Operations Manual

A-910 Radio Utility

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The Zigbee® Radio Utility

Pre-installing the Common USB Port Driver

This driver is required for the A-910-2.4ZB/A-910-2.4XBE Transceiver and to communicate with targets via the computer's USB port. The driver creates a virtual COM Port that is recognized by the applications as a standard serial port.

Note: You must pre-install this driver prior to connecting the device(s) to the computer through the USB port.

Installing the Driver

1. Insert the flash drive into the target computer.
2. Open the flash drive and locate the driver installation executable (e.g., CP210xVCPInstaller.exe).
3. Double-click the executable to run the installer..
   Follow the on-screen instructions to complete the installation..

Figure 1 - *USB Common Driver Install*

Installing the A-910 Utility Software

1. Insert the flash drive into the target computer
2. Open the flash drive and locate the driver installation executable
3. Locate the **Setup** icon and click to initiate the installation process. Click **NEXT** to continue.
4. Click **Browse** to select an installation folder different from the default folder (optional).
5. Click **Next** to continue. Once the installation is complete, the **Installation Complete** message displays. Select **Close.**

Configuring the Hardware and Utility Settings

1. Insert the A-910-2.4ZB/A-910-2.4XBE dongle into any unused USB Port (see Figure 2). The computer should automatically assign a COM port number to the dongle.

2. Start the A-910 Utility Software. The software should display the COM port assigned to the A-910-2.4ZB/A-910-2.4XBE Dongle (see Figure 3). If the utility does not automatically detect the COM port, it must be manually selected (see **Manually Selecting a COM Port** on Page 3).

3. The Target System ID or R-1307 CH (channel) is the number associated with the A-1519/1520 targets or R-1307 Readout. If using both the A-1519/1520 targets and an R-1307 Readout, both need to be set to the same system ID and channel (see Figure 4). Also see **Setting the Target System ID and Network ID** on Page 4 and **Setting the Target System ID and Network ID for the R-1307** on Page 5.

Figure 2 – A-910-2.4ZB/A-910-2.4XBE Dongle

Figure 3 – A-910 Utility showing the COM Port, System ID and Channel settings
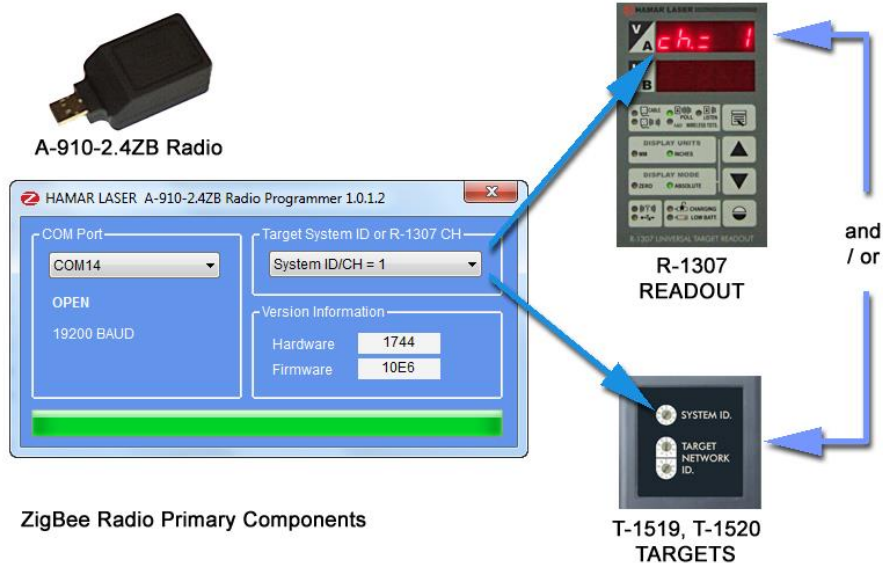
Figure 4 – System ID Setup

Manually Selecting the COM Port

The A-910 Utility should automatically detect the COM Port upon startup. If not, use the following steps to locate the correct COM Port.

For Windows 10 and Windows 11:

1. **Open Device Manager:**

   - Press Win + X and select Device Manager from the menu.

   - Alternatively, you can search for "Device Manager" in the Start menu.

2. **Locate the Device:**

   - In the Device Manager window, expand the Ports (COM & LPT) section.

   - Find the device for which you want to change the COM port (e.g., "Silicon Labs CP210x USB to UART Bridge").

3. **Open Device Properties:**

   - Right-click the device and select Properties.

   - In the Properties window, go to the Port Settings tab.

4. **Advanced Settings:**

   - Click on the Advanced button.

   - In the Advanced Settings window, you'll see a section labeled COM Port Number.

5. **Change the COM Port:**

   - Click the drop-down menu next to COM Port Number and select an available COM port number from the list.

   - Click OK to save the changes.

6. **Apply and Close:**

   - Click OK in the Properties window to apply the changes.

   - Close the Device Manager.

Figure 5 – *Device Manager showing COM Port for A-910 Dongle*

Notes:

- Note the COM Port listed and select that COM Port in the A-910 Zigbee Utility software using the drop-down arrow (see Figure 3).
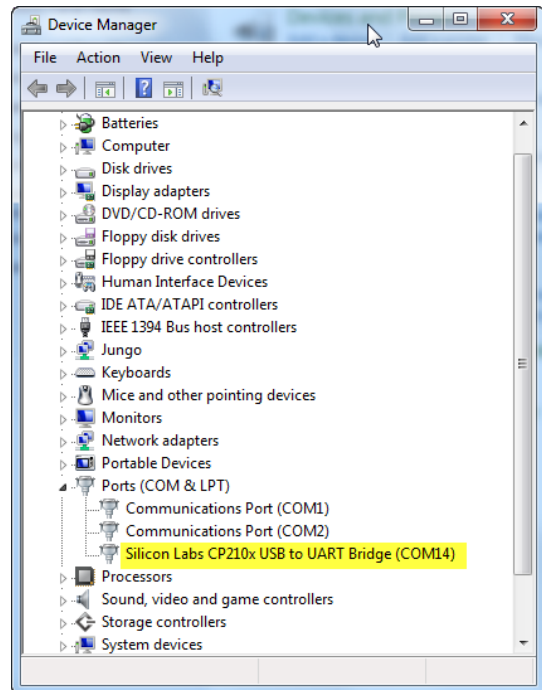
3

- If you do not see the Ports (COM & LPT) section, it may mean that no devices using COM ports are currently connected or detected. Ensure your device is properly connected and its drivers are installed.

Setting the Target System ID and Target Network ID

The System ID is a Radio Network Address that is used by the Radio Communications Protocol to filter unwanted data from other radio transceivers and targets using a different address. Only targets and radio transceivers that are set to a matching System ID can communicate with each other.

Because no two targets with the same System ID can transmit simultaneously, it is necessary for each target to be programmed to respond only when it is being addressed. The Target Network ID is the target address on the communications network. Under Host (computer) control, the radio transceiver transmits a message called a *polling request* that contains the Target Network ID of one specific target. All targets receive all polling requests, but only the target with a Network ID matching the ID contained in the polling message will reply (Transmit Data to the Host).

There are three rotary DIP switches located on the right side of the target, shown in Figure 6:

- The uppermost switch sets the System ID.
- The two lower switches are used to set the target network ID.

Setting the System ID

Note: Before selecting a System ID, ensure that it is not already in use by another system within the radio coverage area.

Using a small screwdriver, rotate Switch 1 to align the arrowhead with the System ID number (0-9). Figure 6 shows the System ID switch set to 1.

Figure 6 – *Unitarget ID Switch set to1*

Setting the Target Network ID and System ID for the R-1307 Readout

To make the unit visible to all other radio-enabled devices, you must set the Target Network ID and the System ID for the readout.

1. **Set the Local Readout/Target Network ID**

   Press the MENU button until the *upper* display shows id˗nn (nn is also equal to the R-1307 number) and the matching target number with the current target ID (nn) blinking. Use the UP and DOWN arrow keys to set the Target ID.

   Press the MENU button again until the lower display shows id˗nn, with the current target ID (nn) blinking. Use the UP and DOWN arrow keys to set the Target ID to the same value as that of the upper display's Target ID.

2. **Set the System ID (Radio Channel)**

   Press the MENU button until the upper display shows ch ˗ nn, with the current System ID (nn) blinking. Use the UP and DOWN arrow keys to set the System ID.
   Note that **nn** must be set to the same number as the channel switch setting of the A-910 radio transceiver (see Figure 7).
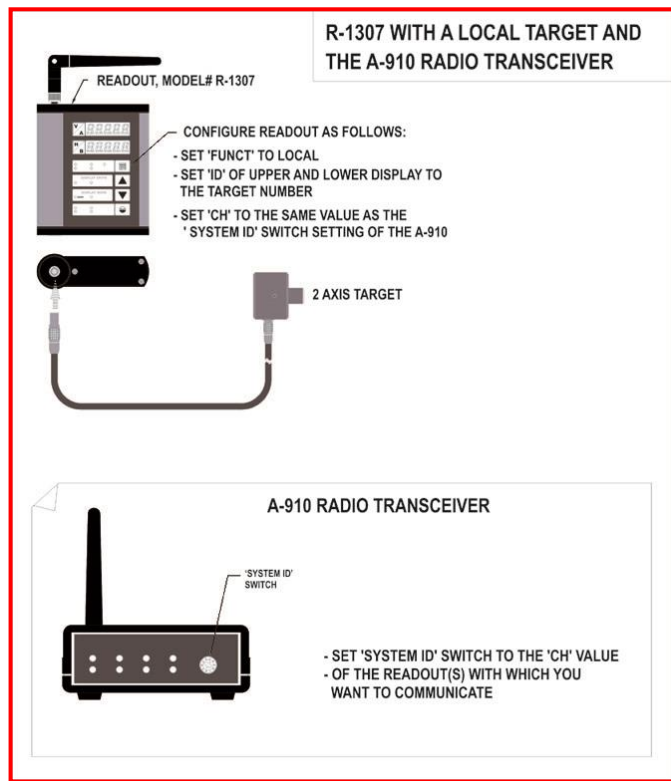

Figure 7– *R-1307 with Cabled (Local) Target and A-910 Radio Transceiver*

Miscellaneous Display Messages

-HLI-

r I_00   Startup Message. Lower Display shows firmware Revision Number.

...   3 moving dots. Wireless target is not responding to a polling request from Readout. Check ID and Channel settings. Check Target(s).

- - -   3 dashes. Target detected but the laser is not on target. Check laser.

ch_˗no

rAd io   Radio channel cannot be selected because no Radio is present or detected. Standard message for R-1307C. For Models R-1307 or R-1307W, this message indicates a fault in the radio module.

FAuLt

PSd   Indicates a problem with the connection to the Cabled (Local) Target's Position Sensing Device (PSD). Check plugs and cable(s).

t6t_n

UncAL   Target 'n' descriptor does not contain target calibration data.

Appendix A – Discontinued Parts

Products affected:

A-910-2.4ZB USB Wireless Receivers for PC

Radios: Effective March 27, 2023, the 2.4GHz radios used in some of our targets, readouts and USB receivers have gone end-of-life and are no longer available. As a result, we are now using replacement radios and antennas in these products and have changed the products' part numbers. Refer to table, below.

The replacement equipment is as follows:

End-of-Life Product	Replacement Part Number
11. A-910-2.4ZB	A-910-2.4XBE
12. A-910F-2.4ZB	No direct replacement but can be replaced with A-910-2.4XBE

Note: The new replacement radios are compatible with the old end-of-life radios, so products using both new and old radio components can be used together within a given alignment system.