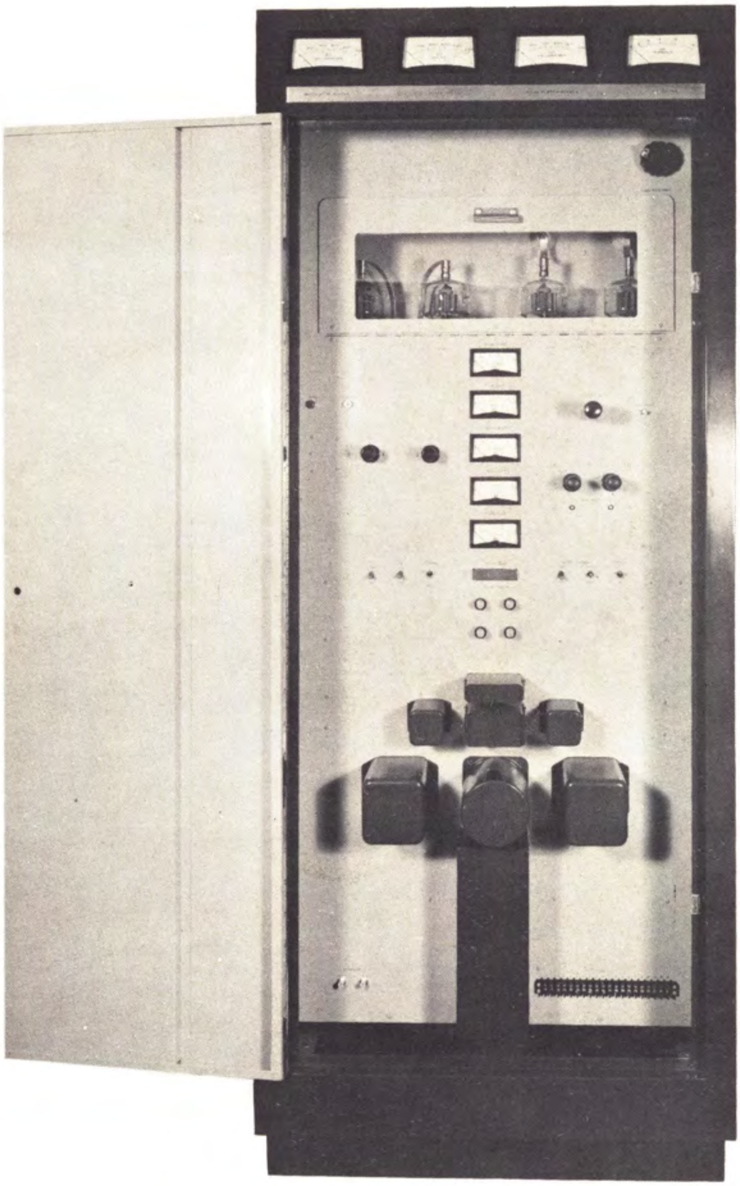
THE Bauer 707



MODEL 707 AM TRANSMITTER

1000/500/250 WATT

AVAILABLE COMPLETELY ASSEMBLED OR IN KIT FORM

BAUER ELECTRONICS CORPORATION — 1661 Industrial Way
San Carlos, California, U.S.A. — Telephone LYtell 3-0800

EXPORT DEPARTMENT 301 Clay St., San Francisco 11, California CABLE "FRASEN"

Bauer

Electronics Corporation

1661 INDUSTRIAL ROAD, SAN CARLOS, CALIFORNIA —— EQUIPMENT FOR THE BROADCAST INDUSTRY —— LYTELL 3-0800

MEMO TO: The Broadcast Equipment Buyer

FROM: Paul Gregg, Sales Manager

Gentlemen, in the pages to follow you will find a wealth of information about just one product, the Bauer Model 707 1000/500/250 watt AM Transmitter. With the introduction of this new model the modern "kit" concept of electronics reached into the broadcast industry at a point vital to its operation -- the transmitter. Aware of the consequential responsibilities, we devoted countless hours of research and many years of experience to the development of the 707. It was designed as a kit from the ground up, and the result is a transmitter unsurpassed in accessibility and simplification.

Much of the technical material in this brochure is taken from the actual type-acceptance application submitted to the Federal Communications Commission, Washington, D. C. The 707, in fact was one of the first transmitters to be type accepted under the new and more exacting rules that went into effect on January 1, 1960. A lot of the information that you will be reading usually never leaves the files of the transmitter manufacturer; however, we thought you would be interested in it for it tells the story of a transmitter as it has never been told before. The Bauer Model 707 is available either as a kit or factory assembled -- and at a price that proves the economy of superior design.

Read the enclosed material and then order yours today!

Respectfully yours,

Paul Gregg

Paul Gregg
Sales Manager

PG:eb

MECHANICAL AND ELECTRICAL SPECIFICATIONS

Height	75 inches
Width	30 inches
Depth	25 inches
Weight (approximate)	800 lb.
Required Power Supply	208-240 volts 30 amperes Single-Phase
Power Consumption for One Kilowatt Output (approx.)	
Average modulation	3300 watts
100% modulation	4000 watts

Type of Emission	A3
Rated Power Output	1000/500/250 watts
Power Output Capability	1100 watts
R. F. Output Impedance	50 ohms, unbalanced
Frequency Range	540-1600 kc
Frequency Stability	± 5 cps
Audio Input Level for 100% mod	+ 10 dbm
Frequency Response (0-95% mod) 1000/500/250 watts	
50-10, 000 cps	± 0. 5 db
30-12, 000 cps	± 1. 5 db
Distortion (0-95% mod) 1000/500/250 watts	
50-10, 000 cps	2. 0 % max
Carrier Shift 1000/500/250 watts	Less than 3%
Noise Level (below 100 % mod)	
1000 and 500 watts	-60 db
250 watts	-57 db

OPERATING CONDITIONS

To insure that the transmitter has ample power capability for operation with 1 kw directional antenna systems with a reserve for possible transmission line losses between the transmitter and the common point, all "one-kilowatt" measurements reported herein were made at a power level of 1100 watts. The following operating conditions were maintained throughout the measurements reported herein:

Parameter	Power Output 250 Watts	500 Watts	1100 Watts
Plate Voltage	1500 v	2130 v	3100 v
Net Plate Current	214 ma	298 ma	485 ma
Screen Voltage	315 v	450 v	530 v
Screen Current	26 ma	37 ma	55 ma
Grid Current	12. 5 ma	15 ma	20 ma
Efficiency	78 %	79 %	76 %
R. F. Output Current	2. 25 a	3. 18 a	4. 71 a
Dummy Load Resistance	49. 5 ohms	49. 5 ohms	49. 5 ohms

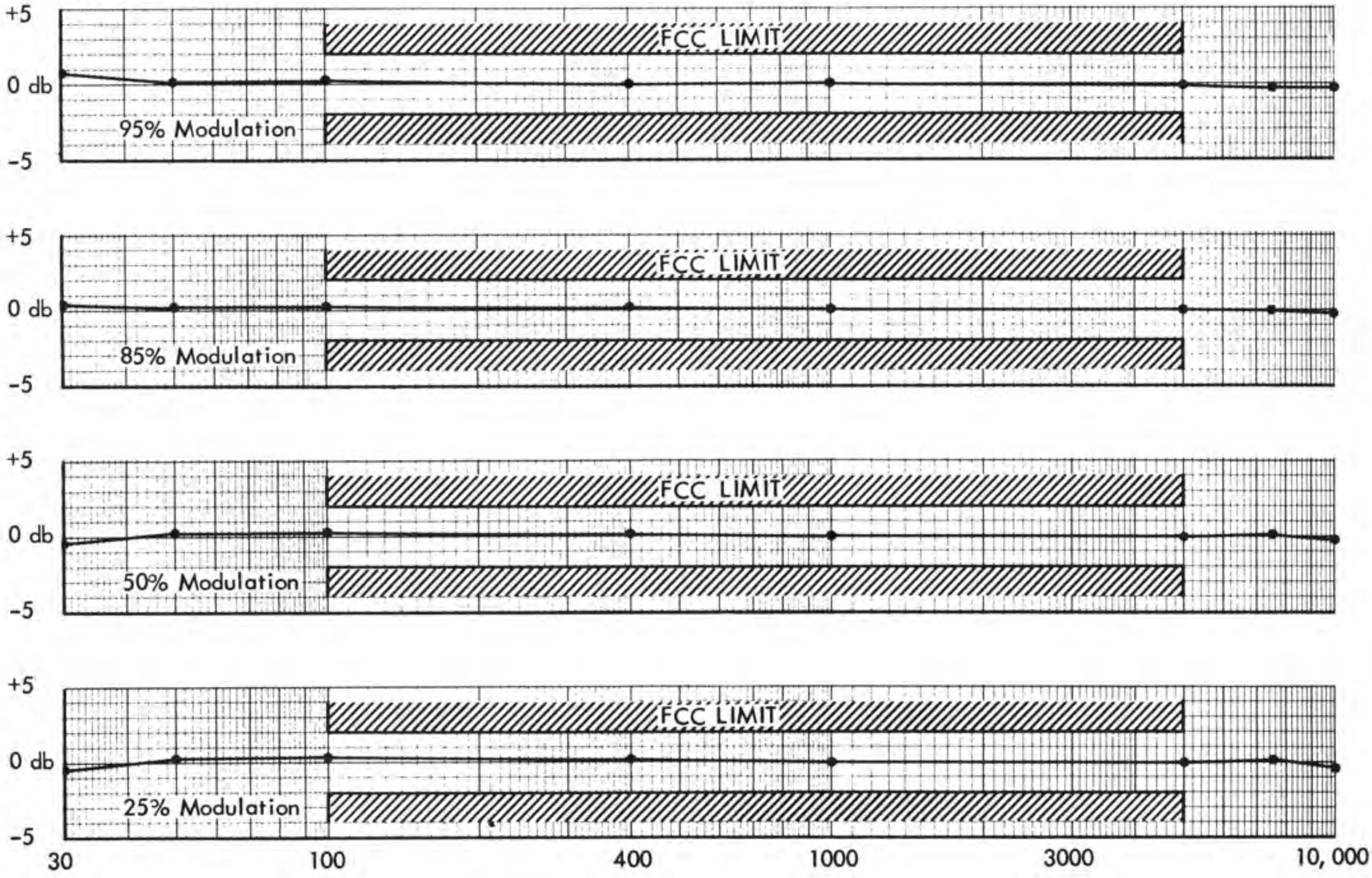
MEASUREMENTS OF FREQUENCY RESPONSE

1100 WATTS

DATA

Modulating Frequency	Relative Response			
	25% Mod.	50% Mod.	85% Mod.	95% Mod.
30	-0. 4 db	-0. 4 db	+0. 3 db	+0. 8 db
50	+0. 2	+0. 2	+0. 2	+0. 1
100	+0. 3	+0. 2	+0. 2	+0. 2
400	+0. 2	+0. 1	+0. 1	0. 0
1000	0. 0	0. 0	0. 0	0. 0
5000	0. 0	0. 0	0. 0	-0. 1
7500	+0. 1	+0. 1	0. 0	-0. 3
10000	-0. 3	-0. 1	-0. 2	-0. 3

GRAPHS



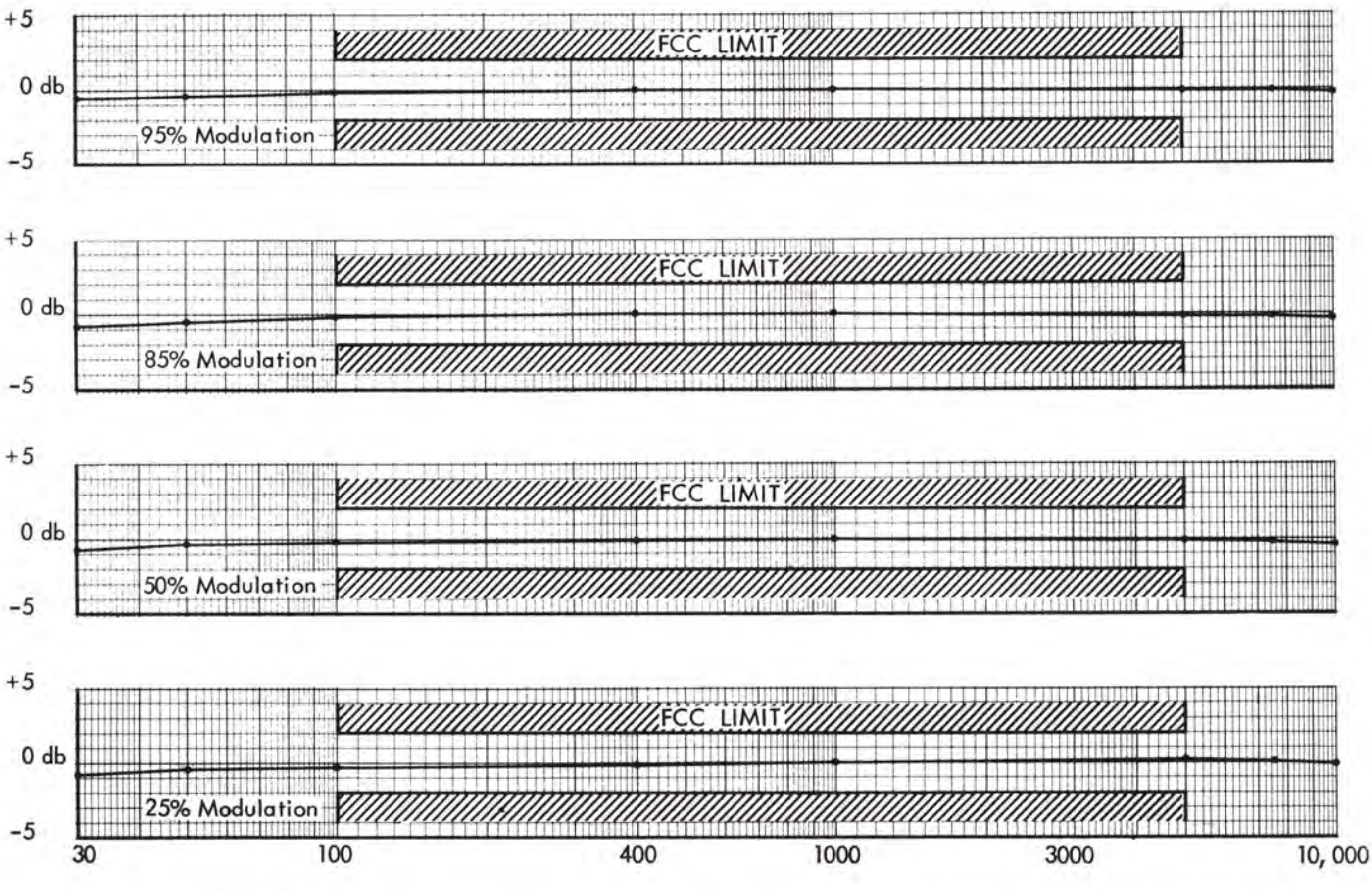
MEASUREMENTS OF FREQUENCY RESPONSE

500 WATTS

DATA

Modulating Frequency	Relative Response 25% Mod.	50% Mod.	85% Mod.	95% Mod.
30	-0. 9 db	-0. 8 db	-0. 7 db	-0. 6 db
50	-0. 4	-0. 4	-0. 4	-0. 4
100	-0. 3	-0. 2	-0. 2	-0. 1
400	-0. 1	-0. 1	0. 0	0. 0
1000	0. 0	0. 0	0. 0	0. 0
5000	+0. 2	-0. 1	-0. 1	-0. 1
7500	+0. 1	-0. 2	-0. 1	-0. 1
10000	-0. 1	-0. 4	-0. 3	-0. 2

GRAPHS



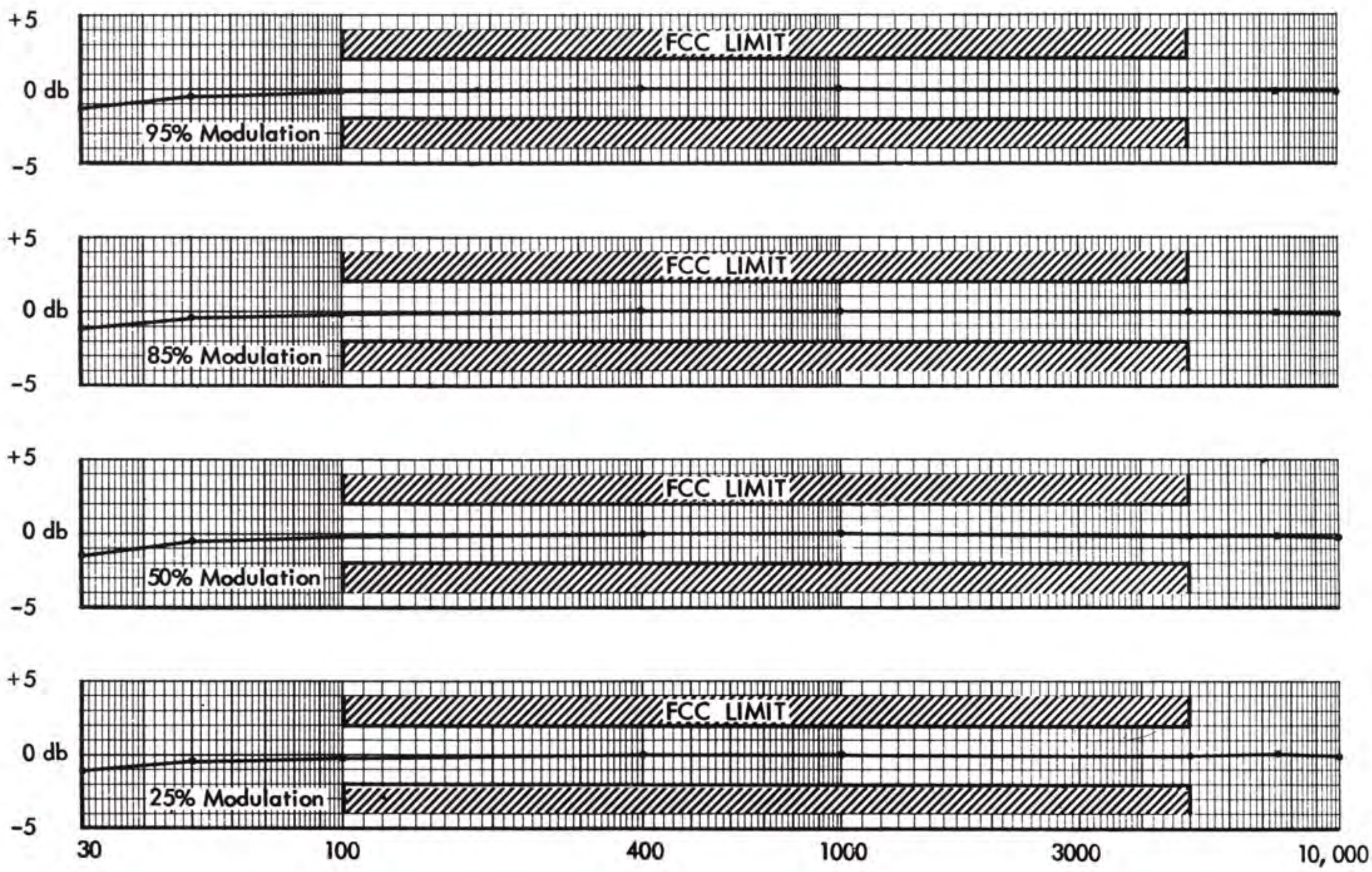
MEASUREMENTS OF FREQUENCY RESPONSE

250 WATTS

DATA

Modulating Frequency	Relative Response 25% Mod.	50% Mod.	85% Mod.	95% Mod.
30	-1. 1 db	-1. 5 db	-1. 3 db	-1. 4 db
50	-0. 5	-0. 6	-0. 5	-0. 6
100	-0. 2	-0. 2	-0. 2	-0. 2
400	0. 0	0. 0	0. 0	0. 0
1000	0. 0	0. 0	0. 0	0. 0
5000	-0. 1	-0. 1	-0. 1	-0. 1
7500	+0. 1	-0. 1	-0. 1	-0. 1
10000	-0. 1	-0. 2	-0. 2	-0. 2

GRAPH



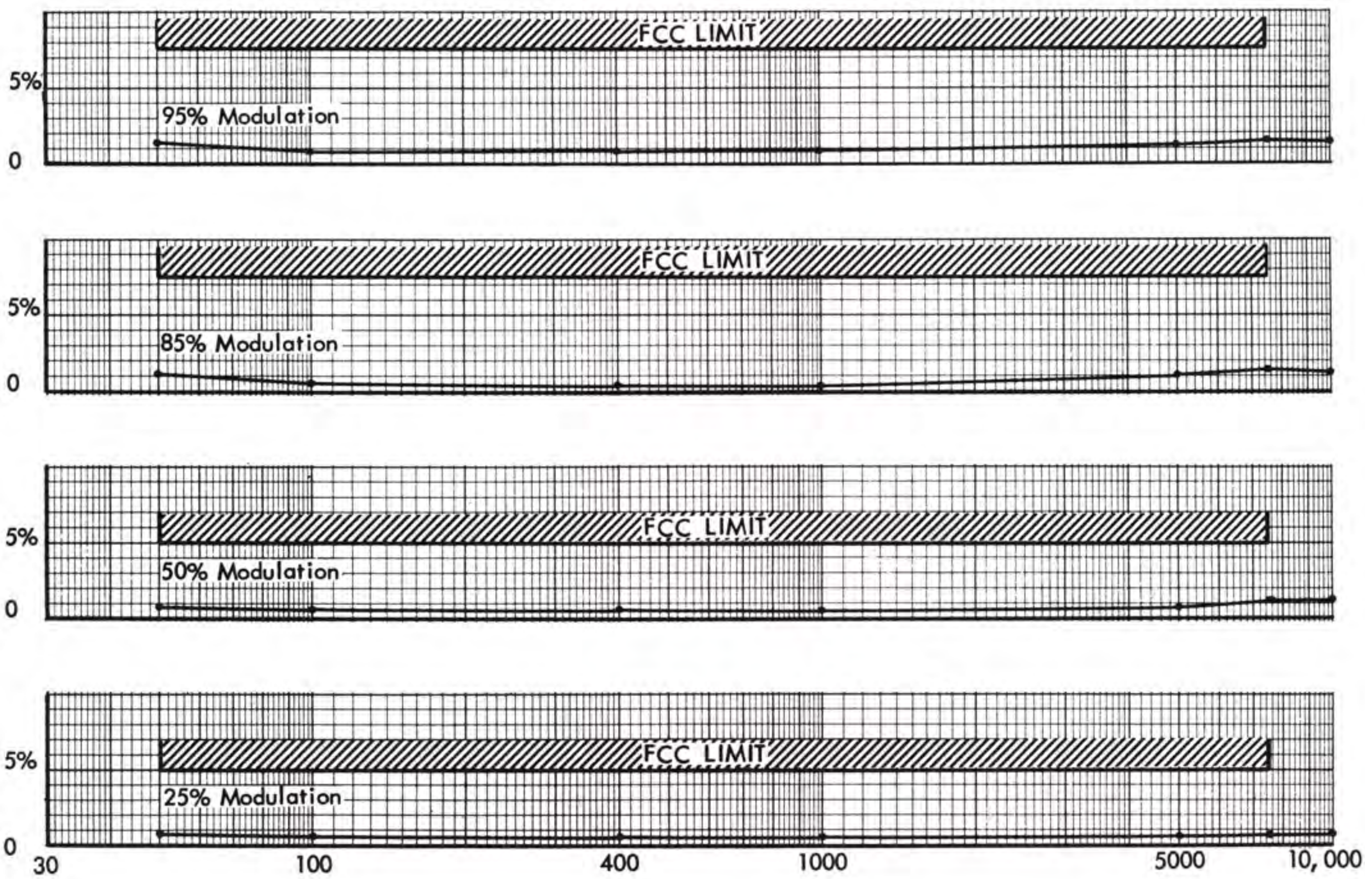
MEASUREMENTS OF AUDIO-FREQUENCY HARMONIC DISTORTION

DATA

1100 WATTS

Modulating Frequency	Harmonic Distortion (includes noise)			
	25% Mod.	50% Mod.	85% Mod.	95% Mod.
50 cps	0. 79 %	0. 78 %	1. 05 %	1. 35 %
100	0. 68	0. 62	0. 52	0. 81
400	0. 61	0. 58	0. 38	0. 86
1000	0. 56	0. 54	0. 36	0. 88
5000	0. 60	0. 73	1. 00	1. 18
7500	0. 76	1. 20	1. 38	1. 42
10000	0. 77	1. 20	1. 25	1. 40

GRAPHS



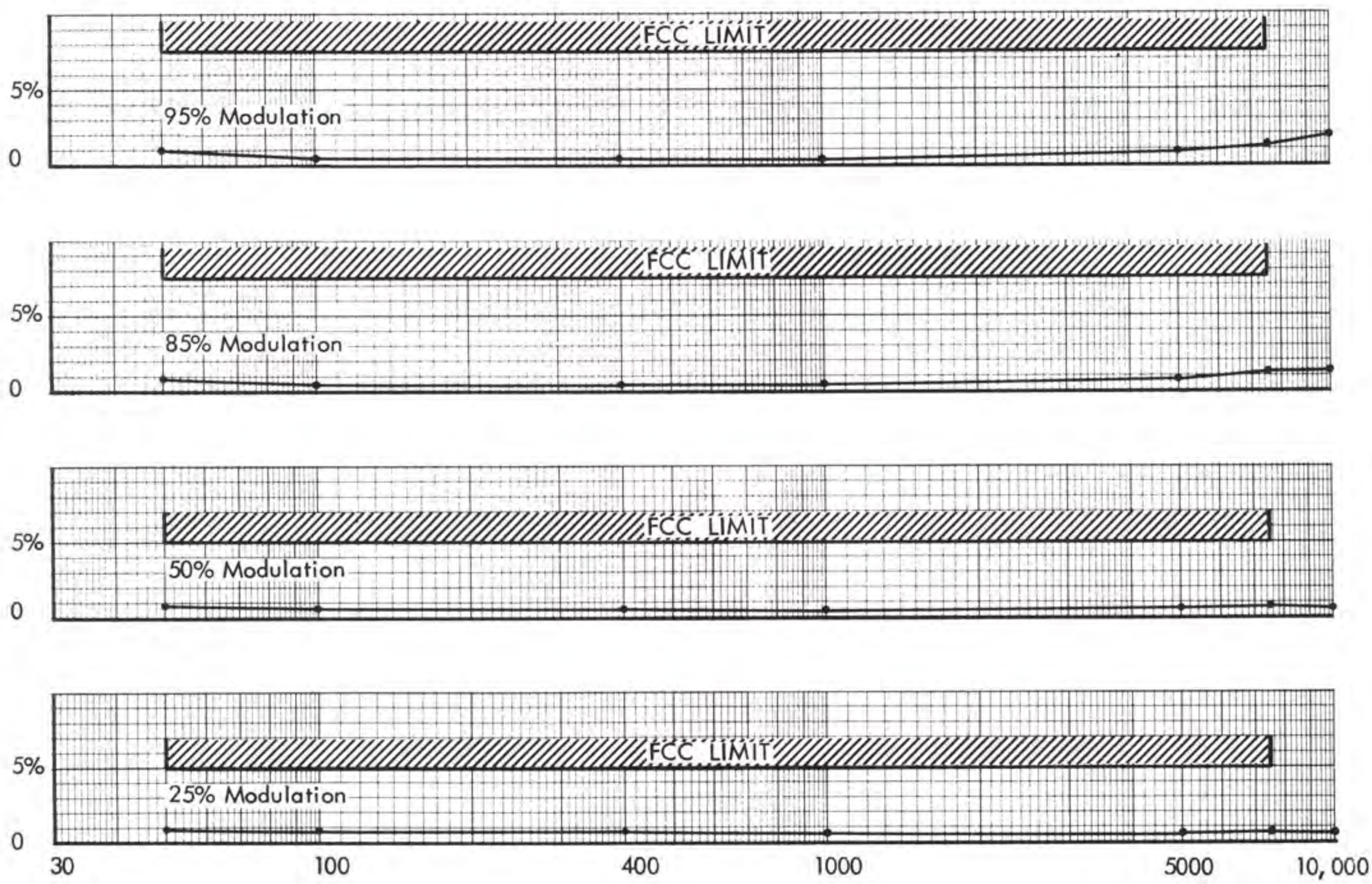
MEASUREMENTS OF AUDIO-FREQUENCY HARMONIC DISTORTION

500 WATTS

DATA

Modulating Frequency	Harmonic Distortion (includes noise)			
	25% Mod.	50% Mod.	85% Mod.	95% Mod.
50	0. 97 %	0. 78 %	0. 92 %	0. 98 %
100	0. 68	0. 53	0. 48	0. 48
400	0. 70	0. 52	0. 41	0. 48
1000	0. 66	0. 43	0. 37	0. 34
5000	0. 61	0. 57	0. 77	0. 77
7500	0. 66	0. 69	1. 05	1. 20
10000	0. 65	0. 64	1. 11	1. 80

GRAPHS



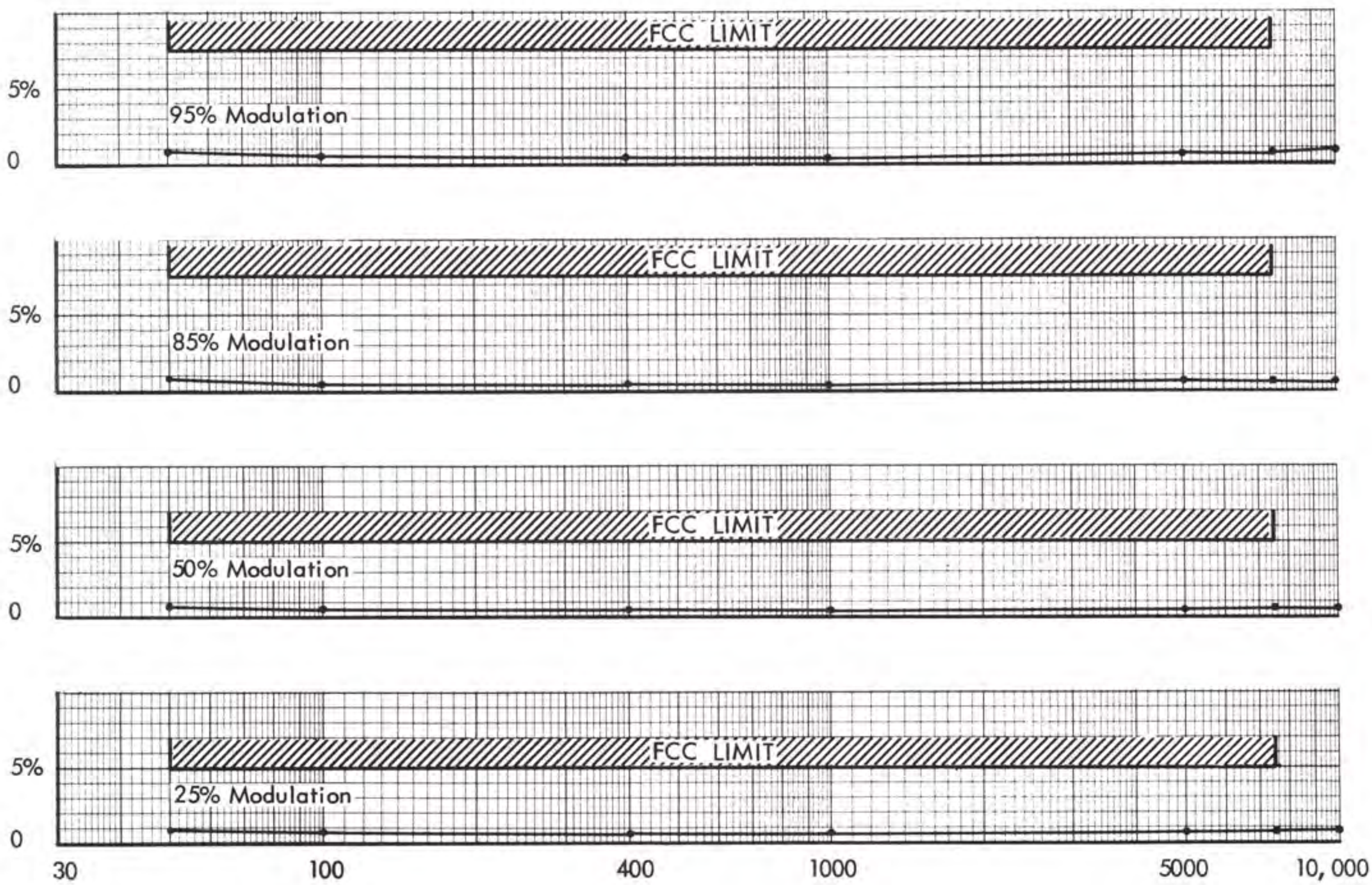
MEASUREMENTS OF AUDIO-FREQUENCY HARMONIC DISTORTION

250 WATTS

DATA

Modulating Frequency	Harmonic Distortion (includes noise) 25% Mod.	50% Mod.	85% Mod.	95% Mod.
50	0.90 %	0.70 %	0.76 %	0.84 %
100	0.71	0.51	0.46	0.50
400	0.68	0.43	0.37	0.38
1000	0.67	0.38	0.34	0.34
5000	0.72	0.48	0.61	0.63
7500	0.80	0.56	0.58	0.58
10000	0.84	0.55	0.51	0.88

GRAPH

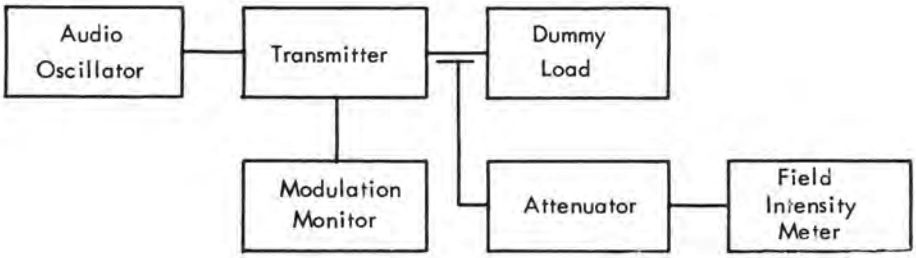


MEASUREMENT OF BANDWIDTH OCCUPIED

METHOD

While the transmitter was operated into a dummy load at power levels of 1100 watts, 500 watts, and 250 watts with 85 percent modulation by 7,500 cps sine waves, the amplitude of the second-order sidebands was observed with a field intensity meter operated as a tuned voltmeter. The meter selectivity was measured and found to provide a rejection of 53 db to frequencies 15 kc removed from center frequency.

BLOCK DIAGRAM



DATA

	250 Watts		500 Watts		1100 Watts	
Frequency	Observed Level	Relative Level	Observed Level	Relative Level	Observed Level	Relative Level
1225 kc	+ 50 dbu	-51 db	+ 52 dbu	-51 db	+ 57 dbu	-50 db
1240 (Carrier)	+101	0	+103	0	+107	0
1255	+ 56	-45	+ 59	-44	+ 63	-44

The level of higher-order sidebands or spurious emissions that could be detected in the vicinity of the carrier were found to be lower than -70 db relative to carrier.

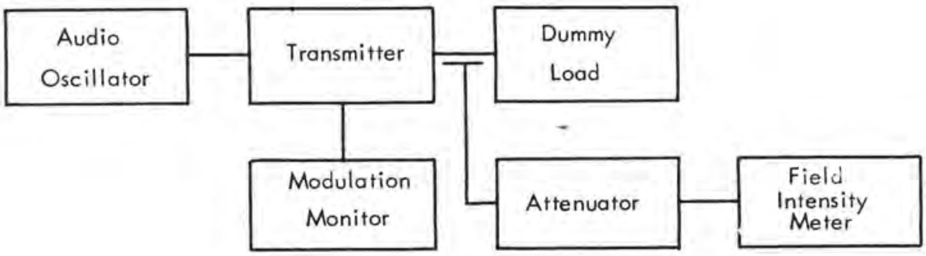
MEASUREMENT OF SPURIOUS EMISSIONS

METHOD

A sample of the output signal appearing across a dummy load was coupled by a small capacitor into an attenuator. The amplitude of the signal appearing at the output of the attenuator was measured with a field-intensity meter operated as a tuned voltmeter. Since r-f coupling to the attenuator was made with a very small capacitor, the coupling increased 6 db per octave.

All measurements for spurious emissions were made while the transmitter was being modulated 85 percent with 7500 cycle sine waves at the power levels shown. The impedance of the dummy load was measured at each harmonic frequency up to 5 mc. As shown by the following data, this impedance at the harmonic frequencies measured was essentially the same as at the fundamental frequency.

BLOCK DIAGRAM



DATA

Harmonic	Frequency	Coupling Correction	250 Watts Measured Output	250 Watts Relative Level	500 Watts Measured Output	500 Watts Relative Level	1100 Watts Measured Output	1100 Watts Relative Level
1	1240 kc	0.0 db	97.0 dbu	0.0 db	100.0 dbu	0.0 db	103.0 dbu	0.0 db
2	2480	- 6.0	25.0	-78.0	29.0	-77.0	32.0	-77.0
3	3720	- 9.5	26.0	-80.5	33.0	-76.5	34.5	-78.0
4	4960	-12.0	14.0	-95.0	13.0	-99.0	18.0	-97.0
5	6200	-14.0	12.5	-98.5	13.0	-101.0	20.0	-97.0
6	7440	-15.6	14.0	-98.6	15.0	-100.6	18.0	-100.6
7	8680	-16.8	21.5	-92.3	20.0	-96.8	26.5	-93.3
8	9920	-18.0	32.5	-82.5	31.0	-87.0	37.0	-84.0
9	11,160	-19.1	22.5	-93.6	27.0	-92.1	33.0	-89.1
10	12,400	-20.0	<10.0	<-107.0	< 10.0	<-110.0	15.5	-107.5

Except in the vicinity of the carrier frequency, spurious emissions could not be detected at any frequency between 150 kc and 25 mc, other than the harmonics shown above.

MEASUREMENT OF SPURIOUS EMISSIONS (Continued)

LOAD IMPEDANCE USED FOR MEASUREMENTS OF SPURIOUS EMISSIONS

An air-cooled coaxial dummy load designed for television use was used as the transmitter load impedance for the measurements shown on Figure 5A. The load impedance at each harmonic frequency up to the 5 mc limit of the radio frequency bridge was measured by standard techniques and found to be as follows:

Harmonic	Frequency	Measured Impedance	
1	1240 kc	49.5	-j 0.3 ohms
2	2480	49.4	-j 0.8
3	3720	49.3	-j 0.5
4	4960	49.2	-j 0.6

From the above measurements and the known performance of the dummy load at VHF frequencies, it is believed that the measurements of the spurious voltages present in the transmitter output are not affected by changes of load impedance.

MEASUREMENTS OF CABINET RADIATION

METHOD

With the transmitter operated as above, at power levels of 250 watts and 1100 watts, the field intensity of spurious radiation from the cabinet and attached circuits was measured. For these tests, the transmitter was operated into the dummy load in such a manner that any emissions were radiated principally from the cabinet, control circuits, power leads, or audio leads. The spectrum was investigated at all frequencies up to the tenth harmonic of the carrier. All observed signals having a strength which was measurable on the Stoddart Type NM-20A field intensity meter employing a shielded loop are reported below. Observations of the extent of spurious radiations were made in several directions from the transmitter and the following measurements were made in the direction of maximum signal at a location free from surrounding wires or metal objects. The measurements were made at a distance of 63 feet from the transmitter. To minimize the effects of induction fields and other errors, it would have been desirable to measure at greater distances. However, the extremely low level of the observed spurious radiation did not permit such measurements.

The strength of these spurious radiations has been compared with the carrier frequency field intensity which would exist at the same point with the same transmitter power exciting a vertical radiator one-quarter wavelength in height having an optimum ground system. The unattenuated field intensity of the reference antenna would be 195 mv/m at one mile for one kilowatt. At the actual distance to the measuring point this would correspond to a field intensity of 144.2 dbu.

MEASUREMENT OF SPURIOUS EMISSIONS (Contined)

DATA

CABINET RADIATION

	250 Watts		500 Watts		1100 Watts	
Harmonic	Measured Field	Relative Level	Interpolated Field	Relative Level	Measured Field	Relative Level
2	< 24. 1 dbu	< -114. 1 db	< 24. 1 dbu	< -117. 1 db	24. 1 dbu	-120. 1 db
3	30. 9	-107. 3	34. 3	-106. 9	37. 7	-106. 5
4	26. 4	-111. 8	30. 6	-110. 6	34. 8	-109. 4
5	23. 5	-114. 1	25. 8	-115. 4	28. 0	-116. 2
6	< 28. 4	< -109. 8	< 28. 4	< -112. 8	< 28. 4	< -115. 8
7	19. 1	-119. 1	22. 1	-119. 1	25. 1	-119. 1
8	35. 6	-101. 6	38. 4	-102. 8	41. 2	-103. 0
9	< 16. 8	< -121. 4	< 16. 8	< -124. 4	< 16. 8	< -127. 4
10	< 15. 1	< -123. 1	< 15. 1	< -126. 1	< 15. 1	< -129. 1

Spurious radiation could not be detected at any frequency between 150 kc and 25 mc other than the harmonics shown above.

MEASUREMENT OF CARRIER SHIFT

The carrier shift between conditions of no modulation and 100 per cent modulation at 400 cycles per second did not exceed the following values:

Power Level	Carrier Shift
1100 watts	2.0 %
500	2.0 %
250	1.5 %

MEASUREMENT OF HUM AND NOISE

The demodulated transmitter output resulting from hum and noise was measured relative to 100% modulation and found to be as follows:

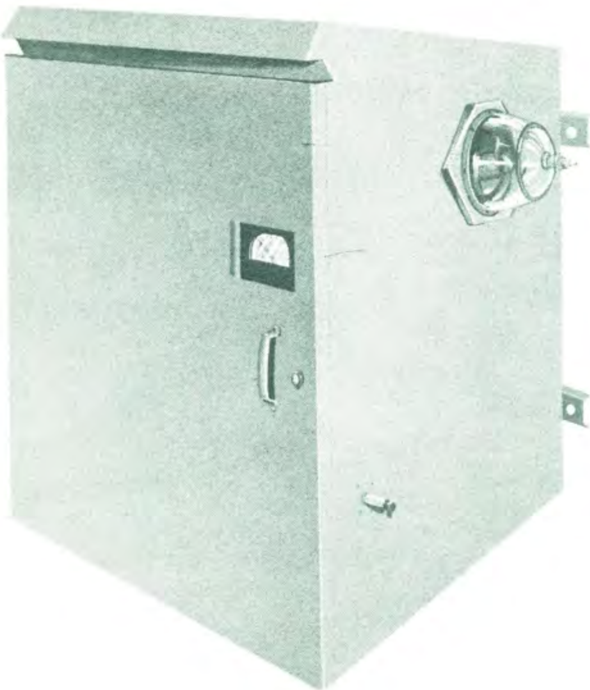
Power Level	Hum & Noise
1100 watts	-61 db
500	-61
250	-58

TEST EQUIPMENT

Audio oscillator	Waveform	Type 510B	Serial 03035
Modulation monitor	General Radio	Type 1931A	Serial 968
Noise and distortion meter	General Radio	Type 1932A	Serial 928
Field intensity meter	Stoddart	Type NM-20A	Serial 130-26
Attenuator	General Radio	Type 874	30 db
Dummy load	RCA (Bird)	Type 93405	Serial 507
Signal generator	General Radio	Type 684A	Serial 214
Bridge	General Radio	Type 916AL	Serial 2341

MODEL LCU-1 COUPLING UNIT

WILL MATCH OUTPUT OF 707 TO TRANSMISSION LINES HAVING IMPEDANCE OTHER THAN 50 OHMS. WHEN ORDERING, SPECIFY IMPEDANCE OF LINE TO BE MATCHED.



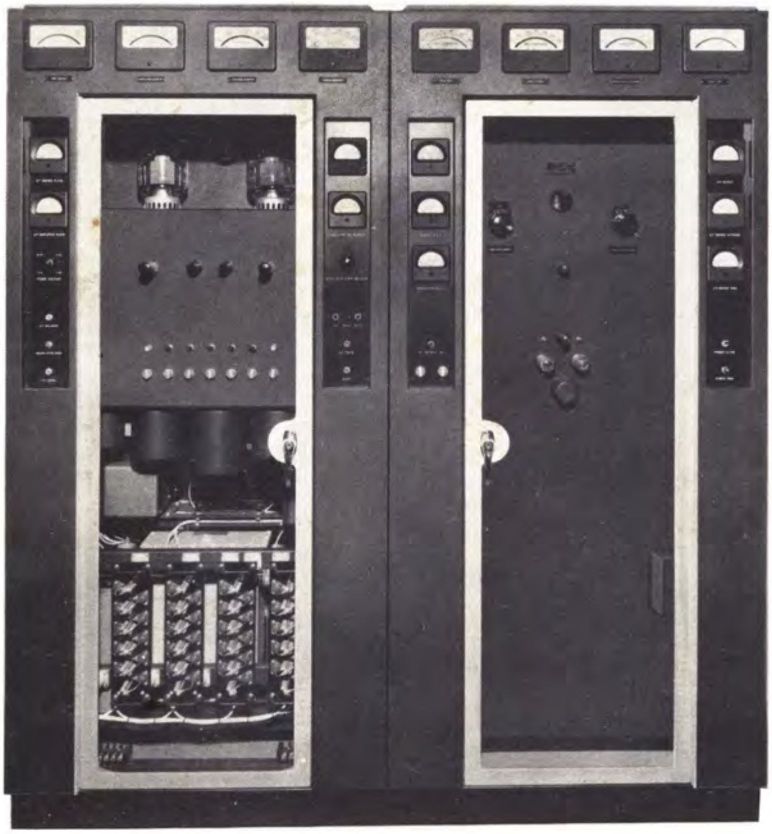
MODEL ACU-301 ANTENNA COUPLER

AN IKW ANTENNA COUPLER FOR MATCHING ANY TRANSMISSION LINE TO AN ANTENNA HAVING A RESISTANCE OF FROM 10 TO 1000 OHMS AND A REACTANCE OF $\pm$ J 200. STANDARD "TEE" NETWORK IS USED. CABINET IS WEATHERPROOF AND IS AVAILABLE IN ALUMINUM OR STEEL. 3-INCH METER AND METER SHORTING SWITCH (FOR LIGHTNING PROTECTION) ARE INCLUDED.

WHEN ORDERING, SPECIFY FREQUENCY AND POWER, TYPE OF TRANSMISSION LINE TO BE USED AND HEIGHT OR LENGTH OF RADIATOR.

BAUER Model FB 5000-J

5000 Watt AM Transmitter



This newest Bauer 5000 watt AM transmitter utilizes conservative design of all circuits and today's most advanced components to provide you with top performance plus minimum maintenance through operation of all components well below rating. The final RF tube, for example, is a ceramic tetrode (Eimac 4CX5000A) that provides a maximum dissipation capability twice that of conventional transmitter design. At the same time power consumption has been reduced several kilowatts. Bauer's advanced design has also reduced the tube complement by 50% and provided easy accessibility to all components. These are just a few of the many advanced features available as standard equipment, when you specify the Bauer Model FB-5000-J. Complete detailed specifications available upon request.

Standard Features

Vacuum Capacitors	100% Silicon Diode Rectifiers
Automatic Filament Regulation	Automatic Protective System
Built-In Remote Control	One Knob Tuning

BAUER ELECTRONICS CORPORATION — 1661 Industrial Way
San Carlos, California, U.S.A. — Telephone LYtell 3-0800

EXPORT DEPARTMENT **FRAZAR & HANSEN, LTD. — 301 Clay St., San Francisco 11, California** **CABLE "FRASEN"**

DESIGN FEATURES OF A BROADCAST TRANSMITTER KIT

A new development in the broadcast equipment field is the availability of kits. The new 1000/250 watt transmitter kit offered by Bauer Electronics Corp. is described in this article.

By PAUL GREGG*

THE "do-it-yourself" trend has reached the broadcast equipment field with the introduction of the Bauer Model 707 AM transmitter. The design was based on an existing one-kilowatt Bauer model but has been simplified mechanically to meet the modern concept of "kit form" electronics.

Not only did this simplification make the transmitter easier to build, it also provided a layout that permits complete component accessibility. Note in Figures 2 and 3 the ease with which every component can be reached. All wiring is accomplished with just one harness which is supplied with the kit, properly laced, and with each wire number coded. All small components are mounted on well marked component boards (such as Fig. 4). Eleven of these insulated boards are used in various sections of the transmitter. An illustrated assembly instruction book shows the correct placement of each part and outlines each step of the wiring.

The average assembly time is 100 hours. When a Bauer kit transmitter is completed the builder sends a notice to the manufacturer, who then sends a representative to the station to run a proof-of-performance on the completed transmitter. When the representative is satisfied that the transmitter meets factory specifications he installs the Bauer nameplate and it is ready for use.

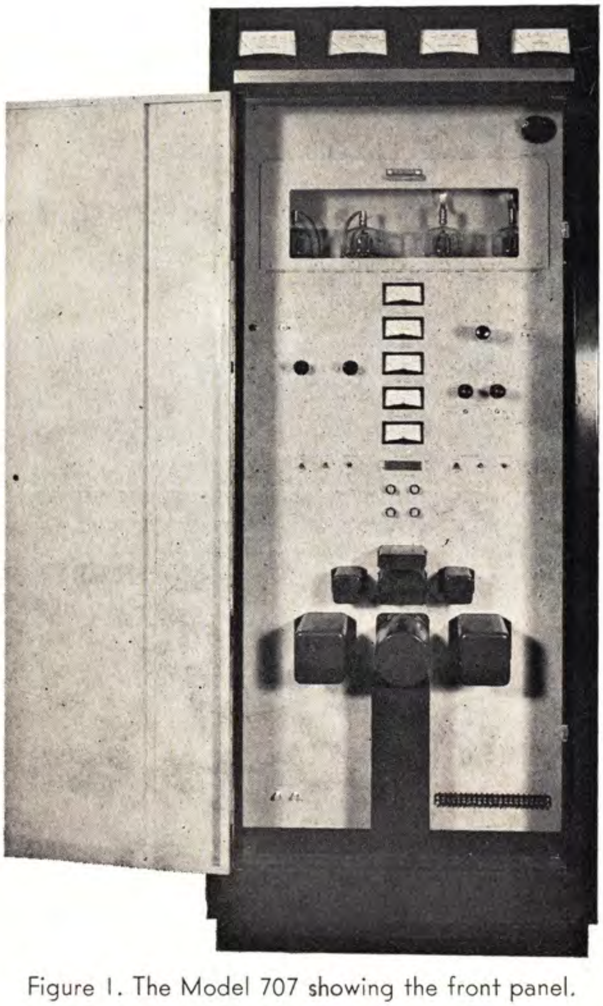


Figure 1. The Model 707 showing the front panel.

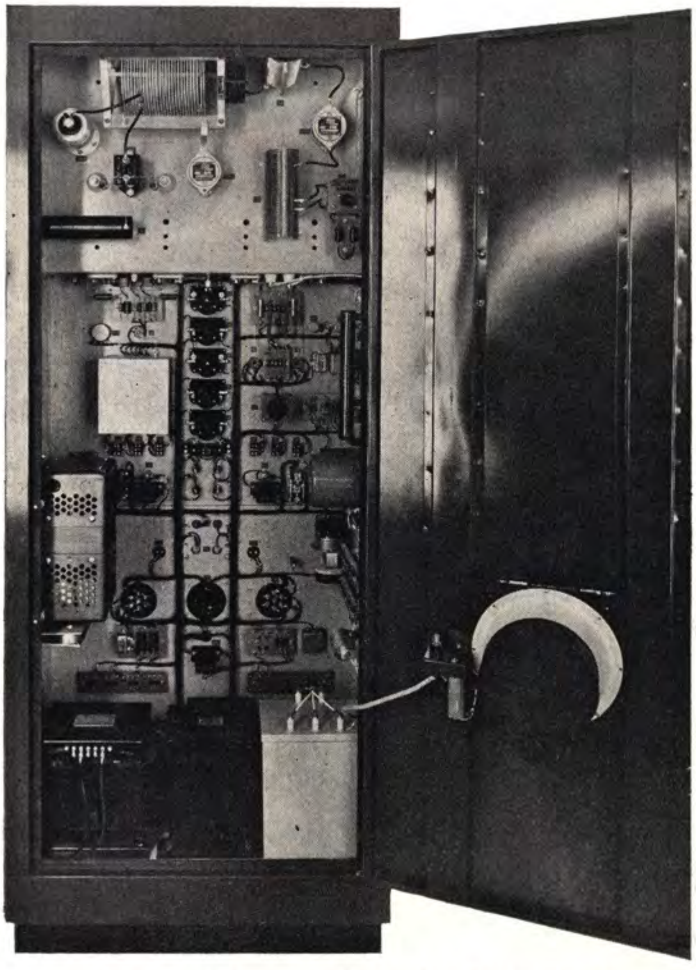


Figure 2. Rear view of completed transmitter.

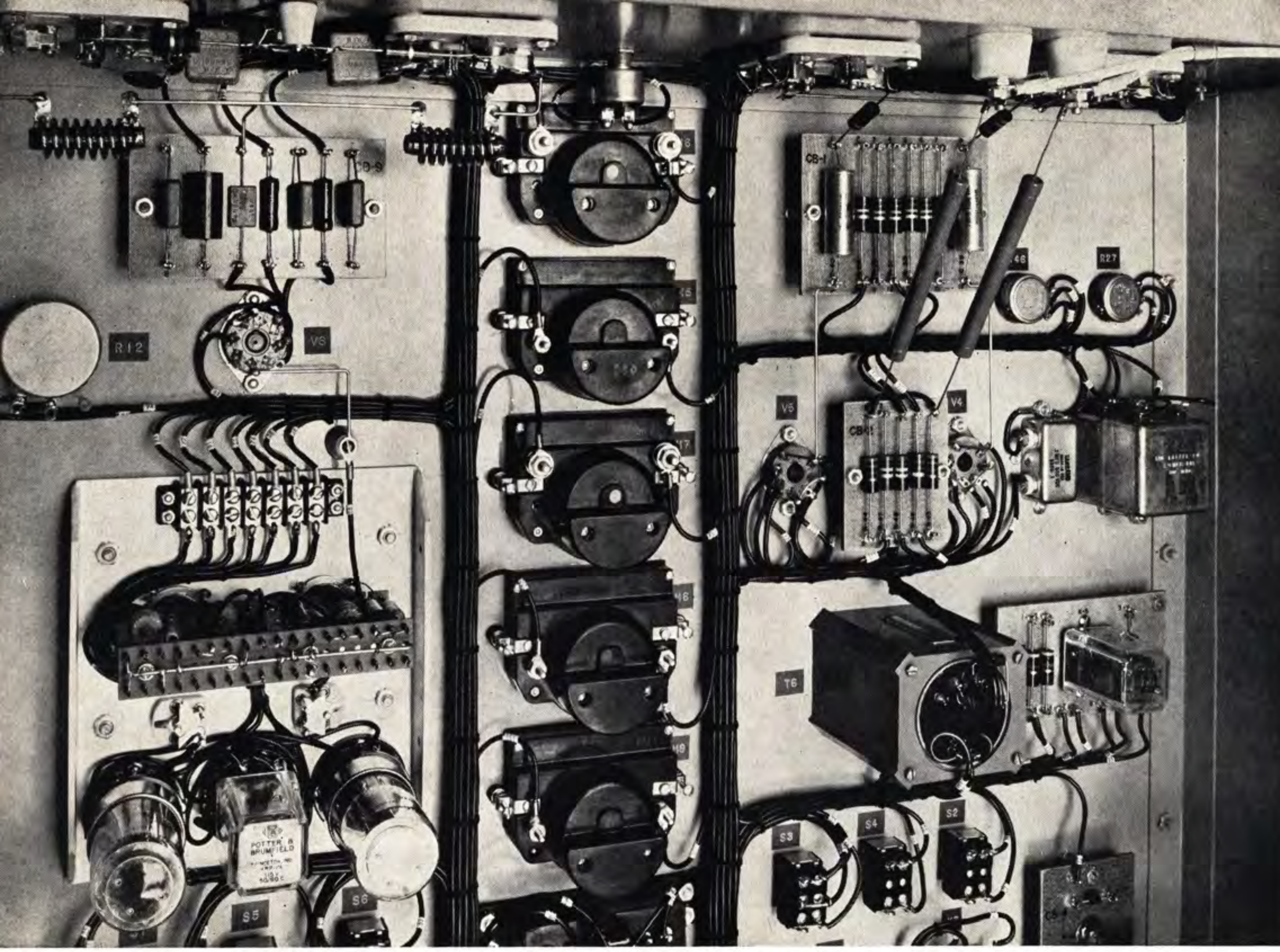


Figure 3. Closeup of transmitter rear.

The RF Section

Looking from the rear (Fig. 2) the RF section is on the left side of the transmitter. Figure 3 shows a closeup of the oscillator-buffer section with the cover removed. This section is assembled on a separate shielded chassis, factory wired and checked, to insure stability. There are provisions for two vacuum crystals and either one can be selected by a relay which is controlled from a switch on the front panel or remotely. The vacuum crystal supplied with the Model 707 is capable of controlling the carrier frequency with an accuracy of $\pm$ 5 cps without the use of heaters, thermostats or ovens.

The oscillator is a Type 6AG7 connected in an electron-coupled circuit and is followed by another Type 6AG7 functioning as a Class A buffer. The driver is a Type 6CA7/EL-34 operating as a Class C stage. The driver excites two Type 4-400A tetrodes operating in parallel as a plate modulated power amplifier. A motor-driven rheostat in the cathode circuit of the final stage controls output power so as to compensate for variations in line voltage. The final tank circuit is unique in that tuning is accomplished through the use of a variable vacuum capacitor, a top quality method not usually found in one-kilowatt transmitters.

The transmitter is designed to match a 50-ohm unbalanced load. The RF output circuit provides the required impedance transformation and adequate harmonic suppression through the use of a "Pi" network followed by a "Tee" network. Additional suppression of second harmonic output is provided by connecting the load to the "Pi" network coil at a point where the impedances of the coil and a fixed capacitor are series resonant at the second harmonic frequency. A simple adjustment of this circuit provides harmonic suppression well beyond that required by the new FCC rules made effective last Jan. 1.

The Bauer Model 707 was one of the first transmitters type accepted by the FCC under these new rules. In looking at Figure 2 you will no-

Figure 4. Component board of the low voltage power supply.

*Bauer Electronics Corp., Burlingame, Calif.

tice the dummy antenna switch. The built-in dummy load is made up of four "ohmspun" grids mounted in the outgoing air stream. Since all the dummy antennas used in the broadcast band are reactive, a means is provided in the Model 707 to automatically cancel out this reactance at any frequency and provide a pure resistive load.

The AF Section

Looking from the rear (Fig. 2) the AF section is on the right side of the transmitter. Four tubes are used in this section. A pair of push-pull 6SJ7's drive a pair of push-pull 4-400A tetrodes operating as Class AB-1 modulators. 8DB of inverse feedback is provided over the two audio stages. One interesting feature of the design is that the modulator plate current when fully modulated does not vary more than 10 per cent over a 30 to 12,000 cycle range. The over-all response of the transmitter is flat within $\pm$ 1.5 db over a 30 to 12,000 cycle range. Distortion is below 2 per cent and noise is down $-$ 64 db.

The Power Supplies

Vacuum tubes have been eliminated in all high voltage, low voltage and bias rectifier circuits in the Bauer Model 707 in favor of semiconductor units. Type 1N2071 silicon diodes are used exclusively, 16 in the low voltage supply, 4 in the bias supply and 56 in the high voltage supply. The low voltage supply is located on the left side of the transmitter (Fig. 2—lower left). The bias supply is located on the lower right and the high voltage rectifier (two plug-in sections) is located on the right above the modulation transformer.

Standard bridge rectifiers are used throughout and transformer center taps play an important part in the low and high voltage supplies. The tap on the low voltage supply provides the 400 volts necessary for the low level audio stages and the oscillator-buffer section. In the high voltage section the center tap provides the 1500 volts necessary for power reduction thus providing a transmitter that draws no more power during the cutback operation than any of the many 250-watt transmitters now in use.

An interesting feature of the power cutback circuit is that the reduced final plate voltage has an additional filter allowing excellent noise specifications (—64DB) at 250 watts. When reducing power a reduction in drive to the final and a 6DB reduction in the audio input are automatic. Power cutback to 500 or 250 watts is standard equipment on the Bauer 707. Cutback is essential for the Class IV station with a lower nighttime power and is a bonus for the kit builder who can perform initial tune-up at low power.

The Control Circuits

With the use of semi-conductor power supplies the Bauer control circuits were greatly simplified and automatic starting was provided. Actually, only one master start-stop switch is necessary since the silicon power supplies require no warmup time. High voltage comes on automatically as soon as there is sufficient grid drive to the final tubes to close an underdrive relay. The master start-stop switch is of the new illuminated bar type (Fig. 1—middle), three inches long and easy for even the newest third-class operator to find. An interesting feature of the control circuit is a "second chance" device that automatically resets the overload relays in the event of an outage. This circuit is adjustable so that single short overloads will not take the transmitter off the air although continued overloads will. The relay protective system can be easily reset by remote control. The modulator and final RF stages, as well as the high-voltage transformer, are well protected by reliable delay-type overload relays that eliminate nuisance outages due to momentary overloads. Low voltage and control circuits are fused by the new indicator type fuse holders.

An additional feature found in the Bauer 707 is automatic voltage control. A Sola constant voltage transformer of the new low harmonic type (Fig. 2—left side) maintains all filament and low voltage supplies within one per cent. Filament rheostats that require manual adjustment are thereby eliminated and tube life is extended.

Cooling of tubes and components is controlled through the use of a pressurized cabinet. Filtered air is drawn in by a high quality blower on the rear door, circulated throughout the cabinet, and then forced through the 4-400A tube sockets for maximum cooling. All switching and control functions are pre-wired to the main terminal board making remote control a simple matter. In addition the plate voltage and plate current kits are built in—a standard part of the 707 circuitry. Note in Figure 1 the number of meters, nine in all, providing continuous metering of all circuits.

Summary

The engineer who builds the 707 kit can gain valuable experience during the construction period. Also he achieves a familiarity with the transmitter that will prove very helpful over the years that he will service it. Since professional tools are supplied with every kit he will be able to turn out a first class transmitter and capture the personal satisfaction that goes with a job well done.

Reprinted from June, 1960, *Broadcast Engineering*

THE BAUER 1000/250 WATT AM TRANSMITTER KIT

GENERAL DESCRIPTION

The Bauer 1000/250 watt AM Transmitter Kit is an established design based on the many years of success of the Bauer FB-1000-J, yet utilizes today's most advanced components to provide optimum performance with a minimum of maintenance.

The Model 707 Transmitter Kit is shipped complete with: detailed assembly instructions; a coded wiring harness; pre-marked component boards for individual transmitter sections; a factory assembled and checked oscillator-buffer section; a complete set of operating tubes; a vacuum crystal for your operating frequency; and a tool kit.

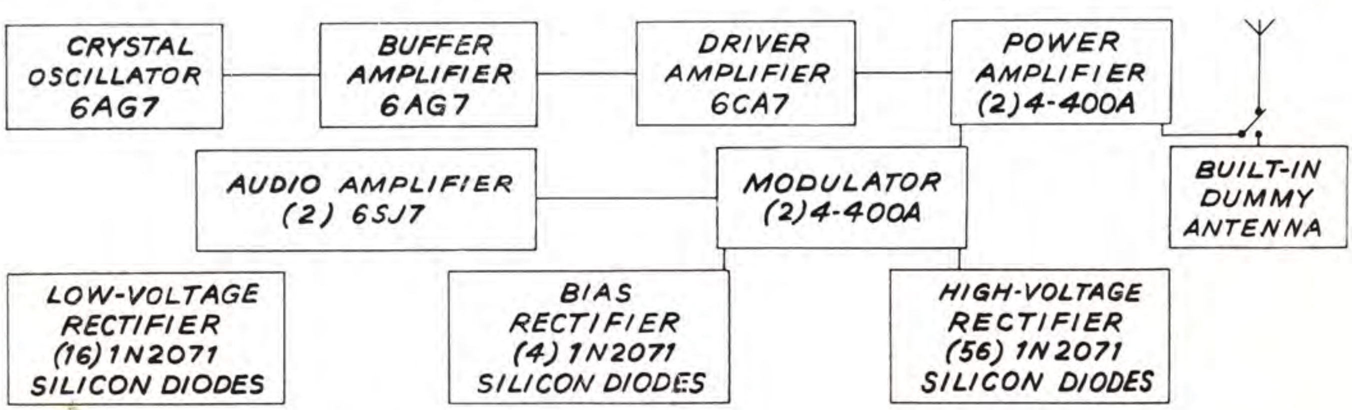
Upon completion of your Bauer Kit a representative of the company will inspect and test your assembled transmitter on location . . . at no additional cost. It must meet factory specifications in every way. This is your assurance of a transmitter of factory quality.

STANDARD EQUIPMENT

Silicon Rectifiers in All Power Supplies
Variable Vacuum Condenser
Automatic Voltage Control
Built-In Dummy Antenna
Vacuum Crystal
Power Reduction — 1000/500 or 250 Watts
Pressurized Cabinet
Built-In Remote Control Facilities
Complete Set of Operating Tubes
Tool Kit

GENERAL PERFORMANCE CHARACTERISTICS AND SPECIFICATIONS

TYPE OF EMISSION	A3
RATED POWER OUTPUT	1000/500/250 watts
POWER OUTPUT CAPABILITY	1100 watts
R.F. OUTPUT IMPEDANCE	50 ohms, unbalanced
FREQUENCY RANGE	540-1600 Kc
FREQUENCY STABILITY	±5 cps
AUDIO INPUT LEVEL (100% mod.)	10 dbm
FREQUENCY RESPONSE (0-95% mod.)	
1000/500/250 watts	
50-10,000 cps	±0.5 db
30-12,000 cps	±1.5 db
DISTORTION (0-95% mod.)	
1000/500/250 watts	
50-10,000 cps	2.0% max
CARRIER SHIFT 1000/500/250 watts	less than 3%
NOISE LEVEL (below 100% mod.)	
1000 and 500 watts	—60 db
250 watts	—57 db
POWER CONSUMPTION	
(For one kilowatt carrier power)	
Average modulation	3300 watts
100% modulation	3950 watts
POWER REQUIREMENTS	208-240 volts 50/60 cycles Single phase
DIMENSIONS —	
Height	75"
Width	30"
Depth	25"
NET WEIGHT	800 pounds (approx.)



Bauer
ELECTRONICS CORPORATION • 1011 INDUSTRIAL WAY, BURLINGAME, CALIF.
PHONE DIAMOND 2-5080

  3-60-2500