

The KLT radio, which is also referred to as FMR (Fleet Management Radio), is designed for alarm purposes, vehicle location (and tracking) and fleet management.

In contrast to “normal” mobile units KLT is not intended for speech processing. Data is transmitted by analogue tone FM modulation. Its compact size makes it ideal for the above applications.

The unit may be operated on either standard MPT1327 system or on a Kavicommm proprietary system.

SPECIFICATIONS

General

Power Supply Operating Voltage	:	10,8 to 15,6V DC.
Antenna Impedance	:	50Ω, unbalanced.
Frequency Range	:	450 – 470 MHz
Channel Spacing	:	12,5 MHz
Modulation	:	FM
Frequency Stability	:	± 2,5 ppm (-30°C to 60°C)
Dimensions	:	(142 L) x (115 W) x (27 H) mm
Weight	:	0,5 Kg
Max. Channel Separation (Tx or Rx)	:	14 MHz

Receiver

Sensitivity	:	-115 dm (typical), without de-emphasis fore 12db SINAD
Hum and Noise Ratio	:	34 dB
Spurious Response and Image	:	50 dB
Conducted Spurious Emissions	:	Less than -60 dBm

Transmitter

Nominal RF Output Power	:	15 watts
Spurious Emissions and Harmonics	:	-75 dBC
Adjacent Channel Power	:	-70 dBC
Frequency Deviation	:	fixed at 1,5 KHz ± 1 dB
Hum and Noise Ratio	:	34 dB

2. INSTALLATION

2.1 General

Radio placement in a vehicle is not critical to its performance. Because of its small size the radio could practically be installed almost anywhere. Do not install the unit where ambient temperatures could rise above +60°C. Choose a place where the main power cable will be as short as possible.

2.2 Power Source

The radio operates from a 13.6V DC (6 Amp) source such as a standard automotive “12v” negative Gnd electrical system. In case a vehicle uses “24V” system it is recommended to use a proper DC to DC converter preferably a linear type (if possible) in order to avoid radio interference.

The installer is advised to make sure that the vehicle's battery is “healthy” and that it is not lower than 10,8V DC. A low battery or defective regulator can severely impair the unit's operation.

A power cable is supplied with the radio. The red wire must always be connected to the (+) terminal of the battery and the black to the (-) terminal.

CAUTION

Do not ever apply more than 16V to the radio. Check the voltage source before connecting the power leads to it. Do not connect the power leads to the cigarette lighter socket or to any other points where high spike voltages might develop. Do not install the unit in a positive GND vehicle.

2.3 Antenna

The antenna and its coaxial cable are supplied by Kavicom. The installer may install other antennae provided they are of equivalent quality or better. Bear in mind that the radio is designed to operate with a 50Ω antenna.

3. FEATURES AND OPERATING INSTRUCTIONS

3.1 Features

The unit is a multipurpose one. The main purpose is raising alarm signals once activated by input at the Micro-Controller connector. The alarm data is transmitted using FFSK signals, which are decoded at the central control room or other similar means.

In addition the unit could be used as a radio link repeating signals which are received by its receiver. Both of the above-described functions utilize either a standard MPT1327 network or Kavicom's proprietary network.

The receiver is equipped with Relative Signal Strength Indication (RSSI) in order to facilitate locking on strongest (RF) signal available on the network.

3.2 Operating Instructions

Once the radio is installed as per installation instructions (see section 2) the radio is turned on (no switch for turning the radio on is available).

If a RF signal is available on the air to which the radio is programmed to receive, the unit locks on. The RSSI indication led will flash periodically.

The more times the led flashes the stronger signal is being received. 5 flashes in a row indicate that the signal strength is stronger than -80dBm . No more than 5 flashes are available even if the signal is very strong. When the led flashes only once the signal strength is around -110dBm . If no signal is available the led flashes at a very low rate.

As the unit has no other indications and/or knobs to operate the operation becomes very simplified.