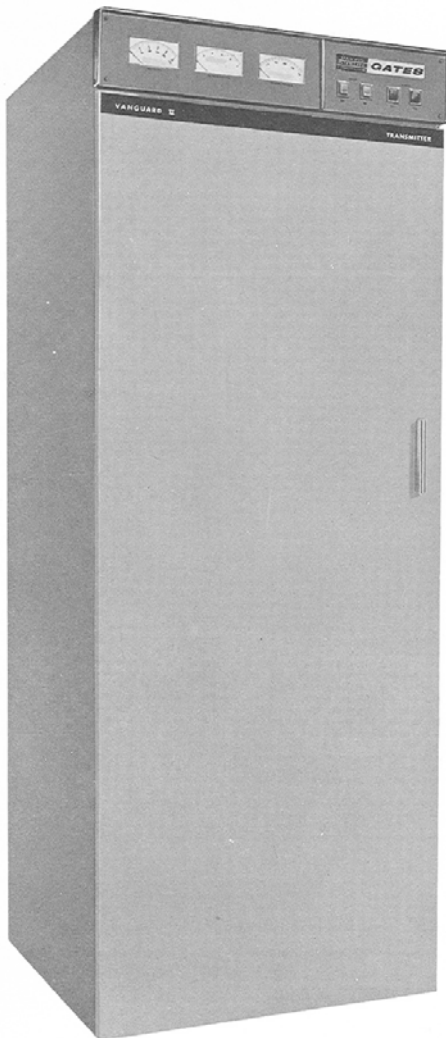


1000 Watt Transistorized AM Transmitter



VANGUARD II

Field-proven for reliability and performance, the Vanguard II transmitter uses just one tube! All remaining circuits are solid state—producing a typical frequency response of ± 1 dB from 20-16,000 Hz, with distortion in the 1% range, and a noise ratio of 55 dB below 100% modulation. Your listeners will actually hear a superior sound quality. And you get the added bonus of "Solid-Statesman" reliability.



ONLY ONE TUBE: The Vanguard II uses a 4CX3000A tube as the final RF amplifier—the rest of the circuits are transistorized. This tube was selected to complement the solid state circuitry, as it operates well below rated capacity to assure longer life. The 4CX3000A is in a Class AB-1 circuit, which significantly reduces intermodulation distortion and substantially contributes to the high fidelity performance of the Vanguard II.

The low level transistorized circuitry accepts and amplifies the audio signal, generates the carrier frequency, then modulates the carrier wave with the audio signal for transmission to the final amplifier stage. Modulation takes place in this section with an audio level of about one watt, compared to about 700 watts in conventional transmitters.

The proven reliability of Vanguard II is brought about by the simplicity of the solid state design versus the elaborate array of components required to perform these functions in tube-type transmitters.

SOLID STATE OSCILLATORS: A single unit contains the two complete temperature controlled crystals, oscillators and first buffers. The frequency stability of these solid state oscillators greatly exceeds that of the conventional type. Crystal trimmers are adjustable from the front panel. A Zener controlled voltage supply to the oscillators assures stable operation with line voltage changes, and a front panel switch permits instant on-the-air change from one oscillator to the other.

POWER CHANGE: The Vanguard II transmitter provides instantaneous power change from a full one kilowatt, to 500 watts or 250 watts.

BUILT-IN DUMMY ANTENNA: The transmitter may be tested at a full one kilowatt output with 100% modulation using the built-in dummy antenna. This permits simulation of on-the-air conditions for thorough testing of all transmitter functions. No external load is required.

BUILT-IN TEE NETWORK: The complete built-in and adjustable Tee network permits exact matching of the transmitter to its load with greatest harmonic attenuation. The capacitors are large mica insulated units of the highest quality.

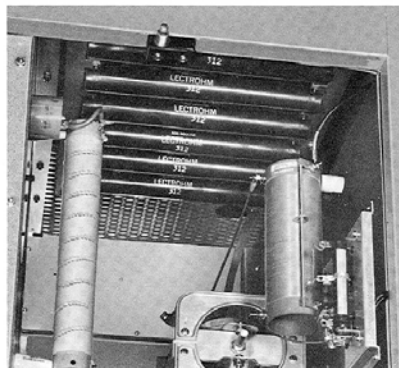
The final amplifier and Tee network are tuned by the large edgewound coils, manufactured by Gates. Tuning in the power amplifier stage is exclusively by variable coils.

COMPACT DESIGN—SAVES FLOOR SPACE: The Vanguard II takes less than six square feet of floor space, and is completely self-contained. There are no external sections that require additional floor space.

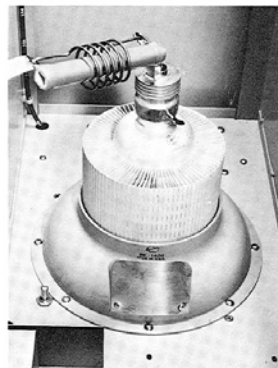
Note the narrow width of Vanguard II that permits a front door swing of only 28 inches. The back door is completely removable with just a twist of a latch handle.

EXTREMELY COOL RUNNING: The combination of cool operating solid state components, with a large capacity blower for the power tube, results in highly efficient internal cooling.

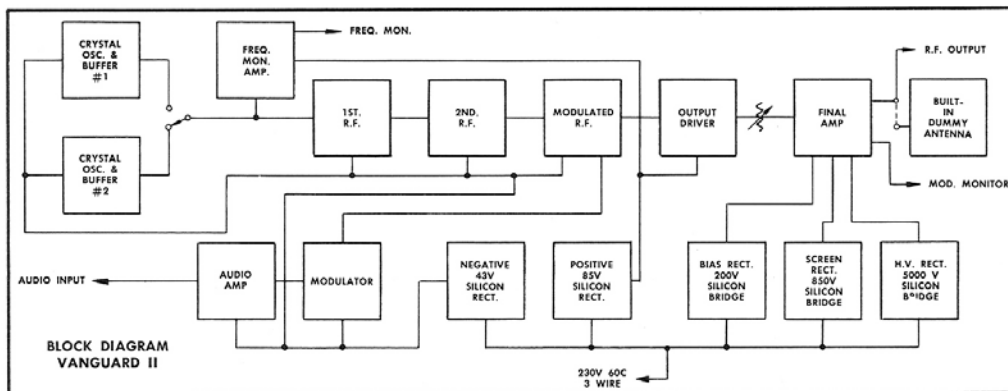
1000 Watt Transistorized AM Transmitter—Vanguard II



Built-in dummy antenna.



Final RF amplifier.



SPECIFICATIONS

POWER OUTPUT: 1150 watts.

FREQUENCY RANGE: 540-1700 kHz.

RF OUTPUT IMPEDANCE: 50/70 ohms.

FREQUENCY STABILITY: ± 2 Hz or better.

CARRIER SHIFT: Rated 3% or less. Typical less than 2%.

AUDIO RESPONSE: ± 1 dB, 20-16,000 Hz.

AUDIO DISTORTION: 1.5% or less, 20-15,000 Hz.

NOISE: 55 dB or better below 100% modulation.

AUDIO INPUT: 600 ohms at +5 dB.

POWER DEMAND: 100% modulation, 4500 watts, 90% power factor.

POWER INPUT: 230 volts, 3 wire, 60 Hz single phase (208 volts also available where specified).

DUMMY ANTENNA: 50 ohms for 1 kW output.

SIZE: 29" wide, 78" high, 30" deep.

WEIGHT: Net 700 lbs. Domestic packed, 800 lbs.; export packed, 935 lbs. Cubage: 72.

TUBE COMPLEMENT: 1—Type 4CX3000A.

ORDERING INFORMATION

Vanguard II, 1000 watt AM broadcast transmitter complete with two crystals, dummy antenna, and silicon rectifiers.....	994-6519
100% spare set of transistors.....	990-0515
Spare tube, 4CX3000A.....	374-0074