**Exhibit L: User Manual** 

FCC ID: CW21669-3

# Test Box.

The Test Box allows the user to test Remote and Controller batteries under load as well as test Remote Arm/Fire functions, and test Remote receivers. The Test Box also serves as the programming interface between a computer and a RFD Unit.

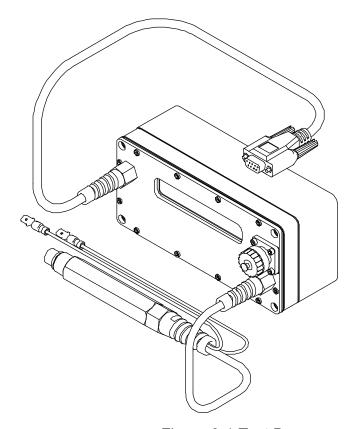


Figure 9-1 Test Box.

## TEST BOX DESCRIPTIONS.

Antenna / Battery Charger Connector:

The Test Box has an Antenna/Battery Charger connector like the Remotes and Controller. Installing an antenna from the system onto the antenna connector turns on the Test Box. The Test Box has an internal battery pack that must be recharged using the system battery charger.

### Probe:

The Test Box has a probe that plugs into the Remote or Controller under test. The Test box communicates to the Unit under test through the probe and by using a radio transmitter that is internal to the Test Box. The two leads coming off the probe are for connecting to the Remote binding posts. The firing voltage of the Remote will be measured through these connections.

#### Serial Connection:

A serial cable connects the Test Box to a computer serial port operating at 1200 baud. The serial cable must be connected to a computer when the Test Box is being used to program Controller and Remote Units. The serial cable may also be used when the Test Box is in the test mode. While in the test mode, the Test Box transmits the information displayed on the Test Box screen out the serial cable. A terminal program such as Hyper Terminal may be set up to capture this information to a file. The file can then be saved and printed.

### TEST BOX OPERATION.

## Test Box Messages

When the Test Box is turned on, the following message is displayed.

166x Series Test Box 12/19/01 Ver 1.4

The "166x Series" part of the message

identifies the system types that the Test Box is designed to operate with. "12/19/01" is the date of the Test Box firmware. "Ver 1.4" is the version of the Test Box firmware.

Plugging the Test Box probe into the Test Box Antenna Connector puts the Test Box into a self-test mode. In this mode, the Test Box loads its own internal battery and then displays the loaded battery voltage along with the low battery threshold point.

Battery Test - Standby

This message displays while the Test Box loads down the battery of the unit connected to the probe. This is done to get a more meaningful measurement of the battery status.

The Test Box will automatically step to the next message.

```
Loaded Battery 7.84

Low Battery = 7.00
```

This message shows the battery voltage for the unit connected to the probe while the Test Box loads that battery. The Low Battery for the Unit is also displayed.

The Test Box will automatically step to the next message.

Testing Completed

This message will be displayed until the probe is removed from the unit being tested.

### Remote Messages

When the Test Box detects that a Remote Unit is connected to the probe, the following message will be displayed.

```
Frequency 154.570 Mhz
Address 65324 Unit 2
```

The data displayed will be the actual configuration data from the unit connected to the probe.

The Test Box will automatically step to the next message.

```
S/N 12345 Type 82

DOM 08/14/2000 Ver 1.0
```

This message shows the Serial Number, Unit Type, Date of Manufacture, and Firmware Version of the unit connected to the probe.

The Test Box will automatically step to the next message.

```
Remote Arm/Fire Test
015
```

The Test Box will arm and fire a Remote Unit connected to the probe. The two leads from the probe must be connected to the Remote binding posts for the arm voltage to be measured. The "015" is the amount of time remaining in the Arm / Fire test. This number will count down to "000". The Remote will then be fired.

The Test Box will automatically step to the next message.

This message show the actual armed voltage measured, and the minimum armed voltage level that is normal.

The Test Box will automatically step to the next message.

```
Battery Test - Standby
```

This message displays while the Test Box loads down the battery of the unit connected to the probe. This is done to get a more meaningful measurement of the battery status.

The Test Box will automatically step to the next message.

```
Loaded Battery 7.84

Low Battery = 7.00
```

This message shows the battery voltage for the unit connected to the probe while the Test Box loads that battery. The Low Battery for the Unit is also displayed.

The Test Box will automatically step to the next message.

Testing Completed

This message will be displayed until the probe is removed from the Unit being tested.

# Controller Messages

Connect the Test Box probe to the Controller Unit antenna connector. Hold down the '3' button on the Controller Unit while pressing the 'ON' button. This puts the Controller in the Program/Test mode. When the Test Box detects that a Controller is connected to the probe, the following message will be displayed.

```
Address 65324 Unit 0 Frequency 154.570 Mhz
```

The data displayed will be the actual configuration data from the unit connected to the probe.

The Test Box will automatically step to the next message.

```
S/N 12345 Type 81

DOM 08/14/2000 Ver 1.0
```

This message shows the Serial Number, Unit Type, Date of Manufacture, and Firmware Version of the unit connected to the probe.

The Test Box will automatically step to the next message.

```
Battery Test - Standby
```

This message displays while the Test Box loads down the battery of the Unit connected to the probe. This is done to get a more meaningful measurement of the battery status.

The Test Box will automatically step to the next message.

```
Loaded Battery 12.26

Low Battery = 11.75
```

This message shows the battery voltage for the unit connected to the probe while the Test Box loads that battery. The Low Battery for the Unit is also displayed.

The Test Box will automatically step to the next message.

```
Testing Completed

This message will be displayed until the probe is removed from the unit being tested.
```

To run the tests again, disconnect and then reconnect the probe to a unit to be tested.