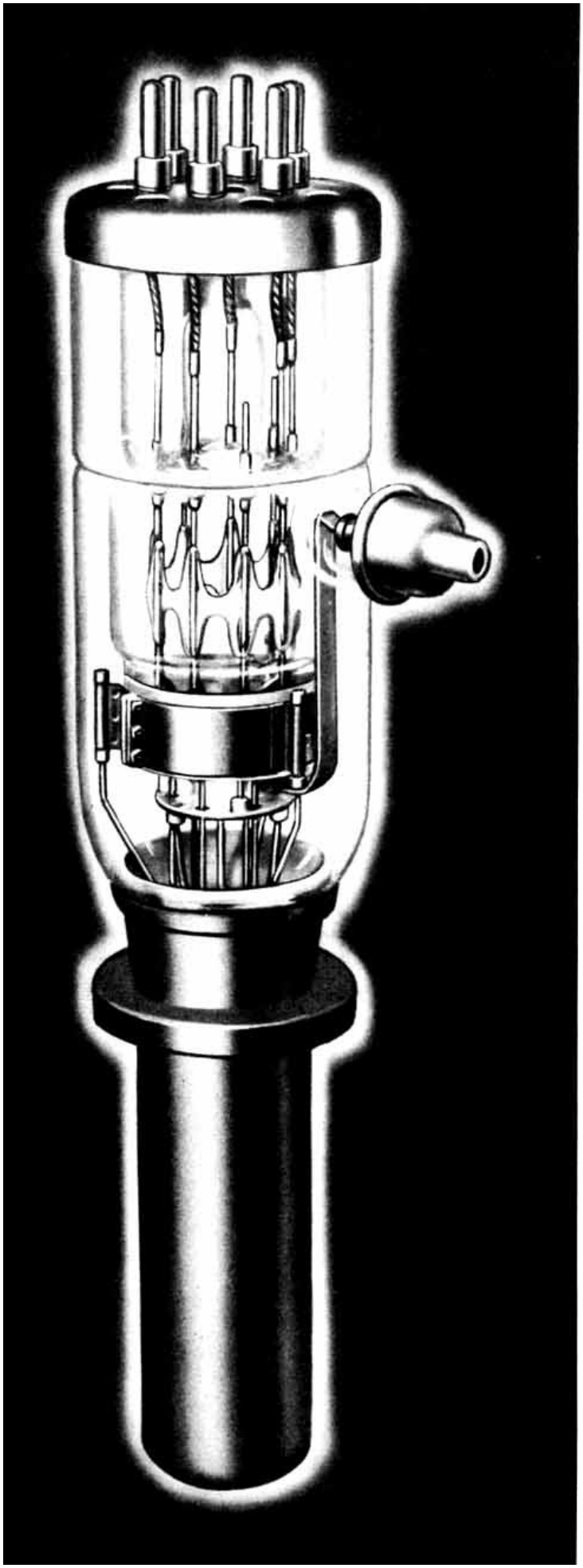


FEDERAL

F-125-A TRANSMITTING TUBE

TECHNICAL DATA

Main Use	Modulator
Number of Electrodes	3
Filament Voltage per strand	13.6 volts
Current per strand	65.5 amperes
Type	Multistrand Tungsten
Excitation	D-C. 1, 3 or 6 ϕ A-C
Thermionic Emission	35 amperes
Average Characteristic Values calculated at E_b=9,000 I_b=3.0 amperes. E_f=13.6 volts per strand	
Grid Voltage (approximate)	−1600 volts
Amplification Factor	4.75
Mutual Conductance	15800 micromhos
Plate Resistance	300 ohms
Approximate Direct Inter-electrode Capacitances	
Plate to Grid	45 mmf.
Grid to Filament	59 mmf.
Plate to Filament	20 mmf.
Overall Dimensions	
Maximum Length	25 11/16 inches
Maximum Radius	6 1/4 inches
Type of Cooling	Water
Water Jacket	Standard or Federal Type 1010-C

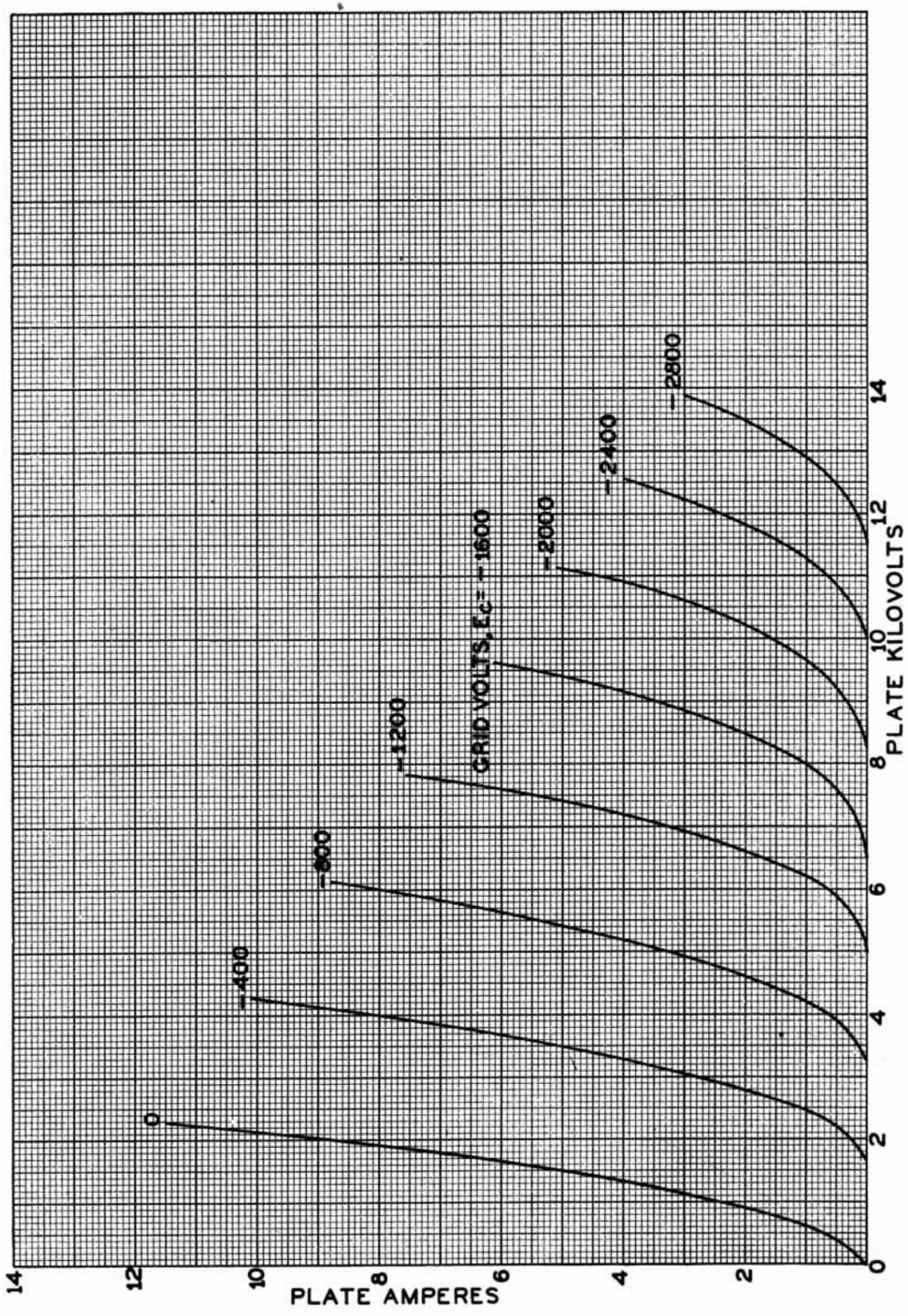
The information above and in the following pages by no means represents exact conditions of operation to be imposed for any particular situation. Since tubes are used under many widely different conditions the manufacturer will gladly furnish information regarding characteristics for design purposes.

Manufactured by

FEDERAL TELEGRAPH CO.

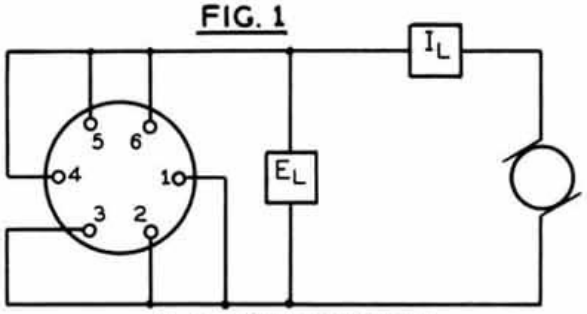
200 Mt. Pleasant Avenue Newark, N. J., U.S.A.

AVERAGE CHARACTERISTICS F-125-A Transmitting Tube



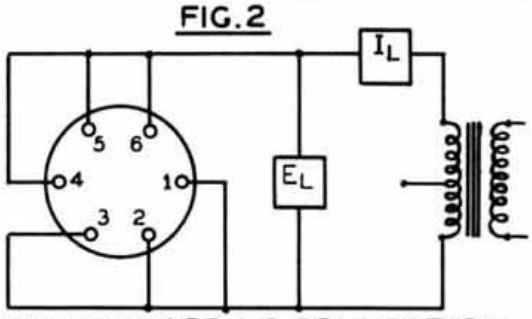
MULTIPHASE FILAMENT CONNECTIONS

FIG. 1



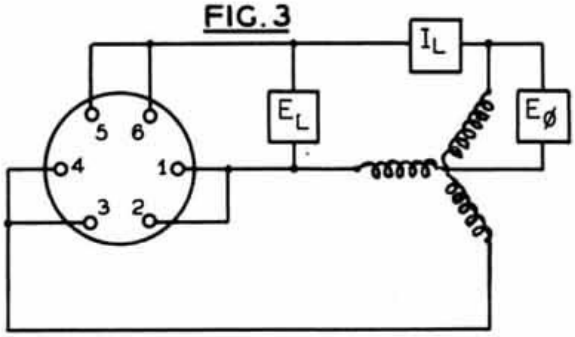
D.C. CONNECTION
E_L = 'X' VOLTS D.C.
I_L = 'Y' AMPS. D.C.

FIG. 2



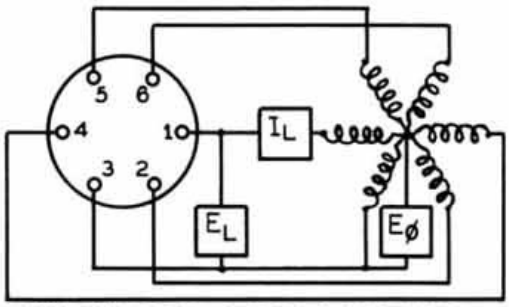
SINGLE PHASE A.C. CONNECTION
E_L = 'X' VOLTS A.C.
I_L = 'Y' AMPS. A.C.

FIG. 3



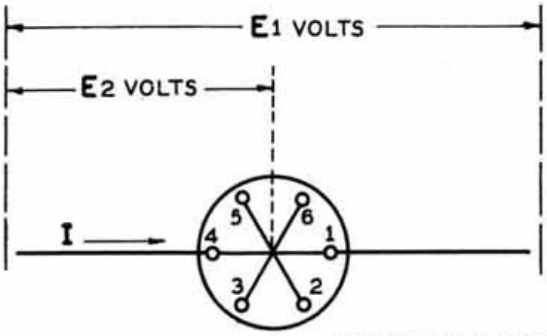
THREE PHASE A.C. CONNECTION
E_L = 'X' VOLTS A.C.
E_ϕ = 'Z' VOLTS A.C.
I_L = 'Y' AMPS. A.C.

FIG. 4



SIX PHASE A.C. CONNECTION
E_L = 'X' VOLTS A.C.
E_ϕ = 'Z' VOLTS A.C.
I_L = 'Y' AMPS. A.C.

FIG. 5



E_1 = 'U' VOLTS D.C. OR A.C. TERMINAL TO TERMINAL VOLTAGE

E_2 = 'V' VOLTS D.C. OR A.C. VOLTAGE PER FILAMENT STRAND, *i.e.* FROM TERMINAL TO COMMON INTERNAL CONNECTION

I = 'W' AMPERES CURRENT PER FILAMENT TERMINAL

INTERNAL CONNECTION OF FILAMENTS

NOTE:- NUMBERS 1 TO 6 INCL. ON CONNECTIONS DENOTE BASE TERMINALS

TUBE	FIG.	'U'	'V'	'W'	'X'	'Y'	'Z'
F-124-A	1				27.2	205.5	
	2				27.2	205.5	
	3				23.5	137.0	13.6
	4				13.6	68.5	13.6
	5	27.2	13.6	68.5			

TUBE	FIG.	'U'	'V'	'W'	'X'	'Y'	'Z'
F-125-A	1				27.2	196.5	
	2				27.2	196.5	
	3				23.5	131.0	13.6
	4				13.6	65.5	13.6
	5	27.2	13.6	65.5			

Maximum Ratings

F-125-A Transmitting Tube

For audio frequency use only

CLASS A AUDIO FREQUENCY AMPLIFIER OR MODULATOR	
D-C Plate Voltage	15000 volts
Plate Input	40000 watts
Plate Dissipation	40000 watts

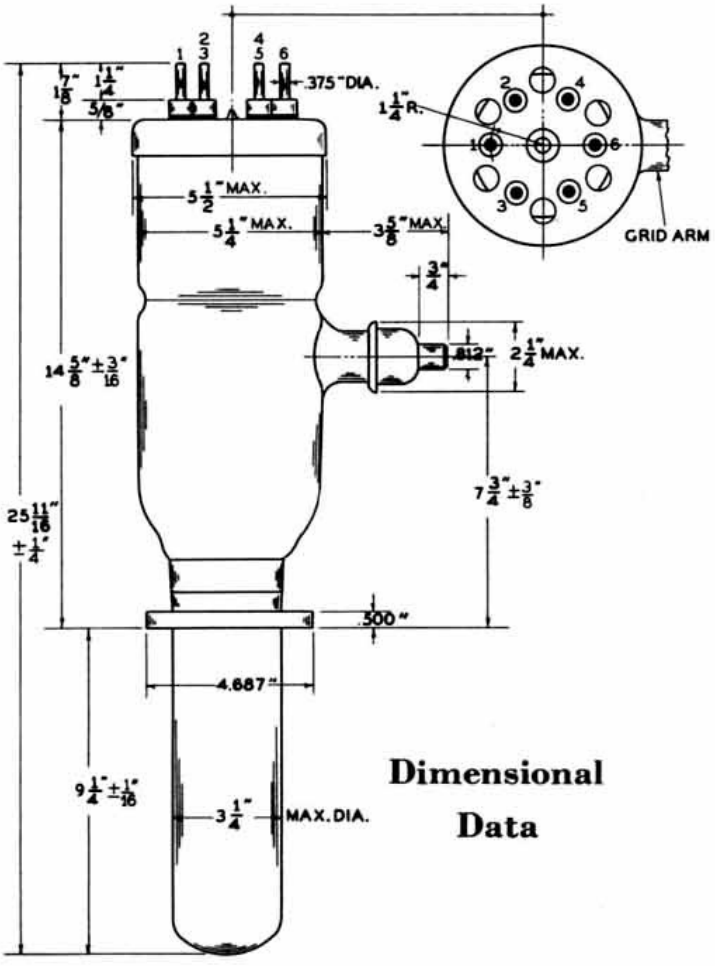
CLASS AB AUDIO FREQUENCY AMPLIFIER OR MODULATOR	
D-C Plate Voltage	15000 volts
Max. Signal D-C Plate Cur.	10 amperes
Max. Signal Plate Input	100000 watts
Plate Dissipation	40000 watts

Typical Operation Data

F-125-A Transmitting Tube

CLASS AB, A-F POWER AMPLIFIER AND MODULATOR	
Filament Voltage	13.6 volts per strand
D-C Plate Voltage	10000 volts
D-C Grid Voltage	−2125 volts (approx.)
Peak A-F Grid Input Voltage	2110 volts (approx.)
Zero Signal Plate Current (per tube)	0.7 ampere
Max. Signal Plate Current (per tube)	3.05 amperes
Max. Signal Plate Input (per tube)	30500 watts
Effective Load (plate to plate)	3100 ohms
Power Output (2 tubes)	40200 watts (approx.)

CLASS AB, A-F POWER AMPLIFIER AND MODULATOR	
Filament Voltage	13.6 volts per strand
D-C Plate Voltage	12000 volts
D-C Grid Voltage	−2600 volts (approx.)
Peak A-F Grid Input Voltage	2580 volts (approx.)
Zero Signal Plate Current (per tube)	0.9 ampere
Max. Signal Plate Current (per tube)	2.64 amperes
Max. Signal Plate Input (per tube)	31700 watts
Effective Load (plate to plate)	5000 ohms
Power Output (2 tubes)	40000 watts (approx.)



Dimensional Data