

CHANGE No. 2

INSTRUCTION BOOK CHANGE NOTICE

Date December 1973

Manual affected: Antenna Multicouplers AMC/LMC Series IN 11-104030

Please make the following pen and ink correction to the AMC/LMC Technical Manual as indicated below:

1. On page 5-5, Figure 5-2;

Change Voltage Regulator Assembly designation from A10746-6 to A10746-5.

Should additional copies of this change notice be required, please contact:

THE TECHNICAL MATERIEL CORP., 700 Fenimore Road, Mamaroneck, New York

Attn: Director of Eng. Services

CHANGE NO. 4 (supersedes change no. 3)

INSTRUCTION BOOK CHANGE NOTICE

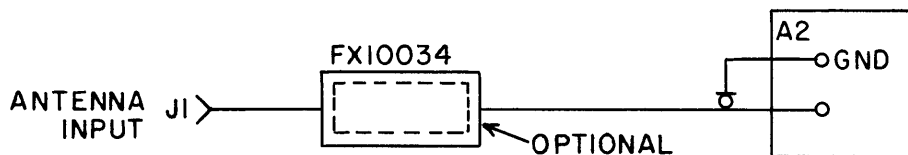
Date July 1975

Manual affected Antenna Multicouplers AMC/LMC Series IN 11-104030

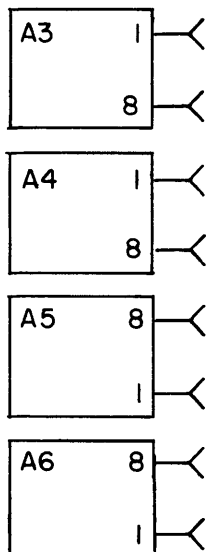
1. On page 1-5, table 1-1. loose items supplied, change table 1-1 as follows:

<u>Name</u>	<u>Part Number</u>	<u>Function</u>	<u>Quantity</u>
Power Cable Assembly	CA10625	For connection to power connector	1
Technical Manual		Operators Manual	1

2. On page 2-4, paragraph 2-5, change all references of 10757-7 and 10757-8 to A10735-7 (75 ohms) and A10735-8 (50 ohms).
3. On page 5-11, figure 5-5, AMC-32 Schematic Diagram, add the following filter between J1 and A2.



4. On page 5-11, figure 5-5, AMC-32 Schematic Diagram, make the following changes:



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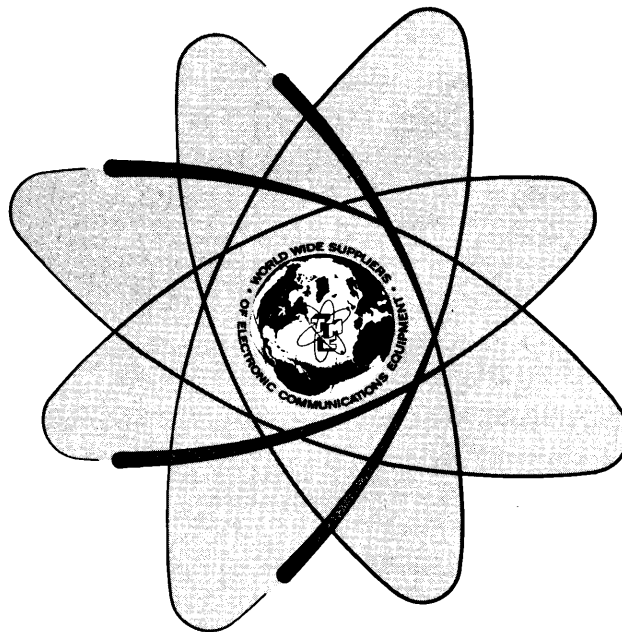
THE TECHNICAL MATERIEL CORP., 700 Fenimore Road, Mamaroneck, New York

Attn: Director of Eng. Services

TECHNICAL MANUAL
for

ANTENNA MULTICOUPLERS

AMC/LMC SERIES



THE TECHNICAL MATERIEL CORPORATION
MAMARONECK, N.Y. OTTAWA, ONTARIO

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TABLE OF CONTENTS

<u>Paragraph</u>	<u>Page</u>
SECTION 1 INTRODUCTION	
1-1 General	1-3
1-2 Technical Specifications	1-4
1-3 Physical Description	1-5
1-4 Filters Available	1-5

SECTION 2 FUNCTIONAL DESCRIPTION

2-1 General Description of AMC-8	2-1
2-2 General Description of AMC-21B	2-1
2-3 General Description of AMC-22	2-2
2-4 General Description of AMC-23	2-4
2-5 General Description of AMC-32	2-4
2-6 General Description of LMC-8	2-5
2-7 General Description of LMC-32	2-5
2-8 Pre-Amplifier Boards	2-6
2-9 Output Modules	2-6
2-10 Power Supply	2-6

SECTION 3 INSTALLATION AND OPERATION

3-1 Installation	3-1
3-2 Operator's Controls and Procedures	3-3

SECTION 4 PARTS LIST

4-1 Introduction	4-1
------------------	-----

SECTION 7 SCHEMATICS

LIST OF ILLUSTRATIONS

SECTION 1 GENERAL DESCRIPTION

1-1 Filter's Characteristic Curves	1-8
------------------------------------	-----

SECTION 2 FUNCTIONAL DESCRIPTION

2-1 AMC-21B Output Module Location	2-3
------------------------------------	-----

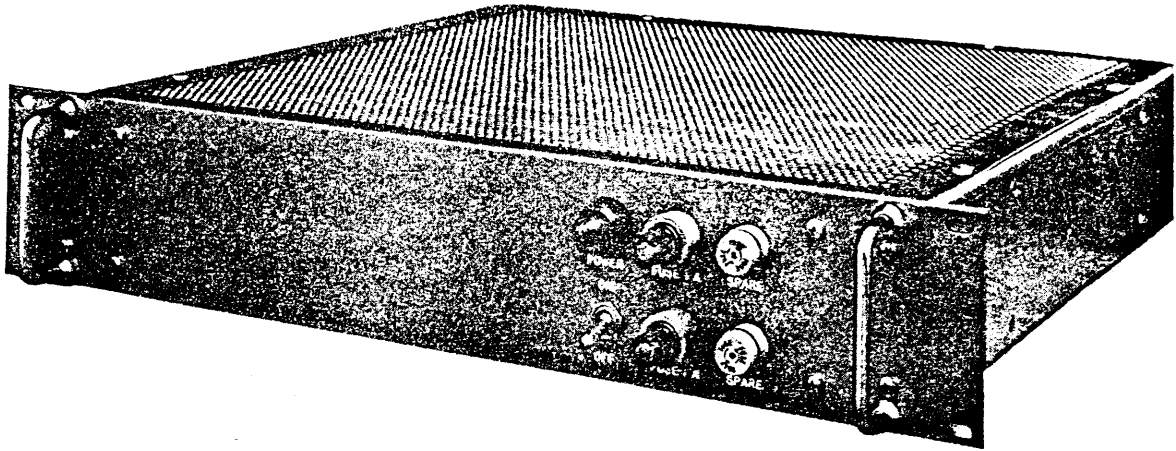
SECTION 5 SCHEMATICS

5-1 Schematic Diagram AMC-8	5-3
5-2 Schematic Diagram AMC-21B	5-5
5-3 Schematic Diagram AMC-22	5-7
5-4 Schematic Diagram AMC-23	5-9
5-5 Schematic Diagram AMC-32	5-11
5-6 Schematic Diagram LMC-8	5-13

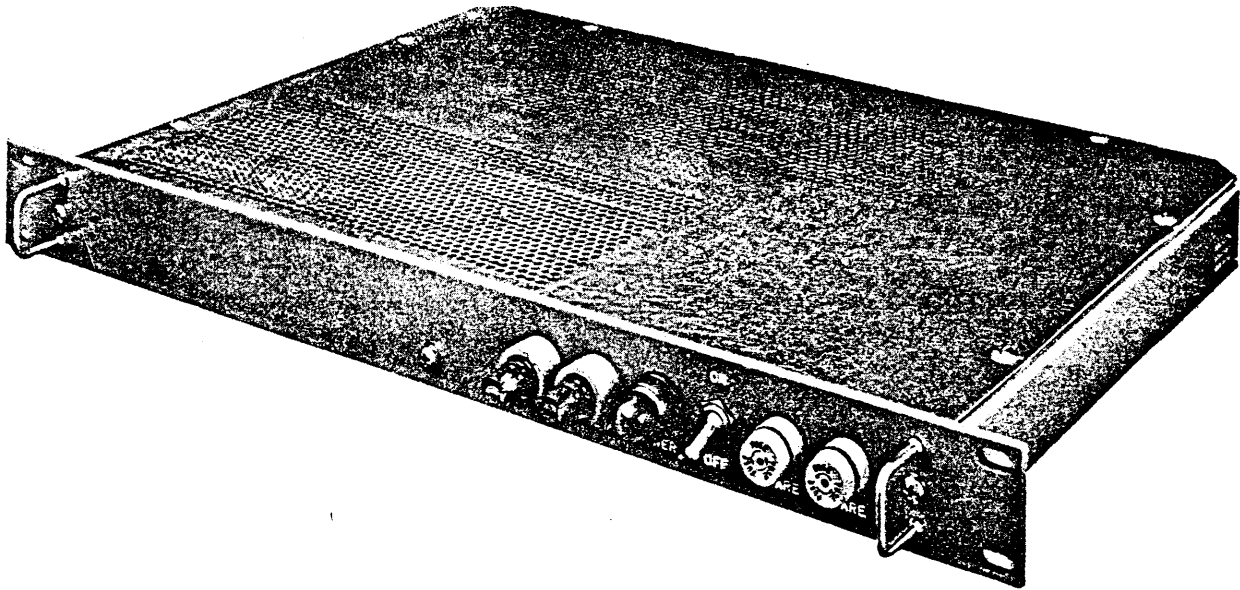
<u>Paragraph</u>	<u>Page</u>
5-7 Schematic Diagram LMC-32	5-15
5-8 Schematic Diagram Regulator	5-16
5-9 Schematic Diagram Preamplifier	5-17
5-10 Schematic Diagram Preamplifier	5-18
5-11 Schematic Diagram Output Amplifier	5-19
5-12 Schematic Diagram 8 Output	5-20
5-13 Schematic Diagram 8 Output	5-21
5-14 Schematic Diagram AC Filter	5-22
5-15 Schematic Diagram Lightning Protection	5-22
5-16 Schematic Diagram Filters	5-24

LIST OF TABLES

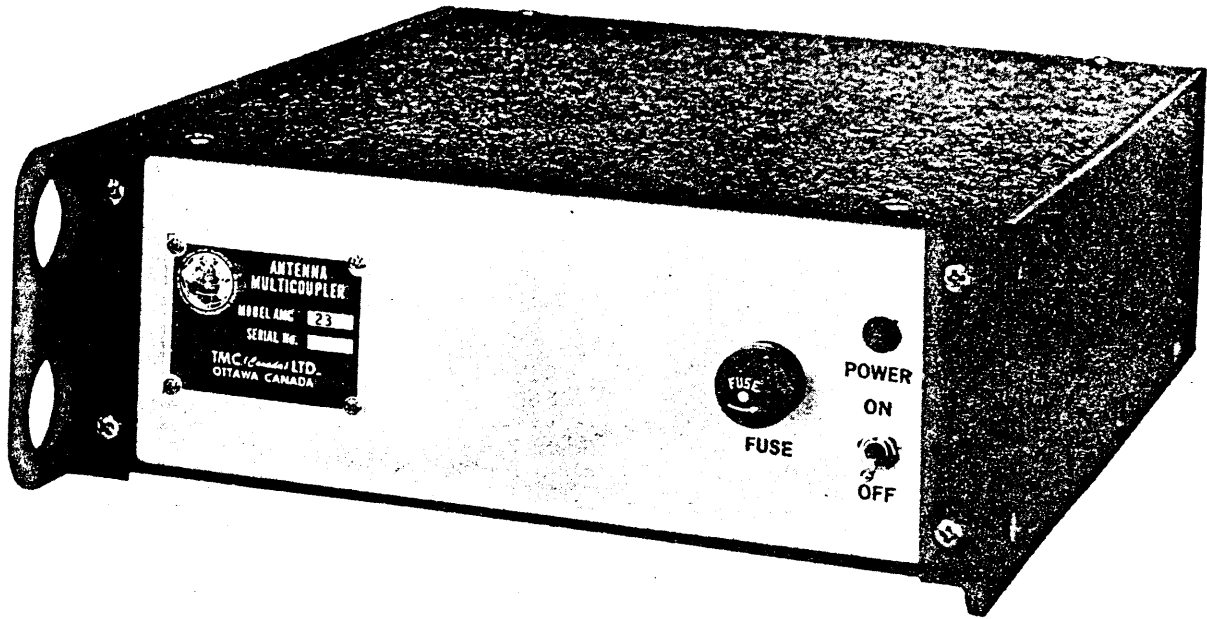
<u>Table</u>	<u>Page</u>
SECTION 1 GENERAL DESCRIPTION	
1-1 Loose Items Supplied	1-5
1-2 Semiconductor Complement	1-6
1-3 Filters Available	1-7



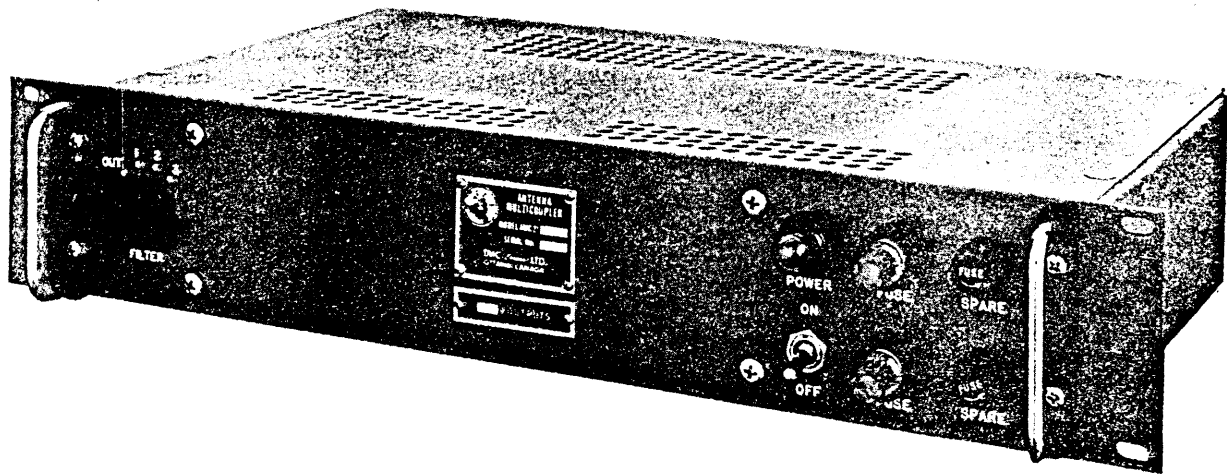
AMC-32 LMC-32



AMC-8 AMC-22 AND LMC-8



AMC-23



AMC-21B

SECTION 1

INTRODUCTION

1-1 General

The antenna multicouplers in the AMC/LMC series manufactured by TMC (Canada) Limited are broadband antenna-to-receiver coupling devices which permit the use of a common antenna by a number of communication receivers. Each TMC antenna multicoupler consists of a broadband transistorized preamplifier, output module(s), power supply and optional filter(s). Given below in the tabular form are the major characteristics of these antenna multicouplers. Section 2 of this manual describes in detail the functional description of these units. Common modules are described only once with notes to their peculiarities when used in different units. Section 3 details the installation and operation of the multicouplers. Since the installation and operation of these antenna multicouplers are identical with a few exceptions, the procedures are described only once with notes for the exceptions. Section 4 contains parts lists. The parts lists for the main chassis are given separately but the parts list for common modules are given only once. Notes on the bottom of these parts lists show any addition or subtraction of a part or its value to enable that particular module to be used in a particular unit. Section 5 contains the schematic diagrams. Once again the main schematics are given separately but the schematic diagrams for the common modules are given once with a note on these drawings about their peculiarities when used in different units.

1-2 TECHNICAL SPECIFICATIONS

ELECTRICAL

Basic Model	No. of Output	Frequency * Range w/o Filters	Nominal Gain	Noise Figure Less Than	Isolation		Desensitization of 3 db @	Intermodulation			VSWR max. Input/Output
					Output to Input db	Output to Output db		2nd order	3rd order		
AMC-8	8	100 KHz-60 MHz	2 db	7 db	>55	>40	4V Peak	65	70	1.5	1.2
AMC-21	4, 8 or 16	100 KHz-60 MHz	2 db	7 db	>55	>40	4V Peak	65	70	1.8	1.2
AMC-22	8	100 KHz-60 MHz	2 db	7 db	>55	>40	4V Peak	65	70	1.8	1.2
AMC-23	8	100 KHz-60 MHz	2 db	7 db	>55	>40	4V Peak	65	70	1.8	1.2
AMC-32	32	100 KHz-60 MHz	2 db	7 db	>55	>40	4V Peak	60	65	1.5	1.2
LMC-8	8	10 KHz- 2 MHz	2 db	7 db	>55	>40	3.5V Peak	65	70	1.5	1.2
LMC-32	32	10 KHz- 2 MHz	2 db	7 db	>55	>40	3.5V Peak	65	70	1.5	1.2

INSTALLATION AND ENVIRONMENTAL

Basic Model	MTBF hours	Power Source		Power Consumption Watts	Weight lbs.	Dimensions		
		Volts ac	Freq Hz			W	H	D
AMC-8	20K	115/230	48-400	25	8 (3.75 Kg)	19" (48.25 cm)	1-3/4" (4.44 cm)	14" (35.56 cm)
AMC-21	20K	115/230	48-400	25	25 (11.5 Kg)	19" (48.25 cm)	3-1/2" (8.89 cm)	14" (35.56 cm)
AMC-22	20K	115/230	48-400	25	8 (3.75 Kg)	19" (48.25 cm)	1-3/4" (4.44 cm)	14" (35.56 cm)
AMC-23	20K	115/230	48-400	25	7 (3.2 Kg)	8-5/8" (21.90 cm)	3-1/2" (8.89 cm)	14" (35.56 cm)
AMC-32	20K	115/230	48-400	85	17 (8.10 Kg)	19" (48.25 cm)	3-1/2" (8.89 cm)	15-1/2" (39.37 cm)
LMC-8	20K	115/230	48-400	25	8 (3.75 Kg)	19" (48.25 cm)	1-3/4" (4.44 cm)	14" (35.56 cm)
LMC-32	20K	115/230	48-400	85	17 (8.10 kg)	19" (48.25 cm)	3-1/2" (8.89 cm)	15-1/2" (39.37. cm)

* This is the useable frequency range. Specifications given are for 2-32 MHz and 10 KHz-2 MHz, high frequency and low frequency multicouplers' frequency range respectively.

1-3 Physical Description

Both AMC and LMC series are designed for mounting in a standard 19 inch rack. Exception is in the AMC-23 which is designed for table mounting with an option for rack mounting. Each unit is supported by four retaining screws on the front panel. All operating controls are located on the front panel. The input, output and power supply connectors are mounted on the rear panel. The majority of the discrete components and semi-conductors are mounted on the printed circuit boards which in turn are fastened to the chassis. Some components are mounted directly on the chassis. The loose items supplied with the equipment are listed in table 1-1, and all semiconductors used in the series are listed in table 1-2.

Name	Part No.	Function	Quantity
*Power Cable Assembly	CA10505	For connection to power connector	1
Technical Manual		Operator's manual	1

*For AMC-23 this cable is an integral part of the unit.

Table 1-1 Loose Items Supplied

1-4 Filters Available

Table 1-3 lists the filters available for use with the multicouplers. Some of these filters are fitted as standard items and others are available as option. For typical characteristic curves of these filters refer to figure 1-1 and for schematic diagrams refer to figure 5-16.

REF SYMBOL	TYPE	FUNCTION	QUANTITY PER UNIT						
			AMC -8	AMC -21	AMC -22	AMC -23	AMC -32	LMC -32	LM -6
<u>POWER SUPPLY</u>									
Q1	2N3055	Main Regulator	1	1	1	1	1	1	1
Z1	NW10005	Rectifier	1	1	1	1	-	-	1
Z1	NW10007	Rectifier	-	-	-	-	1	1	-
A1CR1	1N758	Bias Regulator	1	1	1	1	1	1	1
A1CR2, CR3	1N914B	Bias Regulator	1	1	1	1	1	2	2
A1Q1	TX10001	Current Regulator	1	1	1	1	1	1	1
A1Q2	2N5086	Voltage Regulator	1	1	1	1	1	1	1
<u>PREAMPLIFIER BOARD</u>									
A2CR1, CR2	1N914B	Bias Regulator	1	1	1	1	1	2	2
A2Q1	2N5160	Buffer	1	1	1	1	1	-	-
A2Q1	2N3866	Current Amplifier	-	-	-	-	-	1	1
A2Q2	2N5160	Buffer	1	1	1	1	1	1	1
A2Q3	2N3866	Current Amplifier	1	1	1	1	1	1	1
<u>OUTPUT MODULE</u>									
Q11 to Q81	2N3866	Buffer Amplifier	8	-	8	8	32	32	8
Q3, Q4	2N3866	Buffer Amplifier	-	4 to 16	-	-	-	-	-

Table 1-2 Semiconductor Complement

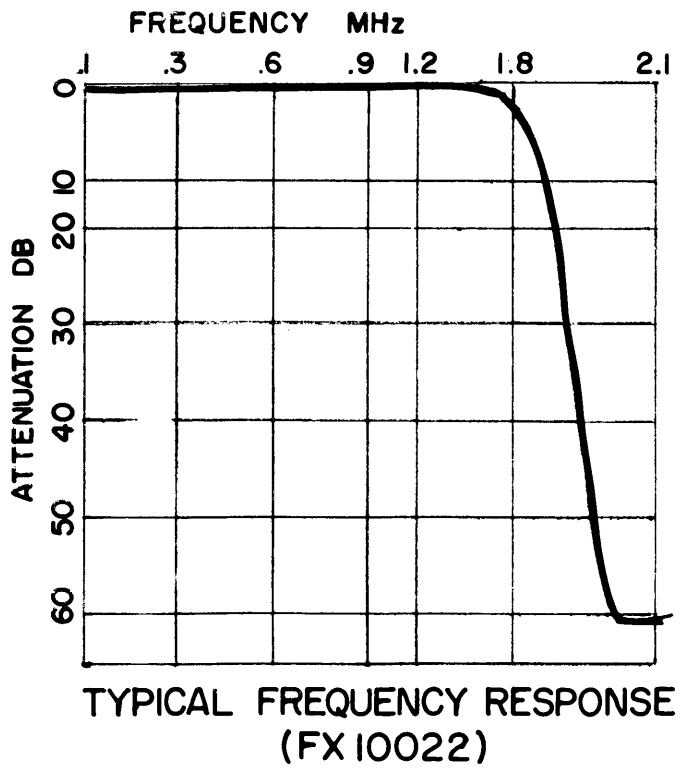
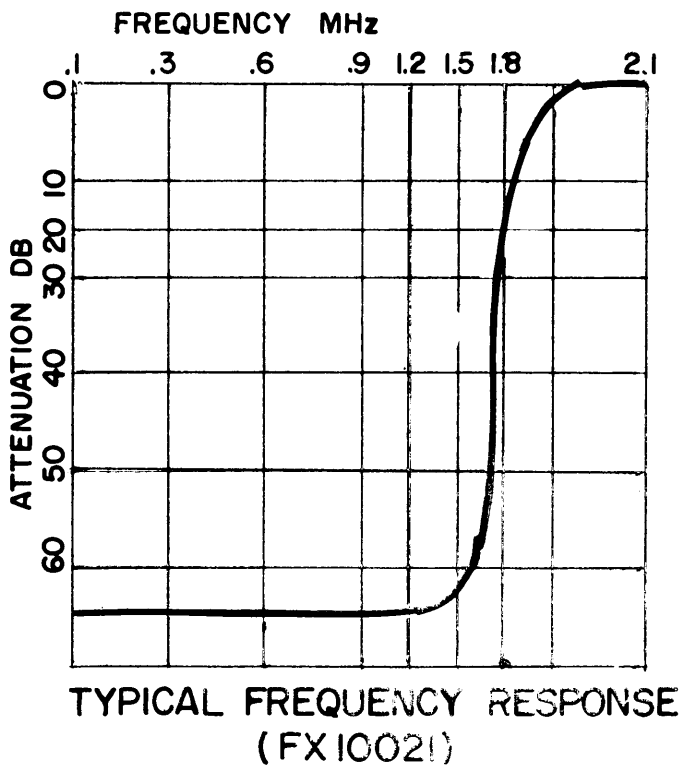
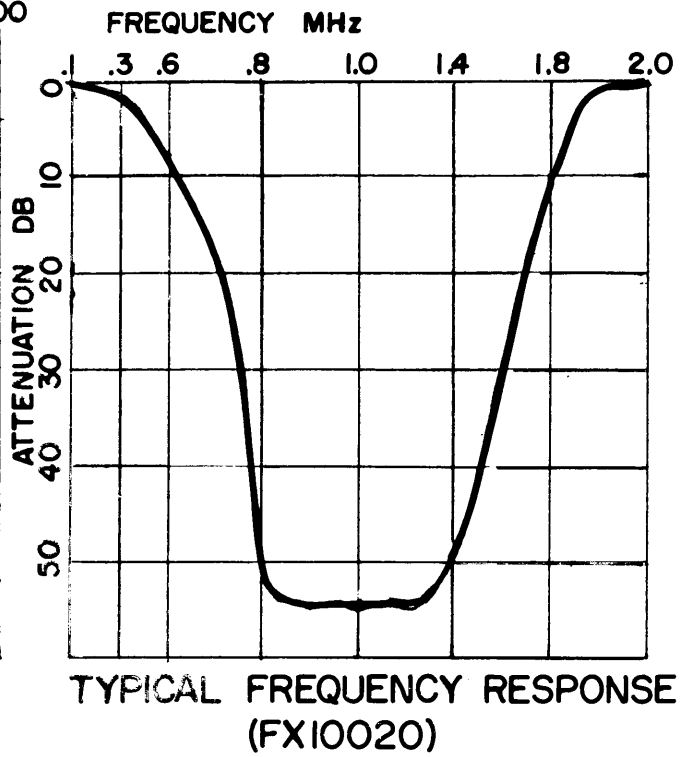
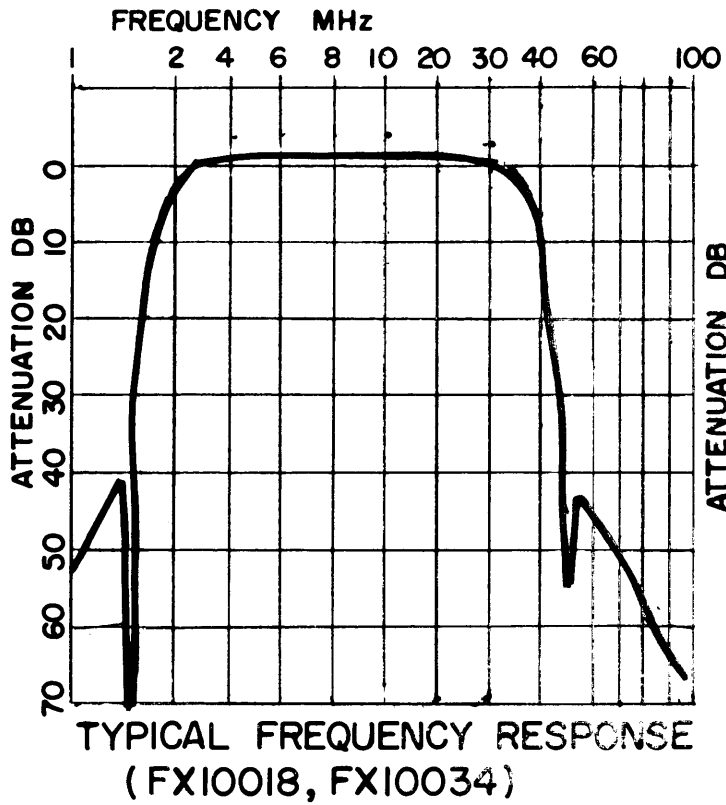


Figure 1-1 Filter's Characteristics

SECTION 2

FUNCTIONAL DESCRIPTION

2-1 General Description of AMC-8 (Figure 5-1)

The eight output antenna multicoupler is a broadband distribution system designed to operate between a single antenna and antenna terminating points of eight communication receivers. Both the input and output impedance (50 ohms or 75 ohms) of the AMC-8 are flat over the specified operating frequency range to ensure high performance when used in a communications receiving system. The antenna input is connected to the preamplifier board assembly through a bandpass filter FX10018 or FX10034. The bandpass filter is a sevenpole bandpass type for frequencies between 2 to 32 MHz and has high attenuation to frequencies outside the bandpass range. The filter is manufactured to an unusual degree of accuracy and provides a phase correlation of $\pm 1\%$. It also contains a neon lamp DS1 connected across the input which prevents damage to the components of AMC-8 caused by lightning surges in the antenna. Any voltage over 40 volts will cause the lamp to fire, thereby providing a ground for the lightning surge.

The preamplifier (A10735-5) or (A10735-6) (para. 2-8) is a low noise, wideband fully transistorised amplifier having an input impedance of 75 ohms or 50 ohms and a gain of 8 db. The output of the preamplifier is connected to the input of the 8-output assembly (A10714-5) or (A10714-6) (para 2-9). The eight outputs are terminated at the eight output connectors with an overall insertion gain of 2 db for each output. The unit can be operated from 115/230 Vac, single phase 48-400 Hz power source. The built-in power supply (para 2-10) converts the ac supply into dc and then regulates it to the required voltage for operating the preamplifier and the output module networks.

2-2 General Description of AMC-21B (Figure 5-2)

The AMC-21B is normally supplied with one of two input impedances, 50 or 75 ohms. The antenna input is connected to the preamplifier board assembly A10735-5 or A10735-6 through a lightning protection circuit (A10859), rotary switch S1 and a filter (if selected).

Filter Switch S1 may be positioned to insert one of three optional filters into the input circuit. When position 1 of the FILTER switch is selected, the input signal passes through the broadcast band stop filter which rejects all broadcast band frequencies, before being applied to the preamplifier. In position 2, the signal passes through the high pass filter which rejects all frequencies below 2 MHz, and in position 3, the signal passes through the low pass filter which rejects all frequencies above 2 MHz. When the OUT position of the FILTER switch is selected, the signal is channeled directly to the preamplifier without passing through any filters.

The preamplifier (para. 2-8) is a low noise, wideband fully transistorised amplifier having a voltage gain of 8 db. There are two versions of preamplifier boards, one for 50 ohms impedance (A10735-6) and the other for 75 ohms impedance (A10735-5). The output of the preamplifier is coupled to the output modules.

The output module (AX10055) or (AX10056) (para 2-9) is also available in two output impedance versions 50 or 75 ohms. Each module contains two output channels which have identical low impedance outputs. The modules are fully interchangeable so that any module may be plugged into any position.

NOTE

The position of the output modules is important when fewer than the full complement of 8 modules (16 channels) is being used. In order to minimize intermodulation distortion, and to balance the RF feedline from the preamplifier to the output modules, the arrangement must be kept symmetrical as shown in Figure 2-1 for 4, 8 and 12 channel operation.

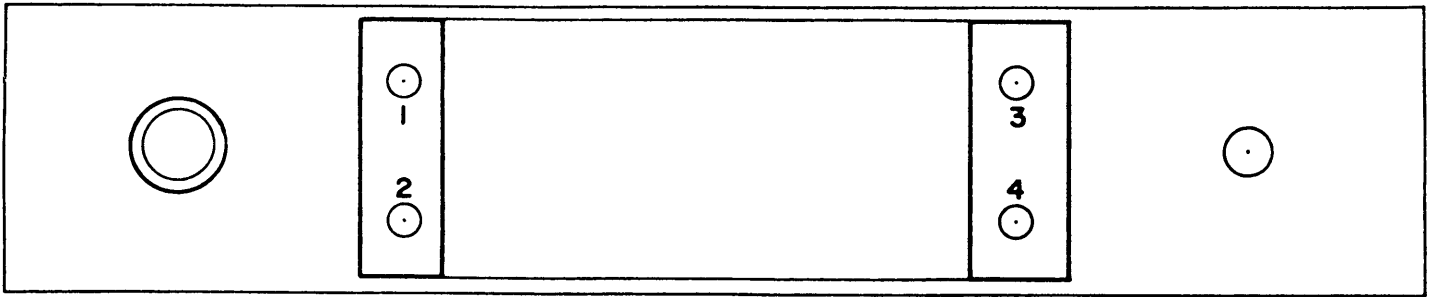
The unit can be operated from 115/230 Vac, single phase 50 to 400 Hz power source. The built-in power supply (para 2-10) converts the ac supply into dc and then regulates it to the required voltage for operating the preamplifier and output module networks.

2-3 General Description of AMC-22 (Figure 5-3)

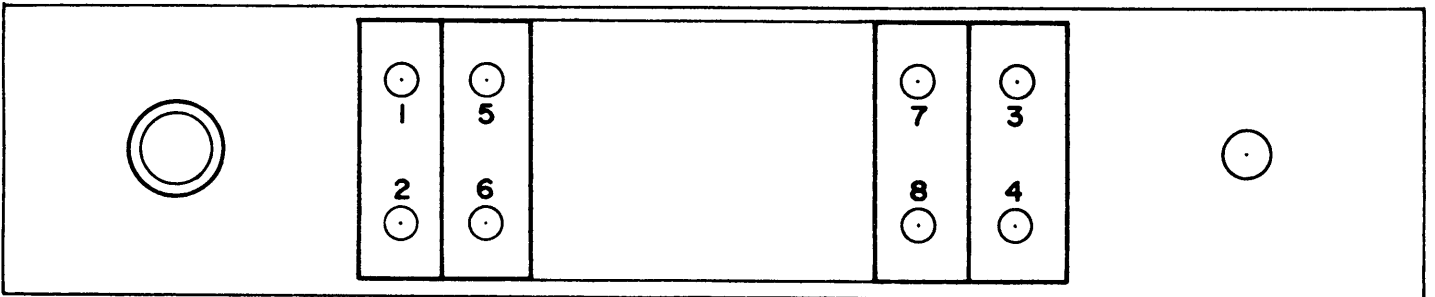
The eight output high frequency antenna multicoupler is a broadband distribution system designed to couple one high frequency antenna to the antenna inputs of up to eight high frequency communication receivers. Both the input and output impedance of AMC-22 coupler are nominally 50 ohms or 75 ohms with a voltage standing wave ratio characteristic better than 1.5 to 1 over the frequency range 2 MHz to 32 MHz. The antenna input is connected to the preamplifier board through an optional filter. There is a choice of three optional filters only one is fitted in the unit according to the customers' requirements. The broadcast band stop filter rejects all broadcast band frequencies, the high pass filter rejects all frequencies below 2 MHz and low pass filter rejects all frequencies above 2 MHz.

The preamplifier (para. 2-8) is a low noise, wideband fully transistorised amplifier having a voltage gain of 8 db. There are two versions of pre-amplifier boards, one for 50 ohms (A10735-6) and the other for 75 ohms impedance (A10735-5). The output of the preamplifier is connected through a common feed line to the eight buffer amplifiers (output module).

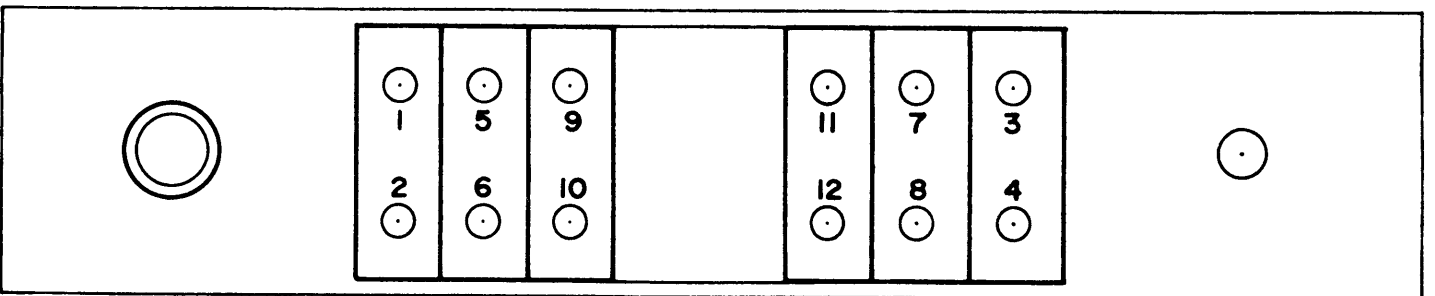
The output module (para. 2-9) is also available in two output impedance versions, 50 ohms or 75 ohms (A10714-6 or A10714-5). The eight outputs



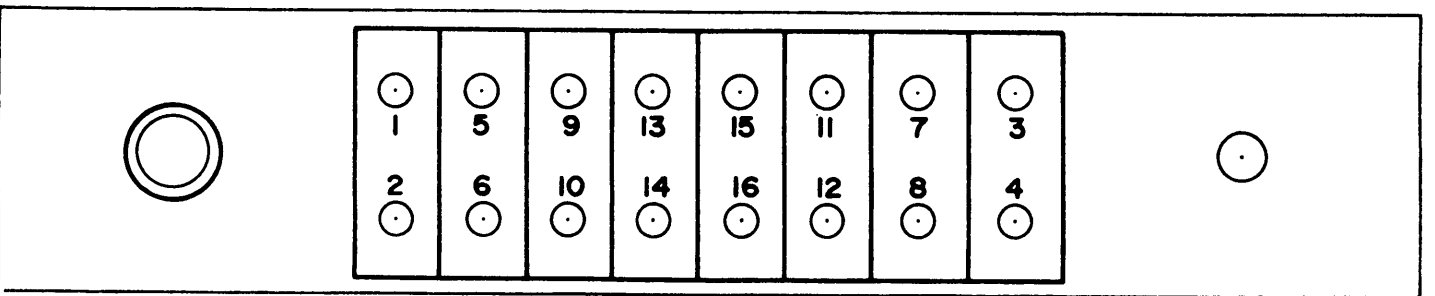
OUTPUT MODULE LOCATIONS WITH 4 CHANNEL OPERATION



OUTPUT MODULE LOCATIONS WITH 8 CHANNEL OPERATION



OUTPUT MODULE LOCATIONS WITH 12 CHANNEL OPERATION



OUTPUT MODULE LOCATIONS WITH 16 CHANNEL OPERATION

FIGURE 2-1-- OUTPUT MODULE LOCATION FOR 4, 8, 12 & 16 CHANNEL OPERATION

are collected at the eight output connectors with an overall gain of 2 db for each output.

The unit can be operated from 115/230 Vac, single phase 48 to 400 Hz power source. The built-in power supply (para 2-10) converts the ac supply into dc and then regulates it to the required voltage for operating the preamplifier and output module networks.

2-4 General Description of AMC-23 (Figure 5-4)

The eight output high frequency antenna multicoupler is a broadband distribution system designed to couple one high frequency antenna to the antenna inputs of up to eight high frequency communication receivers. Both the input and output impedance of AMC-23 coupler are nominally 50 ohms or 75 ohms with a voltage standing wave ratio characteristic better than 1.5 to 1 over the frequency range 2 MHz to 32 MHz. The antenna input is connected to the preamplifier board through an optional filter. There is a choice of three optional filters only one if fitted in the unit according to the customers' requirements. The broadcast band stop filter rejects all broadcast band frequencies, the high pass filter rejects all frequencies below 2 MHz and low pass filter rejects all frequencies above 2 MHz.

The preamplifier (para. 2-8) is a low noise, wideband fully transistorised amplifier having a voltage gain of 8 db. There are two versions of preamplifier boards, one for 50 ohms (A10735-6) and the other for 75 ohms impedance (A10735-5). The output of the preamplifier is connected through a common feed line to the eight buffer amplifiers (output module).

The output module (para. 2-8) is also available in two output impedance versions, 50 ohms or 75 ohms (A10714-6 or A10714-5). The eight outputs are collected at the eight output connectors with an overall gain of 2 db for each output.

The unit can be operated from 115/230 Vac, single phase 40 to 400 Hz power source. The built-in power supply (para 2-10) converts the ac supply into dc and then regulates it to the required voltage for operating the preamplifier and output module networks.

2-5 General Description of AMC-32 (Figure 5-5)

The thirty-two output antenna multicoupler is a broadband distribution system designed to couple a single 75 ohm or 50 ohm antenna to antenna inputs of up to thirty-two HF communications receivers. The antenna output is coupled directly to the preamplifier board. The preamplifier A10757-7 or 10757-8 (para. 2-8) is a low noise, wideband fully transistorised amplifier having a voltage gain of 8 db. The output of the preamplifier is fed to a common feed line. This feed line distributes the signal to four identical 8-output circuits A10714-5 or A10714-6 (para 2-9). The thirty-two outputs are terminated at the thirty-two output connectors with an overall insertion gain of 2 db for each output.

The unit can be operated from 115/230 Vac, single phase 48 to 400 Hz power source. The built-in power supply (para. 2-10) converts the ac supply into dc and then regulates it to the required voltage for operating the preamplifier and output module networks.

2-6 General Description of LMC-8 (Figure 5-6)

The eight output low frequency antenna multicoupler is a broadband antenna distribution system, designed to couple one low frequency antenna to antenna inputs of up to eight low frequency communication receivers. Both the input and output impedance of the LMC-8 coupler are nominally 50 ohms or 75 ohms with a voltage standing-wave ratio characteristic better than 1.5 to 1 over the frequency range 10 KHz to 2 MHz. The antenna input is connected to the preamplifier board through an optional filter. A neon lamp is also connected across the antenna input which acts as a lightning arrester.

The preamplifier (para 2-8) is a low noise, wideband fully transistorised amplifier having a voltage gain of 8 db. There are two versions of the preamplifier boards, one for 50 ohms impedance (A10812-6) and the other for 75 ohms impedance (A10812-5). The output of the preamplifier is connected through a common feed line to the eight buffer amplifiers (output module).

The output module (para. 2-9) is also available in two output impedance versions 50 or 75 ohms (A10791-6 or A10791-5). The eight outputs are terminated at the eight output connectors with an overall gain of 2 db for each output.

The unit can be operated from 115/230 Vac, single phase, 48 to 400 Hz power source. The built-in power supply (para. 2-10) converts the ac supply into dc and then regulates it to the required voltage for operating the preamplifier and output module networks.

2-7 General Description of LMC-32 (Figure 5-7)

The thirty-two output low frequency antenna multicoupler is a broadband antenna distribution system designed to couple one low frequency antenna to antenna inputs of up to thirty-two low frequency communication receivers. Both the input and output impedance of the LMC-32 coupler are nominally 75 ohms or 50 ohms with a voltage standing wave ratio characteristic better than 1.5 to 1 over the frequency range of 10 KHz to 2 MHz. A neon lamp DS2 is connected across the antenna input and is used as a lightning arrester. The antenna input is then coupled to the preamplifier assembly A10812-5 or A10812-6 (para. 2-8). The preamplifier assembly is a low-noise, wideband amplifier having a 75 ohm or 50 ohm input impedance and a nominal gain of 8.5 db. The output of the preamplifier is fed to a common feed line. This feed line distributes the signals to four identical 8-output circuits A10791-5 or A10791-6 (para 2-9). Thirty-two outputs are terminated at the thirty-two output connectors with an overall insertion gain of 2 db for each output. The unit can be operated from 115/230 Vac, single phase 48 to 400 Hz power source. The

built-in power supply (para 2-10) converts the ac supply into dc and then regulates it to the required voltage for operating the preamplifier and output module networks.

2-8 Pre-Amplifier Boards (figure 5-9 and figure 5-10)

The input to the amplifier Q1 is RC coupled (figures 5-9) or is coupled through a step-up transformer T1 (figure 5-10). Q1 provides the required voltage gain. The output of Q1 is coupled to a complementary push-pull amplifier circuit consisting of Q2 and Q3. The latter circuit serves a balancing function to minimize higher order intermodulation products. In the preamplifier circuit of LMC-8 and LMC-32 (figure 5-9) CR1 and CR2 provides temperature compensation and R8 and C10 provide the negative feedback. In the preamplifier circuits of the other multicouplers (figure 5-10) CR1 provide the required temperature compensation and R6, a variable resistor provides an adjustment for the standing current in the output circuit. The dc supply for operating the networks is -28 Vdc and -27 Vdc respectively.

2-9 Output Modules (Figure 5-11 to figure 5-13)

The general principle of the output module is described in this paragraph. The number of these modules used and for the number of outputs obtained, refer to general description of each unit. The output module circuit for AMC-21B (figure 5-11) consists of two separate emitter followers, Q3 and Q4. The output impedance is normally either 50 or 75 ohms (nominal) unbalanced. The input appears at Pin 5 and is fed simultaneously into the two identical emitter follower circuits through resistors R4 and R5 and isolation capacitors C3 and C4 respectively. Two outputs are taken from the emitters of Q3 and Q4, through matching resistors R12 and R13, and DC blocking capacitors C5 and C6, to two connectors. They are represented as OUTPUT NO. 1 and OUTPUT NO. 2. The output module circuit for other units consists of eight identical emitter followers Q11 to Q81 one for each output (figures 5-12 and 5-13). The input from the RF distribution line is RC coupled through C11 and R11 to the base of the emitter follower Q11. The dc bias for the transistor is obtained from a voltage divider network R12 and R13. The output from the emitter follower is applied to the output terminal through a matched 75 ohm or 50 ohm load circuit consisting of R15 and C13.

2-10 Power Supply (Main Schematic of the units and figure 5-8)

Both AMC and LMC antenna multicouplers can be operated from 115/230 Vac supply. Changeover from 115 Vac to 230 Vac or vice versa can be made by simple modification of the input power transformer wiring. Primary power source is supplied to the power ON/OFF switch through one ac line Filter (figure 5-14) as in the case of AMC-21B or through two ac line filters (refer to main schematics of the relevant antenna multicoupler). These filters remove any RF content from the ac supply. When the switch is in the ON position, the input power is provided

through fuses F1 and F2 to power transformer T1 and power indicator DS1. Exception is in AMC-23 where only one line fuse F1 is used. T1 is a step down transformer and produces a nominal supply of 30 Vac. Z1 is a diode bridge network. Ac supply is rectified by this circuit and smoothed by electrolytic capacitor C1 before being applied to the regulator board. Transistor Q2 mounted on regulator board A1 and transistor Q1, mounted on the main chassis form a darlington pair and provide the voltage and current regulation required for operation of the preamplifier and output module networks. Transistor Q2 and diode pair CR1 and CR2 form a voltage reference circuit sensitive to temperature and load changes. In the LMC-32 an additional diode CR3 in series with CR1 and CR2 is provided as the regulated voltage required to operate the preamplifier and output modules is -28 Vdc. The regulated voltage required for the other units is -27 Vdc.

SECTION 3

INSTALLATION AND OPERATION

3-1 Installation

(a) Unpacking

Each AMC/LMC antenna multicoupler has been thoroughly tested and calibrated at the factory before being shipped. Upon receipt of the unit, inspect the packing case and its contents for possible damage. Unpack the equipment carefully, and check the packing material for parts shipped as loose items. The latter are listed in Table 1-2. With respect to damage of the equipment for which the carrier is liable, TMC (Canada) Limited will assist in describing methods of repair and furnishing of replacement parts.

(b) Power Requirements

All multicouplers can operate from either 115 or 230 Vac, single phase, 50 to 400 Hz power source. All the units are normally factory wired for operation from 115 Vac. If 230 Vac operation is required, the jumper connections for transformer T1 must be changed as shown in the main schematic of each unit. The input to units is protected by two fuses, one on each side of the line. Only one fuse is used in AMC-23. The fuses required for all versions of antenna multicouplers are given in the table below:

Fuse Part No.	Fuse Rating in Amperes	AMC -8		AMC-21B								AMC -22		AMC -23		AMC -32		LMC -32		LMC -8				
		115 Vac	230 Vac	115 Vac				230 Vac				115 Vac	230 Vac	115 Vac	230 Vac	115 Vac	230 Vac	115 Vac	230 Vac	115 Vac	230 Vac			
				-4	-8	-12	-16	-4	-8	-12	-16													
FU102-.250	0.25		x					x	x				x		x								x	
FU102-.400	0.40									x	x													
FU102-.500	0.50	x		x	x								x		x			x			x	x		
FU102-.750	0.75					x	x																	
FU102-1	1.00																x		x					

(c) Equipment Location

The equipment should be located in such a way that there is sufficient clearance at the rear of the unit for insertion and removal of the output modules. Front panel controls should be easily accessible to the operator. Because of its solid state construction, heat problems have been virtually eliminated; thus several antenna multicouplers may be installed one above the other in a rack.

If multiple installations of AMC-32 or LMC-32 are required in one rack, it is advisable to space out the units by a 1-3/4" or 3-1/2" blank panel to improve heat dissipation.

TMC (Canada) Limited will be pleased to advise installation methods for unusual circumstances.

(d) Electrical Installation

The following external connections must be made to the unit after it has been installed in a rack.

- (1) Connect the antenna to the ANTENNA INPUT jack on the rear panel using coaxial cable of the correct impedance.
- (2) Power: Connect primary power to the unit by plugging the supplied power cable assembly into POWER INPUT connector on the rear panel ensuring that the keyway on the plug lines up with the key at the top of the POWER INPUT jack. On the AMC-23, the power cable is an integral part of the unit.

NOTES

- (1) When making power connection be sure that the power transformer T1 is correctly wired and the fuses are of the proper value as outlined in the table above.
- (2) When wired for 230 Vac the power plug is not supplied and the plug to suit the installation must be installed by the customer.
- (3) Outputs: Connect the outputs from the output modules to the associated receivers as required using coaxial cable of correct impedance.

(e) Performance Check

- (1) List of Test Equipment Required

Equipment	Recommended MFR Part No.	Remarks
Multimeter	Simpson 260	
RF Signal Generator	HP 606A	For High Frequency
Oscilloscope	Tetronix Model 453	
Audio Generator	HP 200 CD	For Low Frequency

(2) Test Procedures

- (a) Switch the power on and note that the power lamp is lit.
- (b) Check for -27 volts on the input pins of the preamplifier and the output boards(-28 volts in case of LMC-32).
- (c) Connect the RF signal generator to the antenna input jack of high frequency multicoupler or the audio generator to the antenna input of low frequency multicoupler.
- (d) Set the level of the generator to 100 mv at a frequency in the operating range of the multicoupler.
- (e) Terminate one output jack of multicoupler in 50 ohms load and connect an oscilloscope across this load.
- (f) The oscilloscope should indicate an output level of 360 mv Peak to Peak. (130 mv rms)
- (g) Repeat (f) above for remaining output jacks of the antenna multicoupler.

3-2 Operator's Controls and Procedures

The following table lists the operating controls, indicators and fuse holders on the front panel of the antenna multicouplers.

The unit can be operated by simply switching on the power ON/OFF switch. Antenna multicouplers in the AMC-21B series also require the selection of the appropriate FILTER switch position.

CONTROL/INDICATOR	DESCRIPTION
* Filter Switch S1	Position 1: broadcast band stop filter Position 2: high pass filter Position 3: low pass filter Position OUT: no filter
Power ON/OFF Switch	Controls primary power
POWER lamp	Lights when primary power is connected
** Fuse Holders for F1 & F2	Failure of a fuse is indicated by illumination of the fuse holder. Two spare fuses are contained in storage holders located on the front panel.

* Provided only in AMC-21B series.

** On AMC-23 only one fuse is used and the fuseholder is non-illuminating.

SECTION 4

PARTS LIST

4-1 Introduction

Reference designations have been assigned to identify all electrical parts. These designations are marked on the equipment adjacent to the parts that they identify and are included on all drawings, diagrams and part lists. The letters of a reference designation indicate the generic group of the parts, such as capacitor, resistor, transistor, etc. The numeral differentiates between parts of the same generic group. Sockets associated with any particular plug-in device, such as a transistor or fuse, are identified by a reference designation which incorporates the designation used for that device as well as a prefix symbol. To expedite delivery when ordering replacement parts, specify the TMC part number and the name and model number of the equipment.

AMC-8
MAIN CHASSIS, FRONT & REAR PANELS

REF DESIGNATION	DESCRIPTION	TMC PART NUMBER
A1	VOLTAGE REGULATOR	A10746-5
A2	PREAMPLIFIER, 75 ohms	A10735-5
A2	PREAMPLIFIER, 50 ohms	A10735-6
A3	OUTPUT MODULE: 8 outputs, 75 ohms	A10714-5
A3	OUTPUT MODULE: 8 outputs, 50 ohms	A10714-6
A4	FILTER: BANDPASS, 75 ohms	FX10018
A4	FILTER: BANDPASS, 50 ohms	FX10034
W1	CABLE: RF, coaxial with connectors	CA10530 or CA10662
C1	CAPACITOR: Electrolytic, 2200 uF	CE44C222G
DS1	LAMP: Neon	B1100-51
F1, F2	FUSE: slo-blo, 0.5 amp (115 Vac operation only)	FU102-.5
F1, F2	FUSE: slo-blo, 0.25 amp (230 Vac operation only)	FU102-25
FL1, FL2	FILTER: RF, line	F110001
J1 to J9	CONNECTOR: BNC, receptable	UG625B/U
J10	CONNECTOR: Receptable, male	MS3102A-14S-7P
S1	SWITCH: Toggle	ST22K
T1	TRANSFORMER: Power	TF10060
TB1	TERMINAL BOARD	TM102-2
Q1	TRANSISTOR	2N3055
Z1	DIODE BRIDGE NETWORK	NW10005

AMC-21B
MAIN CHASSIS, FRONT AND REAR PANELS

REF DESIGNATION	DESCRIPTION	TMC PART NUMBER
A1	VOLTAGE REGULATOR	A10746-6
A2	PREAMPLIFIER: 50 ohms	A10735-6
A2	PREAMPLIFIER: 75 ohms	A10735-5
A3	OUTPUT MODULE: 50 ohms	A10686-7
A3	OUTPUT MODULE: 75 ohms	A10686-8
A4	LIGHTNING PROTECTION CIRCUIT	A10859
C1	CAPACITOR: Electrolytic, 6800 uF	CE71682G
C1A, C1B*	CAPACITOR: fxd, mica, 22 pF ±10%, 500W Vdc	CM111C220K5S
C2	CAPACITOR: flat, foil, 0.1 uF ±20%, 250W Vdc	CC10011-8
C3	Not used	
C4, C6	CAPACITOR: flat, foil, 0.22 uF ±20%, 250W Vdc	CC10011-10
DS1	INDICATOR: Neon	B1100-51
F1, F2	FUSE: cart, slo-b1b, 230 Vac (AMC-21B-4 & -8)	FU102-.250
F1, F2	FUSE: cart, slo-b1o, 230 Vac (models -12 & -16)	FU102-.400
F1, F2	FUSE: cart, slo-b1o, 115 Vac (models -4 & -8)	FU102-.500
F1, F2	FUSE: cart, slo-b1o, 115 Vac (models -12 & -16)	FU102-.750
FL1	AC LINE FILTER	FX10024
J1	CONNECTOR: RF	UG625-B/U
J2	CONNECTOR: box, receptable	MS3102R-14S-7P

REF DESIGNATION	DESCRIPTION	TMC PART NUMBER
J3 to J10	CONNECTOR: receptable, female	JJ285-6
Q1	TRANSISTOR	2N3055
R1, R2	RESISTOR: Fxd, comp 12 ohms ±5%, ½W	RC20GF120J
S1	SWITCH: wafer	SW10045-W
S2	SWITCH: toggle	ST22K
T1	TRANSFORMER: power	TF10043
Z1	DIODE BRIDGE NETWORK	NW10005
	<u>OPTIONAL FILTERS:</u>	
	BROADCAST BAND STOP FILTER	FX10020
	HIGH PASS FILTER	FX10021
	LOW PASS FILTER	FX10022

*C1B used only with 50 ohm models.

AMC-22
MAIN CHASSIS, FRONT AND REAR PANELS

REF. DESIGNATION	DESCRIPTION	TMC PART NUMBER
A1	VOLTAGE REGULATOR	A10746-5
A2	PREAMPLIFIER: 75 ohms	A10735-5
A2	PREAMPLIFIER: 50 ohms	A10735-6
A3	OUTPUT MODULE: 8 outputs, 75 ohms	A10714-5
A3	OUTPUT MODULE: 8 outputs, 50 ohms	A10714-6
C1	CAPACITOR: Electrolytic, 2200 UF	CE44C222G
DS1	LAMP: Neon	BI100-51
F1, F2	FUSE: Slo-blo, 0.5 amp (115 Vac operation only)	FU102-.5
F1, F2	FUSE: Slo-blo, 0.25 amp (230 Vac operation only)	FU102-.25
FL1, FL2	FILTER: RF, line	FI1001
J1 to J9	CONNECTOR: BNC, receptable	UG625 B/U
J10	CONNECTOR: Receptable, male	MS3102A-14S-7P
Q1	TRANSISTOR:	2N3055
S1	SWITCH: Toggle	ST22K
T1	TRANSFORMER: Power	TF10060
TB1	TERMINAL BOARD	TM102-2
Z1	DIODE BRIDGE NETWORK	NW10005
W1	CABLE: RF	CA10530 or CA10662
* OPTIONAL FILTERS		
A4	BROADCAST BAND STOP FILTER	FX10020
A4	HIGH PASS FILTER	FX10021
A4	LOW PASS FILTER	FX10022

* One of them is fitted as a standard item

AMC-23
MAIN CHASSIS, FRONT AND REAR PANELS

REF. DESIGNATION	DESCRIPTION	TMC PART NUMBER
A1	VOLTAGE REGULATOR	A10746-5
A2	PREAMPLIFIER: 75 ohms	A10735-5
A2	PREAMPLIFIER: 50 ohms	A10735-6
A3	OUTPUT MODULE: 8 outputs, 75 ohms	A10714-5
A3	OUTPUT MODUEL: 8 outputs, 50 ohms,	A10714-6
A5	LIGHTNING PROTECTION BOARD	A10859
C1	CAPACITOR: Electrolytic, 2200 UF	CE44C2229
DS1	LAMP: Neon	BI100-51
F1	FUSE: Slo-blo, 0.5 amp (115 Vac operation only)	FU102-.5
F1	FUSE: Slo-blo, 0.25 amp (230 Vac operation only)	FU102-.25
J1 to J9	CONNECTOR: BNC, receptable	UG625B/U
S1	SWITCH: Toggle	ST22K
T1	TRANSFORMER: Power	TF10043
Q1	TRANSISTOR	2N3055
Z1	DIODE BRIDGE NETWORK	NW10005
* <u>OPTIONAL FILTERS</u>		
A4	BROADCAST BAND STOP FILTER	FX10020
A4	LOW PASS FILTER	FX10022
A4	HIGH PASS FILTER	FX10021

* One of them is fitted as a standard item.

AMC-32
MAIN CHASSIS, FRONT & REAR PANEL

REF. DESIGNATION	DESCRIPTION	TMC PART NUMBER
A1	VOLTAGE REGULATOR	A10746-5
A2	PREAMPLIFIER, 50 ohms	A10735-8
A2	PREAMPLIFIER, 75 ohms	A10735-7
A3 to A6	OUTPUT MODULE: 8 output, 50 ohms	A10714-6
A3 to A6	OUTPUT MODULE: 8 output, 75 ohms	A10714-5
C1	CAPACITOR: Electrolytic, 6800 uF	CE71C682G
DS1	LAMP: Neon	BI100-51
F1, F2	FUSE: slo-blo, 1.0 amp (115 Vac operation only)	FU102-1
F1, F2	FUSE: slo-blo, 0.5 amp (230 Vac operation only)	FU102-.5
FL1, FL2	FILTER: RF, line	FI10001
J1	CONNECTOR: RF female receptable	JJ172
J2 to J33	CONNECTOR: BNC, female receptable	UG625 B/U
J34	CONNECTOR: male receptable	MS3102A-14S-7P
R1, R2	RESISTOR: fixed, composition, 11 ohms $\frac{1}{2}$ W, 5%	RC20GF110J
S1	SWITCH: toggle	ST22K
T1	TRANSFORMER: power	TF10061
Q1	TRANSISTOR	2N3055
Z1	DIODE BRIDGE NETWORK	NW10007

LMC-8
MAIN CHASSIS, FRONT AND REAR PANELS

REF. DESIGNATION	DESCRIPTION	TMC PART NUMBER
A1	VOLTAGE REGULATOR	A10746-5
A2	PREAMPLIFIER, 75 ohms	A10812-5
A2	PREAMPLIFIER, 50 ohms	A10812-6
A3	OUTPUT MODULE: 8 outputs, 75 ohms	A10791-5
A3	OUTPUT MODULE: 8 outputs, 50 ohms	A10791-6
A4	FILTER: Low Pass	FX10022
C1	CAPACITOR: Electrolytic, 2200 uF	CE44C222G
DS1	LAMP: Neon	BI100-51
F1, F2	FUSE: slo-blo 0.5 amp (115 Vac operation only)	FU102-.5
F1, F2	FUSE: slo-blo 0.25 amp (230 Vac operation only)	FU102-.25
FL1, FL2	FILTER: RF, line	FI10001
J1 to J9	CONNECTOR: BNC, receptable	UG625B/U
J10	CONNECTOR: Receptable, male	MS3102A-14S-7P
Q1	TRANSISTOR	2N3055
S1	SWITCH: toggle	ST22K
T1	TRANSFORMER: Power	TF10060
TB1	TERMINAL BOARD	TM102-2
W1	CABLE: RF	CA10530 or CA10662
Z1	DIODE: BRIDGE NETWORK	NW10005

LMC-32
MAIN CHASSIS, FRON & REAR PANELS

REF. DESIGNATION	DESCRIPTION	TMC PART NUMBER
A1	VOLTAGE REGULATOR:	A10746-6
A2	PREAMPLIFIER, 75 ohms	A10812-5
A2	PREAMPLIFIER, 50 ohms	A10812-6
A3 to A6	OUTPUT MODULE: 8 outputs, 75 ohms	A10791-5
A3 to A6	OUTPUT MODULE: 8 outputs, 50 ohms	A10791-6
C1	CAPACITOR: Electrolytic, 6800 uF	CE71C682G
C2	CAPACITOR: Electrolytic, 500 uF	CE10007
DS1, DS2	LAMP: Neon	BI100-51
F1, F2	FUSE: Slo-blo, 1.0 amp (115 Vac operation only)	FU102-1
F1, F2	FUSE: Slo-blo, 0.5 amp (230 Vac operation only)	FU102-.5
FL1, FL2	FILTER: RF, line	FI10001
J1	CONNECTOR: RF, female receptable	JJ172
J2 to J33	CONNECTOR: BNC, female receptable	UG625 B/U
J34	CONNECTOR: male receptable	MS3102A-14S-7P
L1	INDUCTOR: RF, coil, 16 uH	CL1004-7
S1	SWITCH: toggle	ST22K
T1	TRANSFORMER: Power	TF10061
Q1	TRANSISTOR	2N3055
Z1	DIODE BRIDGE NETWORK	NW10007

A1, REGULATOR ASSEMBLY
A10746-5 and -6

REF. DESIGNATION	DESCRIPTION	TMC PART NUMBER
C1, C6	CAPACITOR: Fixed, ceramic, 0.1 uF	CC10015-X5V104M
C2	CAPACITOR: Fixed, tantalum, 6.8 uF	CSR13G685ML
C3, C5	CAPACITOR: Fixed, tantalum, 0.47 uF	CSR13G474ML
C4	CAPACITOR: Fixed, ceramic, 0.01 uF	CC10017-X5V103M
CR1	DIODE: Zener	IN758
CR2, CR3*	DIODE	IN914B
R1	RESISTOR: Fixed, composition, 47K, $\frac{1}{2}$ W, 5%	RC20GF473J
R2	RESISTOR: Fixed, composition, 68K, $\frac{1}{2}$ W, 5%	RC20GF683J
R3	RESISTOR: Fixed, composition, 15 ohms, $\frac{1}{2}$ W, 5%	RC20GF150J
R4	RESISTOR: Fixed, composition, 560 ohms, $\frac{1}{2}$ W, 5%	RC20GF561J
R5	RESISTOR: Fixed, composition, 1.2K, $\frac{1}{2}$ W, 5%	RC20GF122J
R6	RESISTOR: Fixed, composition, 2.9K, $\frac{1}{2}$ W, 5%	RC20GF392J
R7	RESISTOR: Variable, composition, 1K, linear curve, $\frac{1}{4}$ W	RV111U102A
R8	RESISTOR: Fixed, composition, $\frac{1}{2}$ W, 6.8K, 5%	RC20GF682J
Q1	TRANSISTOR: NPN, silicon	TX10001
Q2	TRANSISTOR: PNP, silicon	2N5086

*CR3 used only with A10746-6

PREAMPLIFIER ASSEMBLY
A10735-5, A10735-6, -7 and -8

REF. DESIGNATION	DESCRIPTION	TMC PART NUMBER
C1, C6, C7	CAPACITOR: Fixed, ceramic 0.1 uF	CC10015-X5V104M
C2	CAPACITOR: Fixed, mica 47 pF, 2% (used only in A10735-5 and -7)	CM104ED470G03
C3, C4, C5, C8, C9	CAPACITOR: Fixed, ceramic .01 uF	CC10017-X5V103M
CR1	DIODE	1N914B
* R1	RESISTOR: Fixed, film 910 ohms, $\frac{1}{2}$ W, 2% (A10735-5)	RL07S911G
R1	RESISTOR: Fixed, film, 510 ohms $\frac{1}{2}$ W, 2% (A10735-6)	RL07S511G
R2	RESISTOR: Fixed, film 8.2 K, $\frac{1}{2}$ W, 2%	RL07S822G
R3	RESISTOR: Fixed, film 3K, $\frac{1}{2}$ W, 2%	RL07S302G
R4	RESISTOR: Fixed, comp, 330 ohms, $\frac{1}{2}$ W, 5%	RC20GF331J
R5, R7	RESISTOR: Fixed, film 2K, $\frac{1}{2}$ W, 2%	RL07S202G
R6	RESISTOR: Variable, 500 ohms	RV10009-501AP
R8, R9	RESISTOR: Fixed, comp, 7.5 ohms, $\frac{1}{2}$ W, 5%	RC07GF7R5J
L1	INDUCTOR: RF coil, 33 uH	CL275-330
L2	INDUCTOR: RF coil, 0.33 uH (used only in A10735-5 and -7)	CL10044
L3, L4, L5	INDUCTOR: RF coil, 220 uH	CL275-221
T1	TRANSFORMER: RF	TR10005
Q1, Q2	TRANSISTOR	2N5160
Q3	TRANSISTOR	2N3866

*THE value of R1 for -7 is 1 Kohms and for -8 is 680 ohms

PREAMPLIFIER ASSEMBLY
A10812-5 and -6

REF. DESIGNATION	DESCRIPTION	TMC PART NUMBER
C1, C2, C4, C6, C10, C12, C13	CAPACITOR: Fixed, ceramic, 2.2 uF	CC10018
C3, C7, C8	CAPACITOR: Fixed, ceramic, 0.1 uF	CC10020
C5, C14	CAPACITOR: Fixed, tantalum, 68 uF	CE10009
C9	CAPACITOR: Fixed, ceramic, 0.47 uF	CC10021
C11	CAPACITOR: Fixed, mica, 5pF	CM04ED050J03
CR1, CR2	DIODE	1N914B
R1 [*]	RESISTOR: Fixed, deposited film high stability, 61.9 ohms, $\frac{1}{2}$ W, 1%	RN65D61R9F
R2	RESISTOR: Fixed, film, 1K, $\frac{1}{2}$ W, 2%	RL07S102G
R3	RESISTOR: Fixed, film, 51 ohms, $\frac{1}{2}$ W, 2%	RL07S510G
R4	RESISTOR: Fixed, film, 68 ohms, $\frac{1}{2}$ W, 2%	RL07S680G
R5	RESISTOR: Fixed, film, 560 ohms, $\frac{1}{2}$ W, 2%	RL07S561G
R6	RESISTOR: Fixed, film, 270 ohms, $\frac{1}{2}$ W, 2%	RL07S271G
R7	RESISTOR: Fixed, film 7.5 K, $\frac{1}{2}$ W, 2%	RL07S752G
R8	RESISTOR: Fixed, film, 180 ohms, $\frac{1}{2}$ W, 2%	RL07S181G
R9, R10	RESISTOR: Fixed, film, 10 ohms, $\frac{1}{2}$ W, 2%	RL07S100G
L1	INDUCTOR: RF, coil, 220 uH	CL275-221
Q1, Q3	TRANSISTOR	2N3866
Q2	TRANSISTOR	2N5160

TWO OUTPUT MODULE
AX10055/AX10056

REF. DESIGNATION	DESCRIPTION	TMC PART NUMBER
C1, C5, C6	CAPACITOR, FLAT, FOIL: 0.1 uF, 250 vdc	CC10011-8
C3, C4	CAPACITOR, FLAT, FOIL: .047 uF, 250 vdc	CC10011-5
J1, J2	CONNECTOR, RF	UG625-B/U
L1, L3, L4	INDUCTOR, RF COIL: 220 uH, 500 vdc	CL275-221
Q3, Q4	TRANSISTOR	2N3866
R4, R5	RESISTOR, FIXED, COMPOSITION: 100 ohms, 5%, 1/2W	RC07GF101J
R6, R8	RESISTOR, FIXED, COMPOSITION: 4.7 K, 5%, 1/2W	RC07GF472J
R7, R9	RESISTOR, FIXED, COMPOSITION: 3.3 K, 5%, 1/2W	RC07GF332J
R10, R11	RESISTOR, FIXED, BERLM. OXIDE: 220 ohms, 5%, 1 W	RR10004-221-3R0
R12, R13	RESISTOR, FIXED, COMPOSITION: 47 ohms, 5%, 1/2W (AX10055 only)	RC07GF470J
R12, R13	RESISTOR, FIXED, COMPOSITION: 68 ohms, ±5%, 1/2W, (AX10056 only)	RC07GF680J

8 OUTPUT ASSEMBLY
A10714 - 5 and -6

REF. DESIGNATION	DESCRIPTION	TMC PART NUMBER
C1, C2, C12, C13, C22, C23, C32, C33, C42, C43, C52, C53, C62, C63, C72, C73, C82, C83	CAPACITOR: Fixed, mica 0.1 uF	CC10015-X5V104M
C11, C21, C31, C41, C51, C61, C71, C81	CAPACITOR: Fixed, mica, 0.01 uF	CC10017-X5V103M
L11, L21, L31, L41, L51, L61, L71, L81	INDUCTOR: RF coil, 33 uH	CL275-330
L12, L22, L32, L42, L52, L62, L72, L82	INDUCTOR: RF coil, 220 uH	CL275-221
R11, R21, R31, R41, R51, R61, R71, R81	RESISTOR: Fixed, composition 100 ohms, $\frac{1}{4}$ W, 5%	RC07GF101J
R12, R22, R32, R42, R52, R62, R72, R82	RESISTOR: Fixed, composition 4.3 K, $\frac{1}{4}$ W, 5%	RC07GF432J
R13, R23, R33, R43, R53, R63, R73, R83	RESISTOR: Fixed, composition 3.3 K, $\frac{1}{4}$ W, 5%	RC07GF332J
R14, R24, R34, R44, R54, R64, R74, R84	RESISTOR: Fixed, composition 220 ohms, 1W, 5%	RC32GF221J
*R15, R25, R35, R45, R55, R65, R75, R85	RESISTOR: Fixed, film 71.5 ohms, $\frac{1}{4}$ W, 1%	RNG0D71R5F
Q11, Q21, Q31, Q41, Q51, Q61, Q71, Q81	TRANSISTOR	2N3866

*The value of R15 and R85 for -6 is 51.3 ohms

8 OUTPUT ASSEMBLY
A10791-5 and -6

REF. DESIGNATION	DESCRIPTION	TMC PART NUMBER
C1, C2, C12, C13, C22, C23, C32, C33, C42, C43, C52, C53, C62, C63, C72, C73, C82, C83	CAPACITOR: Fixed, mica 2.2 uF	CC10018
C11, C21, 31, C41, C51, C61, C71, C81	CAPACITOR: Fixed, mica 0.22 uF	CC10019
L11, L21, L31, L41, L51, L61, L71, L81	INDUCTOR: RF coil, 220 uH	CL275-221
L12, L22, L32, L42, L52, L62, L72, L82	INDUCTOR: RF coil, 2200 uH	CL275-222
R11, R21, R31, R41, R51, R61, R71, R81	RESISTOR: Fixed, composition, 100 ohms, $\frac{1}{4}$ W, 5%	RC07GF101J
R12, R22, R32, R42, R52, R62, R72, R82	RESISTOR: Fixed, composition, 4.3 K, $\frac{1}{4}$ W, 5%	RC07GF432J
R13, R23, R33, R43, R53, R63, R73, R83	RESISTOR: Fixed, composition, 3.3 K, $\frac{1}{4}$ W, 5%	RC07GF332J
R14, R24, R34, R44, R54, R64, R74, R84	RESISTOR: Fixed, composition, 180 ohms, 1W, 5%	RC32GF181J
* R15, R25, R35, R45, R55, R65, R75, R85	RESISTOR: Fixed, film, 71.5 ohms, $\frac{1}{4}$ W, 1%	RN6D71R5F
Q11, Q21, Q31, Q41, Q51, Q61, Q71, Q81	TRANSISTOR	2N3866

*The value of R15 and R85 for -6 is 52.3 ohms

BANDPASS FILTER (FX10018) ASSEMBLY

REF. DESIGNATION	DESCRIPTION	TMC PART NUMBER
C1, C3, C9, C10, C13	CAPACITOR: Variable, air 1-14 pF	CT10001
C2, C6	CAPACITOR: Fixed, mica 56 pF, 1%	CM04ED560F03
C4, C8	CAPACITOR: Fixed, mica 5 pF	CM04CD050D03
C5	CAPACITOR: Fixed, mica 820 pF, 1%	CM06FD821F03
C7	CAPACITOR: Fixed, mica 91 pF, 2%	CM04FD910G03
C11	CAPACITOR: Fixed, mica 27 pF, 2%	CM04ED270G03
C12	CAPACITOR: Fixed, mica 1300 pF, 1%	CM06FD132F03
C14	CAPACITOR: Fixed, mica 43 pF, 2%	CM04ED430G03
DS1	LAMP: Neon glow	B110005
J1, J2	CONNECTOR: BNC, receptable	UG290A/U
L1	INDUCTOR: RF coil 5.61 uH	CL10042-2
L2	INDUCTOR: RF coil .448 uH	CL10043-1
L3	INDUCTOR: RF coil 29.2 uH	CL10042-5
L4	INDUCTOR: RF coil 2.58 uH	CL10042-1
L5	INDUCTOR: RF coil .306 uH	CL10043-2
L6	INDUCTOR: RF coil 9.52 uH	CL10042-4
L7	INDUCTOR: RF coil 7.5 uH	CL10042-3

*For FX10034 see the vlue of components on figure 5-16

FILTER ASSY, BROADCAST BANDSTOP
FX10020

REF. DESIGNATION	DESCRIPTION	TMC PART NUMBER
C1, C5	CAPACITOR: fixed, mica, 2000 pF	CM06FD202F03
C3	CAPACITOR: fixed, mica, 6200 pF	CM07FD622F03
C4	CAPACITOR: fixed, mica, 22 pF	CM04ED220J03
L1, L3	INDUCTOR: RF coil, 122.2 uH	CL10039-1
L2	INDUCTOR: RF coil, 4.65 uH	CL10039-2

FILTER ASSY. HIGH PASS
FX10021

REF. DESIGNATION	DESCRIPTION	TMC PART NUMBER
C1, C9	CAPACITOR: fixed, mica, 1300 pF	CM06FD132F03
C2	CAPACITOR: fixed, mica, 1000 pF	CM06FD102F03
C3	CAPACITOR: fixed, mica, 10 pF	CM07FD103F03
C4	CAPACITOR: fixed, mica, 39pF	CM04ED390G03
C5	CAPACITOR: fixed, mica, 750 pF	CM06FD751F03
C6	CAPACITOR: fixed, mica, 27 uF	CM08FD273F03
C7	CAPACITOR: fixed, mica, 47 pF	CM04ED470G03
C8	CAPACITOR: fixed, mica, 910 pF	CM06FD911F03
L1	INDUCTOR: RF coil, 10.4 uH	CL10040-1
L2	INDUCTOR: RF coil, 4.0 uH	CL10040-2
L3	INDUCTOR: RF coil, 3.8 uH	CL10040-3
L4	INDUCTOR: RF coil, 12.1 uH	CL10040-6

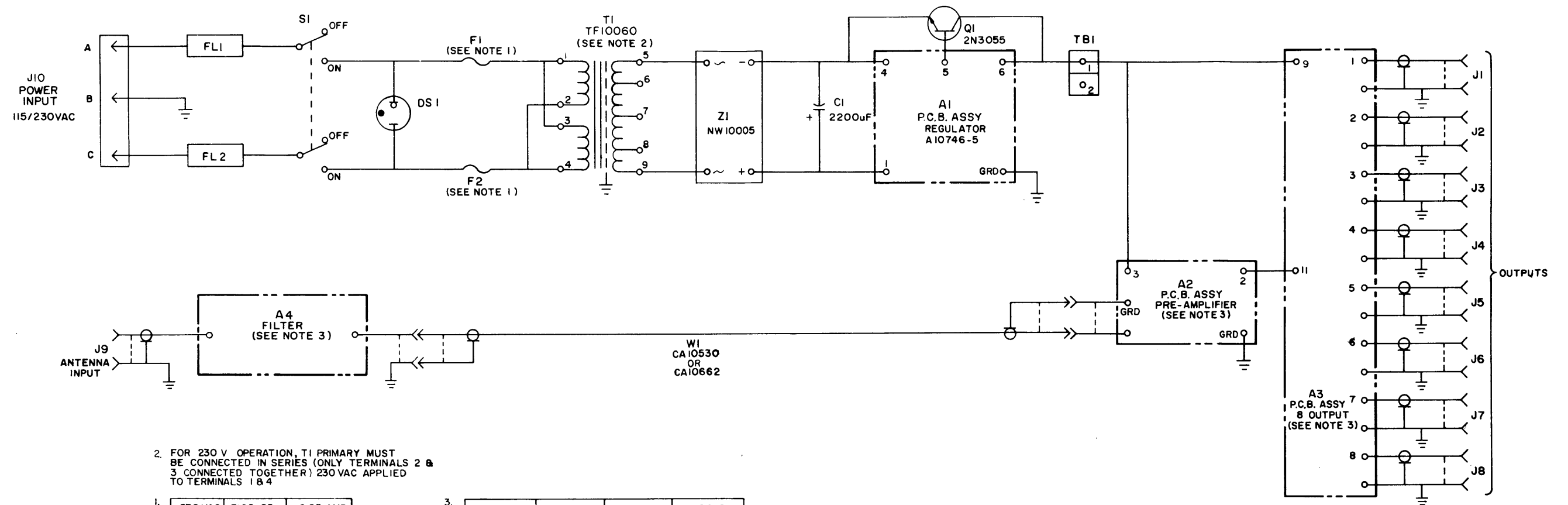
FILTER ASSY. LOWPASS
FX10022

REF. DESIGNATION	DESCRIPTION	TMC PART NUMBER
C2, C11	CAPACITOR: fixed, mica, 1300 pF	CM06FD132F03
C3, C12	CAPACITOR: fixed, mica, 120 pF	CM04FD121F03
C4, C9	CAPACITOR: fixed, mica, 1000 pF	CM06FD102F03
C5, C10	CAPACITOR: fixed, mica, 750 pF	CM06FD751F03
C6	CAPACITOR: fixed, mica, 510 pF	CM06FD511J03
C7	CAPACITOR: fixed, mica, 2000 pF	CM06FD202F03
C8	CAPACITOR: fixed, mica, 390 pF	CM05FD391J03
L1, L4	INDUCTOR: RF coil, 2.6 uH	CL10040-4
L2, L3	INDUCTOR: RF coil, 7.2 uH	CL10040-5

AC LINE FILTER
FX10024

REF. DESIGNATION	DESCRIPTION	TMC PART NUMBER
C1, C2	CAPACITOR: FIXED, MYLAR: 0.2 uF, 600 WVdc	CN10007
L1, L2	COIL, RF, ENCAPSULATED: 8.2 uH	CL10028

SECTION 5
SCHEMATICS



2. FOR 230 V OPERATION, T1 PRIMARY MUST BE CONNECTED IN SERIES (ONLY TERMINALS 2 & 3 CONNECTED TOGETHER) 230 VAC APPLIED TO TERMINALS 1 & 4

1.

230 VAC	F102-25	0.25 AMP
115 VAC	F102-50	0.50 AMP
POWER INPUT	F1/F2 P/N	F1/F2 RATING

3.

AMC 8, 75Ω	A10735-5	A10714-5	Fx10018-1
AMC 8, 50Ω	A10735-6	A10714-6	Fx10034
UNIT	A2 P/N	A3 P/N	A4 P/N

NOTES

**SCHEMATIC DIAGRAM
AMC 8
FIG. 5-1**

NOTES:

1. FILTERS ARE OPTIONAL.
2. SI FILTER SELECT
 OUT - FILTERS OUT
 POS 1 - B/C REJECT
 POS 2 - < 2MHz REJECT
 POS 3 - > 2MHz REJECT
3. UNLESS OTHERWISE SPECIFIED
 ALL RESISTANCES IN OHMS, 1/2 WATT
 ALL CAPACITANCES IN μF
 ALL INDUCTANCES IN μH
4. CIB USED WITH 50 Ω Z ONLY

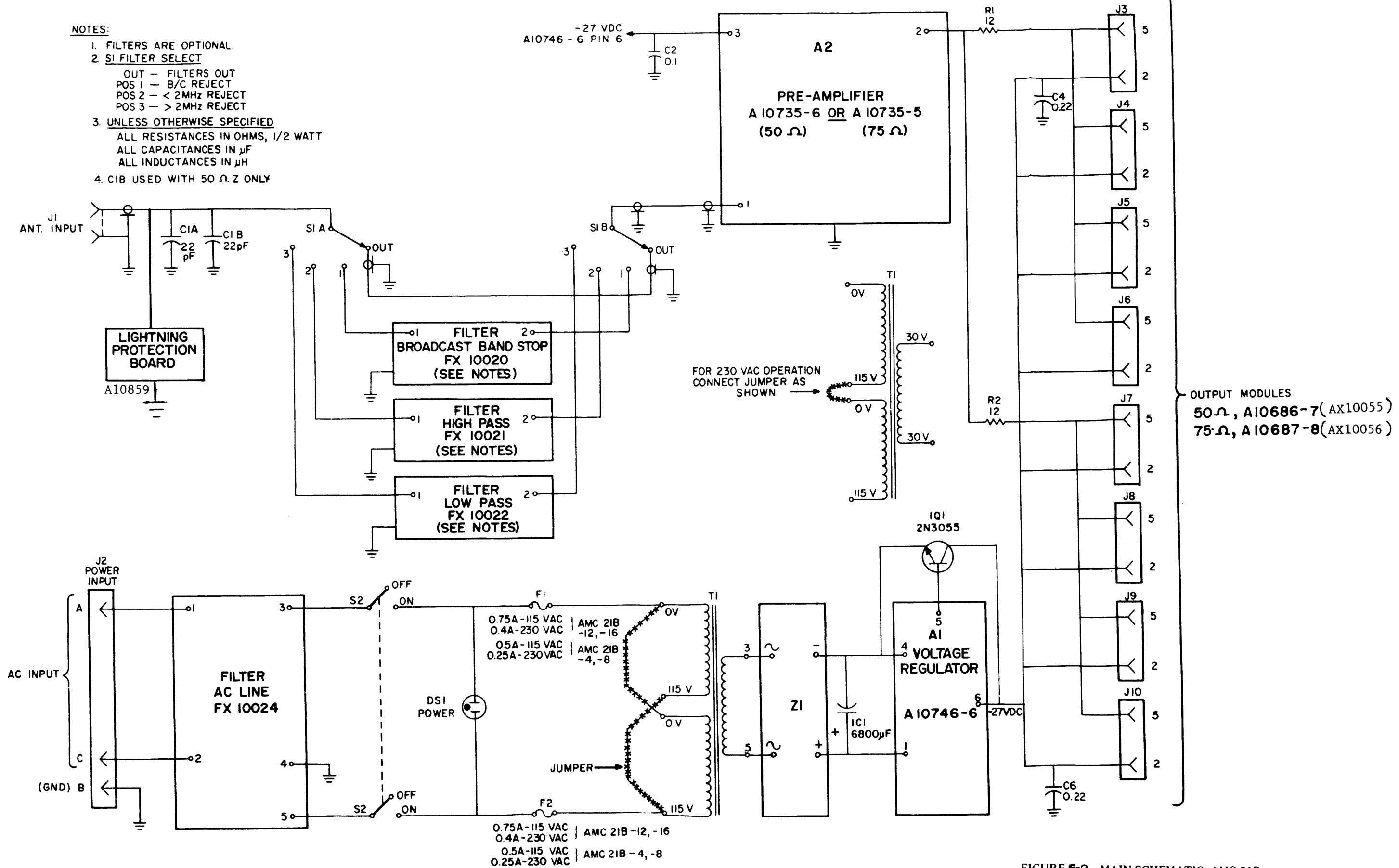
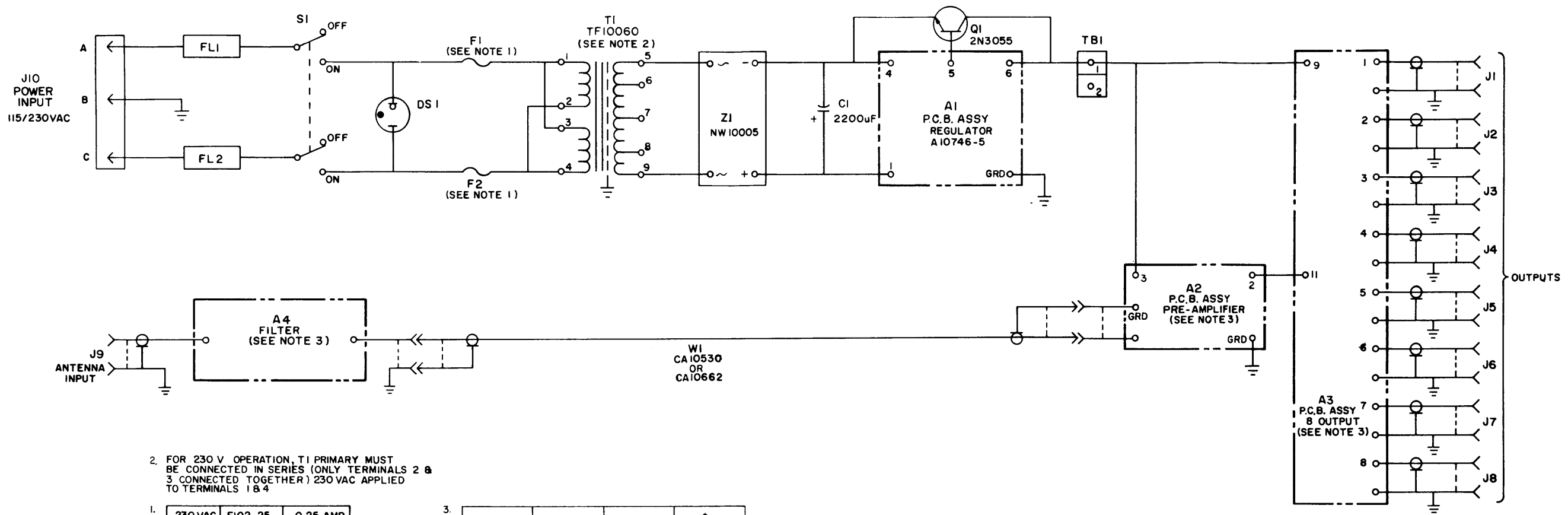


FIGURE 5-2- MAIN SCHEMATIC, AMC-21B



2. FOR 230 V OPERATION, T1 PRIMARY MUST BE CONNECTED IN SERIES (ONLY TERMINALS 2 & 3 CONNECTED TOGETHER) 230 VAC APPLIED TO TERMINALS 1 & 4

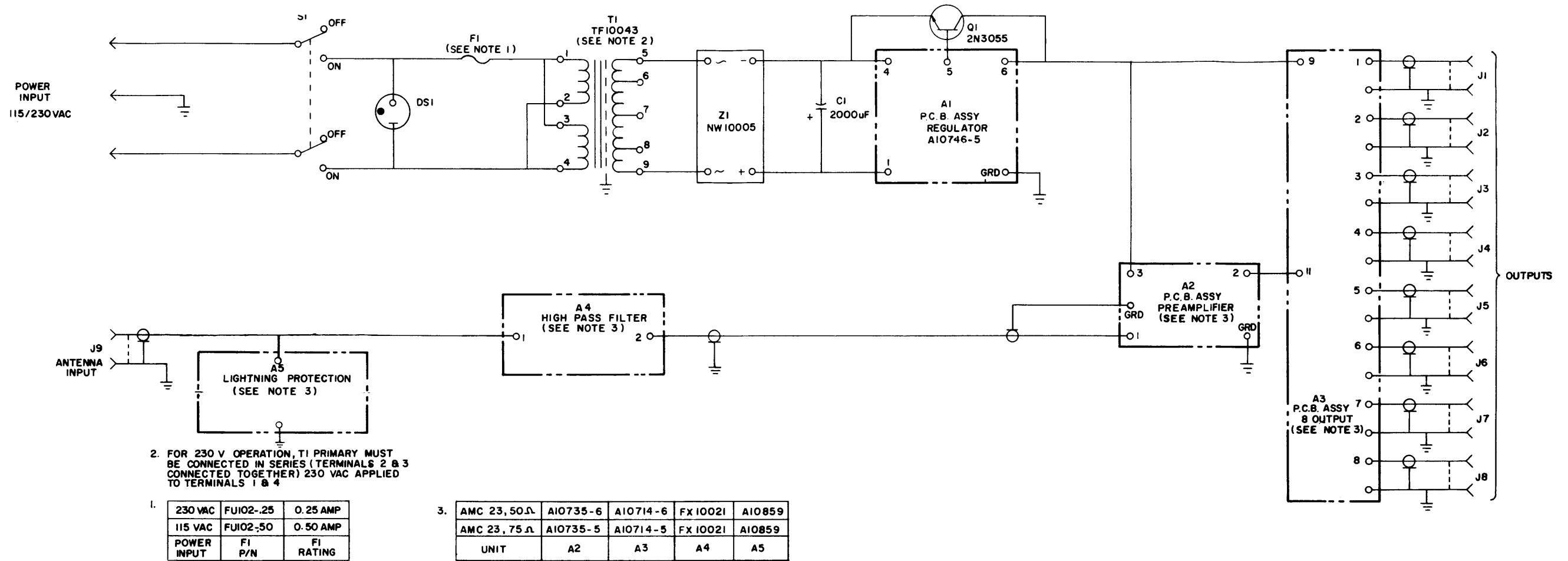
230 VAC	F102-25	0.25 AMP
115 VAC	F102-50	0.50 AMP
POWER INPUT	F1/F2 P/N	F1/F2 RATING

AMC 22 75-1	A10735-5	A10714-5	*
AMC 22 50-1	A10735-6	A10714-6	*
UNIT	A2	A3	A4

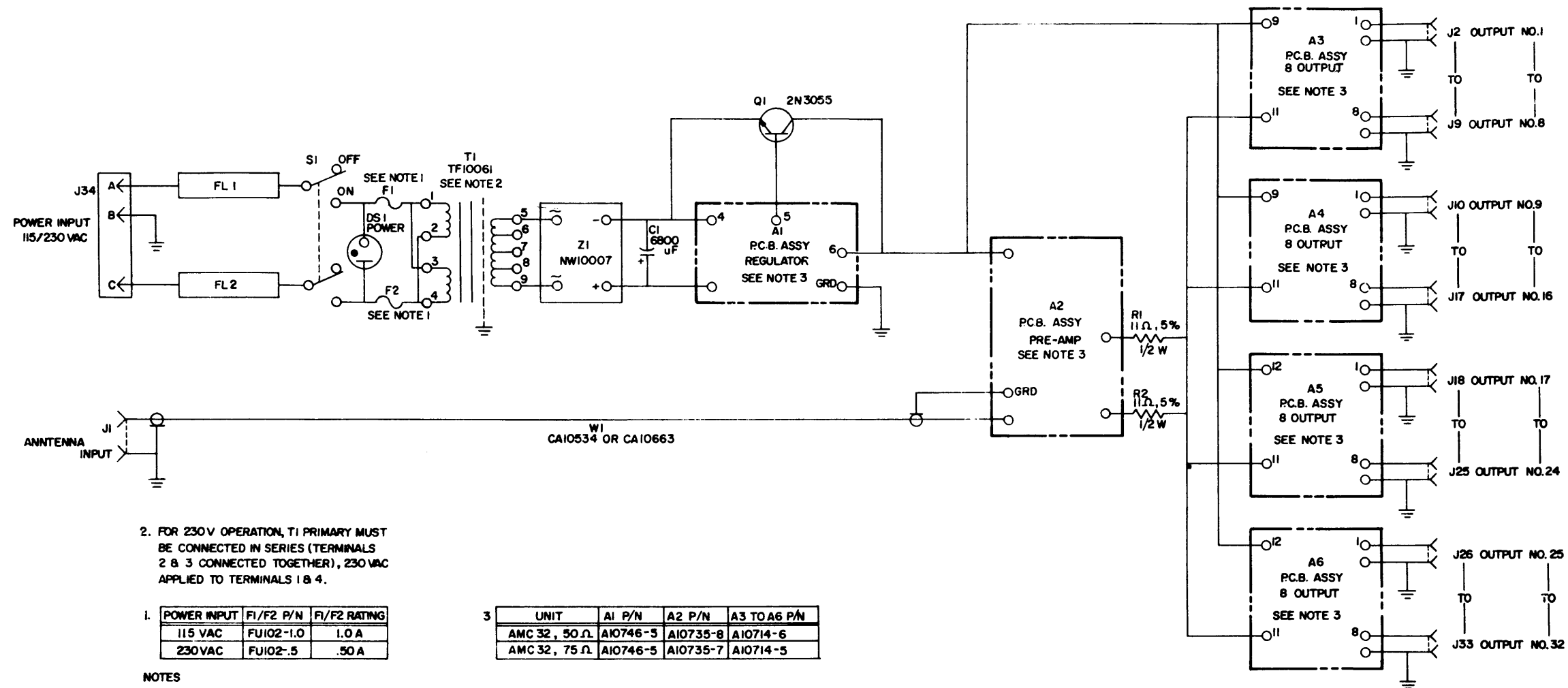
NOTES

* One of the following filters is fitted as standard:
 FX10020
 FX10021
 FX10022

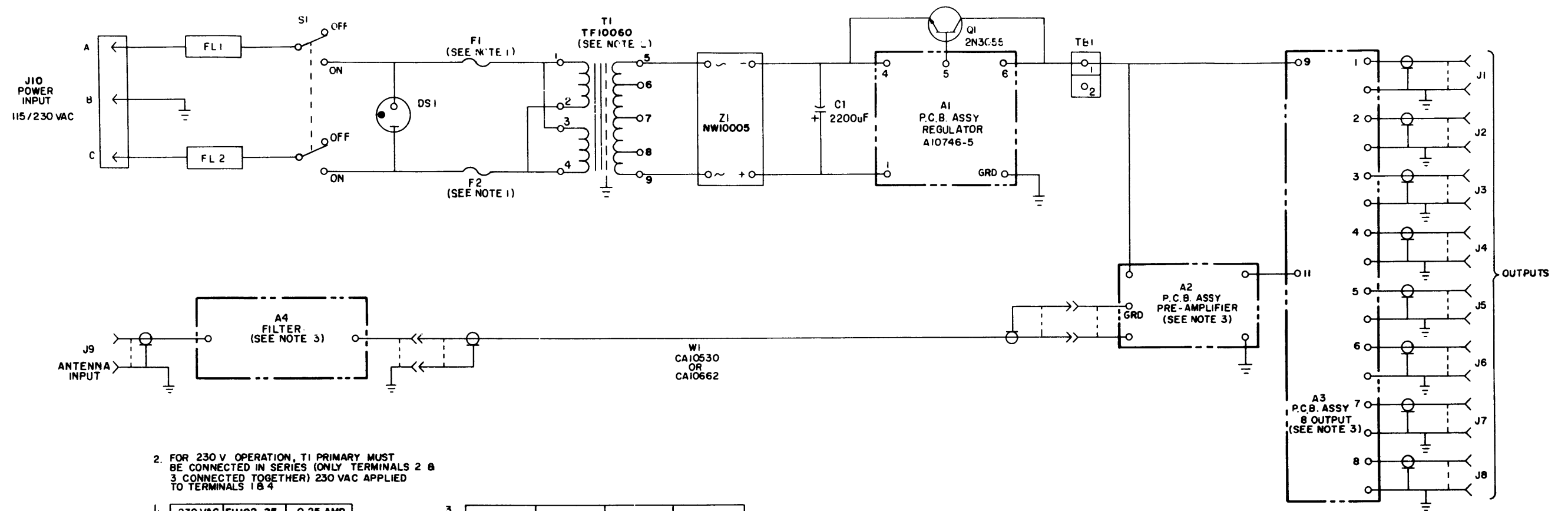
**SCHEMATIC DIAGRAM
 AMC 22
 FIG. 5-3**



**SCHEMATIC DIAGRAM
AMC 23
FIG. 5-4**



**SCHEMATIC DIAGRAM
AMC 32
FIG. 5-5**



2. FOR 230 V OPERATION, T1 PRIMARY MUST BE CONNECTED IN SERIES (ONLY TERMINALS 2 & 3 CONNECTED TOGETHER) 230 VAC APPLIED TO TERMINALS 1 & 4

1.

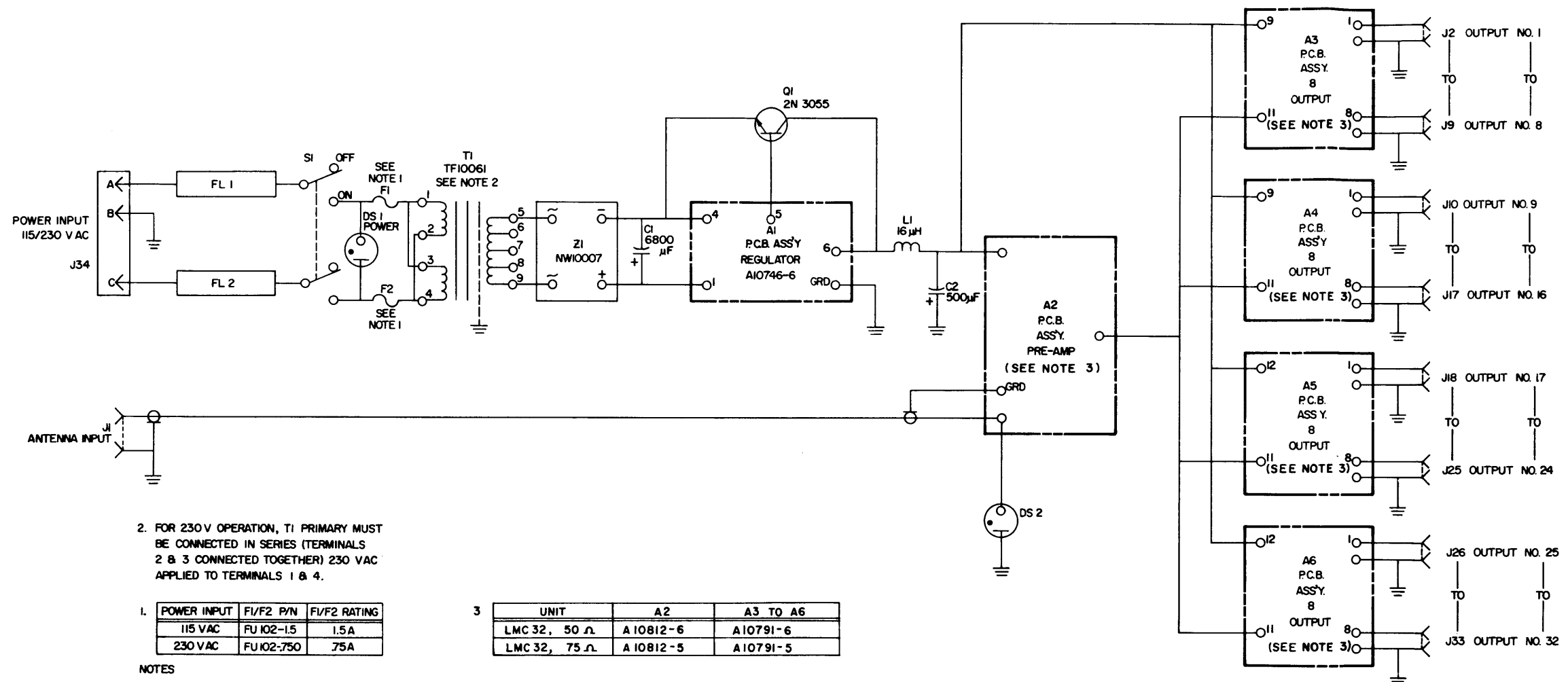
230 VAC	FU102-25	0.25 AMP
115 VAC	FU102-50	0.50 AMP
POWER INPUT	F1/F2 P/N	F1/F2 RATING

NOTES

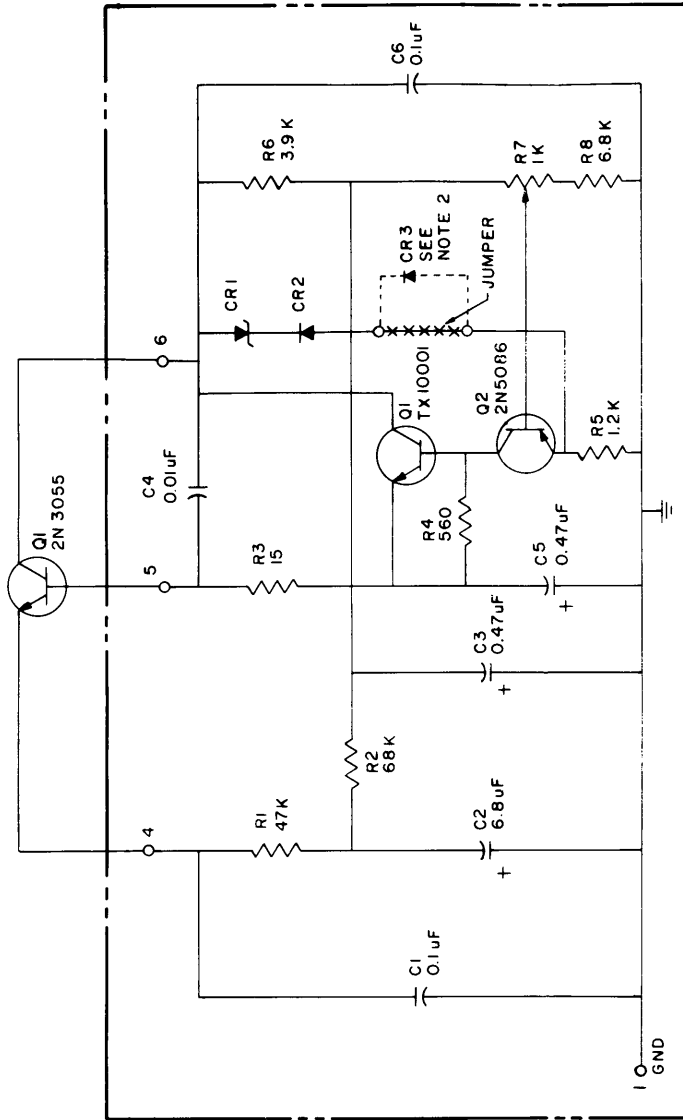
3.

LMC 8, 75 Ω	A10812-5	A10791-5	FX10022
LMC 8, 50 Ω	A10812-6	A10791-6	FX10022
UNIT	A2 P/N	A3 P/N	A4 P/N

**SCHEMATIC DIAGRAM
LMC 8
FIG. 5-6**



**SCHEMATIC DIAGRAM
LMC 32
FIG. 5-7**

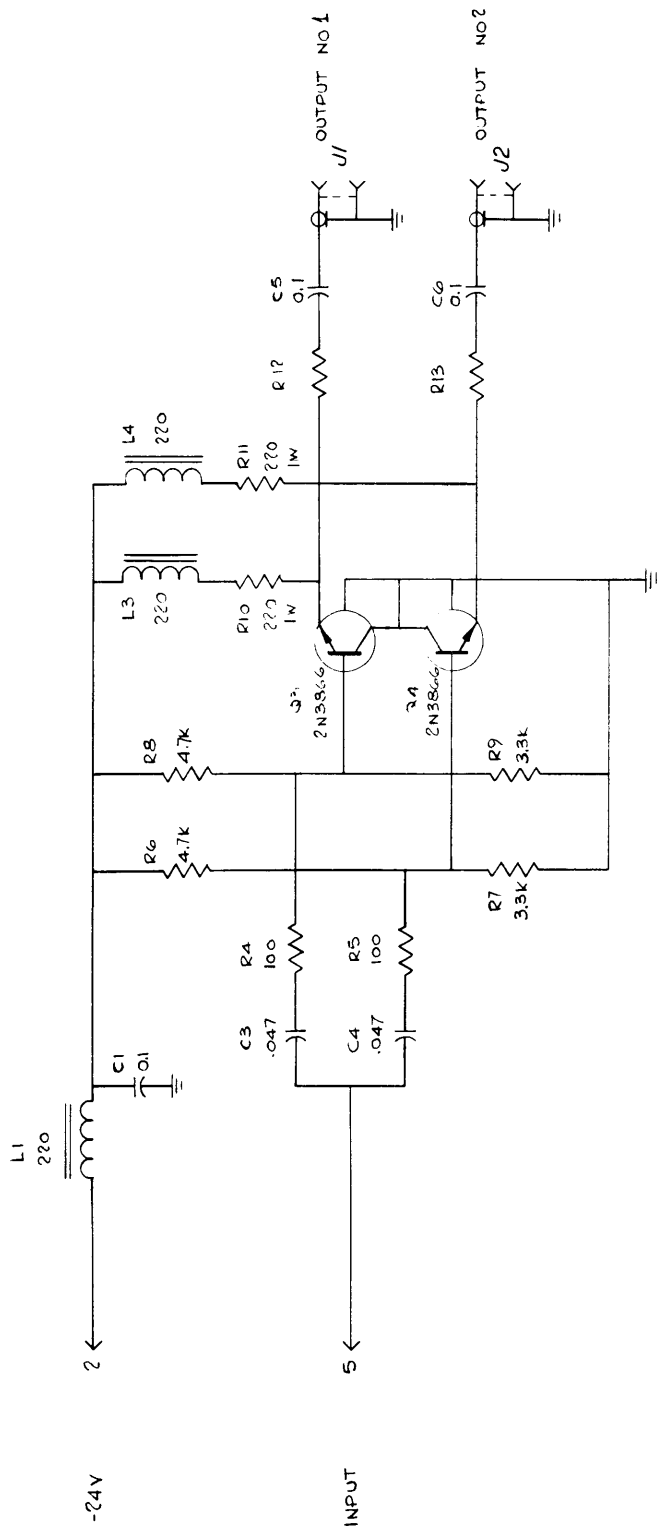


MODEL	CR 1	CR 2	CR 3	ASSY NO.
AMC 8	IN758	IN914B		A10746-5
AMC 21	IN758	IN914B		A10746-5
AMC 22	IN758	IN914B		A10746-5
AMC 23	IN758	IN914B		A10746-5
AMC 32	IN758	IN914B		A10746-5
LMC 8	IN758	IN914B		A10746-5
LMC 32	IN758	IN914B	IN914B	A10746-6
MAC 1		IN914B		A10746-7

1. CAPACITANCE IN MICROFARADS
RESISTANCE IN OHMS .5 WATT
UNLESS OTHERWISE STATED :

NOTES

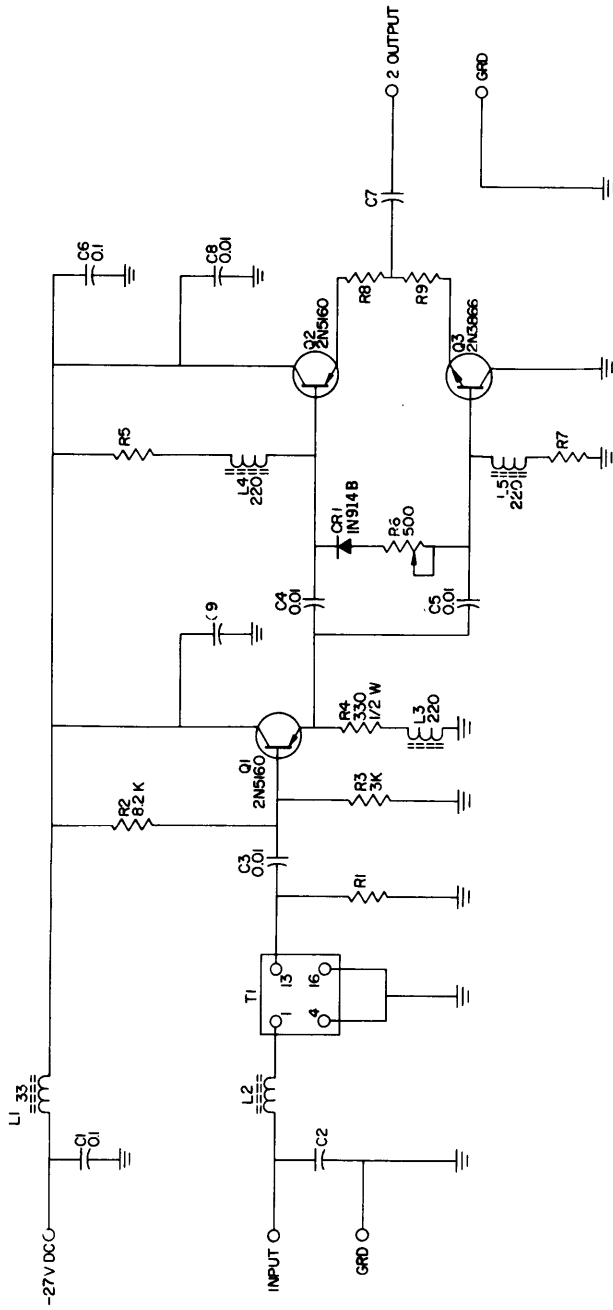
**SCHEMATIC DIAGRAM
REGULATOR
FIG. 5-8**



75 Ω	68 Ω	A10686-8 (AX 10056)
50 Ω	47 Ω	A10686-7 (AX 10055)
IMPEDANCE	R12	R13
ASSEMBLY		

2. UNLESS SPECIFIED OTHERWISE:
 RESISTANCE IN OHMS, 25 WATT
 CAPACITANCE IN μF
 INDUCTANCE IN μH
 NOTES:

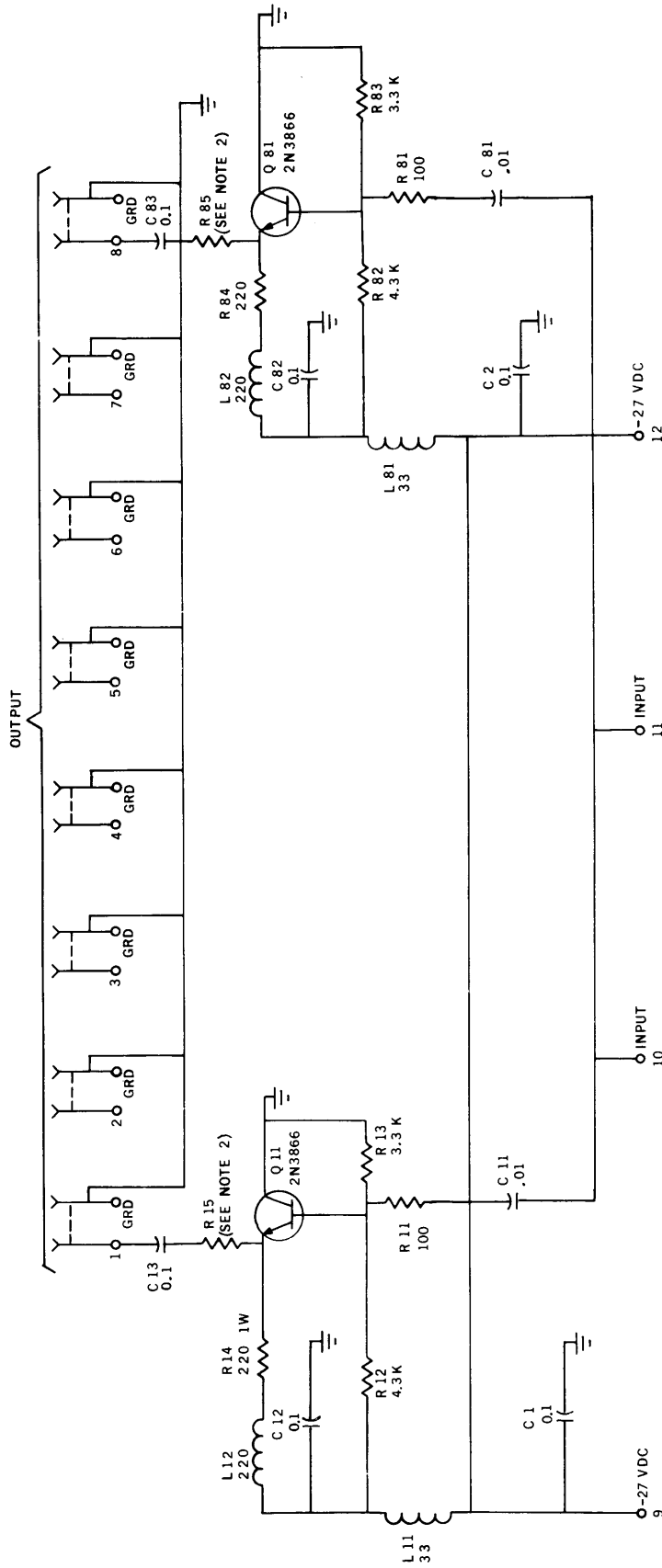
**SCHEMATIC DIAGRAM
 OUTPUT AMPLIFIER
 FIG. 5-11**



MODEL	C2	C7	C9	L2	R1	R5	R7	R8	R9	ASSEMBLY
AMC 8, 75 Ω	47 pF	0.1μF	0.01μF	0.33μH	910Ω	2K	2K	7.5Ω	7.5Ω	A10735-5
AMC 21, 50Ω		0.1μF	0.01μF	510Ω	510Ω	2K	2K	7.5Ω	7.5Ω	A10735-6
AMC 21, 75 Ω	47 pF	0.1μF	0.01μF	0.33μH	910Ω	2K	2K	7.5Ω	7.5Ω	A10735-5
AMC 8, 50Ω		0.1μF	0.01μF	510Ω	510Ω	2K	2K	7.5Ω	7.5Ω	A10735-6
AMC 23, 75Ω	47 pF	0.1μF	0.01μF	0.33μH	910Ω	2K	2K	7.5Ω	7.5Ω	A10735-5
AMC 32, 50Ω		0.1μF	0.01μF	680Ω	680Ω	1.8K	1.8K	11Ω OPTIONAL	11Ω OPTIONAL	A10735-8
AMC 32, 75Ω	47 pF		0.01μF	1K	1K	1.8K	1.8K	11Ω OPTIONAL	11Ω OPTIONAL	A10735-7
AMC 23, 50Ω		0.1μF	0.01μF	510Ω	510Ω	2K	2K	7.5Ω	7.5Ω	A10735-6
AMC 22, 50Ω										A10735-6
AMC 22, 75Ω										A10735-5

RESISTANCE IN OHMS ±2% 1/4 WATT
 CAPACITANCE IN μF
 INDUCTANCE IN μH
 UNLESS OTHERWISE STATED:
 NOTES

SCHEMATIC DIAGRAM
 PREAMPLIFIER
 FIG. 5-10



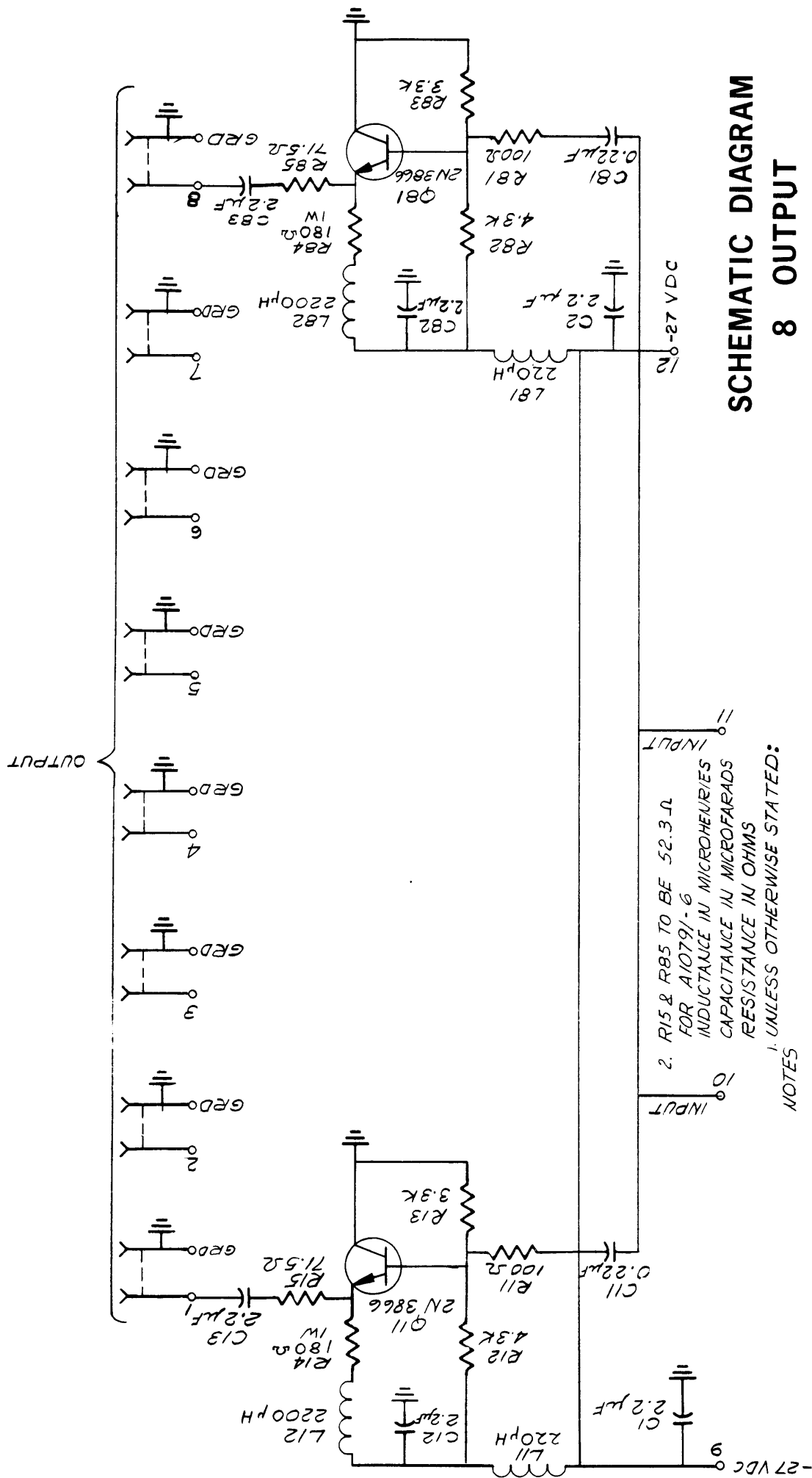
SCHEMATIC DIAGRAM
8 OUTPUT
FIG. 5-12

MODEL	R 15		R 85		ASSEMBLY NO
	50 Ω	75 Ω	50 Ω	75 Ω	
AMC 8	52.3	71.5	52.3	71.5	A-10714-6
AMC 22	52.3	71.5	52.3	71.5	A-10714-5
AMC 23	52.3	71.5	52.3	71.5	A-10714-6
AMC 32	52.3	71.5	52.3	71.5	A-10714-5

2

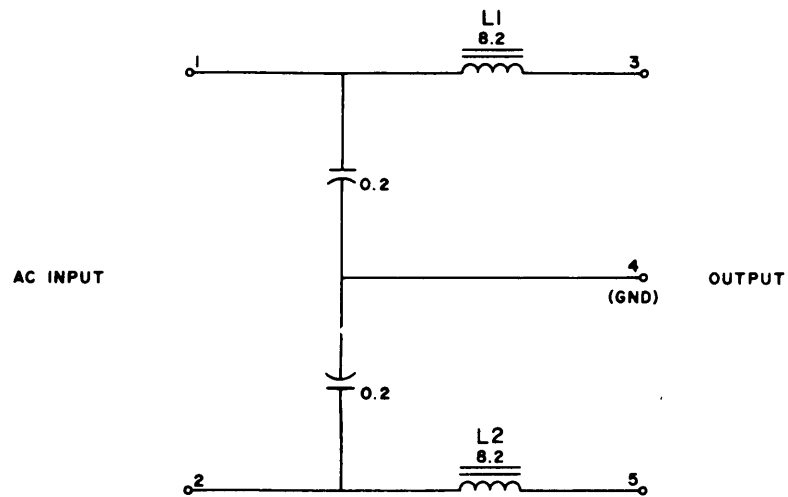
1 INDUCTANCE IN MICROHENRIES
CAPACITANCE IN MICROFARADS
RESISTANCE IN OHMS
UNLESS OTHERWISE STATED:

NOTES:



SCHEMATIC DIAGRAM
8 OUTPUT
FIG. 5-13

- NOTES
1. UNLESS OTHERWISE STATED:
 RESISTANCE IN OHMS
 CAPACITANCE IN MICROFARADS
 INDUCTANCE IN MICROHENRIES
 2. R15 & R85 TO BE 52.3 Ω
 FOR A10791-6

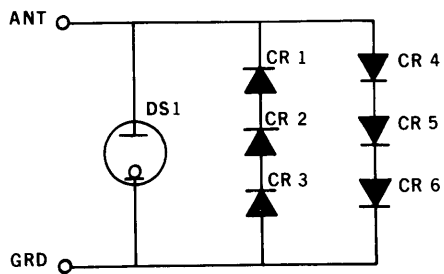


UNLESS OTHERWISE SPECIFIED:

ALL CAPACITANCES IN μF.

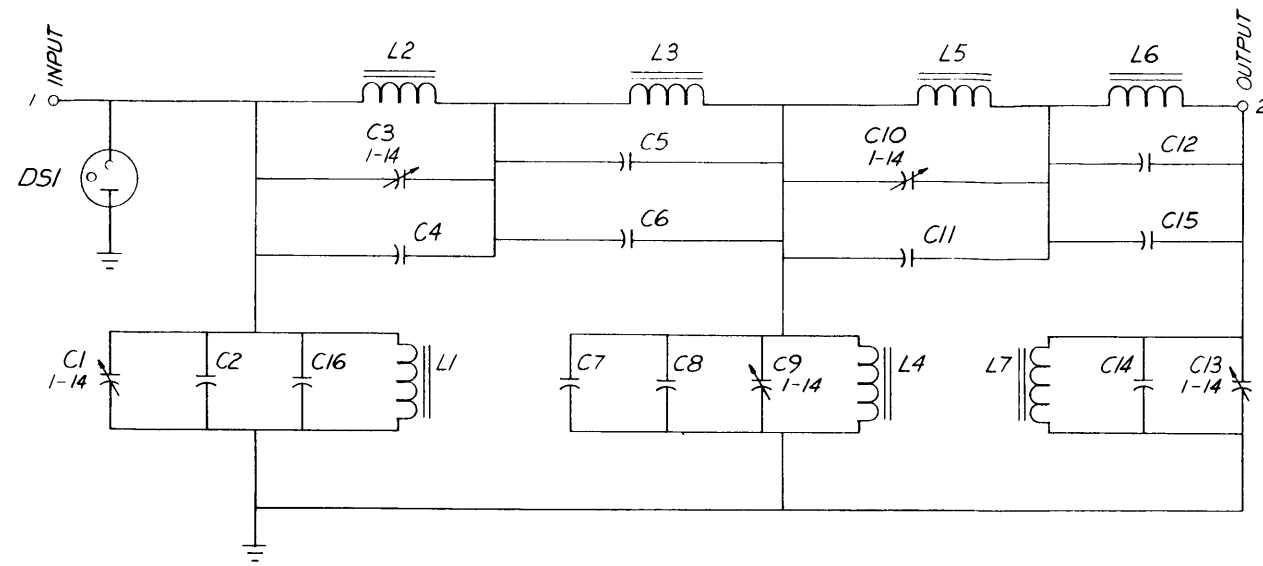
ALL INDUCTANCES IN μH.

FIGURE 5-14 AC LINE FILTER SCHEMATIC, FX10024



1. ALL DIODES 1N914B
NOTES:

SCHEMATIC DIAGRAM
LIGHTNING PROTECTION A10859
FIG. 5-15

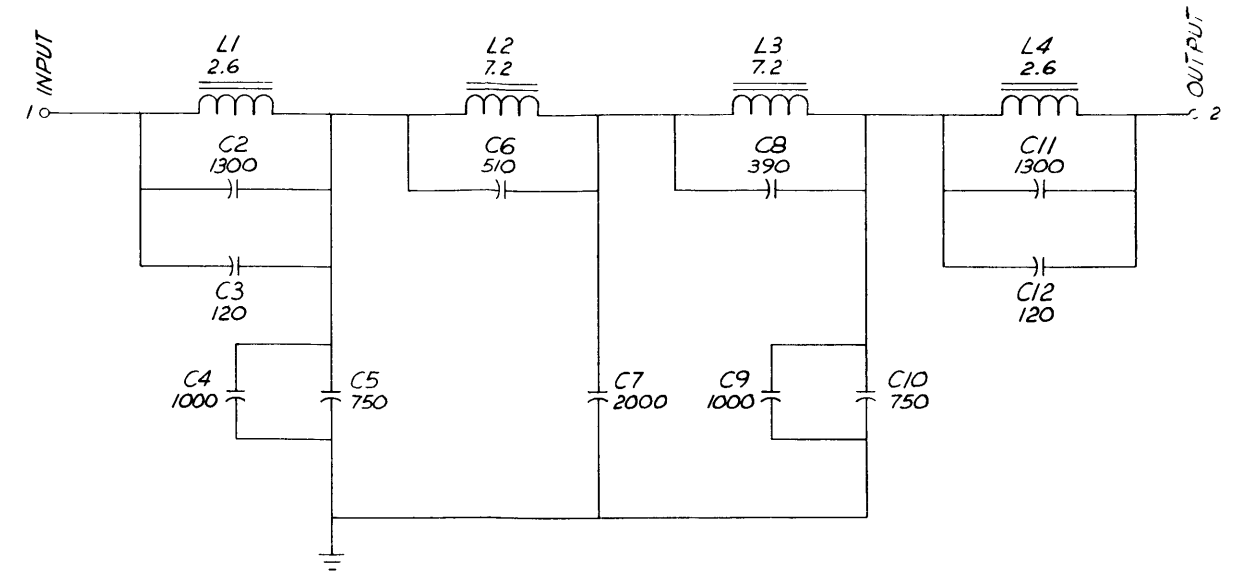


C16	DSI	L7	
LAST COMP USED		MISSING COMP	

CK 10660-2	75 Ω	5.61	.448	29.2	3.58	.306	9.52	7.5	56	5	820	56	91	5	27	1300	43		
CK 10660-1	50 Ω	3.74	.299	19.45	2.39	.204	6.35	5	82	12	1300	12	100	47	43	1200	68	750	5
SCHMATIC	IMPEDENCE	L1	L2	L3	L4	L5	L6	L7	C2	C4	C5	C6	C7	C8	C11	C12	C14	C15	C16

BANDPASS FILTER

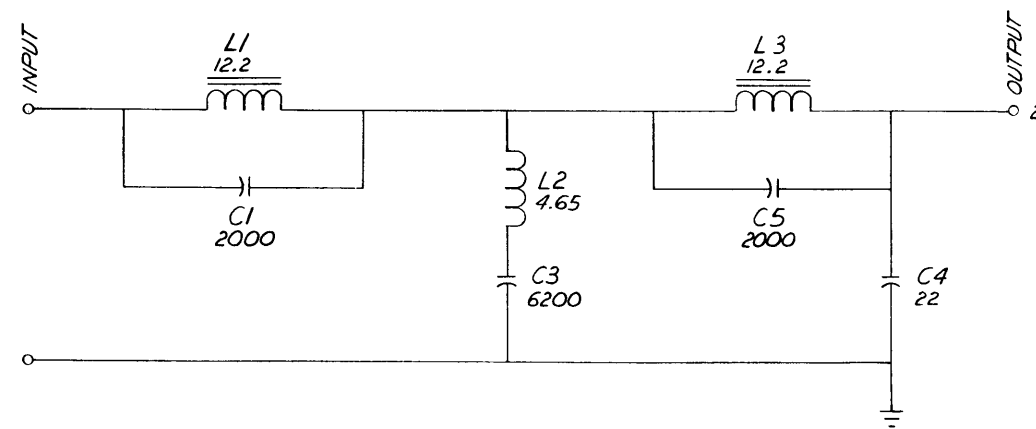
CK 10660-1 & 2



C12	L4		C1	
LAST COMP USED		MISSING COMP		

LOW PASS FILTER

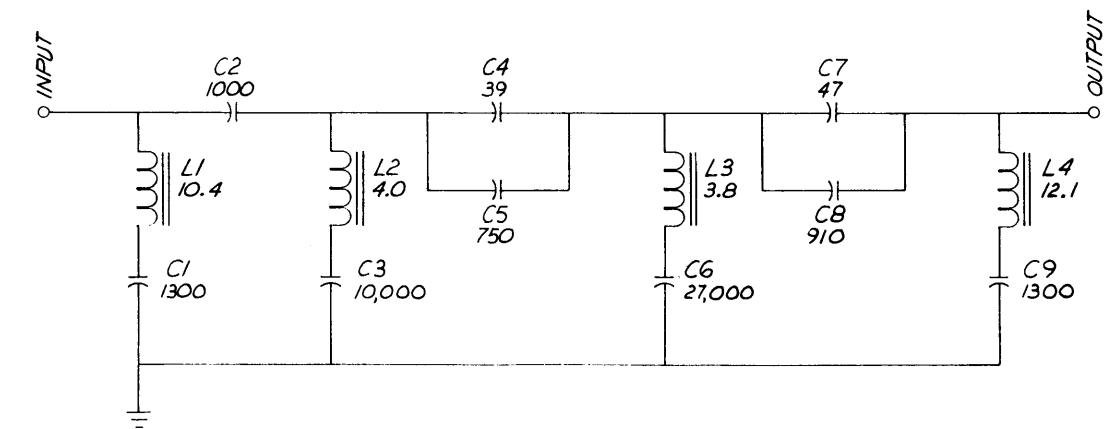
CK 10660-3



C5	L3		C2	
LAST COMP USED		MISSING COMP		

BROADCAST BANDSTOP FILTER

CK 10660-4



C9	L4			
LAST COMP USED		MISSING COMP		

HIGH PASS FILTER

CK 10660-5

2.

CK 10660-5	FX 10021
CK 10660-4	FX 10020
CK 10660-3	FX 10022
CK 10660-2	FX 10018
CK 10660-1	FX 10034
SCHMATIC	ASSEMBLY

1. UNLESS OTHERWISE SPECIFIED:
 ALL RESISTANCE IN OHMS
 ALL INDUCTANCE IN MICROHENRIES
 ALL CAPACITANCE IN PICO FARADS

NOTES

SCHMATIC DIAGRAM
 FILTERS
 FIG. 5-16