17
790-03937-01	SIGNAL DATA TRANSLATOR MD-443/FCC-17
790-03938-01	SIGNAL DATA TRANSLATOR MD-444/FCC-17
790-03939-01	SIGNAL DATA TRANSLATOR MD-445/FCC-17
790-03940-01	SIGNAL DATA TRANSLATOR MD-446/FCC-17
790-07226-01	TELEPHONE CARRIER DEMODULATOR GROUP OA-6122/MCC-13
790-07227-01	AMPLIFIER-ATTENUATOR GROUP OA-6123/MCC-13

849-16890

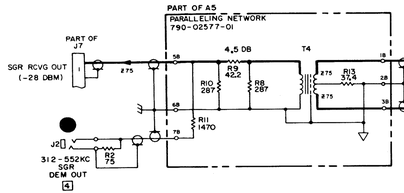


TABLE A

SGR	SGR DEM TRAY [8]	A1 SGR FILTER	A2 CARRIER FILTER	A3 DEMODULATOR	A8 AND A9 ALARM CONTROL	NOTES
1A	790-03273-XX	300-KC LP 792-05301-01	564-KC BP 792-05382-01	790-02580-01	SEE TABLE B.	1
1	790-03931-XX	300-KC LP 792-05301-01	612-KC BP 792-05381-01	790-02580-01	SEE TABLE C.	
2	790-03932-XX	312-552 KC BP 792-05302-01	NOT USED	SGR RCVG PAD 790-02603-01		2
3	790-03933-XX	564-804 KC BP 792-05303-01	1116-KC BP 792-05383-01	790-02611-01		3
4	790-03934-XX	812-1052 KC BP 792-05304-01	1364-KC BP 792-05384-01	790-02611-01		3
5	790-03935-XX	1060-1300 KC BP 792-05305-01	1612-KC BP 792-05385-01	790-02611-01		
6	790-03936-XX	1308-1548 KC BP 792-05306-01	1860-KC BP 792-05386-01	790-02611-01		3
7	790-03937-XX	1556-1796 KC BP 792-05307-01	2108-KC BP 792-05387-01	790-02611-01		3
8	790-03938-XX	1804-2044 KC BP 792-05308-01	2356-KC BP 792-05388-01	790-02611-01		3
9	790-03939-XX	2052-2292 KC BP 792-05309-01	2604-KC BP 792-05389-01	790-02611-01		
10	790-03940-XX	2300-2540 KC BP 792-05310-01	2852-KC BP 792-05390-01	790-02611-01		
1	790-07226-01	300-KC LP 792-05301-01	612-KC BP 792-05381-01	790-02580-01	790-02282-01 (MONITORS 356-KC PILOT IN GR 1).	1
2	790-07227-01	312-552 KC BP 792-05302-01	NOT USED	SGR RCVG PAD 790-02603-01		1, 2

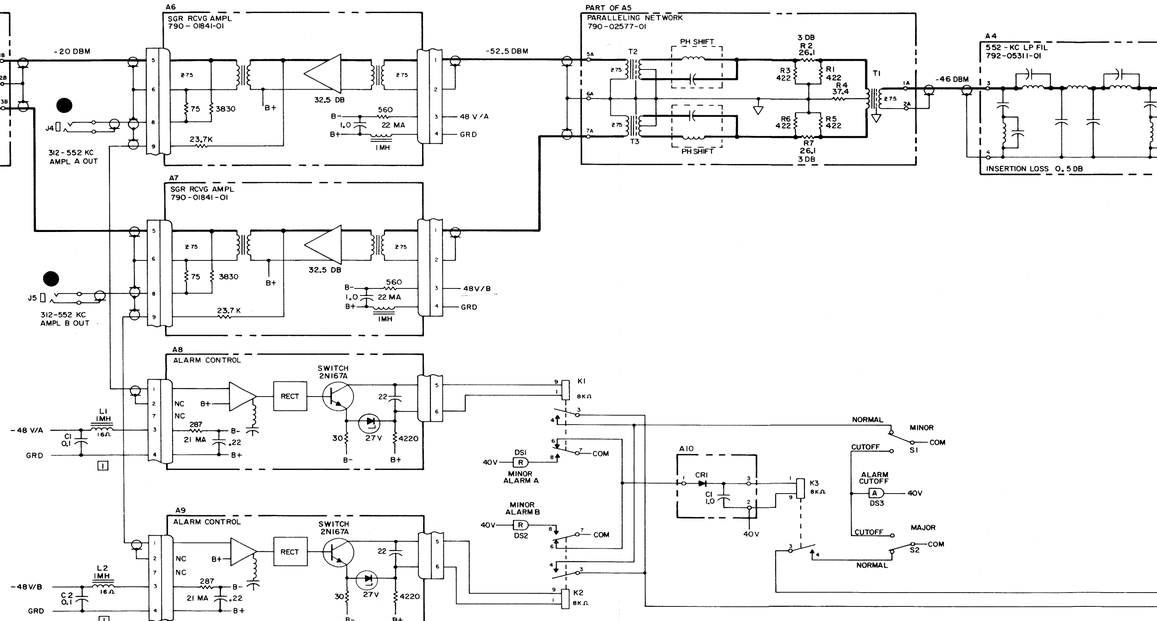
TABLE B [6]

SGR 1A DEM TRAY	A8 AND A9 ALARM CONTROL	
	PART NO.	MONITORED PILOT
790-03273-01	790-02282-01	GR 1, 356 KC
-02	790-05088-02	GR 4, 500 KC
-03	-01	GR 5 548 KC
-04	-05	GR 2, 404 KC
-05	-06	GR 3, 452 KC

TABLE C [6]

* SGR DEM TRAY DASH NO. (-XX)	A8 AND A9 ALARM CONTROL	
	PART NO.	MONITORED PILOT
-01	790-02282-01	GR 1, 356 KC
-02	790-05088-01	GR 5, 548 KC
-03	-02	GR 4, 500 KC
-04	-06	GR 3 452 KC
-05	-05	GR 2, 404 KC

* APPLICABLE TO 790-03931-XX THRU 790-03940-XX



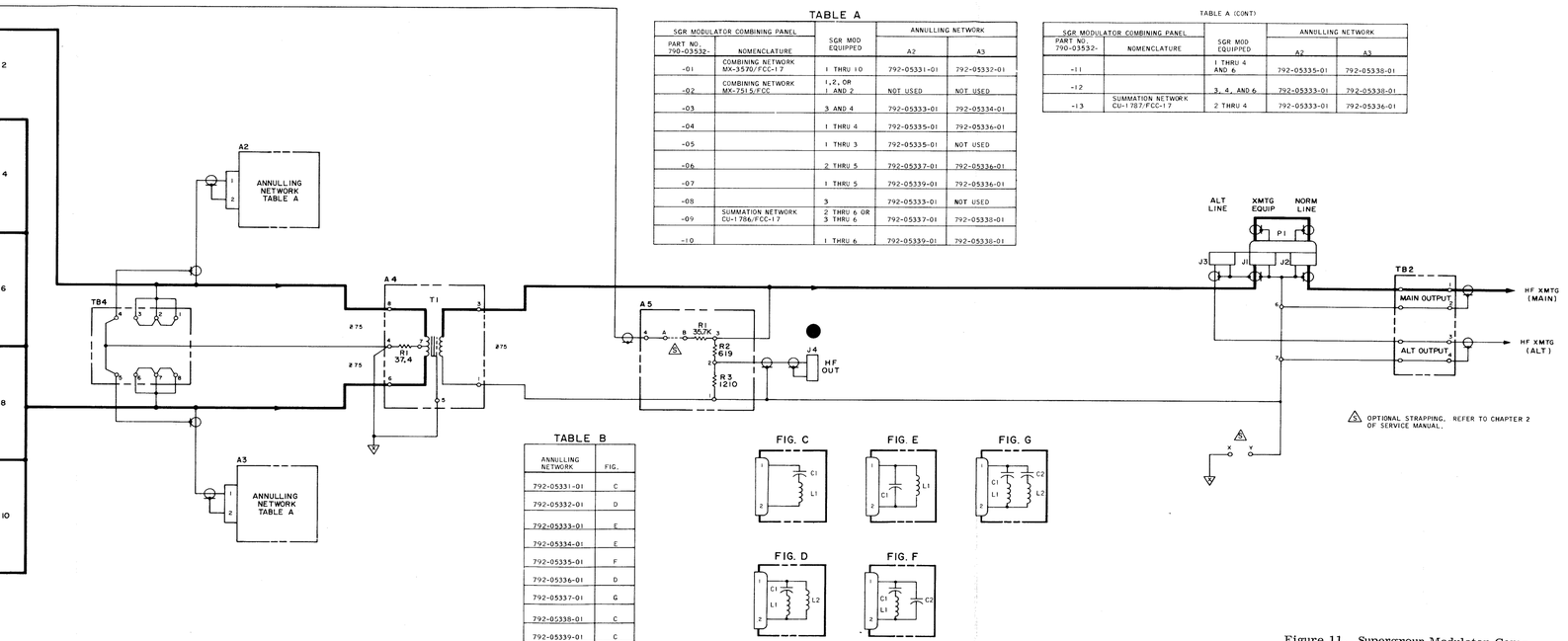


TABLE A

SGR MODULATOR COMBINING PANEL PART NO. 790-03532-	NOMENCLATURE	SGR MOD EQUIPPED	ANNULLING NETWORK A2	ANNULLING NETWORK A3
-01	COMBINING NETWORK MX-3570/FCC-17	1 THRU 10	792-05331-01	792-05332-01
-02	COMBINING NETWORK MX-7515/FCC	1, 2, OR 1 AND 2	NOT USED	NOT USED
-03		3 AND 4	792-05333-01	792-05334-01
-04		1 THRU 4	792-05335-01	792-05336-01
-05		1 THRU 3	792-05335-01	NOT USED
-06		2 THRU 5	792-05337-01	792-05336-01
-07		1 THRU 5	792-05339-01	792-05336-01
-08		3	792-05333-01	NOT USED
-09	SUMMATION NETWORK CU-1786/FCC-17	2 THRU 6 OR 3 THRU 6	792-05337-01	792-05338-01
-10		1 THRU 6	792-05339-01	792-05338-01

TABLE A (CONT)

SGR MODULATOR COMBINING PANEL PART NO. 790-03532-	NOMENCLATURE	SGR MOD EQUIPPED	ANNULLING NETWORK A2	ANNULLING NETWORK A3
-11		1 THRU 4 AND 6	792-05335-01	792-05338-01
-12		3, 4, AND 6	792-05333-01	792-05338-01
-13	SUMMATION NETWORK CU-1787/FCC-17	2 THRU 4	792-05333-01	792-05336-01

TABLE B

ANNULLING NETWORK	FIG.
792-05331-01	C
792-05332-01	D
792-05333-01	E
792-05334-01	E
792-05335-01	F
792-05336-01	D
792-05337-01	G
792-05338-01	C
792-05339-01	C

FIG. C

FIG. E

FIG. G

FIG. D

FIG. F

Figure 11. Supergroup Modulator Combining Panel, Schematic Diagram

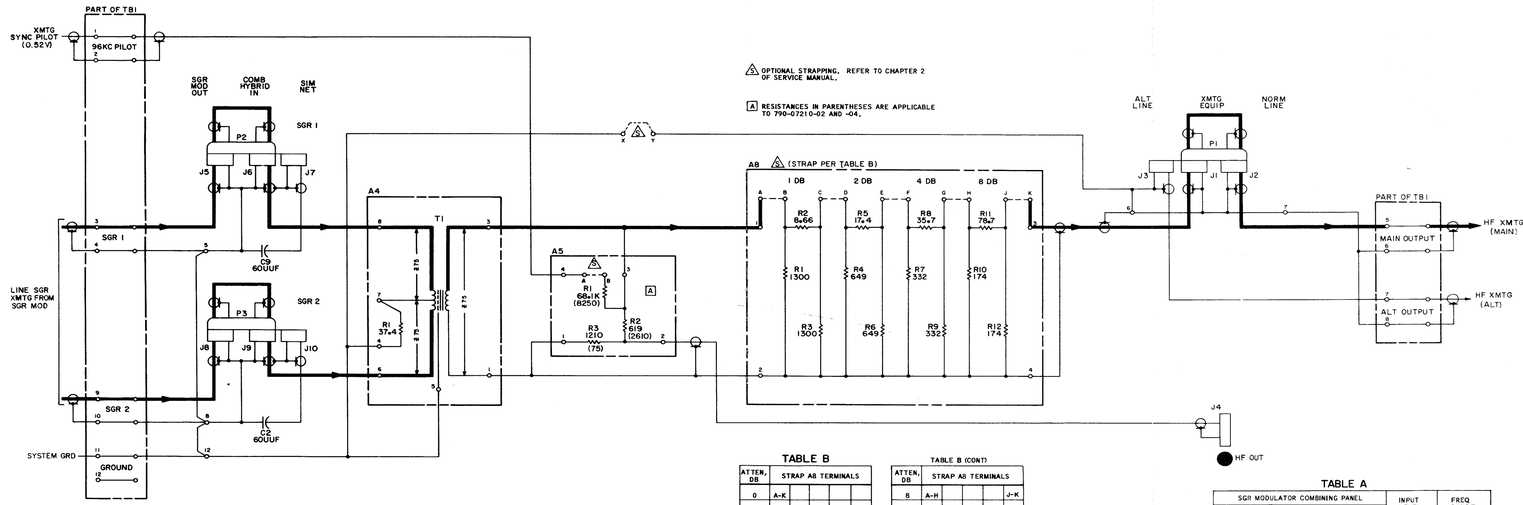


TABLE B

ATTEN, DB	STRAP A8 TERMINALS					
0	A-K					
1	A-B	C-K				
2	A-D		E-K			
3	A-B	C-D	E-K			
4	A-F			G-K		
5	A-B	C-F		G-K		
6	A-D		E-F	G-K		
7	A-B	C-D	E-F	G-K		

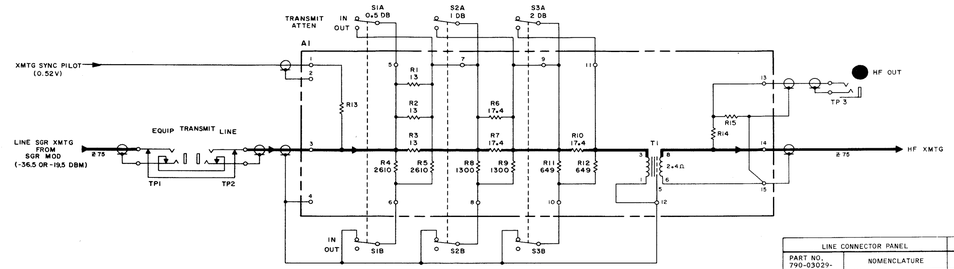
TABLE B (CONT)

ATTEN, DB	STRAP A8 TERMINALS				
8	A-H				J-K
9	A-B	C-H			J-K
10	A-D		E-H		J-K
11	A-B	C-D	E-H		J-K
12	A-F			G-H	J-K
13	A-B	C-F		G-H	J-K
14	A-D		E-F	G-H	J-K
15	A-B	C-D	E-F	G-H	J-K

TABLE A

SGR MODULATOR COMBINING PANEL		INPUT LEVEL, DBM	FREQ RANGE, KC
PART NO. 790-07210-	NOMENCLATURE		
-01	RF COMBINER CU-1274/MCC-13	-36.5	60-552
-02		-19.5	
-03		-36.5	12-552
-04		-19.5	

Figure 12. Supergroup Modulator Combining Panel (72-Channel), Schematic Diagram



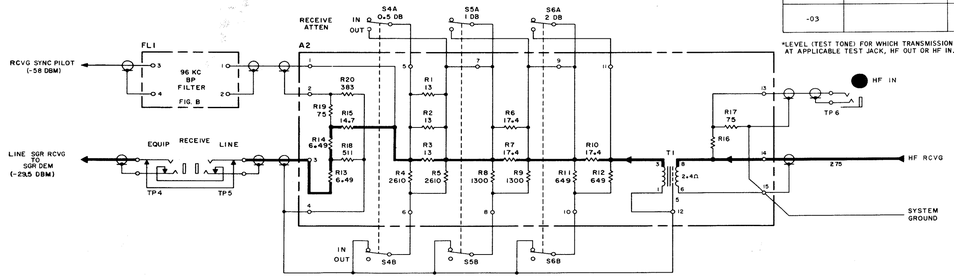


TABLE A

LINE CONNECTOR PANEL		HF XMTG LEVEL, DBM			HF RCVG LEVEL, DBM			RESISTANCE, OHMS			
PART NO. 790-03029-	NOMENCLATURE	MAX	MIN	*0 DB ON TEST SET	MAX	MIN	*0 DB ON TEST SET	A1R13	A1R14	A1R15	A2R16
-01	IMPEDANCE MATCHING NETWORK CO-936/MCC-12	-20	-23.5	-20	-22.5	-26	-26	3830	3830	75	1780
-02	IMPEDANCE MATCHING NETWORK CO-1154/MRC-98	-20	-23.5	-23	-22.5	-26	-23	3830	2610	75	2610
-03		-37	-40.5	-40	-22.5	-26	-26	31.6K	619	1210	1780

*LEVEL (TEST TONE) FOR WHICH TRANSMISSION TEST SET READS 0 DB AT APPLICABLE TEST JACK, HF OUT OR HF IN.

FIG. B

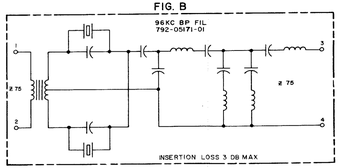


Figure 13. Line Connector Panel, Schematic Diagram

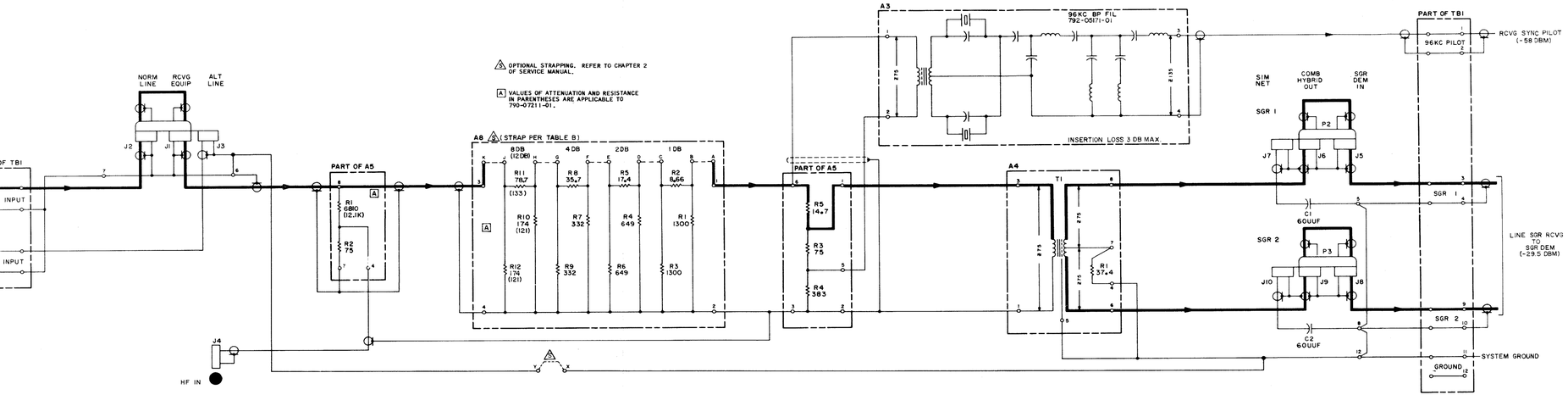


TABLE B

ATTEN, DB	STRAP A8 TERMINALS				
0	A-K				J-K
1	A-B	C-K			J-K
2	A-D		E-K		J-K
3	A-B	C-D	E-K		J-K
4	A-F			G-K	J-K
5	A-B	C-F		G-K	J-K
6	A-D		E-F	G-K	J-K
7	A-B	C-D	E-F	G-K	J-K

TABLE B (CONT)

ATTEN, DB A	STRAP A8 TERMINALS				
8 (12)	A-H				J-K
9 (13)	A-B	C-H			J-K
10 (14)	A-D		E-H		J-K
11 (15)	A-B	C-D	E-H		J-K
12 (16)	A-F			G-H	J-K
13 (17)	A-B	C-F		G-H	J-K
14 (18)	A-D		E-F	G-H	J-K
15 (19)	A-B	C-D	E-F	G-H	J-K

TABLE A

SGR DEMODULATOR COMBINING PANEL		*INPUT LEVEL, DBM	FREQ RANGE, KC
PART NO. 790-07211-	NOMENCLATURE		
-01	FREQUENCY DIVIDER CU-1275/MCC-13	-10	60-552
-02		-15	
-03		-15	12-552

*RF RCVG LEVEL (TEST TONE) AT WHICH TRANSMISSION TEST SET READS 0 DB.

Figure 15. Supergroup Demodulator Combining Panel (72-Channel), Schematic Diagram

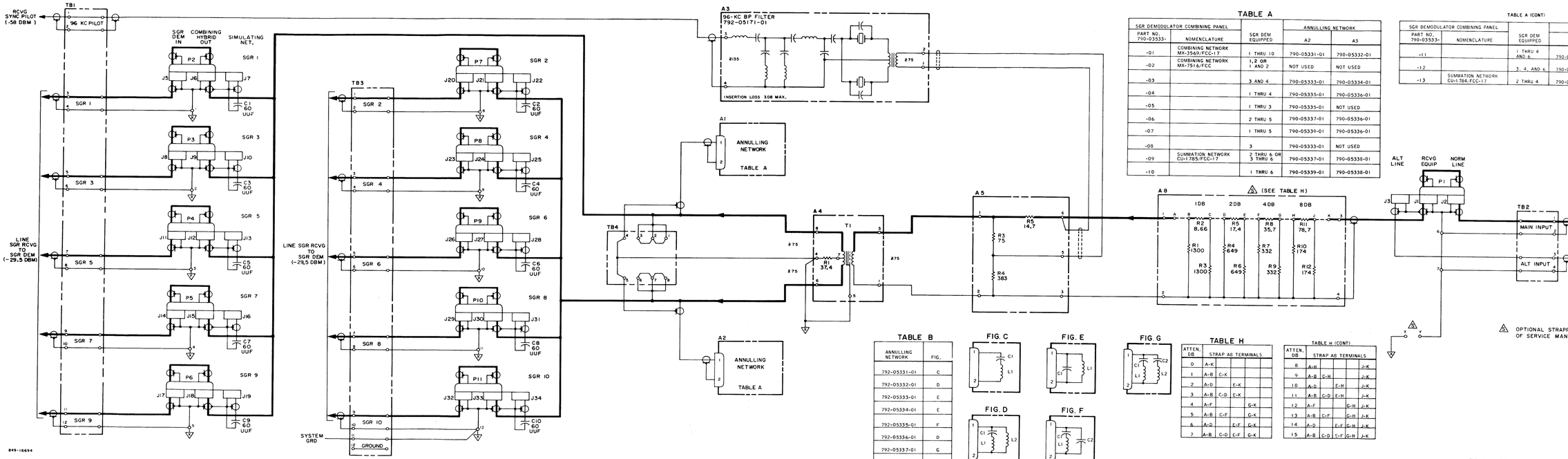


TABLE A

SGR DEMODULATOR COMBINING PANEL PART NO. 790-03533-	NOMENCLATURE	SGR DEM EQUIPPED	ANNULLING NETWORK A2	ANNULLING NETWORK A3
-01	COMBINING NETWORK MX-3569/FCC-17	1 THRU 10	790-05331-01	790-05332-01
-02	COMBINING NETWORK MX-7516/FCC	1, 2 OR 1 AND 2	NOT USED	NOT USED
-03		3 AND 4	790-05333-01	790-05334-01
-04		1 THRU 4	790-05335-01	790-05336-01
-05		1 THRU 3	790-05335-01	NOT USED
-06		2 THRU 5	790-05337-01	790-05336-01
-07		1 THRU 5	790-05339-01	790-05336-01
-08		3	790-05333-01	NOT USED
-09	SUMMATION NETWORK CU-1785/FCC-17	2 THRU 6 OR 3 THRU 6	790-05337-01	790-05338-01
-10		1 THRU 6	790-05339-01	790-05338-01

TABLE A (CONT)

SGR DEMODULATOR COMBINING PANEL PART NO. 790-03533-	NOMENCLATURE	SGR DEM EQUIPPED	
-11		1 THRU 4 AND 6	790-0
-12		3, 4, AND 6	790-0
-13	SUMMATION NETWORK CU-1784/FCC-17	2 THRU 4	790-0

TABLE B

ANNULLING NETWORK	FIG.
792-05331-01	C
792-05332-01	D
792-05333-01	E
792-05334-01	E
792-05335-01	F
792-05336-01	D
792-05337-01	G
792-05338-01	C
792-05339-01	C

FIG. C

FIG. E

FIG. G

FIG. D

FIG. F

TABLE H

ATTEN. DB	STRAP AB TERMINALS				
0	A-K				
1	A-B	C-K			
2	A-D		E-K		
3	A-B	C-D	E-K		
4	A-F			G-K	
5	A-B	C-F		G-K	
6	A-D		E-F	G-K	
7	A-B	C-D	E-F	G-K	

TABLE H (CONT)

ATTEN. DB	STRAP AB TERMINALS				
8	A-H				J-K
9	A-B	C-H			J-K
10	A-D		E-H		J-K
11	A-B	C-D	E-H		J-K
12	A-F			G-H	J-K
13	A-B	C-F		G-H	J-K
14	A-D		E-F	G-H	J-K
15	A-B	C-D	E-F	G-H	J-K

Figure 14. Supergroup Combining Panel Schematic Diagram

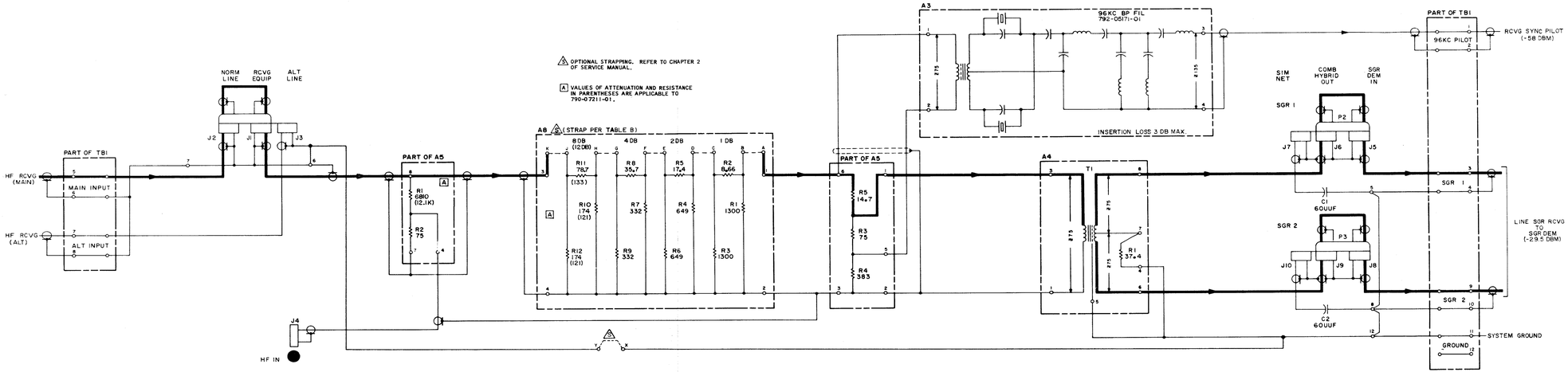


TABLE B

ATTEN, DB	STRAP A8 TERMINALS				
0	A-K				
1	A-B	C-K			
2	A-D		E-K		
3	A-B	C-D	E-K		
4	A-F			G-K	
5	A-B	C-F		G-K	
6	A-D		E-F	G-K	
7	A-B	C-D	E-F	G-K	

TABLE B (CONT)

ATTEN, DB [A]	STRAP A8 TERMINALS				
8 (12)	A-H				J-K
9 (13)	A-B	C-H			J-K
10 (14)	A-D		E-H		J-K
11 (15)	A-B	C-D	E-H		J-K
12 (16)	A-F			G-H	J-K
13 (17)	A-B	C-F		G-H	J-K
14 (18)	A-D		E-F	G-H	J-K
15 (19)	A-B	C-D	E-F	G-H	J-K

TABLE A

SGR DEMODULATOR COMBINING PANEL		*INPUT LEVEL, DBM	FREQ RANGE, KC
PART NO. 790-07211-	NOMENCLATURE		
-01	FREQUENCY DIVIDER CU-1273/MCC-13	-10	60-552
-02		-15	
-03		-15	12-552

*HF RCVG LEVEL (TEST TONE) AT WHICH TRANSMISSION TEST SET READS 0 DB.

Figure 15. Supergroup Demodulator Combining Panel (72-Channel), Schematic Diagram

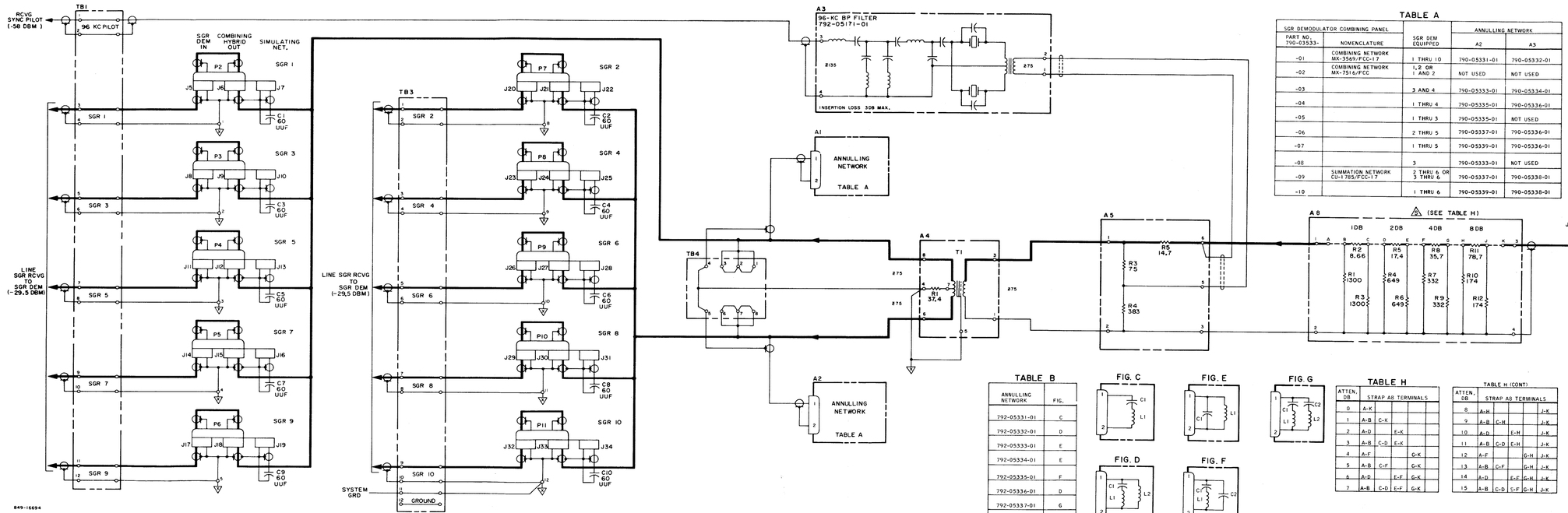


TABLE A

SGR DEMODULATOR COMBINING PANEL PART NO. 790-03533-	NOMENCLATURE	SGR DEM EQUIPPED	ANNULLING NETWORK A2	ANNULLING NETWORK A3
-01	COMBINING NETWORK MX-3569/FCC-17	1 THRU 10	790-05331-01	790-05332-01
-02	COMBINING NETWORK MX-7516/FCC	1,2 OR 1 AND 2	NOT USED	NOT USED
-03		3 AND 4	790-05333-01	790-05334-01
-04		1 THRU 4	790-05335-01	790-05336-01
-05		1 THRU 3	790-05335-01	NOT USED
-06		2 THRU 5	790-05337-01	790-05336-01
-07		1 THRU 5	790-05339-01	790-05336-01
-08		3	790-05333-01	NOT USED
-09	SUMMATION NETWORK CU-1785/FCC-17	2 THRU 6 OR 3 THRU 6	790-05337-01	790-05338-01
-10		1 THRU 6	790-05339-01	790-05338-01

TABLE A (CONT)

SGR DEMODULATOR COMBINING PANEL PART NO. 790-03533-	NOMENCLATURE	SGR DEM EQUIPPED	ANNULLING NETWORK A2	ANNULLING NETWORK A3
-11		1 THRU 4 AND 6	790-05335-01	790-05338-01
-12		3, 4, AND 6	790-05333-01	790-05338-01
-13	SUMMATION NETWORK CU-1784/FCC-17	2 THRU 4	790-05333-01	790-05336-01

TABLE B

ANNULLING NETWORK	FIG.
792-05331-01	C
792-05332-01	D
792-05333-01	E
792-05334-01	E
792-05335-01	F
792-05336-01	D
792-05337-01	G
792-05338-01	C
792-05339-01	C

FIG. C

FIG. E

FIG. G

FIG. D

FIG. F

TABLE H

ATTEN. DB	STRAP AB TERMINALS				
0	A-K				
1	A-B	C-K			
2	A-D		E-K		
3	A-B	C-D	E-K		
4	A-F			G-K	
5	A-B	C-F		G-K	
6	A-D		E-F	G-K	
7	A-B	C-D	E-F	G-K	

TABLE H (CONT)

ATTEN. DB	STRAP AB TERMINALS				
8	A-H				J-K
9	A-B	C-H			J-K
10	A-D		E-H		J-K
11	A-B	C-D	E-H		J-K
12	A-F			G-H	J-K
13	A-B	C-F		G-H	J-K
14	A-D		E-F	G-H	J-K
15	A-B	C-D	E-F	G-H	J-K

Figure 14. Supergroup Demodulator Combining Panel, Schematic Diagram

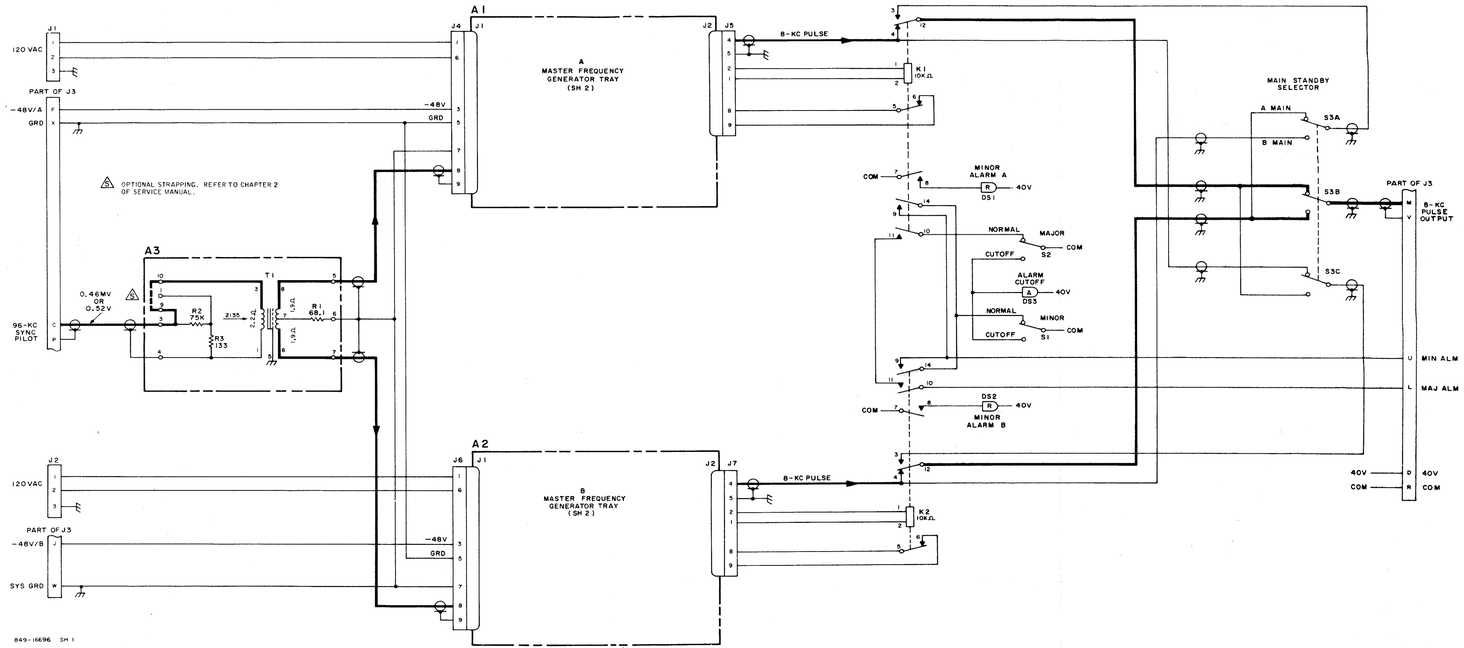


Figure 16. Master Frequency Generator Shelf, Schematic Diagram (Sheet 1 of 2)

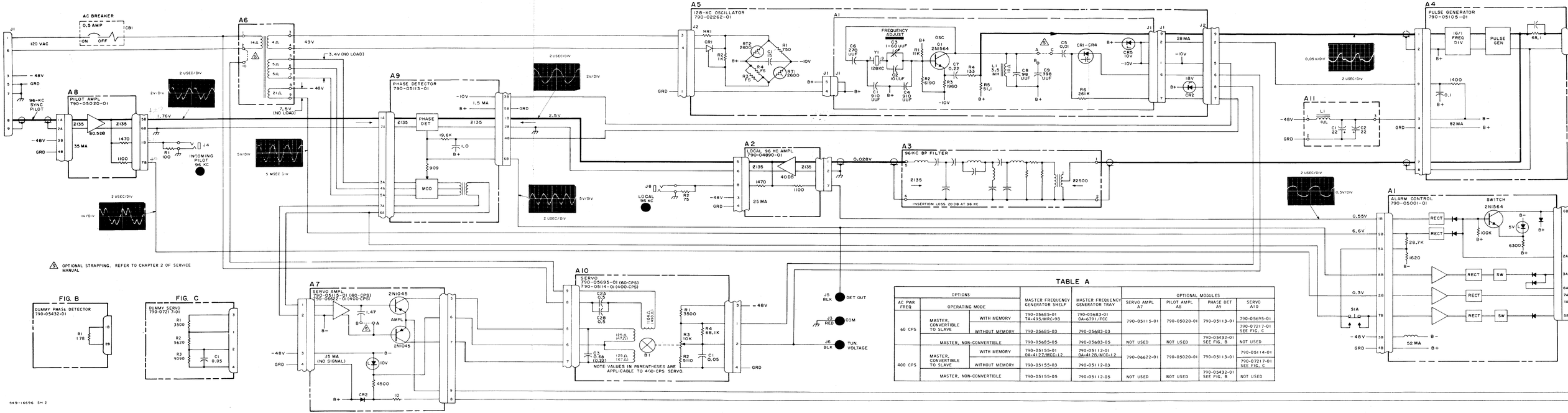
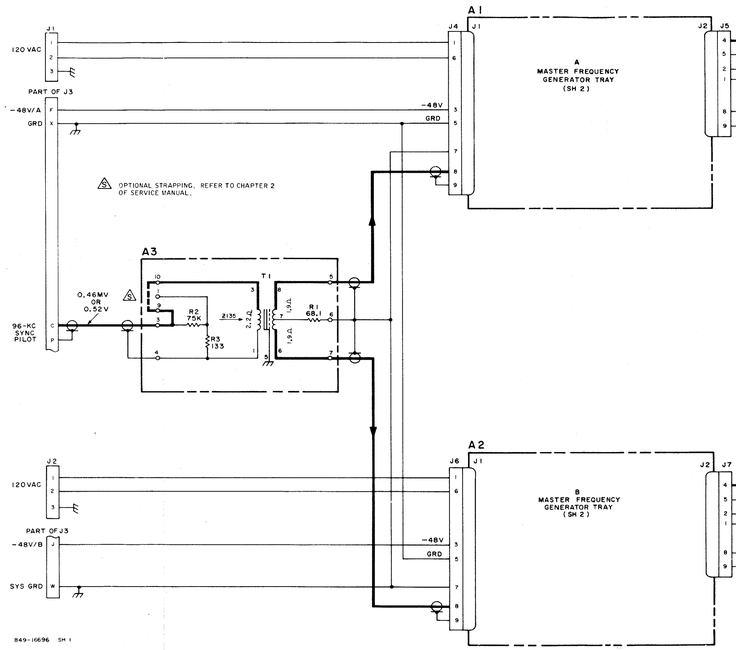


TABLE A

AC PWR FREQ	OPTIONS: OPERATING MODE		MASTER FREQUENCY GENERATOR SHELF	MASTER FREQUENCY GENERATOR TRAY	OPTIONAL MODULES: SERVO AMPL A7	PILOT AMPL A8	PHASE DET A9	SERVO A10
60 CPS	MASTER, CONVERTIBLE TO SLAVE	WITH MEMORY	790-05685-01 TA-495/MRC-98	790-05683-01 0A-6791/FCC	790-05115-01	790-05020-01	790-05113-01	790-05695-01
		WITHOUT MEMORY	790-05685-03	790-05683-03				790-07217-01 SEE FIG. C
	MASTER, NON-CONVERTIBLE		790-05685-05	790-05683-05	NOT USED	NOT USED	790-05432-01 SEE FIG. B	NOT USED
400 CPS	MASTER, CONVERTIBLE TO SLAVE	WITH MEMORY	790-05155-01 0A-4127/MCC-12	790-05112-01 0A-4128/MCC-12	790-06622-01	790-05020-01	790-05113-01	790-05114-01
		WITHOUT MEMORY	790-05155-03	790-05112-03				790-07217-01 SEE FIG. C
	MASTER, NON-CONVERTIBLE		790-05155-05	790-05112-05	NOT USED	NOT USED	790-05432-01 SEE FIG. B	NOT USED

Figure 16. Mast
Shelf
(Shee


A1
J1
120 VAC
PART OF J3
-48V/A
GRD
J4
J1
J2
J5
A
MASTER FREQUENCY
GENERATOR TRAY
(SH 2)
-48V
GRD
OPTIONAL STRAPPING, REFER TO CHAPTER 2
OF SERVICE MANUAL.
A3
T1
0.46MV
OR
0.52V
96-KC
SYNC
PILOT
R2
75K
2135
R3
133
R1
68.1
1.2:1
1.2:1
A2
J2
120 VAC
PART OF J3
-48V/B
SYS GRD
J6
J1
J2
J7
B
MASTER FREQUENCY
GENERATOR TRAY
(SH 2)
-48V
GRD
849-10696 SH 1

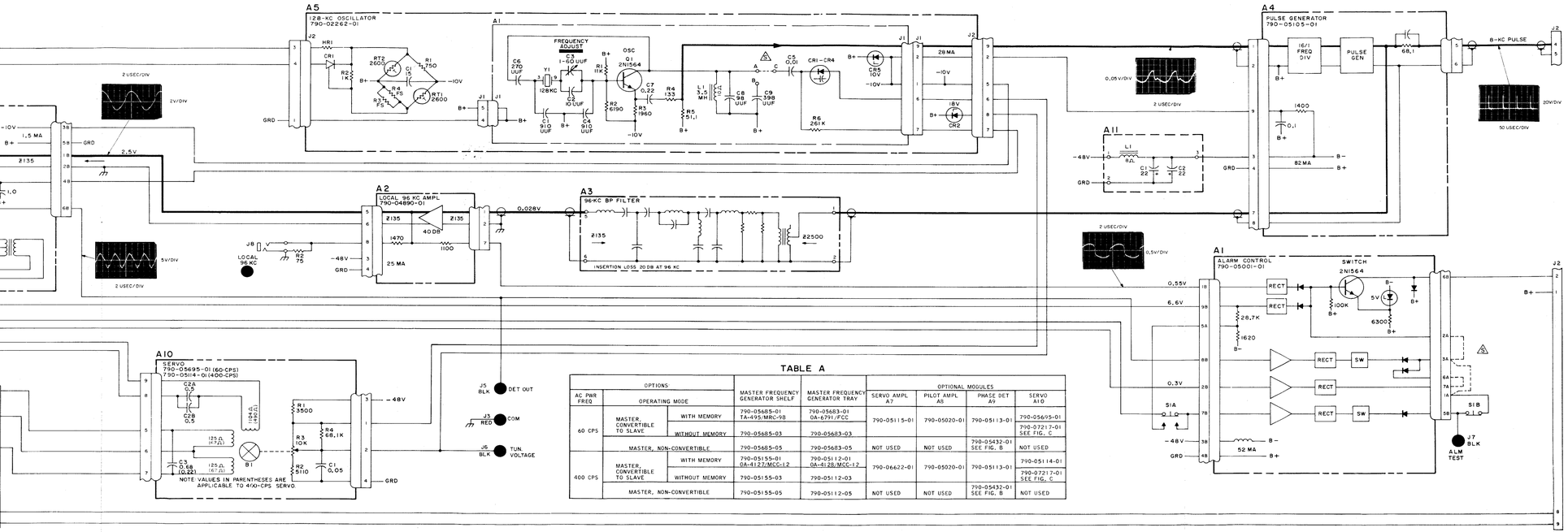


TABLE A

AC PWR FREQ	OPTIONS: OPERATING MODE		MASTER FREQUENCY GENERATOR SHELF	MASTER FREQUENCY GENERATOR TRAY	OPTIONAL MODULES: SERVO AMPL A7	PILOT AMPL A8	PHASE DET A9	SERVO A10
60 CPS	MASTER, CONVERTIBLE TO SLAVE	WITH MEMORY	790-05685-01 TA-495/MRC-98	790-05683-01 OA-6791/FCC	790-05115-01	790-05020-01	790-05113-01	790-05695-01
		WITHOUT MEMORY	790-05685-03	790-05683-03				790-07217-01 SEE FIG. C
	MASTER, NON-CONVERTIBLE		790-05685-05	790-05683-05	NOT USED	NOT USED	790-05432-01 SEE FIG. B	NOT USED
400 CPS	MASTER, CONVERTIBLE TO SLAVE	WITH MEMORY	790-05155-01 OA-6127/MCC-12	790-05112-01 OA-6128/MCC-12	790-06622-01	790-05020-01	790-05113-01	790-05114-01
		WITHOUT MEMORY	790-05155-03	790-05112-03				790-07217-01 SEE FIG. C
	MASTER, NON-CONVERTIBLE		790-05155-05	790-05112-05	NOT USED	NOT USED	790-05432-01 SEE FIG. B	NOT USED

Figure 16. Master Frequency Generator Shelf, Schematic Diagram (Sheet 2 of 2)

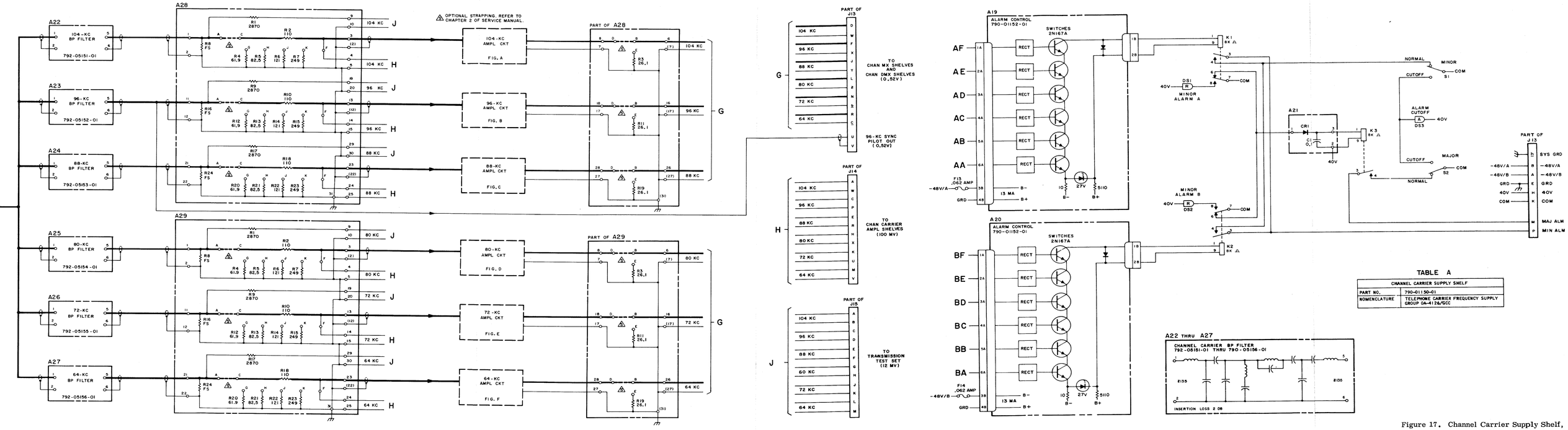


TABLE A

CHANNEL CARRIER SUPPLY SHELF	
PART NO.	790-01150-01
NOMENCLATURE	TELEPHONE CARRIER FREQUENCY SUPPLY GROUP OA-4126/GCC

Figure 17. Channel Carrier Supply Shelf, Schematic Diagram (Sheet 1 of 2)

FIG. A

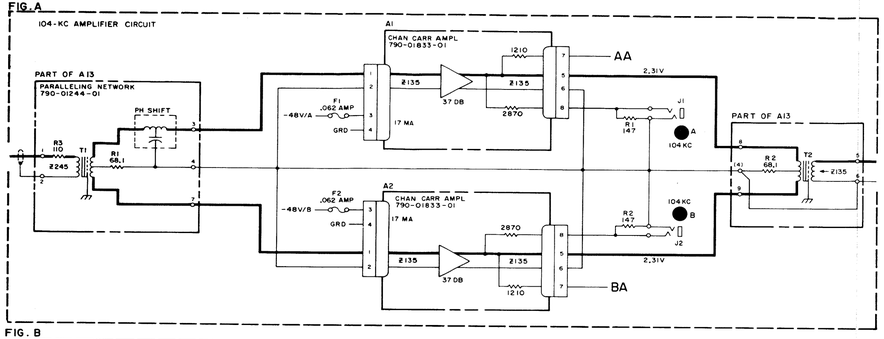
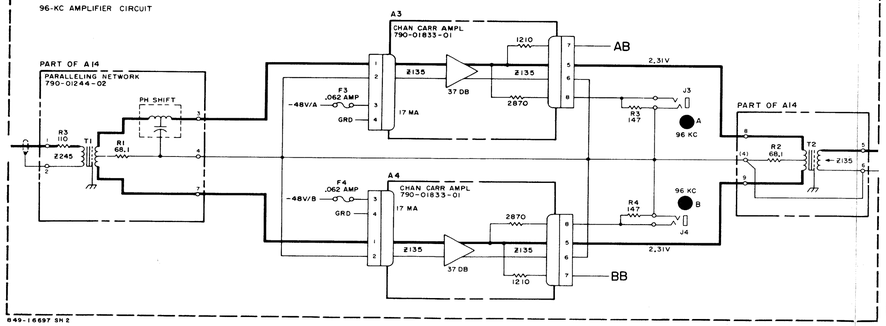


FIG. B



649-16697 SH 2

FIG. C

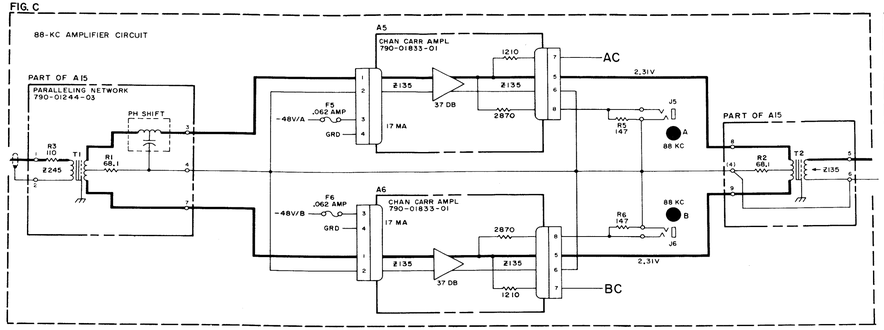


FIG. D

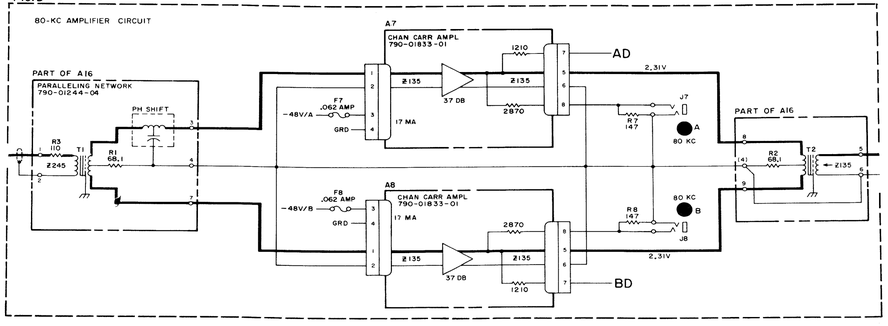


FIG. E

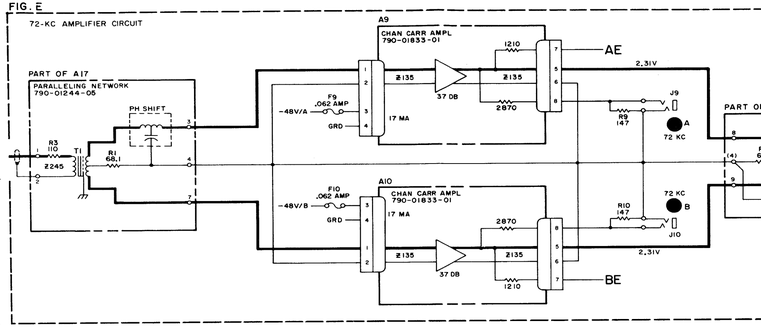


FIG. F

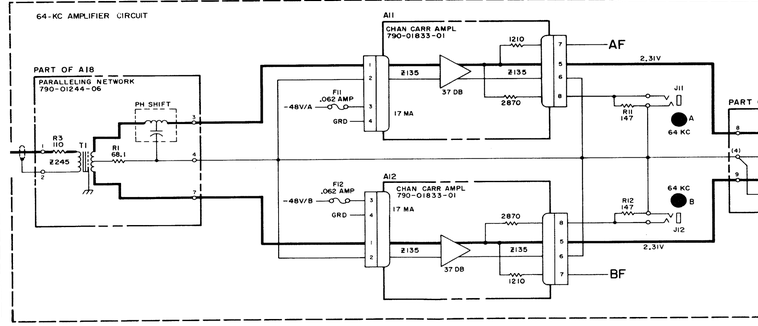


Figure 17. Channel Car
Schematic D

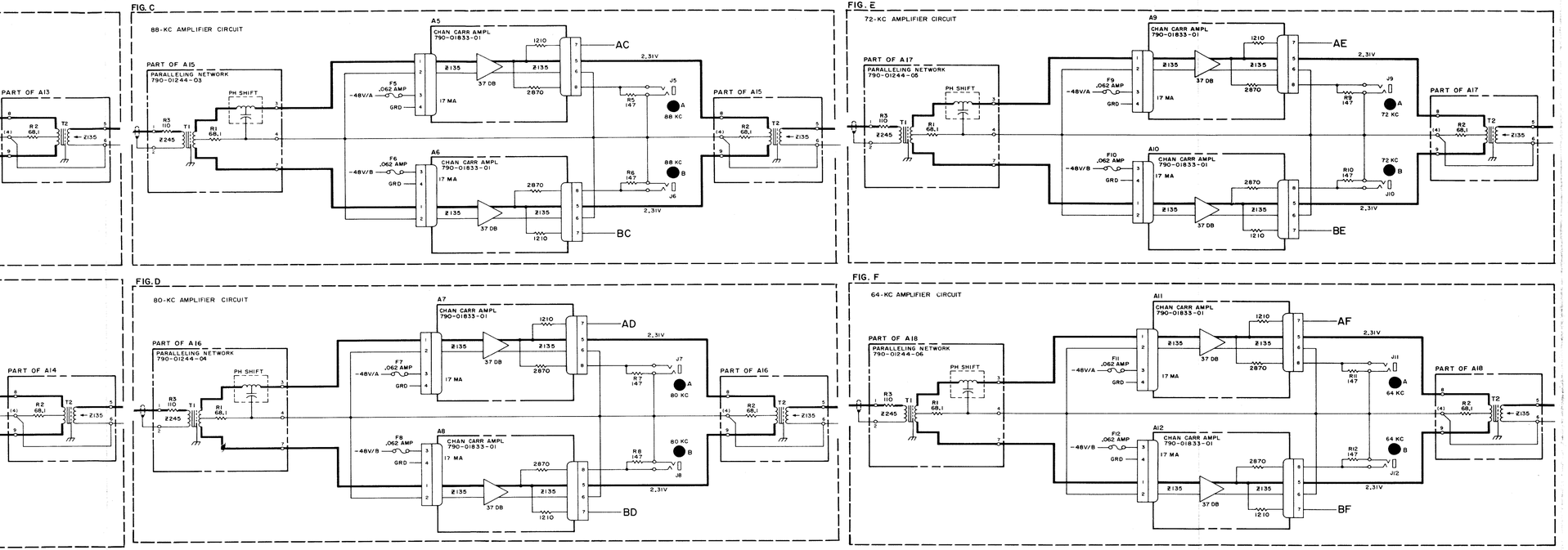
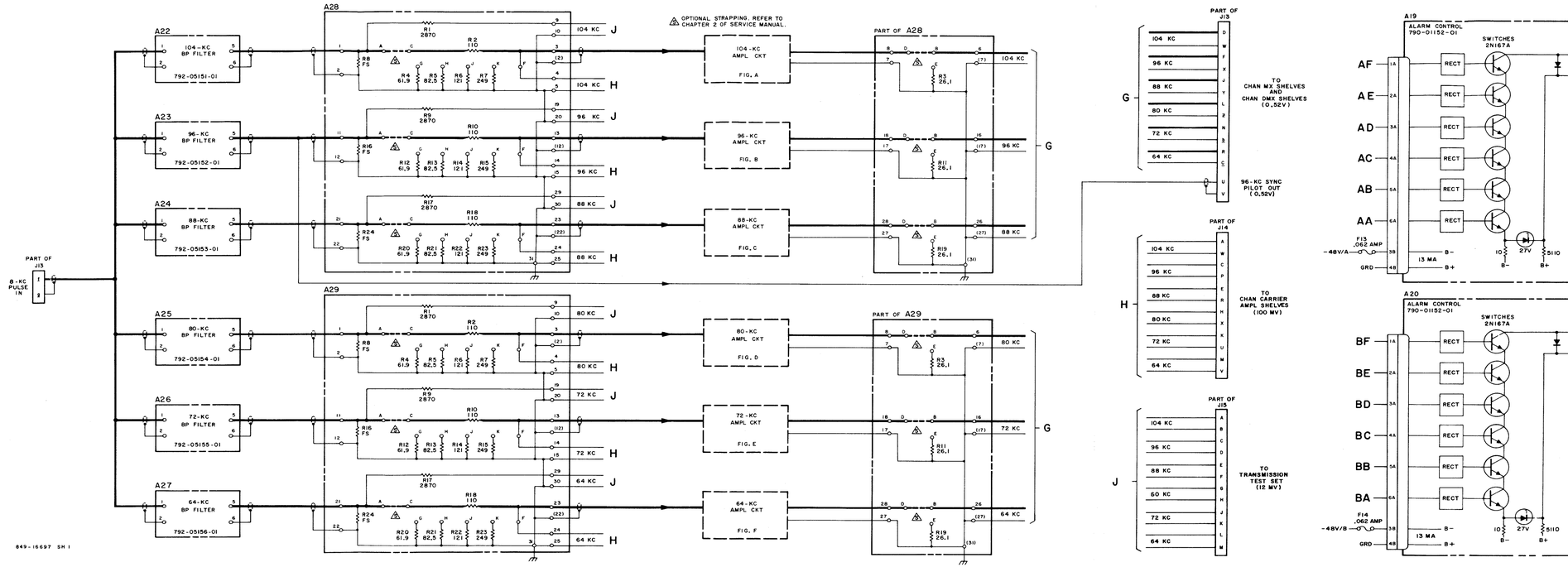
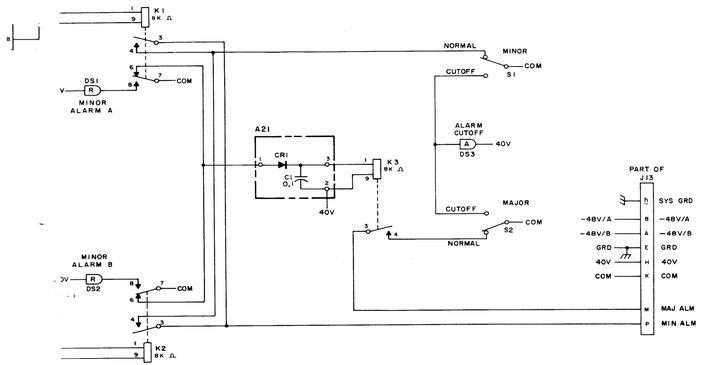


Figure 17. Channel Carrier Supply Shelf, Schematic Diagram (Sheet 2 of 2)


A28
A29
A22
104-KC BP FILTER
792-05151-01
A23
96-KC BP FILTER
792-05152-01
A24
88-KC BP FILTER
792-05153-01
A25
80-KC BP FILTER
792-05154-01
A26
72-KC BP FILTER
792-05155-01
A27
64-KC BP FILTER
792-05156-01
PART OF J13
8-KC PULSE IN
OPTIONAL STRAPPING. REFER TO CHAPTER 2 OF SERVICE MANUAL.
104-KC AMPL CKT
FIG. A
96-KC AMPL CKT
FIG. B
88-KC AMPL CKT
FIG. C
80-KC AMPL CKT
FIG. D
72-KC AMPL CKT
FIG. E
64-KC AMPL CKT
FIG. F
PART OF A28
PART OF A29
104 KC
96 KC
88 KC
80 KC
72 KC
64 KC
PART OF J13
TO CHAN MX SHELVES AND CHAN DMX SHELVES (0.52V)
96-KC SYNC PILOT OUT (0.52V)
PART OF J14
TO CHAN CARRIER AMPL SHELVES (100 MV)
PART OF J15
TO TRANSMISSION TEST SET (12 MV)
A19
ALARM CONTROL 790-01152-01
SWITCHES 2N167A
A20
ALARM CONTROL 790-01152-01
SWITCHES 2N167A
RECT
F13 .062 AMP
F14 .062 AMP
-48V/A
-48V/B
GRD
13 MA
B-
B+
27V
849-16697 SH 1



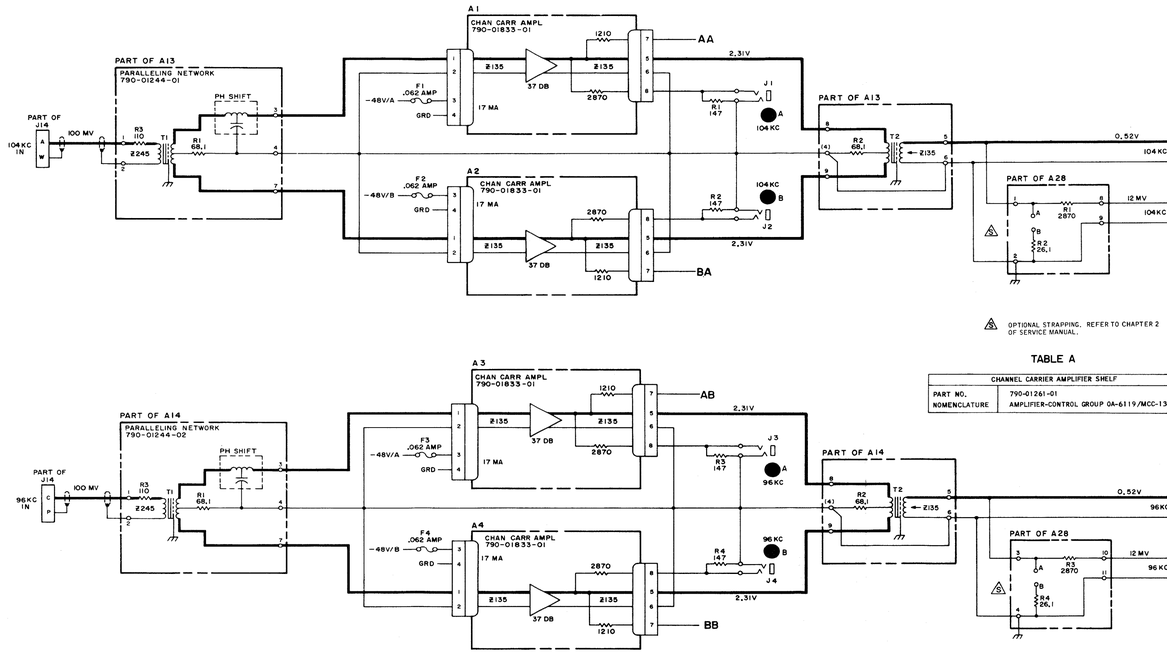
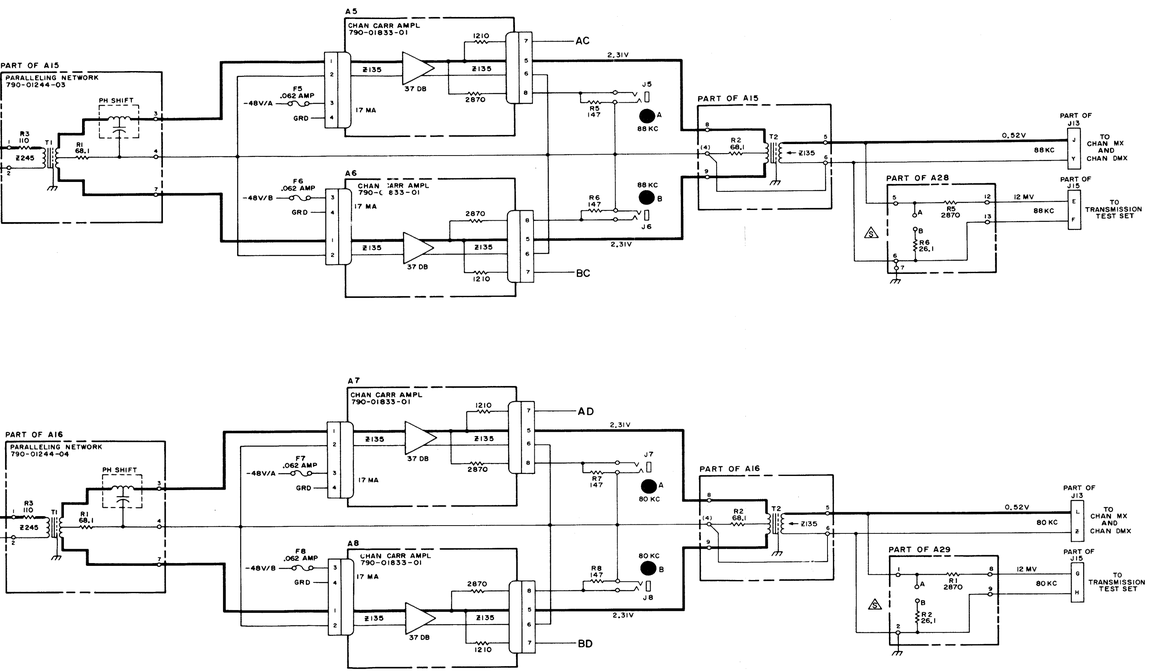


TABLE A

CHANNEL CARRIER AMPLIFIER SHELF	
PART NO.	790-01261-01
NOMENCLATURE	AMPLIFIER-CONTROL GROUP OA-6119/MCC-13

Figure 18. Channel Carrier A
Schematic Diagra



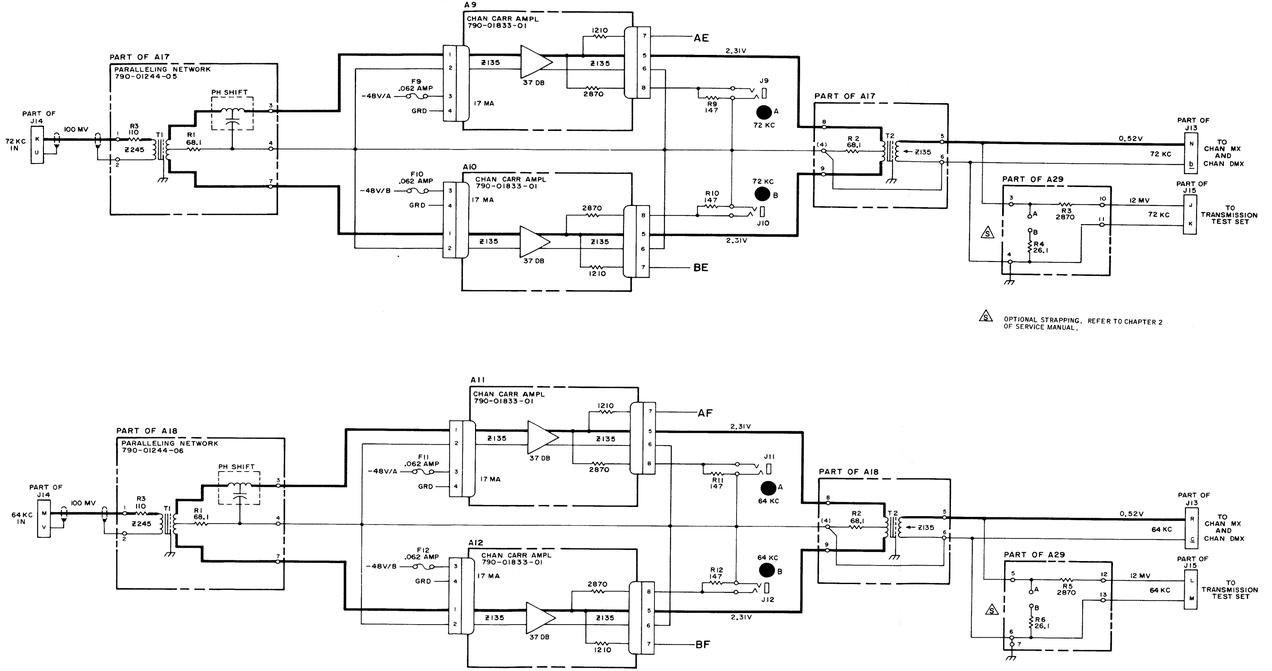
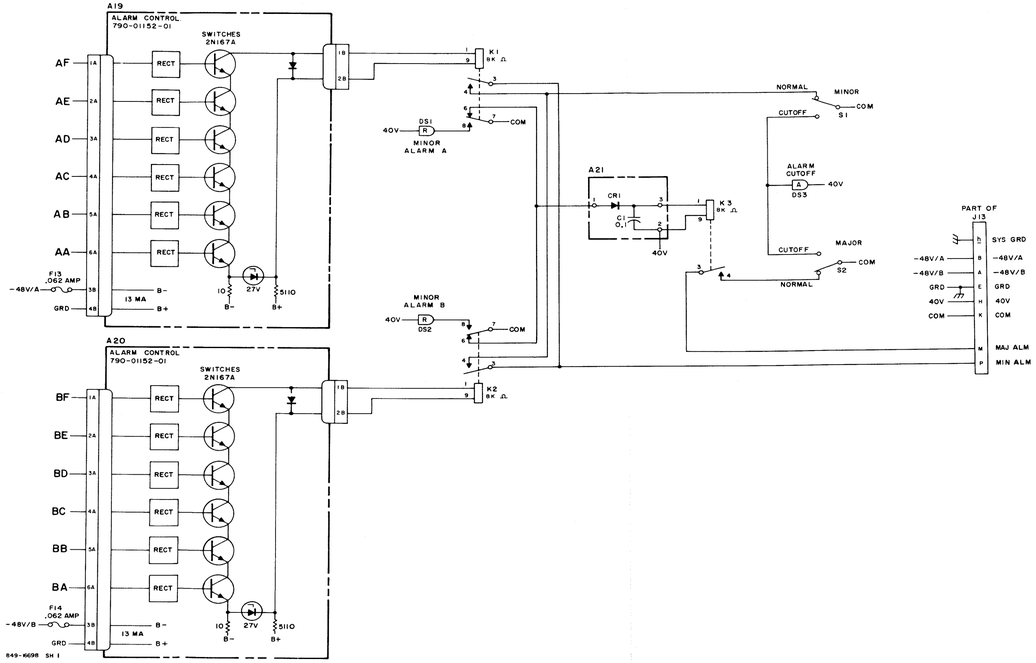


Figure 18. Channel Carrier Amplifier Shelf, Schematic Diagram (Sheet 2 of 2)



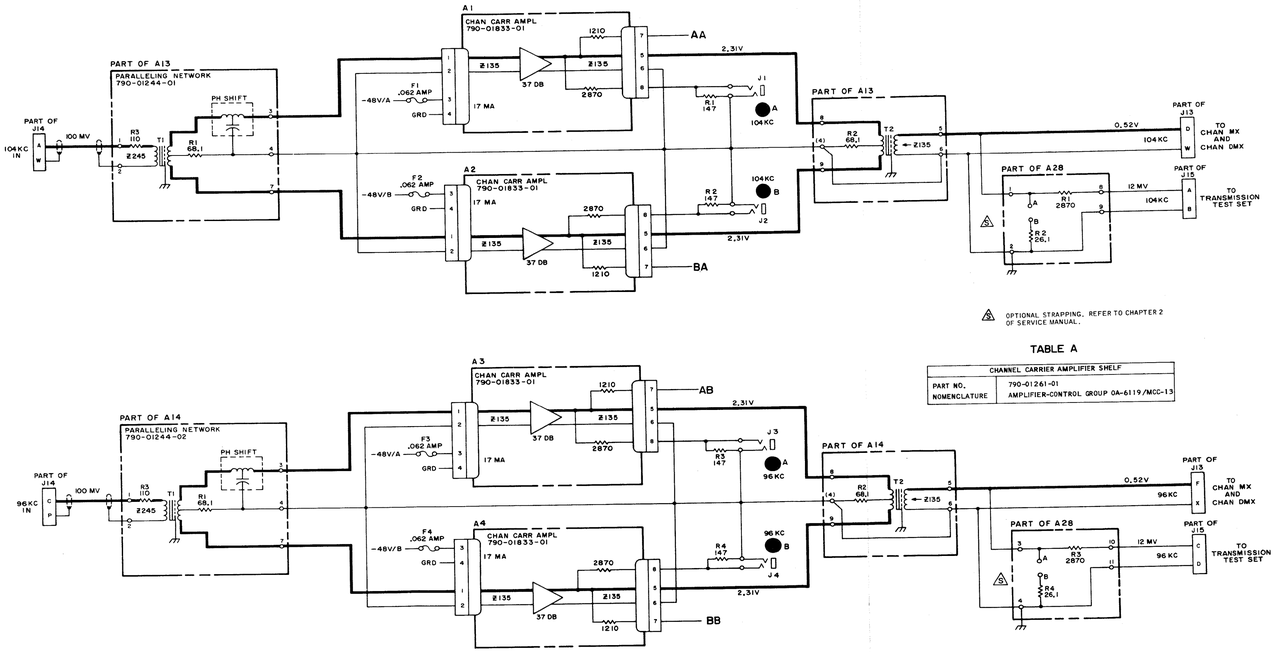
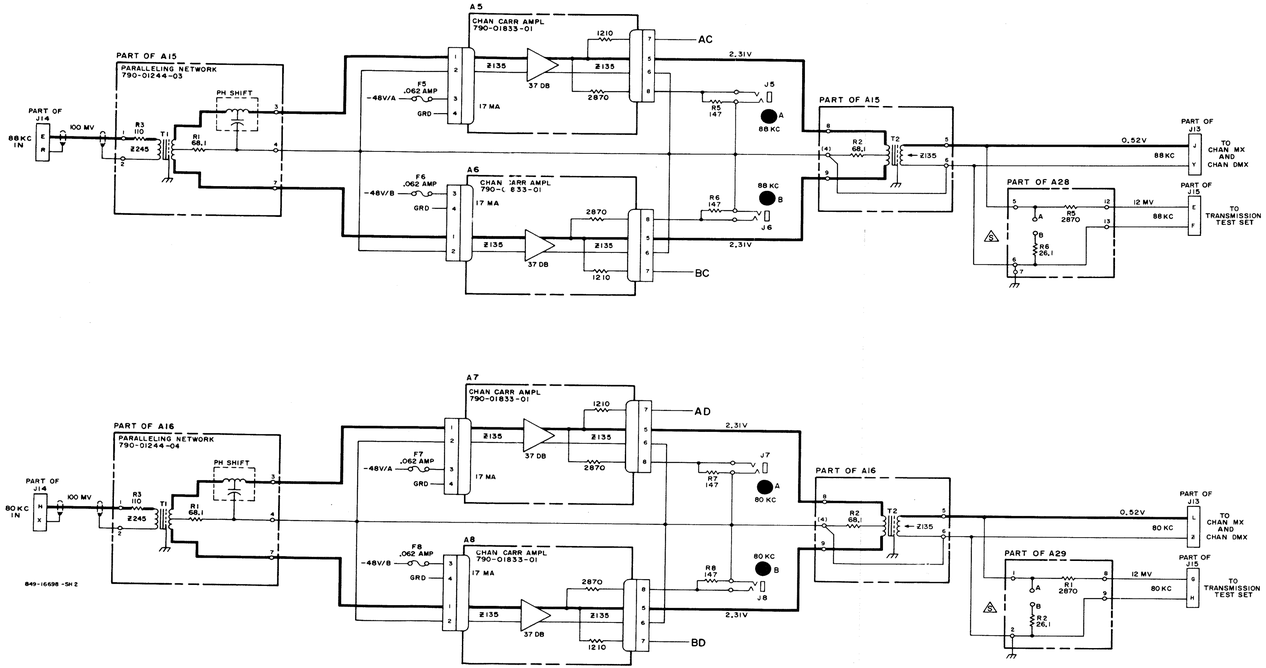


TABLE A

CHANNEL CARRIER AMPLIFIER SHELF	
PART NO.	790-01261-01
NOMENCLATURE	AMPLIFIER-CONTROL GROUP OA-6119/MCC-13

Figure 18. Channel Carrier Amplifier Shelf, Schematic Diagram (Sheet 1 of 2)



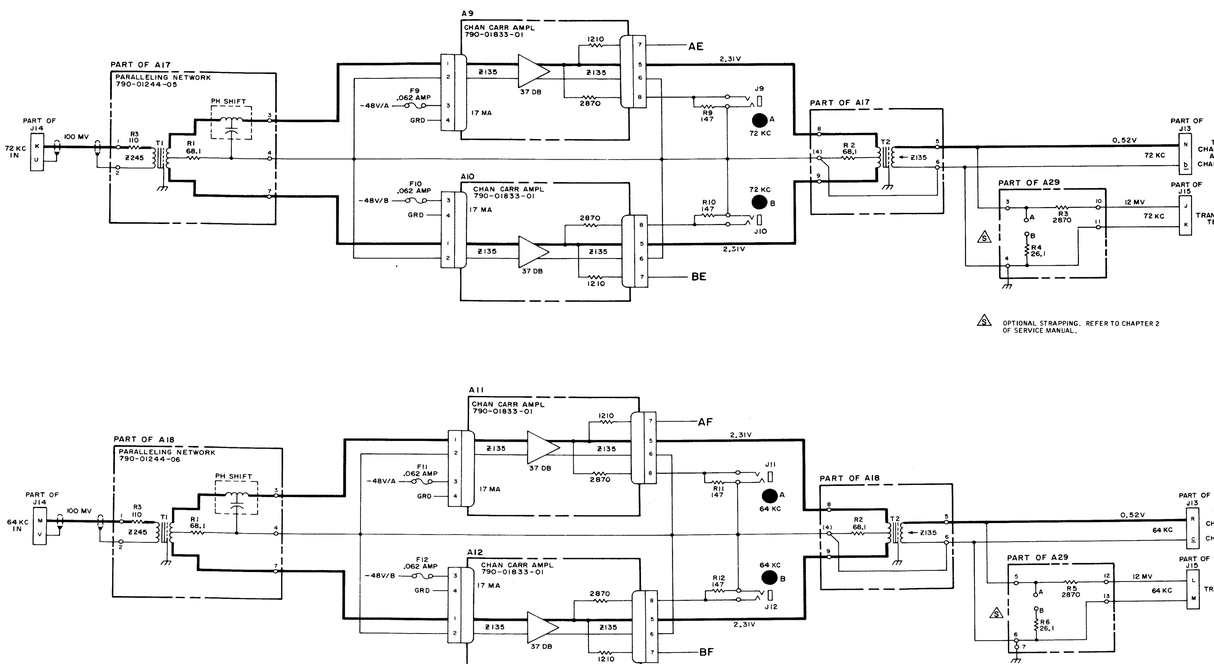


Figure 18. Channel Carrier Amplifie
Schematic Diagram (Shee

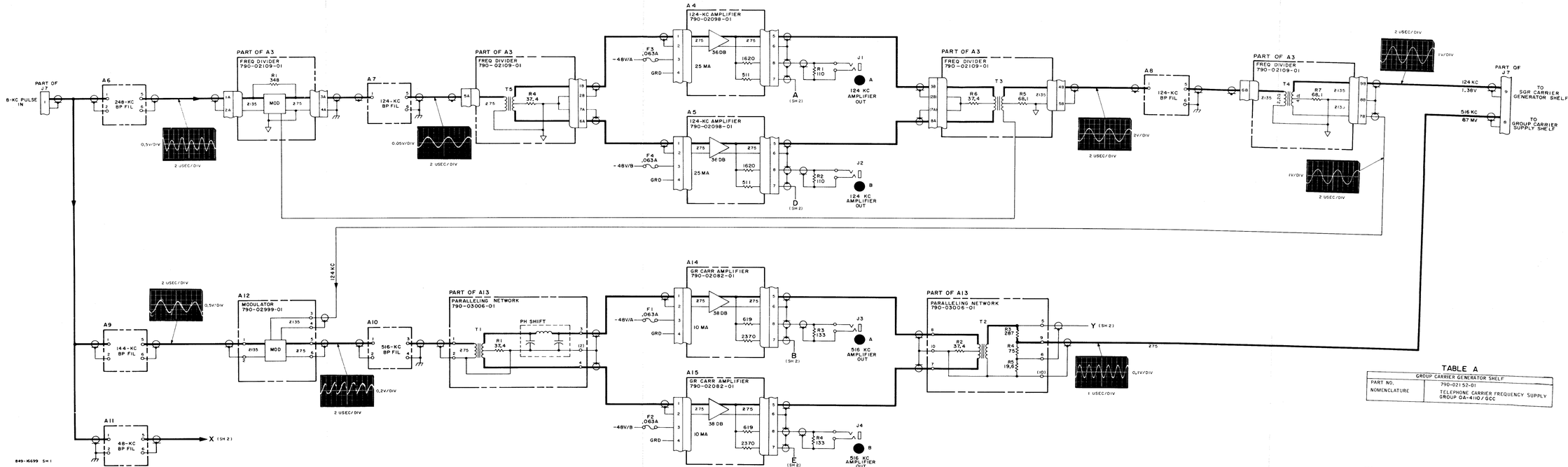


TABLE A

GROUP CARRIER GENERATOR SHELF	
PART NO.	790-0212-52-01
NOMENCLATURE	TELEPHONE CARRIER FREQUENCY SUPPLY GROUP OA-4110/GCC

Figure 19. Group Carrier Generator Shelf, Schematic Diagram (Sheet 1 of 2)

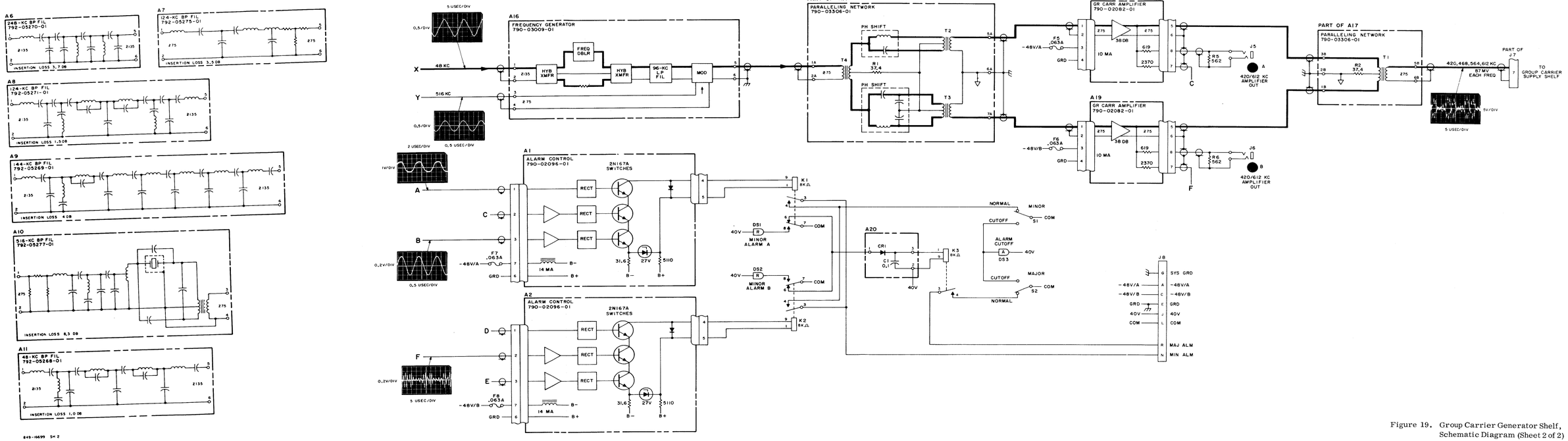
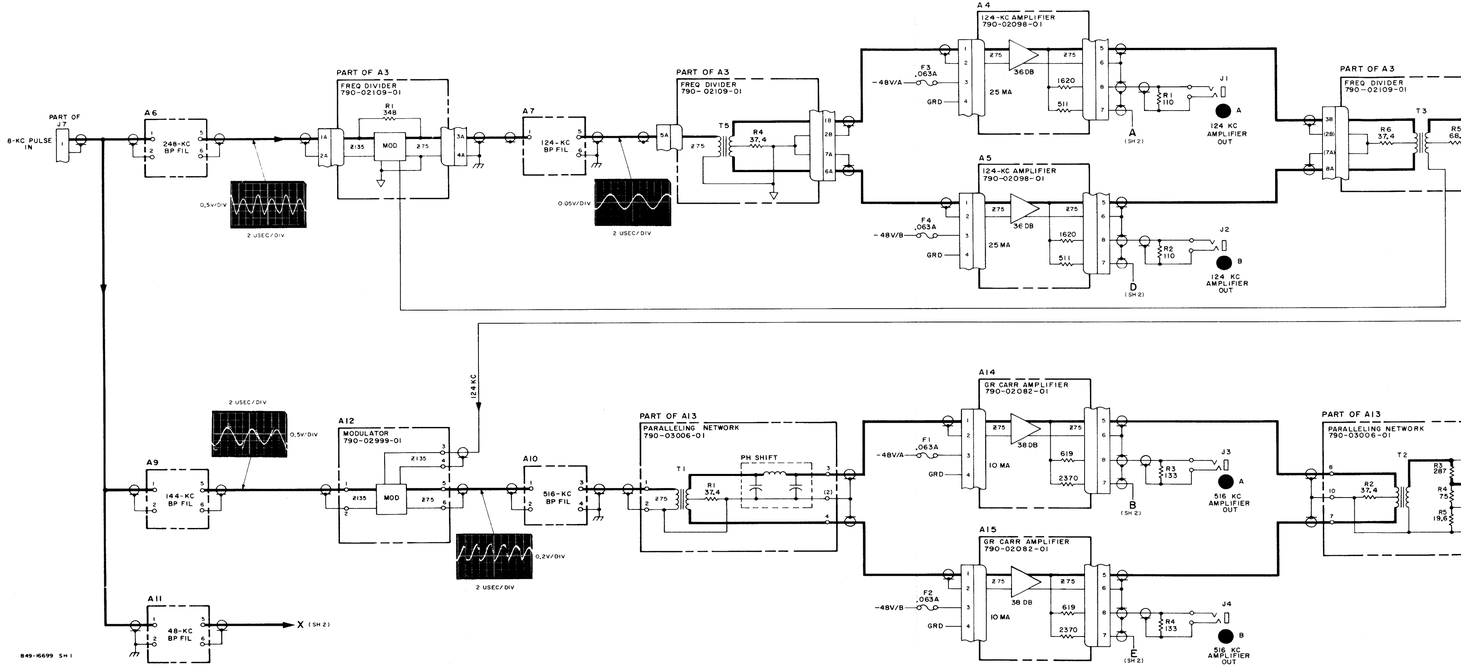


Figure 19. Group Carrier Generator Shelf, Schematic Diagram (Sheet 2 of 2)


PART OF J7
8-KC PULSE IN
A6
248-KC BP FIL
0.5V/DIV
2 USEC/DIV
PART OF A3
FREQ DIVIDER 790-02109-01
R1 348
#135
MOD
275
A7
124-KC BP FIL
0.05V/DIV
2 USEC/DIV
PART OF A3
FREQ DIVIDER 790-02109-01
T5
275
R4 37.4
A4
124-KC AMPLIFIER 790-02098-01
F3 .063A
-48V/A
GRD
25 MA
275
36DB
1620
511
R1 110
J1
A
124 KC AMPLIFIER OUT
A (SH 2)
A5
124-KC AMPLIFIER 790-02098-01
F4 .063A
-48V/B
GRD
25 MA
36 DB
1620
511
R2 110
J2
B
124 KC AMPLIFIER OUT
D (SH 2)
PART OF A3
FREQ DIVIDER 790-02109-01
T3
R6 37.4
R5 68.1
124KC
A9
144-KC BP FIL
2 USEC/DIV
0.5V/DIV
A12
MODULATOR 790-02999-01
#135
MOD
275
A10
516-KC BP FIL
0.2V/DIV
2 USEC/DIV
PART OF A13
PARALLELING NETWORK 790-03006-01
T1
R1 37.4
PH SHIFT
121
A14
GR CARR AMPLIFIER 790-02082-01
F1 .063A
-48V/A
GRD
10 MA
38DB
619
2370
R3 133
J3
A
516 KC AMPLIFIER OUT
B (SH 2)
A15
GR CARR AMPLIFIER 790-02082-01
F2 .063A
-48V/B
GRD
10 MA
38 DB
619
2370
R4 133
J4
B
516 KC AMPLIFIER OUT
E (SH 2)
PART OF A13
PARALLELING NETWORK 790-03006-01
T2
R3 287
R4 75
R5 19.6
R2 37.4
A11
48-KC BP FIL
X (SH 2)
849-K699 SH 1

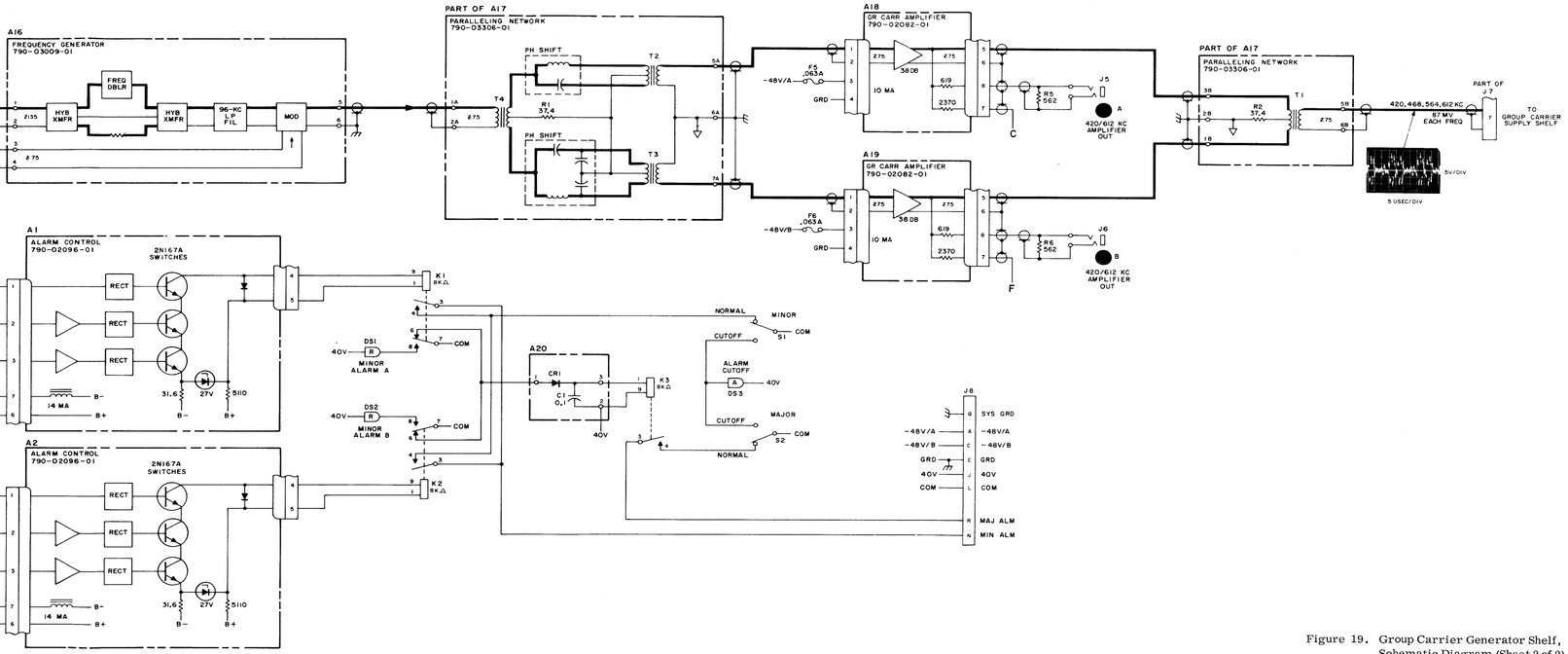
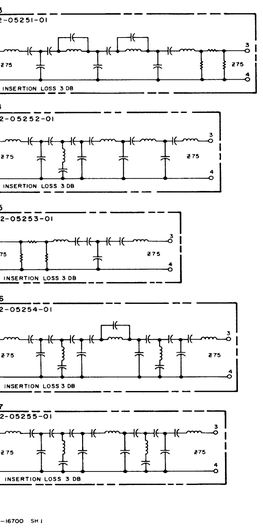
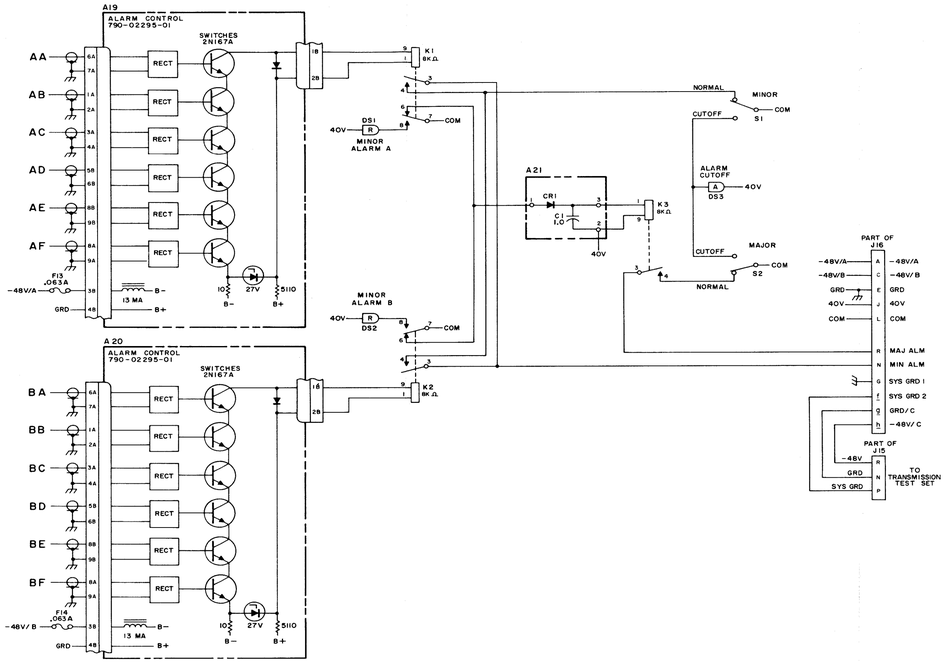


Figure 19. Group Carrier Generator Shelf, Schematic Diagram (Sheet 2 of 2)





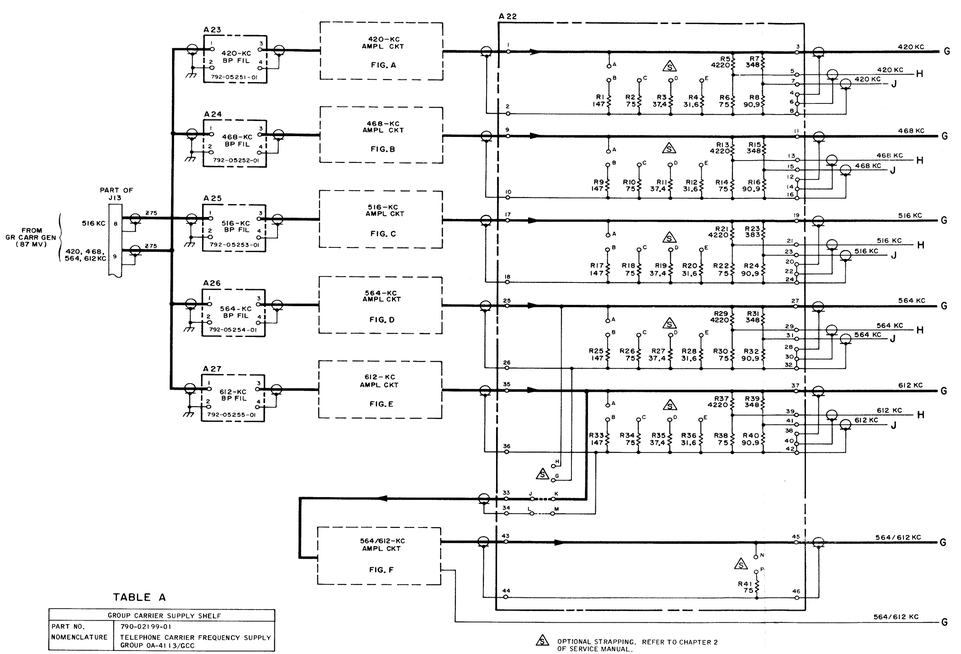


TABLE A

GROUP CARRIER SUPPLY SHELF	
PART NO.	790-02199-01
NOMENCLATURE	TELEPHONE CARRIER FREQUENCY SUPPLY GROUP OA-4113/GCC

Figure 20. Group Carrier Supply Shelf, Schematic Diagram (Sheet 1 of 2)

FIG. A

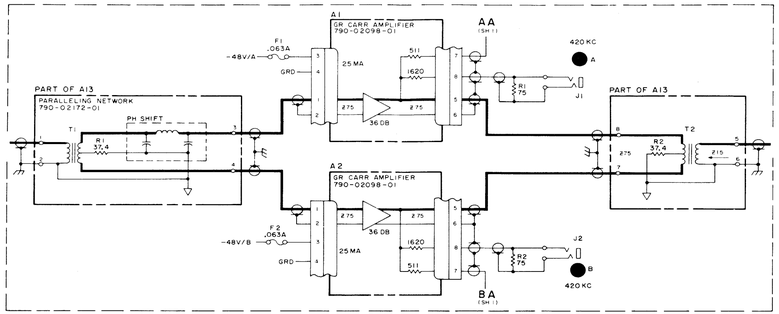


FIG. B

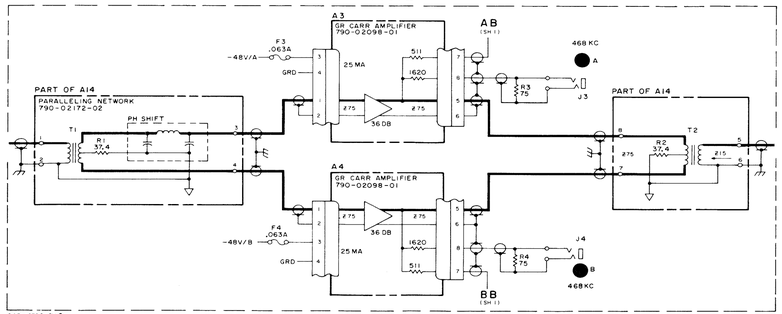


FIG. C

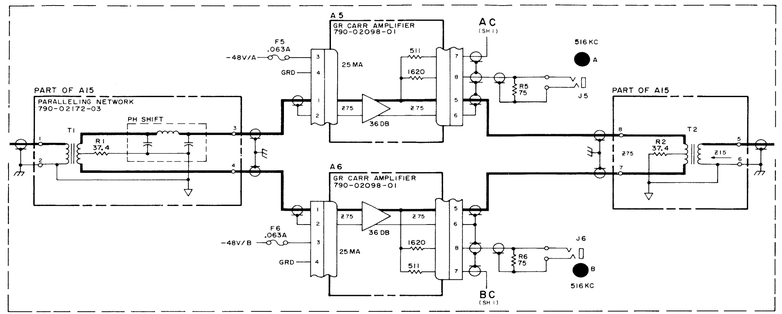


FIG. D

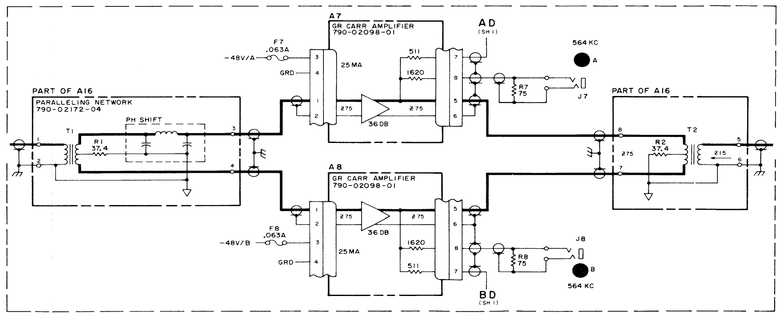


FIG. E

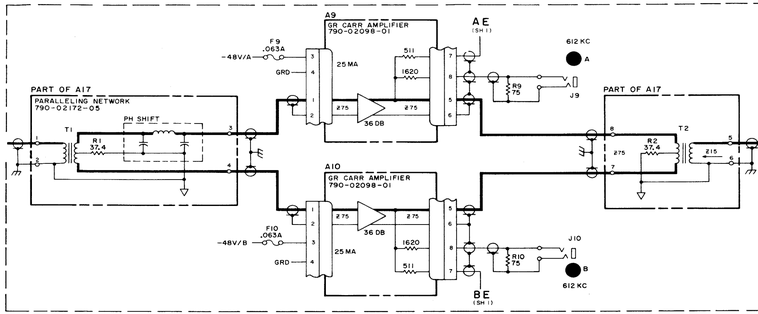


FIG. F

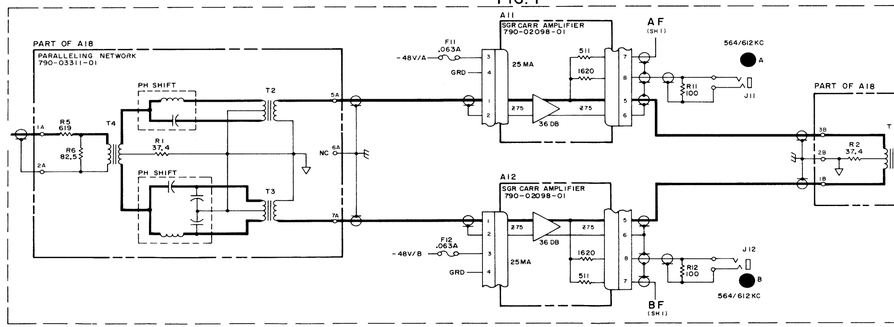


Figure 20. Group C
Schemat

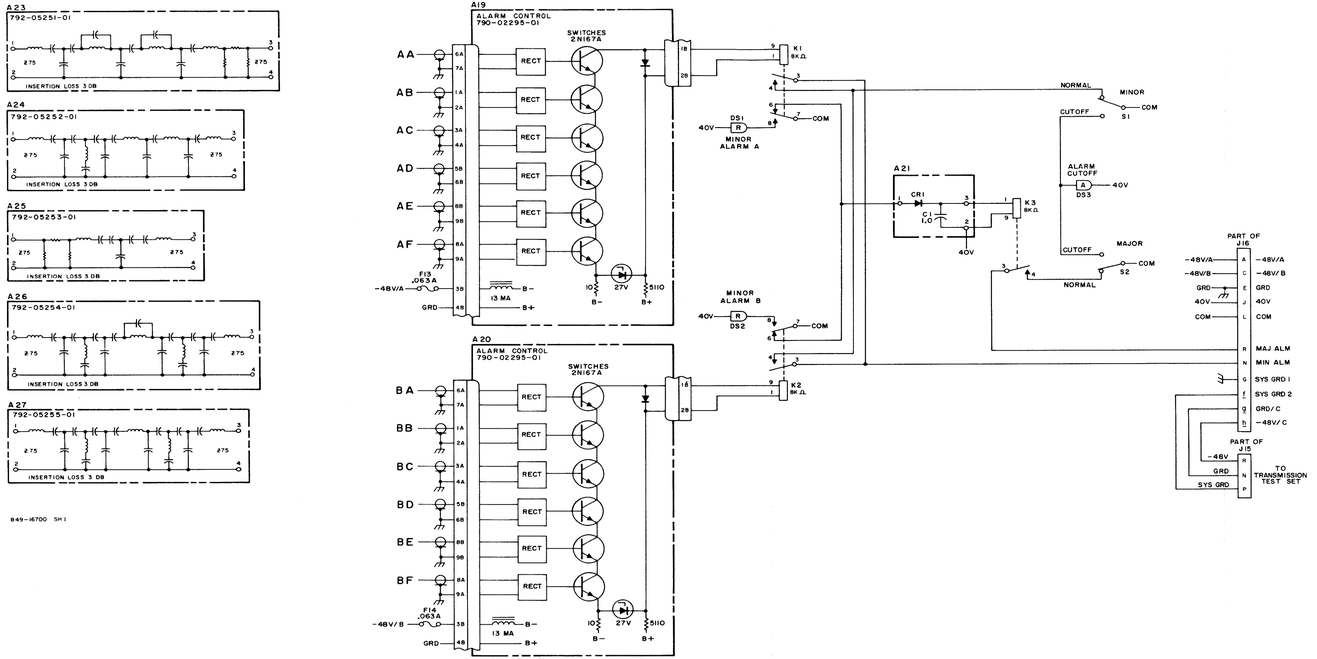


TABLE A

GROUP CARRIER SUPPLY SHELF	
PART NO.	790-02199-01
NOMENCLATURE	TELEPHONE CARRIER FREQUENCY SUPPLY GROUP OA-4113/GCC

FIG. C

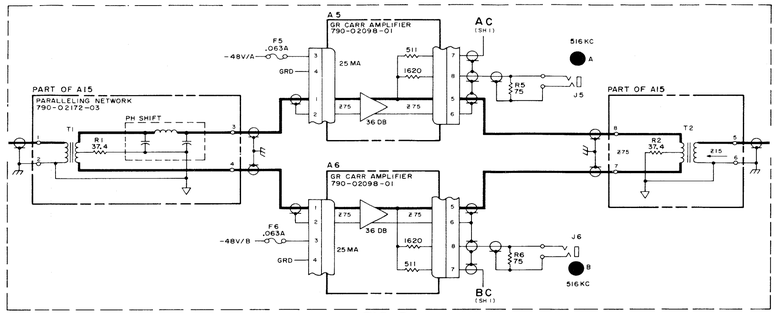


FIG. D

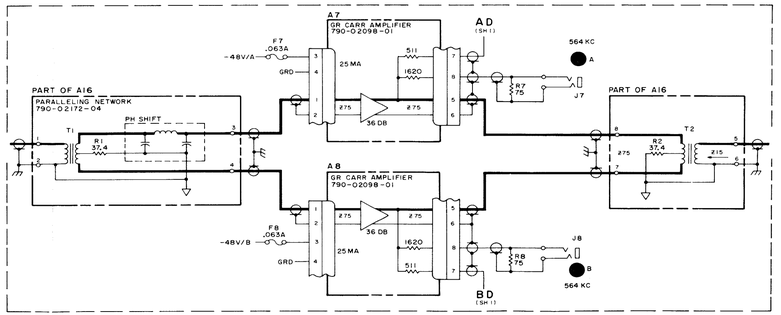


FIG. E

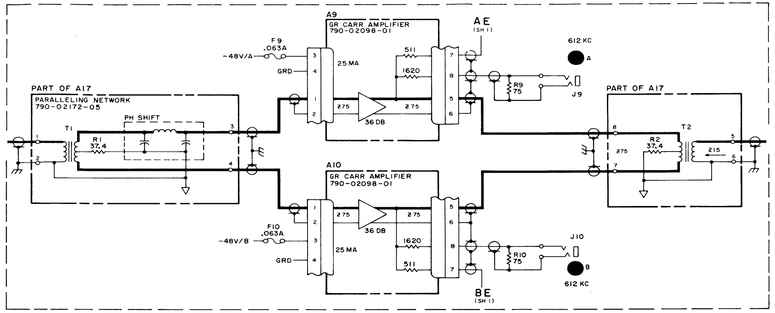


FIG. F

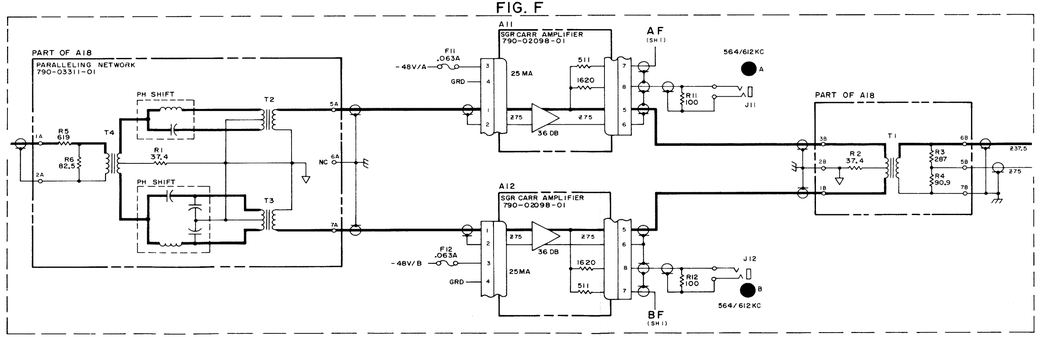
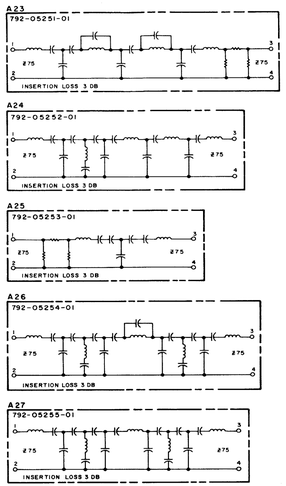
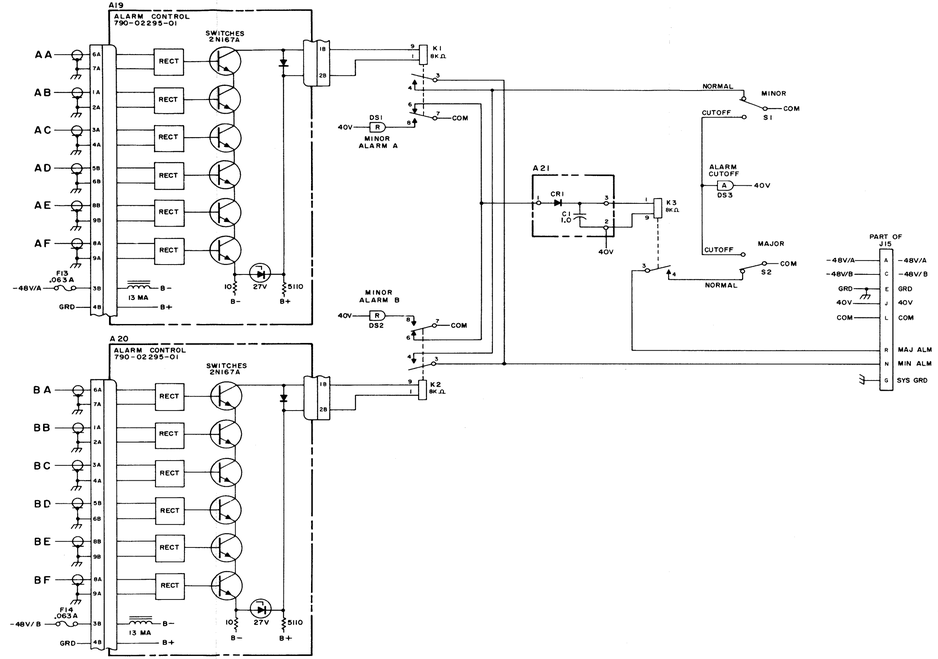


Figure 20. Group Carrier Supply Shelf, Schematic Diagram (Sheet 2 of 2)



849-16701 SH 1



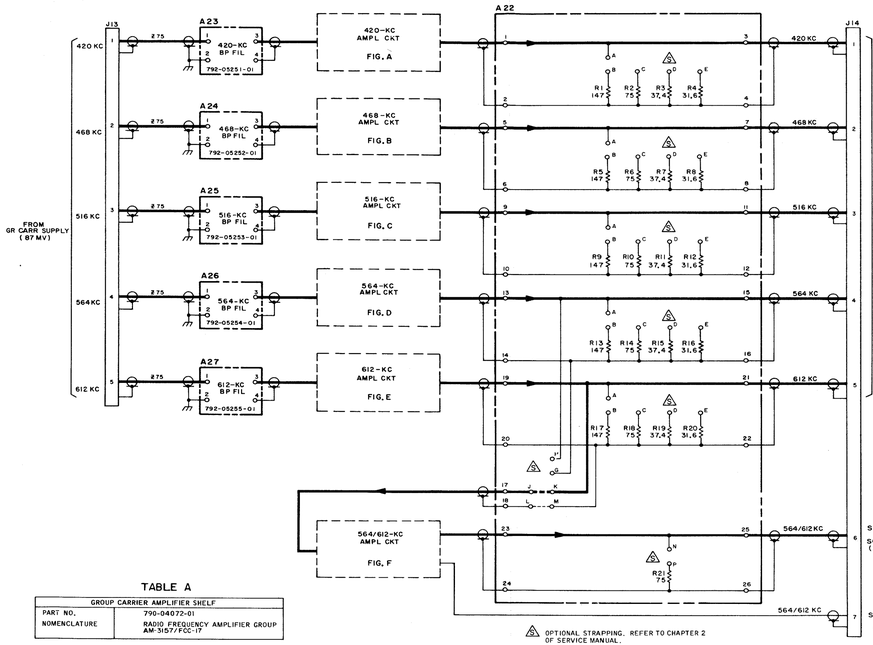


TABLE A

GROUP CARRIER AMPLIFIER SHELF	
PART NO.	790-04072-01
NOMENCLATURE	RADIO FREQUENCY AMPLIFIER GROUP AM-3157/FCC-17

Figure 21. Group Carrier Amplifier Shelf, Schematic Diagram (Sheet 1 of 2)

FIG. A

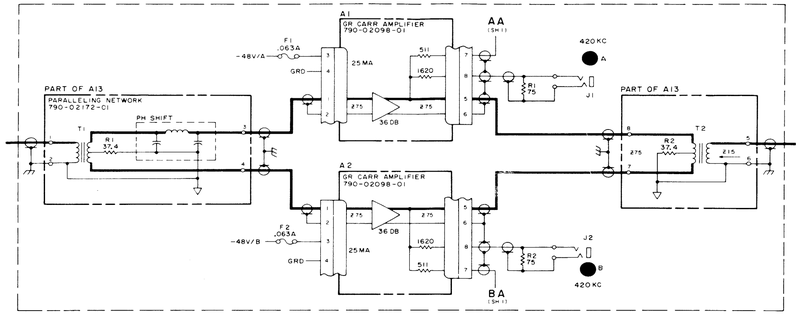


FIG. B

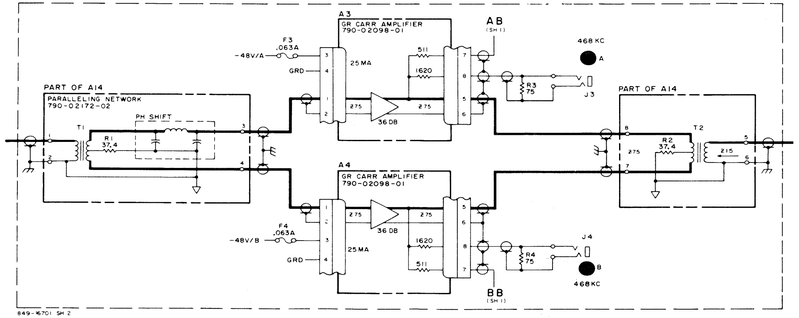


FIG. C

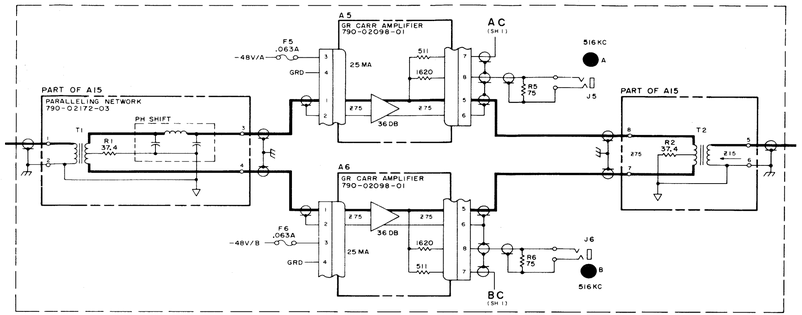


FIG. D

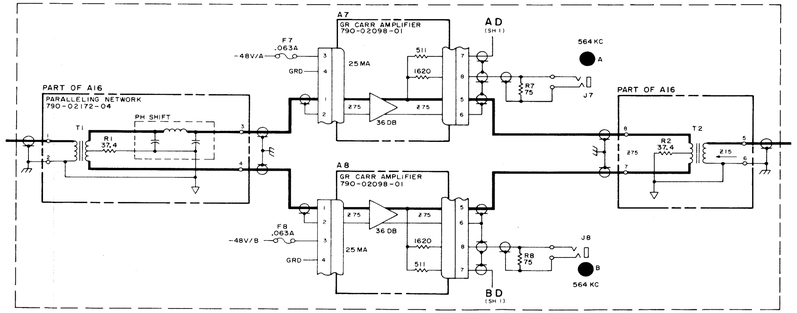


FIG. E

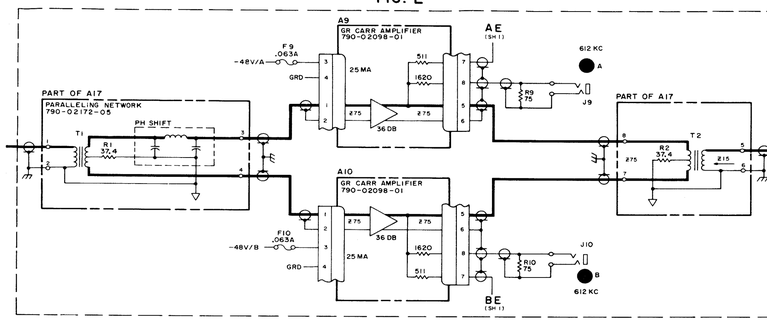


FIG. F

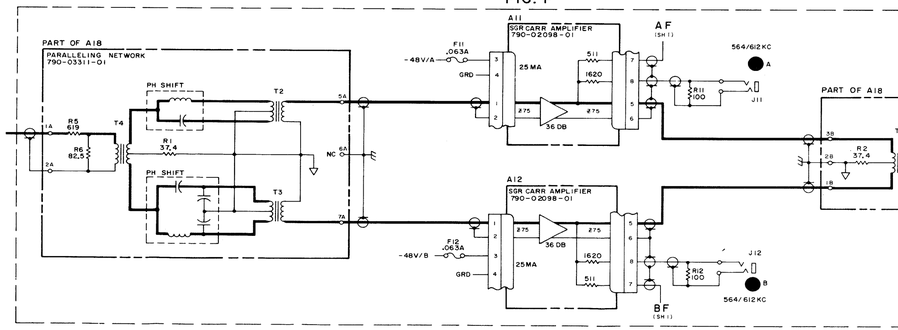
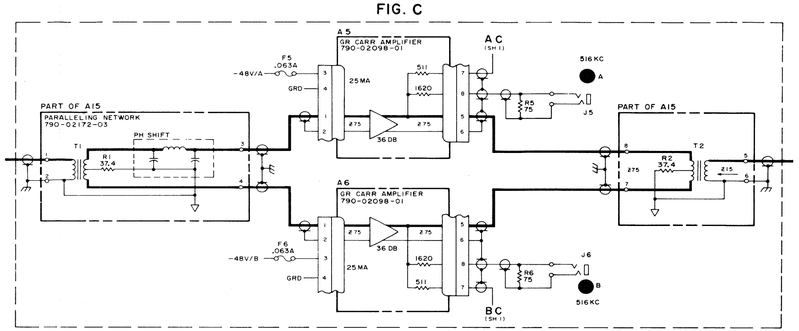
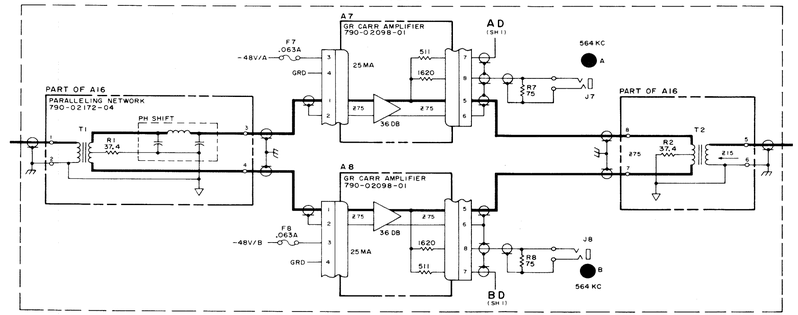
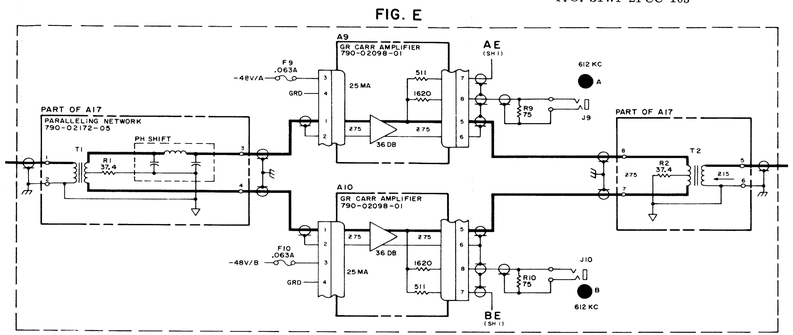


Figure 21. Group C
Schema







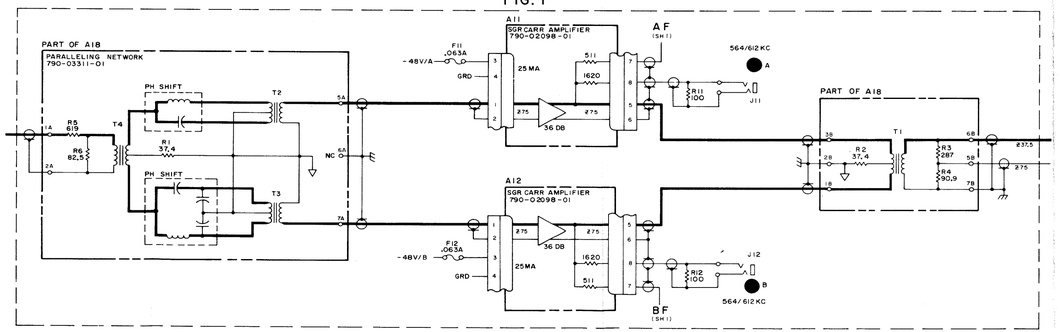
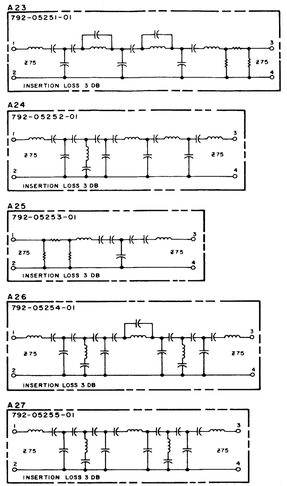
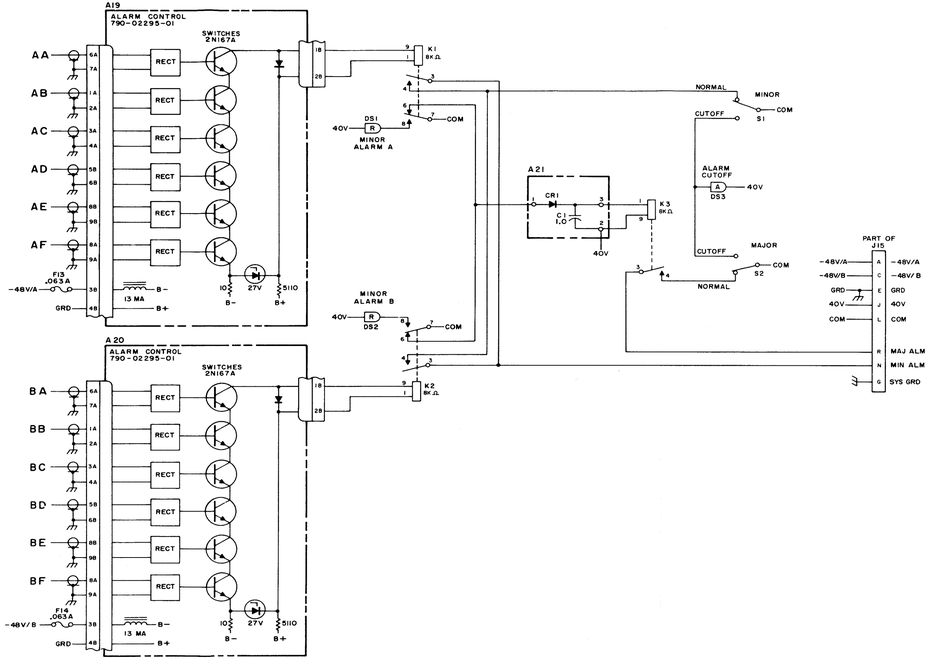


Figure 21. Group Carrier Amplifier Shelf, Schematic Diagram (Sheet 2 of 2)



849-16701 SH 1



GROUP CARRIER	
PART NO.	7
NOMENCLATURE	R A

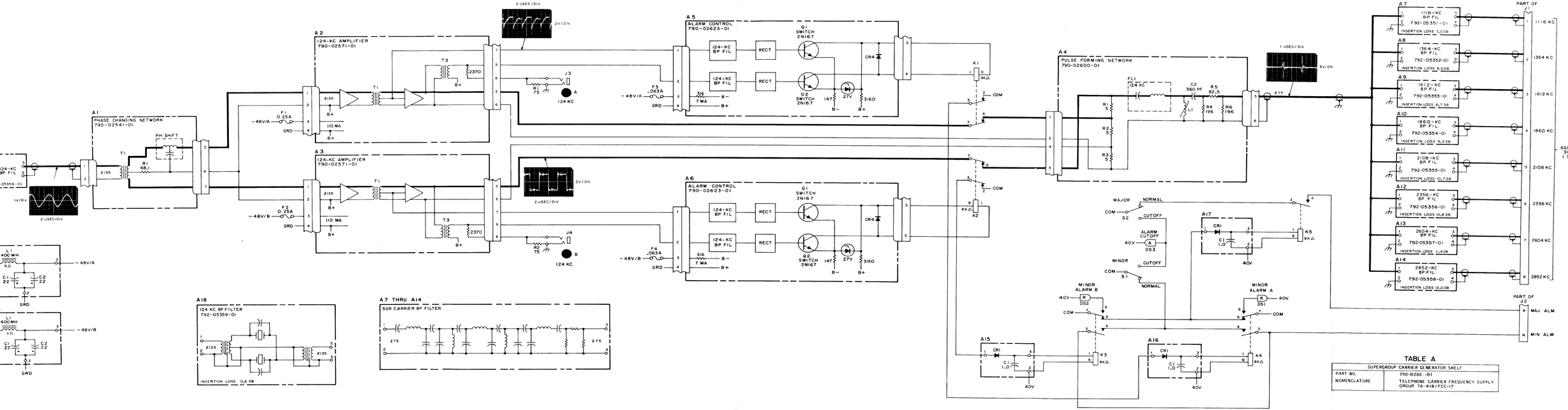


TABLE A

SUPERGROUP CARRIER GENERATOR SHELF	
PART NO.	790-0288-01
NOMENCLATURE	TELEPHONE CARRIER FREQUENCY SUPPLY GROUP TA-418/FCC-17

Figure 22. Supergroup Carrier Generator Shelf, Schematic Diagram

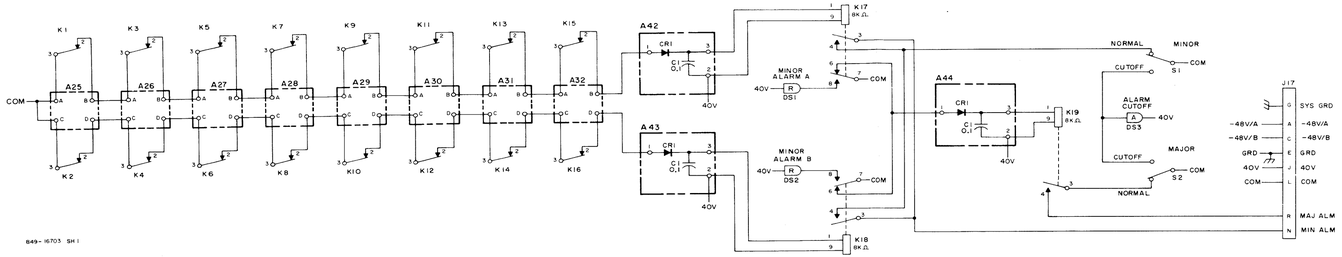
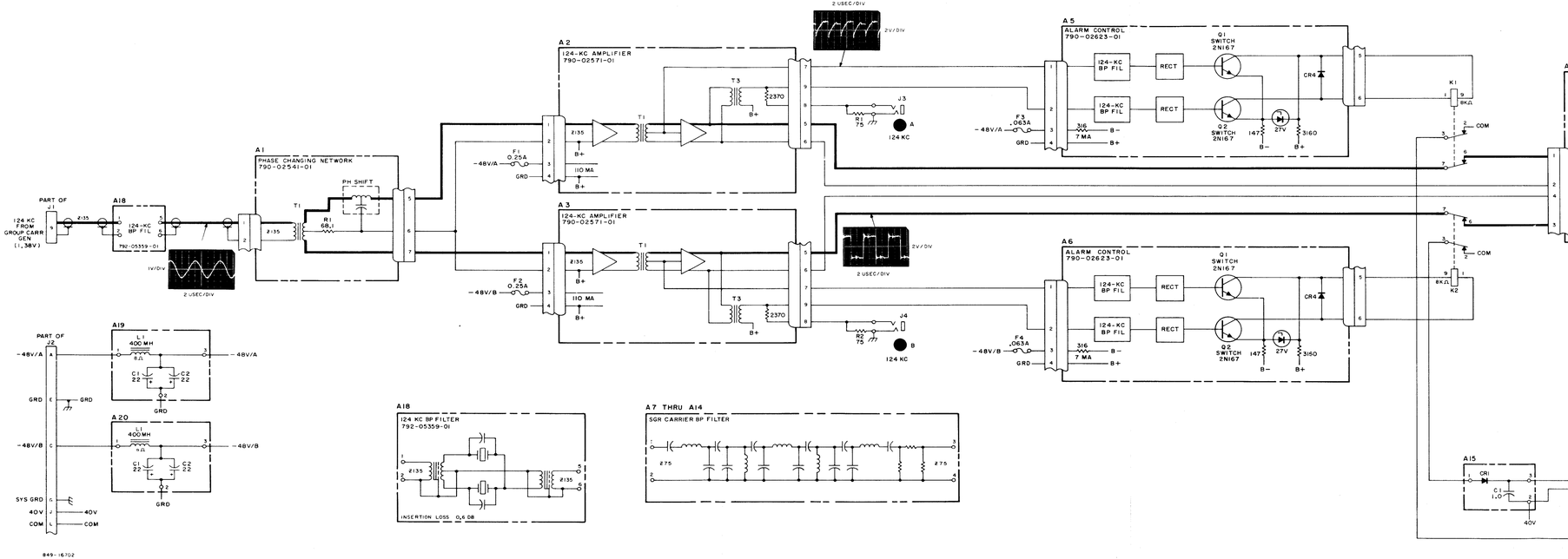


TABLE A

SUPERGROUP CARRIER SUPPLY SHELF	
PART NO.	790-02880-01
NOMENCLATURE	RADIO FREQUENCY AMPLIFIER GROUP AM-2995/FCC-17

Figure 23. Supergroup Carrier Supply Shelf, Schematic Diagram (Sheet 1 of 3)


PART OF J1
124 KC FROM GROUP CARR GEN (1.38V)
Z135
A18
124-KC BP FIL
PRI-05359-01
1V/DIV
2 USEC/DIV
A1
PHASE CHANGING NETWORK 790-02541-01
T1
R1 68Ω
PH SHIFT
F1 0.25A
-48V/A
GRD
110 MA
B+
A2
124-KC AMPLIFIER 790-02571-01
T3
237Ω
J3
R1 75
A
124 KC
2 USEC/DIV
2V/DIV
A3
124-KC AMPLIFIER 790-02571-01
F2 0.25A
-48V/B
J4
R2 75
B
A5
ALARM CONTROL 790-02623-01
124-KC BP FIL
RECT
Q1 SWITCH 2N167
Q2 SWITCH 2N167
CR4
147Ω
27V
316Ω
7 MA
B-
316Ω
K1
8KΩ
COM
A6
ALARM CONTROL 790-02623-01
F3 .063A
F4 .063A
K2
A19
PART OF J2
L1 400 MH
8.2Ω
C1 22
C2 22
-48V/A
GRD
A20
-48V/B
SYS GRD
40V
COM
849-16702
A18
124 KC BP FILTER 792-05359-01
INSERTION LOSS 0.6 DB
A7 THRU A14
5GR CARRIER BP FILTER
275Ω
A15
CR1
C1 1.0
40V

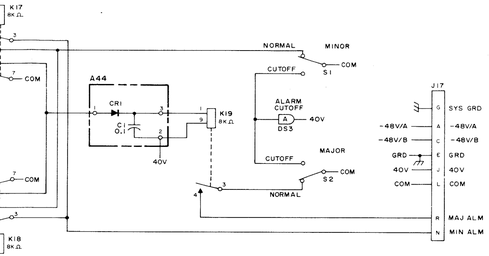
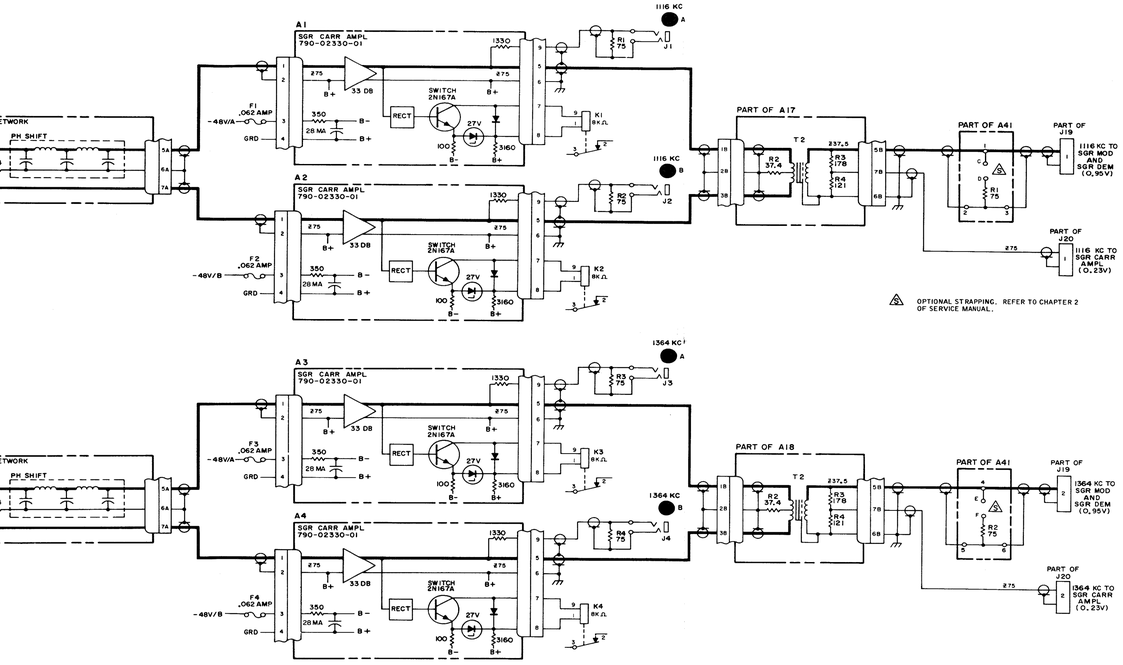


TABLE A

SUPERGROUP CARRIER SUPPLY SHELF	
PART NO.	790-02880-01
NOMENCLATURE	RADIO FREQUENCY AMPLIFIER GROUP AM-2995/FCC-17

Figure 23. Supergroup Carrier Supply Shelf, Schematic Diagram (Sheet 1 of 3)



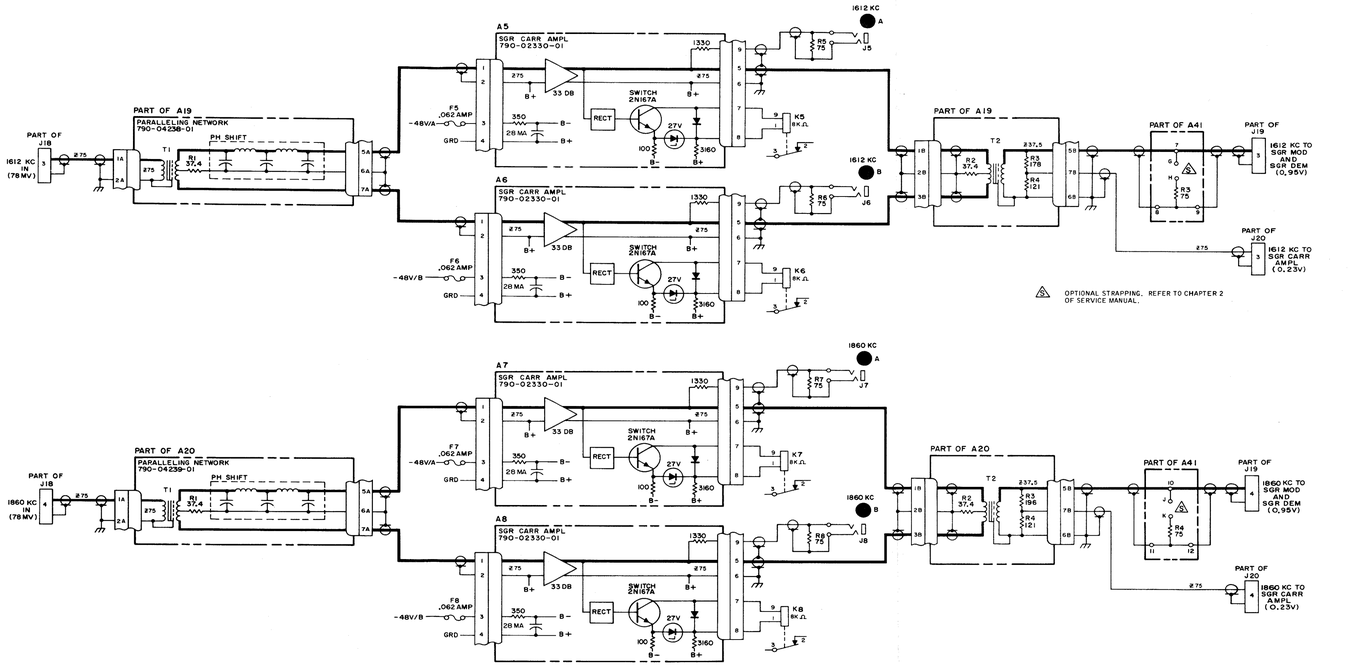
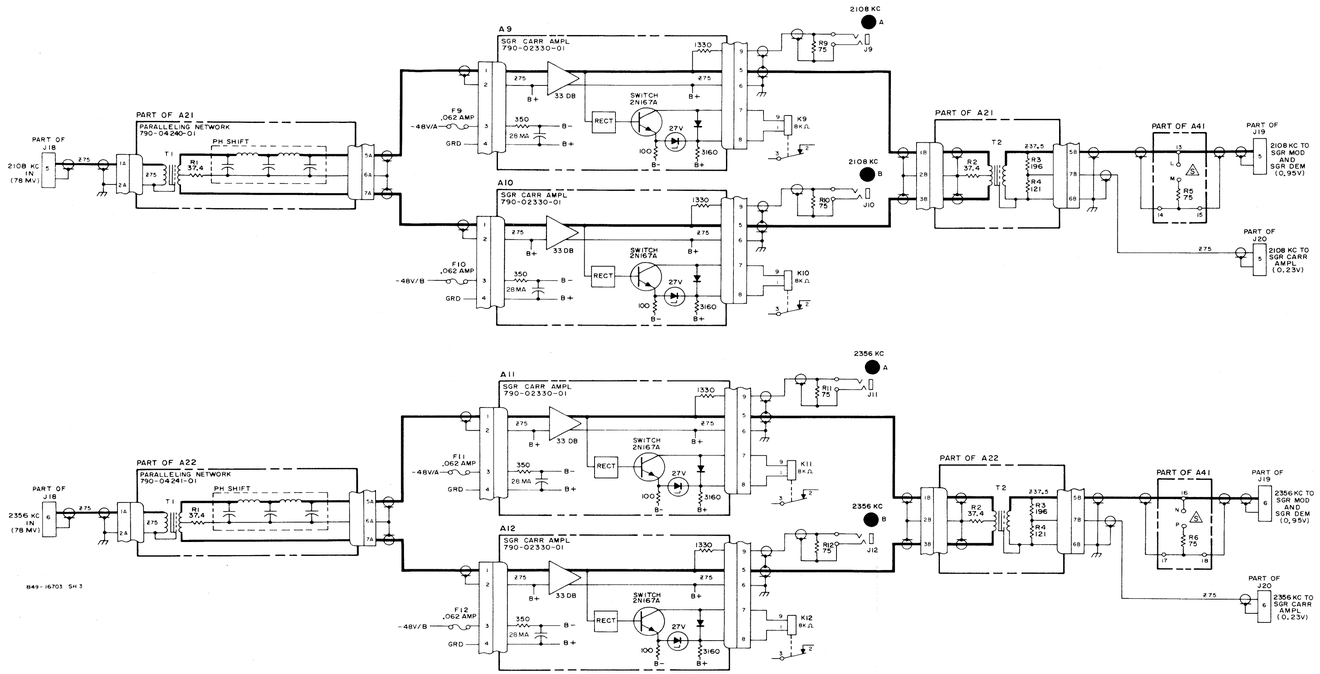


Figure 23. Supergroup Carrier Supply Shelf, Schematic Diagram (Sheet 2 of 3)


2108 KC
A
2108 KC
B
A9
SGR CARR AMPL
790-02330-01
A10
SGR CARR AMPL
790-02330-01
PART OF A21
PARALLELING NETWORK
790-04240-01
PH SHIFT
PART OF J18
2108 KC IN (78 MV)
F9 .062 AMP
-48V/A
F10 .062 AMP
-48V/B
GRD
33 DB
SWITCH 2N167A
RECT
27V
PART OF A21
PART OF A41
PART OF J19
2108 KC TO SGR MOD AND SGR DEM (0,95V)
PART OF J20
2108 KC TO SGR CARR AMPL (0,23V)
2356 KC
A
2356 KC
B
A11
SGR CARR AMPL
790-02330-01
A12
SGR CARR AMPL
790-02330-01
PART OF A22
PARALLELING NETWORK
790-04241-01
PH SHIFT
PART OF J18
2356 KC IN (78 MV)
F11 .062 AMP
-48V/A
F12 .062 AMP
-48V/B
GRD
33 DB
SWITCH 2N167A
RECT
27V
PART OF A22
PART OF A41
PART OF J19
2356 KC TO SGR MOD AND SGR DEM (0,95V)
PART OF J20
2356 KC TO SGR CARR AMPL (0,23V)
849-16703 SH 3

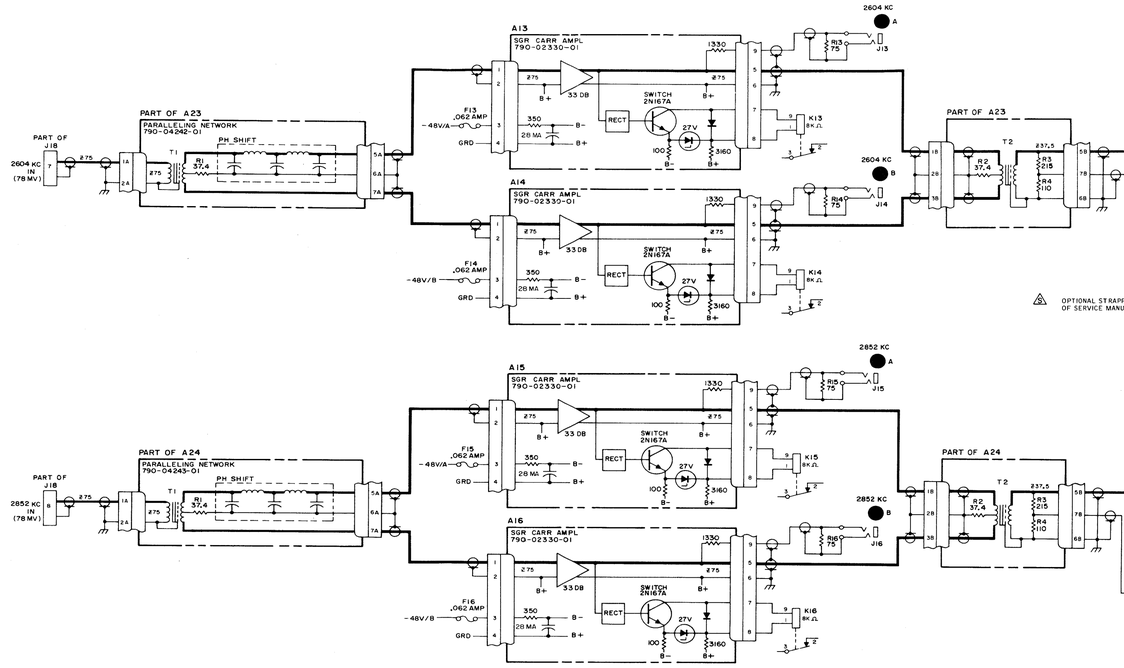
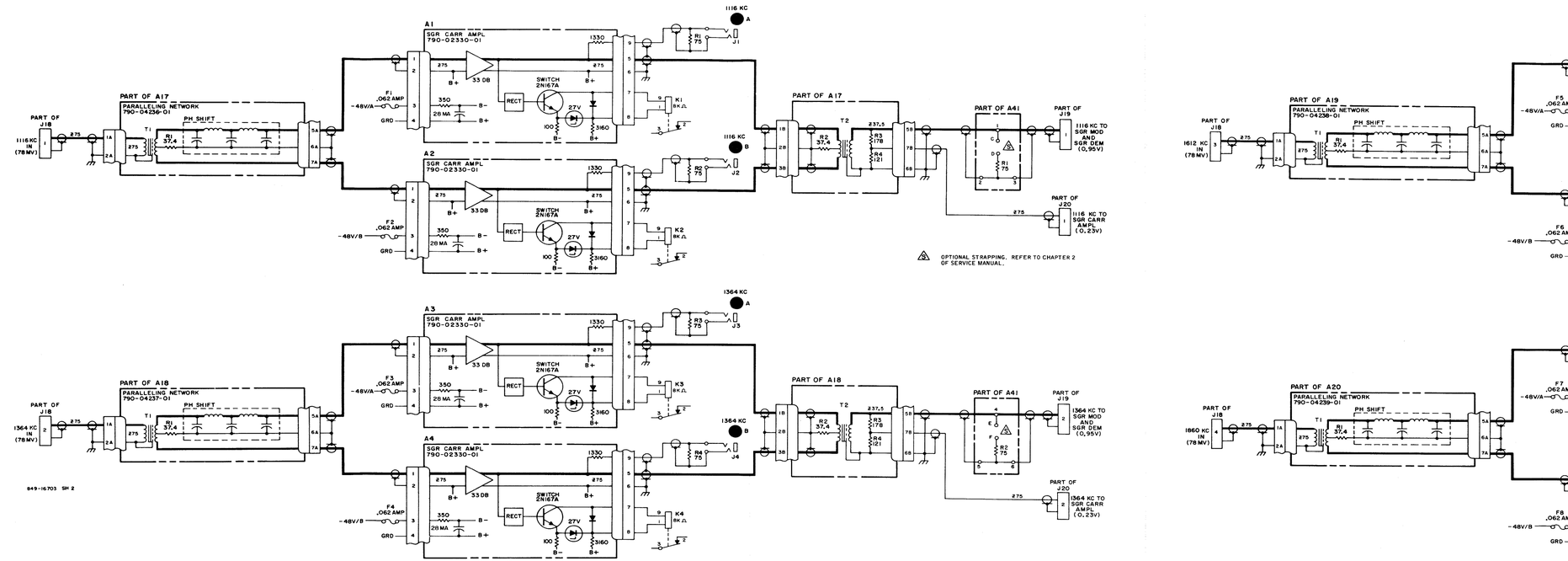

2604 KC
A
2604 KC
B
A13
SGR CARR AMPL
790-02330-01
A14
SGR CARR AMPL
790-02330-01
PART OF A23
PARALLELING NETWORK
790-04242-01
PH SHIFT
PART OF J18
2604 KC IN (78 MV)
F13 .062 AMP
-48V/A
F14 .062 AMP
-48V/B
GRD
33 DB
SWITCH 2N167A
RECT
27V
PART OF A23
OPTIONAL STRAPP
OF SERVICE MANU
2852 KC
A
2852 KC
B
A15
SGR CARR AMPL
790-02330-01
A16
SGR CARR AMPL
790-02330-01
PART OF A24
PARALLELING NETWORK
790-04243-01
PH SHIFT
PART OF J18
2852 KC IN (78 MV)
F15 .062 AMP
-48V/A
F16 .062 AMP
-48V/B
GRD
33 DB
SWITCH 2N167A
RECT
27V
PART OF A24

Figure 23. S


A1
SGR CARR AMPL
790-02330-01
A2
SGR CARR AMPL
790-02330-01
A3
SGR CARR AMPL
790-02330-01
A4
SGR CARR AMPL
790-02330-01
PART OF A17
PARALLELING NETWORK
790-04236-01
PART OF A18
PARALLELING NETWORK
790-04237-01
PART OF A19
PARALLELING NETWORK
790-04238-01
PART OF A20
PARALLELING NETWORK
790-04239-01
PH SHIFT
SWITCH 2N167A
33 DB
RECT
27V
PART OF J18
1116 KC IN (78 MV)
1364 KC IN (78 MV)
1612 KC IN (78 MV)
1860 KC IN (78 MV)
1116 KC A
1116 KC B
1364 KC A
1364 KC B
PART OF A41
PART OF J19
1116 KC TO SGR MOD AND SGR DEM (0,95V)
PART OF J20
1116 KC TO SGR CARR AMPL (0,23V)
1364 KC TO SGR MOD AND SGR DEM (0,95V)
1364 KC TO SGR CARR AMPL (0,23V)
F1 .062 AMP -48V/A GRD
F2 .062 AMP -48V/B GRD
F3 .062 AMP -48V/A GRD
F4 .062 AMP -48V/B GRD
F5 .062 AMP -48V/A GRD
F6 .062 AMP -48V/B GRD
F7 .062 AMP -48V/A GRD
F8 .062 AMP -48V/B GRD
OPTIONAL STRAPPING, REFER TO CHAPTER 2 OF SERVICE MANUAL.
849-16703 SH 2

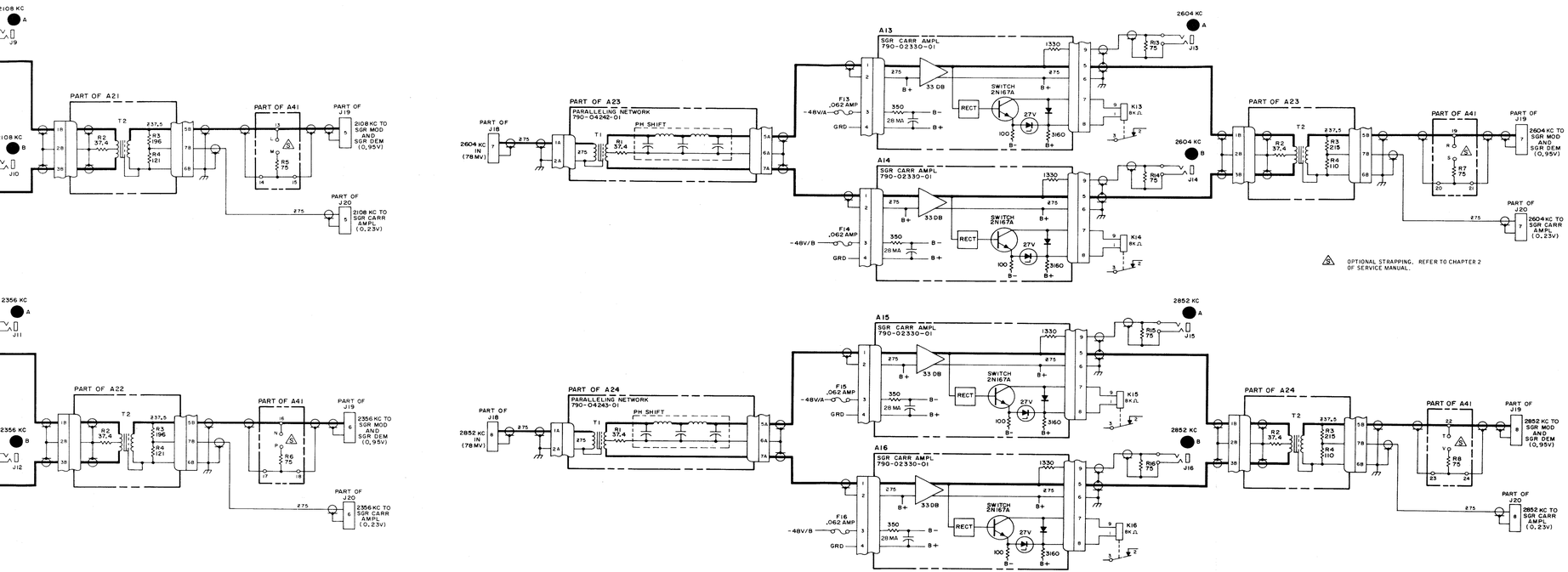
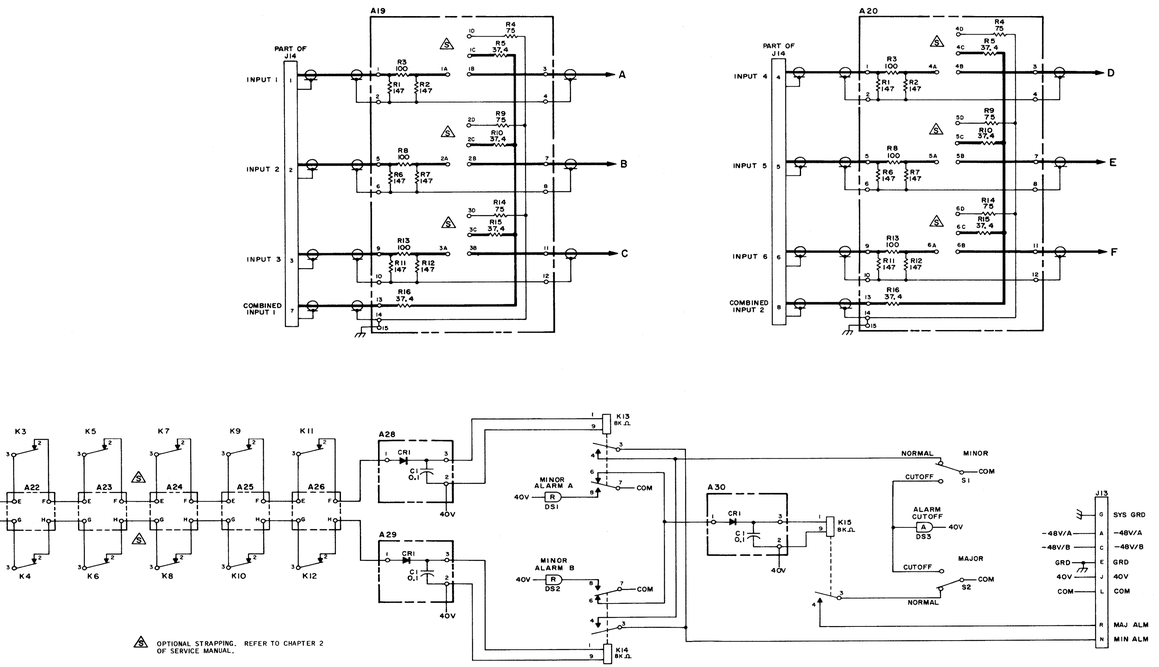


Figure 23. Supergroup Carrier Supply Shelf, Schematic Diagram (Sheet 3 of 3)



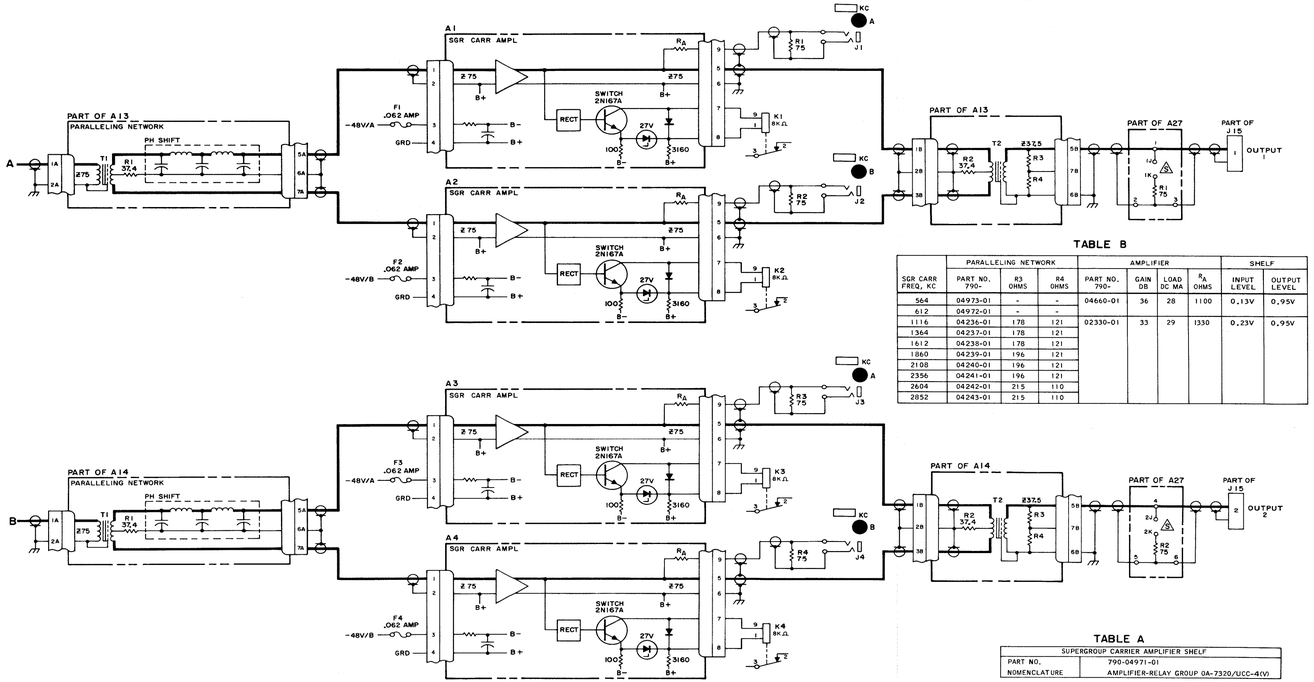


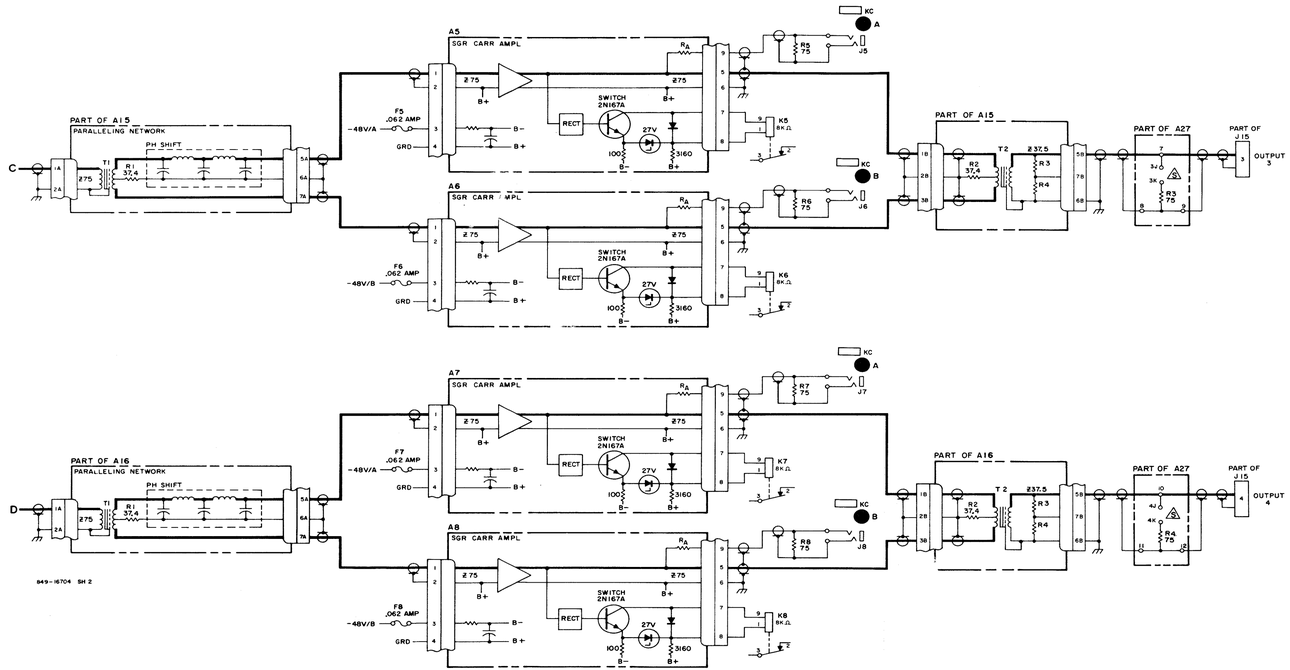
TABLE B

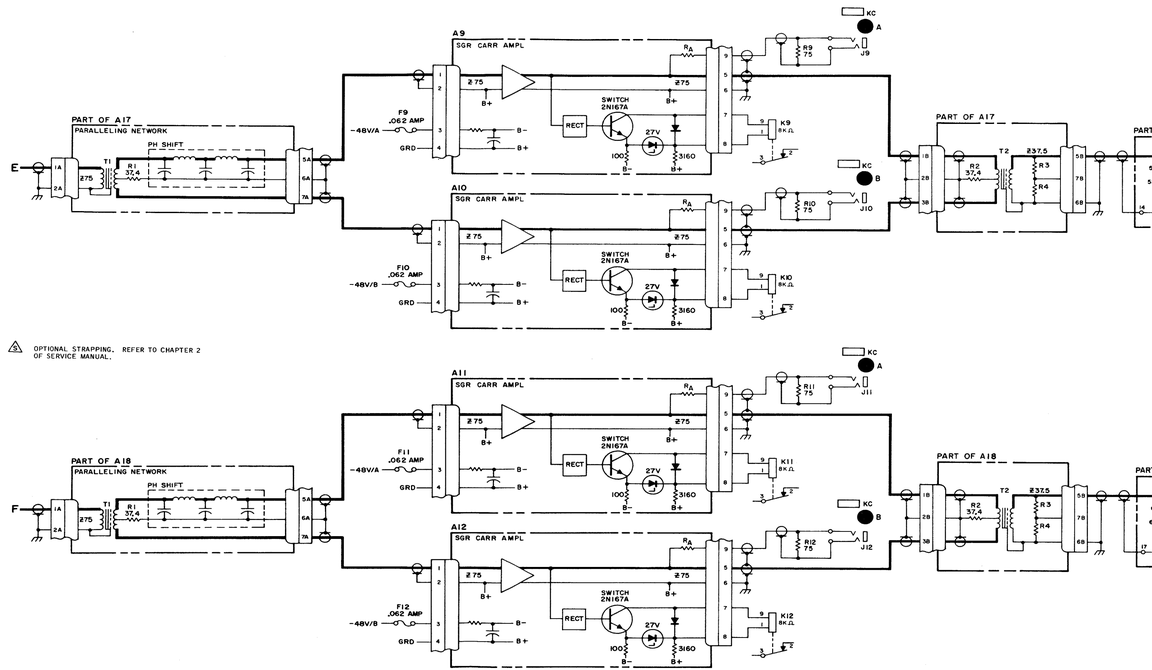
SGR CARR FREQ, KC	PARALLELING NETWORK PART NO. 790-	PARALLELING NETWORK R3 OHMS	PARALLELING NETWORK R4 OHMS	AMPLIFIER PART NO. 790-	AMPLIFIER GAIN DB	AMPLIFIER LOAD DC MA	AMPLIFIER R_A OHMS	SHELF INPUT LEVEL	SHELF OUTPUT LEVEL
564	04973-01	-	-	04660-01	36	28	1100	0,13V	0,95V
612	04972-01	-	-						
1116	04236-01	178	121	02330-01	33	29	1330	0,23V	0,95V
1364	04237-01	178	121						
1612	04238-01	178	121						
1860	04239-01	196	121						
2108	04240-01	196	121						
2356	04241-01	196	121						
2604	04242-01	215	110						
2852	04243-01	215	110						

TABLE A

SUPERGROUP CARRIER AMPLIFIER SHELF	
PART NO.	790-04971-01
NOMENCLATURE	AMPLIFIER-RELAY GROUP 0A-7320/UCC-4(V)

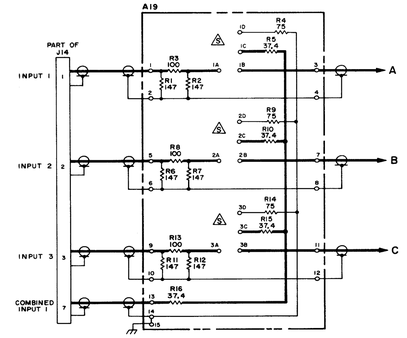
Figure 24. Supergroup Carrier Amplifier Shelf, Schematic Diagram (Sheet 1 of 2)

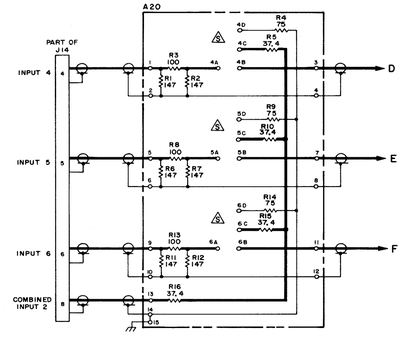


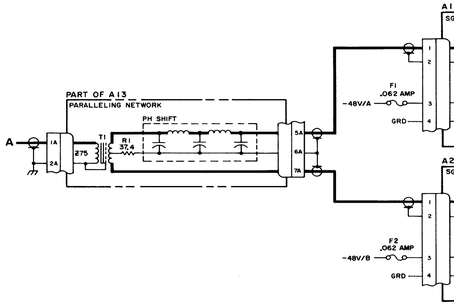


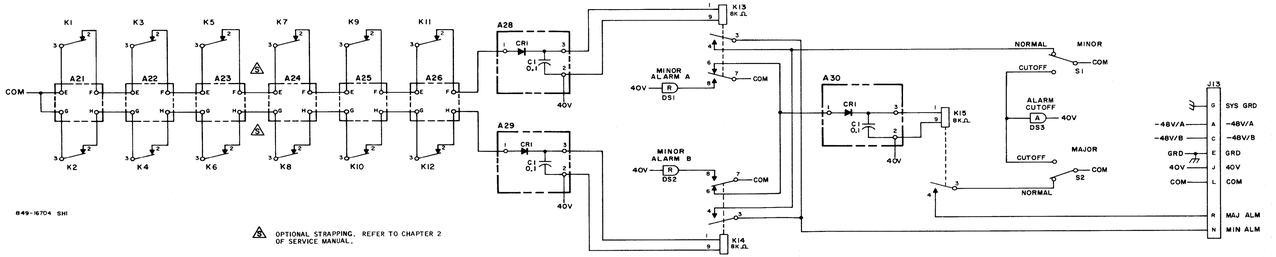
⚠ OPTIONAL STRAPPING. REFER TO CHAPTER 2 OF SERVICE MANUAL.

Figure 24. Supergroup Ca
Schematic Dia

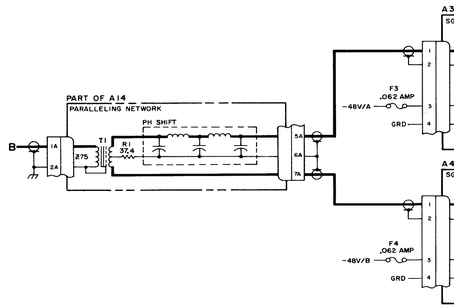








5 OPTIONAL STRAPPING. REFER TO CHAPTER 2 OF SERVICE MANUAL.



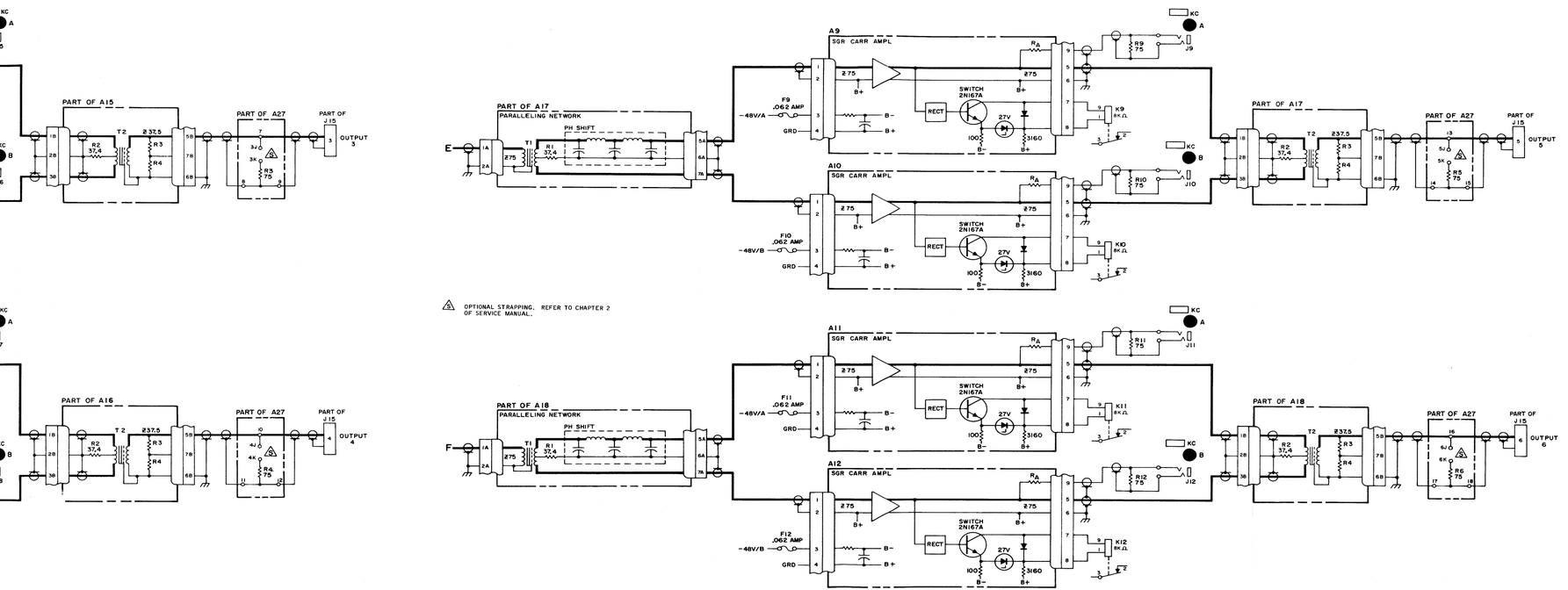


Figure 24. Supergroup Carrier Amplifier Shelf, Schematic Diagram (Sheet 2 of 2)

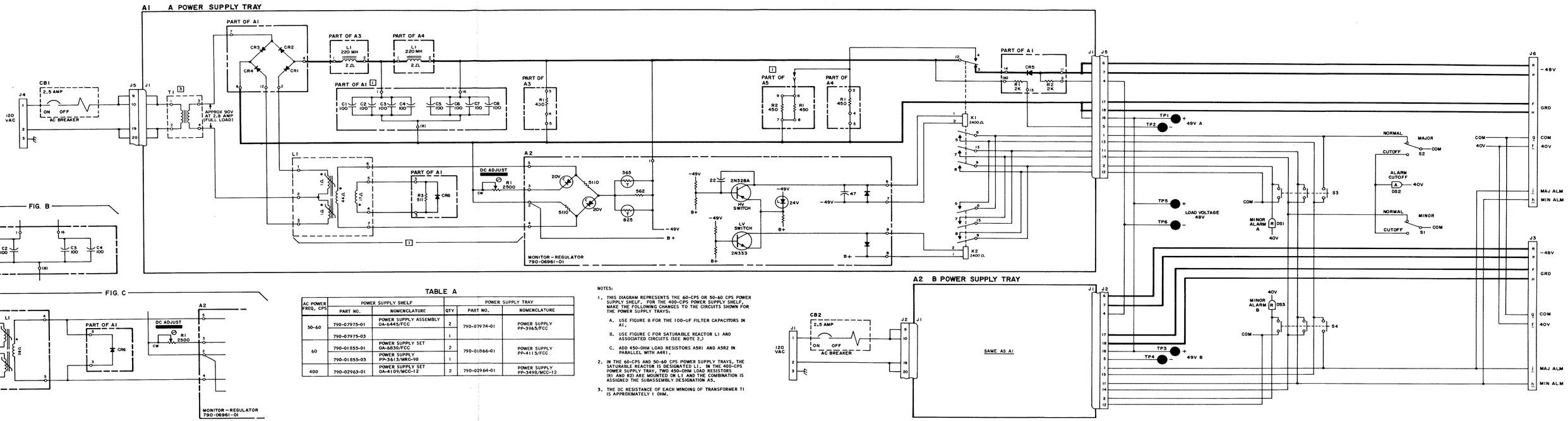


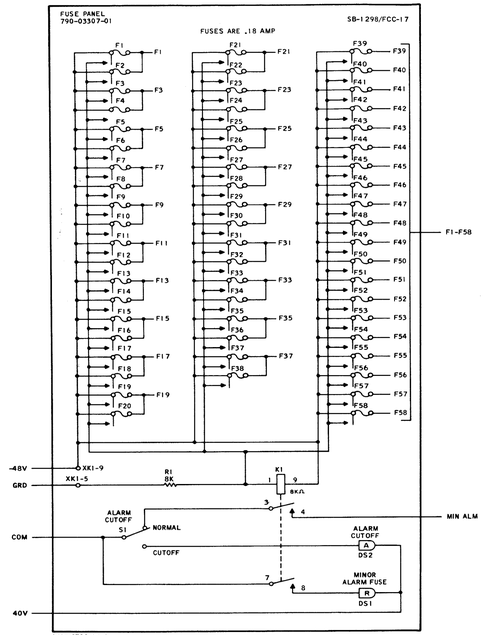
TABLE A

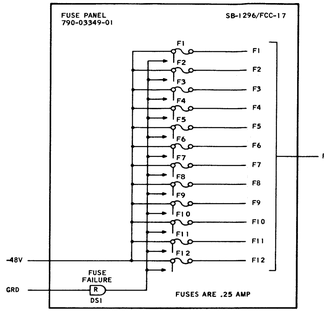
AC POWER FREQ, CPS	POWER SUPPLY SHELF			POWER SUPPLY TRAY	
	PART NO.	NOMENCLATURE	QTY	PART NO.	NOMENCLATURE
50-60	790-07975-01	POWER SUPPLY ASSEMBLY 0A-6445/FCC	2	790-07974-01	POWER SUPPLY PP-3965/FCC
	790-07975-03		1		
60	790-01855-01	POWER SUPPLY SET 0A-6830/FCC	2	790-01864-01	POWER SUPPLY PP-4115/FCC
	790-01855-03	POWER SUPPLY PP-3613/MRC-98	1		
400	790-02963-01	POWER SUPPLY SET 0A-4109/MCC-12	2	790-02964-01	POWER SUPPLY PP-3498/MCC-12

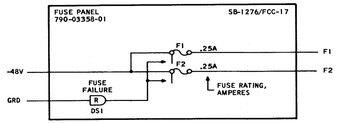
NOTES:

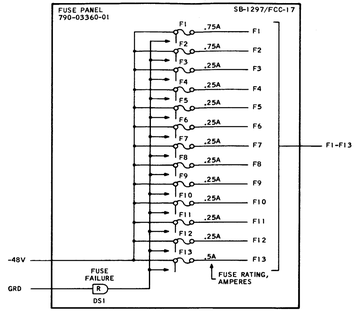
1. THIS DIAGRAM REPRESENTS THE 60-CPS OR 50-60 CPS POWER SUPPLY SHELF. FOR THE 400-CPS POWER SUPPLY SHELF, MAKE THE FOLLOWING CHANGES TO THE CIRCUITS SHOWN FOR THE POWER SUPPLY TRAYS:
   A. USE FIGURE B FOR THE 100-UF FILTER CAPACITORS IN A1.
   B. USE FIGURE C FOR SATURABLE REACTOR L1 AND ASSOCIATED CIRCUITS (SEE NOTE 2.)
   C. ADD 450-OHM LOAD RESISTORS A5R1 AND A5R2 IN PARALLEL WITH A4R1.
2. IN THE 60-CPS AND 50-60 CPS POWER SUPPLY TRAYS, THE SATURABLE REACTOR IS DESIGNATED L1. IN THE 400-CPS POWER SUPPLY TRAY, TWO 450-OHM LOAD RESISTORS (R1 AND R2) ARE MOUNTED ON L1 AND THE COMBINATION IS ASSIGNED THE SUBASSEMBLY DESIGNATION A5.
3. THE DC RESISTANCE OF EACH WINDING OF TRANSFORMER T1 IS APPROXIMATELY 1 OHM.

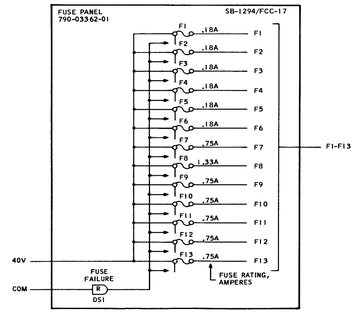
Figure 25. Power Supply Shelf, Schematic Diagram











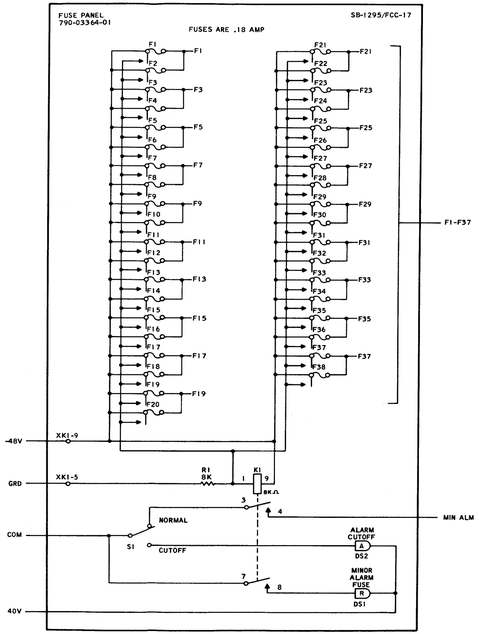


TABLE A

FUSE PANEL PART NUMBER	NOMENCLATURE: FUSE PANEL	USED ON
790-03307-01	SB-1298/FCC-17	AN/FCC-17
790-03349-01	SB-1296/FCC-17	
790-03358-01	SB-1276/FCC-17	
790-03360-01	SB-1297/FCC-17	
790-03362-01	SB-1294/FCC-17	
790-03364-01	SB-1295/FCC-17	
790-11501-01	SB-2932/FCC	AN/FCC-22
790-11502-01	SB-2922/FCC	MISC
790-11571-01	SB-2924/FCC	AN/FCC-21, -22
790-11574-01	SB-2921/FCC	AN/FCC-21
790-12601-01	SB-2931/FCC	AN/FCC-22
790-12604-01	SB-3078/UCC-4(V)	MISC

*SCHEMATICS ARE IN NUMERICAL ORDER BY FUSE PANEL PART N

TABLE B

INDICATOR ALARM FUSES		
*RATING, AMPERES	COLOR CODE	TYPE
0.18	YELLOW	70E
0.25	VIOLET	70F
0.25	VIOLET-WHITE	70K
0.50	RED	70G
0.75	TAN	70H
1.33	WHITE	70A
2.00	ORANGE	70B
3.00	BLUE	70C
5.00	GREEN	70D
6.00	GREEN-WHITE	71A

*FUSE WILL CARRY 100% OF RATED CURRENT CONTINUOUSLY. AT 150% OF RATED CURRENT, FUSE WILL BLOW WITHIN 90 SECONDS (300 SECONDS FOR TYPE 70X).

Figure 26. Fuse Panels, Sc
Diagram (Sheet

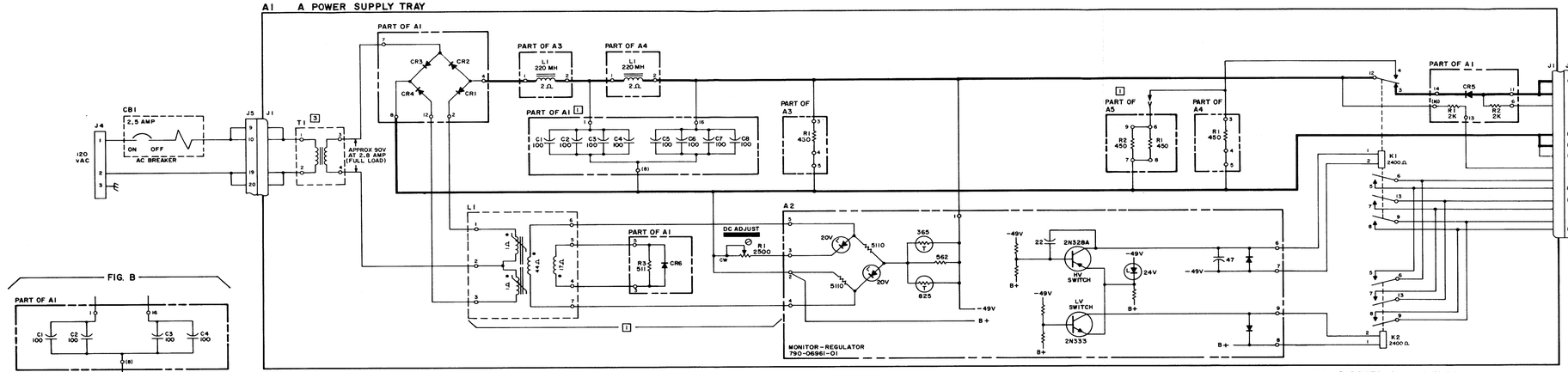
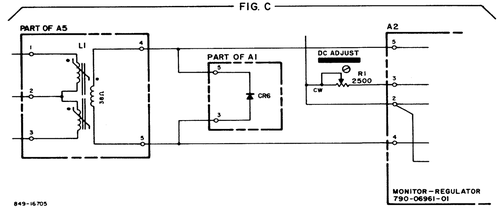


FIG. B

FIG. C



849-16705

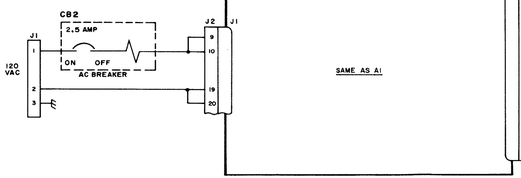
TABLE A

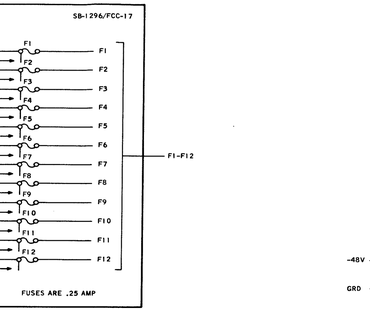
AC POWER FREQ, CPS	POWER SUPPLY SHELF			POWER SUPPLY TRAY	
	PART NO.	NOMENCLATURE	QTY	PART NO.	NOMENCLATURE
50-60	790-07975-01	POWER SUPPLY ASSEMBLY 0A-6445/FCC	2	790-07974-01	POWER SUPPLY PP-3965/FCC
	790-07975-03		1		
60	790-01855-01	POWER SUPPLY SET 0A-6830/FCC	2	790-01866-01	POWER SUPPLY PP-4115/FCC
	790-01855-03	POWER SUPPLY PP-3613/MRC-98	1		
400	790-02963-01	POWER SUPPLY SET 0A-4109/MCC-12	2	790-02964-01	POWER SUPPLY PP-3498/MCC-12

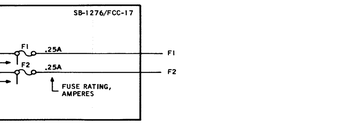
NOTES:

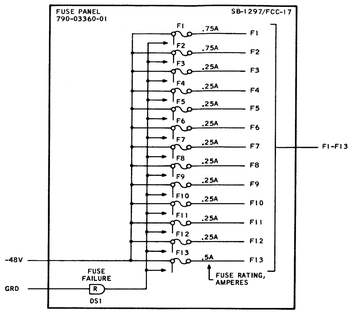
1. THIS DIAGRAM REPRESENTS THE 60-CPS OR 50-60 CPS POWER SUPPLY SHELF. FOR THE 400-CPS POWER SUPPLY SHELF, MAKE THE FOLLOWING CHANGES TO THE CIRCUITS SHOWN FOR THE POWER SUPPLY TRAYS:
   A. USE FIGURE B FOR THE 100-UF FILTER CAPACITORS IN A1.
   B. USE FIGURE C FOR SATURABLE REACTOR L1 AND ASSOCIATED CIRCUITS (SEE NOTE 2.)
   C. ADD 450-OHM LOAD RESISTORS A5R1 AND A5R2 IN PARALLEL WITH A4R1.
2. IN THE 60-CPS AND 50-60 CPS POWER SUPPLY TRAYS, THE SATURABLE REACTOR IS DESIGNATED L1. IN THE 400-CPS POWER SUPPLY TRAY, TWO 450-OHM LOAD RESISTORS (R1 AND R2) ARE MOUNTED ON L1 AND THE COMBINATION IS ASSIGNED THE SUBASSEMBLY DESIGNATION A5.
3. THE DC RESISTANCE OF EACH WINDING OF TRANSFORMER T1 IS APPROXIMATELY 1 OHM.

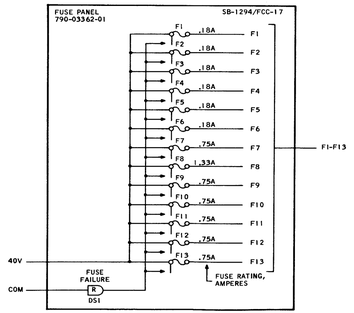
A2 B POWER SUPPLY TRAY











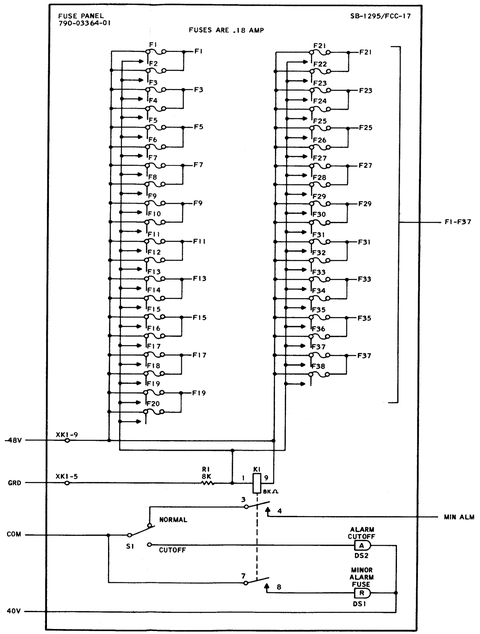


TABLE A

FUSE PANEL PART NUMBER	FUSE PANEL NOMENCLATURE	USED ON	*SCHEM ON SHEET
790-03307-01	SB-1298/FCC-17	AN/FCC-17	1
790-03349-01	SB-1296/FCC-17		
790-03358-01	SB-1276/FCC-17		
790-03360-01	SB-1297/FCC-17		
790-03362-01	SB-1294/FCC-17		
790-03364-01	SB-1295/FCC-17		
790-11501-01	SB-2932/FCC	AN/FCC-22	2
790-11502-01	SB-2922/FCC	MISC	
790-11571-01	SB-2924/FCC	AN/FCC-21, -22	
790-11574-01	SB-2921/FCC	AN/FCC-21	
790-12601-01	SB-2931/FCC	AN/FCC-22	
790-12604-01	SB-3078/UCC-4(V)	MISC	

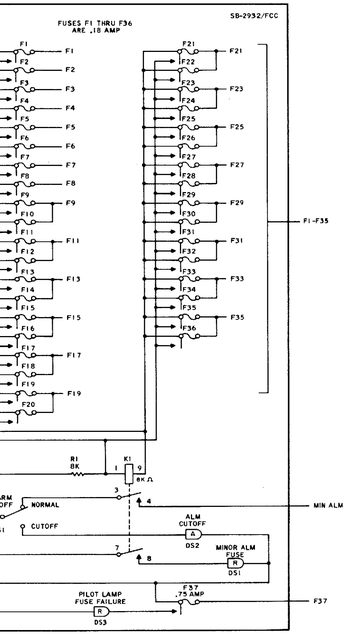
*SCHEMATICS ARE IN NUMERICAL ORDER BY FUSE PANEL PART NUMBER.

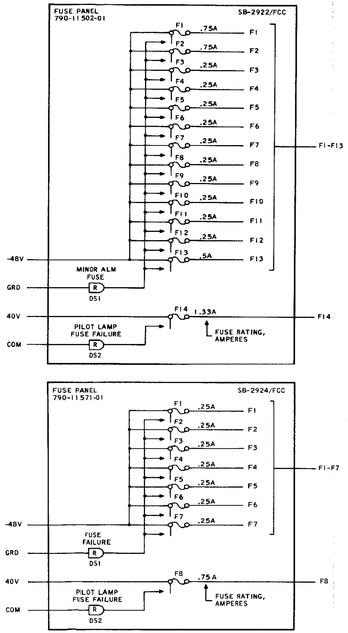
TABLE B

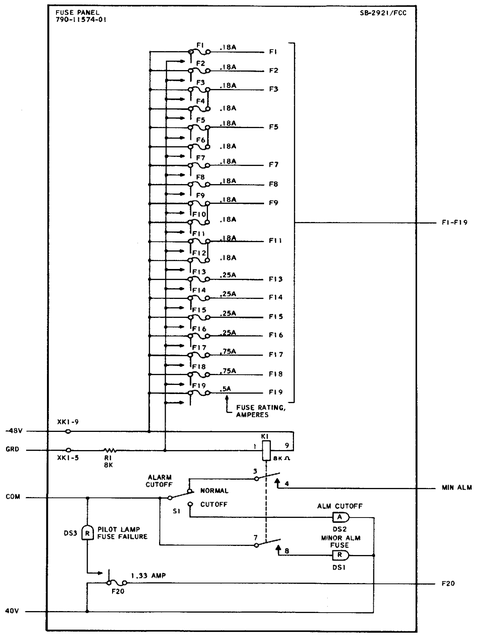
INDICATOR ALARM FUSES		
*RATING, AMPERES	COLOR CODE	TYPE
0.18	YELLOW	70E
0.25	VIOLET	70F
0.25	VIOLET-WHITE	70K
0.50	RED	70G
0.75	TAN	70H
1.33	WHITE	70A
2.00	ORANGE	70B
3.00	BLUE	70C
5.00	GREEN	70D
6.00	GREEN-WHITE	71A

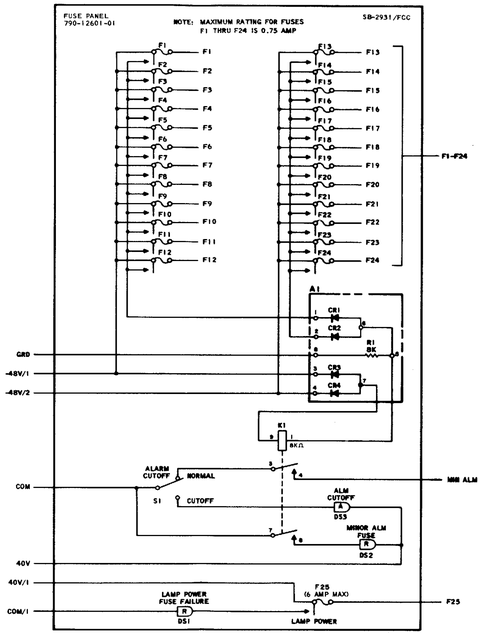
*FUSE WILL CARRY 100% OF RATED CURRENT CONTINUOUSLY. AT 150% OF RATED CURRENT, FUSE WILL BLOW WITHIN 90 SECONDS (300 SECONDS FOR TYPE 70K).

Figure 26. Fuse Panels, Schematic Diagram (Sheet 1 of 2)









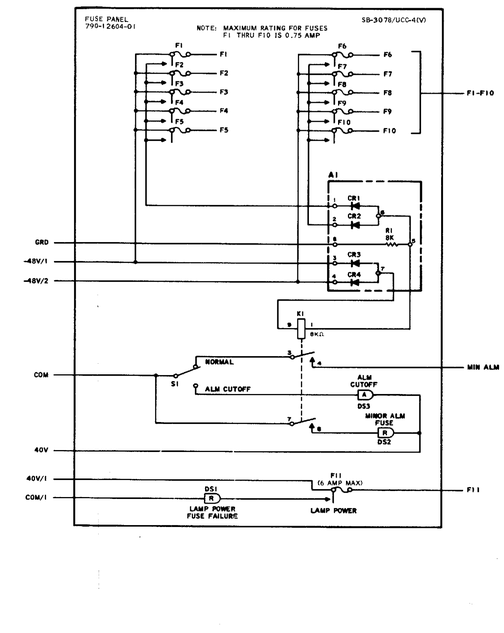
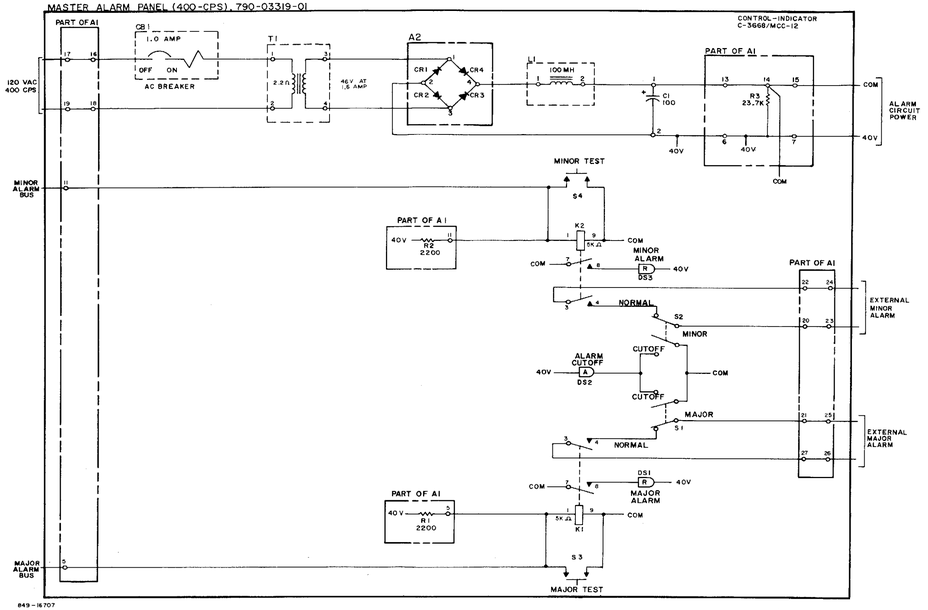


Figure 26. Fuse Panels, Schematic Diagram (Sheet 2 of 2)



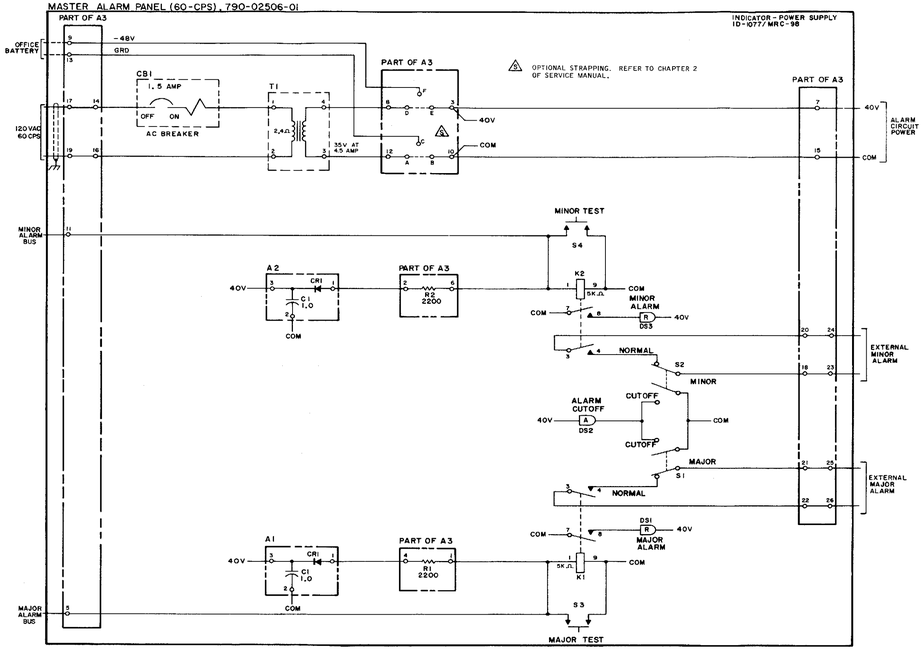
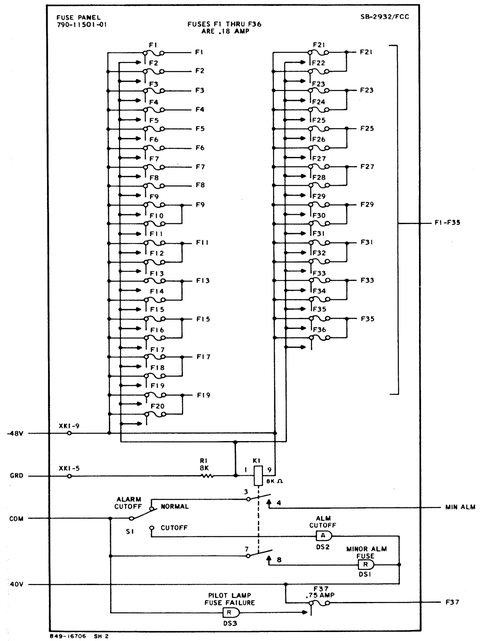
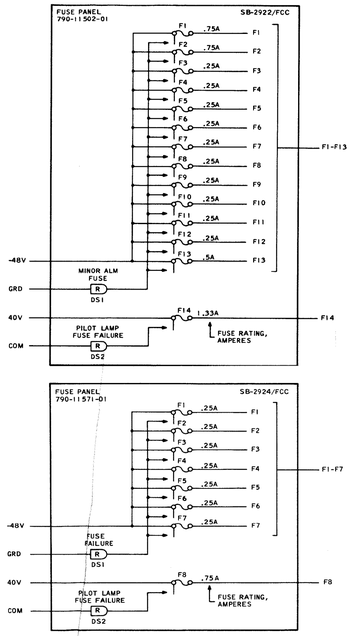
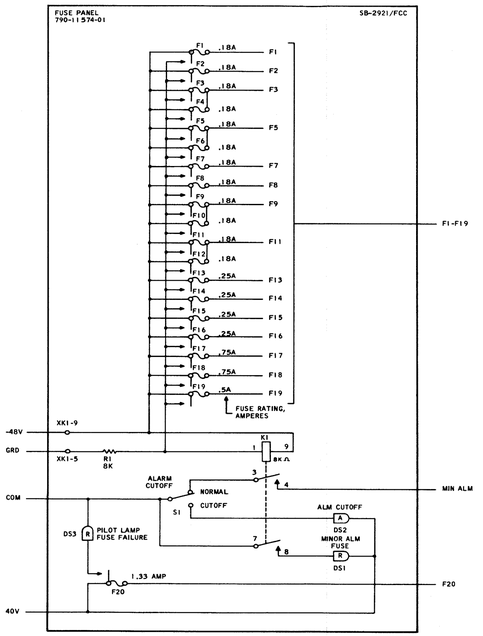
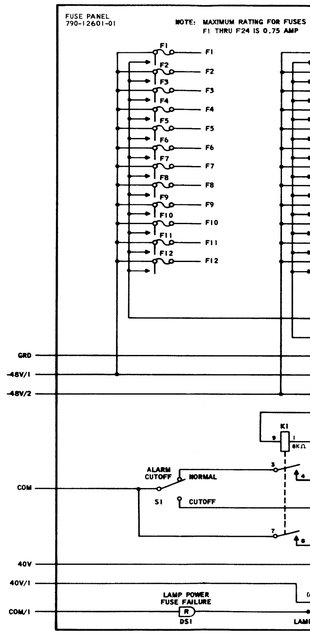


Figure 27. Master Alarm Panel, Schematic Diagram


FUSE PANEL
790-11501-01
SB-2932/FCC
FUSES F1 THRU F36
ARE .18 AMP
F1
F2
F3
F4
F5
F6
F7
F8
F9
F10
F11
F12
F13
F14
F15
F16
F17
F18
F19
F20
F21
F22
F23
F24
F25
F26
F27
F28
F29
F30
F31
F32
F33
F34
F35
F36
F1-F35
-48V
XK1-9
GRD
XK1-5
R1
8K
K1
8K Ω
ALARM
CUTOFF
NORMAL
CUTOFF
S1
COM
ALM
CUTOFF
DS2
MINOR ALM
FUSE
DS1
MIN ALM
40V
PILOT LAMP
FUSE FAILURE
DS3
F37
.75 AMP
F37
849-16706 SH 2


FUSE PANEL
790-11502-01
SB-2922/FCC
F1 .75A
F2 .75A
F3 .25A
F4 .25A
F5 .25A
F6 .25A
F7 .25A
F8 .25A
F9 .25A
F10 .25A
F11 .25A
F12 .25A
F13 .5A
F1-F13
-48V
MINOR ALM
FUSE
DS1
GRD
40V
F14 1.33A
F14
PILOT LAMP
FUSE FAILURE
DS2
COM
FUSE RATING,
AMPERES
FUSE PANEL
790-11571-01
SB-2924/FCC
F1 .25A
F2 .25A
F3 .25A
F4 .25A
F5 .25A
F6 .25A
F7 .25A
F1-F7
-48V
FUSE
FAILURE
DS1
GRD
40V
F8 .75A
F8
PILOT LAMP
FUSE FAILURE
DS2
COM
FUSE RATING,
AMPERES


FUSE PANEL
790-11574-01
SB-2921/FCC
F1 .18A
F2 .18A
F3 .18A
F4 .18A
F5 .18A
F6 .18A
F7 .18A
F8 .18A
F9 .18A
F10 .18A
F11 .18A
F12 .18A
F13 .25A
F14 .25A
F15 .25A
F16 .25A
F17 .75A
F18 .75A
F19 .5A
F1-F19
FUSE RATING,
AMPERES
-48V
XK1-9
GRD
XK1-5
R1
8K
K1
8K Ω
ALARM
CUTOFF
NORMAL
CUTOFF
S1
COM
MIN ALM
ALM CUTOFF
DS2
MINOR ALM
FUSE
DS1
DS3
PILOT LAMP
FUSE FAILURE
1.33 AMP
F20
F20
40V


FUSE PANEL
790-12601-01
NOTE: MAXIMUM RATING FOR FUSES
F1 THRU F24 IS 0.75 AMP
F1
F2
F3
F4
F5
F6
F7
F8
F9
F10
F11
F12
GRD
-48V/1
-48V/2
K1
8K Ω
ALARM
CUTOFF
NORMAL
CUTOFF
S1
COM
40V
40V/1
LAMP POWER
FUSE FAILURE
DS1
COM/1
LAMP

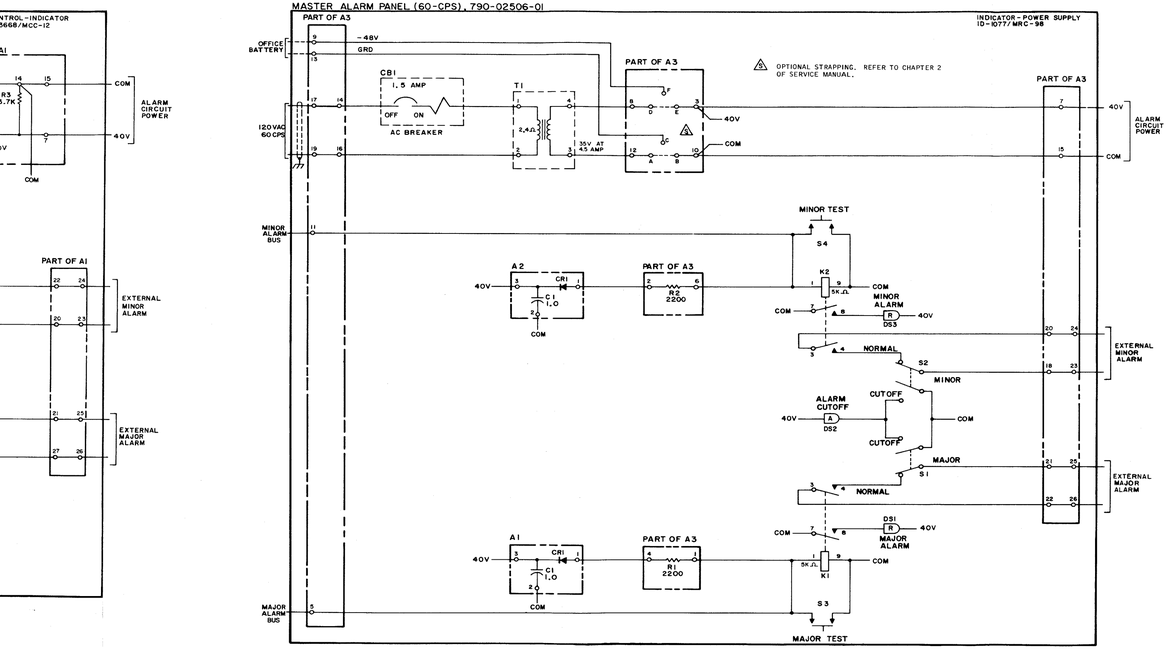


Figure 27. Master Alarm Panel, Schematic Diagram

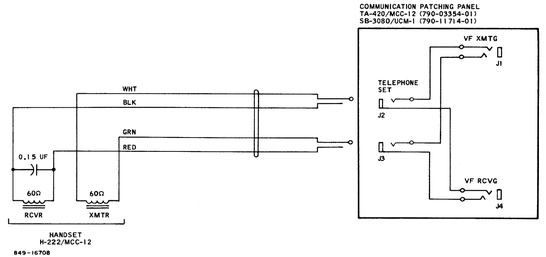
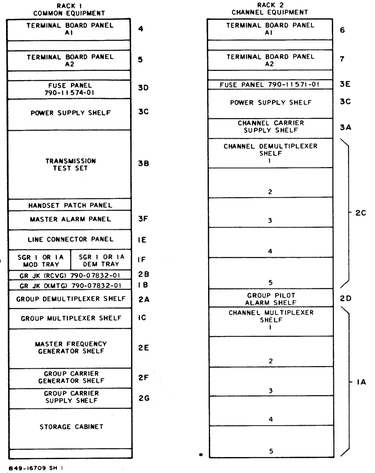


Figure 28. Handset and Handset Patch Panel, Schematic Diagram



NOTES:

1. THIS DIAGRAM SHOWS INTRA-RACK WIRING, INTER-RACK WIRING (BETWEEN RACKS), AND WIRING TO EXTERNAL EQUIPMENT. THE SHEET NUMBER OR FIGURE NUMBER OF THE DIAGRAM PERTAINING TO EACH MAJOR COMPONENT IS SHOWN IN THE EQUIPMENT RACK LAYOUT ON THIS SHEET.
2. INTRA-RACK WIRING TO THE EQUIPMENT SHELVES (AND TRAYS) IS PROVIDED BY WIRING HARNESSES THAT PLUG INTO RECEPTACLES AT THE REAR OF THE SHELVES. THE PART NUMBERS OF THE WIRING HARNESSES ARE CALLED OUT ON THIS DIAGRAM AT THE PLUG END.
3. PANELS AND JACKFIELDS HAVE INTEGRAL WIRING HARNESSES THROUGH WHICH CONNECTIONS ARE MADE TO THE TERMINAL BOARD PANELS AT THE TOP OF THE RACK.
4. UNLESS OTHERWISE SPECIFIED, INTRA-RACK WIRING IS 22 AWG. COAXIAL CABLE IS TYPE RG-187A/U. THE SIZE OF WIRE IN THE WIRING HARNESSES IS INDICATED AT THE END ADJACENT TO THE SHELF, TRAY, OR PANEL.
5. WIRE COLOR ABBREVIATIONS.

BK	BLACK	GY	GRAY	W	WHITE
BL	BLUE	O	ORANGE	Y	YELLOW
BR	BROWN	R	RED		
G	GREEN	V	VIOLET		

6. THE SYMBOL —2— MEANS THAT THE SINGLE LINE REPRESENTS TWO SEPARATE WIRES OR CABLES OF THE SAME TYPE.
7. INTER-RACK AND EXTERNAL WIRING IS IDENTIFIED BY THE FOLLOWING SYMBOLS.
   - (Z) INTER-RACK WIRING TO OR FROM THE NUMBERED RACK. (TO AND FROM DENOTE THE DIRECTION OF SIGNAL FLOW.)
   - (X) WIRING TO OR FROM EXTERNAL EQUIPMENT
   - (■) OPTIONAL CIRCUITS THAT MAY BE USED TO SUPPLY CARRIERS, SYNC PILOTS, DC POWER, ALARM CIRCUIT POWER, OR ALARM FUNCTIONS TO ADJACENT MULTIPLEXER SETS OR AUXILIARY EQUIPMENT.
8. FOR DESCRIPTION OF WIRE USED IN INTER-RACK AND EXTERNAL WIRING, REFER TO CHAPTER 2 OF THE SERVICE MANUAL.

FIG. 1A
CHANNEL MULTIPLEXER SHELF
RACK 2

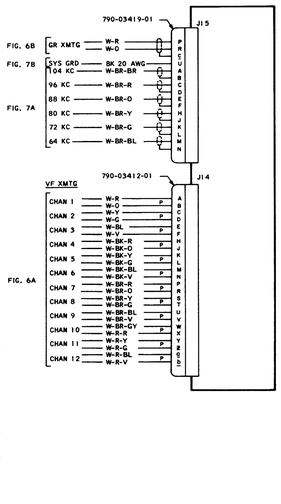


FIG. 1B
GROUP XMTG JACKFIELD
RACK 1

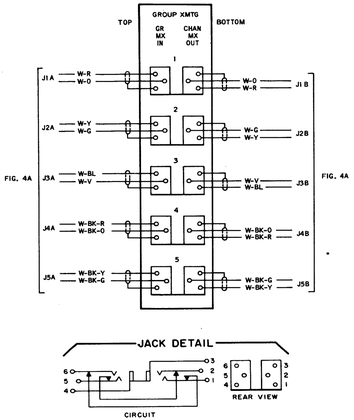


FIG. 1C
GROUP MULTIPLEXER SHELF
RACK 1

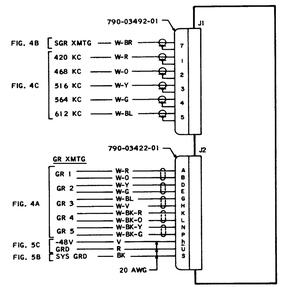
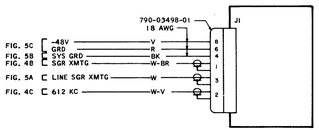


FIG. 1D
LOW-LEVEL SUPERGROUP MODULATOR TRAY
RACK 1



HIGH-LEVEL SUPERGROUP MODULATOR TRAY
RACK 1

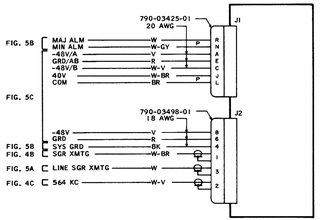


FIG.
LINE CONN
RA

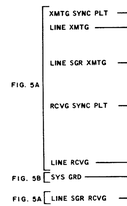


FIG.
SUPERGROUP DE
RA

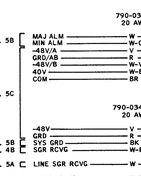
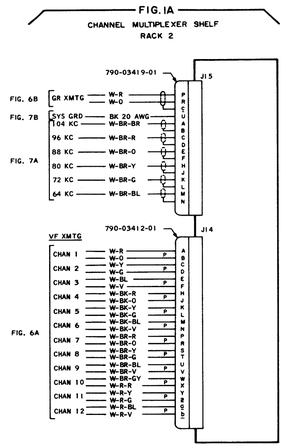
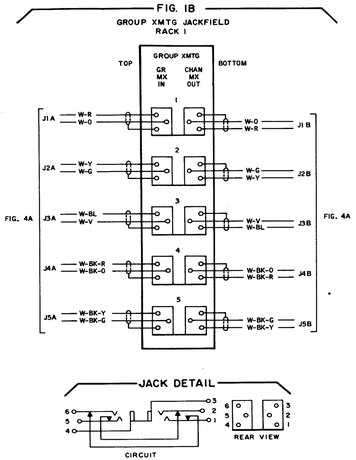
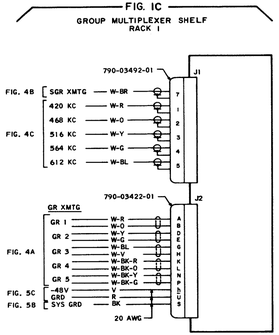
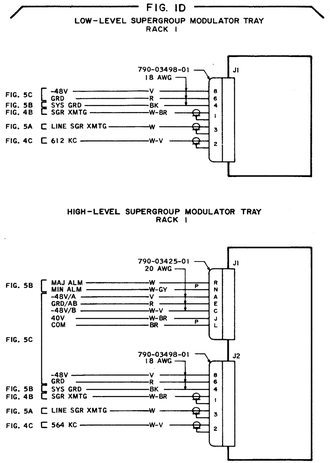


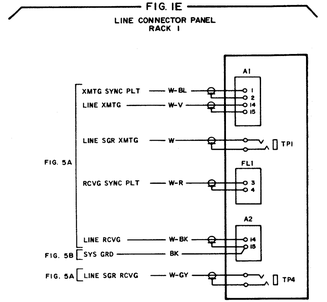
Figure 29. Mu
Cal











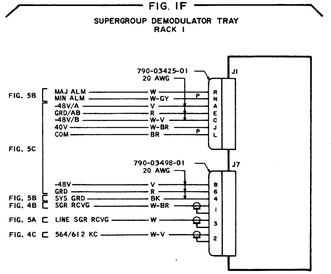
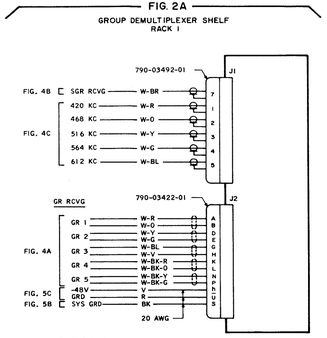
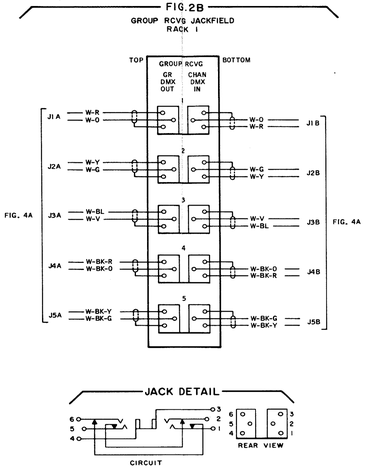
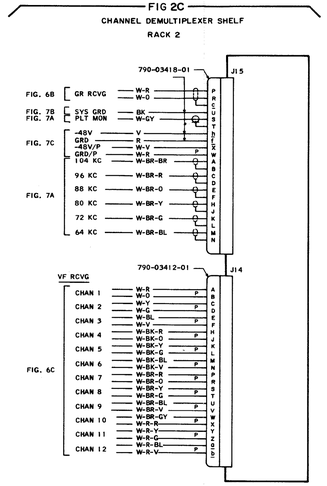
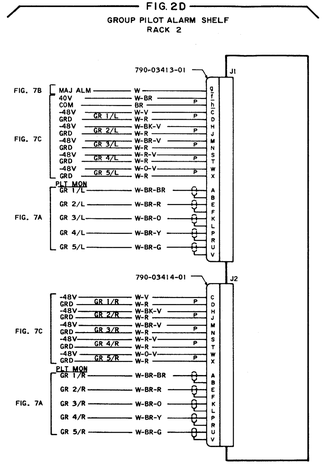


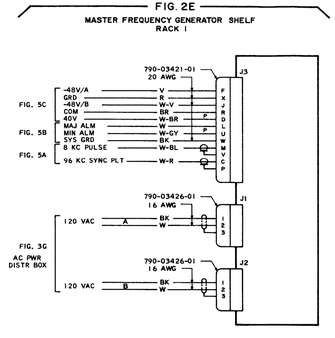
Figure 29. Multiplexer Set AN/FCC-21, Cabling Diagram (Sheet 1 of 7)

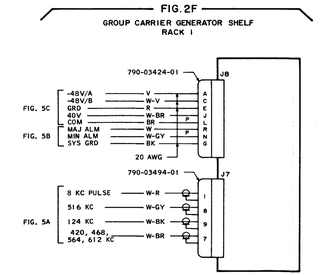












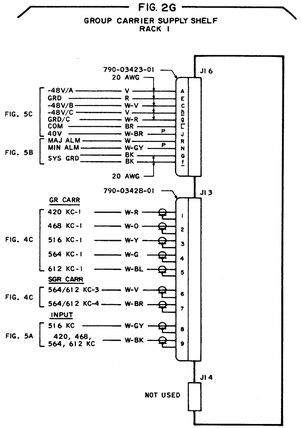


Figure 29. Multiplexer Set AN/FCC-21, Cabling Diagram (Sheet 2 of 7)

FIG. 3A
CHANNEL CARRIER SUPPLY SHELF
RACK 2

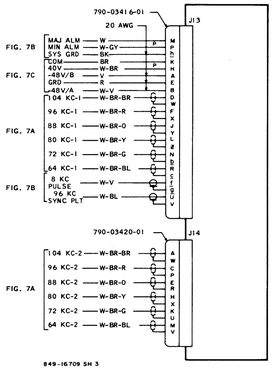


FIG. 3B
TRANSMISSION TEST SET
RACK 1

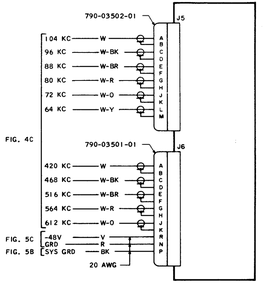


FIG. 3C
POWER SUPPLY SHELF
RACK 1,2

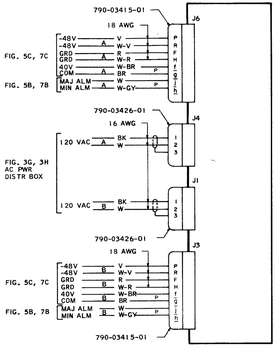


FIG. 3D
FUSE PANEL 790-11574-01
RACK 1

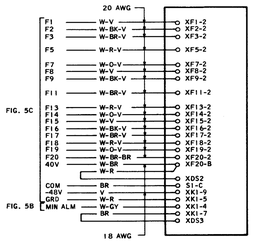


FIG. 3E
FUSE PANEL 790-11571-01
RACK 2

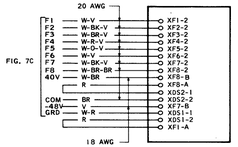


FIG. 3F
MASTER ALARM PANEL
RACK 1

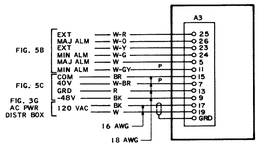


FIG. 3G
AC POWER DISTRIBUTION BOX
RACK 1

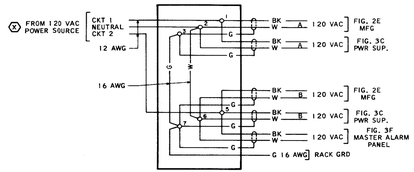


FIG. 3H
AC POWER DISTRIBUTION BOX
RACK 2

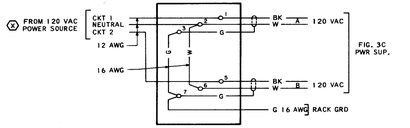
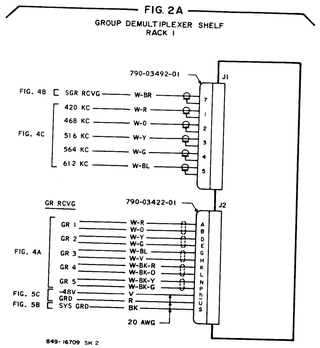
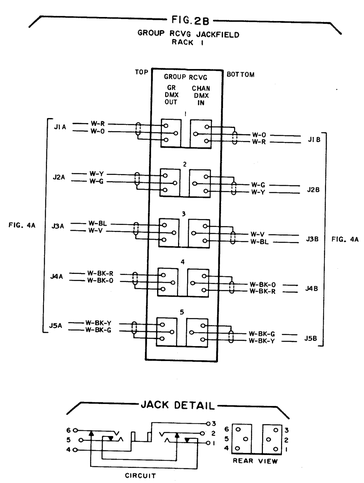
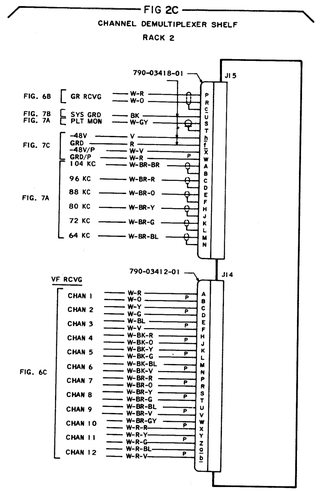
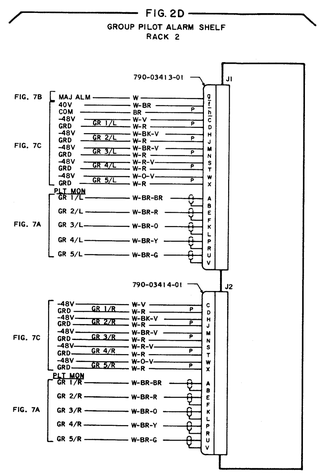


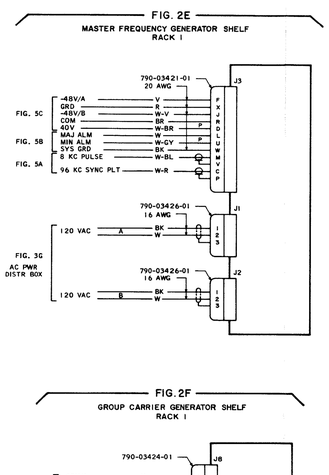
Figure 29. Multiplexer Set AN/FCC-21, Cabling Diagram (Sheet 3 of 7)

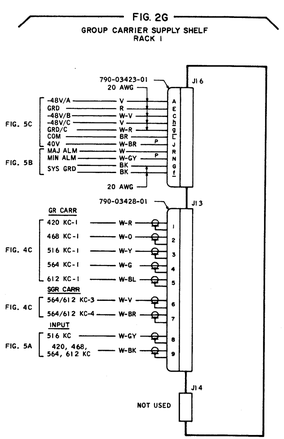












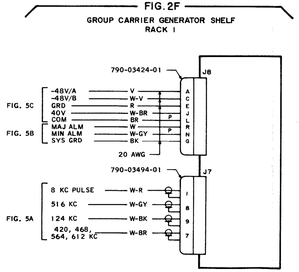
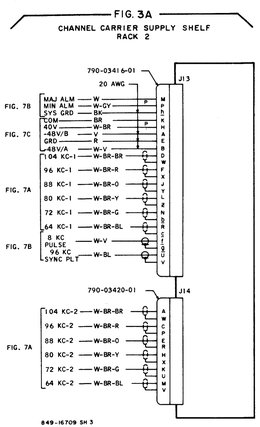
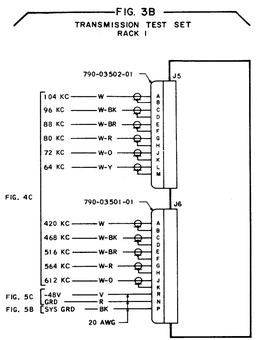
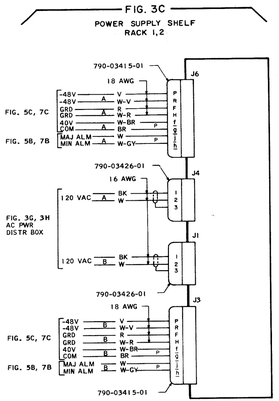
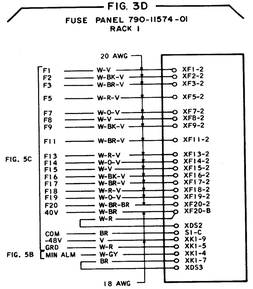


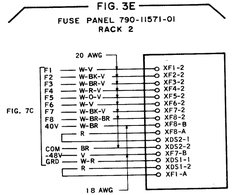
Figure 29. Multiplexer Set AN/FCC-21, Cabling Diagram (Sheet 2 of 7)

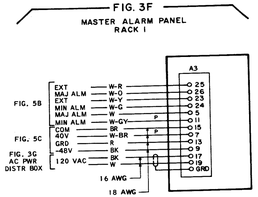


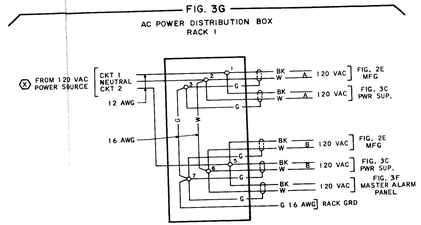












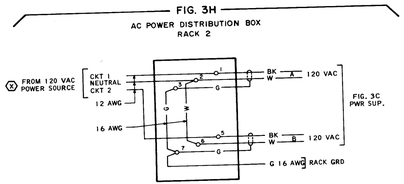


Figure 29. Multiplexer Set AN/FCC-21, Cabling Diagram (Sheet 3 of 7)

FIG. 4A
TERMINAL BOARD A1TB1
RACK 1

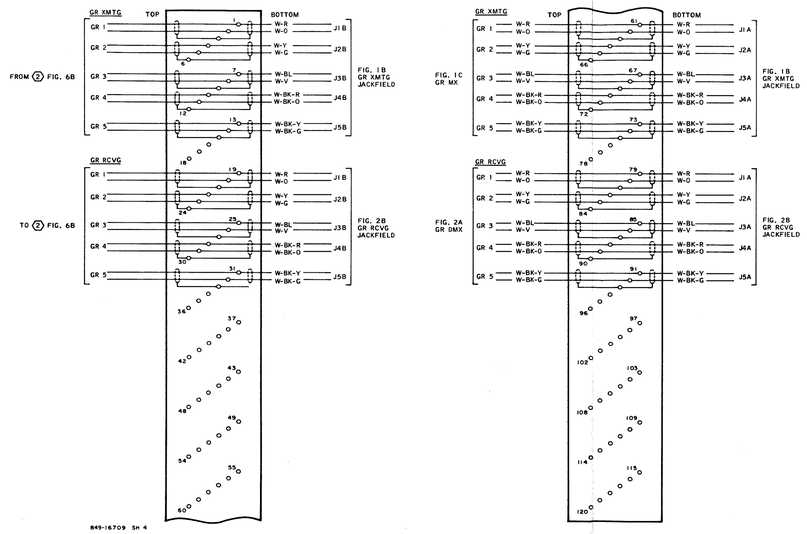


FIG. 4B
TEMINAL BOARD A1TB2
RACK 1

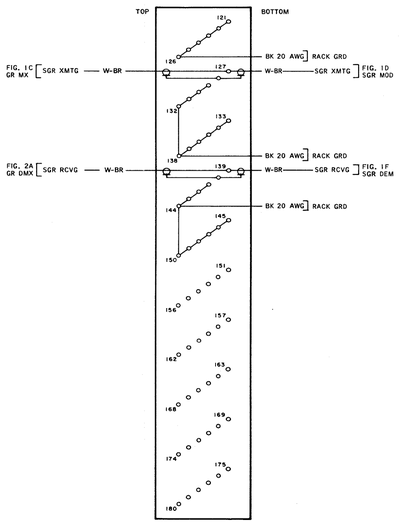


FIG. 4C
TERMINAL BOARD A1TB3
RACK 1

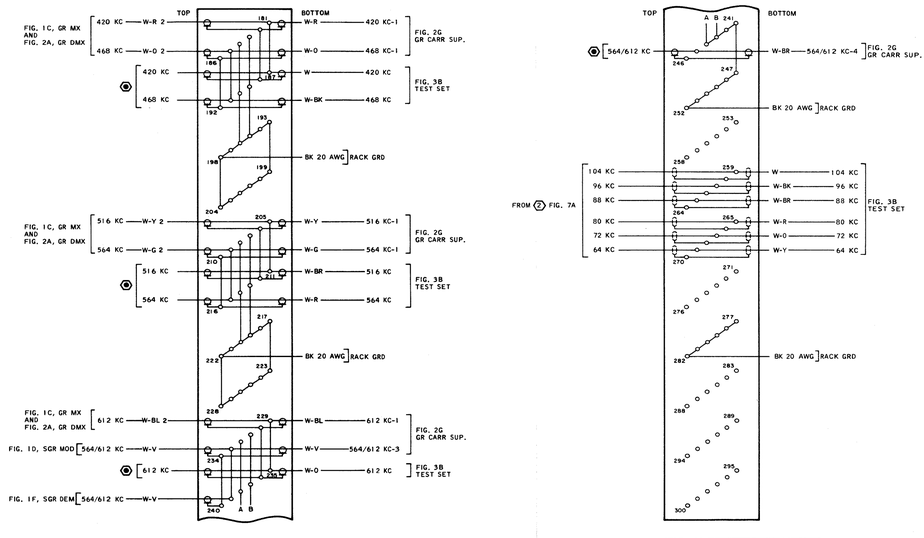


Figure 29. Multiplexer Set AN/FCC-21, Cabling Diagram (Sheet 4 of 7)

FIG. 5A
TERMINAL BOARD A2TB1
RACK 1

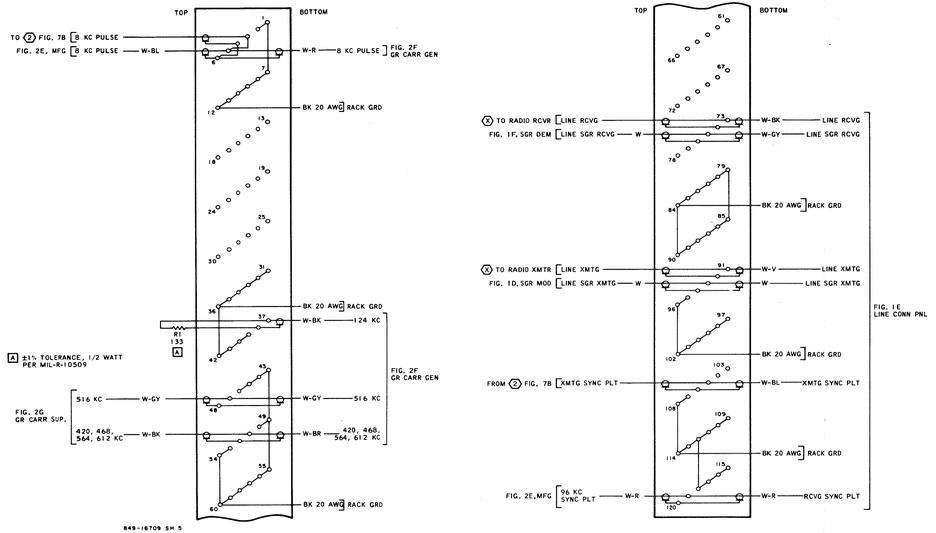


FIG. 5B
TERMINAL BOARD A2TB2
RACK 1

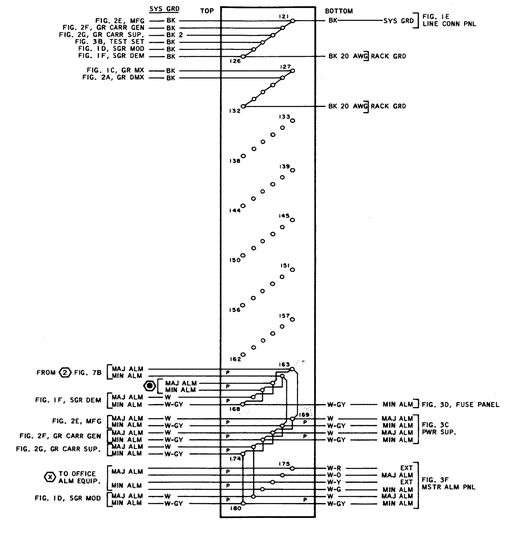
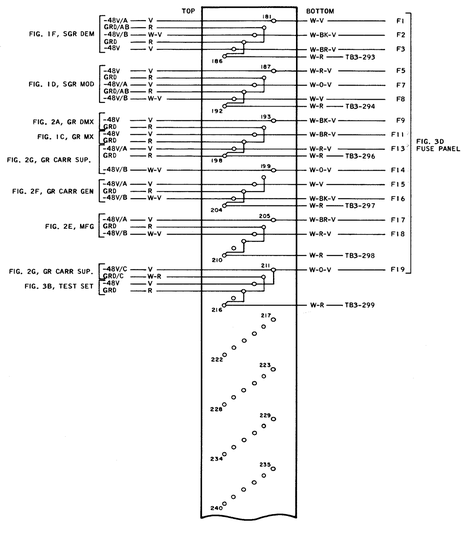
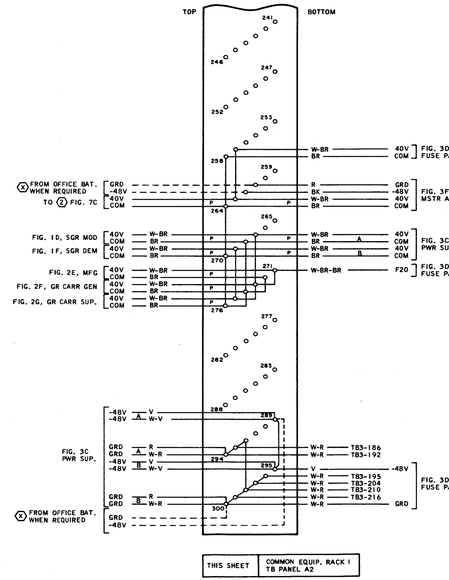


FIG. 5C
TERMINAL BOARD A2TB3
RACK 1





THIS SHEET | COMMON EQUIP. RACK 1 TB PANEL A2

Figure 29. Multiplexer Set AN/FCC-
Cabling Diagram (Sheet 5

FIG. 4A

TERMINAL BOARD A1TB1
RACK 1

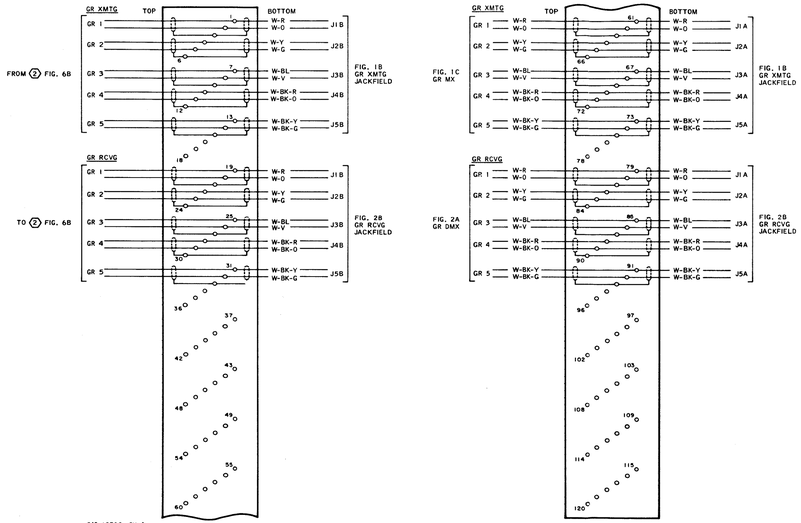
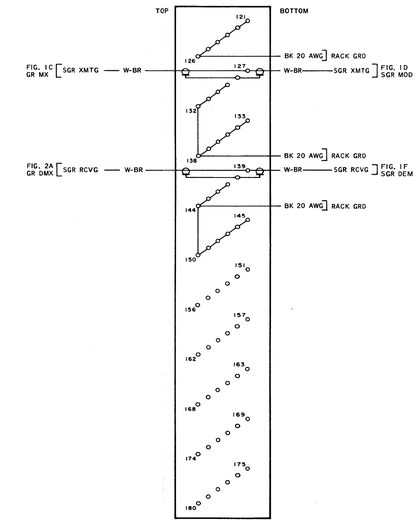
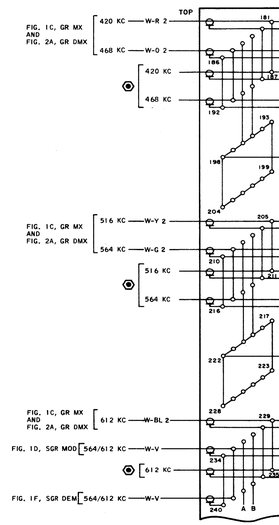


FIG. 4B

TEMINAL BOARD A1TB2
RACK 1





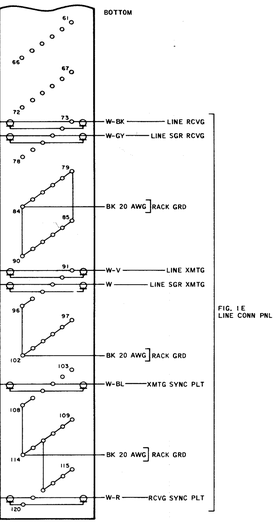


FIG. 5B
TERMINAL BOARD A2TB2
RACK 1

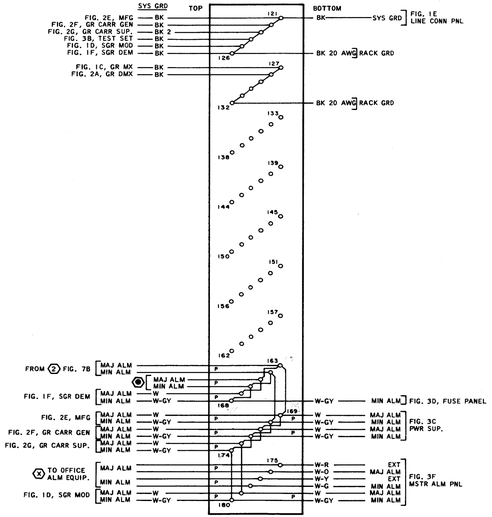
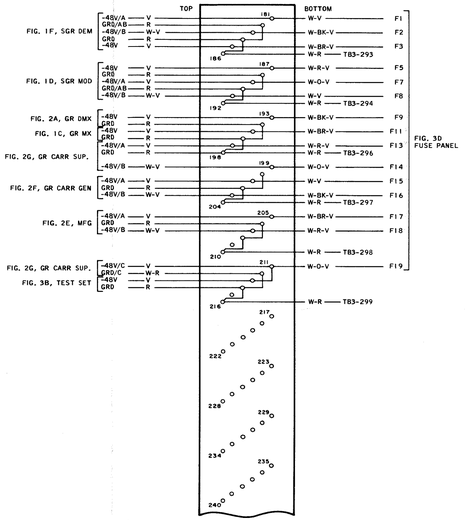


FIG. 5C
TERMINAL BOARD A2TB3
RACK 1



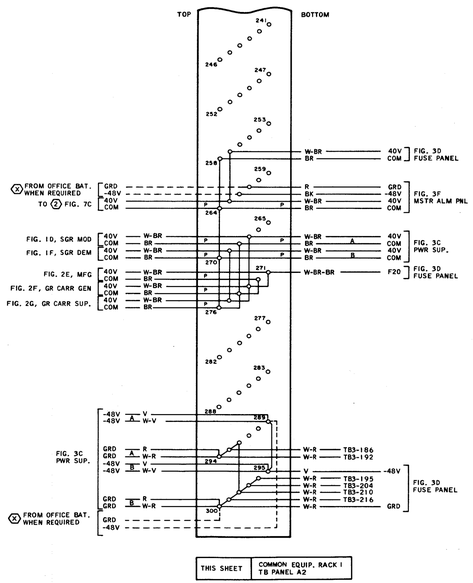


Figure 29. Multiplexer Set AN/FCC-21, Cabling Diagram (Sheet 5 of 7)

FIG. 6A
TERMINAL BOARD A1TB1
RACK 2

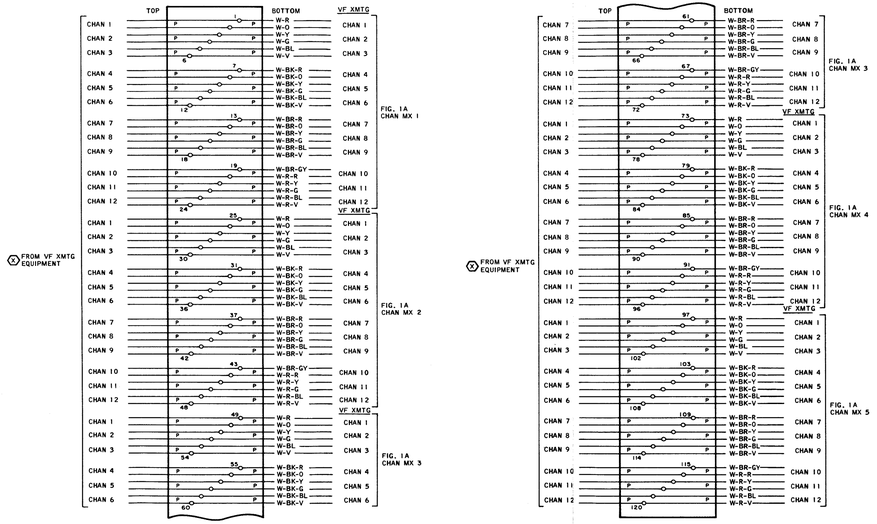


FIG. 6B
TERMINAL BOARD A1TB2
RACK 2

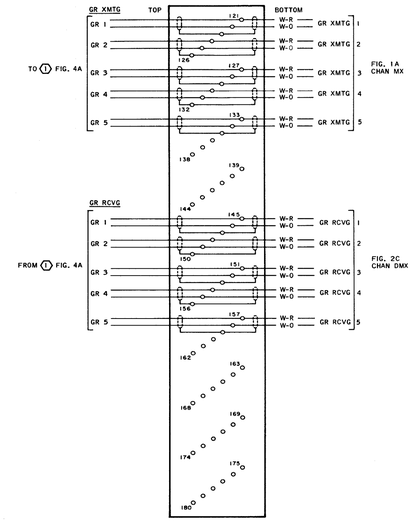


FIG. 6C
TERMINAL BOARD A1TB3
RACK 2

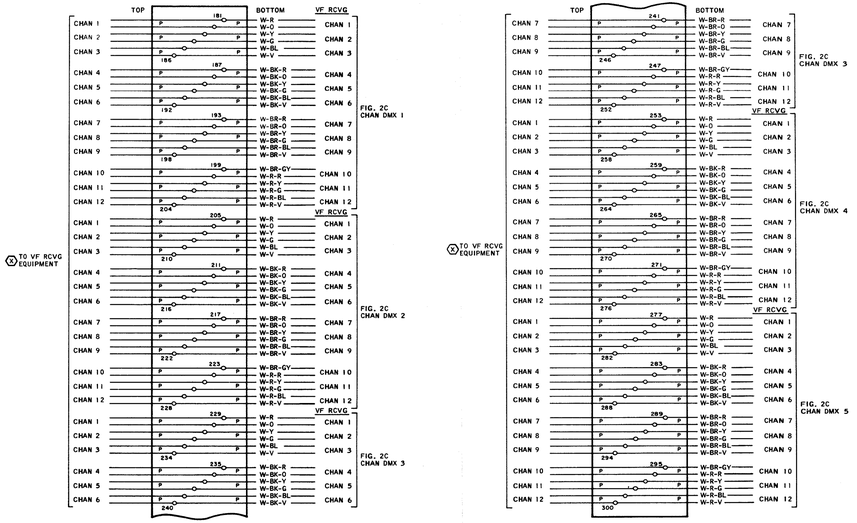


Figure 29. Multiplexer Set AN/FCC-21, Cabling Diagram (Sheet 6 of 7)

FIG. 7A
TERMINAL BOARD A2TB1
RACK 2

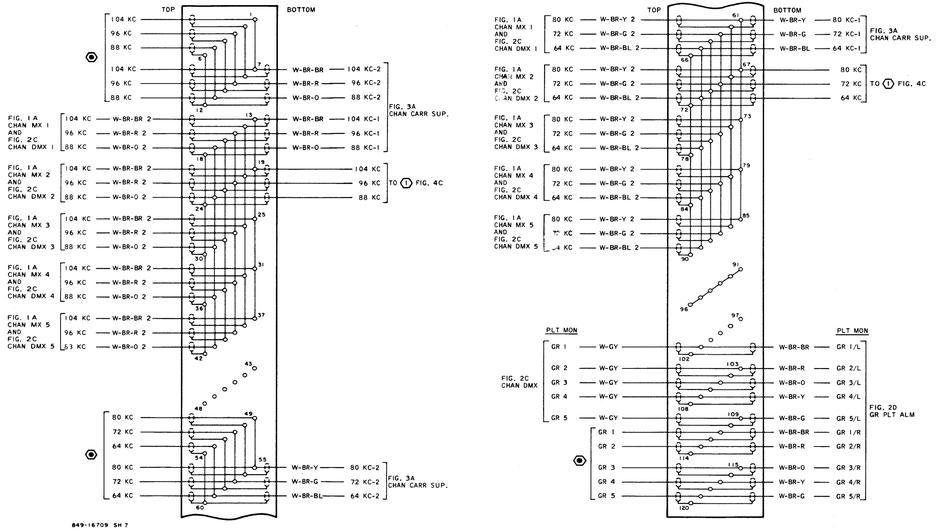


FIG. 7B
TERMINAL BOARD A2TB2
RACK 2

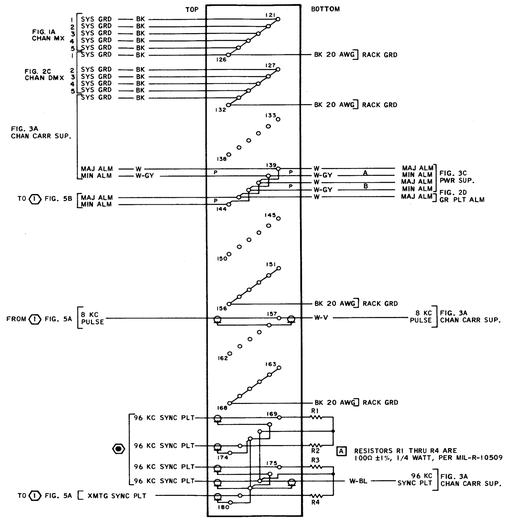
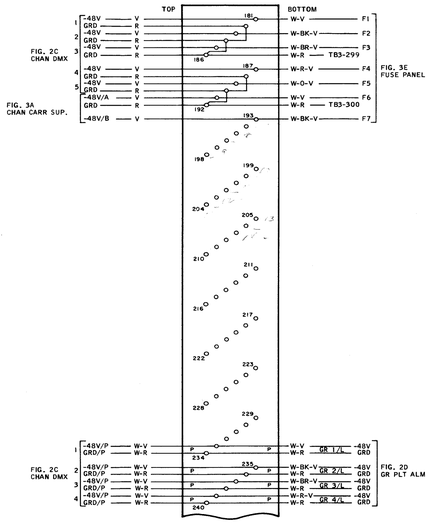


FIG. 7C
TERMINAL BOARD A2TB3
RACK 2



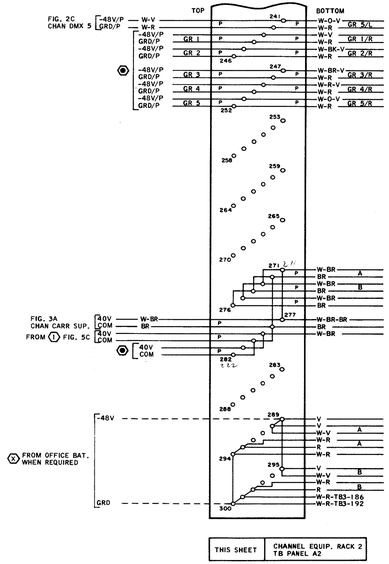


Figure 29. Multiplexer Set AN/FCC-
Cabling Diagram (Sheet 7

FIG. 6A

TERMINAL BOARD A1TB1
RACK 2

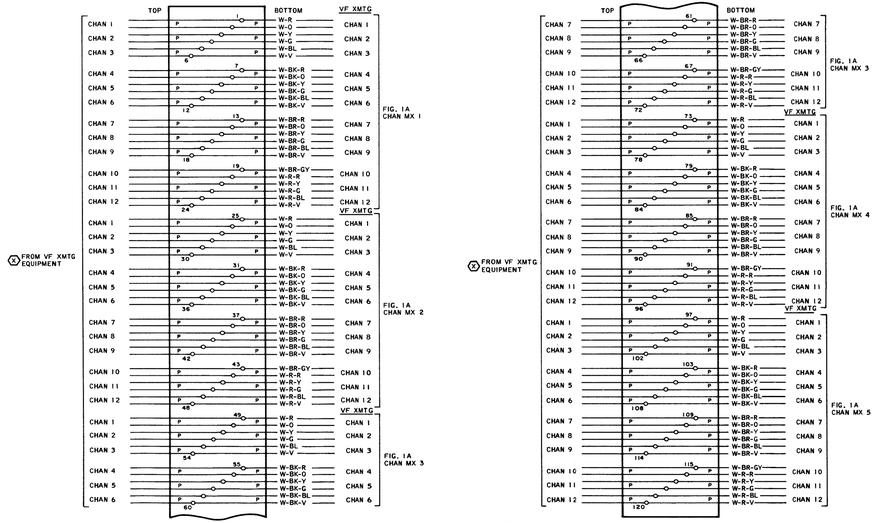
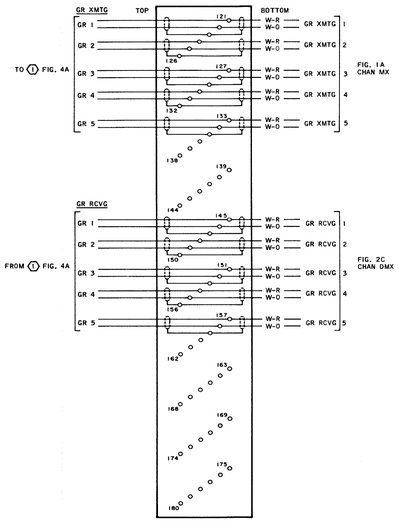
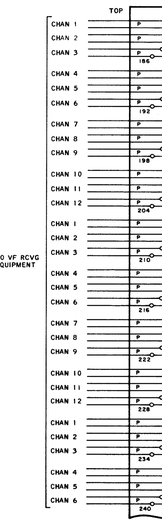


FIG. 6B

TERMINAL BOARD A1TB2
RACK 2





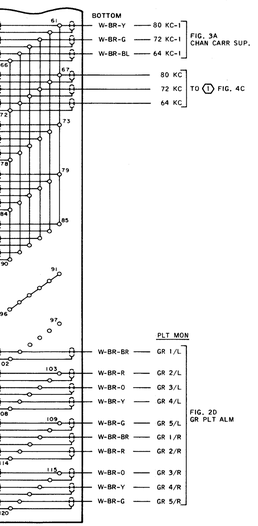


FIG. 7B

TERMINAL BOARD A2TB2
RACK 2

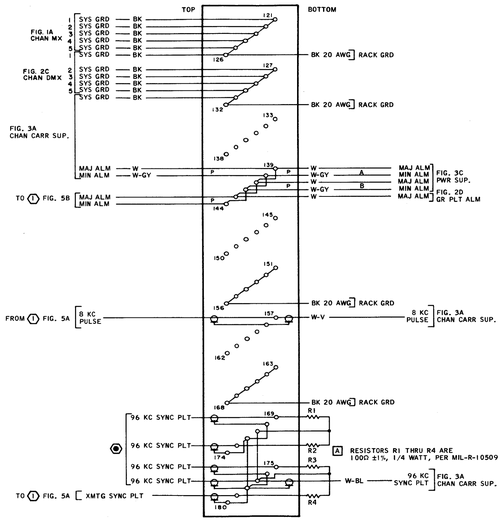


FIG. 7C

TERMINAL BOARD A2TB3
RACK 2

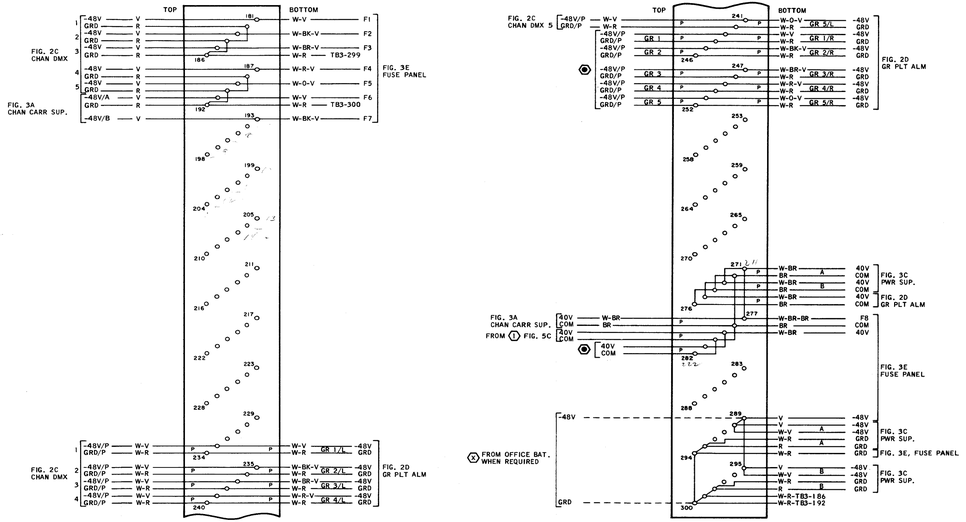
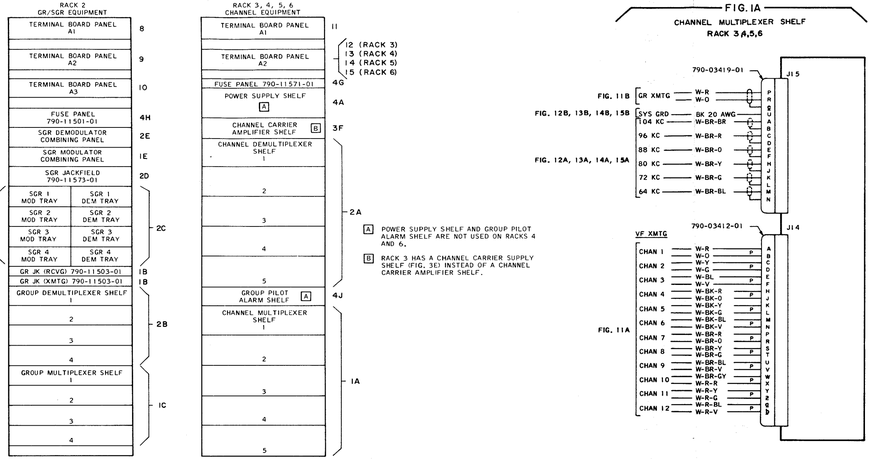


Figure 29. Multiplexer Set AN/FCC-21, Cabling Diagram (Sheet 7 of 7)



ER-RACK WIRING
EQUIPMENT. THE
AGRAM PERTAINING TO
UIPMENT RACK LAYOUT

ES (AND TRAYS) IS
NTO RECEPTACLES AT
ERS OF THE WIRING
M AT THE PLUG END.

NG HARNESSES
HE TERMINAL BOARD

IRING IS 22 AWG,
E OF WIRE IN THE
ADJACENT TO THE

5. WIRE COLOR ABBREVIATIONS.

BK	BLACK	GY	GRAY	W	WHITE
BL	BLUE	O	ORANGE	Y	YELLOW
BR	BROWN	R	RED		
G	GREEN	V	VIOLET		

6. THE SYMBOL —2— MEANS THAT THE SINGLE LINE REPRESENTS TWO SEPARATE WIRES OR CABLES OF THE SAME TYPE.

7. INTER-RACK AND EXTERNAL WIRING IS IDENTIFIED BY THE FOLLOWING SYMBOLS.

(7) INTER-RACK WIRING TO OR FROM THE NUMBERED RACK. (TO AND FROM DENOTE THE DIRECTION OF SIGNAL FLOW.)

(X) WIRING TO OR FROM EXTERNAL EQUIPMENT.

(●) OPTIONAL CIRCUITS THAT MAY BE USED TO SUPPLY CARRIERS, SYNC PILOTS, DC POWER, ALARM CIRCUIT POWER, OR ALARM FUNCTIONS TO ADJACENT MULTIPLEXER SETS OR AUXILIARY EQUIPMENT.

8. FOR DESCRIPTION OF WIRE AND CABLE USED IN INTER-RACK AND EXTERNAL WIRING, REFER TO CHAPTER 2 OF THE SERVICE MANUAL.

FIG. 1A
CHANNEL MULTIPLEXER SHELF
RACK 3,4,5,6

FIG. 1B
GROUP XMTG JACKFIELD, RACK 2
GROUP RCVG JACKFIELD, RACK 2

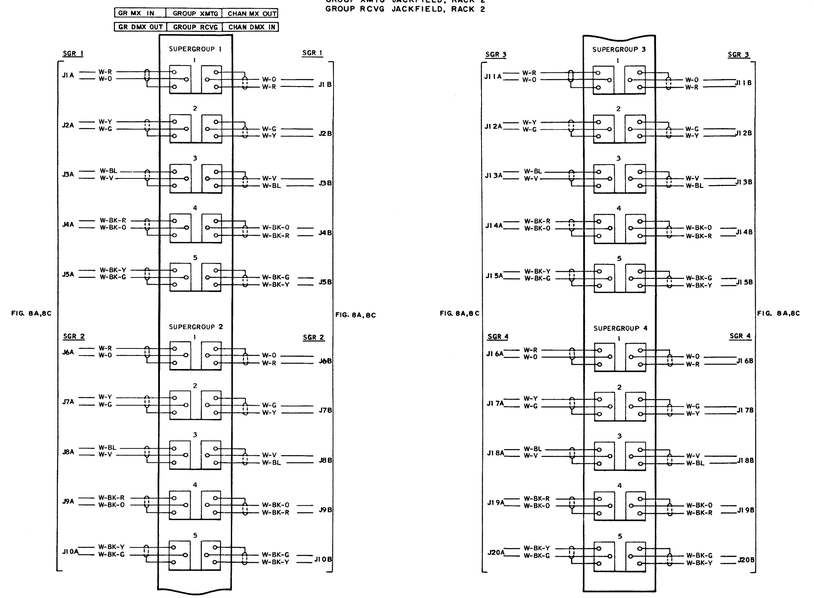


FIG. 1C
GROUP MULTIPLEXER SHELF
RACK 2

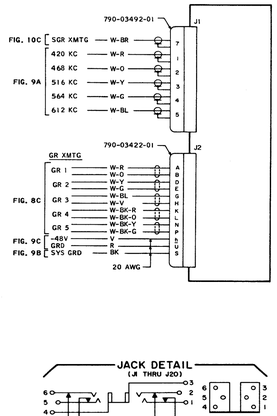


FIG. 1D
SUPERGROUP MODULATOR TRAY
RACK 2

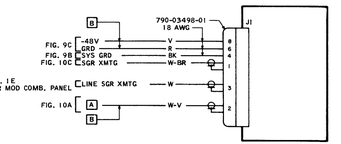


FIG. 1E
SUPERGROUP MODULATOR COMBINING PANEL
RACK 2

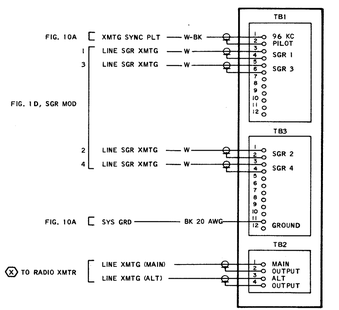


Figure 30. Multiplexer Set AN/FCC-22, Cabling Diagram (Sheet 1 of 15)

FIG 2A
CHANNEL DEMULTIPLEXER SHELF
RACK 3,4,5,6

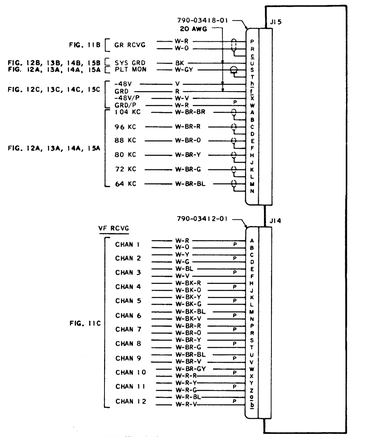


FIG. 2B
GROUP DEMULTIPLEXER SHELF
RACK 2

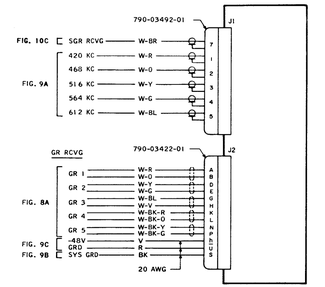


FIG. 2C
SUPERGROUP DEMODULATOR TRAY
RACK 2

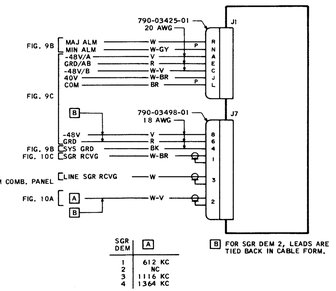


FIG. 2D
SUPERGROUP JACKFIELD
RACK 2

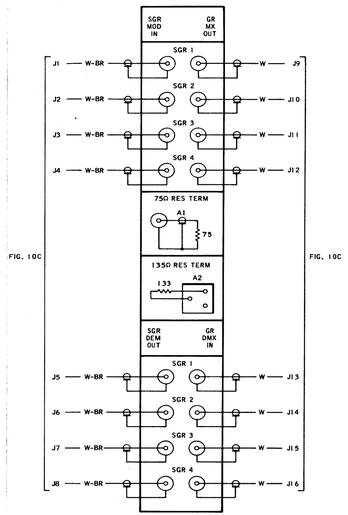


FIG. 2E
SUPERGROUP DEMODULATOR COMBINING PANEL
RACK 2

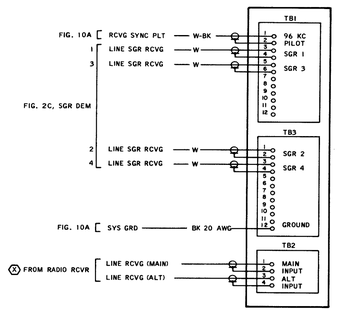


FIG. 2F
MASTER FREQUENCY GENERATOR SHELF
RACK 1

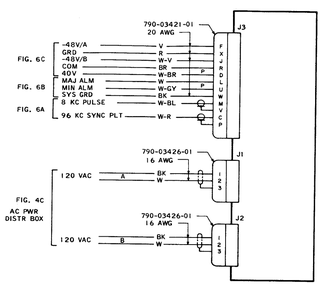


FIG. 2G
SUPERGROUP CARRIER GENERATOR SHELF
RACK 1

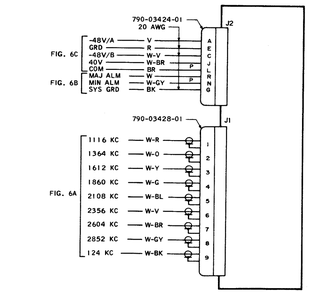


FIG. 2H
SUPERGROUP CARRIER AMPLIFIER SHELF
RACK 1

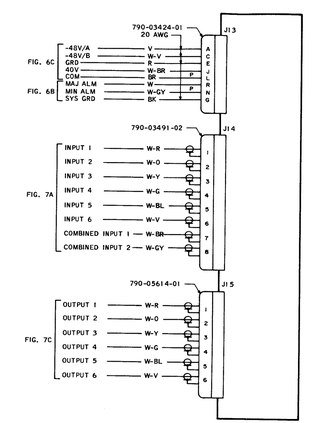
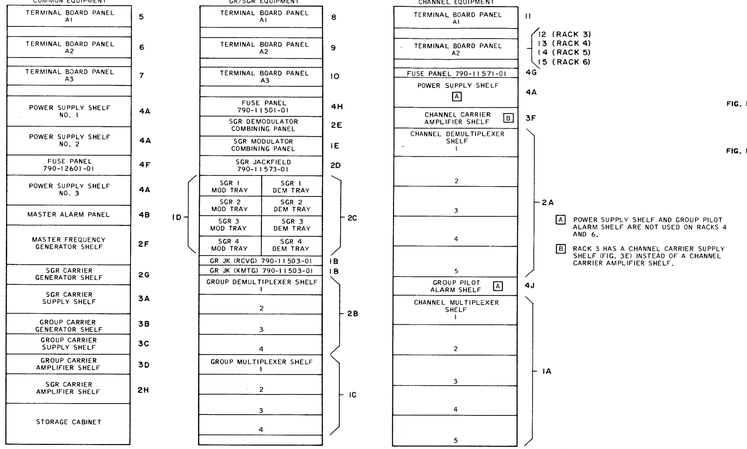


Figure 30. Multiplexer Set AN/FCC-22, Cabling Diagram (Sheet 2 of 15)



11-78

NOTES:

1. THIS DIAGRAM SHOWS INTRA-RACK WIRING, INTER-RACK WIRING (BETWEEN RACKS), AND WIRING TO EXTERNAL EQUIPMENT. THE SHEET NUMBER OR FIGURE NUMBER OF THE DIAGRAM PERTAINING TO EACH MAJOR COMPONENT IS SHOWN IN THE EQUIPMENT RACK LAYOUT ON THIS SHEET.
2. INTRA-RACK WIRING TO THE EQUIPMENT SHELVES (AND TRAYS) IS PROVIDED BY WIRING HARNESSES THAT PLUG INTO RECEPTACLES AT THE REAR OF THE SHELVES. THE PART NUMBERS OF THE WIRING HARNESSES ARE CALLED OUT ON THIS DIAGRAM AT THE PLUG END.
3. PANELS AND JACKFIELDS HAVE INTEGRAL WIRING HARNESSES THROUGH WHICH CONNECTIONS ARE MADE TO THE TERMINAL BOARD PANELS AT THE TOP OF THE RACK.
4. UNLESS OTHERWISE SPECIFIED, INTRA-RACK WIRING IS 22 AWG. COAXIAL CABLE IS TYPE RG-187A/U. THE SIZE OF WIRE IN THE WIRING HARNESSES IS INDICATED AT THE END ADJACENT TO THE SHELF, TRAY, OR PANEL.

849-16710 SH 1

5. WIRE COLOR ABBREVIATIONS.

BK	BLACK	GY	GRAY	W	WHITE
BL	BLUE	O	ORANGE	Y	YELLOW
BR	BROWN	R	RED		
G	GREEN	V	VIOLET		

6. THE SYMBOL ——2—— MEANS THAT THE SINGLE LINE REPRESENTS TWO SEPARATE WIRES OR CABLES OF THE SAME TYPE.
7. INTER-RACK AND EXTERNAL WIRING IS IDENTIFIED BY THE FOLLOWING SYMBOLS.
   - (2) INTER-RACK WIRING TO OR FROM THE NUMBERED RACK. (TO AND FROM DENOTE THE DIRECTION OF SIGNAL FLOW.)
   - (X) WIRING TO OR FROM EXTERNAL EQUIPMENT.
   - (●) OPTIONAL CIRCUITS THAT MAY BE USED TO SUPPLY CARRIERS, SYNC PILOTS, DC POWER, ALARM CIRCUIT POWER, OR ALARM FUNCTIONS TO ADJACENT MULTIPLEXER SETS OR AUXILIARY EQUIPMENT.
8. FOR DESCRIPTION OF WIRE AND CABLE USED IN INTER-RACK AND EXTERNAL WIRING, REFER TO CHAPTER 2 OF THE SERVICE MANUAL.

FIG. 1A

CHANNEL MULTIPLEXER SHELF
RACK 3,4,5,6

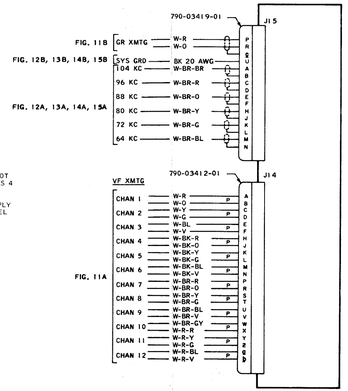


FIG. 1B

GROUP XMTG JACKFIELD, RACK 2
GROUP RCVG JACKFIELD, RACK 2

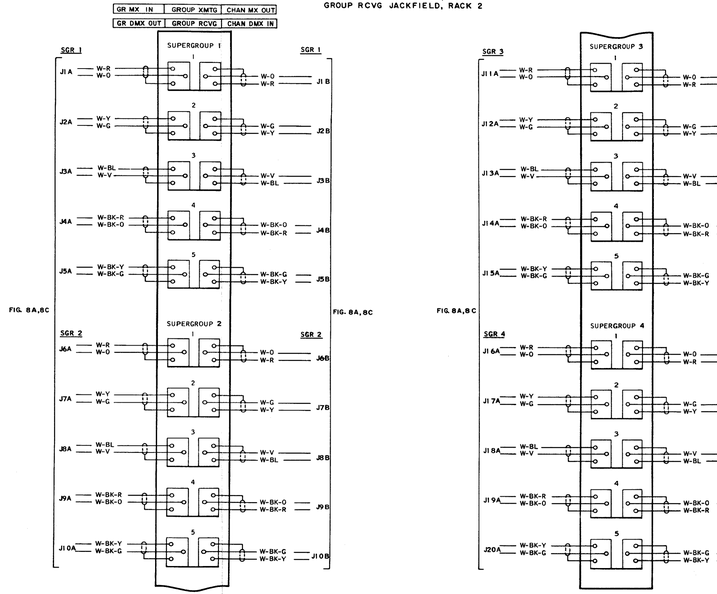


FIG. 2D
SUPERGROUP JACKFIELD RACK 2

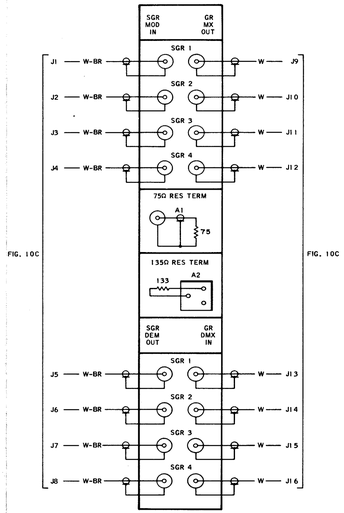


FIG. 2E
SUPERGROUP DEMODULATOR COMBINING PANEL RACK 2

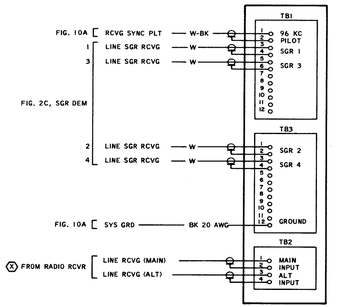


FIG. 2F
MASTER FREQUENCY GENERATOR SHELF RACK 1

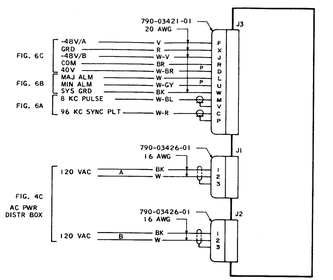


FIG. 2G
SUPERGROUP CARRIER GENERATOR SHELF RACK 1

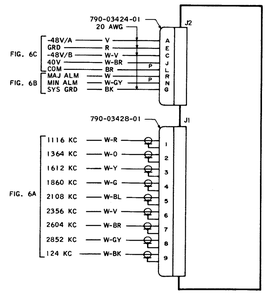


FIG. 2H
SUPERGROUP CARRIER AMPLIFIER SHELF RACK 1

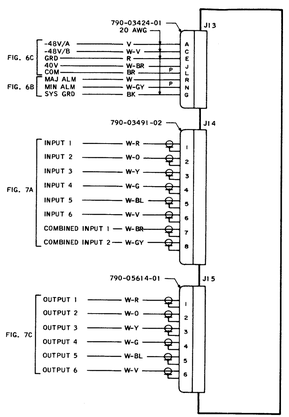


Figure 30. Multiplexer Set AN/FCC-22, Cabling Diagram (Sheet 2 of 15)

FIG. 3A
SUPERGROUP CARRIER SUPPLY SHELF
RACK 1

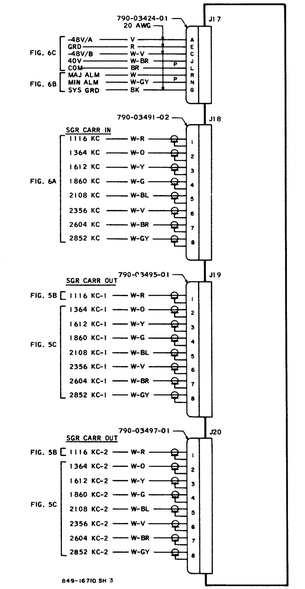


FIG. 3B
GROUP CARRIER GENERATOR SHELF
RACK 1

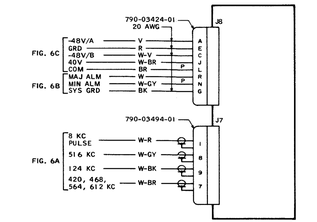


FIG. 3C
GROUP CARRIER SUPPLY SHELF
RACK 1

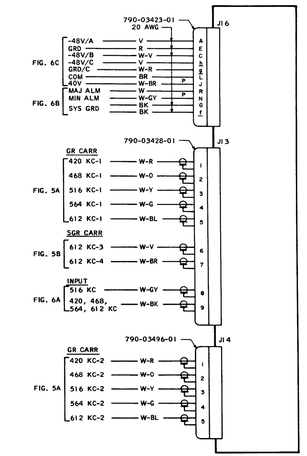


FIG. 3D
GROUP CARRIER AMPLIFIER SHELF
RACK 1

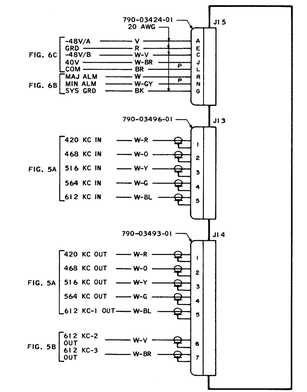


FIG. 3E
CHANNEL CARRIER SUPPLY SHELF
RACK 3

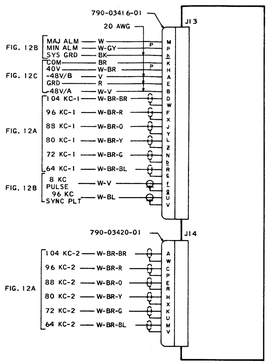


FIG. 3F
CHANNEL CARRIER AMPLIFIER SHELF
RACK 4,5,6

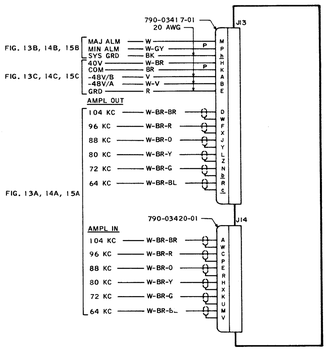


Figure 30. Multiplexer Set AN/FCC-22, Cabling Diagram (Sheet 3 of 15)

FIG. 4A
POWER SUPPLY SHELF
RACK 1,3,5

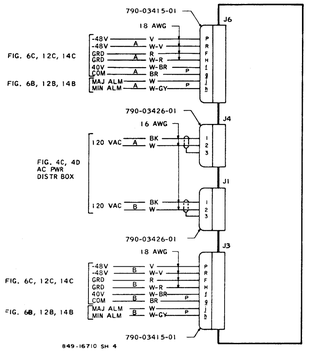


FIG. 4B
MASTER ALARM PANEL
RACK 1

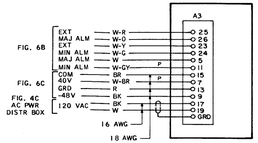


FIG. 4C
AC POWER DISTRIBUTION BOX
RACK 1

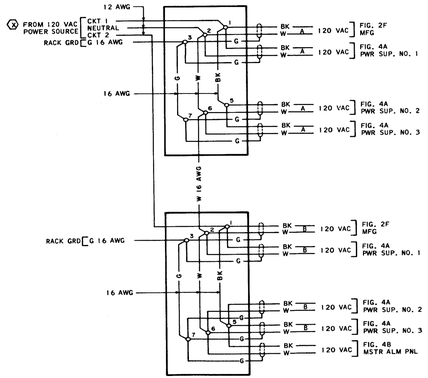


FIG. 4D
AC POWER DISTRIBUTION BOX
RACK 3,5

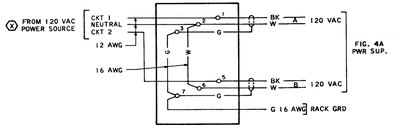
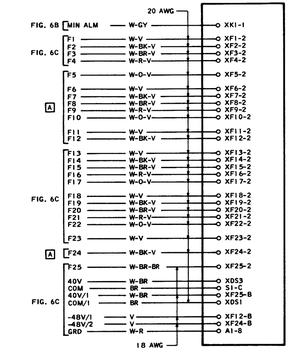


FIG. 4E
(NOT USED)

FIG. 4F
FUSE PANEL 790-12601-01
RACK 1



A LEADS ARE TIED BACK IN WIRING HARNESS.

FIG. 4G
FUSE PANEL 790-11571-01
RACK 3,4,5,6

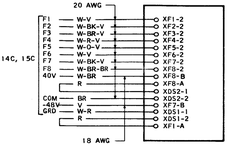


FIG. 4H
FUSE PANEL 790-11501-01
RACK 2

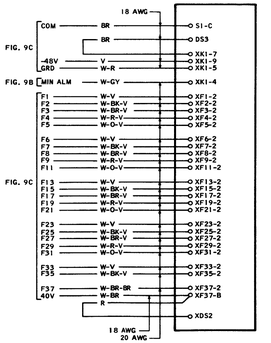


FIG. 4J
GROUP PILOT ALARM SHELF
RACK 3,5

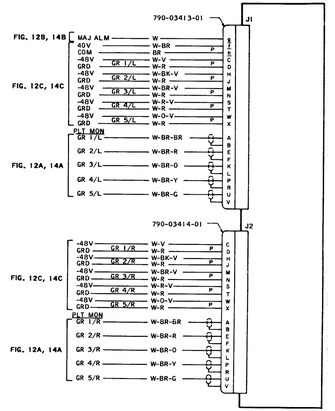
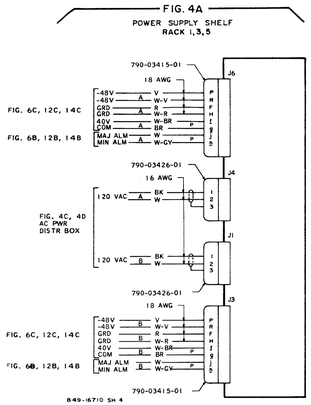
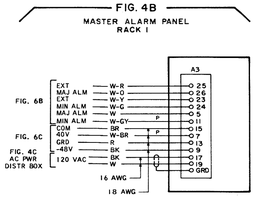
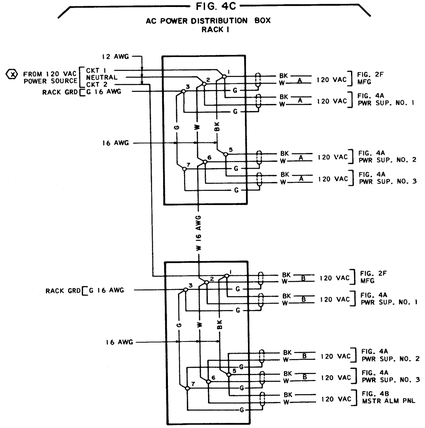


Figure 30. Multiplexer Set AN/FCC-22, Cabling Diagram (Sheet 4 of 15)







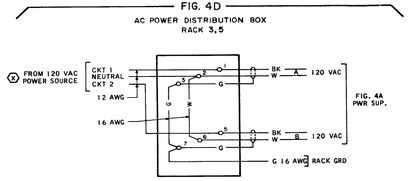
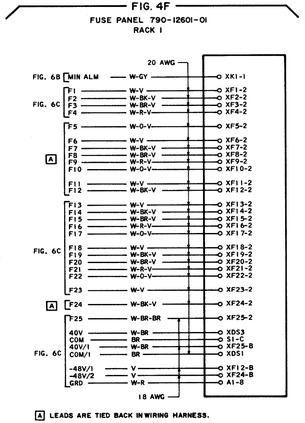
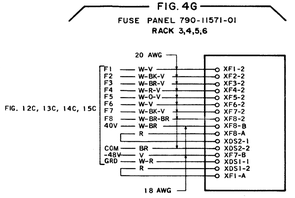
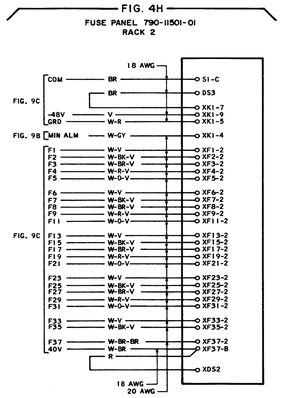
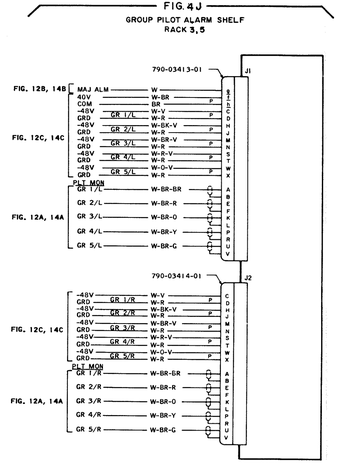


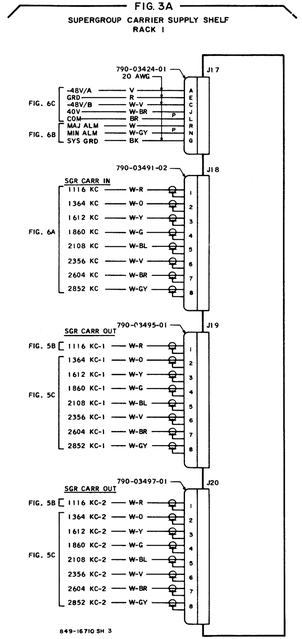
FIG. 4E
(NOT USED)

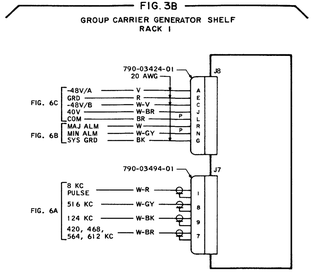


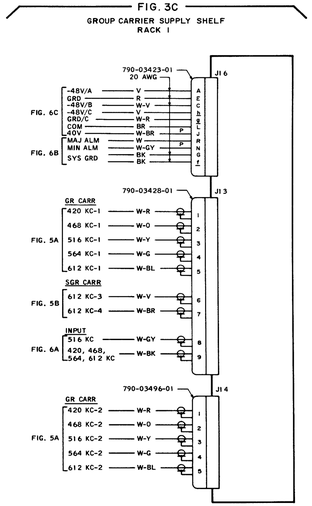


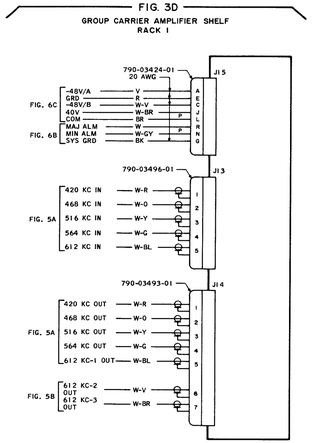


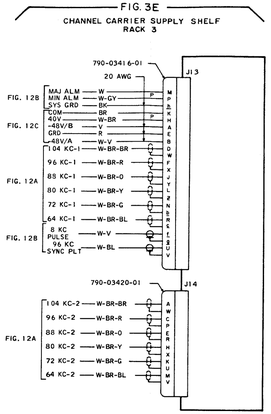












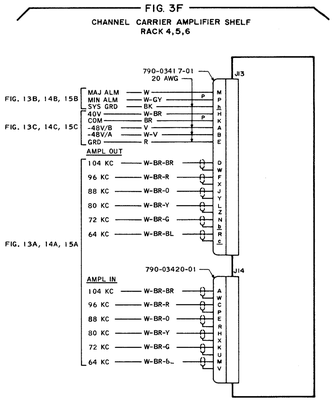


Figure 30. Multiplexer Set AN/FCC-22, Cabling Diagram (Sheet 3 of 15)

FIG. 5A
TERMINAL BOARD A1TB1
RACK 1

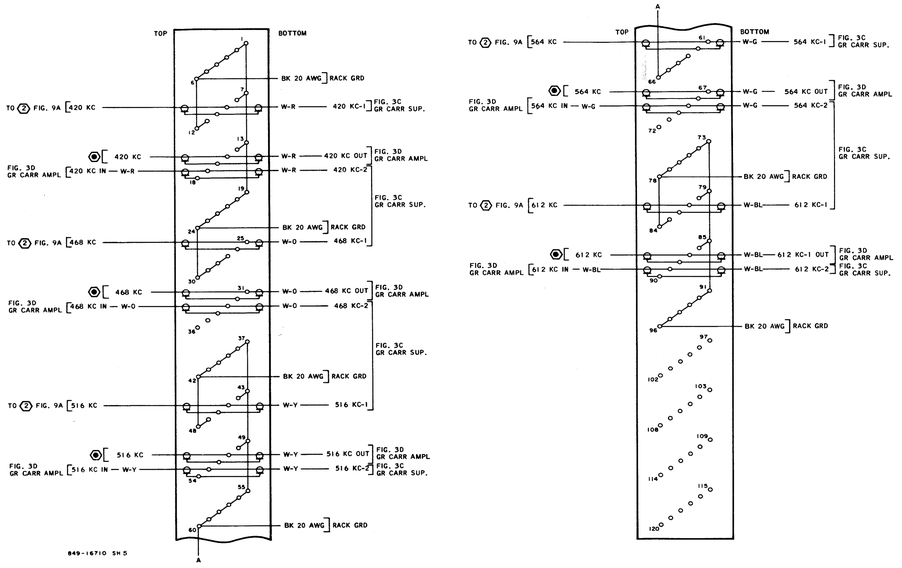
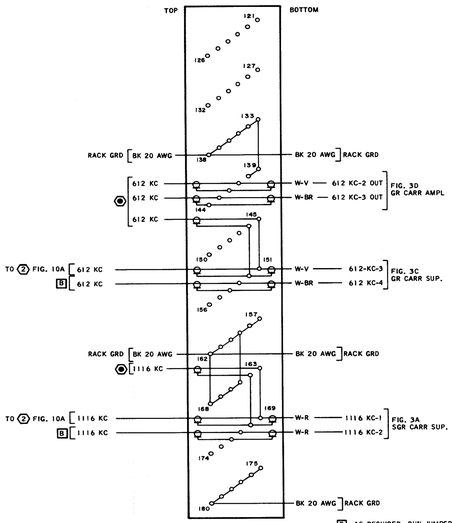
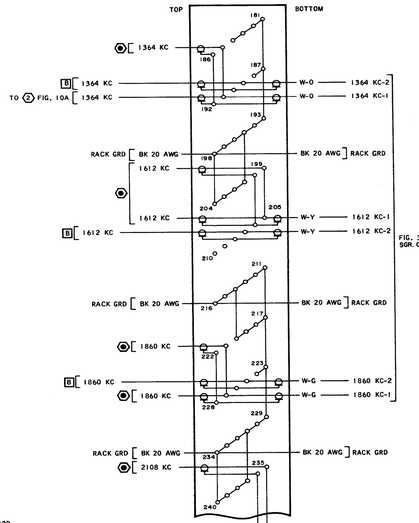


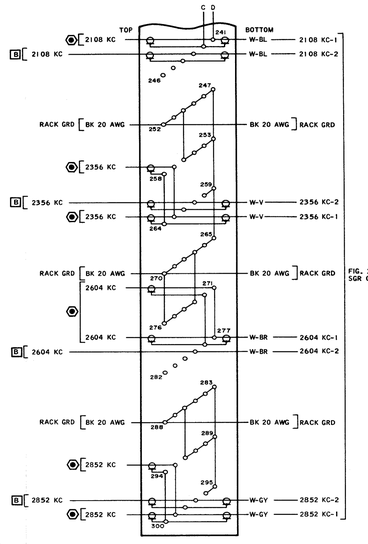
FIG. 5B
TERMINAL BOARD A1TB2
RACK 1



[B] AS REQUIRED, RUN JUMPER TO TERMINAL BOARD A3TB1 (FIG. 7A) TO FURNISH SGR CARRIER TO INPUTS OF SGR CARRIER AMPLIFIER SHELF.

FIG. 5C
TERMINAL BOARD A1TB3
RACK 1





THIS SHEET	COMMON EQUIP. RACK 1 TB PANEL A1

Figure 30. Multiplexer Set AN/FCC-22, Cabling Diagram (Sheet 5 of 15)

FIG. 6A
TERMINAL BOARD A2TB1
RACK 1

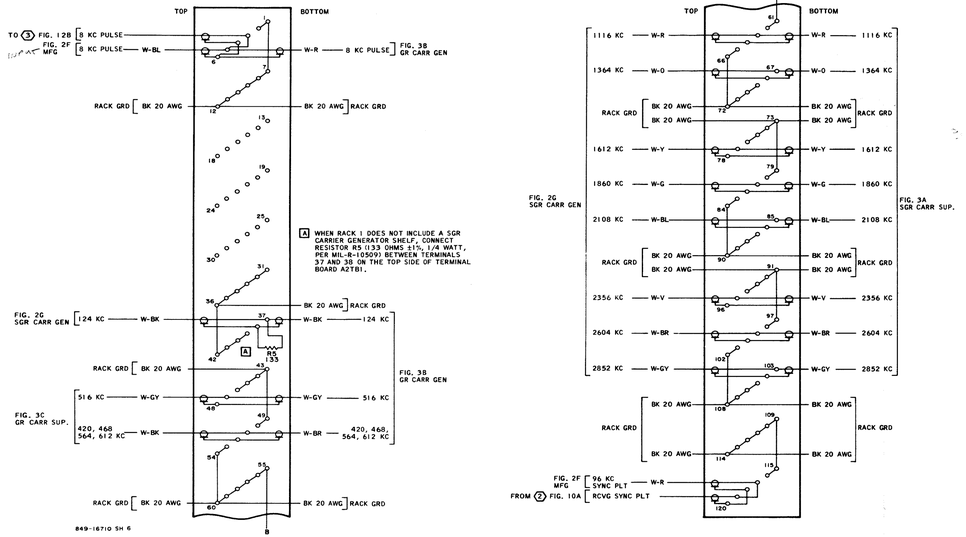


FIG. 6B
TERMINAL BOARD A2TB2
RACK 1

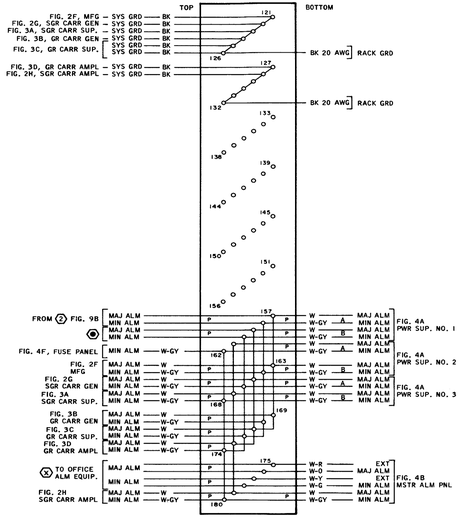


FIG. 6C
TERMINAL BOARD A2TB3
RACK 1

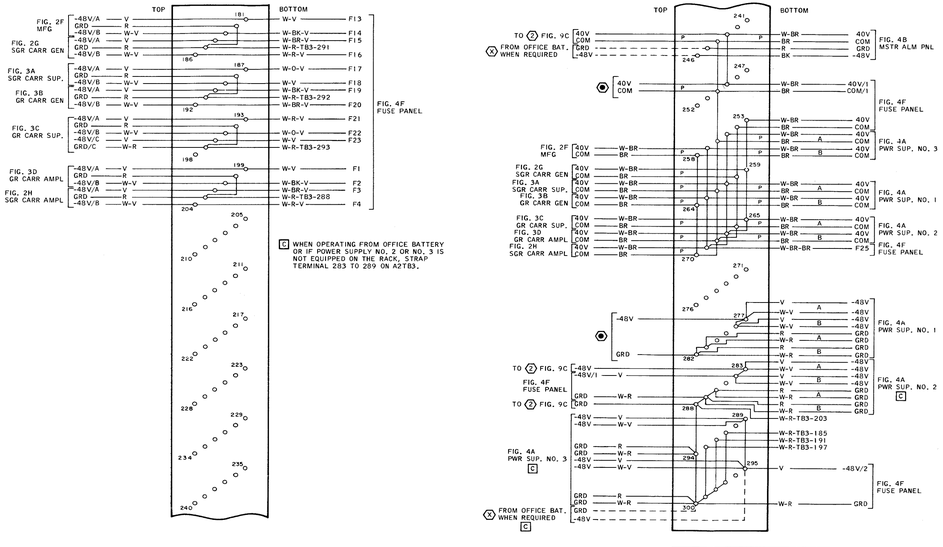
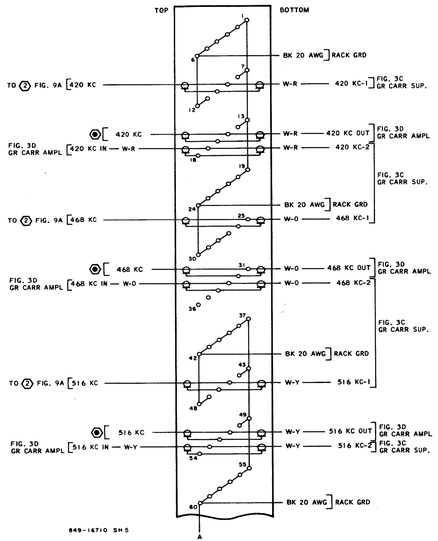


Figure 30. Multiplexer Set AN/FCC-22, Cabling Diagram (Sheet 6 of 15)

FIG. 5A

TERMINAL BOARD A1TB1
RACK 1



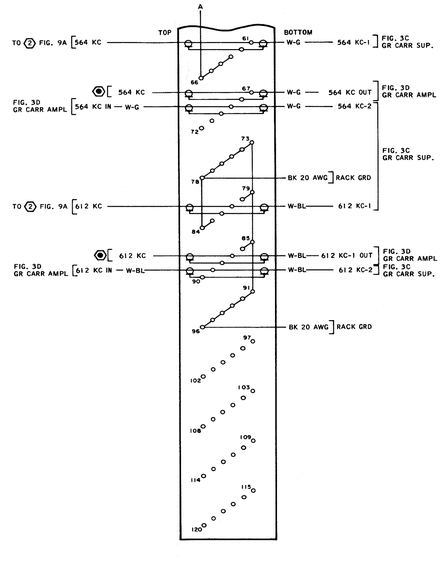
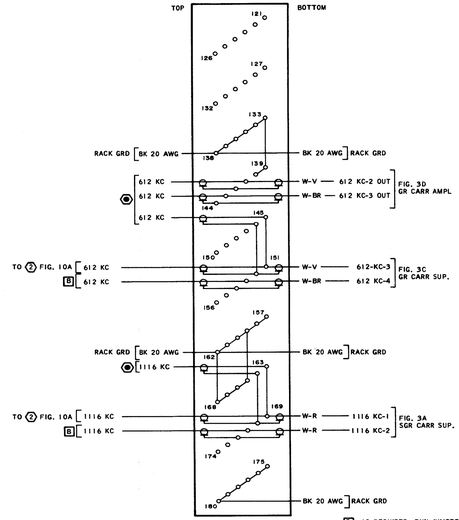


FIG. 5B

TERMINAL BOARD A1TB2
RACK 1



B AS REQUIRED, RUN JUMPER TO TERMINAL BOARD A3TB1 (FIG. 7A) TO FURNISH SGR CARRIER TO INPUTS OF SGR CARRIER AMPLIFIER SHELF.

116 KC
364 KC
CK GRD
612 KC
860 KC
FIG. 3A SGR CARR SUP.
108 KC
CK GRD
356 KC
604 KC
852 KC
CK GRD

FIG. 6B
TERMINAL BOARD A2TB2
RACK 1

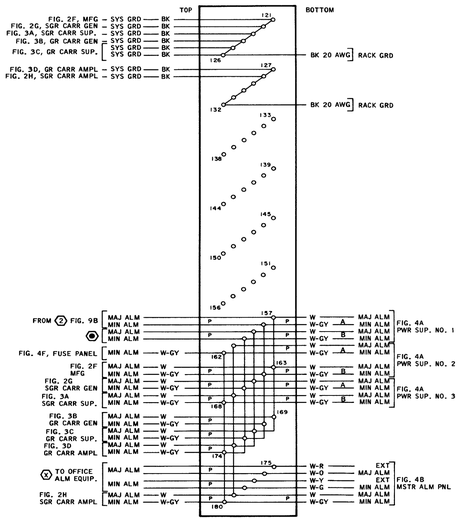
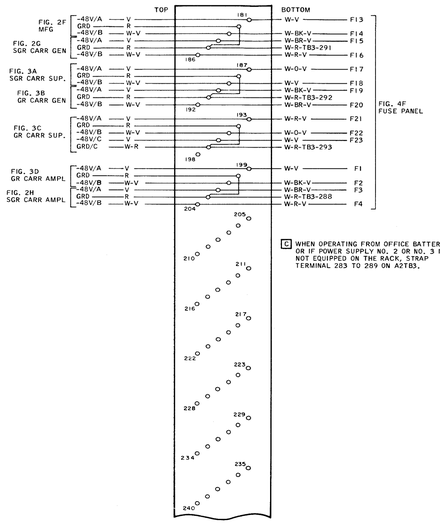


FIG. 6C
TERMINAL BOARD A2TB3
RACK 1



[C] WHEN OPERATING FROM OFFICE BATTERY OR IF POWER SUPPLY NO. 2 OR NO. 3 IS NOT EQUIPPED ON THE RACK, STRAP TERMINAL 203 TO 289 ON A2TB3.

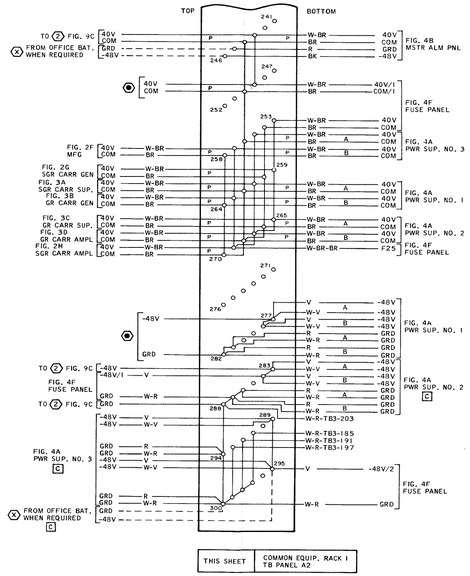
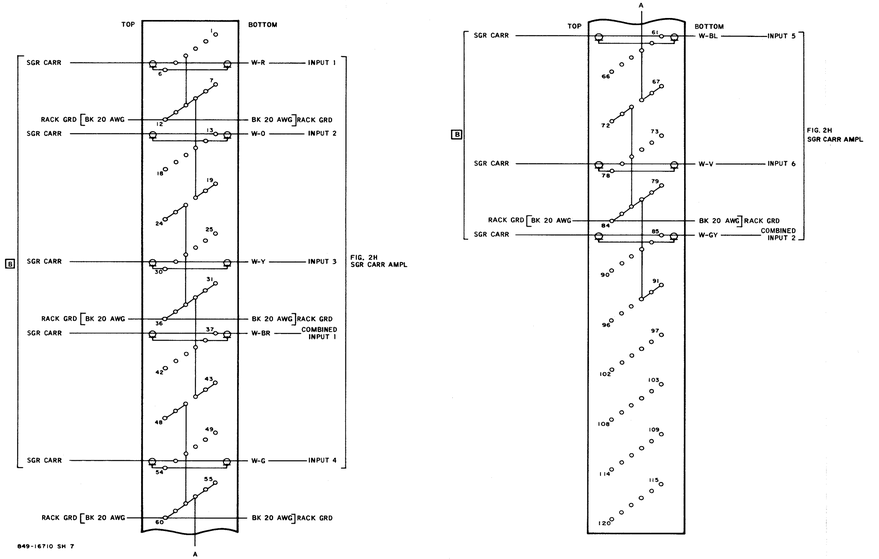


Figure 30. Multiplexer Set AN/FCC-22, Cabling Diagram (Sheet 6 of 15)

FIG. 7A
TERMINAL BOARD A3TB1
RACK 1



B AS REQUIRED, CONNECT JUMPER FROM TERMINAL BOARD A1TB2 (FIG. 5B) OR A1TB3 (FIG. 5C) TO FURNISH SGR CARRIER TO INPUTS OF SGR CARRIER AMPLIFIER SHELF.

FIG. 7B
TERMINAL BOARD A3TB2
RACK 1

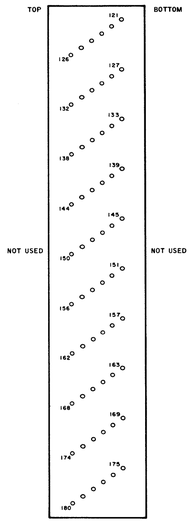
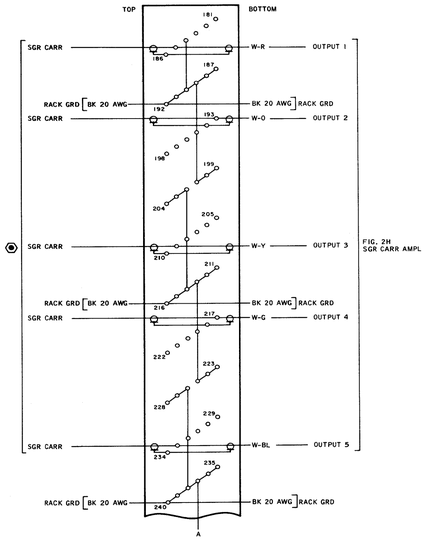


FIG. 7C
TERMINAL BOARD A3TB3
RACK 1



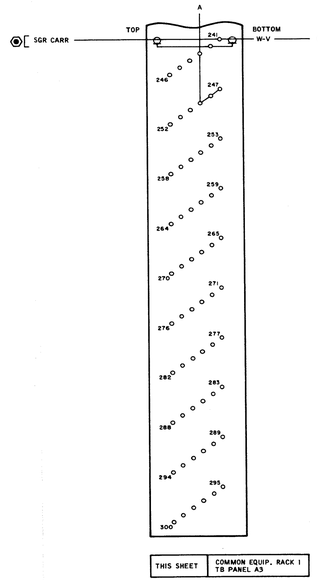
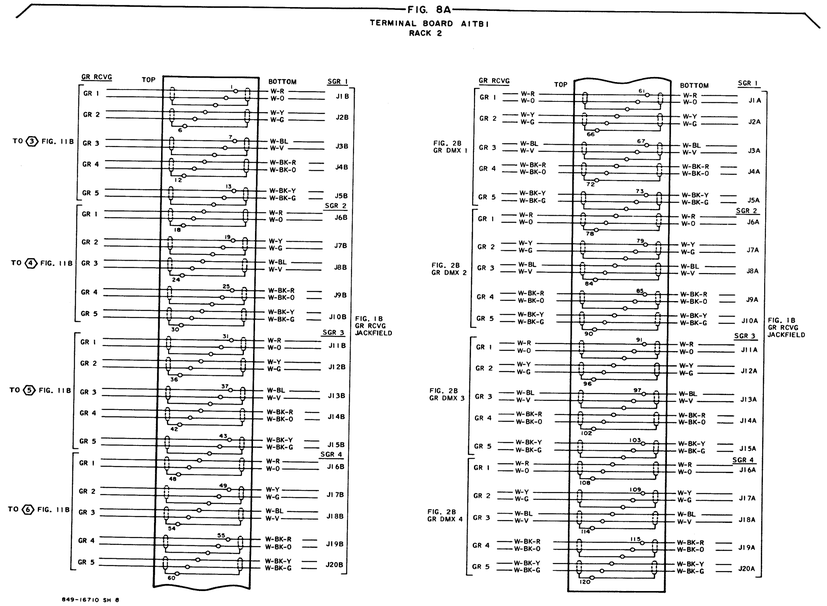
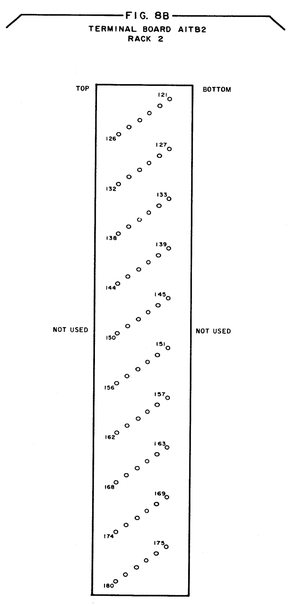


Figure 30. Multiplexer Set AN/FCC-22, Cabling Diagram (Sheet 7 of 15)





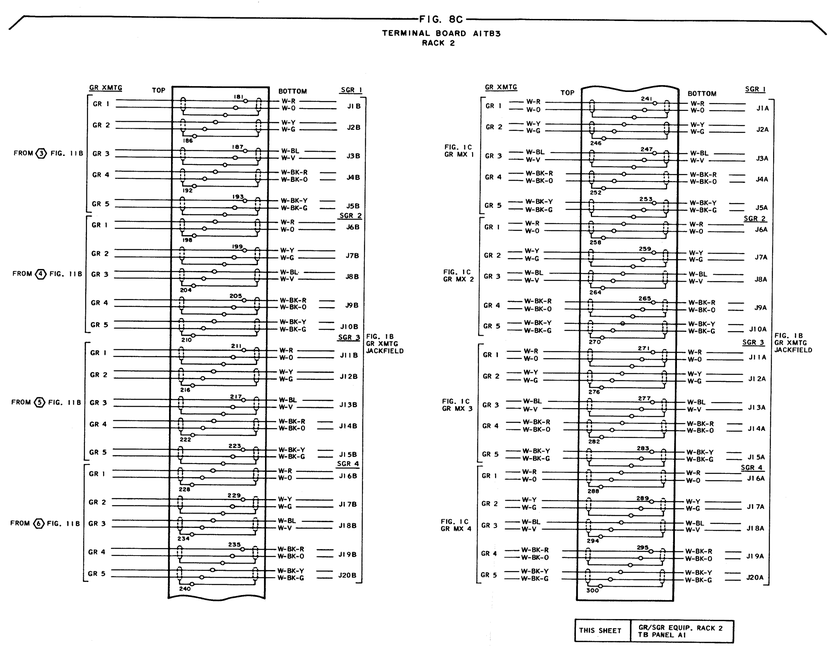


Figure 30. Multiplexer Set AN/FCC-22, Cabling Diagram (Sheet 8 of 15)

FIG. 9A
TERMINAL BOARD A2TB1
RACK 2

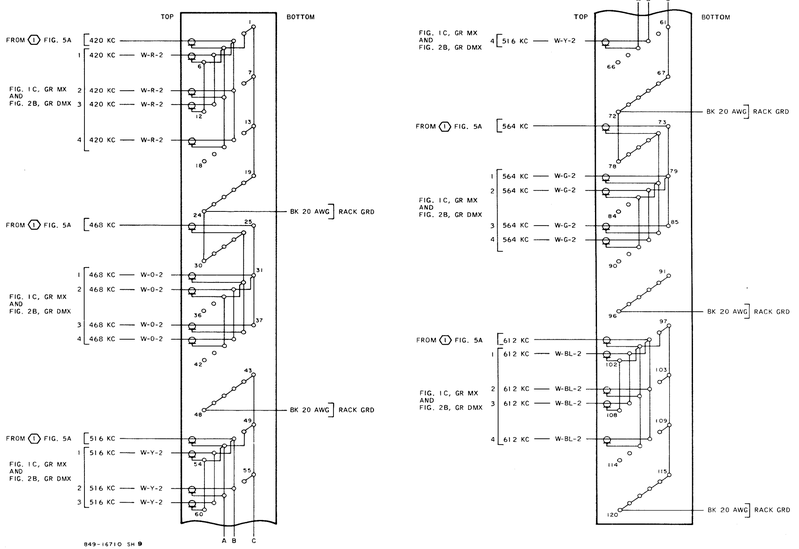


FIG. 9B
TERMINAL BOARD A2TB2
RACK 2

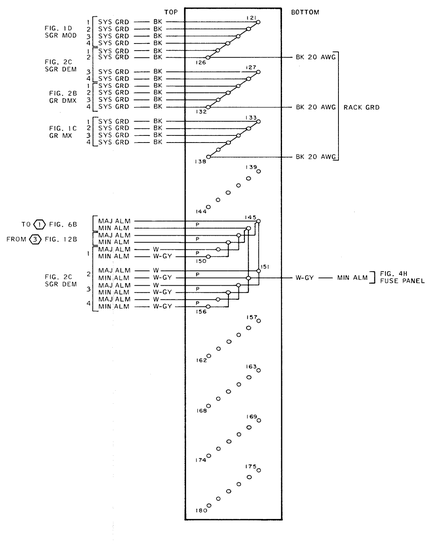
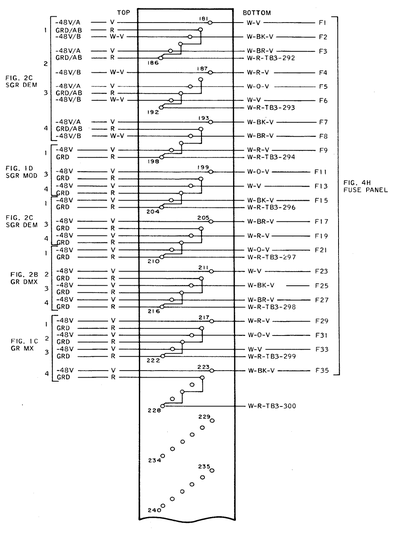
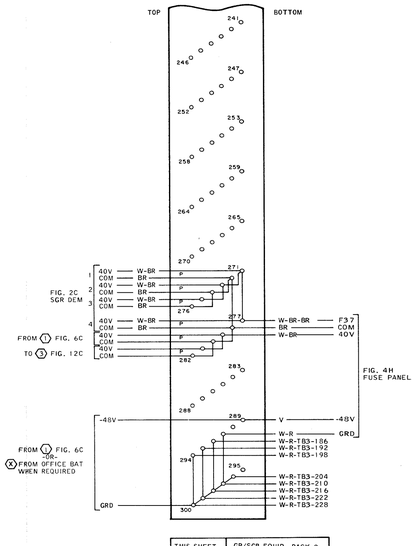


FIG. 9C
TERMINAL BOARD A2TB3
RACK 2





THIS SHEET	GR/SGR EQUIP. RACK 2 TB PANEL A2

Figure 30. Multiplexer Set AN/FCC-22, Cabling Diagram (Sheet 9 of 15)

FIG. 9A
TERMINAL BOARD A2TB1
RACK 2

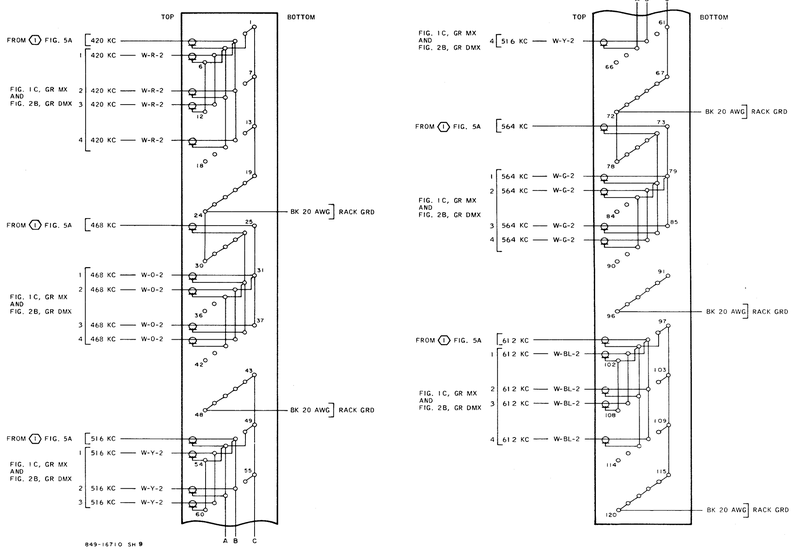


FIG. 9B
TERMINAL BOARD A2TB2
RACK 2

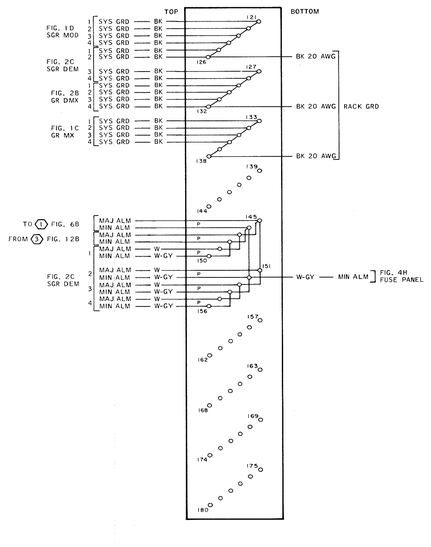
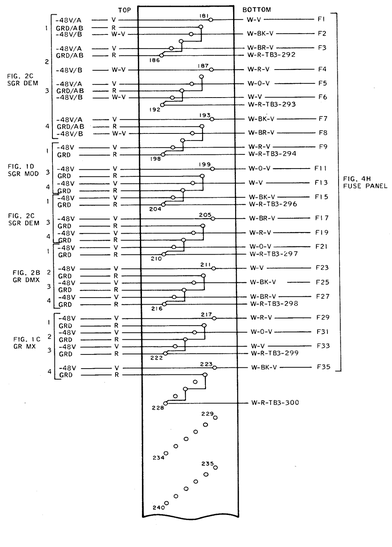
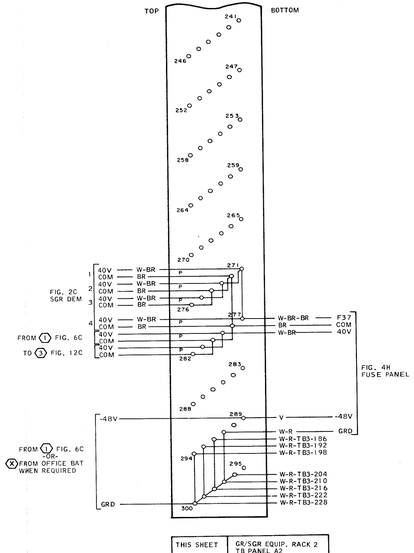


FIG. 9C
TERMINAL BOARD A2TB3
RACK 2





THIS SHEET	GR/SGR EQUIP. RACK 2 TB PANEL A2

Figure 30. Multiplexer Set AN/FCC-22, Cabling Diagram (Sheet 9 of 15)

FIG. 10A
TERMINAL BOARD A3TB1
RACK 2

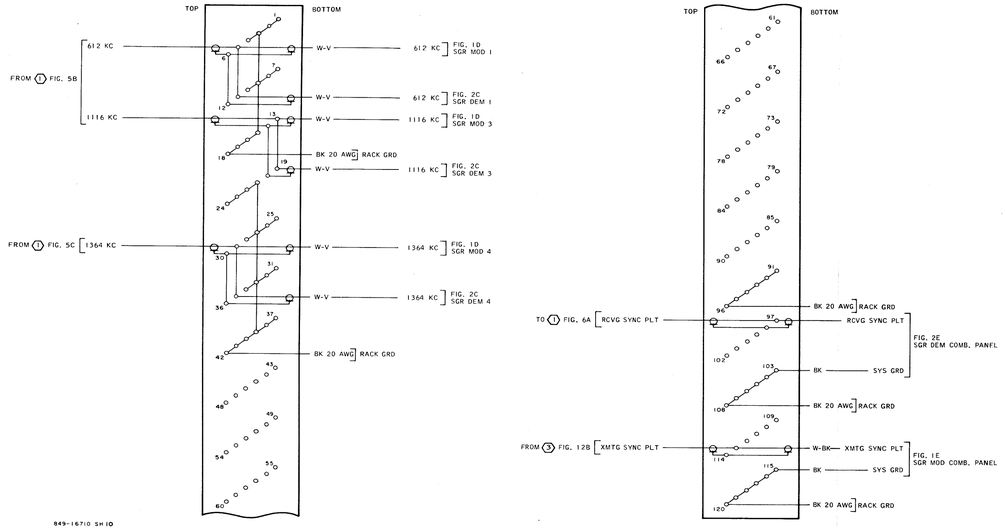
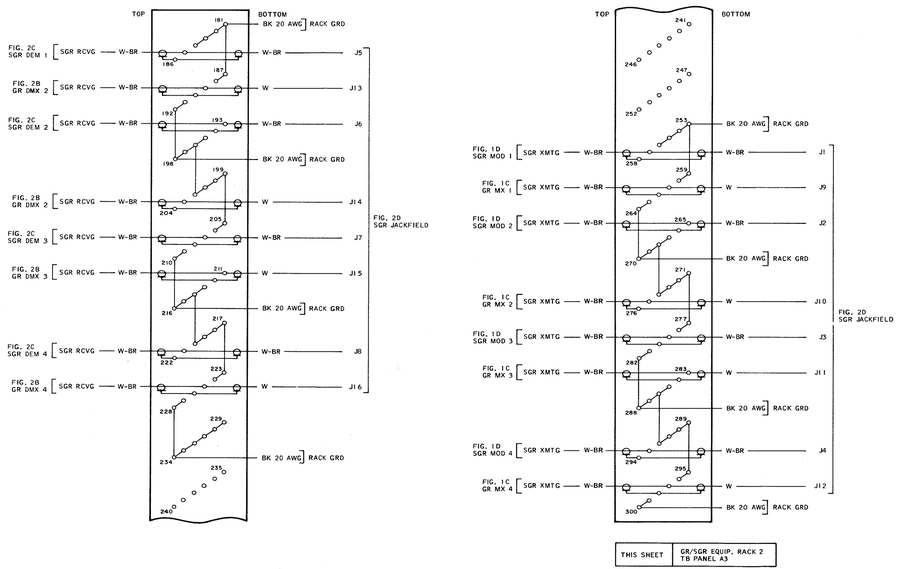


FIG. 10B
TERMINAL BOARD A3TB2
RACK 2

FIG. 10B
TERMINAL BOARD A3TB2
RACK 2

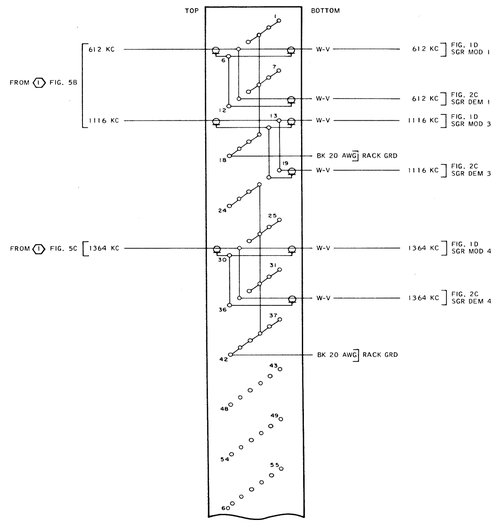
FIG. 10C
TERMINAL BOARD A3TB3
RACK 2



THIS SHEET	GR/SGR EQUIP, RACK 2 TB PANEL A3

Figure 30. Multiplexer Set AN/FCC-22, Cabling Diagram (Sheet 10 of 15)

FIG. 10A
TERMINAL BOARD A3TB1
RACK 2



849-16710 SH 10

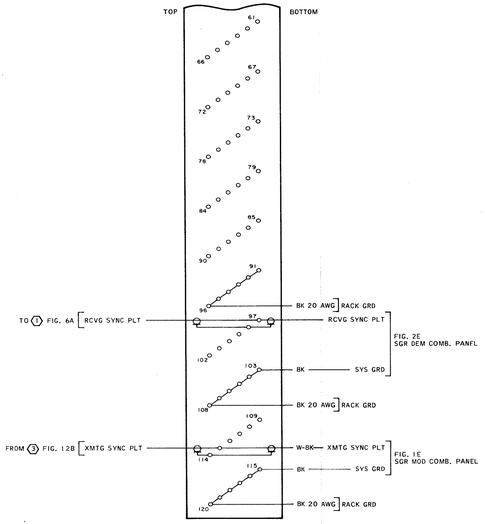


FIG. 10B
TERMINAL BOARD A3TB2
RACK 2

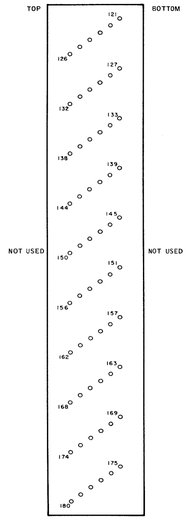
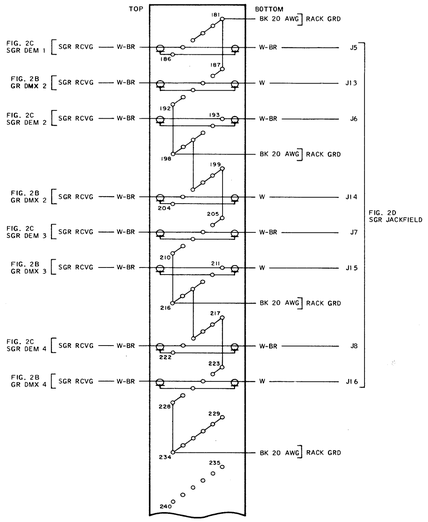
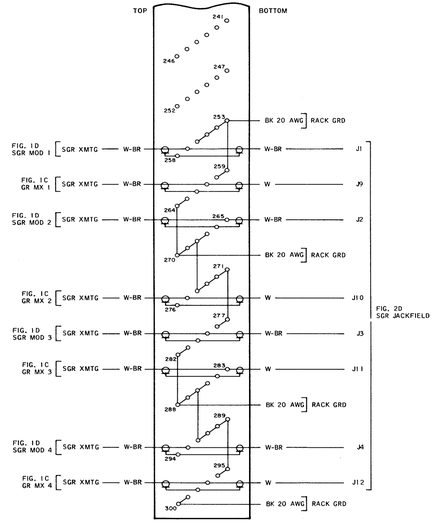


FIG. 10C
TERMINAL BOARD A3TB3
RACK 2





THIS SHEET	GR/SGR EQUIP. RACK 2 TB PANEL A3

Figure 30. Multiplexer Set AN/FCC-22, Cabling Diagram (Sheet 10 of 15)

FIG. 9A
TERMINAL BOARD A2TB1
RACK 2

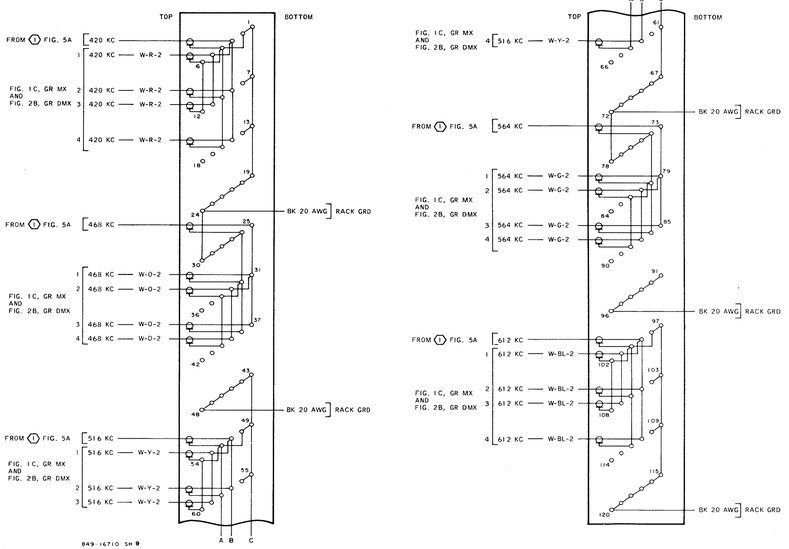


FIG. 9B
TERMINAL BOARD A2TB2
RACK 2

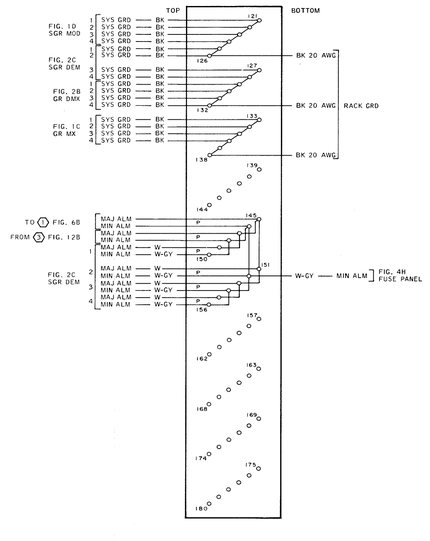


FIG. 9C
TERMINAL BOARD A2TB3
RACK 2

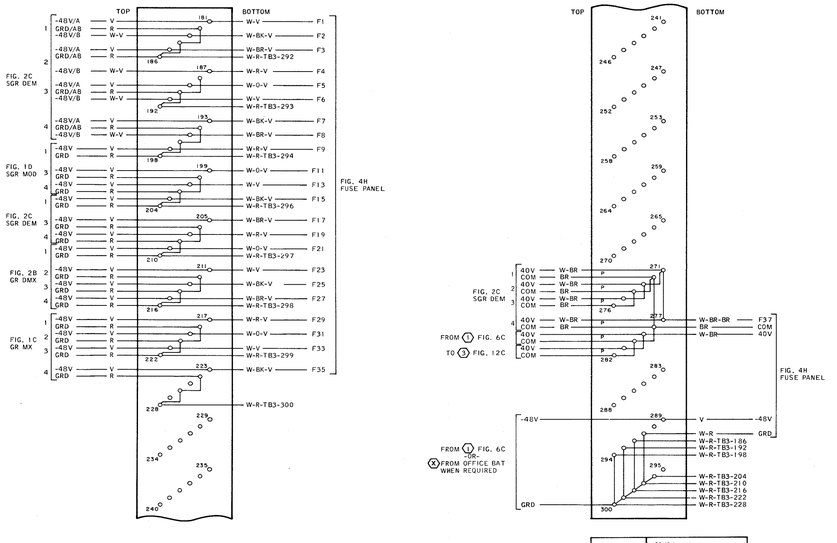


Figure 30. Multiplexer Set AN/FCC-22, Cabling Diagram (Sheet 9 of 15)

FIG. IIA

TERMINAL BOARD A1TB1
RACKS 3 THRU 6

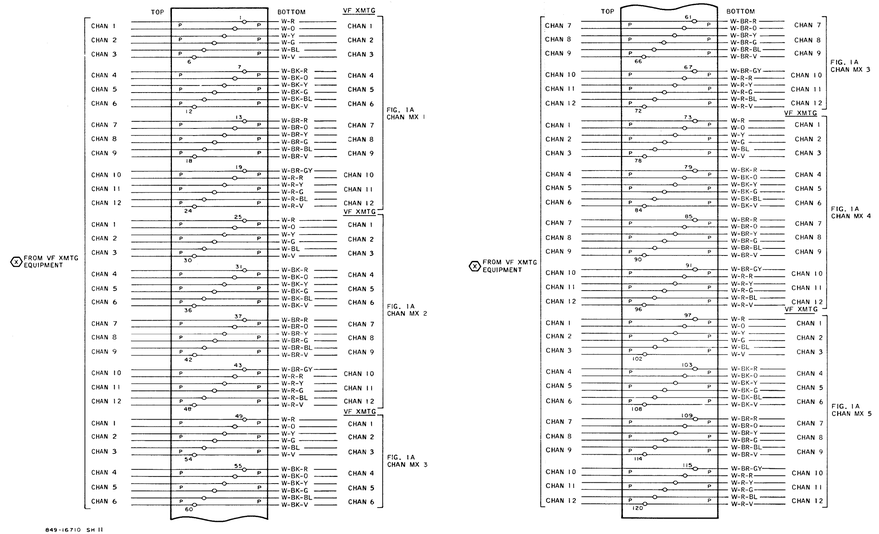


FIG. IIB

TERMINAL BOARD A1TB2
RACKS 3 THRU 6

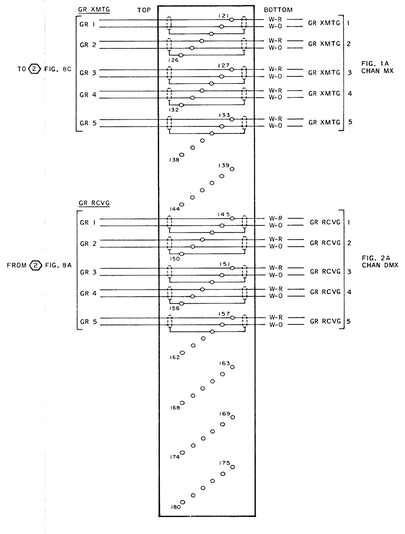
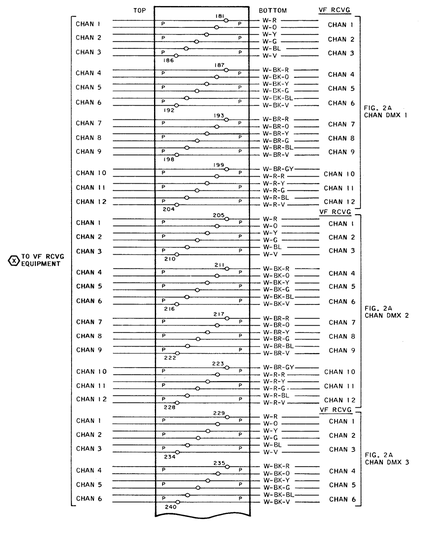
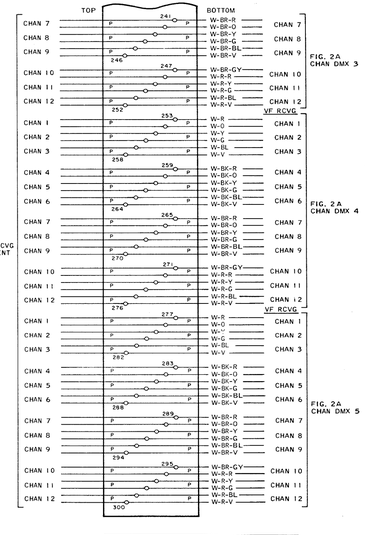


FIG. IIC

TERMINAL BOARD A1TB3
RACKS 3 THRU 6





THIS SHEET	CHANNEL EQUIP. RACKS 3 THRU 6 TB PANEL A1

Figure 30. Multiplexer Set AN/FCC-22, Cabling Diagram (Sheet 11 of 15)

FIG. 12A
TERMINAL BOARD A2TB1
RACK 3

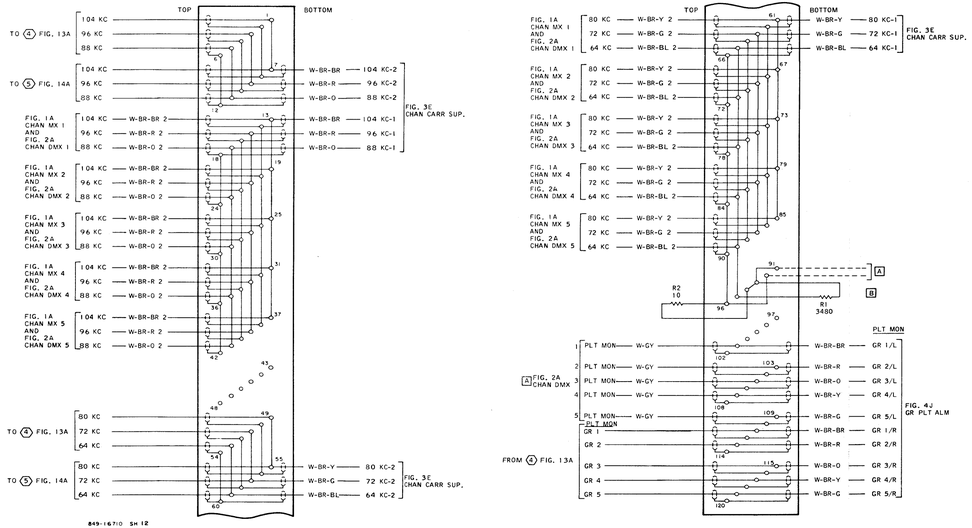


FIG. 12B
TERMINAL BOARD A2TB2
RACK 3

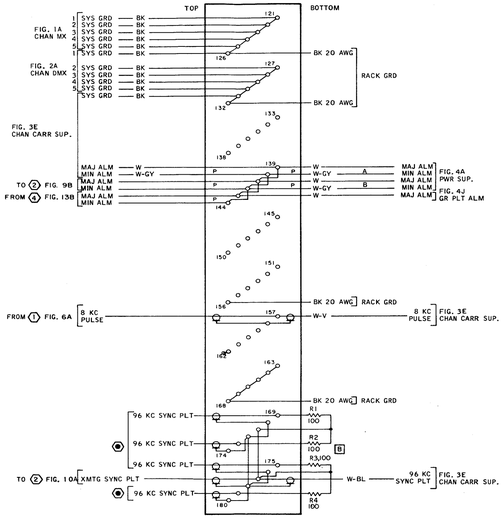
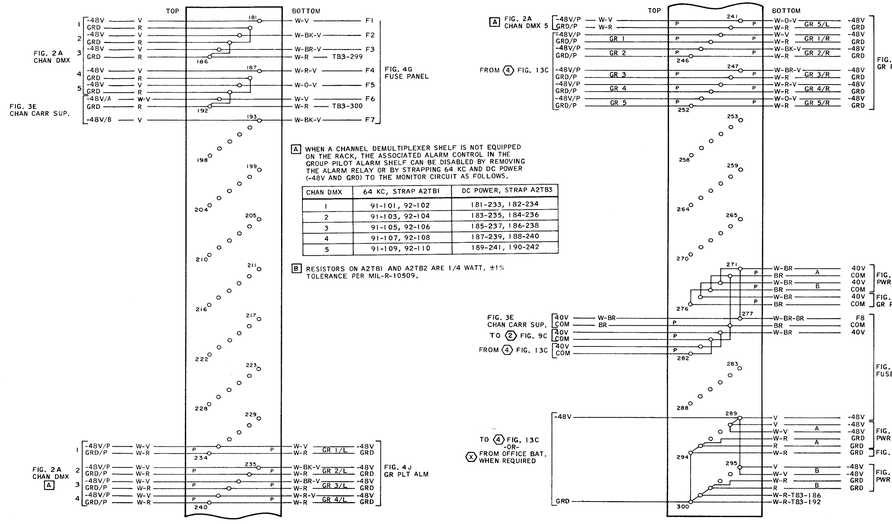


FIG. 12C
TERMINAL BOARD A2TB3
RACK 3



A WHEN A CHANNEL DEMULTIPLEXER SHELF IS NOT EQUIPPED ON THE RACK, THE ASSOCIATED ALARM CONTROL IN THE GROUP PILOT ALARM SHELF CAN BE DISABLED BY REMOVING THE ALARM RELAY OR BY STRAPPING 64 KC AND DC POWER (-48V AND GRD) TO THE MONITOR CIRCUIT AS FOLLOWS.

CHAN DMX	64 KC, STRAP A2TB1	DC POWER, STRAP A2TB3
1	91-101, 92-102	181-233, 182-234
2	91-103, 92-104	183-235, 184-236
3	91-105, 92-106	185-237, 186-238
4	91-107, 92-108	187-239, 188-240
5	91-109, 92-110	189-241, 190-242

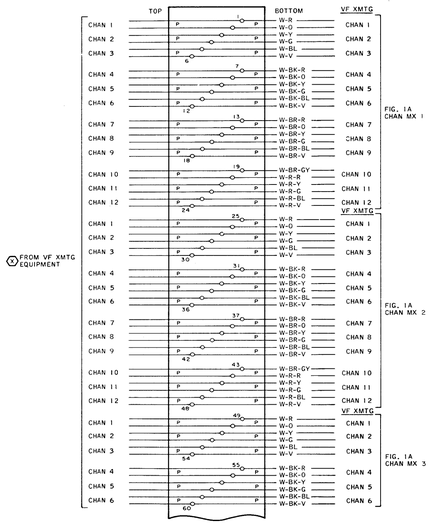
B RESISTORS ON A2TB1 AND A2TB2 ARE 1/4 WATT, ±1% TOLERANCE PER MIL-R-10509.

THIS SHEET	CHANNEL EQUIP. RACK 3 TB PANEL A2

Figure 30. Multiplexer Set AN/F
Cabling Diagram (She

FIG. 11A

TERMINAL BOARD A1TB1
RACKS 3 THRU 6



849-16710 SH 11

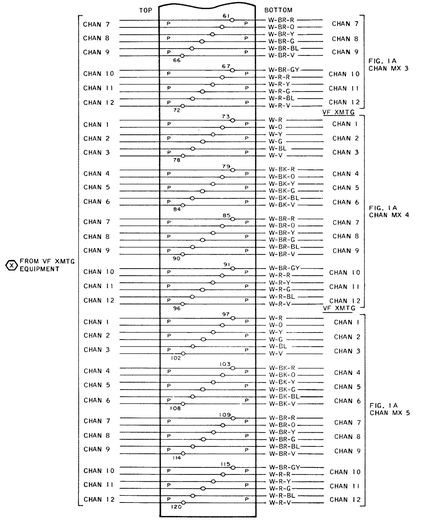
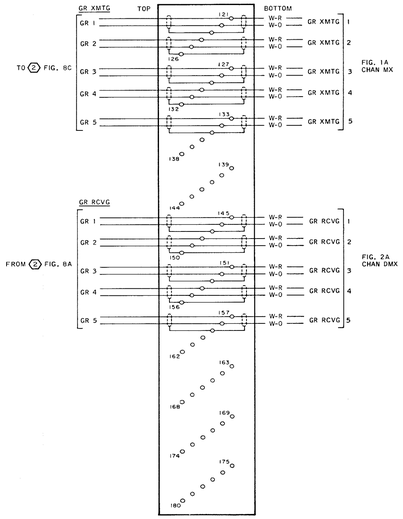
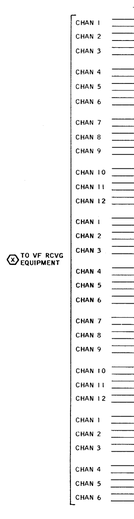


FIG. 11B

TERMINAL BOARD A1TB2
RACKS 3 THRU 6





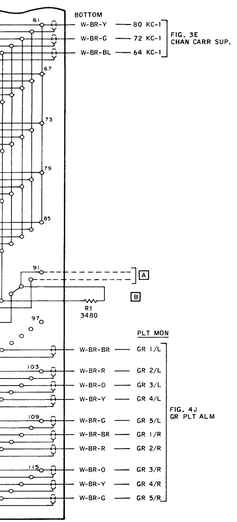


FIG. 12B
TERMINAL BOARD A2TB2
RACK 3

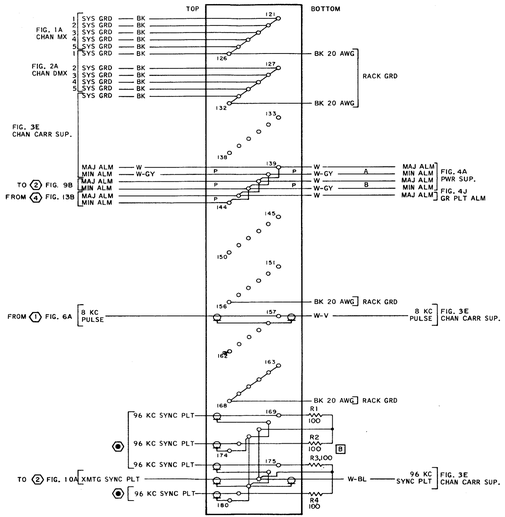
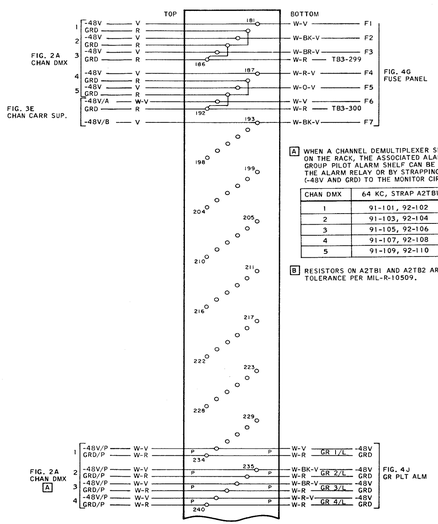


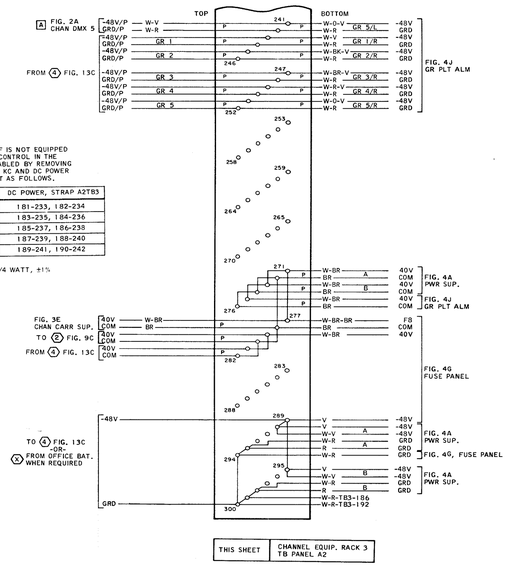
FIG. 12C
TERMINAL BOARD A2TB3
RACK 3



A WHEN A CHANNEL DEMULTIPLEXER SHELF IS NOT EQUIPPED ON THE RACK, THE ASSOCIATED ALARM CONTROL IN THE GROUP PILOT ALARM SHELF CAN BE DISABLED BY REMOVING THE ALARM RELAY OR BY STRAPPING 64 KC AND DC POWER (-48V AND GRD) TO THE MONITOR CIRCUIT AS FOLLOWS.

CHAN DMX	64 KC, STRAP A2TB1	DC POWER, STRAP A2TB3
1	91-101, 92-102	181-233, 182-234
2	91-103, 92-104	183-235, 184-236
3	91-105, 92-106	185-237, 186-238
4	91-107, 92-108	187-239, 188-240
5	91-109, 92-110	189-241, 190-242

B RESISTORS ON A2TB1 AND A2TB2 ARE 1/4 WATT, ±1% TOLERANCE PER MIL-R-10509.



THIS SHEET	CHANNEL EQUIP. RACK 3 TB PANEL A2

Figure 30. Multiplexer Set AN/FCC-22, Cabling Diagram (Sheet 12 of 15)

FIG. 13A
TERMINAL BOARD A2TB1
RACK 4

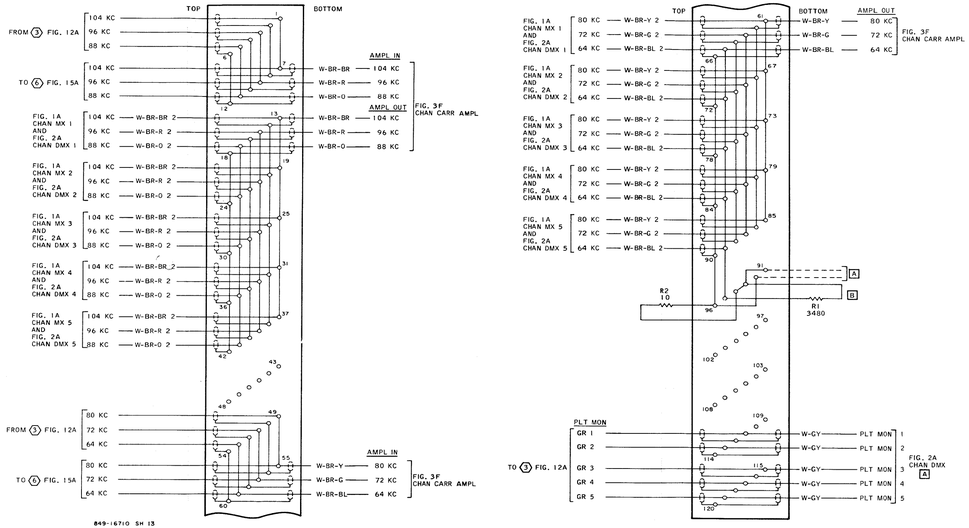
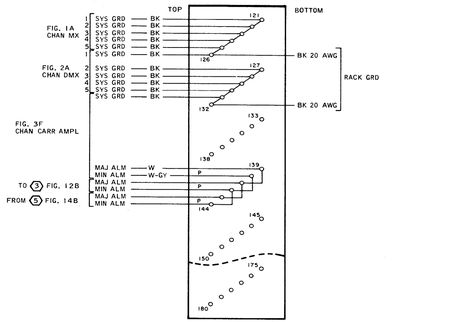


FIG. 13B
TERMINAL BOARD A2TB2
RACK 4

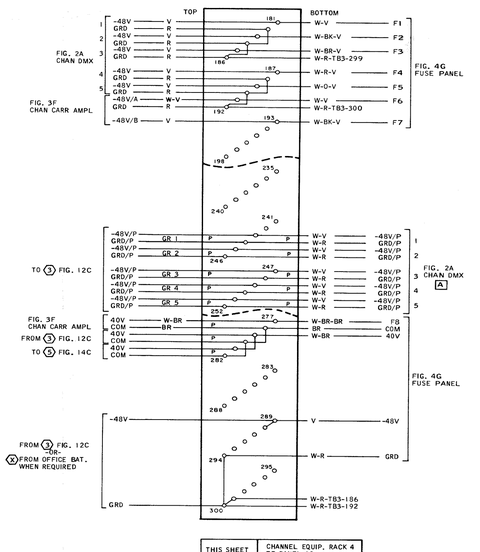


A WHEN A CHANNEL DEMULTIPLEXER SHELF IS NOT EQUIPPED ON THE RACK, THE ASSOCIATED ALARM CONTROL IN THE GROUP PILOT ALARM SHELF ON THE ADJACENT RACK CAN BE DISABLED BY REMOVING THE ALARM RELAY OR BY STRAPPING 64 KC AND DC POWER (-48V AND GRD) TO THE MONITOR CIRCUIT AS FOLLOWS.

CHAN DMX	64 KC, STRAP A2TB1	DC POWER, STRAP A2TB3
1	91-111, 92-112	181-243, 182-244
2	91-113, 92-114	183-245, 184-246
3	91-115, 92-116	185-247, 186-248
4	91-117, 92-118	187-249, 188-250
5	91-119, 92-120	189-251, 190-252

B RESISTORS ON A2TB1 ARE 1/4 WATT, ±1% TOLERANCE, PER MIL-R-10509.

FIG. 13C
TERMINAL BOARD A2TB3
RACK 4



THIS SHEET	CHANNEL EQUIP. RACK 4 TB PANEL A2

Figure 30. Multiplexer Set AN/FCC-22, Cabling Diagram (Sheet 13 of 15)

FIG. 14A
TERMINAL BOARD A2TB1
RACK 5

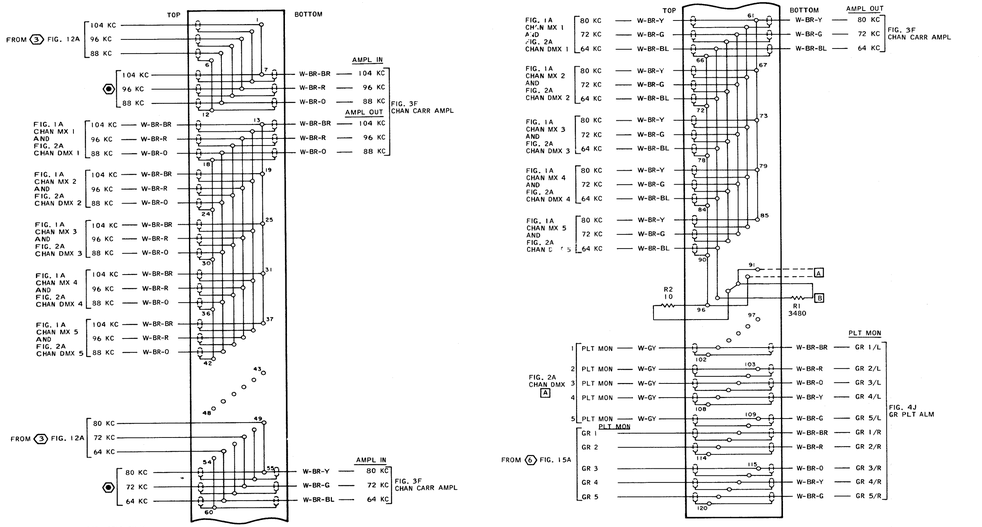
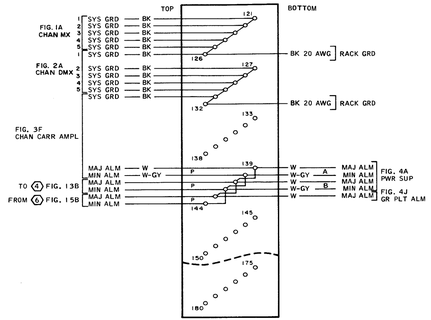


FIG. 14B
TERMINAL BOARD A2TB2
RACK 5

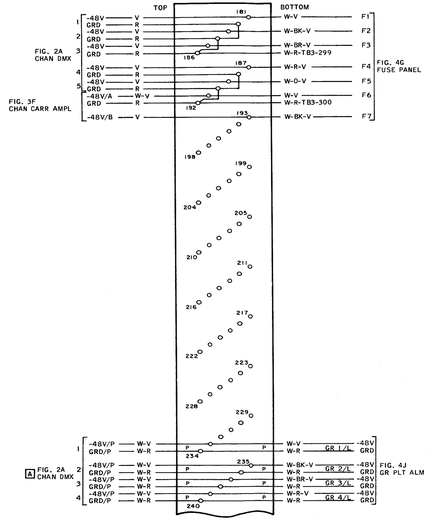


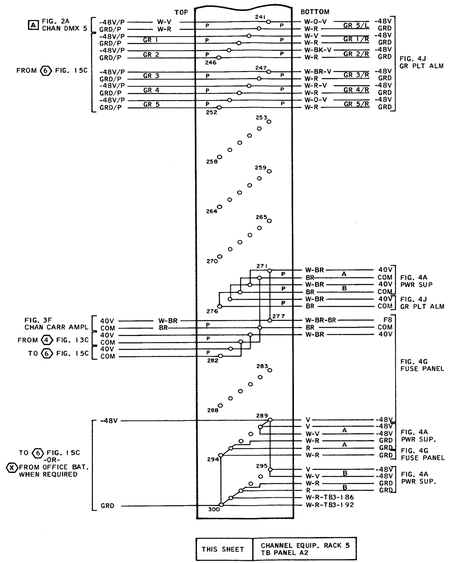
(A) WHEN A CHANNEL DEMULTIPLEXER SHELF IS NOT EQUIPPED ON THE RACK, THE ASSOCIATED ALARM CONTROL IN THE GROUP PILOT ALARM SHELF CAN BE DISABLED BY REMOVING THE ALARM RELAY OR BY STRAPPING 64 KC AND DC POWER (-48V AND GRD) TO THE MONITOR CIRCUIT AS FOLLOWS.

CHAN DMX	64 KC, STRAP A2TB1	DC POWER, STRAP A2TB3
1	91-101, 92-102	181-233, 182-234
2	91-103, 92-104	183-235, 184-236
3	91-105, 92-106	185-237, 186-238
4	91-107, 92-108	187-239, 188-240
5	91-109, 92-110	189-241, 190-242

(B) RESISTORS ON A2TB1 ARE 1/4 WATT, ±1% TOLERANCE, PER MIL-R-10509.

FIG. 14C
TERMINAL BOARD A2TB3
RACK 5

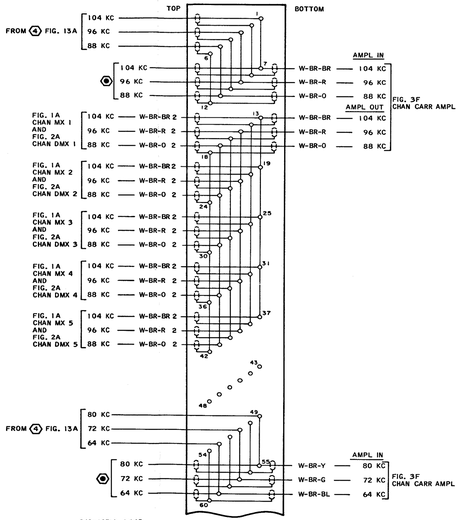




THIS SHEET	CHANNEL EQUIP. RACK 5 TB PANEL A2

Figure 30. Multiplexer Set AN/FCC-22, Cabling Diagram (Sheet 14 of 15)

FIG. 15A
TERMINAL BOARD A2TB1
RACK 6



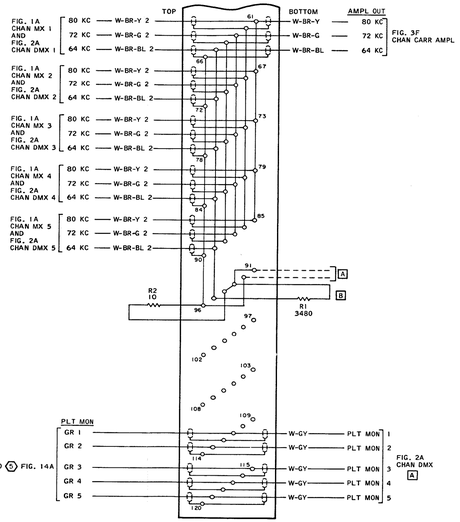
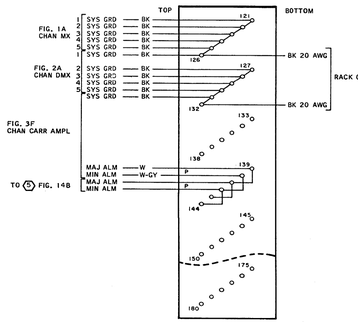


FIG. 15B
TERMINAL BOARD A2TB2
RACK 6

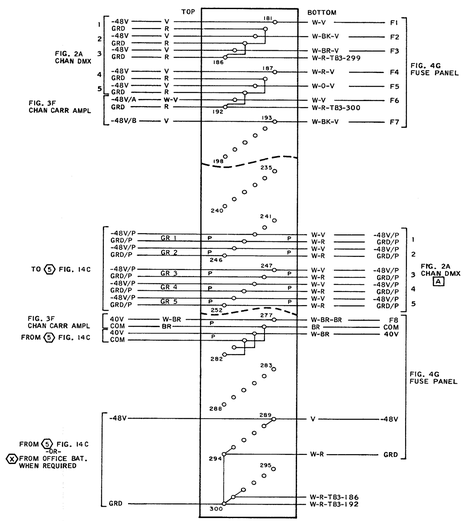


A WHEN A CHANNEL DEMULTIPLEXER SHELF IS NOT EQUIPPED ON THE RACK, THE ASSOCIATED ALARM CONTROL IN THE GROUP PILOT ALARM SHELF ON THE ADJACENT RACK CAN BE DISABLED BY REMOVING THE ALARM RELAY OR BY STRAPPING 64 KC AND DC POWER (-48V AND GRD) TO THE MONITOR CIRCUIT AS FOLLOWS.

CHAN DMX	64 KC, STRAP A2TB1	DC POWER, STRAP A2TB3
1	91-111, 92-112	181-243, 182-244
2	91-113, 92-114	183-245, 184-246
3	91-115, 92-116	185-247, 186-248
4	91-117, 92-118	187-249, 188-250
5	91-119, 92-120	189-251, 190-252

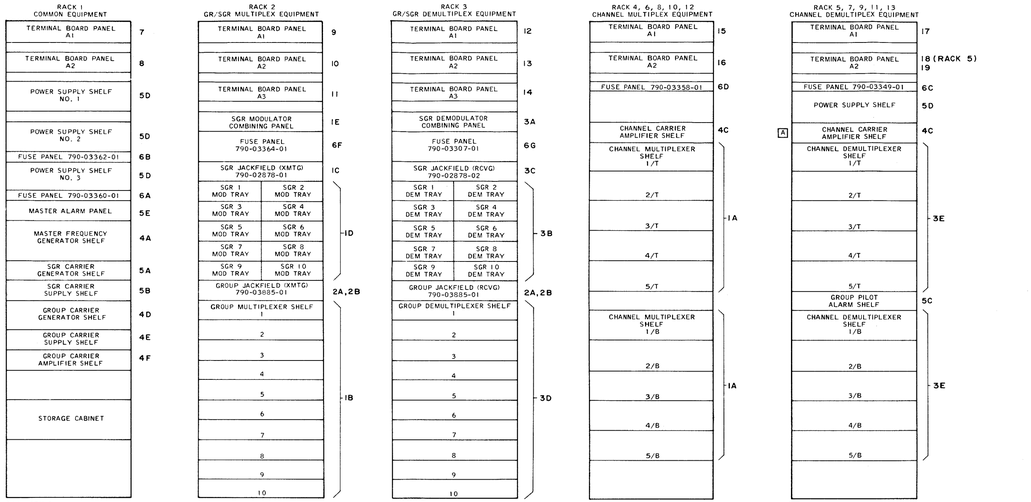
B RESISTORS ON A2TB1 ARE 1/4 WATT, ±1% TOLERANCE, PER MIL-R-10509.

FIG. 15C
TERMINAL BOARD A2TB3
RACK 6



THIS SHEET | CHANNEL EQUIP. RACK 6 TB PANEL A2

Figure 30. Multiplexer Set AN/FCC-22, Cabling Diagram (Sheet 15 of 15)



A RACK 5 HAS A CHANNEL CARRIER SUPPLY SHELF (FIG. 4B) INSTEAD OF A CHANNEL CARRIER AMPLIFIER SHELF.

NOTES:

1. THIS DIAGRAM SHOWS INTRA-RACK WIRING, INTER-RACK WIRING (BETWEEN RACKS), AND WIRING TO EXTERNAL EQUIPMENT. THE SHEET NUMBER OR FIGURE NUMBER OF THE DIAGRAM PERTAINING TO EACH MAJOR COMPONENT IS SHOWN IN THE EQUIPMENT RACK LAYOUT ON THIS SHEET.

2. INTRA-RACK WIRING TO THE EQUIPMENT SHELVES (AND TRAYS) IS PROVIDED BY WIRING HARNESSES THAT PLUG INTO RECEPTACLES AT THE REAR OF THE SHELVES. THE PART NUMBERS OF THE WIRING HARNESSES ARE CALLED OUT ON THIS DIAGRAM AT THE PLUG END.

3. PANELS AND JACKFIELDS HAVE INTEGRAL WIRING HARNESSES THROUGH WHICH CONNECTIONS ARE MADE TO THE TERMINAL BOARD PANELS AT THE TOP OF THE RACK.

4. UNLESS OTHERWISE SPECIFIED, INTRA-RACK WIRING IS 22 AWG. COAXIAL CABLE IS TYPE RG-187A/U. THE SIZE OF WIRE IN THE WIRING HARNESSES IS INDICATED AT THE END ADJACENT TO THE SHELF, TRAY, OR PANEL.

5. WIRE COLOR ABBREVIATIONS.

BK	BLACK	GY	GRAY	W	WHITE
BL	BLUE	O	ORANGE	Y	YELLOW
BR	BROWN	R	RED		
G	GREEN	V	VIOLET		

6. THE SYMBOL —2— MEANS THAT THE SINGLE LINE REPRESENTS TWO SEPARATE WIRES OR CABLES OF THE SAME TYPE.

7. INTER-RACK AND EXTERNAL WIRING IS IDENTIFIED BY THE FOLLOWING SYMBOLS.
   - (Z) INTER-RACK WIRING TO OR FROM THE NUMBERED RACK. (TO AND FROM DENOTE THE DIRECTION OF SIGNAL FLOW.)
   - (X) WIRING TO OR FROM EXTERNAL EQUIPMENT.
   - (●) OPTIONAL CIRCUITS THAT MAY BE USED TO SUPPLY CARRIERS, SYNC PILOTS, DC POWER, ALARM CIRCUIT POWER, OR ALARM FUNCTIONS TO ADJACENT MULTIPLEXER SETS OR AUXILIARY EQUIPMENT.

8. FOR DESCRIPTION OF WIRE AND CABLE USED IN INTER-RACK AND EXTERNAL WIRING, REFER TO CHAPTER 2 OF THE SERVICE MANUAL.

FIG. 1A
CHANNEL MULTIPLEXER SHELF
RACK 4, 6, 8, 10, 12

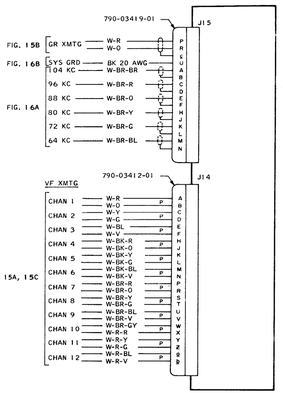


FIG. 1B
GROUP MULTIPLEXER SHELF
RACK 2

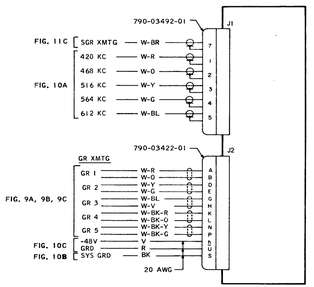


FIG. 1C
SGR XMTG JACKFIELD
RACK 2

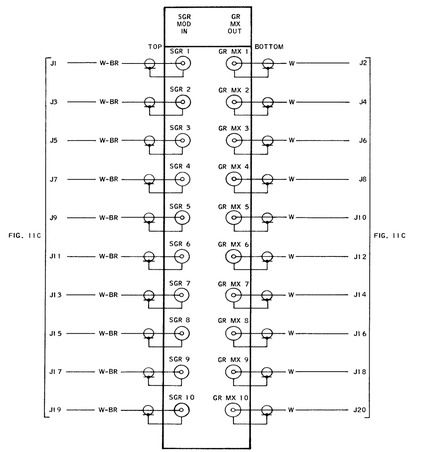
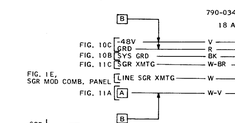


FIG.
SUPERGROUP MO
RACK



SGR MOD	A
1	612 KC
2	NC
3	1116 KC
4	1364 KC
5	1612 KC
6	1860 KC
7	2108 KC
8	2356 KC
9	2604 KC
10	2852 KC

B FOR SGR MOD 2, LE
BACK IN THE CABLE

FIG.
SUPERGROUP MODULATOR
RACK

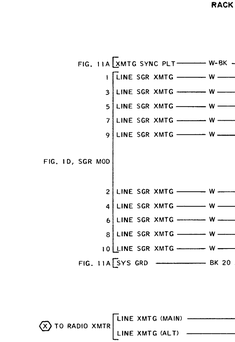
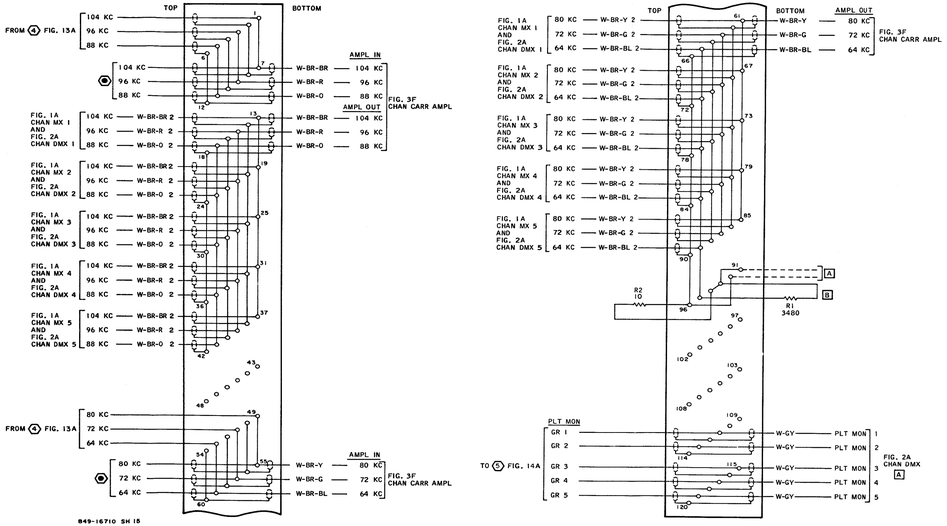


Figure 31. M
C

FIG. 15A

TERMINAL BOARD A2TB1
RACK 6



, 13
EQUIPMENT

PANEL 17

PANEL 18 (RACK 5)
19

349-01 6C

HELF 5D

ER 4C
LF
LEXER

3E

5C

LEXER

3E

NNEL CARRIER SUPPLY SHELF (FIG. 4B)
NEL CARRIER AMPLIFIER SHELF.

HE

RACK. (TO
W.)

Y CARRIERS,
OR ALARM
UXILIARY

RACK AND
ICE MANUAL.

FIG. 1A
CHANNEL MULTIPLEXER SHELF
RACK 4, 6, 8, 10, 12

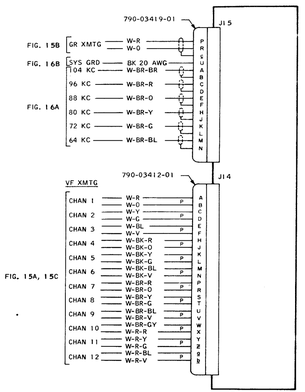


FIG. 1B
GROUP MULTIPLEXER SHELF
RACK 2

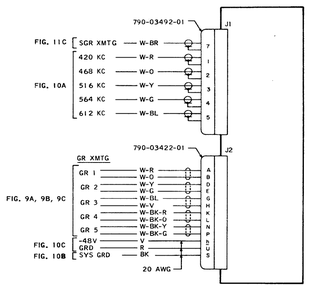


FIG. 1C
SGR XMTG JACKFIELD
RACK 2

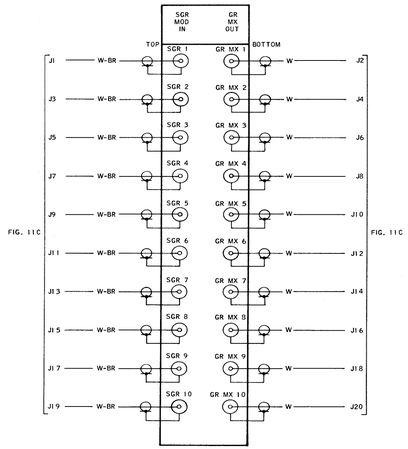
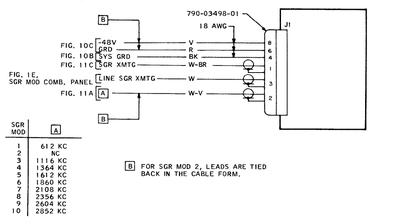


FIG. 1D
SUPERGROUP MODULATOR TRAY
RACK 2



SGR MOD	A
1	612 KC
2	NC
3	1116 KC
4	1364 KC
5	1612 KC
6	1860 KC
7	2108 KC
8	2356 KC
9	2604 KC
10	2852 KC

B FOR SGR MOD 2, LEADS ARE TIED BACK IN THE CABLE FORM.

FIG. 1E
SUPERGROUP MODULATOR COMBINING PANEL
RACK 2

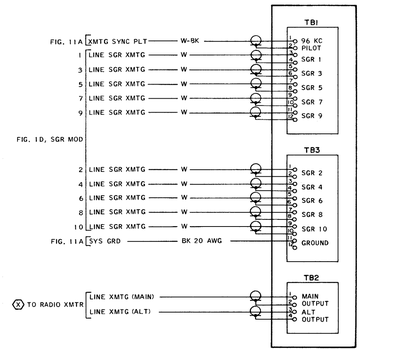


Figure 31. Multiplexer Set AN/FCC-17, Cabling Diagram (Sheet 1 of 19)

FIG. 2A

UPPER SECTION
GR XMTG JACKFIELD, RACK 2
GR RCVG JACKFIELD, RACK 3

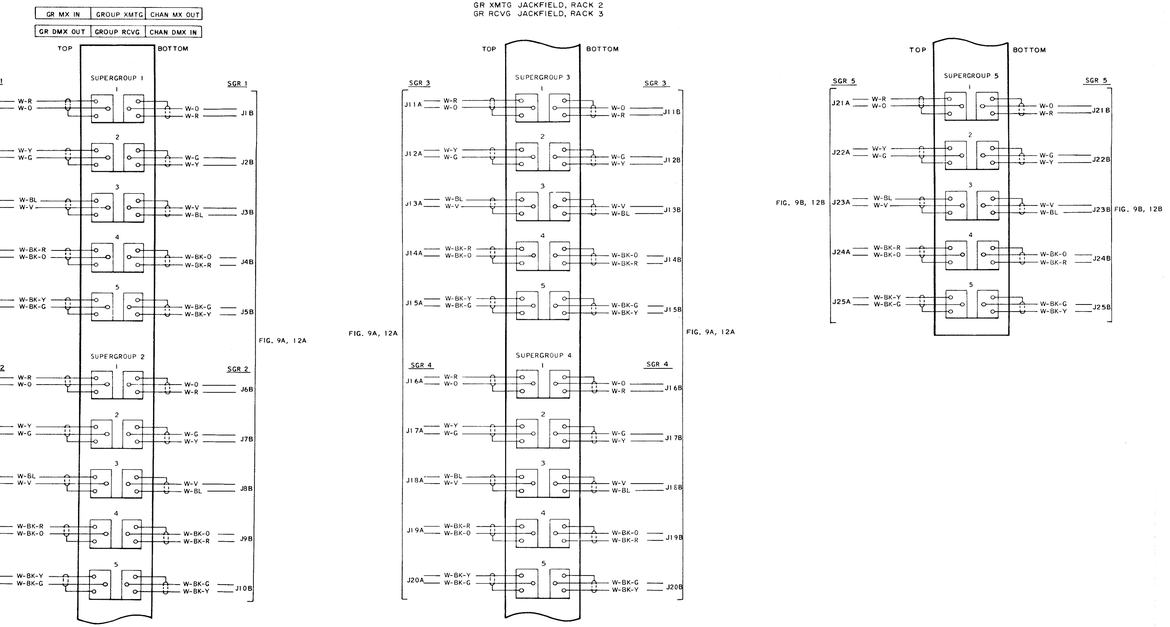


FIG. 2B

LOWER SECTION
GR XMTG JACKFIELD, RACK 2
GR RCVG JACKFIELD, RACK 3

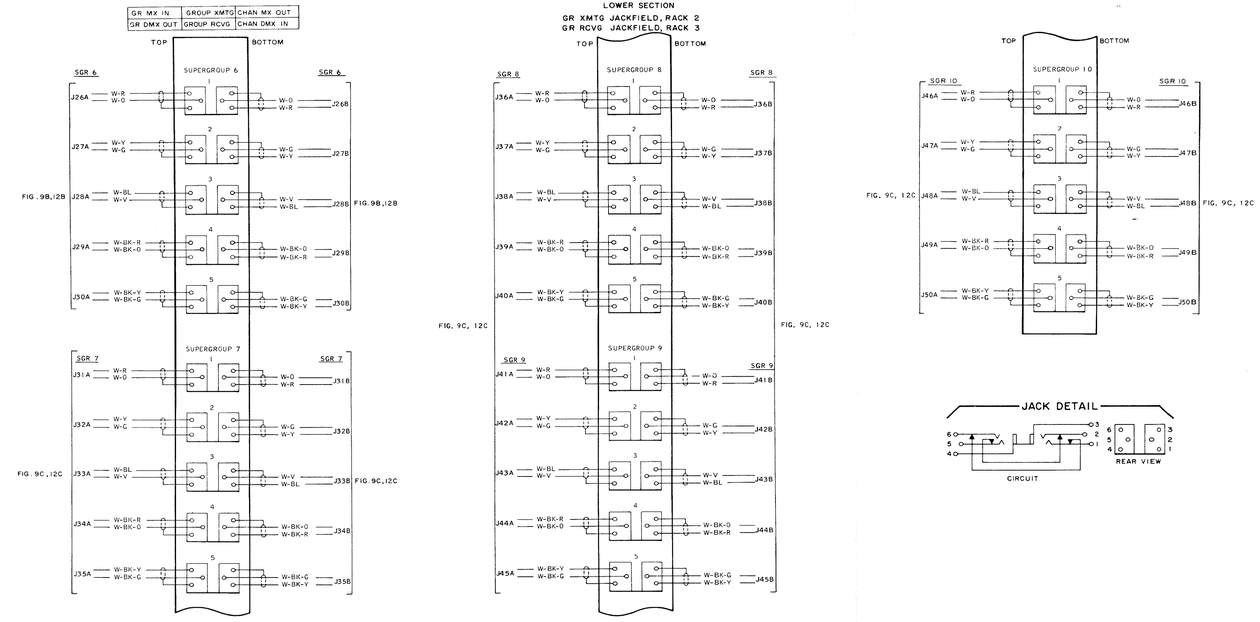


Figure 31. Multiplexer Set AN/FCC-17, Cabling Diagram (Sheet 2 of 19)

FIG. 3A

SUPERGROUP DEMODULATOR COMBINING PANEL
RACK 3

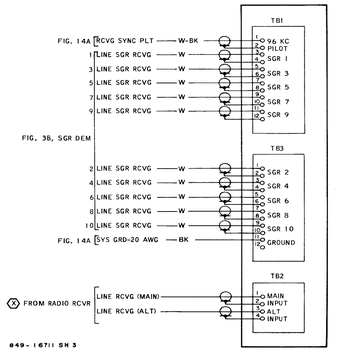
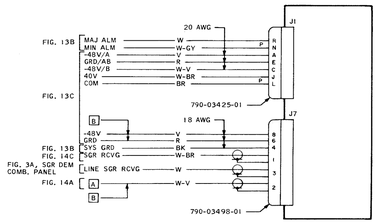


FIG. 3B

SUPERGROUP DEMODULATOR TRAY
RACK 3



SGR DEM	A
1	612 KC
2	NC
3	1116 KC
4	1364 KC
5	1612 KC
6	1860 KC
7	2108 KC
8	2356 KC
9	2604 KC
10	2852 KC

B FOR SGR DEM 2, LEADS ARE TIED BACK IN CABLE FORM.

FIG. 3C

SGR RCVG JACKFIELD
RACK 3

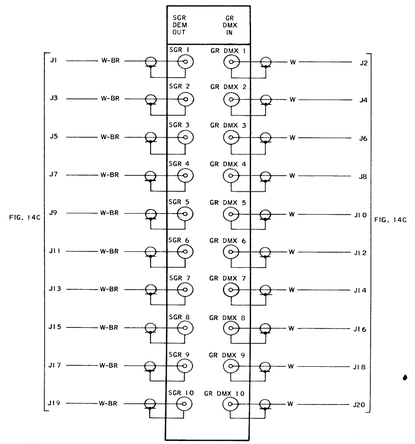


FIG 3D

GROUP DEMULTIPLEXER SHELF
RACK 3

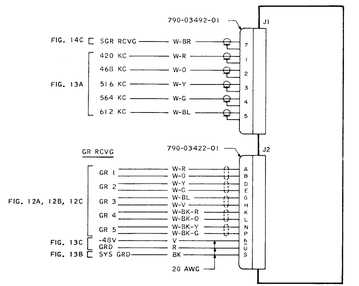


FIG. 3E

CHANNEL DEMULTIPLEXER SHELF
RACK 5, 7, 9, 11, 13

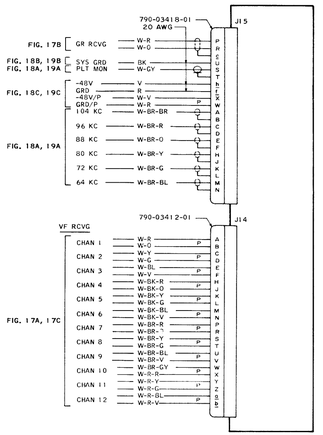


Figure 31. Multiplexer Set AN/FCC-17, Cabling Diagram (Sheet 3 of 19)

FIG. 2A

UPPER SECTION

GR XMTG JACKFIELD, RACK 2

GR RCVG JACKFIELD, RACK 3

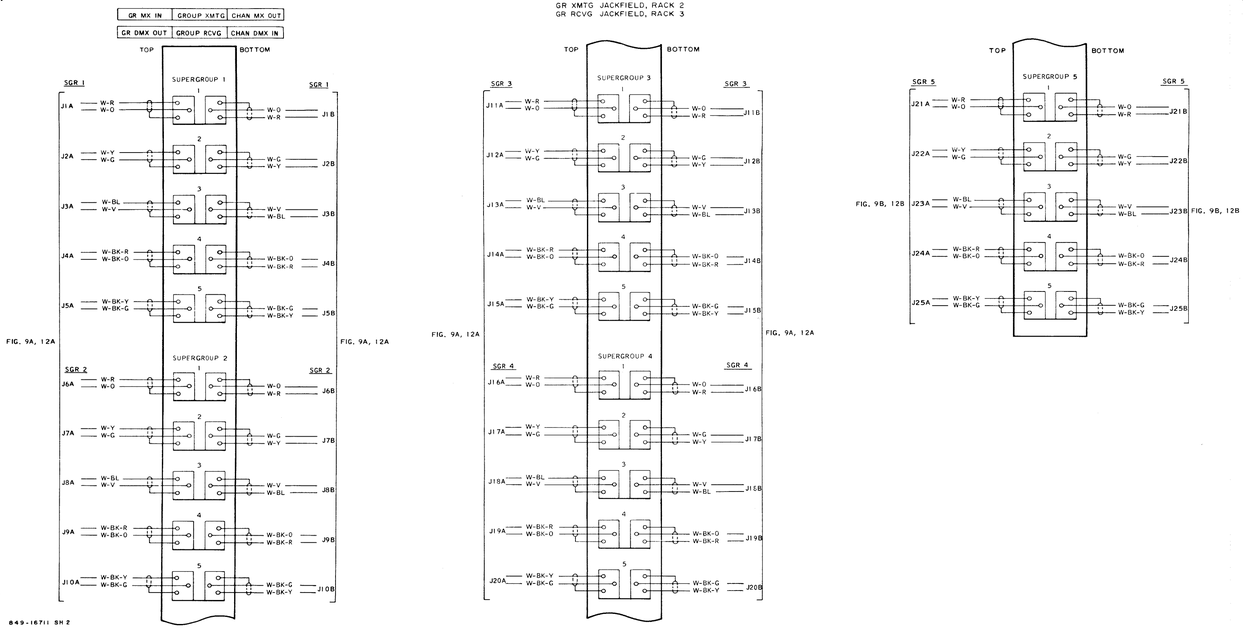


FIG. 3C

SGR RCVG JACKFIELD
RACK 3

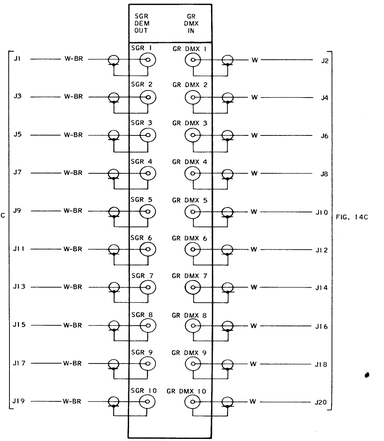


FIG. 3D

GROUP DEMULTIPLEXER SHELF
RACK 3

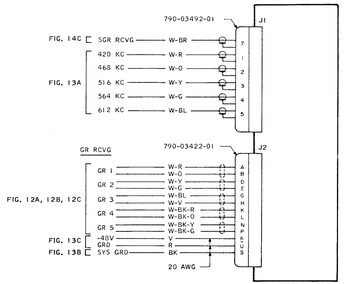


FIG. 3E

CHANNEL DEMULTIPLEXER SHELF
RACK 5, 7, 9, 11, 13

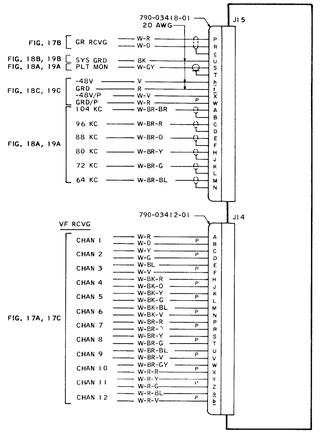


Figure 31. Multiplexer Set AN/FCC-17, Cabling Diagram (Sheet 3 of 19)

FIG. 4A
MASTER FREQUENCY GENERATOR SHELF
RACK 1

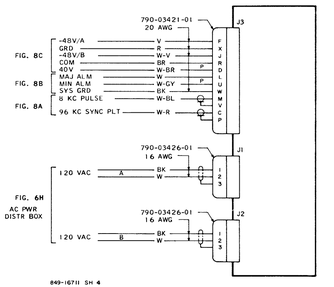


FIG. 4B
CHANNEL CARRIER SUPPLY SHELF
RACK 5

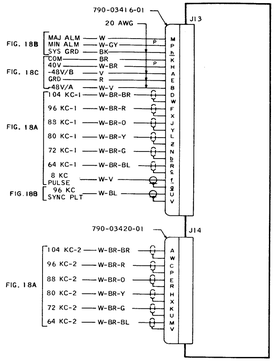


FIG. 4C
CHANNEL CARRIER AMPLIFIER SHELF
RACK 4, 6 THRU 13

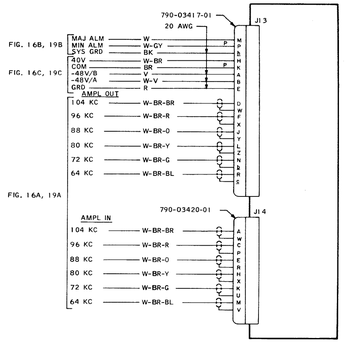


FIG. 4D
GROUP CARRIER GENERATOR SHELF
RACK 1

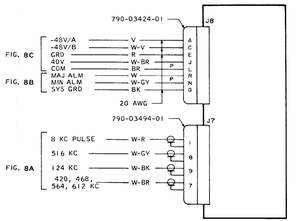


FIG. 4E
GROUP CARRIER SUPPLY SHELF
RACK 1

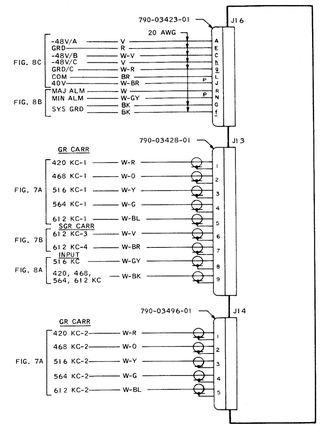


FIG. 4F
GROUP CARRIER AMPLIFIER SHELF
RACK 1

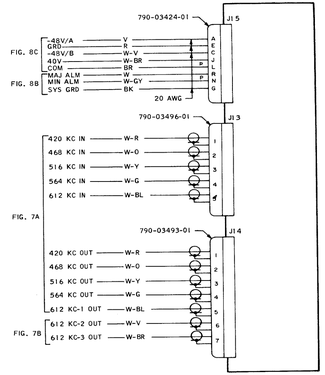
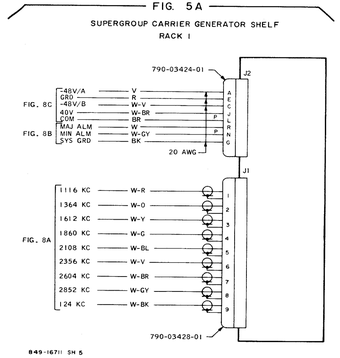
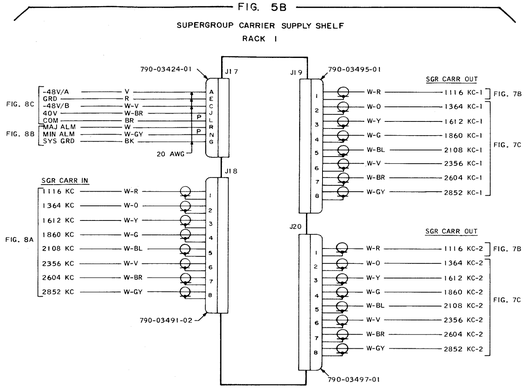
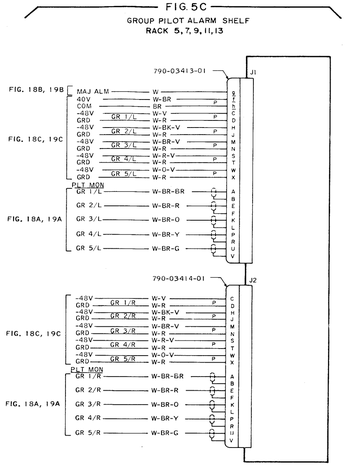
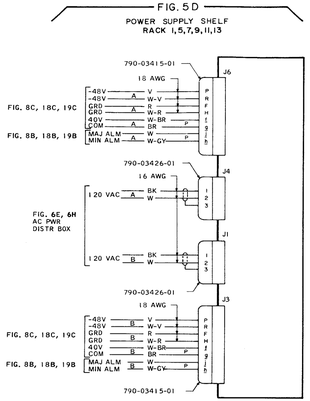


Figure 31. Multiplexer Set AN/FCC-17, Cabling Diagram (Sheet 4 of 19)









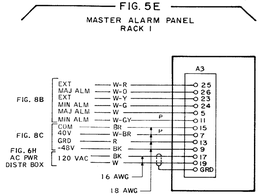


Figure 31. Multiplexer Set AN/FCC-17, Cabling Diagram (Sheet 5 of 19)

FIG. 6A
FUSE PANEL 790-03360-01
RACK 1

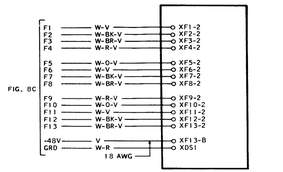


FIG. 6C
FUSE PANEL 790-03349-01
RACK 5,7,9,11,13

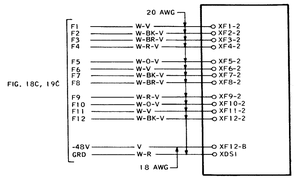


FIG. 6E
AC POWER DISTRIBUTION BOX
RACK 5,7,9,11,13

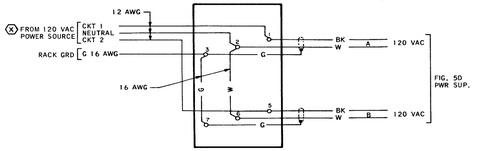


FIG. 6F
FUSE PANEL 790-03364-01
RACK 2

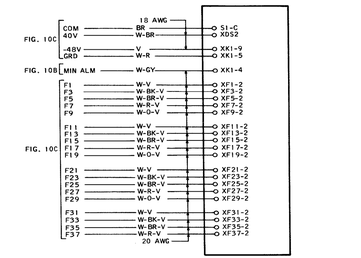


FIG. 6G
FUSE PANEL 790-03307-01
RACK 3

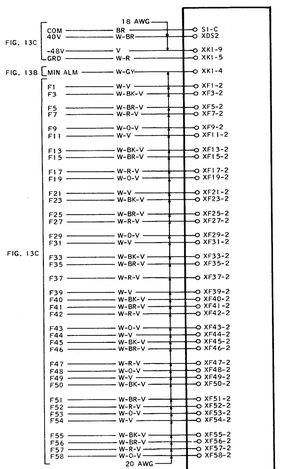


FIG. 6H
AC POWER DISTRIBUTION BOX
RACK 1

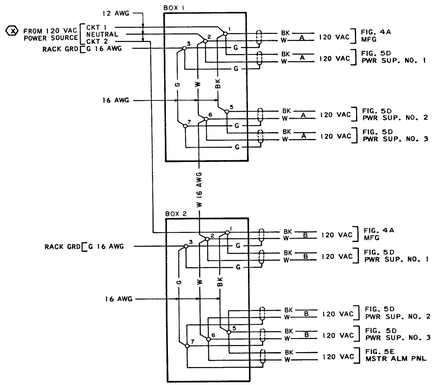
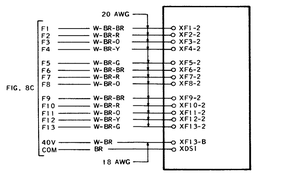


FIG. 6B
FUSE PANEL 790-03362-01
RACK 1



849-1671 SH 6

FIG. 6D
FUSE PANEL 790-03358-01
RACK 4,6,8,10,12

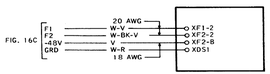


Figure 31. Multiplexer Set AN/FCC-17, Cabling Diagram (Sheet 6 of 19)

FIG. 7A
TERMINAL BOARD A1TB1
RACK 1

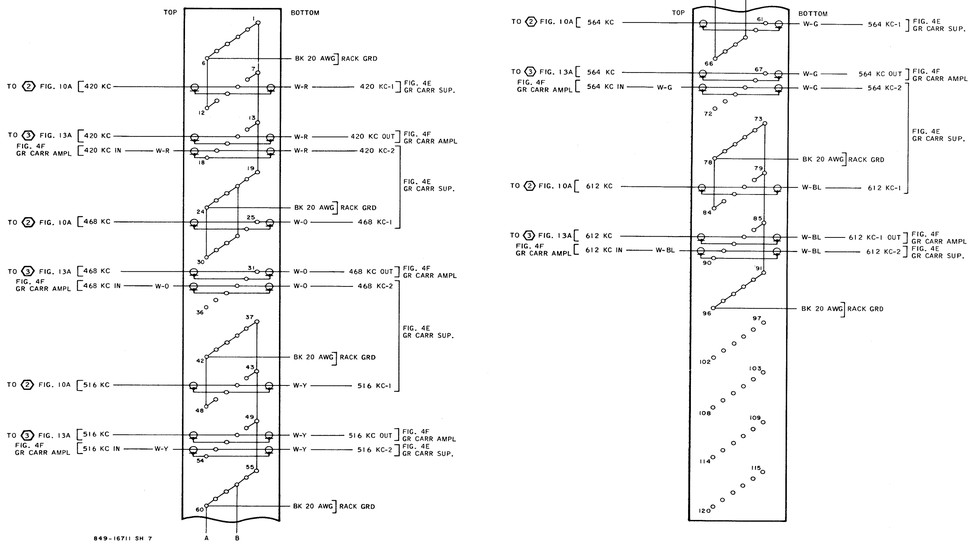


FIG. 7B
TERMINAL BOARD A1TB2
RACK 1

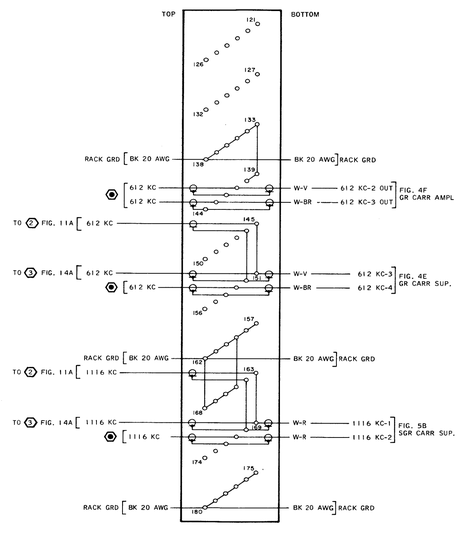
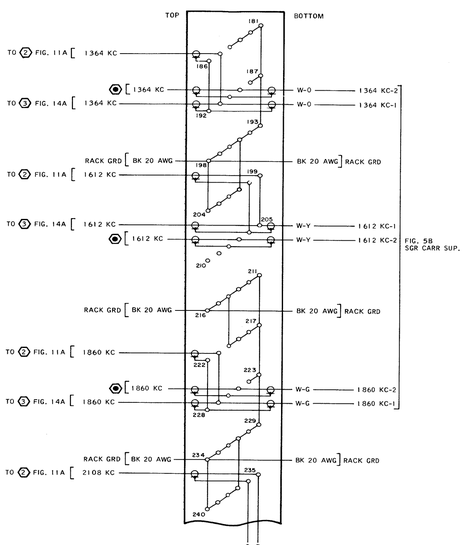
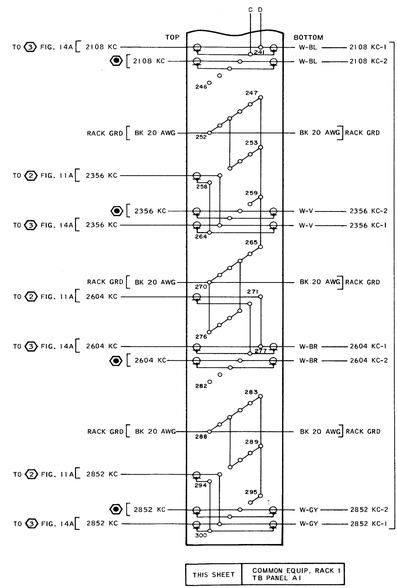


FIG. 7C
TERMINAL BOARD A1TB3
RACK 1





THIS SHEET	COMMON EQUIP. RACK 1 TB PANEL A1

Figure 31. Multiplexer Set AN/FC
Cabling Diagram (Shee

FIG. 7B
TERMINAL BOARD A1T82
RACK 1

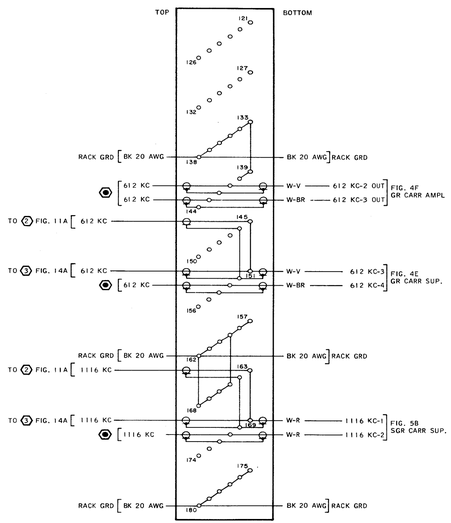
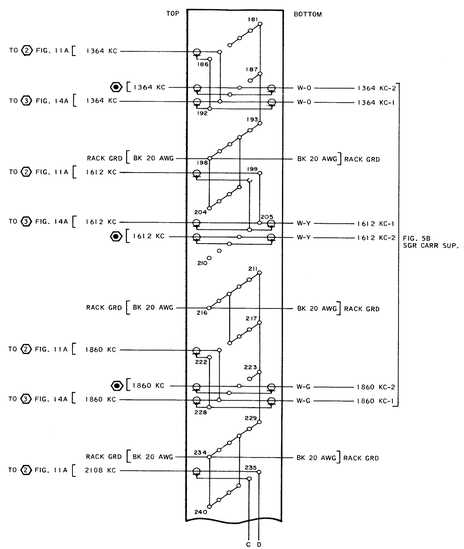
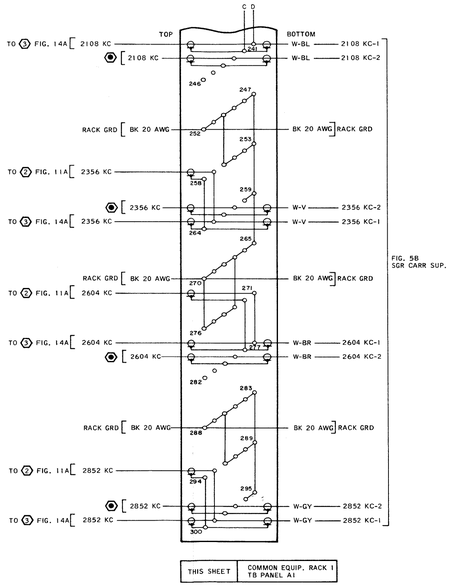


FIG. 7C
TERMINAL BOARD A1T83
RACK 1





THIS SHEET	COMMON EQUIP. RACK 1 TB PANEL A1

Figure 31. Multiplexer Set AN/FCC-17, Cabling Diagram (Sheet 7 of 19)

FIG. 6A
FUSE PANEL 790-03360-01
RACK 1

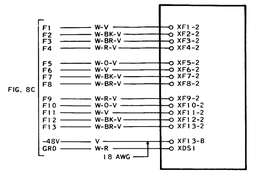
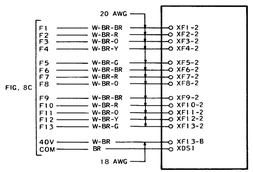


FIG. 6B
FUSE PANEL 790-03362-01
RACK 1



849-16711 SH 6

FIG. 6C
FUSE PANEL 790-03349-01
RACK 5,7,9,11,13

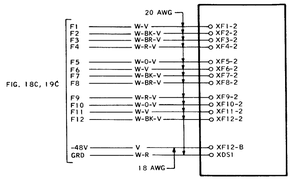


FIG. 6D
FUSE PANEL 790-03358-01
RACK 4,6,8,10,12

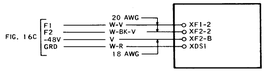


FIG. 6E
AC POWER DISTRIBUTION BOX
RACK 5,7,9,11,13

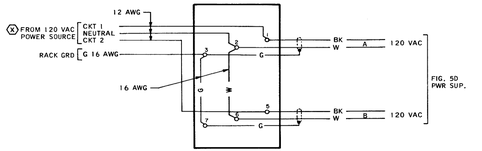


FIG. 6F
FUSE PANEL 790-03364-01
RACK 2

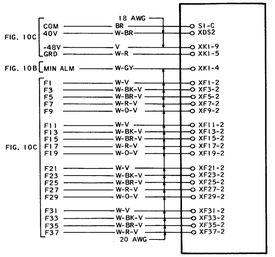


FIG. 8A
TERMINAL BOARD A2TB1
RACK 1

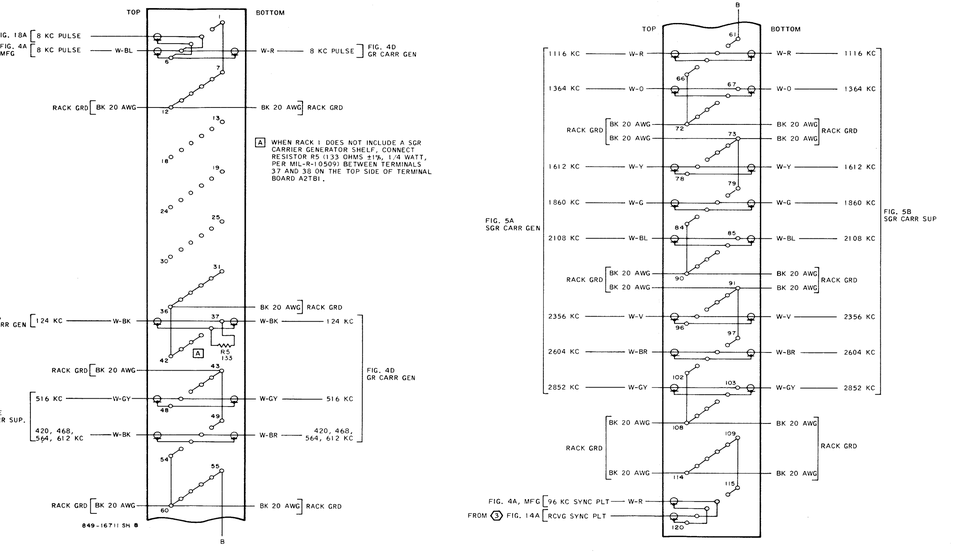


FIG. 8B
TERMINAL BOARD A2TB2
RACK 1

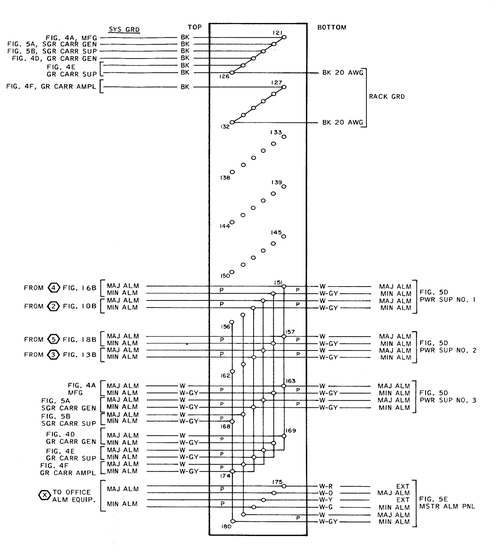
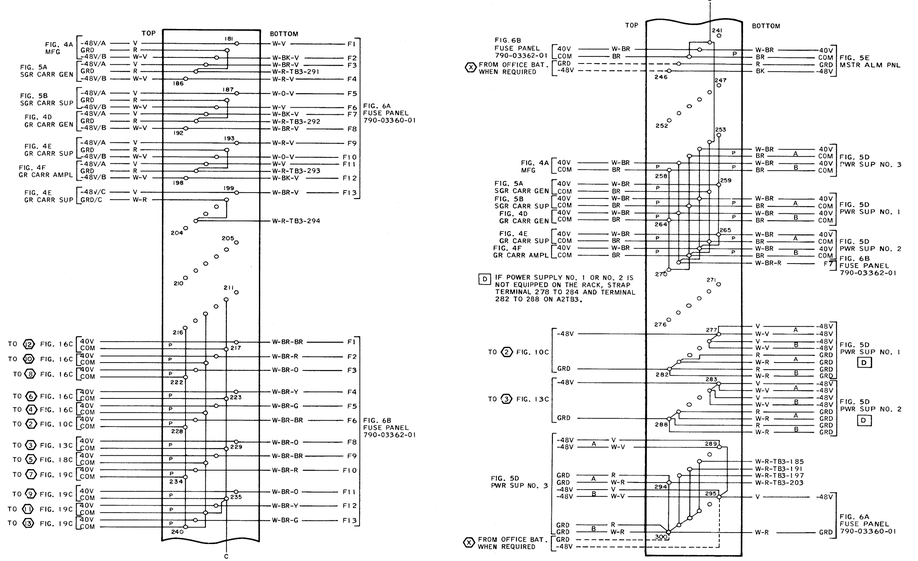


FIG. 8C
TERMINAL BOARD A2TB3
RACK 1



THIS SHEET | COMMON EQUIP. RACK 1 TB PANEL A2

Figure 31. Multiplexer Set AN/FCC-17, Cabling Diagram (Sheet 8 of 19)

FIG. 9A
TERMINAL BOARD A1TB1
RACK 2

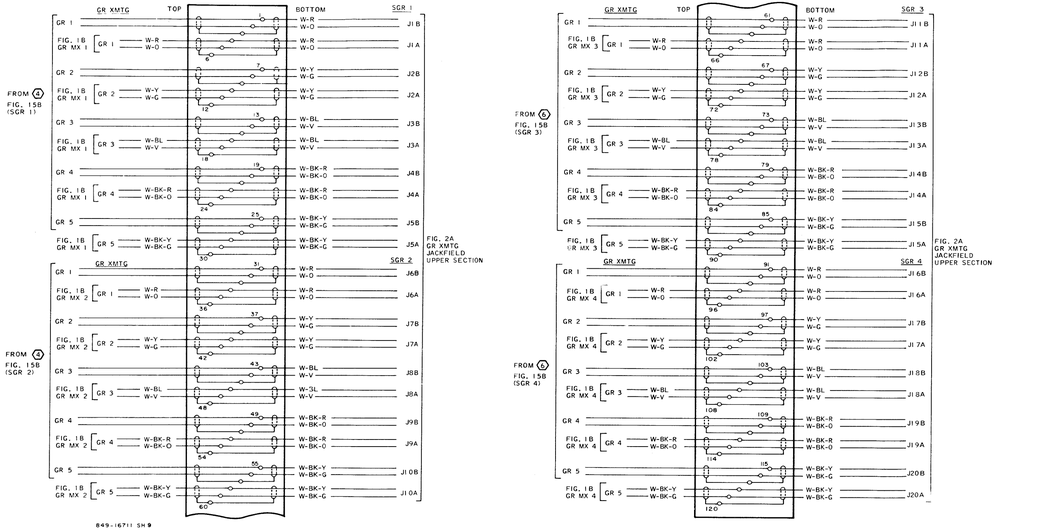


FIG. 9B
TERMINAL BOARD A1TB2
RACK 2

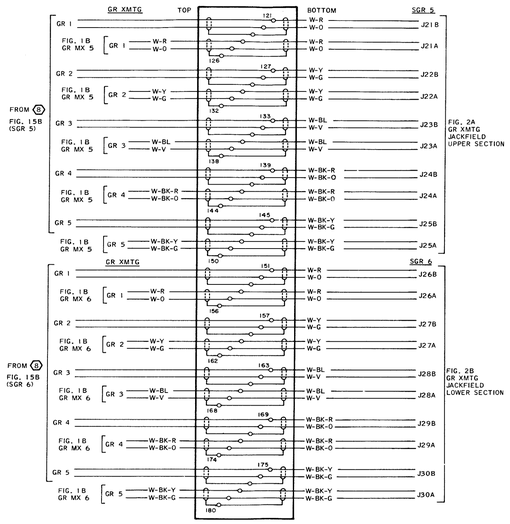
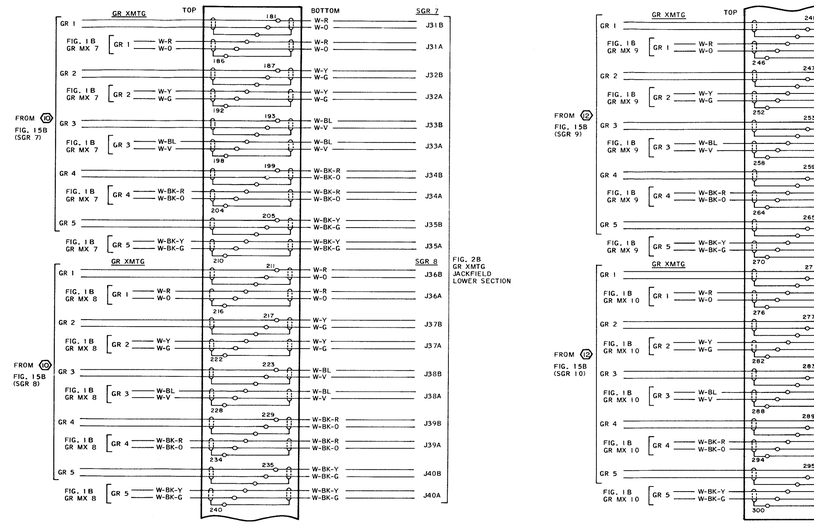


FIG. 9C
TERMINAL BOARD A1TB3
RACK 2



Figur

FIG. 8A

TERMINAL BOARD A2TB1
RACK 1

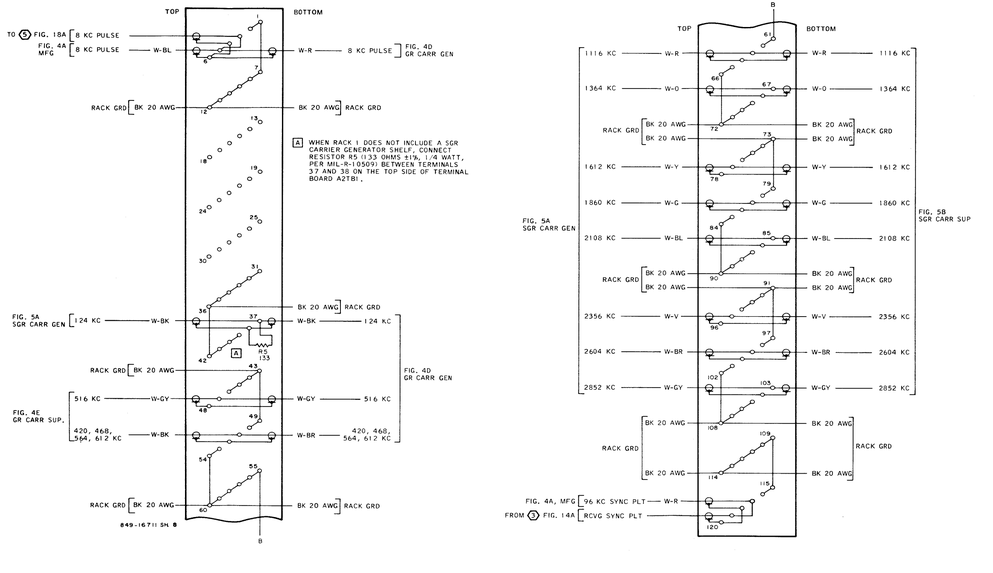
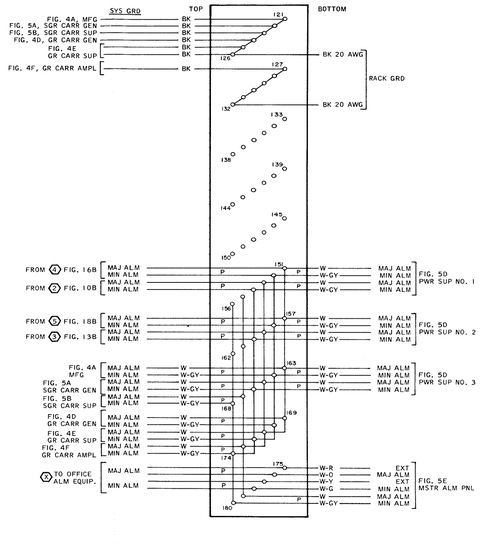
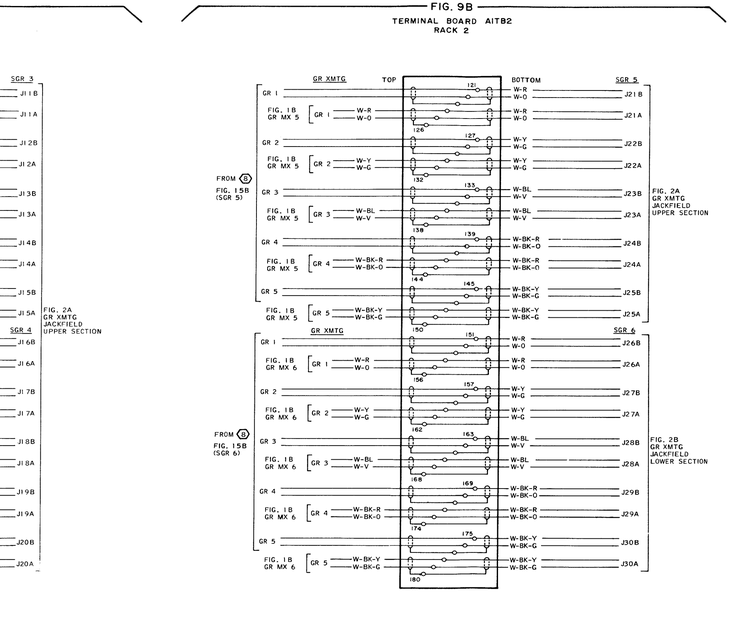
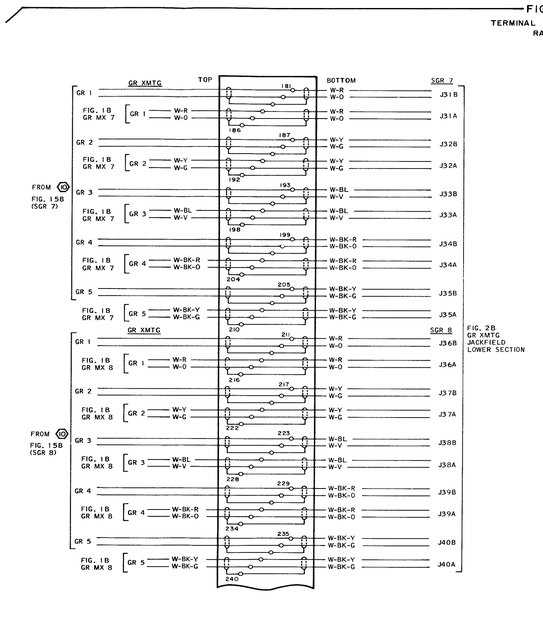


FIG. 8B

TERMINAL BOARD A2TB2
RACK 1







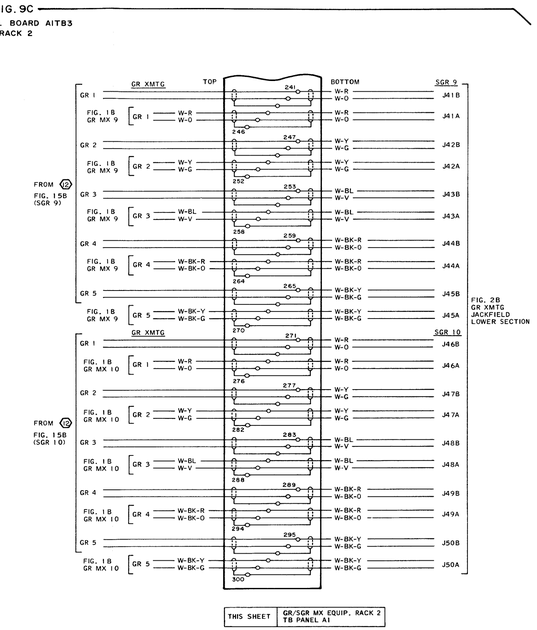


Figure 31. Multiplexer Set AN/FCC-17, Cabling Diagram (Sheet 9 of 19)

FIG. 10A
TERMINAL BOARD A2TB1
RACK 2

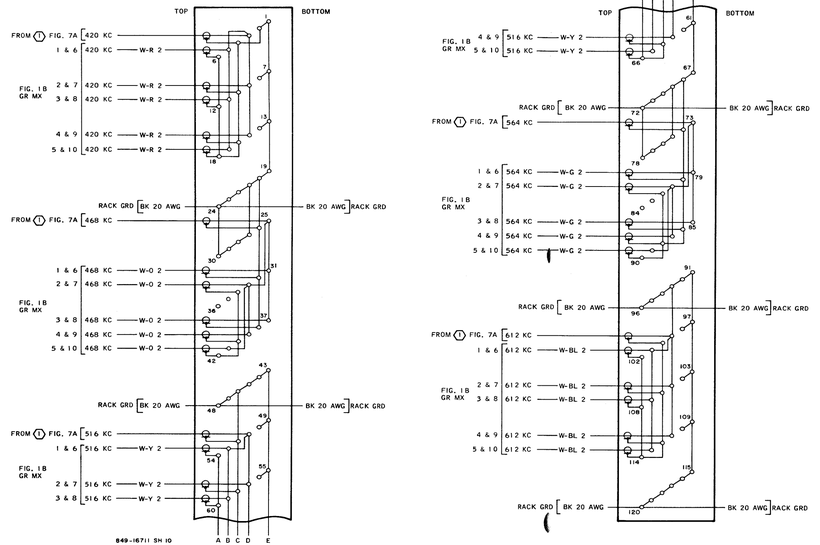


FIG. 10B
TERMINAL BOARD A2TB2
RACK 2

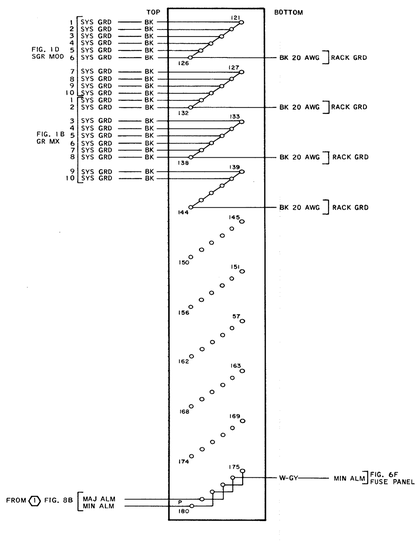


FIG. 10C
TERMINAL BOARD A2TB3
RACK 2

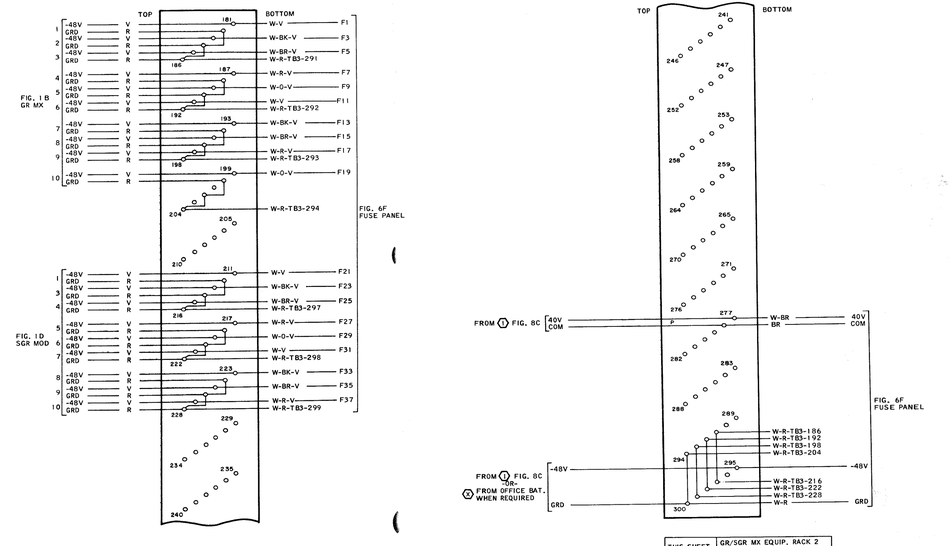
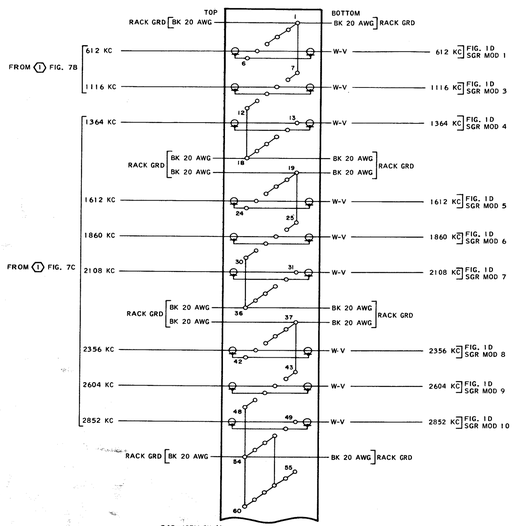


Figure 31. Multiplexer Set AN/FCC-17, Cabling Diagram (Sheet 10 of 19)

FIG. 11A

TERMINAL BOARD A3TB1
RACK 2



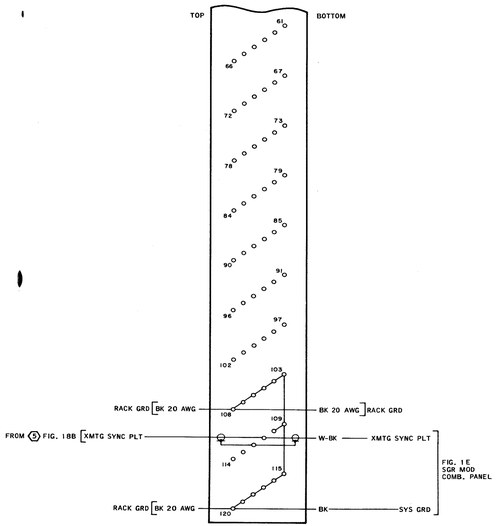


FIG. 11B

TERMINAL BOARD A3TB2
RACK 2

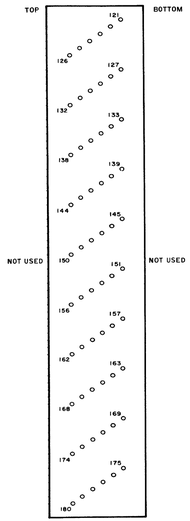
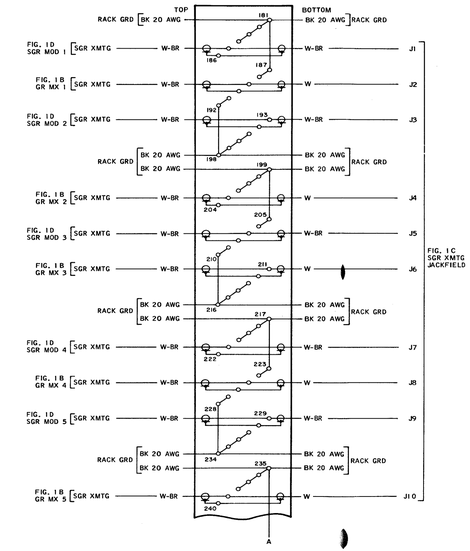


FIG. 11C

TERMINAL BOARD A3TB3
RACK 2



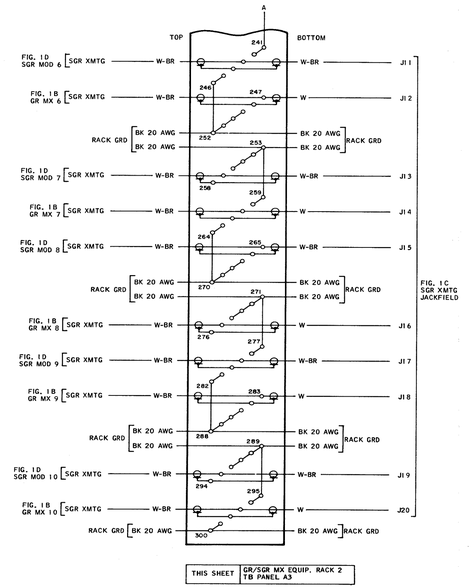


Figure 31. Multiplexer Set AN/FCC-17, Cabling Diagram (Sheet 11 of 19)

FIG. 12A
TERMINAL BOARD A1TB1
RACK 3

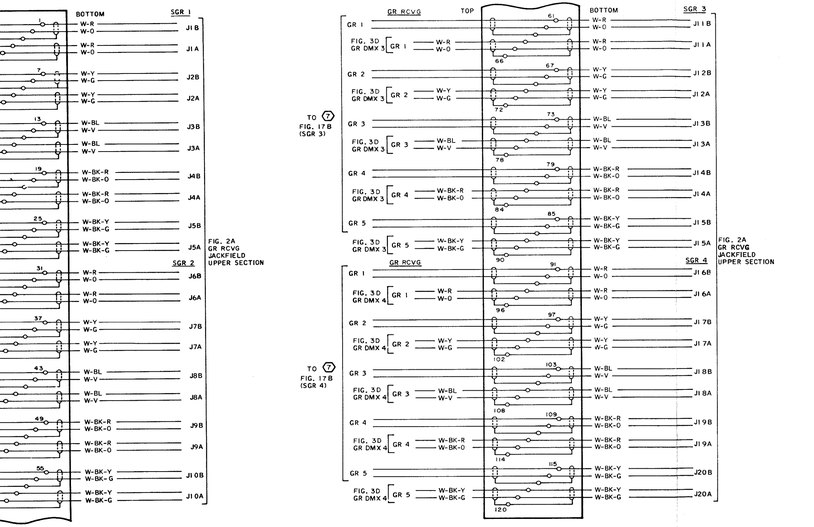


FIG. 12B
TERMINAL BOARD A1TB2
RACK 3

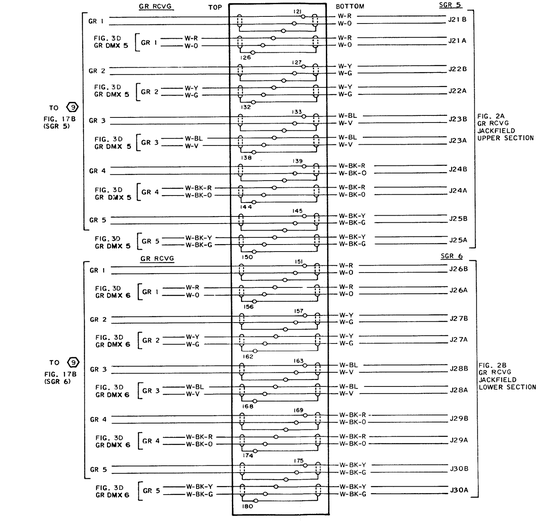
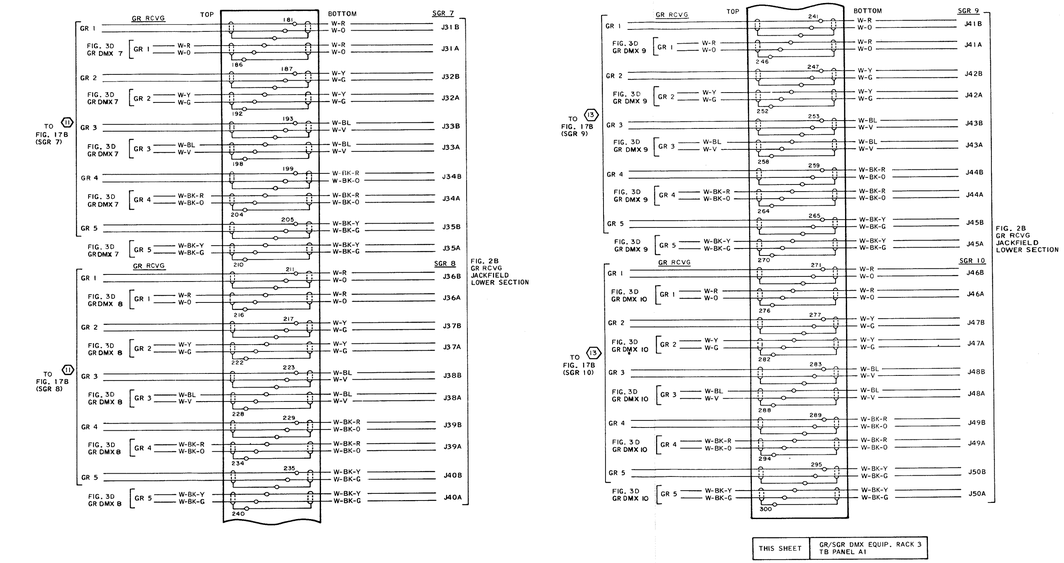


FIG. 12C
TERMINAL BOARD A1TB3
RACK 3



THIS SHEET	GR/SGR DMX EQUIP. RACK 3 TB PANEL A1

Figure 31. Multiplexer Set AN/FCC-17, Cabling Diagram (Sheet 12 of 19)

FIG. 13A

TERMINAL BOARD A2TB1
RACK 3

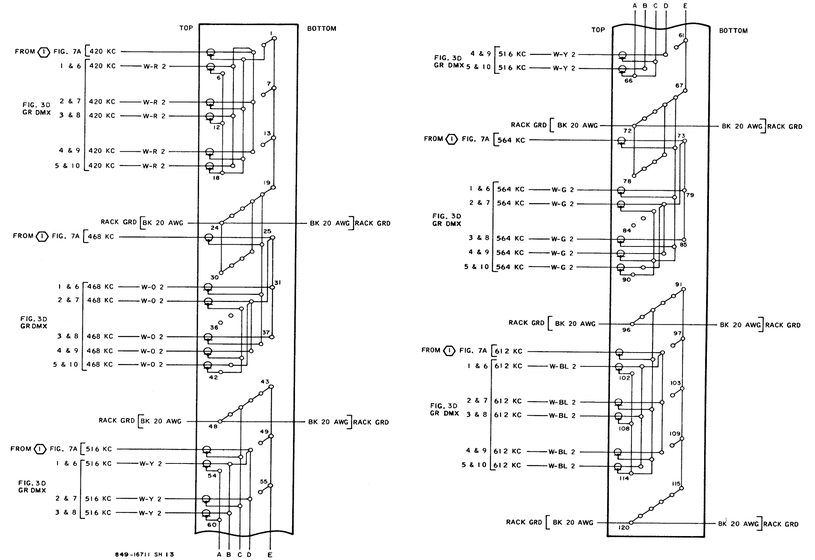


FIG. 13B

TERMINAL BOARD A2TB2
RACK 3

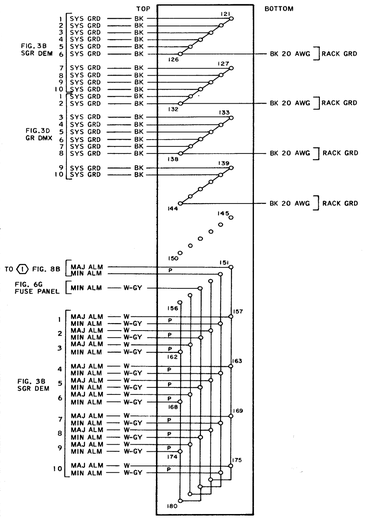
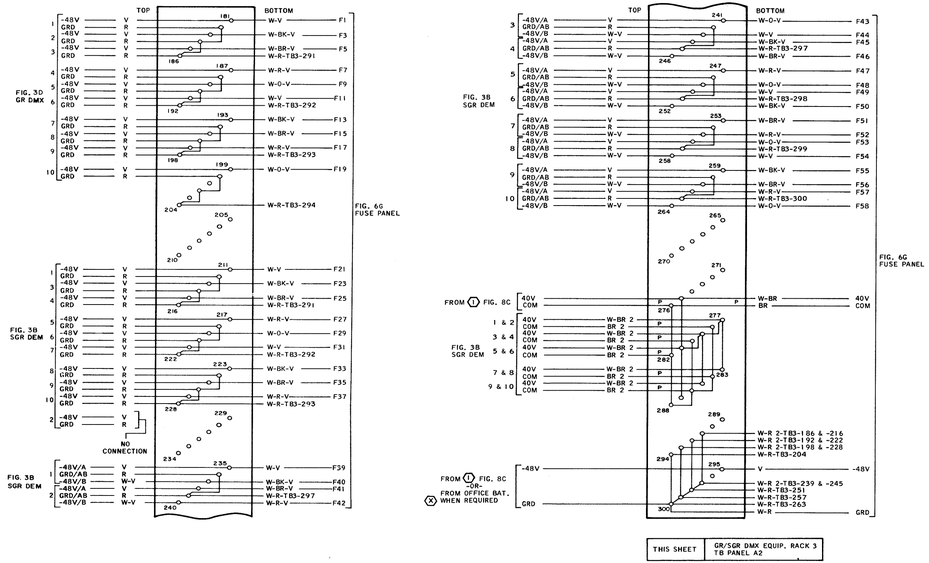


FIG. 13C

TERMINAL BOARD A2TB3
RACK 3



THIS SHEET	GR/SGR DMX EQUIP, RACK 3 TB PANEL A2

Figure 31. Multiplexer Set AN/FCC-17, Cabling Diagram (Sheet 13 of 19)

FIG. 12A

TERMINAL BOARD A1TB1
RACK 3

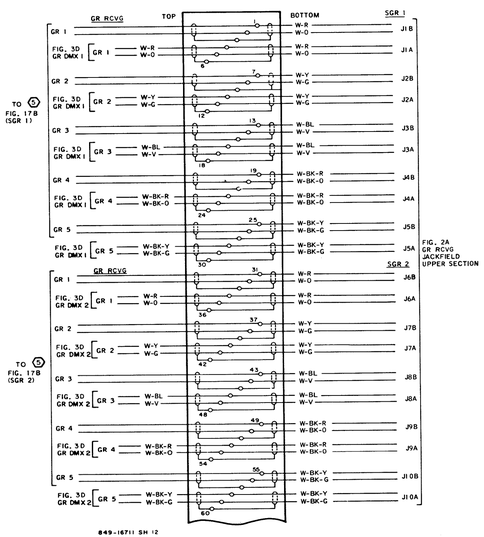


FIG. 12A

TERMINAL BOARD A1TB1
RACK 3

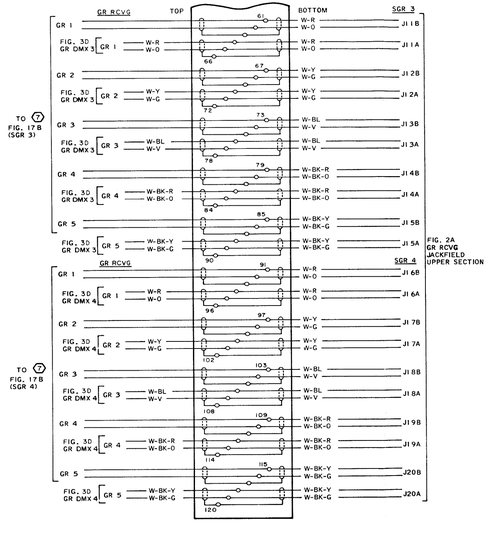
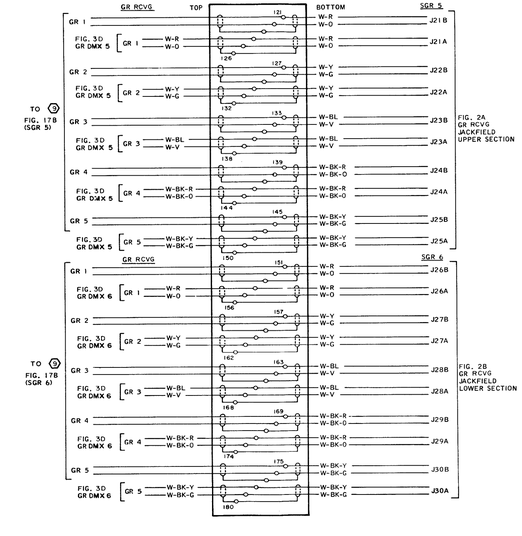


FIG. 12B

TERMINAL BOARD A1TB2
RACK 3



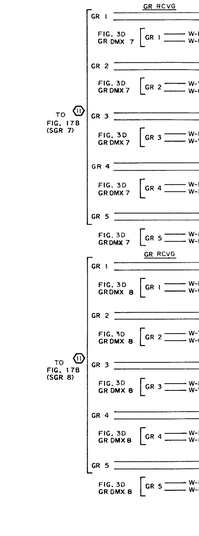


FIG. 13B
TERMINAL BOARD A2TB2
RACK 3

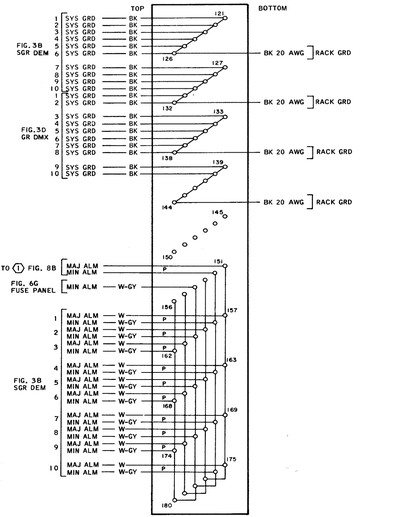
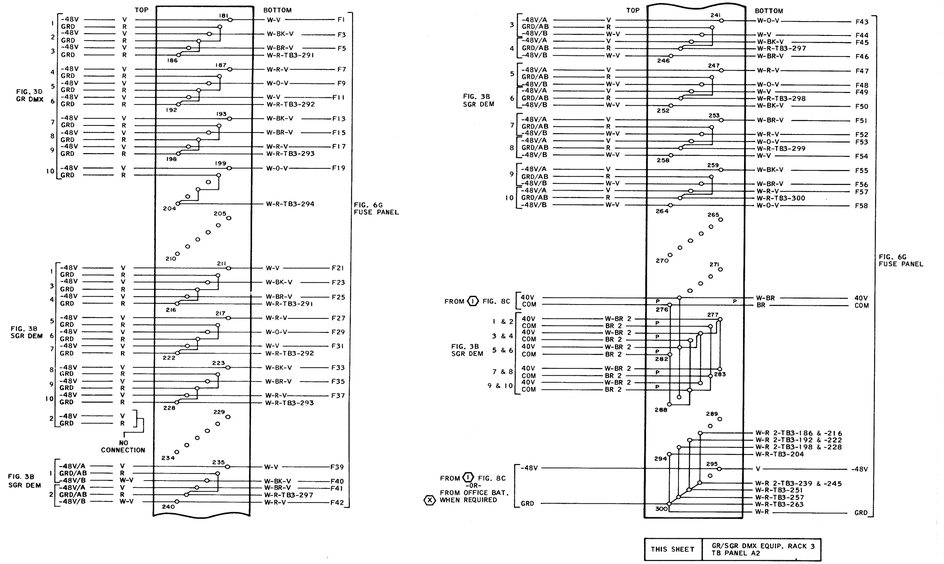


FIG. 13C
TERMINAL BOARD A2TB3
RACK 3



THIS SHEET	GR/SGR DMX EQUIP. RACK 3 TB PANEL A2

Figure 31. Multiplexer Set AN/FCC-17, Cabling Diagram (Sheet 13 of 19)

FIG. 14A
TERMINAL BOARD A3TB1
RACK 3

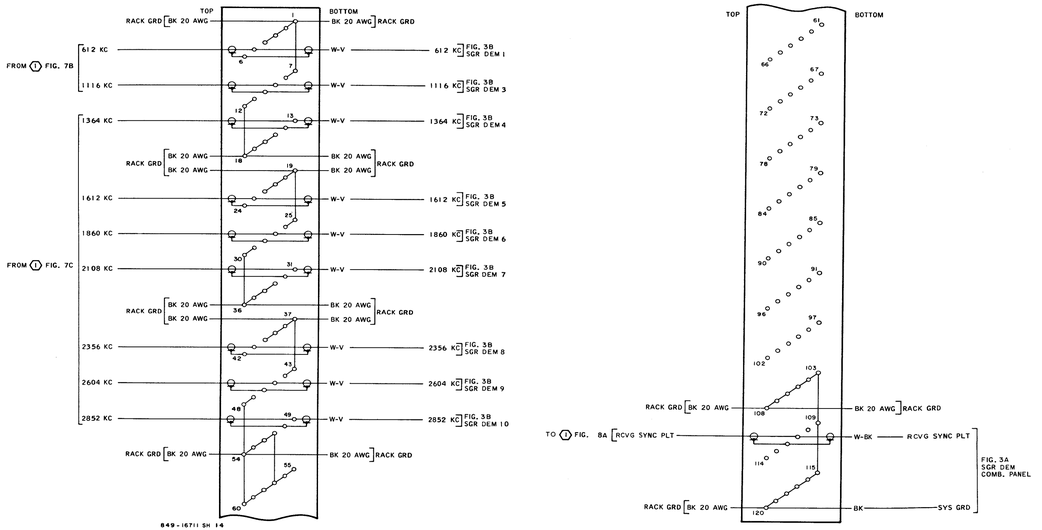


FIG. 14B
TERMINAL BOARD A3TB2
RACK 3

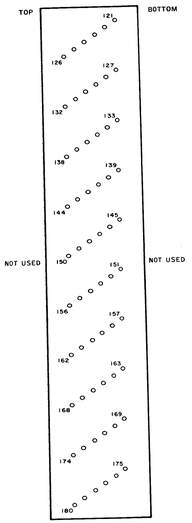
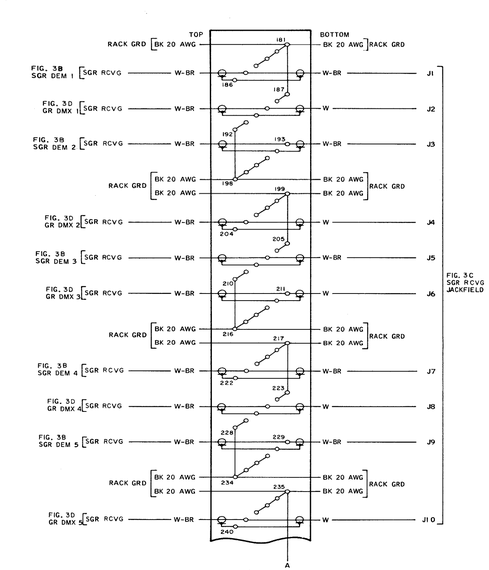
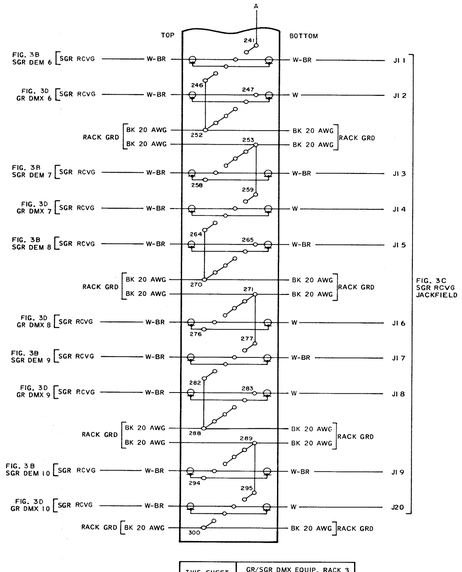


FIG. 14C
TERMINAL BOARD A3TB3
RACK 3



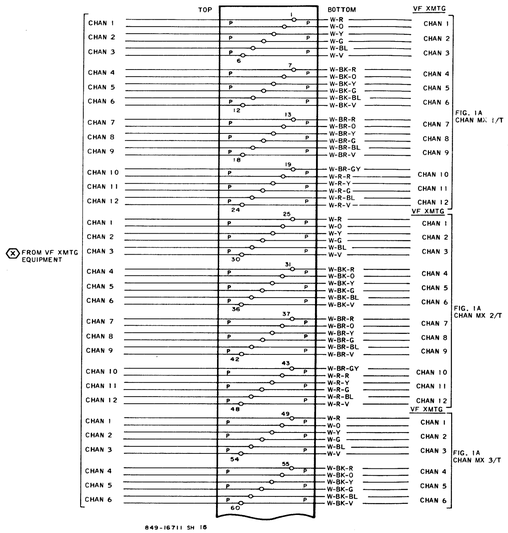


THIS SHEET	GR/SGR DMX EQUIP. RACK 3 TB PANEL A3

Figure 31. Multiplexer Set AN/FCC-17, Cabling Diagram (Sheet 14 of 19)

FIG. 15A

TERMINAL BOARD A1TB1
RACK 4,6,8,10,12



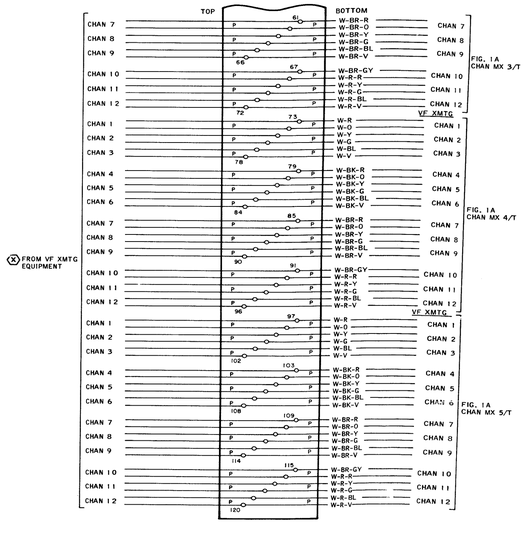


FIG. 15B

TERMINAL BOARD A1TB2
RACK 4,6,8,10,12

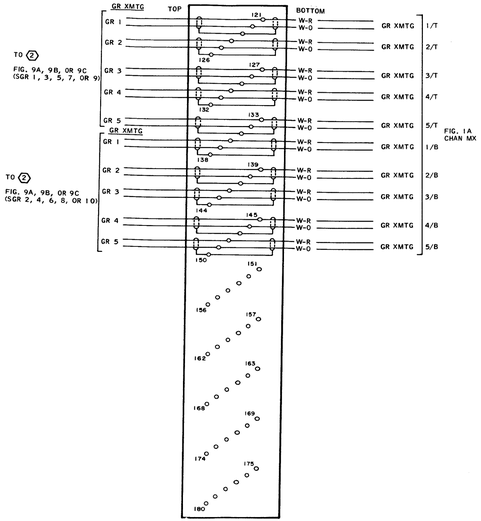
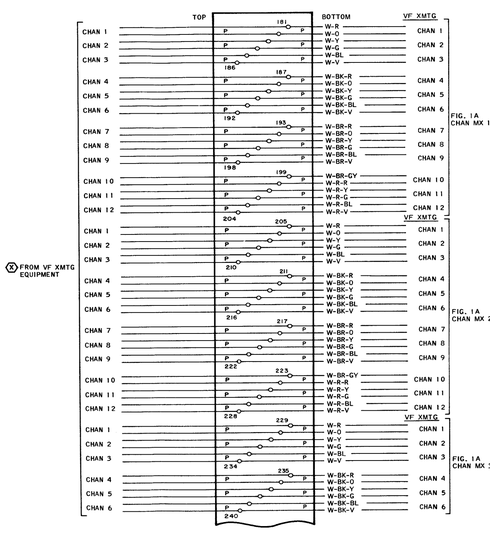
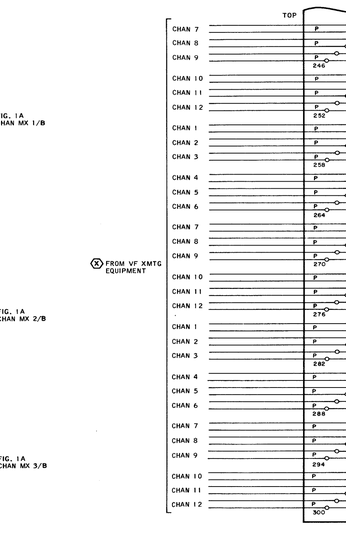


FIG. 15C

TERMINAL BOARD A1TB3
RACK 4,6,8,10,12





THIS SHEE

FI

FIG. 14A

TERMINAL BOARD A3TB1
RACK 3

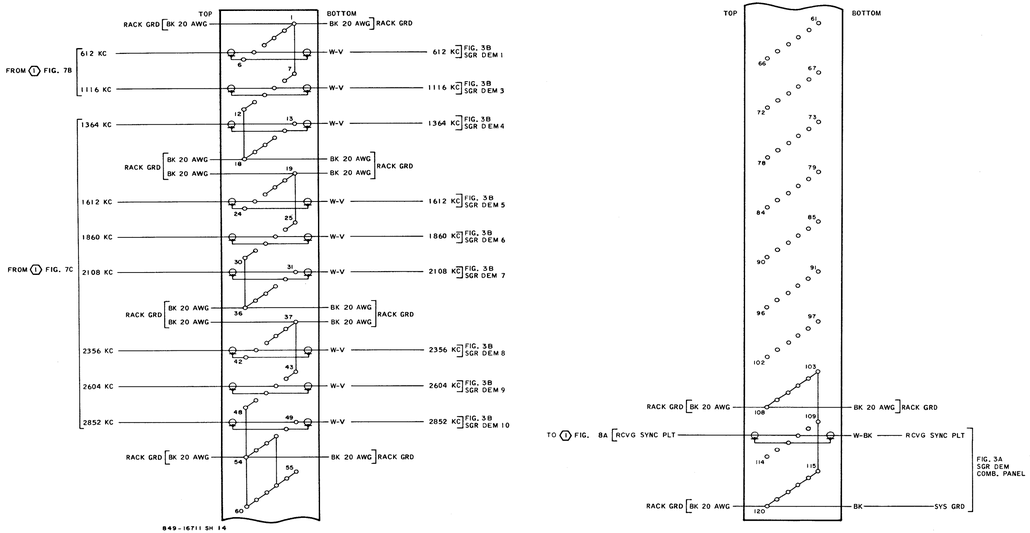
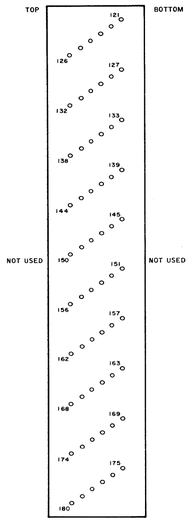


FIG. 14B

TERMINAL BOARD A3TB2
RACK 3



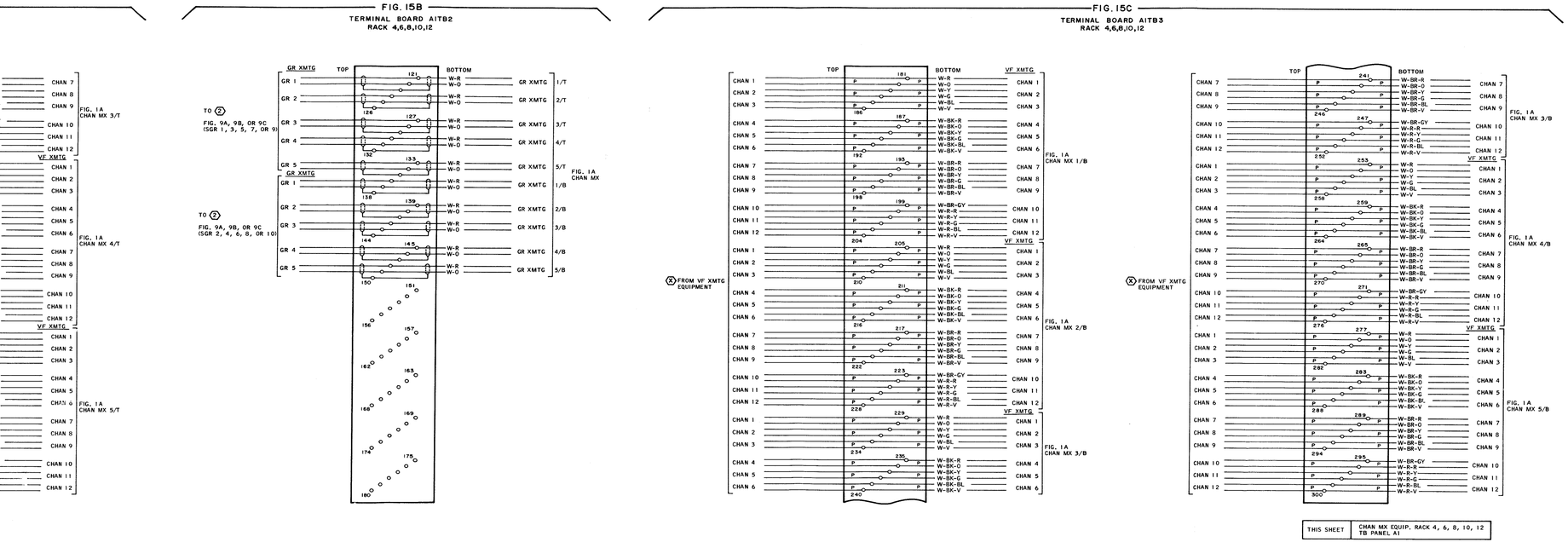
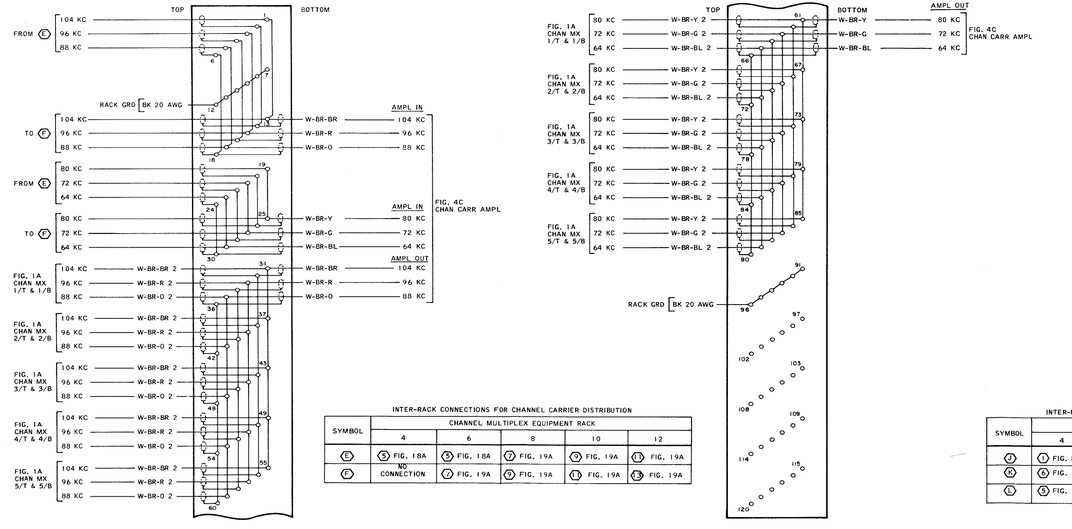


Figure 31. Multiplexer Set AN/FCC-17, Cabling Diagram (Sheet 15 of 19)

FIG. 16A

TERMINAL BOARD A2TB1
RACK 4,6,8,10,12



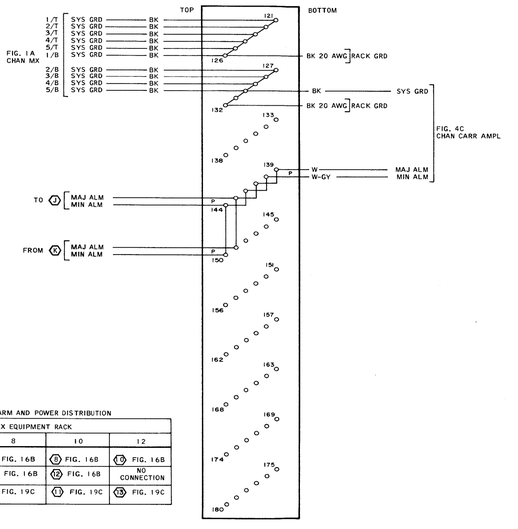
INTER-RACK CONNECTIONS FOR CHANNEL CARRIER DISTRIBUTION

SYMBOL	CHANNEL MULTIPLEX EQUIPMENT RACK				
	4	6	8	10	12
(E)	(5) FIG. 18A	(6) FIG. 18A	(7) FIG. 19A	(9) FIG. 19A	(11) FIG. 19A
(F)	NO CONNECTION	(7) FIG. 19A	(9) FIG. 19A	(11) FIG. 19A	(13) FIG. 19A

849-16711 SH 16

FIG. 16B

TERMINAL BOARD A2TB2
RACK 4,6,8,10,12

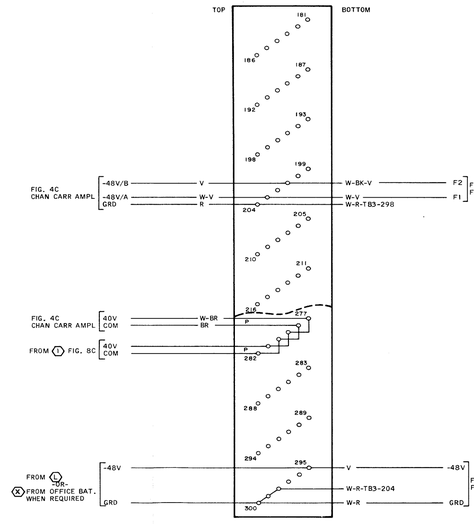


INTER-RACK CONNECTIONS FOR ALARM AND POWER DISTRIBUTION

SYMBOL	CHANNEL MULTIPLEX EQUIPMENT RACK				
	4	6	8	10	12
(J)	(1) FIG. 8B	(4) FIG. 16B	(6) FIG. 16B	(8) FIG. 16B	(10) FIG. 16B
(K)	(6) FIG. 16B	(8) FIG. 16B	(10) FIG. 16B	(12) FIG. 16B	NO CONNECTION
(L)	(5) FIG. 18C	(7) FIG. 19C	(9) FIG. 19C	(11) FIG. 19C	(13) FIG. 19C

FIG. 16C

TERMINAL BOARD A2TB3
RACK 4,6,8,10,12



THIS SHEET	CHAN MX EQUIP, RACK 4, 6, 8, 10, 12 TB PANEL A2

Figure 31. Multiplexer Set AN/FCC-17, Cabling Diagram (Sheet 16 of 19)

FIG. 17A

TERMINAL BOARD A1TB1
RACK 5,7,9,11,13

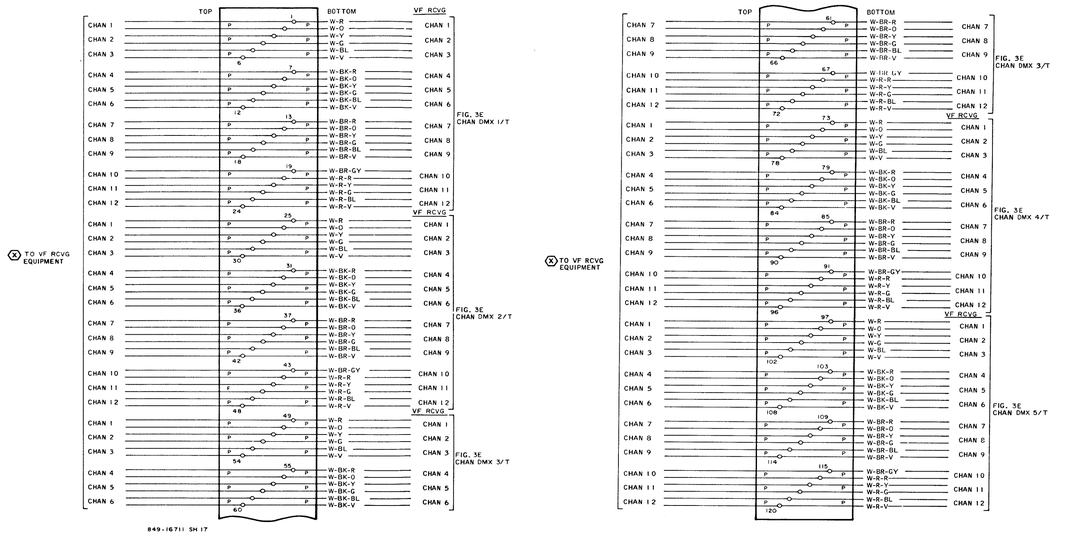


FIG. 17B

TERMINAL BOARD A1TB2
RACK 5,7,9,11,13

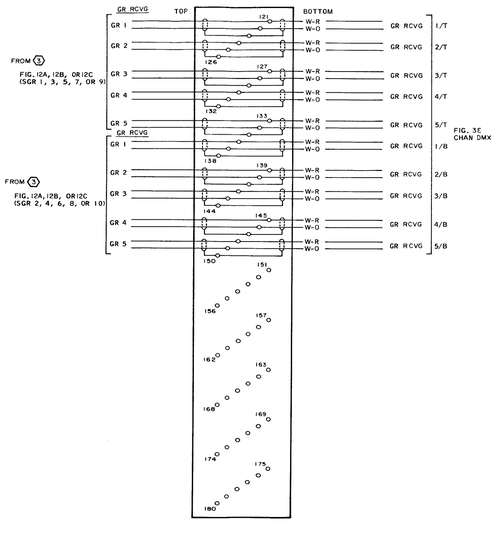
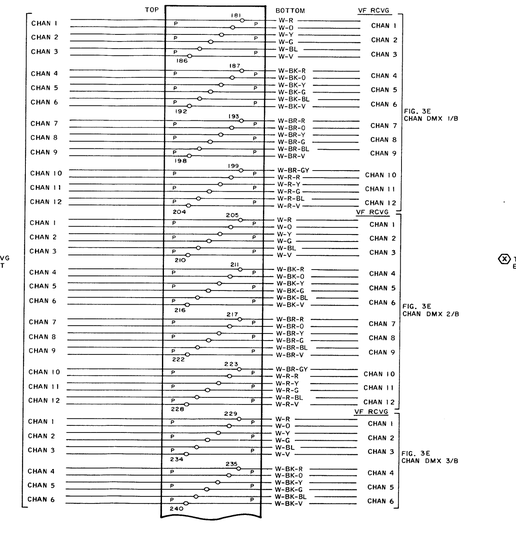
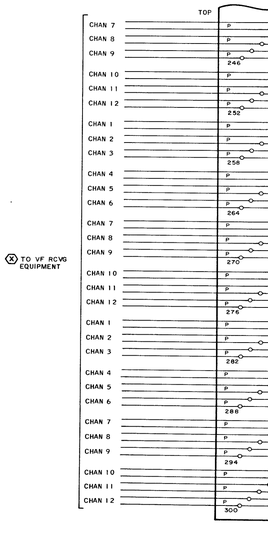


FIG. 17C

TERMINAL BOARD A1TB3
RACK 5,7,9,11,13





THIS SHEET

Figu

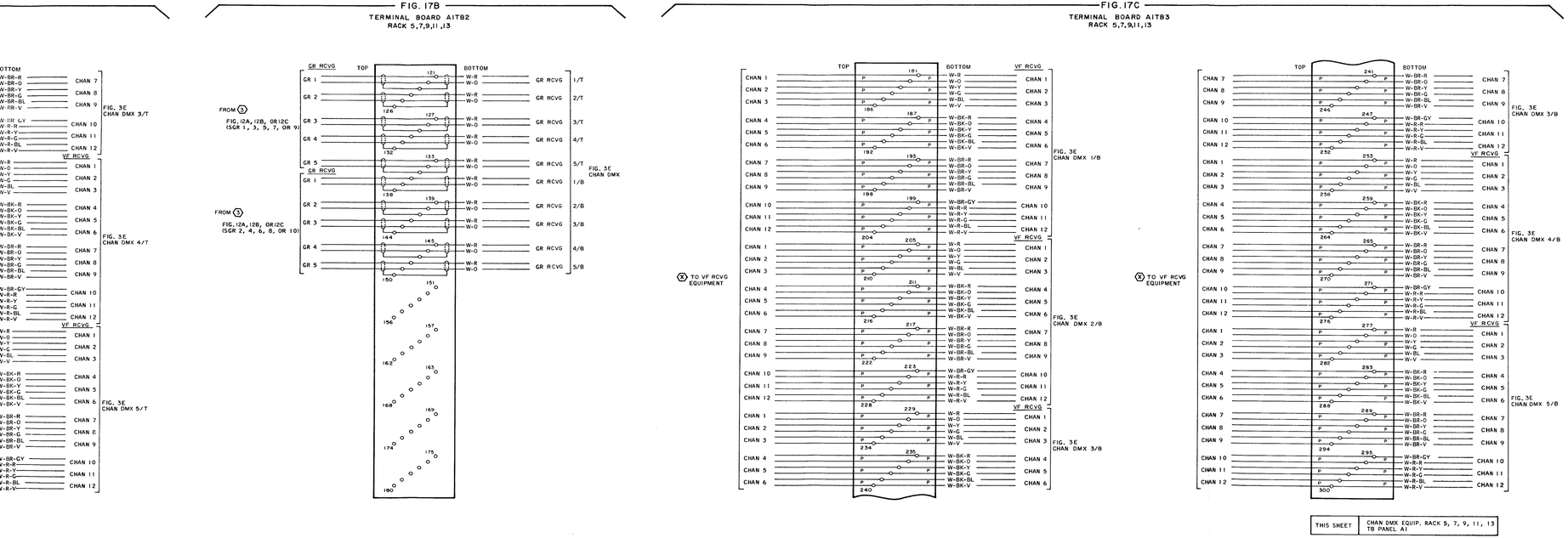
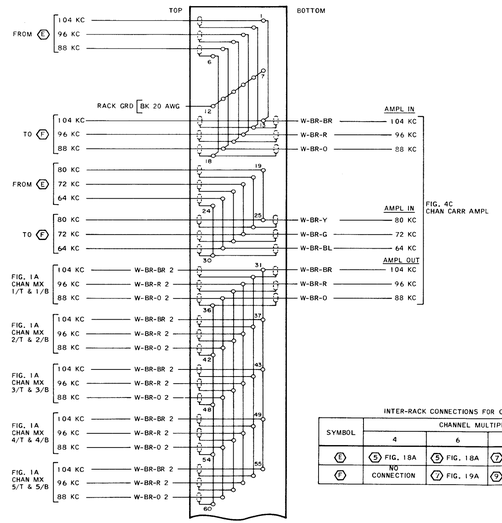


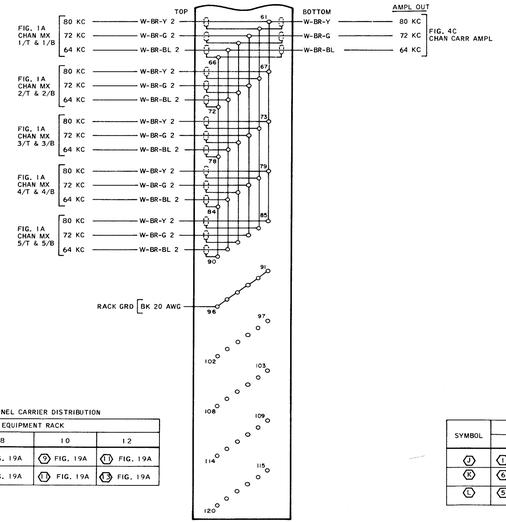
Figure 31. Multiplexer Set AN/FCC-17, Cabling Diagram (Sheet 17 of 19)

FIG. 16A

TERMINAL BOARD A2TB1
RACK 4,6,8,10,12



849-16711 SH 16

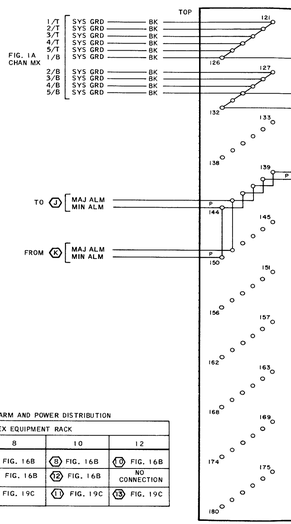


INTER-RACK CONNECTIONS FOR CHANNEL CARRIER DISTRIBUTION

SYMBOL	CHANNEL MULTIPLEX EQUIPMENT RACK				
	4	6	8	10	12
(E)	(5) FIG. 18A	(5) FIG. 18A	(7) FIG. 19A	(9) FIG. 19A	(11) FIG. 19A
(F)	NO CONNECTION	(7) FIG. 19A	(9) FIG. 19A	(11) FIG. 19A	(13) FIG. 19A

FIG. 16B

TERMINAL BOARD A2
RACK 4,6,8,10,12



INTER-RACK CONNECTIONS FOR ALARM AND POWER DISTRIBUTION

SYMBOL	CHANNEL MULTIPLEX EQUIPMENT RACK				
	4	6	8	10	12
(J)	(1) FIG. 8B	(4) FIG. 16B	(6) FIG. 16B	(8) FIG. 16B	(10) FIG. 16B
(K)	(6) FIG. 16B	(8) FIG. 16B	(10) FIG. 16B	(12) FIG. 16B	NO CONNECTION
(L)	(5) FIG. 18C	(7) FIG. 19C	(9) FIG. 19C	(11) FIG. 19C	(13) FIG. 19C

FIG. 18A

TERMINAL BOARD A2TB1
RACK 5

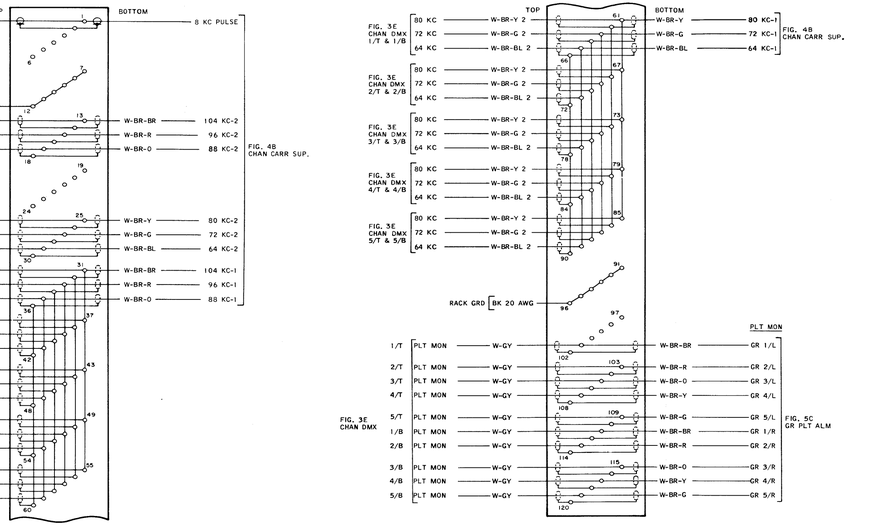


FIG. 18B

TERMINAL BOARD A2TB2
RACK 5

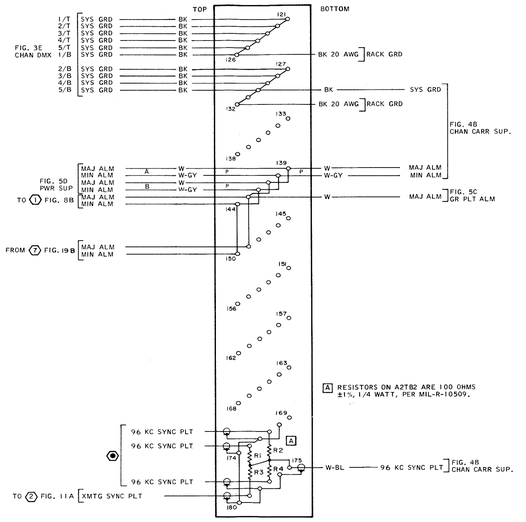


FIG. 18C

TERMINAL BOARD A2TB3
RACK 5

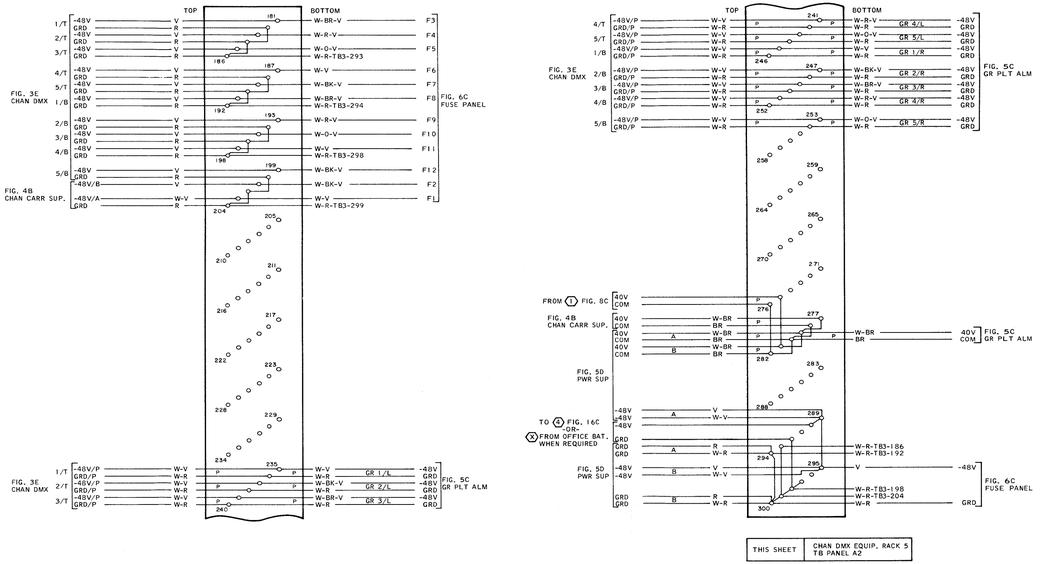
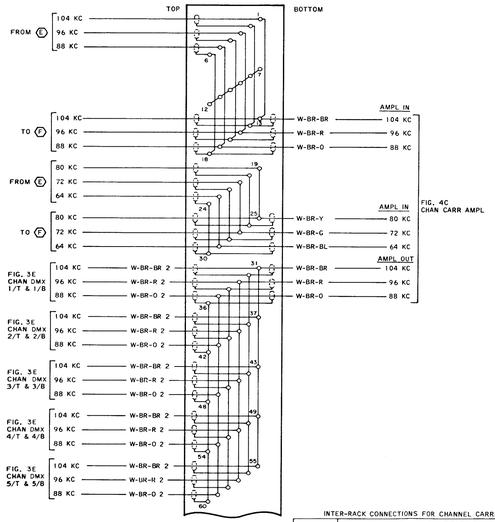
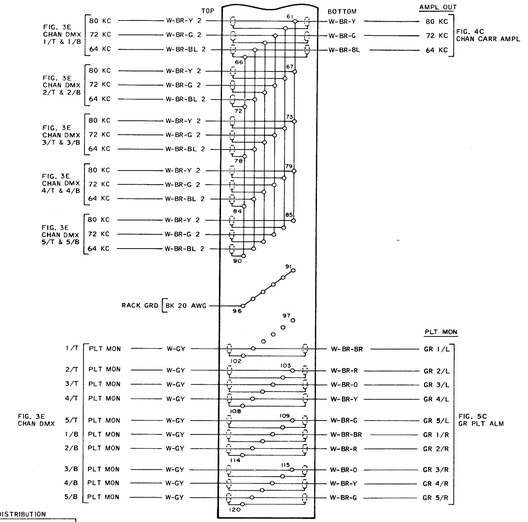


Figure 31. Multiplexer Set AN/FCC-17, Cabling Diagram (Sheet 18 of 19)

FIG. 19A

TERMINAL BOARD A2TB1
RACK 7,9,11,13





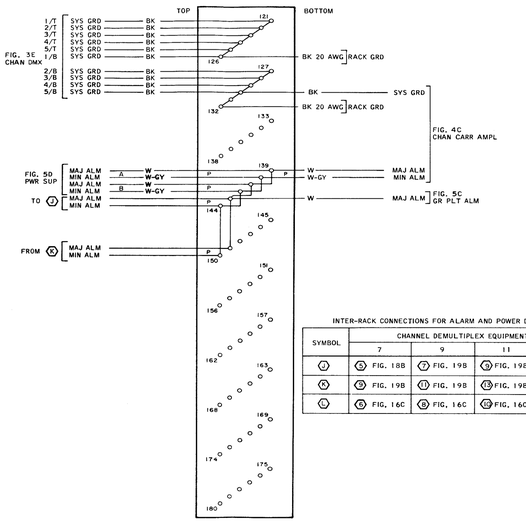
INTER-RACK CONNECTIONS FOR CHANNEL CARRIER DISTRIBUTION

SYMBOL	CHANNEL DEMULTIPLEX EQUIPMENT RACK			
	7	9	11	13
(E)	(A) FIG. 16A	(B) FIG. 16A	(C) FIG. 16A	(D) FIG. 16A
(F)	(B) FIG. 16A	(D) FIG. 16A	(E) FIG. 16A	NO CONNECTION

849-16711 SH 19

FIG. 19B

TERMINAL BOARD A2TB2
RACK 7,9,11,13

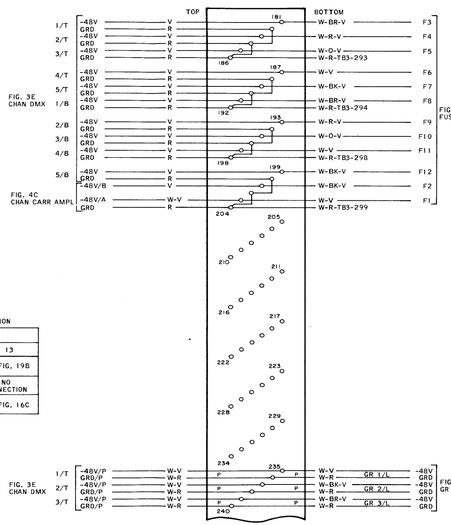


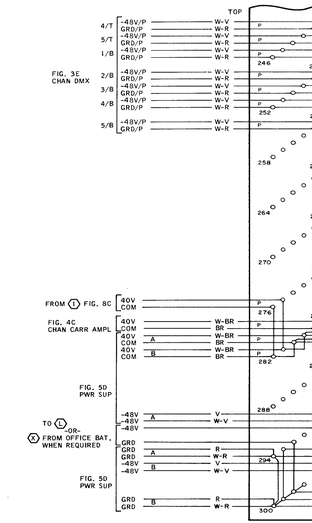
INTER-RACK CONNECTIONS FOR ALARM AND POWER DISTRIBUTION

SYMBOL	CHANNEL DEMULTIPLEX EQUIPMENT RACK			
	7	9	11	13
(J)	(S) FIG. 18B	(P) FIG. 19B	(R) FIG. 19B	(T) FIG. 19B
(K)	(R) FIG. 19B	(T) FIG. 19B	(S) FIG. 19B	NO CONNECTION
(L)	(B) FIG. 16C	(D) FIG. 16C	(E) FIG. 16C	(C) FIG. 16C

FIG. 19C

TERMINAL BOARD A2TB3
RACK 7,9,11,13





Figure

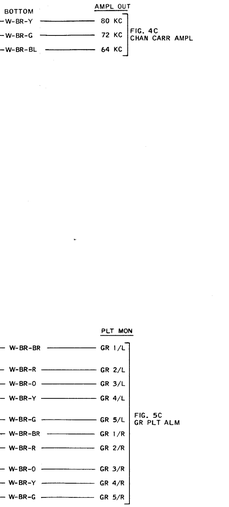
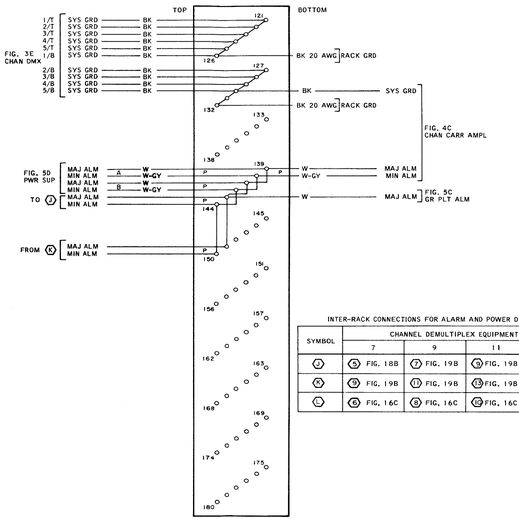


FIG. 19B

TERMINAL BOARD A2TB2
RACK 7, 9, 11, 13

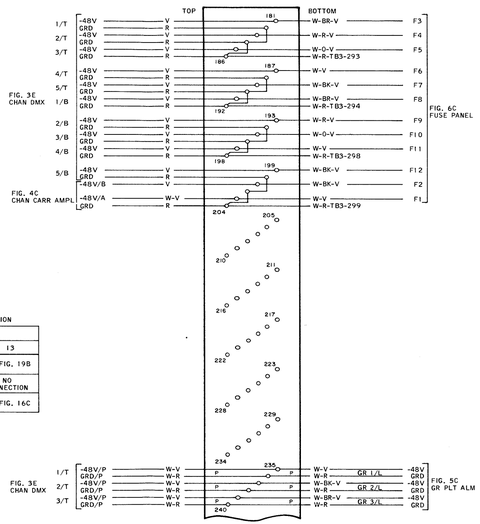


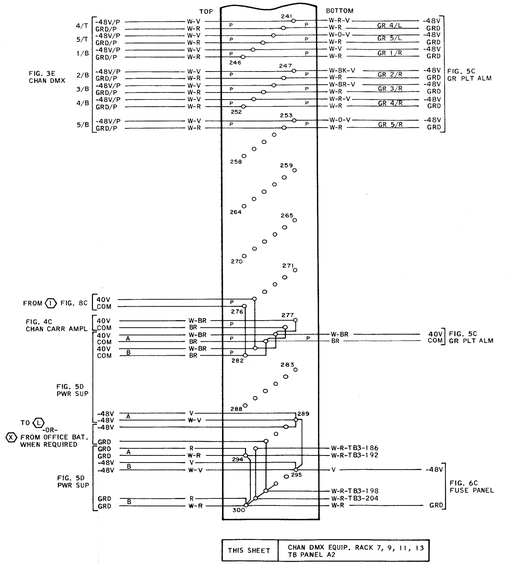
INTER-RACK CONNECTIONS FOR ALARM AND POWER DISTRIBUTION

SYMBOL	CHANNEL DEMULTIPLEX EQUIPMENT RACK			
	7	9	11	13
(J)	(5) FIG. 18B	(7) FIG. 19B	(9) FIG. 19B	(11) FIG. 19B
(K)	(6) FIG. 19B	(8) FIG. 19B	(10) FIG. 19B	NO CONNECTION
(L)	(6) FIG. 16C	(8) FIG. 16C	(10) FIG. 16C	(12) FIG. 16C

FIG. 19C

TERMINAL BOARD A2TB3
RACK 7,9,11,13



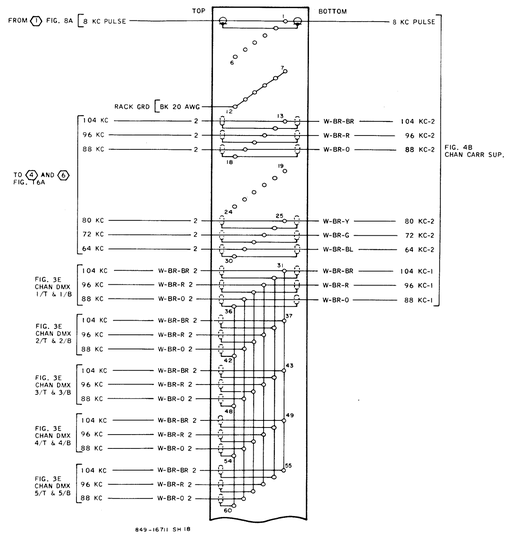


THIS SHEET	CHAN DMX EQUIP. RACK 7, 9, 11, 13 TB PANEL A2

Figure 31. Multiplexer Set AN/FCC-17, Cabling Diagram (Sheet 19 of 19)

FIG. 18A

TERMINAL BOARD A2TB1
RACK 5



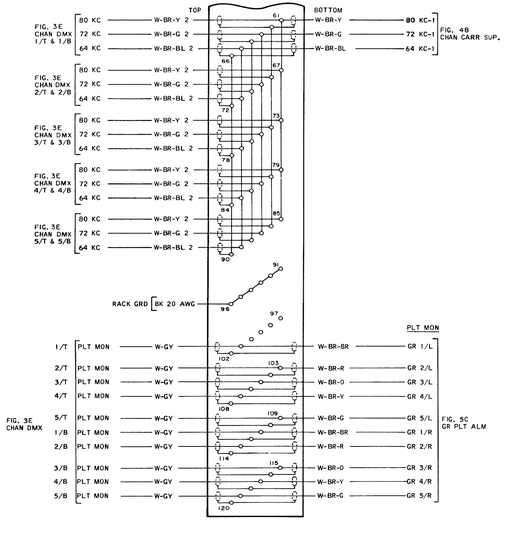


FIG. 18B

TERMINAL BOARD A2TB2
RACK 5