# Shakespeare® Style ART-3 Antenna / Radio Tester

# An easy to use pocketable meter that checks: Receiver Function Output Power Antenna VSWR

Use Internal Battery or External 12 VDC

#### SET-UP:

- Attach the antenna to the "ANT" connection on the ART-3 meter.
- 2. Use a 1-meter length of 50-ohm cable (Shakespeare part #4079, sold separately) to connect the transceiver to the meter.
- Insert supplied battery into device and test battery as per "To Test ART-3 Internal Battery" section. If battery is low, replace battery.
- If desired, connect the supplied power cord to 12VDC only, making sure to observe polarity to avoid damage.

## To Test Radio Transmitter Output Power:

- 1. Slide ART-3 Top Switch to "WATTS" mode.
- 2. Ensure Bottom Switch is at "PWR OFF".
- Key VHF transmitter (Mic PTT) on Channel 72. Read top scale of the meter.

#### To Test Antenna (VSWR):

- 1. Slide ART-3 Top Switch to "SET"
- 2. Ensure Bottom Switch is at "PWR OFF".
- 3.Transmit on radio and turn "SET" knob until Needle just touches the leading edge of the blue "Set" line.
- 4. Slide top Switch to "VSWR". Read middle scale.
- 5. A reading higher than 3 indicates the need for inspection and possible replacement of the PL-259 connector, the coax cable, or the antenna. Seek technical help as needed.

**NOTE**: The needle will not move/move very little if antenna is functioning properly.

#### To Test VHF Receiver:

- **1.** Set radio to CH72, volume up to 1/3 and squelch to minimum counter clockwise
- 2. Slide ART-3 Bottom Switch to "Rx TEST".
- **3.** A Tone should be heard through the Noise on the Radio. If no Tone is heard seek technical help.
- 4. Slide Bottom Switch to "PWR OFF".

#### To Test ART-3 Internal Battery:

- 1. Slide Bottom Switch to "BAT". Read "BAT" scale.
- 2. Slide to "PWR OFF" when done.
- 3. Use only type 23A or MN21 12V alkaline battery.

ART-3	SPECIF	ICAT	IONS
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Frequency Range: 155-158 MHz
RF Power Scale: 0 to 30 watts
Impedance: 50 ohms
Accuracy: 10%

Connectors: SO-239
Construction: Die-cast

Construction: Die-cast aluminum Signal Generator: 3Khz Deviation

Tone: 1000 Hz

RF Level: -115 dBM (approx.)

Although the meter can be left in-line, to minimize line losses it is recommended that the ART-3 be removed from the system after measurement.



## **Shakespeare Electronic Products Group**

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