1.1.5 STORED SETTINGS

Nonvolatile memory locations allow up to 15 complete front panel settings to be stored and recalled in any order. This storage permits fast and accurate recall of frequently used settings. The parameters stored in location number 15 may be recalled with one keystroke.

The 2500 powers up with the same settings present when power was removed, except the RF output will be off.

1.1.6 ERROR INDICATORS

The front panel displays for the 2500 indicate the following error conditions:

- An unlocked condition in the phase locked loop circuitry
- An unleveled condition in the RF output leveler circuitry
- A tripped RF circuit breaker
- FM overmodulation

1.2 SPECIFICATIONS

1.2.1 FREQUENCY

Range (MHz)	.4 - 1100
Resolution	10 Hz
Frequency Stability/Temp	±0.5 ppm (±.00005%), 0-50° C
Frequency Stability (Aging)	<1 ppm/yr.
Switching Speed	Typically 200 mSec

1.2.2 RF OUTPUT

Impedance	50Ω
Output Connector	Type "N"
Calibrated Level Range	+13 to -137 dBm
Level Resolution	.1 dB
Level Accuracy	±1.3 dB for power levels >-36.9 dBm; ±(1.3 dB + .1 dB/10 dB step decrease) for power levels <-36.9 dB
Flatness	±1 dB
Leakage	<1 µV into a 2-turn 1 inch diameter loop at 1100 MHz Conforms to MIL-STD-461, Class B, Sections CS01, CS02, CS06, RE02, RS03 (to 1 GHz); VDE 0871, Class B.

1.2.3 SPECTRAL PURITY

Harmonics	<-30 dBc
Sub-Harmonics (550 MHz - 1100 MHz)	<-25 dBc
Non-Harmonics (Spurs) (>5 kHz from carrier)	<-50 dBc for carrier frequencies <137.5 MHz <-60 dBc for carrier frequencies >137.5 MHz

1.2.4 PHASE NOISE @ 500 MHz

10 kHz offset	<-107 dBc/Hz guaranteed (Typ -110 dBc/Hz)
20 kHz offset	Typ <-115 dBc/Hz

1.2.5 RESIDUAL AM

(.05 - 15 kHz PDBW)	<-65 dBc

1.2.6 RESIDUAL FM

(.05 - 15 kHz PDBW)	<30 Hz rms (.4 - 137.49999 MHz) <15 Hz rms (137.5 - 274.99999 MHz) <30 Hz rms (275 - 550 MHz) <60 Hz rms (>550 MHz)
(.3 - 3 kHz PDBW)	<15 Hz rms typical (.4 - 137.49999 MHz) <10 Hz rms typical (137.5 - 274.99999 MHz) <15 Hz rms typical (275 - 550 MHz) <30 Hz rms typical (>550 MHz)

1.2.7 MODULATION

Modes	AM, FM, COMPLEX (EXT AM and INT FM; EXT FM and INT AM)
Internal Source	400 Hz, 1 kHz; derived from frequency standard
External Source	AM Mode: DC to 20 kHz, 600 Ω floating input FM Mode: 20 Hz to 100 kHz, 600 Ω floating input

1.2.7.1 AM CHARACTERISTICS

AM Frequency Response	DC to 15 kHz (Typ to 20 kHz), (3 dB bw, 50% modulation)
AM Resolution	.1%
AM Range	0 - 99.9% (+3 dBm max output at 99.9% modulation)
Modulation Accuracy, AM (0 - 90%)	± (1% +5% of indicated setting) at internal rates
AM Distortion	<1.5%, below 30% modulation <3%, 30% to 70% modulation <5%, 70% to 90% modulation

1.2.7.2 FM CHARACTERISTICS

FM Resolution	10 Hz (deviations <10 kHz) 100 Hz (deviations <100 kHz) 1 kHz (deviations <1 MHz)
FM Rate	20 Hz - 100 kHz (3 dB bw)
FM Deviation Range for 1 kHz Rate	1 MHz peak (3-137.49999 & >275 MHz) 500 kHz peak (137.5 - 275 MHz) 100 kHz peak (1 - 3 MHz) 10 kHz peak (.4 - 1 MHz)
Modulation Accuracy, FM	At internal rates, ±5% of indicated setting, excluding residual FM
FM Distortion	<2% at internal rates for deviation <100 kHz

1.2.8 FRONT PANEL CONTROL

Type	Push-buttons, Spin-Knob

1.2.9 REVERSE POWER PROTECTION

Max RF Power	50 W
Trip Level	~ .7 W
Trip Time	Typically <1 mSec
Max DC Voltage	50 V

1.2.10 STORED SETTINGS

15 total, non-volatile; complete front panel settings stored

1.2.11 EXTERNAL REFERENCE INPUT (REAR PANEL)

Frequency	1, 5, or 10 MHz
Required Input Level/Impedance	1-5 Vp-p, into 50 Ω
Waveform	Sine or Square Wave

1.2.12 INTERNAL REFERENCE OUTPUT (REAR PANEL)

Frequency	10 MHz
Voltage Out/Impedance	100 mVp-p, into 50 Ω
Waveform	Square Wave

1.2.13 GENERAL

Dimensions	14 cm (5.5 in.) High; 31.8 cm (12.5 in.) Wide; 53.3 cm (21 in.) Deep
Weight	12.57 kg (27.7 lbs.) net; 14.38 kg (31.7 lbs.) shipping
Power	100 or 120, 220 or 240 VAC; 50-400 Hz

1.2.14 REMOTE PROGRAMMING (GPIB)

Interface	IEEE-488
Functions	Full Talk/Listen (Conforms to IEEE Proposed Standard 951 for Codes and Formats)