

**Operating Instructions
For the IRESPOND System
6/17/04**

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0.0 Scope. These operating instructions are provided to allow the user to operate the IRESPOND system for FCC certification testing. The IRESPOND system is composed of 30 hand held Remote units and a single Base station connected to a PC via USB cable. Tests are issued from the PC and broadcast via the RF access point to all 30 remote devices. For FCC certification we are submitting a single Remote and a single Base station. Keypad controls will allow setting the power output and the selected operating frequency.

1.0 UUT Setup. Set up the Remote and Base units as shown in figure 1. The Base is connected to the PC via the supplied USB cable and draws its power from the USB port. *Ensure that the UP label on the USB cable is showing when plugging the USB cable into the Base unit.* Also note that the Base software still requires some power on switch debouncing. If the Base is powered on and the LCD screen continues to show Initializing.... Then after one minute unplug the USB cable to turn the Base off and try again. A floppy disk is included to load the USB driver onto a notebook or PC to communicate with the USB controller in the Base. All controls reside on the Base and no other intervention is required on the PC side

The Remote operates from the internal battery pack. At present there is no software to display the battery status. Therefore, 2 spare battery packs fully charged will be shipped with the units in case battery replacement is required. The Remote comes with a fully charged battery pack installed. If the LCD display dims then the battery pack may need to be replaced. When the battery pack voltage falls below 3.0V the battery pack should be replaced. Full charged the voltage on the packs should be greater than +3.8V. Instructions in the user manual detail battery pack replacement.

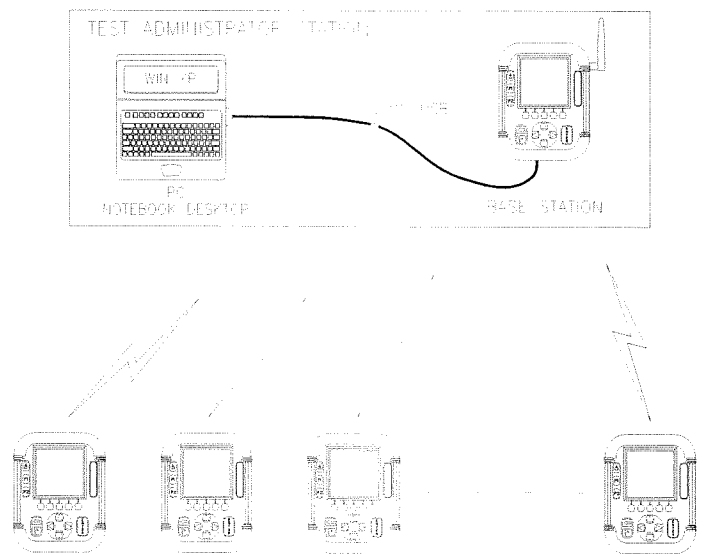
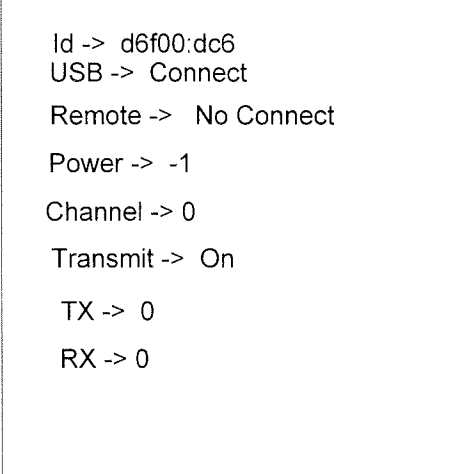


Figure 1. System Set Up

2.0 Controls and LCD Display. Press the power on button just above F1 to turn on the Base. The LCD screen should appear as in Figure 2. The following keys control the operation of the Base. *Note that the transmit should set off before the frequency channel is changed.* After the new frequency is set then toggle the flag key to set the transmit back on.

- 2.1** Up cursor key: Increase power by 5 db
- 2.2** Down cursor key: decrease power by 5 db
- 2.3** F1 Key: increments frequency channel by 1
- 2.4** F2 Key: decrements frequency channel by 1
- 2.5** Flag key: toggles transmit on/off

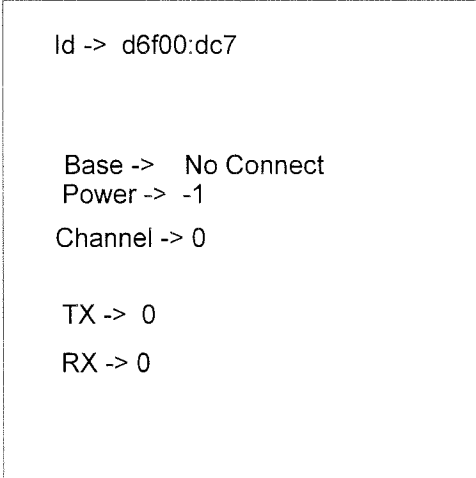
A rectangular box representing the LCD screen of the Base. It contains the following text:

```
Id -> d6f00:dc6
USB -> Connect
Remote -> No Connect
Power -> -1
Channel -> 0
Transmit -> On
TX -> 0
RX -> 0
```

Id -> d6f00:dc6
USB -> Connect
Remote -> No Connect
Power -> -1
Channel -> 0
Transmit -> On
TX -> 0
RX -> 0

Figure 2. Base LCD screen

The LCD screen for the remote is shown in figure 3 below. The Remote is always in receive mode and simply echoes the messages received from the Base.

A rectangular box representing the LCD screen of the Remote. It contains the following text:

```
Id -> d6f00:dc7

Base -> No Connect
Power -> -1
Channel -> 0

TX -> 0
RX -> 0
```

Id -> d6f00:dc7

Base -> No Connect
Power -> -1
Channel -> 0

TX -> 0
RX -> 0

Figure 3. Remote LCD Screen

3.0 Operation. After the Base and remote are powered on , select the frequency and power output for both the Base and Remote. Toggle the flag key to start the Base transmitting. The Base sends out a 64 byte message at a one second rate. The Remote should hear the message increment its RX counter and retransmit the same message back to the Base. When the Base receives the message from the remote the Base will increment its RX counter. When changing the frequency there will be a 30 second delay before the new frequency is active. There are 16 possible frequency settings starting at 0 to 15. The frequency assignment is shown in the attached documentation. The power settings can be changed from -1 db to -31 db in 5 db steps.

4.0 Documentation. Documentation for FCC submittal is provided. Also a hard copy and soft copy of the Specific Absorption Rate Analysis has been provided from our previous Model FCC submittal. This can be used as a template with the new FCC test data if required.

5.0 Contact Info.

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