This manual covers connection and operating instructions for the Optronic Mini Scouter. The Optronic Mini Scouter is covered under U.S. Patent Number 5,471,402.

WARNING: Maximum input signal is +15dBm (50Ω). Under no circumstances damage to the input circuitry. Damage resulting from excessive input voltage is easily avoidable.


The Optronic logo is a registered trademark of Optronic Inc.
Introduction

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Features include a signal strength bar graph, rapid charge internal NiCd batteries, Reaction Time, etc.

The unit can be set to operate in AC or DC power adapter and NiCd.

The front panel includes a built-in frequency counter and filter options.

Green buttons may be used for two-way radio communications. Designed to work with an antenna to pick up transmission from the background.

Transmission frequencies from the background.

Preceding technology developed by frequency engineers, special applications for security, wireless communication, and tactical applications. If required, a list of trees, etc.

The unit is the latest advancement in handheld frequency test instruments.
The Mini Scout has three external connections located on the top panel. The functions of each are briefly described below.

**POWER**
DC power is supplied to the Mini Scout through the POWER connector, a standard 5.5 mm x 2.1 mm coaxial DC power jack located on the top panel, which provides a 9V DC input to the Mini Scout. This input is intended for charging the internal NiCad battery.

**RF INPUT**
The RF IN jack is used to connect the Mini Scout to a receiver for the purpose of Reaction Tuning. RF IN is used in two ways:

- The T1000, R7000, R7100, R8500, R9000, and the AOR AR8000, AR8200. Also, the Radio Shack Pro-2035/2032 (with OSS35 installed). The Serial Interface conforms to the ICOM CI-V interface standard. The TIP carries the TTL serial data, and the SHIELD provides the return.
- The Pin-4 output from the Mini Scout's VFO B or C jack located on the front of the Opalina. A Windows® Terminal Emulator program may be used for dialing.

**GATE**
GATE jack used for interfacing with a computer for the purpose of dialing. The GATE jack is used as an input to control the Mini Scout to a receiver for the purpose of Reaction Tuning. The GATE jack is used as an input to control the Mini Scout to a receiver for the purpose of Reaction Tuning. The GATE jack is used as an input to control the Mini Scout to a receiver for the purpose of Reaction Tuning.
Filter Mode

Filter mode is selected by pressing the FILTER switch in the ON position. In this mode, the LED indication only shows when a measurement is made in the "filter" mode. The filter mode allows the user to select a filter function to block unwanted frequencies. The filter function can be used to improve the accuracy and reliability of the measurement, especially when measuring complex signals.

Normal Mode

Normal mode is the default mode and is used for routine measurements. In this mode, the LED indication shows the measurement result in real-time. The Normal mode is suitable for general measurement tasks, where real-time data is required.

Power-Up

The instrument is powered up by the internal battery. When the instrument is turned on, the LED indicator lights up, indicating that the instrument is ready for use. The instrument can be used immediately after power-up.

Automatic Calibration

The instrument features an automatic calibration function, which automatically calibrates the measurement range based on the external environment. This function ensures that the instrument provides accurate measurements even in changing conditions.

Data Logging

The instrument supports data logging, allowing users to record measurement results for further analysis. The data can be stored locally or transferred to a computer for further processing.

Data Transfer

The instrument can transfer data to a computer via a USB port. This feature allows users to access and analyze measurement results easily. The instrument supports various data formats, making it suitable for different applications.

Maintenance

Regular maintenance is recommended to ensure the instrument's performance. The instrument should be cleaned regularly, and any necessary adjustments should be made to maintain its accuracy. Regular calibration is also recommended to ensure the instrument's accuracy over time.
To change the communication language, follow the procedure below.

### Changing Communications Language

**AOR**
- For use when Reaction Tuning the AOR AR8000/AR8200.

**C-5**
- For use when Reaction Tuning the following ICOM Receivers: R10.

### Reaction Tuning

<table>
<thead>
<tr>
<th>Setting</th>
<th>Gate</th>
<th>Measurement Time</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>8000s</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>64ms</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>90ms</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>100Hz</td>
<td></td>
</tr>
</tbody>
</table>
1. After setting the Mini Scout in FILTER mode, put the Radio switch to the down position (AR1000). Start the Mini Scout.

2. For the AR8000, switch the Mini Scout to the down position (AR1000). Start the AR8000.

3. Make sure that the Mini Scout is powered on before the AR8000. Then, turn on the AR8000 to the receiver.

4. Make sure the receiver is powered on before the Mini Scout. Then, turn on the Mini Scout so that the AR8000 is ready to be used.

5. Key up any radio and the Mini Scout will automatically tune the AR8000 to the received

Note:
- The initialization command may be sent to the AR8000 to the receiver.
- The cable to the Mini Scout is located at the top of the Mini Scout.
- The cable to the AR8000 is located at the bottom of the AR8000.

ICOM R7100: Band Freq = 9600, TRAIN = ON, C-V ADDRESS = 32

ICOM R10: Band Freq = 9600, TRAIN = ON, C-V ADDRESS = 32

The ICOM R10 and R7100 receive special digital signals for communication. These signals are transmitted from the AR8000 to the Mini Scout.

Learn more about the Mini Scout and AR8000 by following the ICOM C5-2 compatible receiver setup guide. The Mini Scout is capable of receiving signals from the AR8000.
SERIAL DATA INTERFACE

Below 70 MHz:

No interference for these frequencies above 800 MHz. Use the BL70 low pass filter when your receiver is downstream for these frequencies above 800 MHz. When used with the R800 receiver, the antenna will eliminate all frequencies below the BL70.

The N100 FM broadcast will interfere with the reception of local FM stations. The BL70 rejects this interference.

This is not necessary and is practical to disable even further, the change itself must be disabled since it interferes with the battery.

The built-in wideband antenna is suggested for receiving the signal from the station you are interested in. The antenna is not supplied with the M50900 as standard. 

The use of an external antenna may be necessary in some areas where the signal strength is weak.

Please ensure that the antenna is properly connected and that the connections are secure to prevent any interference. The use of a ground wire is recommended to improve performance.

ANTENNAS

Please review the installation instructions and make sure the antenna is properly installed.

CHARGE OPERATION

The AC-90 power adapter is required for charging the M600900. Please check the adapter and plug it back in. If the LED does not illuminate, the charging circuit is complete or a fault condition has occurred. If the LED illuminates, the charging circuit is not complete or a fault condition has occurred. Please check the adapter and plug it back in.

Antenna and accessory recommendations

Please refer to the installation manual for additional recommendations on antenna and accessory usage.