

BIRD

Termaline[®]
RF Absorption
Wattmeters

BIRD TERMALINE[®] RF Absorption Wattmeters are direct-reading termination instruments for servicing and testing 50 ohm coaxial line systems and components. Their individual frequency coverage is generally wider than that of a directional wattmeter, and an integral load resistor for the dis-

sipation of line power during measurement offers the additional convenience of a single, compact package.

TERMALINE Wattmeters are best used for optimizing transmitter and component performance up to the end of the line, while

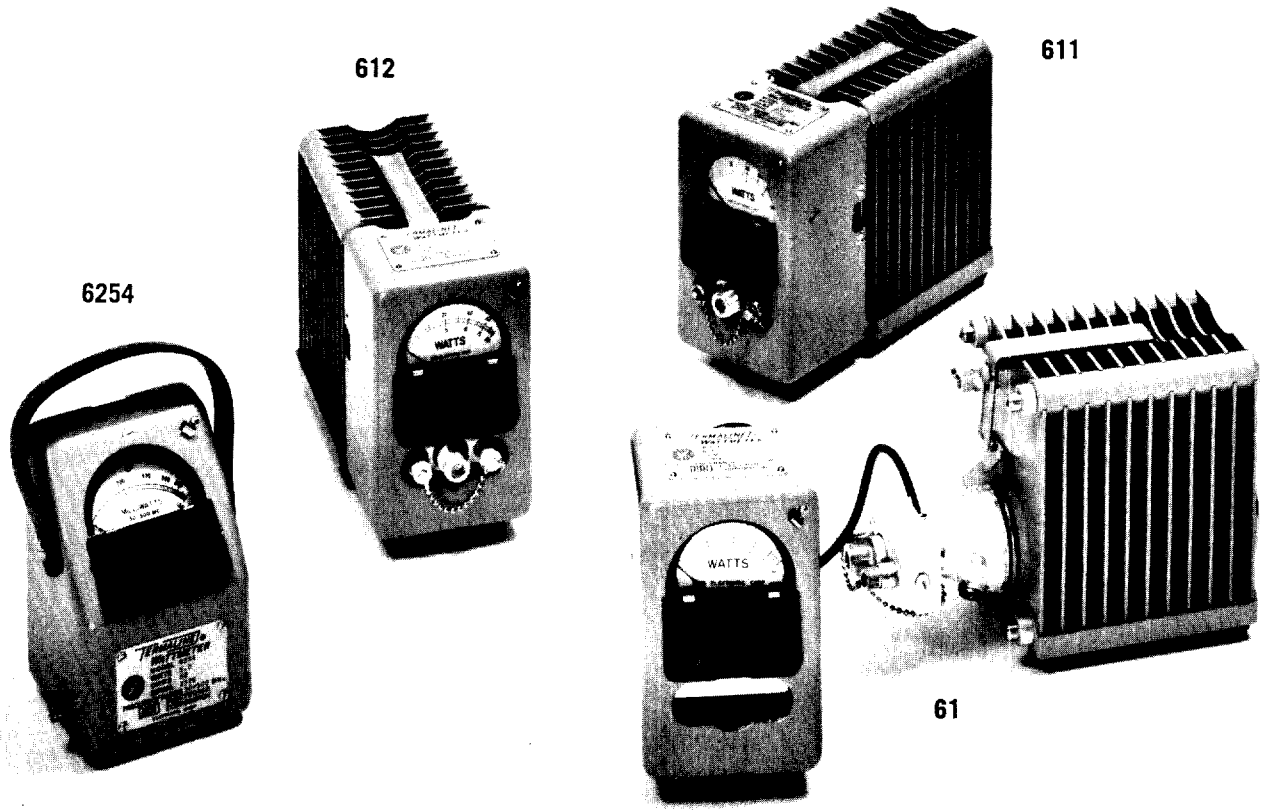
THRULINE[®] Wattmeters are essential when the effects of the normal line load (e.g. antenna) also have to be measured.

Absorption type wattmeters can also be tailored to your needs by combining a THRULINE Wattmeter with a TERMALINE RF Load Resistor.

Model 6151 consists of such a combination, permanently joined. It offers a "custom-made" flexibility in power scale and frequency range from 1 watt to 100 watts and from 2 to 2300 MHz. The load resistor can dissipate 150 watts. Full scale power is determined by the Element, e.g. selection of a 50B results in a 50 watt TERMALINE Model 6151, 50-125 MHz, which can also be used as a 150 watt termination from dc to 2:300 MHz.

selection chart

POWER RATING	POWER SCALES														CALIBRATED FREQUENCY RANGE	MOD.		
	0-25 mW	0-50 mW	0-100 mW	0-250 mW	0-500 mW	0-1 W	0-2 W	0-5 W	0-10 W	0-15 W	0-20 W	0-25 W	0-50 W	0-100 W				
2 W																	30-500 MHz	6254
60 W																	30-500 MHz	611
80 W																	30-500 MHz	612
80 W																	30-500 MHz	61
100 W																	2-2300 MHz	6151
150 W																	25-1000 MHz	6154
150 W																	2-30 MHz	6155
500 W																	30-500 MHz	67
1000W																	2-30 MHz	694
1200W																	30-500 MHz	6835
2500W																	30-500 MHz	67C



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Termaline® RF Absorption Wattmeters
50 ohms nominal

specifications

MODEL	POWER RATING	POWER SCALES	MAX. VSWR	CALIBRATED FREQUENCY RANGE	INPUT CONN.	NOM. SIZE INCL. CONN.	WEIGHT
6254	2 W	Choice of 0-25, 0-50, 0-100, 0-250, 0-500, 0-1000 milliwatts, or 2 watts	1.15	30-500 MHz	BNC (F)	5 ⁷ / ₈ x 4 ³ / ₈ x 3 ⁵ / ₈	2 lbs
611 ①	60W	0-15/0-60 watts	1.1	30-500 MHz	N (F)	6 ³ / ₈ x 3 ¹ / ₂ x 9 ⁵ / ₈	7 lbs
612 ①	80W	0-20/0-80 Watts	1.1	30-500 MHz	N (F)	6 ³ / ₈ x 3 ¹ / ₂ x 9 ⁵ / ₈	7 lbs
61 ①	80W	Any two compatible scales (See Table)	1.1	30-500 MHz	N (F)	6 ³ / ₈ x 3 ¹ / ₂ x 9 ⁵ / ₈	7 lbs

① Meter Housing can be detached from load for convenient reading with a 3' cable. This is feature of the Models 611, 612, 61.

NOTES: These liquid dielectric TERMALINE® RF Absorption Wattmeters operate in a horizontal position only, except dry (air) dielectric Model 6254 which may be operated in any position.

ACCURACY: ±5% OFS.

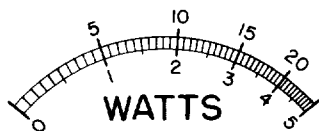
FINISH: Light Navy Grey Baked Enamel (MIL-E-15090)

Special calibration to 1000 MHz available at time of order.

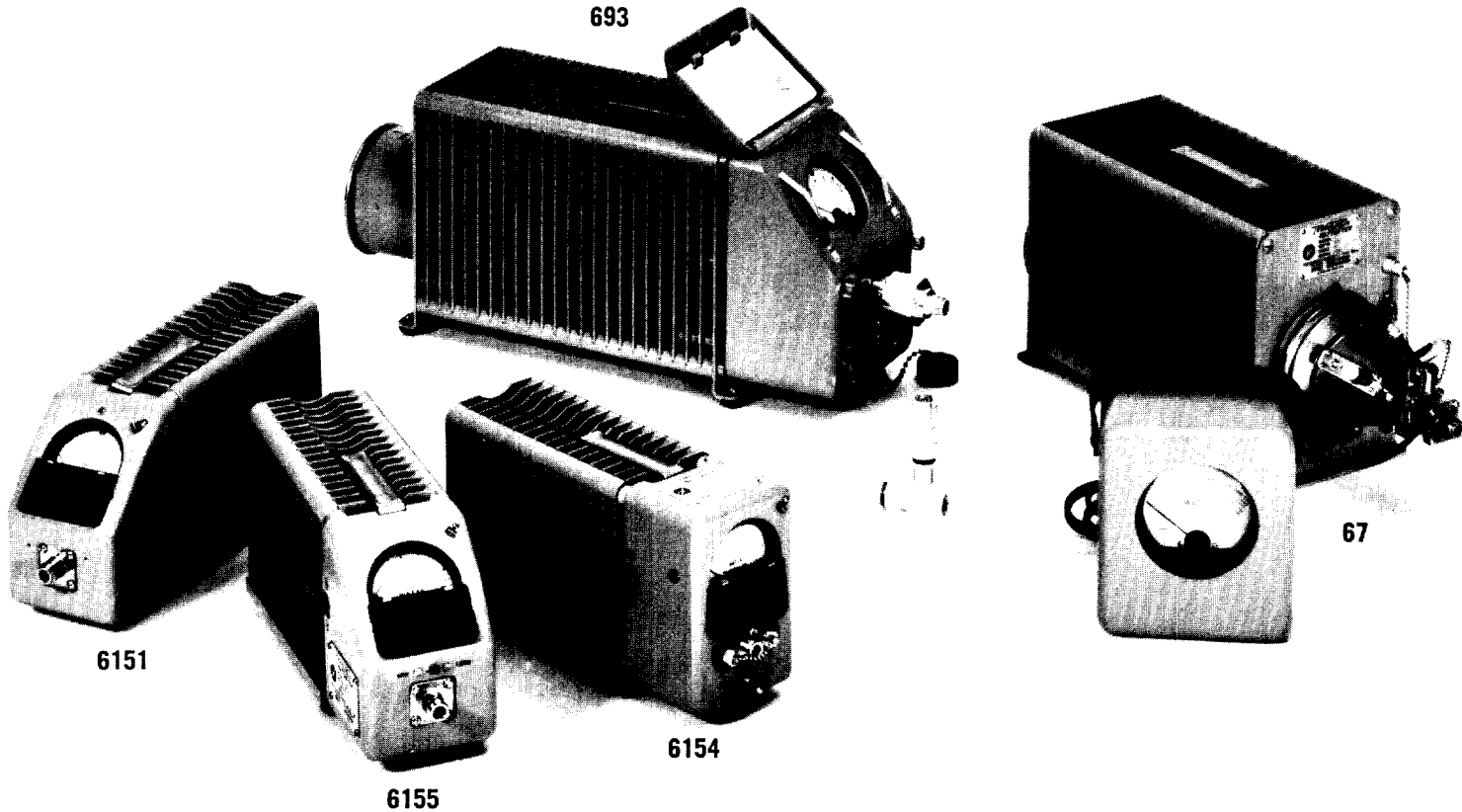
METER SCALES FOR MODEL 61

Low Range (full scale watts)

	0.5	1.0	1.5	2.0	2.5	3.0	4.0	5.0	6.0	8.0	10.0	15.0	20.0	25.0	30.0	40.0
1.0																
2.5	*	*														
3.0			*													
4.0				*												
5.0	*	*			*											
6.0			*			*										
8.0				*			*									
10.0	*	*			*			*								
15.0			*			*			*							
20.0				*			*			*						
25.0					*			*			*					
30.0		*				*			*			*				
40.0			*				*			*			*			
50.0				*				*			*			*		
60.0					*				*				*		*	
80.0						*			*						*	*



Typical dual meter scale for Model 61 TERMALINE Wattmeter. Other meter scale combinations available from stock and on special order as listed in table.



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50 ohms nominal

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MODEL	POWER RATING	POWER SCALES	ACCURACY	MAX. VSWR	CALIBRATED FREQUENCY RANGE	INPUT CONN.	NOM. SIZE INCL. CONN.	WEIGHT
6151 ① ②	100W	0-1/0-2.5/0-5/0-10/0-25/0-50/0-100W Select one element to suit your frequency and power range	±5% OFS	1.1 1.25	2-1000 MHz 1000-2300 MHz	QC-N (F)	6 ³ / ₈ x 3 ¹ / ₁₆ x 12 ⁷ / ₈	8 lbs
6154 ②	150W	0-5/0-15/0-50/0-150W	±5% OFS ⑤	1.1	25-1000 MHz	N (F)	6 ³ / ₈ x 3 ¹ / ₁₆ x 12 ¹ / ₂	8 lbs
6155 ①	150W	0-50/0-150W	±5% OFS	1.1	2-30 MHz	QC-N (F)	6 ³ / ₈ x 3 ¹ / ₁₆ x 12 ³ / ₄	8 lbs
67 ④	500W	0-25/0-100/0-500W	±5% OFS	1.1	30-500 MHz ③	QC-N (F)	8 ¹ / ₂ x 5 ¹ / ₁₆ x 19 ¹ / ₁₆	25 lbs
693	500W	Power Scales vary with frequency e.g.: 20 MHz . . . 0-22/0-90/0-480/0-500W 100 MHz . . . 0-21/0-75/0-285/0-500W 400 MHz . . . 0-18/0-48/0-150/0-500W 1400 MHz . . . 0-7 /0-20/0-70 /0-220W Full scale power ranges	±15% of Reading	1.25 1.25	20-1400 MHz 20-1400 MHz	LC (F)* LC (F)*	8 ³ / ₄ x 5 ¹ / ₁₆ x 20 ¹ / ₁₆ 8 ³ / ₄ x 5 ¹ / ₁₆ x 20 ¹ / ₁₆	27 ¹ / ₂ lbs 27 ¹ / ₂ lbs

*With N (F)
Adapter

① Carrying Case available.

② Meter Housing can be detached from load for convenient reading with 3' cable.

③ Special calibration to 1000 MHz available at time of order.

④ METER: 4¹/₂" meter, shock mounted in aluminum carrying case with 10' shielded meter cable. Dimensions: 5⁹/₁₆" wide, 6¹/₂" high, 3¹¹/₃₂" deep.

⑤ ±5% Of Full Scale 25-500 MHz; ±10% OFS 500-1000 MHz.

NOTES:

These liquid dielectric TERMALINE RF Absorption Wattmeters operate in a horizontal position only.

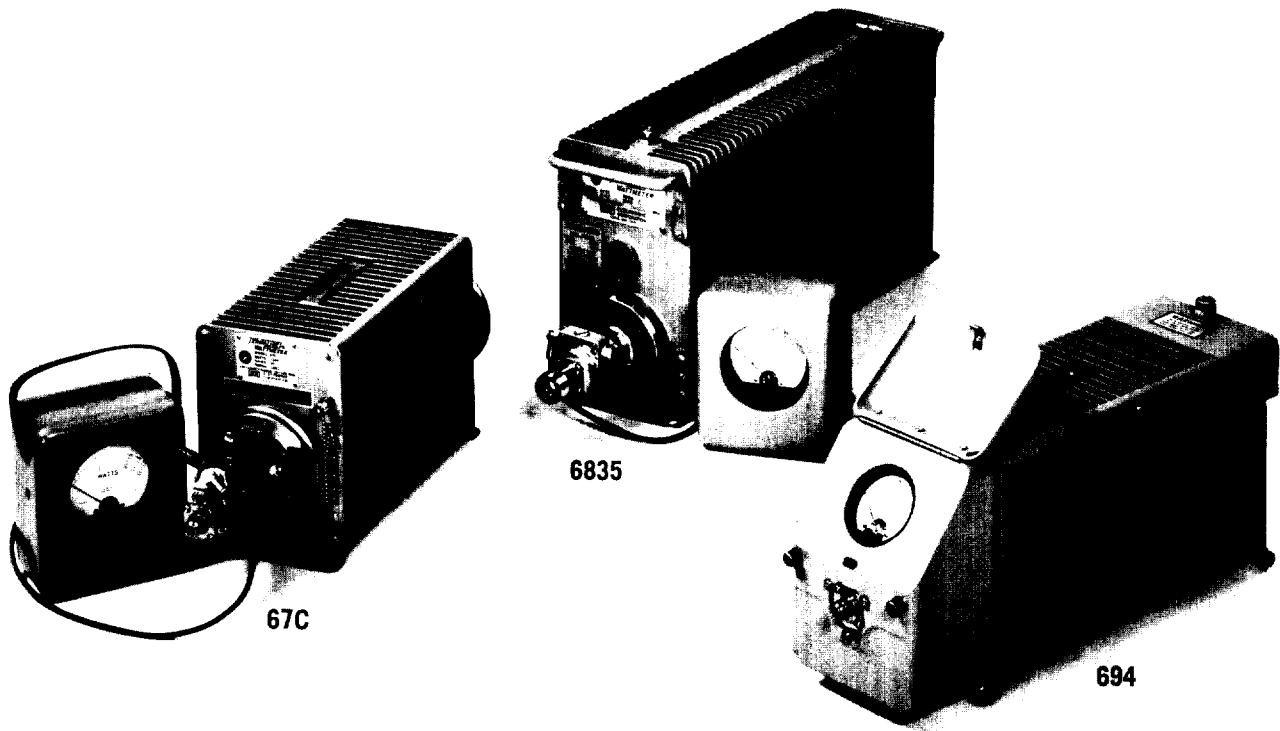
FINISH: Light Navy Grey Baked Enamel (MIL-E-15090)

Table shows QC Connectors normally supplied. Other types available.

Model TS-118A/AP and its commercial version, model 693, are thermocouple wattmeters that measure power by the I²R method. They indicate true rms power not only of CW but also of modulated signals (e.g. 150 watts for 100 watt carrier, 100% amplitude modulated). One of the four thermocouples supplied is selected for various full scale-readings. Charts are provided to convert 0-1.0 meter indication into power for all ranges and for frequencies from 20-1400 MHz.

When used as a wattmeter, the appropriate thermocouple is connected in series with the load.

A rugged transit case and a spare set of thermocouples is included with model TS-118A/AP.



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MODEL	POWER RATING	POWER SCALES	MAX. VSWR	CALIBRATED FREQUENCY RANGE	INPUT CONN.	NOM. SIZE INCL. CONN.	WEIGHT
694	1000W	0-1000W	1.1	2-30 MHz	QC-N (F)	8¾ x 5½ ₁₆ x 20½	29 lbs.
6835 ①	1200W ①	0-120/0-600/0-1200W	1.1	30-500 MHz	QC-LC (F)	10¾ x 6¾ x 26⅝	40 lbs.
67C ①	2500W ②	0-100/0-500/0-2500W	1.1	30-500 MHz ③	QC-N (F)	8½ x 5½ ₁₆ x 21½ ₁₆	29 lbs.

① METER: 4½" meter, shock mounted in aluminum carrying case with 10' shielded meter cable. Dimensions: 5½" wide, 6½" high, 3½" deep.

② With water cooling.

③ Special calibration to 1000 MHz available at time of order.

④ 1000W continuous duty, 1200W ½ hour.

NOTES: These liquid dielectric TERMALINE RF Absorption Wattmeters operate in a horizontal position only, except Model 67C which may be operated vertically — connector down above 200 watts when water cooled.

ACCURACY: ±5% OFS.

FINISH: Light Navy Grey Baked Enamel (MIL-E-15090)

Table shows QC Connectors normally supplied. Other types available.

SPECIAL CALIBRATION SERVICES are currently available for the following instruments: Most TERMALINE Absorption Wattmeters that are normally calibrated to 500 MHz. Specific models identified with a footnote can be supplied with a frequency correction factor from 500-1000 MHz, thereby doubling their useful frequency range.

Request details on data and cost from the Customer Service Department.

MODEL	PRICES
6254 Select range	\$140.00
611 †	190.00
612 †	190.00
61 † Select ranges	220.00
6151 Select range	180.00+
6154	265.00
6155	215.00
67 †	\$360.00
693	495.00
TS-118A/AP	695.00
694	400.00
6835	550.00
67C †	400.00

+Plus Elements. †Special Calibration 500 to 1000 MHz \$25.00.

BIRD ELECTRONIC CORPORATION

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216-248-1200 • TWX 810-427-2687 • Cable: BIRDLEC

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