Changes and Corrections; provides updating information for the manual in the form of inserts. These inserts are incorporated into the manual text and diagrams when the manual is updated.

Standards

The abbreviations and graphic symbols used in the text and diagrams of this manual are based on ANSI Y1.1-1972, ANSI Y32.2-1970, and ANSI Y32.14-1973 (American National Standards Institute, 345 East 47 Street, New York, N.Y. 10017).

SPECIFICATIONS

The following specifications apply to the TR 503 Tracking Generator and the TR 503/492 Spectrum Analyzer system. Allow at least 30 minutes warmup unless noted otherwise.

Items listed in the Performance Requirements column are verified by completing the Performance Check in Section 4 of this manual. Items listed in the Supplemental Information column may not be verified in this manual; they are either explanatory notes or performance characteristics for which no limits are specified.

Table 1-1

ELECTRICAL CHARACTERISTICS

Characteristic	Performance Requirement	Supplemental Information
Frequency Range	The TR 503 tracks the 492 tuned input frequency from 100 kHz to 1.8 GHz.	
Output Level		
Maximum Output	0 dBm ±0.5 dB.	
Adjustment Steps	0 to 9 dB in 1 dB steps. 0 to 50 dB in 10 dB steps.	An additional 2 dB attenuation is provided by the front panel VAR dB control.
Attenuator Error	±0.2 dB for each 1 dB change. Total error over the 59 dB range is ±2 dB.	
Output Impedance		50 Ω nominal, VSWR is 2:1 or less to 1.8 GHz.
Flatness		
TR 503	±0.75 dB from 100 kHz to 1.8 GHz, referred to 100 MHz.	
TR 503/492 System	±2.25 dB from 100 kHz to 1.8 GHz, referred to 100 MHz.	Typically ±2 dB or better.
Dynamic Range		
TR 503/492 System		≥110 dB
Residual FM (peak-to-peak)		
TR 503		≤1 Hz
TR 503/492 System		≤10 Hz or same as 492, whichever is greater.

Table 1-1 (cont)

Characteristic	Performance Requirement	Supplemental Information
Auxiliary Output Level	0.1 V rms minimum, into a 50 Ω load.	
Spurious Signals (100 kHz—1.8 GHz)		
Harmonic	−20 dB or better with respect to the fundamental.	
Non-Harmonic	−40 dB or better with respect to the fundamental.	

Table 1-2

ENVIRONMENTAL CHARACTERISTICS

Characteristic	Description
Temperature Range	
Operating	0 to +50° C.
Non-Operating	−40 to +75° C.
Altitude Range	
Operating	To 15,000 feet.
Non-Operating	To 50,000 feet.

Table 1-3

PHYSICAL CHARACTERISTICS

Characteristic	Description
Finish	Anodized aluminum panel and chassis. Front panel faced with matt plastic.
Net Weight	8 lbs (3.64 kg)
Overall Dimensions	5.28 in (134.1 mm) H X 12 in. (304.8 mm) D X 4.96 in (126 mm) H.

STANDARD ACCESSORIES

Refer to tabbed pullout sheet at the end of the Replaceable Mechanical Parts section.