



ACM Systems

A Wholly Owned Subsidiary of SINC

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TRIM



TARGET RECEIVER INJECTION MODULE

The TRIM (Target Receiver Injection Module) provides a realistic jamming environment for evaluating overall tactical system and personnel performance. Its primary application is large-scale exercises involving many voice and data radios and dense message traffic.

The TRIM's innovative design virtually eliminates unintentional or undesired jamming of non-targeted communication systems or data links. The TRIM avoids radiating jamming signals into the atmosphere, which as an added benefit minimizes potential FAA and FCC limitations or ERP, bandwidth, and modulation type. TRIM has proven itself to be a valuable and effective jammer during the U.S. Army's Bradley IOT&E and the FBCB2 Limited User Test in 2000. The TRIM offers many enhancements over the earlier Palletized Jammer Simulator that was developed in the mid 1980s. The TRIM has the capability to jam up to three SUT (System Under Test) radios with up to four independent jammer channels by injecting waveforms via remote mounted couplers at the SUT radio's antenna. The extremely compact TRIM is composed of seven major subsystems:

Four independent Jammer CCAs, RF Backplane CCA, Tone Receiver CCA, and a PC-104 "5x86" CPU CCA all in one environmentally rugged chassis. This extremely flexible and fully programmable combination includes remote control over RS-232 serial and/or Ethernet port for connection to an external controller, or for configuration through a remote PC.

FEATURES

- Fully operator programmable through remote interface via RS-232 or Ethernet (IEEE-1394 optional)
- Jamming waveforms include waveforms such as tone, spot noise, combs, swept noise, barrage jamming, and FM and AM arbitrary jamming capability with or without added noise.
- Integrated GPS receiver and antenna
- Simultaneously jams up to three SUT radios:
 - Two with the combined power of three jammer channels and one stand-alone channel
- Jamming signal is injected into SUT radios via remote mounted couplers to minimize radio cable losses
- Three Modes of operation:
 - Tone Mode: Jammer output amplitude governed by the relative strength of up to four different received CW tones.
 - Manual: Jammer output amplitude governed by command or script file
 - Virtual: Jammer output amplitude governed by the TRIM terrain-map/path loss model for simulating up to four "virtual" jammers
- Can Optionally be connected to external HPA (High Power Amplifier) for open-air live jamming



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SPECIFICATIONS

Jammer Specifications:

- Jammer Channels ~ 4
- Simultaneous Jamming ~ 3 target radios
- Frequency Range ~ 20-450 MHz
- Frequency Resolution ~ 12.5 kHz
- Instantaneous Jamming ~ Up to 450 MHz (bandwidth)
- Modulation Type ~ Arbitrary FM and AM with or without noise
- RF Power Range ~ -30 to -100 dBm (0 to -70 w/o coupler)
- RF Power Resolution ~ 0.5 dB

Receiver Specifications:

- Receiver Channels ~ 4 (Multiplexed)
- Frequency Range ~ 30-88 MHz, 225-450 MHz
- Frequency Resolution ~ 12.5 kHz
- Demodulation Type ~ AM
- Dynamic Range ~ -30 to -100 dBm (-44 to -114 w/o coupler)

Standard Specifications:

- Mounting Specifications ~ MS91405-B1B ATR tray mounting
- Mechanical Dimensions ~ 14" x 10.2" x 5.75" (HxWxD)
 - Weight ~ 18 pounds
 - Operational Temperature Range ~ -34C to +50C
- Input Power ~ 18 - 32 VDC, 60W

Call ACM Systems at 916-859-4777 for additional information...