

TECHNICAL SUMMARY

ELECTRICAL CHARACTERISTICS:

TRANSMITTER	AURAL	VISUAL
Type of Emission	A3 (FM)	A5 (AM)
Frequency Range	54 to 216 mc	54 to 216 mc
Power Output (nominal)	2.5 kw max	5 kw max peak
R-F Output Impedance	51.5/72 ohms †	51.5/72 ohms †
Carrier Frequency Stability	± 0.002 per cent	± 0.002 per cent
Modulation Capability (max.)	± 50 kc	±90%
Method of Modulation	Reactance Tube	Grid-amplitude
Input Impedance	600 ohms	75 ohms
Input Voltage	10 dbm ± 2 dbm	1.0 to 2.5 volts, peak to peak
Frequency Response	*Uniform within ± 1 db from 30 to 15,000 cycles	**2 db at 0.5 mc 2 db at 1.25 mc 2 db at 2 mc 2 db at 3 mc 3 db at 4 mc
Frequency Deviation - Normal	± 25 kc	
Audio Frequency Distortion (Output of standard de-emphasis network)		
50 to 100 cycles	1.5 per cent	
100 to 7500 cycles	1.0 per cent	
7500 to 15,000 cycles	1.5 per cent	
Noise Level		
FM Noise (below ±25 kc swing) . . .	60 db	
Amplitude Noise (RMS below carrier).	50 db	30 db
Amplitude Variation, Peak-to-Peak, (over one frame)		Less than 5 per cent
Efficiency Factor "F"	0.62	
Attenuation, Low Frequency Edge of Channel		20 db min.

† Output impedance depends on sideband filter supplied.

‡ Output as required by diplexer impedance.

* Without pre-emphasis network.

** Maximum variation below idealized rectified vestigial sideband response.

CONTROL CONSOLE:

Impedances-

Sound Line Input	}	600 ohms, balanced
Sound Line Output			
Sound Monitor Output			
External Sound Monitoring Circuits (three)			10,000 ohms, balanced
Visual Monitor Inputs (six)			75 ohms, unbalanced
Master Monitor--See Instruction Book IB-36021-2.			

POWER REQUIREMENTS:

TRANSMITTER

Line Voltage 208/230 volts
 Phase 3
 Frequency 60 cycles
 Instantaneous Regulation (maximum) 5 per cent
 Power Consumption, black level (approximate)
 Channels 2 to 6 24,000 watts
 Channels 7 to 13 27,000 watts
 Power Factor 90 per cent
CONTROL CONSOLE (Crystal Heaters, Convenience Outlets, Monitoring Equipment)
 Line Voltage 115 volts
 Phase single
 Frequency 60 cycles
 Power Consumption (approximate) 1500 watts

POWER DISSIPATION:

TOTAL POWER DISSIPATION-

Channels 2 to 6 18 kw (1023 Btu/min.)
 Channels 7 to 13 21 kw (1195 Btu/min.)
DISSIPATION IN WATER COOLER (approximately)-
 Channels 2 to 13 7 kw (398 Btu/min.)
DISSIPATION IN CABINETS (approximately)-
 Channels 2 to 6 11 kw (625 Btu/min.)
 Channels 7 to 13 14 kw (796 Btu/min.)

MECHANICAL SPECIFICATIONS:

DISTILLED WATER CAPACITY, WATER COOLER TANK (Normal Installation).....10 Gallons

DIMENSIONS AND WEIGHTS

	TRANSMITTER	CONTROL CONSOLE	WATER COOLER	R-F LOAD (EXCLUDING METER)
Length	208 in.	69 in.	36 in.	35 1/8 in.
Height	84 in.	40 in.	54 in.	7 in.
Depth	42 1/2 in.	36 in.	25 in.	5 1/8 in.
Weight, approx.	8,000 lbs.	*400 lbs.	800 lbs.	-

* Does not include Master Monitor (68 lbs.)

TUBE COMPLEMENT:

SUMMARY OF TUBES IN TT-5A TRANSMITTER

RCA TYPE TUBE	AURAL TRANS. SECTION	VISUAL TRANS. SECTION
2BP1	1	
2E26	2	
*4D21/4-125-A	4	4
4E27/8001	2	8
*4X500-A	2	2
5U4G	4	1
502-A	1	1
6AC7	5	
6AG7		6
6AL5	2	2
*6AS7G		8
6H6		1
6J5		3
6SH7	1	3
6V6	4	
*8D21	1	1
807		2
816		4
1614	4	1
8008	9	15
0A3/VR75		1
0C3/VR105	1	3
0D3/VR150	2	8

For tube functions see schematic diagrams.

* Data sheets for these tubes are included under MAINTENANCE.