



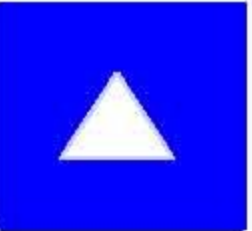
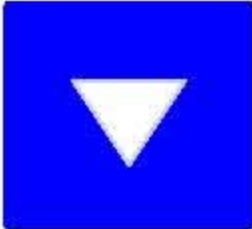




LazerLine!™



RTD-540 User's Manual

TRANSMITTER - GENERATOR

This unit is an accurate and temperature stable crystal synthesized two-carrier generator. The low frequency is fixed at 5 MHz and the high is variable and can be set from 25.0 MHz to 42.0 MHz in 100 KHz steps through a user-friendly keyboard and an alphanumeric LCD display. In order to improve flexibility, 2 memory keys allow custom frequency settings on the higher band. Both carriers have an output level of 50dBmV \pm 0.4dB with spectral purity better than 60dBc. The output carriers can be generated individually or simultaneously; the TX-Mode key selects this function.

| KEY | DISPLAY | DESCRIPTION |
|---|---|---|
|  | RTD'T V1.1 | Turn On |
|  | L' 5.0 MHz H' xx.x MHz D' xx.x MHz NO RF'OUT | Only low frequency CARRIER = 5 MHz Only high frequency CARRIER = 25.0 to 42.0 MHz DUAL - low and high frequency carriers simultaneously Output SHUT OFF |
|  | | Increase high frequency setting in 100 KHz steps (Fast auto-increase is allowed by pressing the key for more than 1 sec.) |
|  | | Decrease high frequency setting in 100 KHz steps (Fast auto-decrease is allowed by pressing the key for more than 1 sec.) |
|   | "m" | Frequency memory keys SAVE: Select the desired frequency setting, then press and hold Mem1 or Mem2 for 1 sec, till the display show "m" RECALL: Press the Mem1 or Mem2 key and release quickly |
|  | | This key activate 20 sec. of backlight |
|  | BAT xxx % | Battery Test By pressing and holding this key it will show battery-level, and SHUT OFF unit by releasing the key |

NOTE: Please SHUT OFF Device when NOT in USE, in order to preserve Battery Power.

Transmitter Specifications

| | |
|-----------------------------|--|
| Carrier frequencies..... | Low = 5 MHz High = 25.0 MHz to 42.0 MHz (Variable in 100 KHz steps) |
| Amplitude accuracy..... | 50 dBmV |
| Output impedance..... | 75 Ohms |
| Output VSWR..... | ≤ 1.3 |
| Frequency accuracy..... | ± 0.01 % |
| Amplitude accuracy..... | ± 0.2 dB at 5 MHz. ± 0.4 dB from 25.0 to 42.0 MHz |
| Spectral purity..... | 60 dBc |
| Operating temperature..... | -20° C to +50° C |
| Battery type..... | 9V alkaline |
| Battery life..... | ≥ 12 hours continuous (Duracell® MN1604) |
| Size (W x H x D) (Max)..... | 3.0" (7.6 cm) x 5.5" (14.0 cm) x 1.5" (3.8 cm) |
| Weight..... | 7.7 oz (218 g) |
| Warranty..... | One Year - Parts and Labor |

DURACELL® is a trademark of Duracell, Inc a division of The Gillette Company

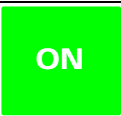





Receiver Specifications

| | |
|--------------------------------|--|
| Measurement bandwidth..... | Low band = 5 MHz (-0.2 dB) High band = 25.0 to 42.0 MHz (-0.2 dB) |
| Flatness..... | ± 0.1 dB |
| Out-band rejection..... | ≥ 50 dB (Freq ≥ 55 MHz) |
| Amplitude measuring range..... | 10 dBmV to 60 dBmV |
| Absolute accuracy..... | ± 0.4 dB |
| Resolution..... | 0.2 dB |
| Input impedance..... | 75 |
| Input VSWR..... | ≤ 1.3 |
| Operating temperature..... | -20° C to +50° C |
| Battery type..... | 9V alkaline |
| Battery life..... | ≥ 15 hours continuous (Duracell® MN1604) |
| Size (W x H x D) (Max)..... | 3.0" (7.6 cm) x 5.5" (14.0 cm) x 1.5" (3.8 cm) |
| Weight..... | 7.7 oz (218 g) |
| Warranty..... | One Year - Parts and Labor |

DURACELL® is a trademark of Duracell, Inc a division of The Gillette Company

RECEIVER - LEVEL TESTER

This unit is a 2 band accurate dB Level-Meter. The first band is centered at 5 MHz and the second one starts at 25.0 MHz and ends at 42.0 MHz with a flatness of 0,2dB. The LCD display shows the input level directly in dBmV or dB with a resolution of 0,2dB. The **Test-Band** Key selects the band of measurement, low, high or both at the same time. The system also allows 2 measurement modes, **Absolute** or **Relative**; in absolute mode the display shows the real input level in dBmV and in relative mode, the dB difference (positive or negative) between the input signal level and a user's pre calibrated **Zero** reference. This function is very useful to make insertion loss and gain tests.

| KEY | DISPLAY | DESCRIPTION |
|---|--|---|
|  | RTD'R V1.1 | Turn On |
|  | L' xx.x dBmV H' xx.x dBmV L' xx.x H' xx.x LR' ± xx.x dB HR' ± xx.x dB ± xx.x ± xx.x LOW OVR | Absolute - Only low frequency band = 5 MHz Absolute - Only high frequency band = 25.0 to 42.0 MHz Absolute - DUAL - low and high frequency bands Relative - Only low frequency band = 5 MHz Relative - Only high frequency band = 25.0 to 42.0 MHz Relative - DUAL - low and high frequency bands Low level, input < 10 dBmV Over level, input > 60 dBmV |
|  | | Measurement Mode Selection: ABSOLUTE / RELATIVE Absolute - It will read your output level Relative - It will read your signal loss in "dB", from point A to B |
|  | *** | REFERENCE LEVEL SETTING (only in relative mode) Set reference for the band selected. It is possible to set different reference points for each band. |
|  | | This key activate 20 sec. of backlight |
|  | BAT xxx % | Battery Test By pressing and holding this key it will show battery-level, and SHUT OFF unit by releasing the key |

NOTE: Please SHUT OFF Device when NOT in USE, in order to preserve Battery Power.