



**intelePharmacy**<sup>TM</sup>



**Will Call System (WCS)  
Transceiver Manual**

# WCS Transceiver Manual

Version 2.9.119

## Chapter 1 Transceiver

This guide is intended to provide information on the transceiver component of PickPoint's Will Call System (WCS). This guide briefly covers its intended use, physical features, functional requirements, physical and logical setup and includes a diagram that visually represents how the transceiver works with the overall system.

### Caution:

*This user manual shall be used solely for the intent for which it was created; to provide information on the transceiver used with PickPoint's Will Call System (WCS). Any changes or modifications not expressly approved by the manufacturer - Dragonfire Group Holdings LTD. - can void the user's authority to operate the equipment.*

### 1.1 Description

This is a physical device that shares common circuitry that allows it to transmit and receive radio signals within a single housing. See

This device is used to receive commands from the intelWare software via a Local Area Network (LAN) connection in order to transmit the command to the receiving device; the hanger.

At this time this device unidirectionally transmits to the hangers. It does not receive any signals and therefore does not require use of a separate signal range.



Figure 1. Transceiver.

### 1.2 Functional Requirements

This section summarizes requirements and general specifications for the transceiver's network connections.

#### 1.2.1 Power

The transceiver has a power input that requires 250 mA at 3.6 V via an AC adapter. See

Figure 2. Transceiver power supply.

## 1.2.2 Radio Transmission

The following details requirements for the wireless communication channel.

### 1.2.2.1 Frequency

This device transmits between 905.5 MHz and 905.8 MHz.

### 1.2.2.2 Speed

The wireless data channel is unidirectional and thus acts as a transmitter though the unit can be configured for collision and error checking purposes.

### 1.2.2.3 Distance

The data signal transmission range is currently set to a capacity of 100 feet with a clear line of site.

## 1.2.3 Ethernet

This section covers details on the Ethernet interface.

### 1.2.3.1 Speed

The transceiver NIC receives data at 100MB full duplex via Ethernet cabling.

### 1.2.3.2 Connector

The transceiver uses an RJ45 jack to connect to the LAN. See Figure 3.

### 1.2.3.3 Protocol

The transceiver receives data via Ethernet using the TCP protocol on Port 700.



Figure 3. Transceiver RJ45 jack.

#### 1.2.3.4 Addressing

The transceiver is a network host that utilizes the IP protocol addressing scheme. The device can be set to Static or DHCP via a switch located on the PCB board next to the DB9 serial port. See Figure 4.

When the switch is set to the left, the unit will have a static IP of 192.168.0.2 which allows the device to be found, accessed and changed thru a web interface at any time. The switch, when set to the right, puts the device in DHCP mode.

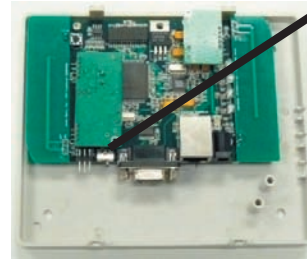


Figure 4. Transceiver addressing switch.



**NOTE** The above detailed picture of the switch (to the right) shows the transceiver set to DHCP. An active DHCP server on the network is needed in order for the device to receive a valid IP address.

#### 1.2.4 LED Indicators

The transceiver has four (4) LED indicators on the front case with different color lights to represent various states the transceiver is in. They are:

- 1.) Power - When powered on this will stay a constant red.
- 2.) Tx (transmit) - A yellow LED indicates that the unit is ready to transmit. When flashing, data is being transmitted.
- 3.) Rx (receive) - A yellow LED indicates that the unit is ready to receive. When flashing, the unit is receiving data.
- 4.) LAN - This LED is green and when lit, indicates that the unit is connected to the LAN. See Figure 5.



Figure 5. Transceiver LED indicators.



## 1.3 Physical Setup

This section describes the physical placement of the transceiver.

### 1.3.1 Placement

Placement of the transceiver is crucial to achieve optimal performance and functionality.

- The transceiver should be placed between 15 and 20 feet away and least 3 feet above the Uniweb paneling with no obstructions.
- It is recommended that the unit face perpendicular from the paneling that holds the hangers.
- The distance from the nearest LAN port must also be taken into consideration. A custom length CAT 5 Ethernet cable may be needed in order to complete the setup.

## 1.4 Software Setup

The transceiver is capable of being configured via a web interface.

### 1.4.1 Using Static IP Address

- Set the transceiver's switch to static mode (to the left) and open a web interface.
- Type in `http://192.168.0.2` in the address bar and hit enter. A login box appears:
- Username: anonymous  
Password: anonymous. After authenticating,

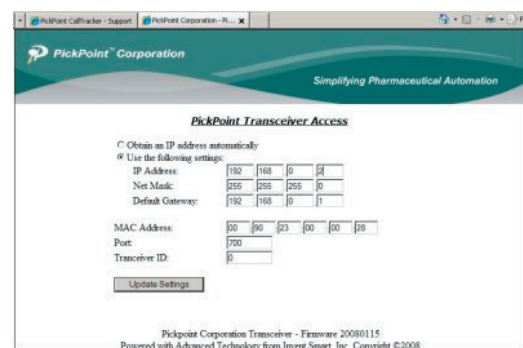


Figure 6. Web interface.

the browser displays an interface.  
See figure 6.

IP can be set to static or DHCP. Other settings are MAC address, port and ID assignment.

### 1.4.2 *inteleWare* Options

You can further configure the transceiver from the *inteleWare* software interface. From the Maintenance tab, select Settings. See figure 7.

- Global Settings show the assigned IP address and port number. You can also set the amount of time that the unit will timeout.
- The beacon service sleep time option is used to keep from overflowing the hangers with signals.
- The light sleep option also keeps the hangers from getting flooded from multiple commands. Time is in milliseconds, and it is recommended to set these at 20 seconds for beacon service and 5 seconds for light service.

### 1.4.3 Quick Tips

This covers a few quick troubleshooting tips for the transceiver.

#### 1.4.3.1 Checking Connectivity

First check if the LAN LED on the face of the transceiver. If out, check all physical connections.

If LED is on, verify that your network card is configured correctly (you may have to consult your local IT administrator to verify this information)

You can test connection from *inteleWare* as seen in figure 7. You can

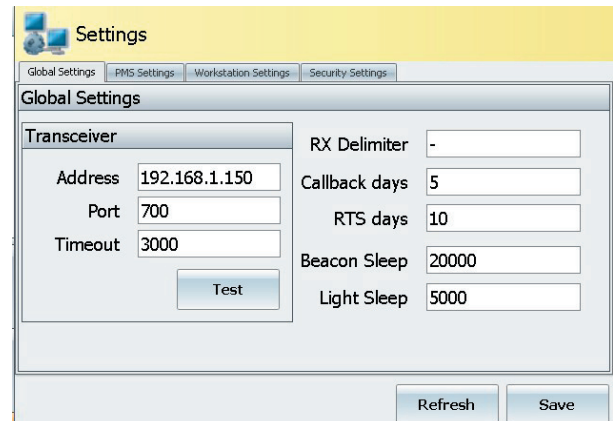


Figure 7. *inteleWare* interface.



**NOTE** Verify that the IP address and port number are the same as that configured in the web interface.

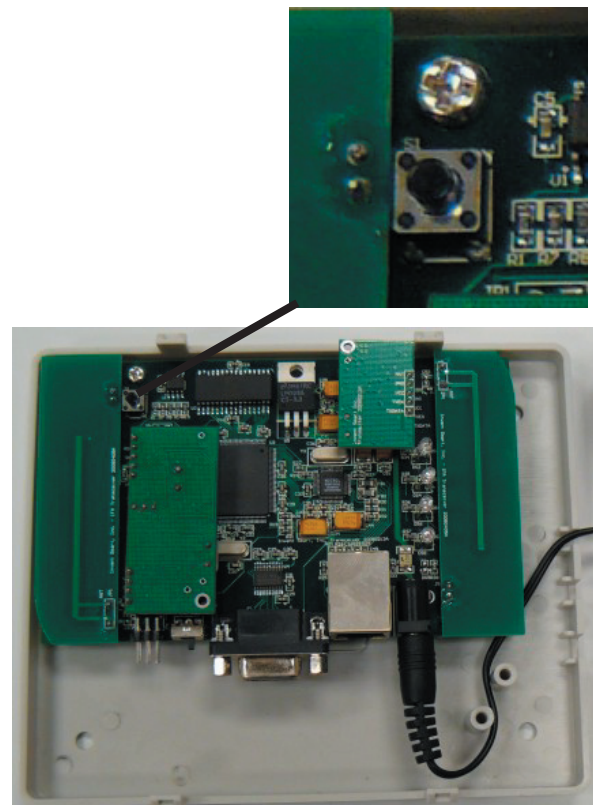


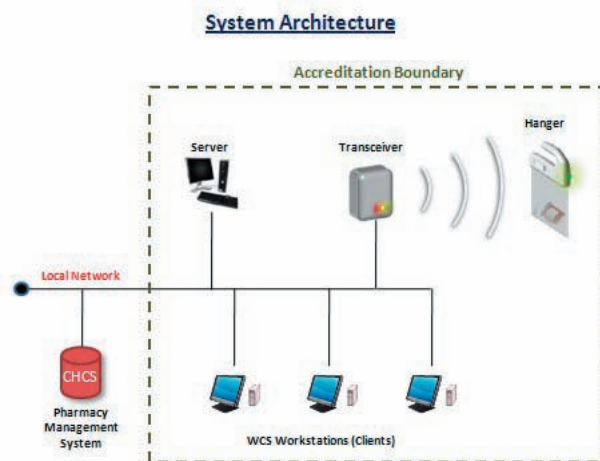
Figure 8. Reset button.

also test from a command prompt by typing ping 192.1.68.0.2 (as an example). The transceiver itself has a button that can be used to reset the unit. It is located in the upper left hand corner of the PCB. See

## 1.5 Diagram

A diagram of the system architecture is included to represent the transceiver's role in the WCS.

See *Diagram 1*.



*Diagram 1. Visual representation of transceiver.*

## 1.6 FCC Notice

### 1.6.1 Class A Digital Device

**NOTE:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.