

704A WIDE BAND TEST SET SPECIFICATIONS

The 704A Wide Band Test Set performs general transmission measurements on voice-grade, program, and wide-band carrier channels. With a frequency range of 110 kHz and 50 kb/s noise weighting filters, it is uniquely suited for analog DDS local loop measurements per BSP-313-410-510.

The 704A measures transmission level, noise (idle-channel and notch), noise-to-ground, and frequency. Its dual digital readouts simultaneously display both the prime measurement (level or noise-with-tone) and frequency.

Three separate counters record impulse noise at three levels for automatically timed periods of five

or 15 minutes—or counting may be continuous. Highly stable fixed-frequency and variable oscillators provide a source for notch noise and similar measurements that demand precise, low-distortion test tones. In addition, the 704A incorporates six weighting networks and a notch noise filter which can be used with any of the weighting networks.

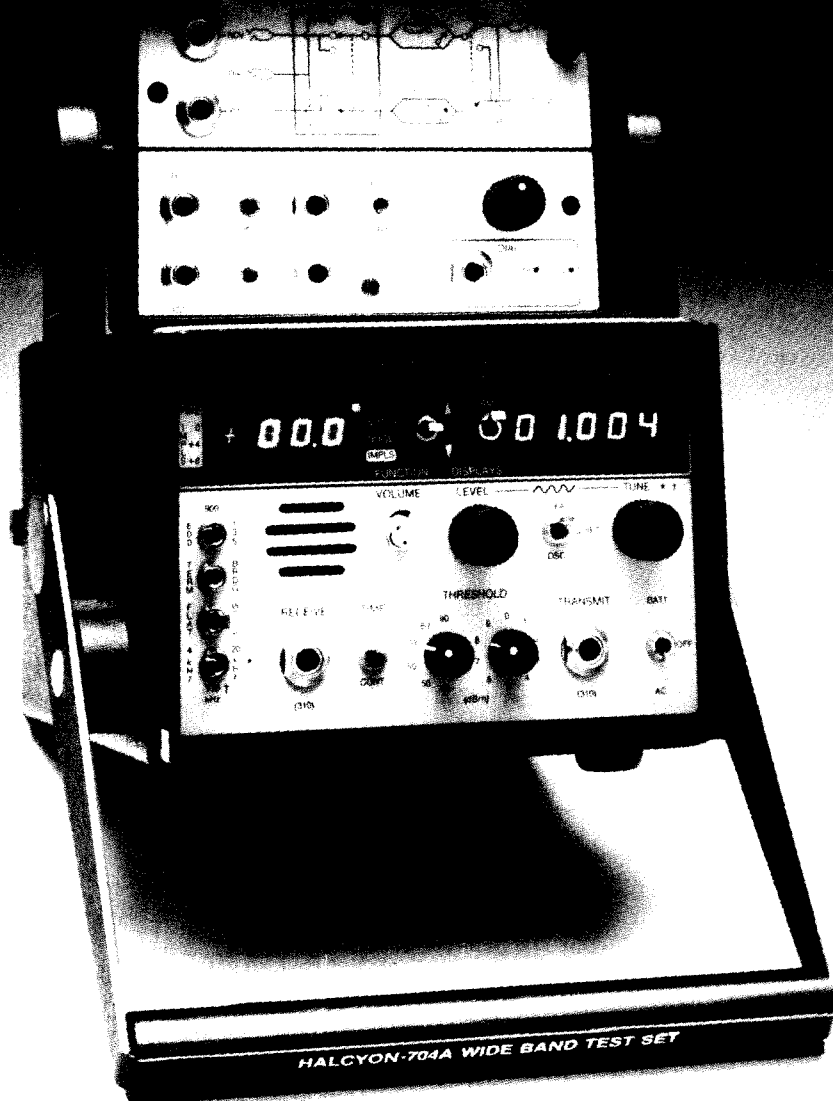
Operating from either ac or self-contained, rechargeable batteries (optional), the 704A is ideal for field use.

The 705A Dial and Hold Unit operates in conjunction with the 704A to provide dial-and-hold capability. It permits two lines — one in

the transmit mode and one in the receive mode — to be dialed up and held for loopback testing. The transmit and receive modes can be switched during the testing procedure. The 705A requires no power and is packaged inside the front cover of the 704A.

FEATURES

- ☐ Dual digital displays (level/noise and frequency)
- ☐ Fixed-frequency and variable oscillators
- ☐ Portability
- ☐ Three-level impulse noise measurement
- ☐ DDS local loop measurements per BPS-314-410-510
- ☐ Four-wire dial/hold capability



704A

WIDE BAND TEST SET

SPECIFICATIONS

Mechanical

Height	5 in (12.7 cm)
Width	7 in (17.8 cm)
Depth	12 in (30.5 cm)
Weight	9.6 lbs (4.4 kg); add 1.5 lbs (0.68 kg) for batteries and 1.2 lbs (0.55 kg) for 005A

Environmental

Temperature	0° to 50°C
Relative humidity	0 to 95%

Electrical

Input voltage	115 or 230 Vac
Frequency	50 to 60 Hz
Battery operation	
Type	NiCd
Operating time	3 hrs (typical)
Recharge time	8 hrs (typical)
Discharge/recharge cycle	999

Level measurement

Level range	-50 dBm to +13 dBm
Frequency range	50 Hz to 110 kHz
Measurement accuracy	
-30 dBm to +8 dBm	±0.1 dB (1 kHz) ±0.2 dB (200 Hz to 15 kHz) ±0.5 dB (all other frequencies)
All other levels	±0.3 dB (200 Hz to 15 kHz) ±0.5 dB (all other frequencies)
Measurement resolution	0.1 dB

Noise measurement

Level range	
Idle channel	10 dBm to 99 dBm
Notched	20 dBm to 99 dBm
Frequency range	Weighting network dependent
Measurement accuracy	
20 dBm to 99 dBm	±1 dB
Below 20 dBm	±2 dB
Measurement resolution	1 dB
Weighting networks	
4 kHz range	C-message and 3-kHz flat
20 kHz range	Program and 15-kHz flat
110 kHz range	50 kbit and 50-kHz flat (497F characteristics per BSP-314-410-510)
Notch filter attenuation	50 dB or more (995 Hz to 1025 Hz)

Noise-to-ground measurement

Measurement range	50 to 130 dBm
Measurement accuracy	±1.5 dB
Ring-to-ground impedance	100K ohms
Tip-to-ground impedance	100K ohms

Impulse noise measurement

Weighting networks	Same as for noise measurement
Impulse threshold, 1st	40 dBm to 99 dBm, 1 dB steps
Impulse threshold, 2nd	+4 dB relative to 1st
Impulse threshold, 3rd	+8 dB relative to 1st
Threshold accuracy	±1.0 dB
Timing intervals	5 min, 10 min or continuous
Count range	999

Frequency measurement

Level range	-50 dBm to +13 dBm
Frequency range	50 Hz to 110 kHz
Measurement accuracy	±1 count (with S/N of 20 dB or more)
Measurement resolution	1 Hz at 4 kHz range; 10 Hz at 20 kHz to 110 kHz range

Oscillator

Fixed frequency	1004 Hz ±0.5 Hz
Variable frequency	
4 kHz range	50 Hz to 4 kHz
20 kHz range	3 kHz to 20 kHz
110 kHz range	15 kHz to 110 kHz
Output level	-40 dBm to +13 dBm
Level accuracy	±0.1 dB: 1 kHz, -30 dBm to +8 dBm; ±0.2 dB: all other levels
Flatness	±0.2 dB: 200 Hz to 15 kHz; ±0.5 dB: all other frequencies
Harmonic distortion	55 dB or more below fundamental: 1004 Hz fixed frequency

Impedance

Input impedance	
Terminated	135 ohms, 600 ohms or 900 ohms
Bridged	20 kohms or greater
Output impedance	135 ohms, 600 ohms or 900 ohms

For ordering information, call your Halcyon Sales Representative.

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