

Screamer MIU-50 Installation Manual

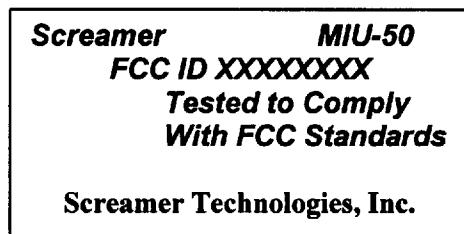
Screamer MIU-50 Description

The Screamer meter interface unit (MIU) is a direct sequence spread spectrum transmitter operating in the unlicensed 902-928 MHz band. The transmitter delivers 50 mW of RF power into a printed antenna.

The transmitter has two interface ports for connections to two utility meters. The microprocessor on the transmitter board accumulates pulses from the two meter ports and transmits the pulse counts, along with a unique I.D. in a 13 mS burst. The interval between bursts is programmable. Typical operation would require transmission intervals between 1 per hour and one per 8 hours.

In addition to pulse counts and a unique I.D., the transmitter sends a vendor code, a property code, and a status byte. The status byte indicates repeat level, battery status, and tamper for each meter.

The data is spread using a 63 bit PN code, providing 18 dB of processing gain.



Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio TV technician for help.

Connections to Utility Meters

The MIU-50 can connect to one or two pulse-type utility meters. The two connection ports are labeled P01 and P02. Three terminals are provided for each connection, data, ground, and tamper. Pin 1 is the tamper pin, pin 2 is ground and pin 3 is the data pin for each connection. In the case where the meter output is polarized, connect the positive terminal to pin 3 and the negative pin to pin 2. If the meter output is not polarized, then the pin 2 – pin 3 choice is not critical. If tamper is used, it can be connected to the ground terminal at the meter.

Placement of MIU-50

The MIU-50 should be installed as high as is practical, with the meter wires directed toward the floor. This ensures vertical polarization of the transmit antenna, for optimal coverage. Avoid placing the MIU-50 too close to metal pipes or duct-work as this will limit the transmission distance.

Operation of MIU-50

The transmitter is factory programmed with a unique transmit I.D. and transmit interval. Should it be necessary to cause a transmission to occur for range checking or trouble shooting, simply short the tamper wire to the ground terminal of the meter (assuming the tamper wire is not already connected to the meter ground terminal). This will cause the MIU-50 to transmit one short burst of data.

Removal of the battery will cause the pulse counts to be reset to zero.