



MK-29 MURS Command/Control Transceiver

User Manual

TELONICS INTERNAL USE ONLY – Not for sale to the public

Automated testing of MK-29:

Prior to integrating into a finished product, all MK-29 Transceivers must undergo automated testing to ensure they function properly and meet the FCC RF requirements.

Power Supply:

Required supply voltage: 2.8 – 4.3Vdc @ 50mA maximum current.

Antenna:

This radio is certified for use with antennas meeting the following criteria:

- Nominal impedance = 50 Ω (151-155MHz)
- Antenna Gain < +7dBi typical.

Integration testing:

The finished product must undergo RF testing to ensure the MK-29 Transceiver is connected to its antenna and power supply and functioning properly.

FCC Licensing Information:

The Telonics MK-29 Transceiver is FCC Part 95J type accepted for use on MURS. It operates on Multi-Use Radio Service (MURS) frequencies according to the Federal Communications Commission (FCC) Rules in the United States. MURS radios are licensed by rule. As such, a license is not required to transmit on these frequencies. For more information, visit the FCC's web site at <https://www.fcc.gov/>.

Labeling:

Any product containing the MK-29 should meet the following labeling requirements:

- The FCC ID shall be placed in the user manual of all finished products.
- Space permitting, the following label should be affixed to the final product. Minimum font size is four point. [sample label shown to right]
- When the finished product is so small or for such use that it is impracticable to label with a font size that is four points or larger, the FCC ID shall be placed on a removable label.



APPENDIX
MK-29 MURS Command/Control Transceiver
Specifications Rev _ 2024.12.23

Frequency Specifications (TX & RX):

- Channels 1,2,3 / 11.25 kHz bandwidth: 151.820, 151.880, 151.940 MHz
- Channels 4,5 / 20.00 kHz bandwidth: 154.570, 154.600 MHz

Frequency Tolerance: ±2.0 ppm max [temp & voltage]

Modulation Characteristics: 2-Modes / High Data Rate (HDR) and Low Data Rate (LDR)

- 11.25 kHz channel bandwidth (LDR only)
Modulation Type: 4GFSK
Peak Deviation: ± 4.0 kHz
Symbol Rate: 2.4 ksymbol/sec
- 20kHz channel bandwidth (HDR/LDR)
Modulation Type: 4GFSK
Peak Deviation: ± 6.4 kHz_{HDR}
± 4.0kHz_{LDR}
Symbol Rate: 6.4 ksymbol/sec_{HDR}
2.4 ksymbol/sec_{LDR}

RF Output Power: +15dBm max typical on all channels

Antenna Gain (anticipated): -10 dBi min typ (collar application)
+7dBi maximum

Power Supply: 2.8 – 4.3Vdc (100mW max)

Environmental: Operating Temp: -30°C to +60°C

Board dimensions: 0.5 x 0.775 x .125" nominal

Electrical Connections (typical):
Power and serial interface:
28ga stranded w/ PTFE insul.
Red = +BATTERY (3.6V nom)
BLK = -BATTERY
Yel = Serial (A/R – as req'd)
RF (TX & RX):
coaxial cable (1.12mm, A/R)