



**DTC COMMUNICATIONS, INC.**

**Operating Instructions for the T2001-S  
Personal Protection Transmitter**

**Version 1.0**

**OP19200XX**



## MODEL T-2001S TRANSMITTER OPERATING INSTRUCTIONS

### Contents

- 1 T-2001S Transmitter
- 6 Duracell AAA Batteries
- 1 MA-70-5 Microphone-Antenna Assy.
- 1 Data Sheet
- 1 Operating Instructions

### Description

The T2001S is a synthesized VHF 1Watt audio transmitter, compliant with the NTIA specification for Narrowband operation. Via a simple PC programming interface, as many as 10 channels over the entire 150 to 174 MHz band may be installed in memory. This transmitter is miniaturized and ruggedized, being designed for body worn personal protection and evidence gathering missions. The time to half power with AAA Alkaline batteries is greater than 4 hours. The transmission is a narrow-band FM signal, of 2.5 kHz deviation. The T2001-S transmission is duplexed on the microphone cable; meaning the microphone is the antenna. The audio circuitry is built around a DTC proprietary gain control (AGC) circuit, and a high-quality Knowles microphone.

### Operation

1. Controls
  - ON – GREEN
  - OFF - RED
  - Channel Select - 10 Position Rotary
2. Programmed Features
  - Channel Frequency - 1 thru 10
  - AGC - ON / OFF
3. Connectors
  - Microphone/Antenna
  - Programming Connector

#### 4. Deployment

For longest transmission range, use with microphone-antenna fully extended in a vertical orientation.

### **Batteries**

The T-2000-S operates on six AAA batteries in series, which produce 9 VDC. A fresh set of batteries will operate the unit for over four hours. Battery reversal guards are integral to the battery compartment to eliminate the possibility of cell reversal.

Verify that the microphone antenna is inserted and the unit is switched off (RED DOT).

To install the batteries:

1. Lay the unit down, battery side up and slide the battery door to the right.
2. Observing polarity, install the six alkaline AAA cells.
3. Close the battery door by sliding the door to the left.

**NOTE:** Do not operate the transmitter without the microphone antenna attached

### **Transmitter Operation**

1. Slide the battery door to the right and install six fresh AAA batteries, being careful to observe polarity. Replace the door by sliding it to the left. Verify that the power switch located on the top control surface is in the RED “off” position. Attach the Microphone to the connector on the top of the unit. This is a push-on pull-off locking-type connector. Connect the microphone antenna to the transmitter by simply pushing it into the top connector.

**This is a push-on push-off locking connector. The connector will rotate 360 degrees in the transmitter without unmating. Use extreme caution when connecting or removing the microphone antenna. To remove slide back the sleeve, and pull straight out.**

2. Set the T-2001 to the proper channel using the recessed rotary switch located on the front cover.
3. Turn the unit “on” by sliding the switch to the GREEN position.
4. Always turn the unit off and remove used batteries when not in use. IT IS IMPERATIVE TO DISCARD partially used batteries, as their remaining life is not very predictable. **ALWAYS** start an operation with a fresh battery.

### **Audio Circuit and Body Mounting Tips**

The audio circuit is based on a DTC proprietary automatic gain control (AGC) hybrid circuit and an external, high-sensitivity Knowles electret microphone. Excellent audio quality is achieved in a wide variety of background noise environments.

All body-worn transmitters are susceptible to “clothing noise”. Reducing this rubbing effect is accomplished in a variety of ways. After securing the transmitter to the body with a secure mounting method such as an ACE bandage or custom harness:

1. Try to locate the microphone in an area that pickup will be best and rubbing noise is least. Avoid the arms, legs, crotch or under the arms or the waist area. Front torso mounting is ideal.
2. Always provide a small amount of strain relief on the microphone cable itself. This reduces the noise caused by the microphone cable and element being tugged and prevents cable damage.
3. Secure the microphone cable to the body with medical adhesive tape in at least two spots, the final being about an inch below the element. Remember to leave a strain relief loop!
4. Completely cover the microphone element (facing outward) with an ordinary Band Aid™ . This provides a damped baffle for the microphone and a slick surface for clothing to rub on, and actually does not impact audio pickup level at all.