

A DIRECT READING FIELD STRENGTH METER For RF Signal Measurement . . . 54 MC to 220 MC



Figure 1. Model 704B

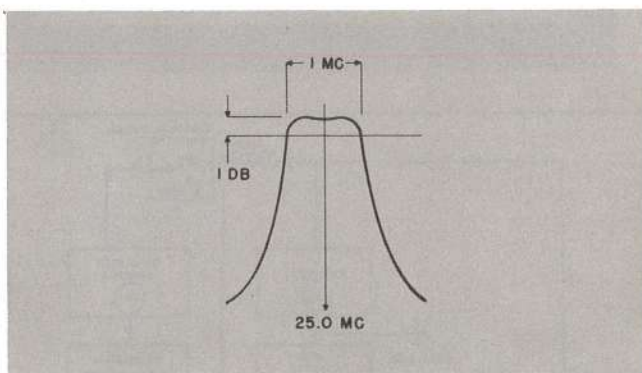


Figure 2. Tuner I.F. Coupling Response

Description The JERROLD Model 704B, direct reading Field Strength Meter, is a high quality, versatile, and portable instrument for making measurements of RF signal strength within the frequency range of 54 MC to 220 MC.

Features

- SENSITIVE
- SELECTIVE
- ACCURATE
- PORTABLE
- RUGGED

APPLICATIONS

- ★ Field Intensity Surveys
- ★ Orientating Antennas
- ★ Measuring RF Attenuation of Coaxial Cables
- ★ Balancing Television Distribution Systems

and . . . many more.

GENERAL DESCRIPTION

TUNER

A special type of continuous tuner that has been designed for increased selectivity, 75 ohm impedance match, and uniform gain - as required for accuracy - is used in the instrument. The tuner gain variation is less than 3 db from 54 MC to 220 MC. A built-in tuner-compensator circuit, with external control, further enhances tuner accuracy. A trapping circuit, on the output of the tuner, attenuates adjacent picture and sound carriers 45 db. Although the tuner input is designed for 75 ohm impedance devices, the instrument may be used with 300 ohm impedance devices by using the 300-75 ohm matching transformer included.

RANGES

The overall range of the instrument is from 5 microvolts to 3 volts, in eight ranges. Six of the ranges are fundamental and the remaining ranges are selected by accurate RF attenuators, built into the circuit. Internal adjustments are provided for the fundamental ranges and any miss-adjustment of one range does not affect the remaining fundamental ranges.

ACCURACY

The overall accuracy of the instrument is held to within ± 2 db throughout final testing and calibration. The accuracy remains better than ± 3 db over a range of line voltage variations from 105 to 125 volts. These are excellent characteristics for this type of instrument and are the result of the painstaking care with which the circuit was designed.

CABINET

Aluminum was chosen for both the chassis and the cabinet, since it exhibits maximum durability with light weight. A carrying handle and a shoulder strap is included to aid in the portability of the instrument. A hinged door protects the front panel and contains a calibration card, for permanent reference.

PHONE AND VIDEO JACKS

Earphones may be connected to a jack on the front panel to aid in the identification of various signals. Also included, is a video output jack which allows for the connection of an oscilloscope to the instrument for the observation of composite video. This is desirable in determining the percentage of "sync" in relation to the overall composite signal.

SPECIFICATIONS

FREQUENCY RANGE: 54 to 220 mc/sec., covered in one band

INTERMEDIATE FREQUENCY (I.F.): 25 mc/sec.

INPUT IMPEDANCE: 75 ohms; 300/75 ohm matching transformer provided

SENSITIVITY: 5 microvolts

Minimum signal required for full scale deflection with Manual Gain Control maximum position, 60 microvolts.

SELECTIVITY: Bandwidth at 3 DB down 0.6 mc.

IMAGE FREQUENCY RESPONSE: 90 DB down from signal level

ADJACENT CHANNEL REJECTION: 45 db down from received signal.

POWER SUPPLY REQUIREMENTS:

AC—105 to 125 volts, 50 to 60 cps; 1/2 amp; 55 watts

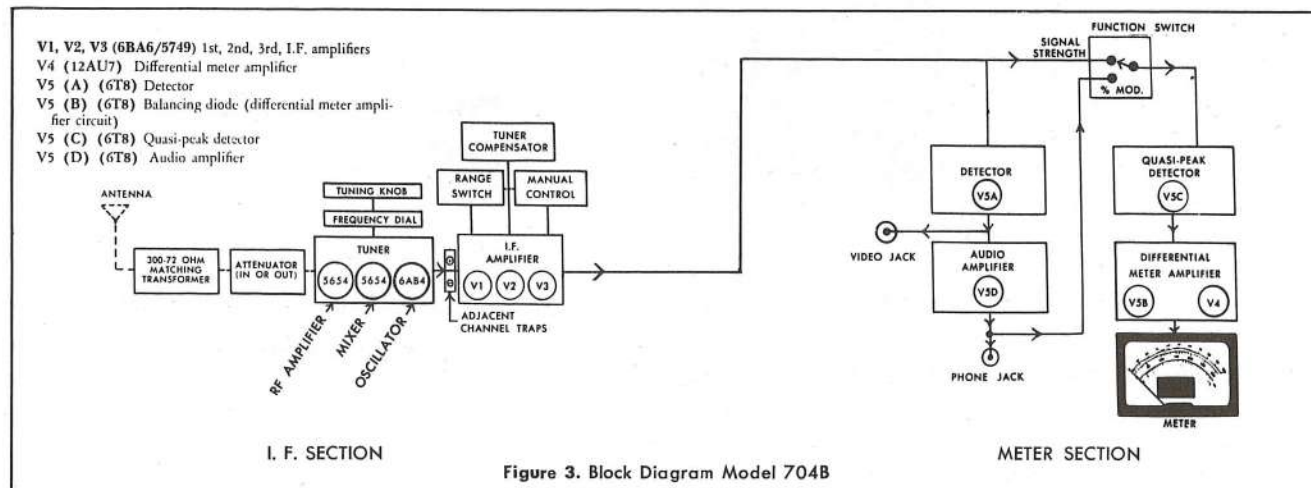
Fuse Protection—1 amp

TUBE COMPLEMENT:

1	.....	OD3 (VR-150)
2	.....	5654
1	.....	6AB4
3	.....	5749
1	.....	6T8
1	.....	12AU7
1	.....	5V4

PHYSICAL SPECIFICATIONS

Height	12"	Depth	8"
Width	12 3/4"	Weight	19 pounds;
		Shipping Weight	—24 pounds



Data Subject to Change Without Notice

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