



Figure 1. Amplifier Assembly AN/FRA-1.

*Status:* Standard. *Stock No.:* 2C466. *Reference:* TM 11-1055.

Amplifier Assembly AN/FRA-1 consists principally of a class C r-f power amplifier, a rectifier, the necessary transmission line materials, and an antenna tuning unit. It is used as final power amplifier for Radio Transmitter BC-365 or similar transmitting equipment.

The 6-kw, r-f amplifier is intended for fixed military radiotelegraph service as a 6- to 10-kw amplifying unit. It is used in conjunction with a nominal 350-watt, 0.15- to 0.55-mc radio transmitter as a source of r-f driving power.

A maximum keying speed of 200 words per minute may be utilized.

### TECHNICAL CHARACTERISTICS

**FREQUENCY RANGE:** 0.15 to 0.55 mc.

**ANTENNA:** Antenna with a capacitance of 750 to 3,000 mmf and a resistance of 6 to 12 ohms.

**TYPE MODULATION:** C-w.

**FREQUENCY CONTROL:** Controlled driver unit.

**POWER SOURCE:** A 3-phase, 3-wire, 60-cyc, 200-, 220-, 240-v power source is required, capable of supplying 22 kva at 90 percent power factor for full-load operation.

**POWER OUTPUT:** Minimum power output of 6 kw at 0.15 mc is obtained when connected to an antenna of 750-mmf capacitance and 6-ohm resistance. Output power up to 10 kw can be obtained when operating into antennas of higher capacitance and resistance, and at higher frequencies.

**RANGE:** Long.

**NUMBER OF TUBES:**

Power amplifier: 3.

Rectifier: 6.

### GENERAL APPLICATION

**USE:** Fixed military radiotelegraph service.

**TO COMMUNICATE WITH:** Any long-range, lf communication equipment.

**INSTALLATION:** Fixed station.

**TYPE OF SIGNAL:** C-w.

### PRINCIPAL COMPONENTS

<i>Name</i>	<i>Dimensions (in.)</i>	<i>Weight (lb)</i>
Power amplifier .....	78 x 60 x 36	1,400
Rectifier .....	78 x 60 x 36	2,540
Antenna tuning unit .....	120 x 97 x 68	1,600

### WEIGHT AND VOLUME

Total weight (lb) .....	<i>Unpacked</i> 5,540
Total volume (cu ft) .....	3,647
Ship tons .....	91