



ELECTRON TUBE DEPARTMENT ■ COMPONENTS DIVISION
INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION, CLIFTON, NEW JERSEY

FW-208
IATRON *

T E N T A T I V E

DESCRIPTION:

THE FW-208 IS A 7.5 INCH IATRON (DIRECT VIEW STORAGE CATHODE-RAY TUBE) THAT PRODUCES A BRIGHT VISUAL DISPLAY OF ELECTRICALLY STORED INFORMATION. IT IS ELECTROMAGNETICALLY FOCUSED AND DEFLECTED. THE TUBE DISPLAYS BRIGHT IMAGES THAT CAN BE VIEWED IN DIRECT DAYLIGHT, AND FEATURES THE ABILITY TO WRITE, STORE, AND ERASE SIGNAL INFORMATION AT THE WILL OF THE OPERATOR. GREY SHADES ARE PRODUCED IN ACCORDANCE WITH THE AMPLITUDE VARIATIONS OF THE INPUT SIGNAL. THE TUBE HAS TWO ELECTRON GUNS, A WRITING GUN, WHICH WRITES THE INPUT SIGNAL ON A STORAGE MESH, AND A FLOOD GUN WHICH ILLUMINATES THE PHOSPHOR IN ACCORDANCE WITH THE STORED SIGNAL.

GENERAL:

DIMENSIONS	SEE OUTLINE AND FUNCTIONAL SCHEMATIC
MINIMUM USEFUL DISPLAY DIAMETER	6.0 INCHES
NOMINAL TUBE DIAMETER	7.5 INCHES
PHOSPHOR	P-20 ALUMINIZED
OPERATING POSITION	ANY
CATHODE PRE-HEATING TIME - NOTE 1	30 SECONDS
FOCUS	MAGNETIC
DEFLECTION	MAGNETIC

OPERATING VALUES AND TYPICAL PERFORMANCE CHARACTERISTICS:

	<u>FLOOD SECTION</u>
VIEWING SCREEN	/10 KV
BACKING ELECTRODE	/10 VDC
COLLECTOR	/150 VDC
ANODE #4	/75 VDC
ANODE #3	/10 TO /30 VDC ADJUSTABLE SEE NOTE 2
ANODE #2	0 TO /80 VDC ADJUSTABLE INTERNALLY CONNECTED TO GRID #2 SEE NOTE 2
ANODE #1	/60 VDC
CATHODE	0
HEATER	6.3 V 1.4 AMPERES NOMINAL AC OR DC

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WRITING SECTION

CATHODE	-2500	VDC
GRID #1 CUTOFF	-30	VDC RESPECT CATHODE SEE NOTE 3
GRID #2	0 TO 80	INTERNAL CONNECTION TO ANODE #2
HEATER - SEE NOTE 4	6.3	VOLTS .6 AMPERES NOMINAL AC OR DC
RESOLUTION - SEE NOTE 5		
125 FT. LAMBERTS	80	LINES PER INCH
625 FT. LAMBERTS	55	LINES PER INCH
1000 FT. LAMBERTS	40	LINES PER INCH
BRIGHTNESS	1250	FT. LAMBERTS
WRITING SPEED		
WRITING TO 50% BRIGHTNESS	40000	INCHES PER SECOND - SEE NOTE 6
VIEWING TIME - SEE NOTE 7	60	SECONDS MINIMUM
ERASE TIME - SEE NOTE 8	30	MILLISECONDS

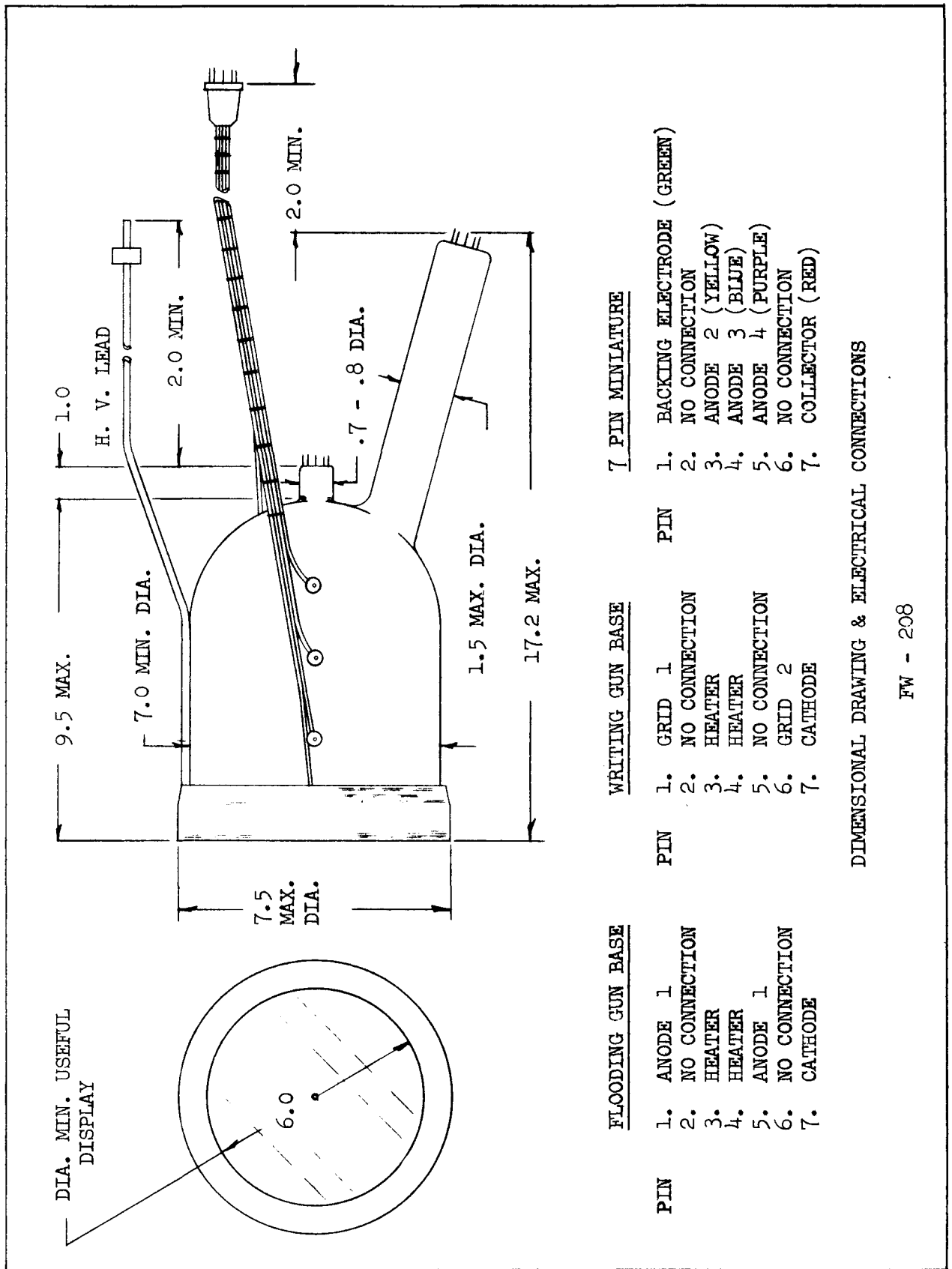
NOTES:

1. MINIMUM TIME RECOMMENDED FOR CATHODE WARM-UP BEFORE OPERATING VOLTAGES ARE APPLIED.
2. ADJUST FOR BEST COLLIMATION OF FLOOD BEAM.
3. VISUAL CUTOFF OF FOCUSED, UNDEFLECTED, STORED SPOT.
4. HEATER TRANSFORMER CENTER TAP SHOULD BE CONNECTED TO CATHODE VOLTAGE.
5. RESOLUTION MEASURED BY THE SHRINKING RASTER METHOD AT THE CENTER OF TUBE.
6. MEASURED WITH 25 VOLTS VIDEO DRIVE ABOVE 1/2 UA BEAM CURRENT BIAS LEVEL.
7. VIEWING TIME IS THE TIME THAT A SIGNAL STORED AT MAXIMUM BRIGHTNESS ANYWHERE IN THE DISPLAY CAN BE VIEWED WITH ERASE PULSES BEING CONTINUOUSLY APPLIED TO COUNTERACT POSITIVE ION CHARGING OF THE STORAGE SURFACE.
8. ERASE TIME IS THE SHORTEST TIME THAT INFORMATION CAN BE REMOVED AFTER BEING STORED AT FULL BRIGHTNESS.

ADDITIONAL INFORMATION FOR SPECIFIC APPLICATIONS CAN BE OBTAINED FROM THE

ELECTRON TUBE APPLICATIONS SECTION
ITT COMPONENTS DIVISION
POST OFFICE BOX 412
CLIFTON, NEW JERSEY

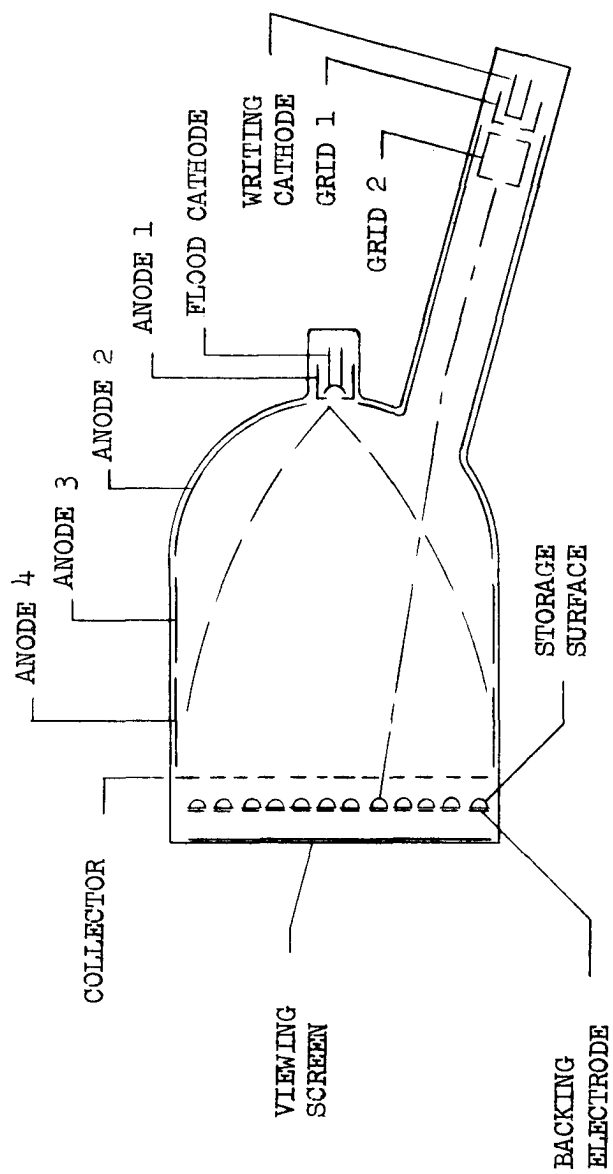
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DIMENSIONAL DRAWING & ELECTRICAL CONNECTIONS

FW - 208





FUNCTIONAL SCHEMATIC

FW - 208