

## SPECIFICATION

### Frequency

RANGE: 10 to 470 Mc/s in five bands:  
 10 to 22 Mc/s    110 to 240 Mc/s  
 22 to 48 Mc/s    240 to 470 Mc/s  
 48 to 110 Mc/s

MAIN TUNING: Controlled via precision slow-motion drive. Total scale length, approximately 60 inches.

CALIBRATION ACCURACY: 1%.

FINE TUNING: Uncalibrated control provides cover of approximately 25 kc/s.

FREQUENCY STABILITY: After warm-up, 0.0025% or better in 10-minute period.

ATTENUATOR REACTION: Negligible below 50 mV; not greater than 0.1% above.

INCREMENTAL FREQUENCY CONTROL: Carrier shift is variable from -100 to +100 kc/s by continuous and stepped control. The stepped control has three negative and three positive shift positions, each with independent preset adjustment, and one zero shift position. Shift is monitored by meter with two ranges, -20 to +20 kc/s and -100 to +100 kc/s.

INCREMENTAL ACCURACY: Direct accuracy varies inversely with carrier frequency from within 10% to 20% of f.s.d.

Using correction chart supplied, accuracy at all carrier frequencies is within 10% of f.s.d.

SPURIOUS SIGNALS: Total harmonic content is less than 10%. There are no sub-harmonics.

### R.F. output

LEVEL: The source e.m.f. is continuously variable from 0.2  $\mu$ V to 200 mV. The attenuator dial shows the source e.m.f. both directly and in decibels relative to 1  $\mu$ V. The dial cursor can be positioned to indicate voltage across a 50-ohm load instead of source e.m.f.

OUTPUT ACCURACY: Incremental, 0.2 dB; overall, 2 dB.

SOURCE IMPEDANCE: 50 ohms; v.s.w.r. not greater than 1.25:1 using the 20-dB Pad, TM 4919, or 1.6 using the 6-dB Pad, TM 4919/1.

STRAY RADIATION: Negligible; permits full use of lowest output.

### Frequency modulation

INTERNAL: Modulation frequencies: 1 and 5 kc/s. Deviation variable to 100 kc/s maximum and indicated on two meter ranges, 0 to 20 kc/s and 0 to 100 kc/s.

EXTERNAL: Modulation frequency range: 30 c/s to 15 kc/s. Modulation depth as for INTERNAL. Input requirements: 25 volts across 5 k $\Omega$  for 100 kc/s deviation.

DEVIATION ACCURACY: Direct accuracy for internal modulation varies inversely with carrier frequency from within 7% of

f.s.d. to within 20% of f.s.d.; using correction chart supplied, accuracy at all carrier frequencies is within 7% of f.s.d. Accuracy over external modulation frequency range is within 5% of accuracy at 1 kc/s.

A.M. ON F.M.: Typically, less than 5% modulation depth at maximum deviation. RESIDUAL F.M.: The f.m. due to hum and noise is less than 100 c/s deviation.

### Amplitude modulation

INTERNAL: Modulation frequencies: 1 and 5 kc/s. Modulation depth variable up to at least 40% and indicated on two meter ranges, 0 to 20% and 0 to 100%.

EXTERNAL: Modulation frequency range: 30 c/s to 15 kc/s. Modulation depth as for INTERNAL. Input requirements: 10 volts across 1 M $\Omega$  for 40%.

MODULATION DEPTH ACCURACY:  $\pm 5\%$  modulation on 0 to 20% range.  $\pm 10\%$  modulation up to 40% on 0 to 100% range. F.M. ON A.M.: For 30% a.m., varies typically from 4 kc/s at 10 Mc/s to 60 kc/s at 100 Mc/s.

RESIDUAL A.M.: The a.m. due to hum and noise is better than 50 dB below 30% modulation.

### Power supply

200 to 250 volts, and 100 to 130 volts; 40 to 60 c/s; 90 watts. Fuses in mains, h.t. and l.t. circuits.

### Dimensions and weight

Height	Width	Depth	Weight
14½ in	23½ in	10½ in	54 lb
(37 cm)	(60 cm)	(27 cm)	(24.5 kg)

### Accessories supplied

Coaxial Free Plug, Type N, for r.f. output socket.

### Accessories available

Output Lead, 50-ohm, TM 4824; 36 inches long; Type N plug both ends.

Attenuator Pad, 6-dB, 50-ohm, TM 4919/1; one end, Type N socket; other end, Type N plug.

Attenuator Pad, 20-dB, 50-ohm, TM 4919; one end, Type N socket; other end, Type N plug.

Matching Unit, 50-ohm to 75-ohm, TM 4918; one end, Type N socket; other end, Belling-Lee L 734/P plug.

Matching Unit, 50-ohm unbal. to 300-ohm bal., TM 4916; one end, Type N socket; other end, solder tags.

D.C. Isolating Unit, TM 4917; one end, Type N socket; other end, crocodile clips.

Coaxial Fuse, Type TM 5753; prevents damage to the Signal Generator attenuator through accidental application of r.f. or h.t. power to the circuit under test. Useful in transmitter/receiver testing.

Overload Protection: Burns out at 0.4 watt.

Insertion Loss: Nominally 0.5 dB.

V.S.W.R.: 1.35 or less when terminated with a matched 50-ohm load. 1.6 or less when terminated with TF 1066B attenuator via 20-dB Pad, TM 4919.

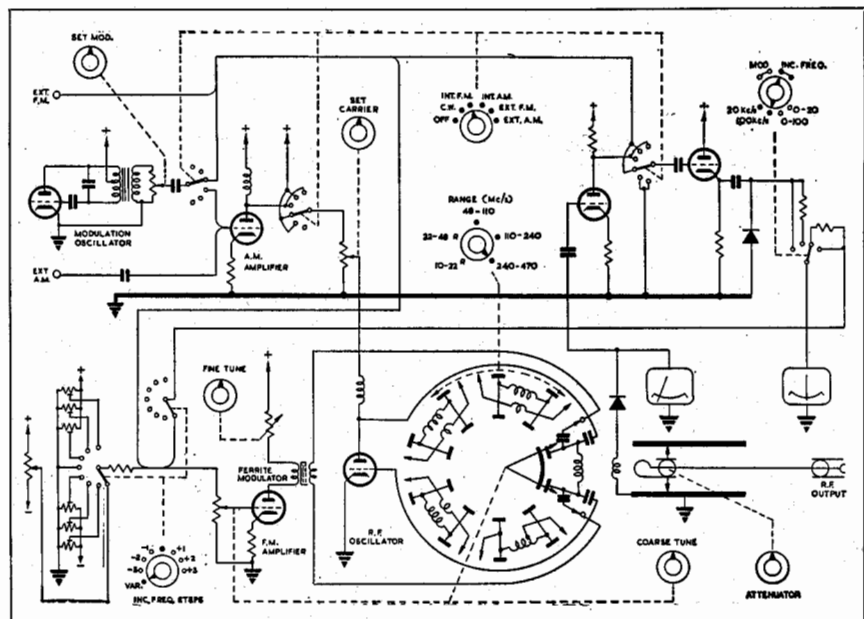
Connectors: Type N.

Fuse: ½ amp Littelfuse Cat. No. 361.062. 10 spares are supplied.

Dimensions: Length, 4½ in; dia. 1½ in.

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Functional Diagram of TF 1066B