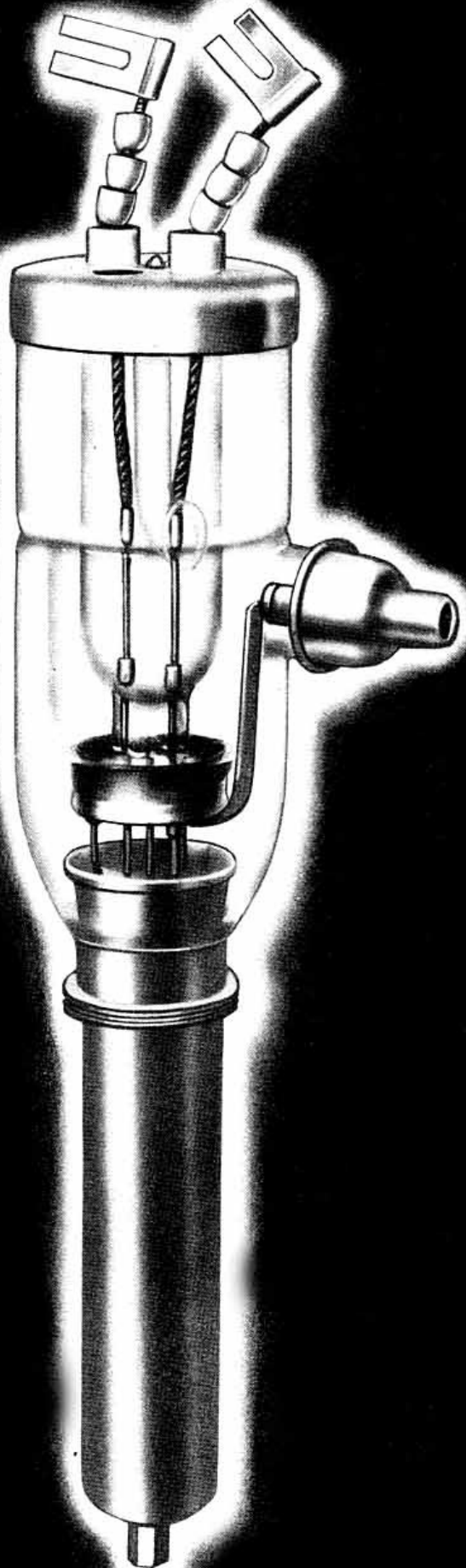


FEDERAL

F-110-A TRANSMITTING TUBE



TECHNICAL DATA

Main Use R-F Power Amplifier, Oscillator

Number of Electrodes 3

Filament Voltage 28 volts

Current 51 amperes

Type Tungsten

Thermionic Emission 12.5 amperes

Average Characteristic Values calculated at
 $E_b = 15000$, $I_b = 1.0$ ampere, $E_f = 28$ volts.

Grid Voltage
(approximate) +150 volts

Amplification
Factor 135

Mutual
Conductance 7500 micromhos

Plate Resistance 18000 ohms

Approximate Direct Inter-electrode Capacitances

Plate to Grid 32 mmf.

Grid to Filament 17 mmf.

Plate to Filament 3.5 mmf.

Type of Cooling Water

Water Jacket Federal Type 1001-A

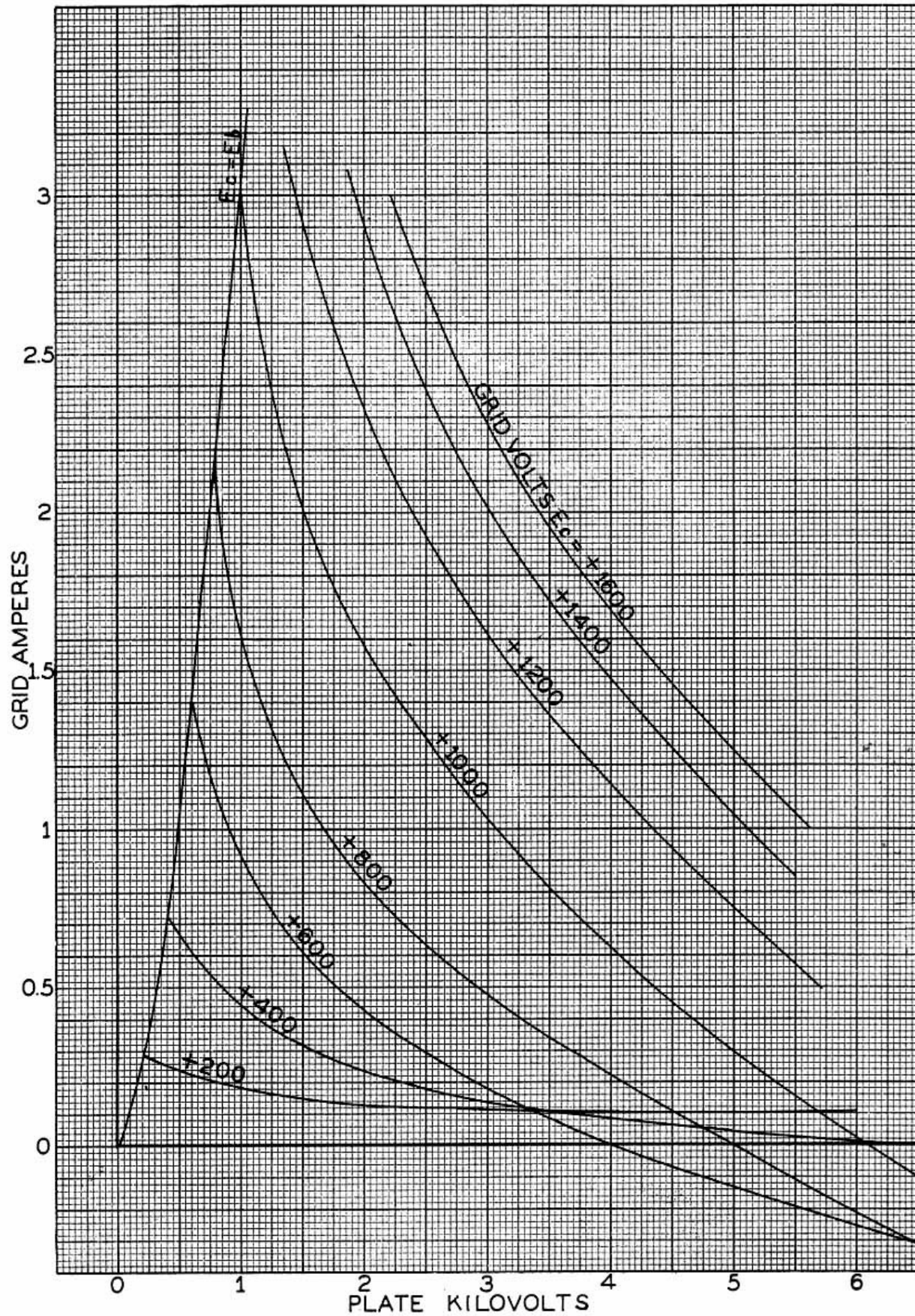
The information above and in the following pages by no means represents exact conditions of operation to be imposed for any particular situation. Since tubes are used under many widely different conditions the manufacturer will gladly furnish information regarding characteristics for design purposes.

Manufactured by

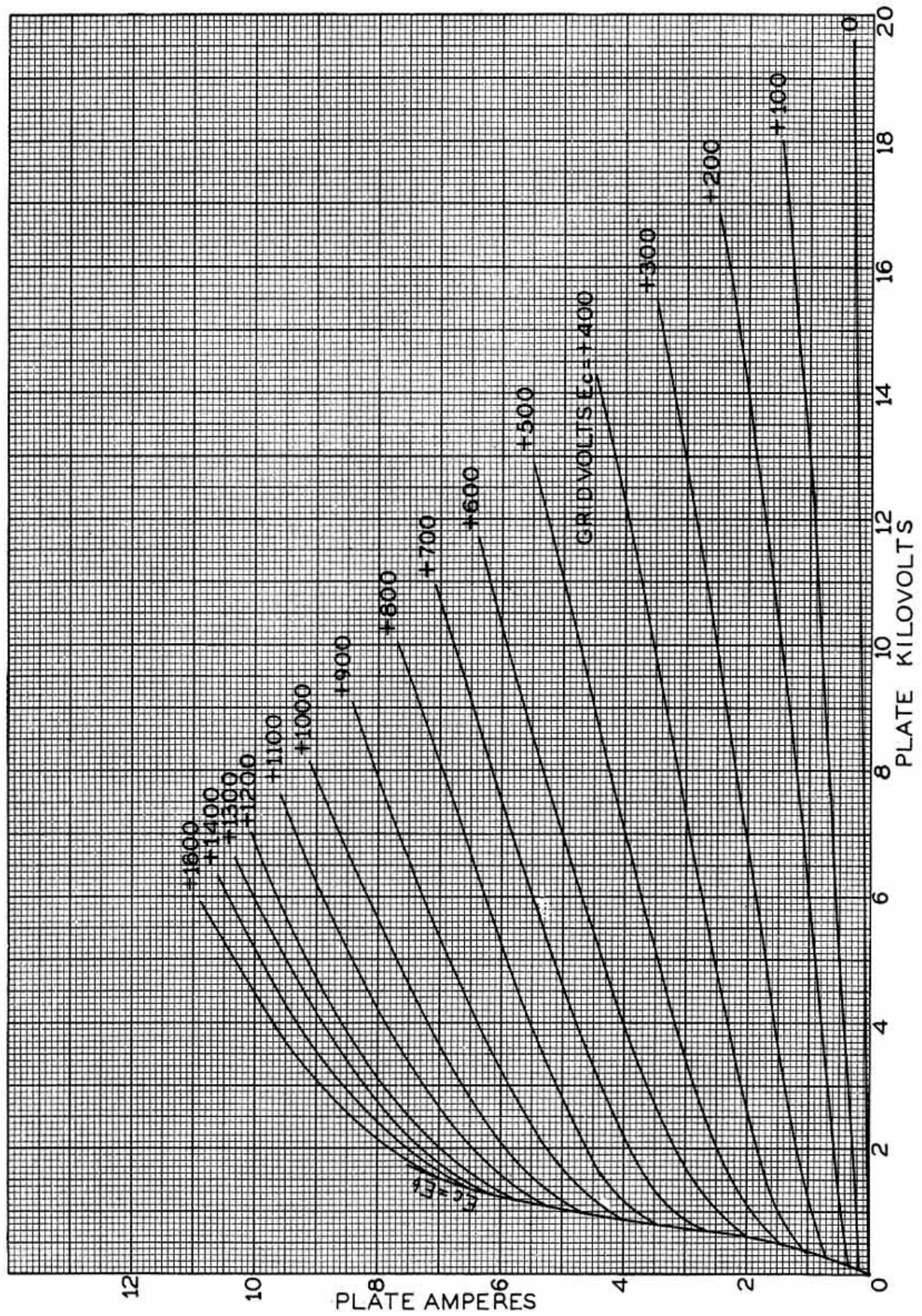
FEDERAL TELEGRAPH CO.

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

AVERAGE GRID CHARACTERISTICS F-110-A Transmitting Tube



AVERAGE PLATE CHARACTERISTICS F-110-A Transmitting Tube



F-110-A Transmitting Tube

(Key-down conditions per tube without modulation)*

D-C Plate Voltage (3 megacycles)	20000 volts
D-C Plate Voltage (20 megacycles)	8500 volts
D-C Grid Voltage	-3000 volts
D-C Plate Current	2.5 amperes
D-C Grid Current	0.500 ampere
R-F Grid Current	30 amperes
Plate Input (3 megacycles)	50000 watts
Plate Input (20 megacycles)	21000 watts
Plate Dissipation	25000 watts

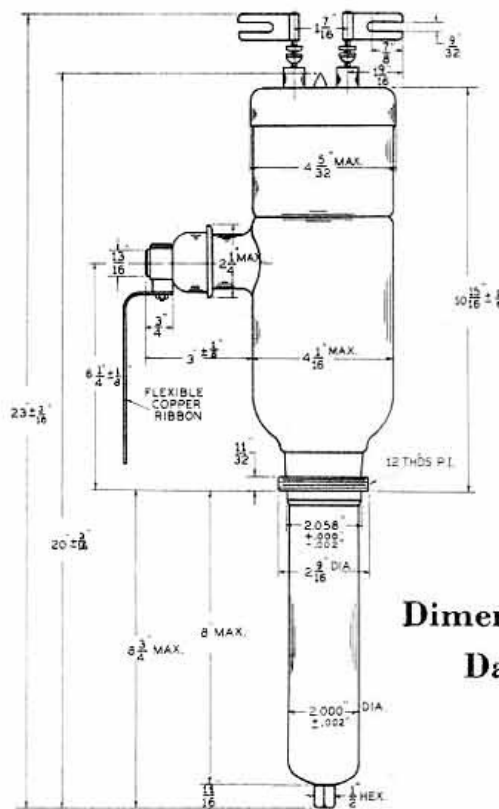
^a Modulation essentially negative, may be used if the positive peak of the audio frequency envelope does not exceed 115% of the carrier condition value.

F.110-A Transmitting Tube

(Key-down conditions per tube without modulation)*

Filament Voltage	28 volts
D-C Plate Voltage	8500 volts
D-C Grid Voltage	-635 volts (approx.)
Peak R-F Grid Input Voltage	2235 volts (approx.)
D-C Plate Current	2.50 amperes
D-C Grid Current	0.385 ampere
Driving Power	775 watts (approx.)
Power Output	11000 watts (approx.)

⁶ Modulation, essentially negative, may be used if the positive peak of the audio-frequency envelope does not exceed 115% of the carrier conditions.



Dimensional Data