

TRK-14

The Model TRK-14 Tracking Receiver, developed by Vertex Communications Corporation, is a versatile, reliable, and user-friendly receiver and downconverter in one compact unit for use with step track antenna control systems in satellite communications earth stations.

The TRK-14 provides a proportional DC tracking signal from any of four customer-defined, crystal-controlled beacon frequencies in the range of 10.95 to 12.75 GHz. If a later frequency change is necessary, component substitution facilitates quick and easy frequency changes in the field. Additionally, any beacon in the 10.95 to 12.75 GHz bandwidth can be selected using a customer-furnished reference generator connected to the External Frequency Reference input of the TRK-14.

The front panel offers convenient selection of the desired beacon. An alphanumeric display provides direct readouts of the selected beacon frequency and the operating conditions of major subfunctions. A meter shows the DC tracking voltage output level for the selected beacon.

For remote operation, the TRK-14 accepts dry contact closures for beacon selection. An auxiliary signal strength output provides for independent monitoring. A form 'C' dry contact summary alarm output is provided for monitoring any critical fault in the receiver, including loss of signal.

FEATURES

VERSATILE

- Order any four beacon frequencies in the 10.95 to 12.75 GHz band.
- Tune to any frequency in the 10.95 to 12.75 GHz band by using an external frequency reference.
- Change frequencies in the field with simple component substitution.
- Select beacons from a remote source (dry contact closure).
- Monitor tracking signal strength through an auxiliary output.

USER-FRIENDLY

- Operate the TRK-14 with straightforward controls and indicators.
- Observe system response to beacon selection and level controls.

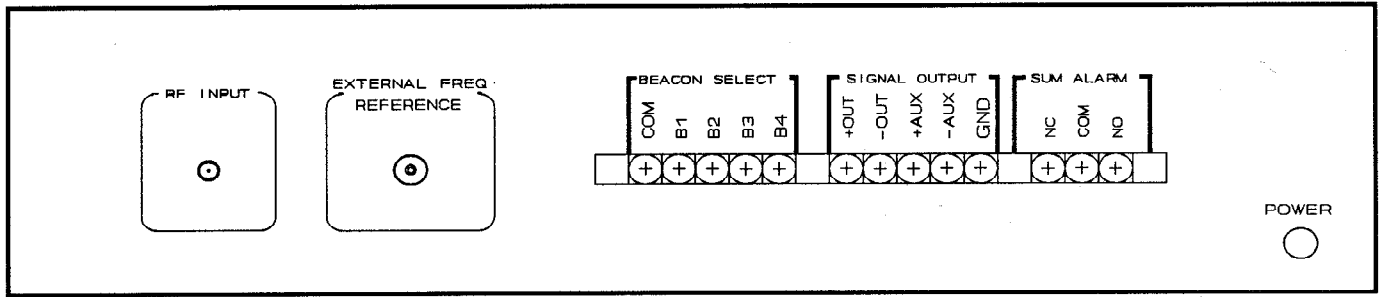
ACCURATE

- Depend on accurate, reliable frequency control from phase-locked loops with precision crystal reference oscillators.

COMPACT

- Save rack space with a single 3.5-inch rack-mounted unit.

REAR VIEW OF TRK-14

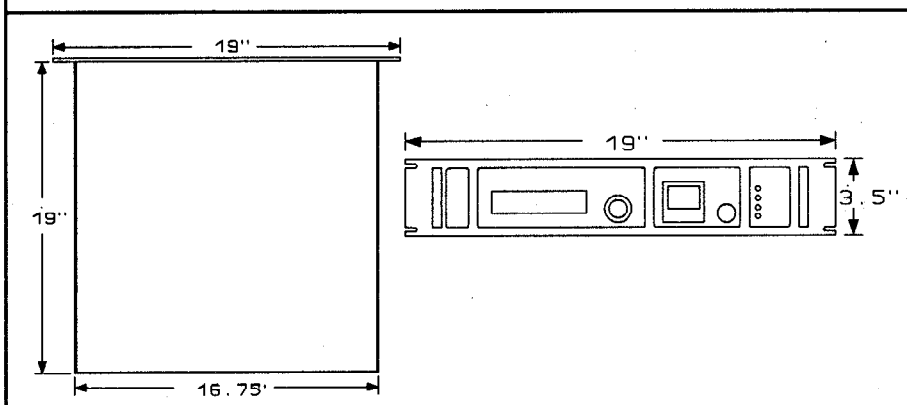


MODEL TRK-14 TRACKING RECEIVER SPECIFICATIONS

| | |
|------------------------------|--|
| INPUT POWER | 120/220/240 VAC \pm 10%, 50/60 Hz; 50 VA |
| INPUT FREQUENCY | 10.95 to 12.75 GHz |
| FREQUENCY SELECTION | Front Panel Control, Remote Contact Closure, or External Frequency Reference |
| INPUT IMPEDANCE | 50 OHMS, Type SMA - Female |
| INPUT VSWR | 1.3:1, Maximum |
| INPUT LEVEL | -100 to -60 dBm |
| NOISE FIGURE | 15 dB, Nominal |
| PREDETECTION BANDWIDTH | 200 KHz |
| L.O. STABILITY | 1st L.O.: \pm 5 PPM, Maximum (10,070 to 11,870 MHz) 2nd L.O.: \pm 5 PPM, Maximum (810 MHz) 3rd Converter: AFC Controlled (70 MHz - DC) |
| L.O. RERADIATION | -60 dBm, Maximum |
| IMAGE REJECTION | 60 dB, Minimum |
| OUTPUT VOLTAGE RANGE | 0 to 10 VDC (Front Panel Adjustable) |
| OUTPUT VOLTAGE SLOPE | 0.5 Volts/dB, Nominal |
| MINIMUM INPUT C/No | 57 dB-Hz |
| EXTERNAL FREQUENCY REFERENCE | 9 to 12 MHz at 0 dBm; BNC Female Connector |
| ENVIRONMENTAL | Temperature - 0°C to +50°C; Humidity - 90% noncondensing |

Specifications subject to change without notice.

DIMENSIONS OF TRK-14



ORDERING INFORMATION

When ordering the Model TRK-14 Tracking Receiver, specify four frequencies in the 10.95 to 12.75 GHz receive band. Also specify line voltage and frequency.

Standard front panel finish is gray textured semigloss. Black can be provided as an option.

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VERTEX CONTROL SYSTEMS DIVISION

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