

Figure 1: Typical System Deployment

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Made in Canada



## Central Control Monitoring System by Heron

### Quick Start Guide




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## Preparing the DATUM POINT System

DATUM POINT is a turnkey monitoring system for viewing and recording the remote data on any computer, tablet or smartphone from anywhere.

In the complete system, you will find:

- A) Field Transmitter (Node)
- B) Data Receiver (Gateway)
- C) Tablet w/Pre-Loaded DATUM POINT App 

## Unboxing

- Step 1: Connect the Data Receiver to a power outlet and turn it on by pressing the ON/OFF button. Look at the LED flashing. The Data Receiver is ready once it starts blinking at a regular pace. The DATUM POINT System is sending/receiving data when the LED blinks.
- Step 2: Open your tablet. Look for the DATUM POINT App icon either on the main screen or by clicking on Applications. Open the DATUM POINT App. 
- Step 3: After the main splash screen, you will either enter into the App or be presented with an installation Wizard. If you are not comfortable setting up the system manually, then follow through the steps of the Wizard to get your system operational.

A) Field Transmitter  
(Included)

B) Receiver  
(Included)



C) Tablet w/Software  
(Included)



D) Signal Booster  
(Repeater)

## Installation Wizard

Starting with a fresh install of the DATUM POINT App (not an update nor a preconfigured tablet), the Installation Wizard will automatically launch when the App starts. You can skip the Wizard anytime, except at the end, when the finish button has already been pressed. This step will automatically be skipped if your tablet was preconfigured.

If you skip the Wizard, it will automatically re-launch at the next App restart, and will continue to do so as long as there is no Data Receiver registered in the App. Once a master component is registered in the database (a Data Receiver), then the Wizard can only be launched manually through the CFG tab, within the Installation Wizard.

Note that you will need to be connected to an internet network for the Wizard to configure and download your maps properly.

### Installation Wizard - Step 1 - Name Device

Name your device (your Android device) so that you can recognize it easily in the future if you have more Android devices in the future.

### Installation Wizard - Step 2 - Enter Your Address

Enter your address (the location of the system installation). For Canadian systems, the 3 first digits of the postal code, and for American systems it could be a zip code. Then tap on Search Address. The address found will be used as the center location of the maps that will be downloaded. It is important to enter the correct location, or the maps downloaded won't be relevant (only maps surrounding your area will be saved to your device).

### Installation Wizard - Step 3 - Remote Use

Next, you'll be asked whether you wish to use the system locally only or locally and remotely (i.e. use the system outside of the network, to view your system at home, at work or anywhere in the world). If you select Yes, then the Wizard will guide you through some extra steps to configure the remote access.

### Installation Wizard - Step 4- Configure Google Account

For remote use, the Wizard will prompt you to configure a Google Account (either choose an existing one or create a new one). Most of our services use Google services (such as Google Drive) to store your private data.

### Installation Wizard - Step 5- Configure Alarms

Next, you can customize the basic alarm settings. You can disable/enable:

- Sound alarms on errors and warnings (you will be able to set the error limits on each sensor later on)
- Turn on Text-to-Speech to get warnings and errors even when not looking at the system

### Installation Wizard - Step 6 - Configure Units

Next, you can customize the units that will be used throughout the App. You can choose either Metric or Imperial units or tap on Customize Units to choose the right unit for each of your measurements.

**Metric units:** distance in meters, height in cm, temperature in °C, positive pressure in bar, negative pressure or vacuum in inches Hg, volume in L, flow in gpm (UK gallons)

**Imperial units:** distance in feet, height in inches, temperature in °F, positive pressure in psi, negative pressure or vacuum in inches Hg, volume in gal (US), flow in gpm (US gallons)

### Installation Wizard - Step 7 - Choose Application

Next, you will be prompted to select the main use of the DATUM POINT system. Choose general application if you are unsure.

### Installation Wizard - Step 8 - Reader or Writer

Then, you will be asked to choose how the App will gather data from the DATUM POINT system:

- 1) by pairing with a Data Receiver (choose this if this is your first installation)
- 2) if you answered yes at Step #3 (you are going to use the system remotely), by re-adding data from the cloud

### Installation Wizard - Step 9 - Install Data Receiver

Now it's time to install the device that you have chosen in Step #8. Tap on scan if applicable to scan the barcode of your Data Receiver. Then, name your Data Receiver device. The next two steps will configure the Data Receiver settings (if applicable) depending on the configuration of your network size and estimated coverage.

### Installation Wizard - Step 10 - Define System

Enter the distance of the farthest Field Transmitter from the Data Receiver (from your main location). In other words, what will be the radius of your DATUM POINT network if the center is at the Data Receiver.

### Installation Wizard - Step 11 - Configure Performance

Choose how you would like to optimize the system:

- 1) **Battery Saver (low data-rate).** You should choose this option if you do not currently need very high data rate to save your battery life. When saving battery life, the system will respond slower than with the high performance option. You will still get frequent readings, but not once every second.
- 2) **High performance (high data-rate).** You can choose this option if you are currently monitoring a critical operation. The system will respond very fast and consume more battery life.

You can choose to run on the Battery Saver mode all the time. You should still have plenty of data. Once the Wizard is over, you can still change these options manually without having to re-run the Wizard. To do so, go to the Field Transmitter tab in the DATUM POINT App. Tap on your activated Data Receiver. Change the duty cycle from 5% (battery saving mode) to any higher value (e.g. 10%, 15%, 20%...).

### Installation Wizard - Step 12 - Choose Theme

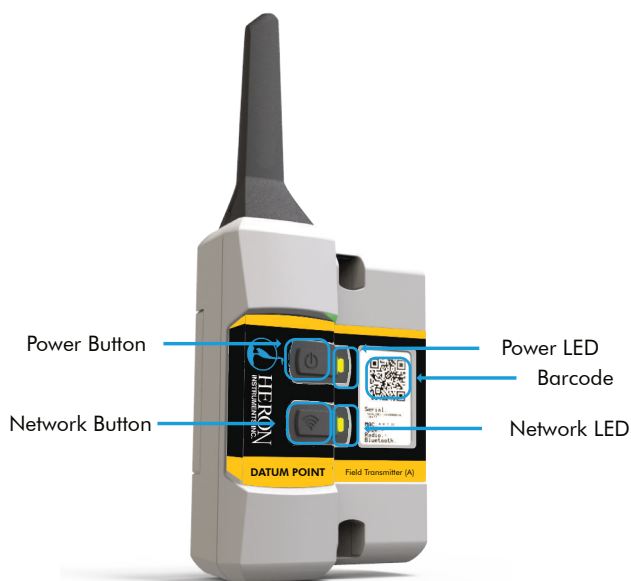
Choose the look of your App. For the best experience, select Modern theme.

### Installation Wizard - Final Step - Finish

You can now commit your preferences and click on Finish, or you can cancel by pressing Skip (no changes will be made). Wait while your preferences are applied. The Wizard will also take care of downloading the satellite map for you. Once completed, the App will restart and you should be ready to start adding transmitters to your network.



**Figure 2: Field Transmitter Buttons & Features**



## Installing Field Transmitters in the Field

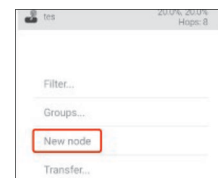
- Step 1:** Turn on the Field Transmitter by pressing the Power Button. The Network LED indicator will start blinking. The first sequence of blinks represents the Channel that the Field Transmitter is currently set on (e.g. 3 blinks = Channel # 3). After the startup sequence, the Power LED light will start blinking at the same rate as your Data Receiver once it is connected (after a few seconds to a few minutes). The Network LED will blink 3 times every 8 seconds while it is searching for the network (It is not connected yet!)
- Step 2:** Install the Field Transmitters starting from the nearest ones (from the Data Receiver). Go to the exact location where the Field Transmitter will be installed with your tablet.
- Step 3:** If the LED on the Power Button of the Field Transmitter is still blinking steadily, then you can install your **DATUM POINT** Field Transmitter at that location (the blinking LED indicates a connection to the network). If the Network LED is blinking, then you are out of the network. Install other Field Transmitters or a Signal Booster (Repeater) between. Since the Field Transmitters are relaying messages to the Data Receiver, installing other Field Transmitters first might increase the network's coverage.

### In the **DATUM POINT** App (on the tablet):

- Go to the Field Transmitters tab, swipe left to right or right to left to view the Field Transmitter list (Data Receiver, Signal Booster (Repeater), Depth & Temperature, etc.) If your tablet was preconfigured, then all unused Field Transmitter types might be hidden. You can unhide them by going to the CFG. tab, tap on Select Active Field Transmitters and check all Field Transmitter types that you wish to show.
- Tap on the Menu Button of the Android device and tap on Add Field Transmitter. The Menu Button varies depending on the Android device and can be toggled by clicking or long clicking any of the following buttons (or any other)



- Tap on Add New Field Transmitter (see picture on below)

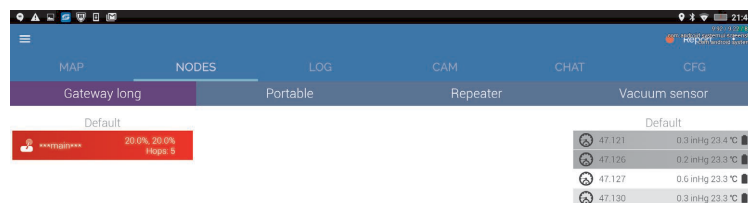


- In the Menu, click on the Scan Barcode button
- Scan the barcode on the Field Transmitter, turning on the flashlight if needed
- Tap the Name field and name the Field Transmitter. Tap the Ok button.
- The Field Transmitter has now been installed and the sensor's icon should appear in the sensors list (Field Transmitters tab) and on the Map tab as well.
- Repeat steps 1-7 for all Field Transmitters to be added to the network, always using the same Android device (tablet) to add/remove Field Transmitters.
- You will start getting your readings once you return to your Data Receiver (until the tablet can communicate with the Data Receiver via a Bluetooth connection)

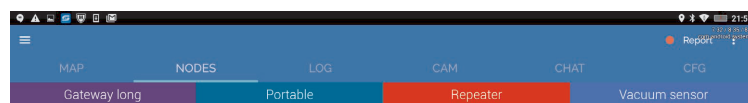
Your system should now be up and running. If the Field Transmitter's page headers (including the Data Receiver header) are greyed out then your tablet has not been paired with the Data Receiver. To pair, click and hold on the Data Receiver's name. In the menu, scroll down and tap on Activate. The App will restart, this time with a Bluetooth connection with the Data Receiver. After a few seconds, the sensors lists will change color and you will start receiving data. If the Data Receiver stays red, make sure the Bluetooth is activated on the Android device and that it is in Bluetooth range of the Data Receiver.

### See Figure 3 to Ensure Correct Setup

**Figure 3a: Data Receiver is not connected to the Tablet and Field Transmitters lists are greyed out**



**Figure 3b: Data Receiver is connected to the tablet and Data Receivers lists are coloured**



Data is stored locally in the Android smartphone/tablet. You can view the logged history by tapping on the Field Transmitter(s) of interest and click on the graph button.

If you have enabled remote use in the Installation Wizard, then you should see a Google Drive Downloading message appear at the bottom of the screen from time to time. Once the message change to Google Drive OK, then your remote access is ready to be viewed online. Open a Chrome browser on any computer/tablet/smartphone that has access to the internet. Then go to:

[https://dipperlogsmart.com/Web24\\_general/#/home](https://dipperlogsmart.com/Web24_general/#/home)

Click on the user icon and log into the same Google Account as configured on the **DATUM POINT** System. In the menu, click on My Field Transmitters - List by Type to view your system.