



**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.

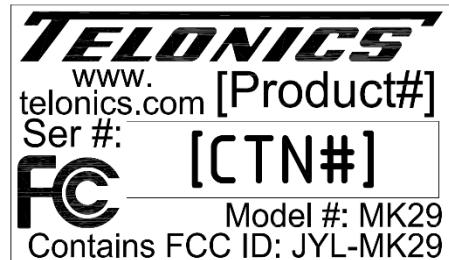
**FCC Licensing Information:**

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<sub>HDR</sub>**  
**± 4.0kHz<sub>LDR</sub>**  
**Symbol Rate:** **6.4 ksymbol/sec<sub>HDR</sub>**  
**2.4 ksymbol/sec<sub>LDR</sub>**

**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)