

# DataSend Installation Instructions

## Model: DataSend900 GPRS



### Description

The DataSend900 GPRS Unit is the central system control/data collection unit for a DataStream Radio network. The Network is designed to automatically and remotely gather readings from a number of Water Meters located within a defined area.

**Note** Please refer to the Technical Manual for further information.

### Specification

<b>Power Supply:</b>	5Vdc 800mA
<b>Operating Frequency:</b>	902MHz to 928MHz (Frequency Hopping)
<b>GPRS Modem</b>	Quad Band PTRCB, FCC approved

### Required Equipment

The following items are required for DataSend installation:

- DataSend900 GPRS Unit.
- 5Vdc 800mA Power supply.
- Antennas (part no
- USB-A to USB-A Cable.
- Simcard
- Computer running Windows XP®.
- 'DataSend USB Configurator' software.

### Installation Instructions

**Note: DataStream Systems are intended to be professionally installed. Only a half-wave dipole antenna with a maximum gain of 2.15dBi should be fitted to the product to meet the FCC regulations.**  
The unit is designed to be wall-mounted and unattended in normal operation.

To mount the unit:

1. Remove the box lid; use a screwdriver to release each of the lid screws from the box.
2. Insert the simcard into the simcard holder. The configuration process for the GPRS network settings are detailed within the *Configuration Software Manual*
3. Before fixing, ensure the Box is positioned so that the RF antennas may be orientated vertically (upwards).
4. Fit antenna as shown and antenna as shown



5. Using suitable wall mountings screw the box to the wall through the holes in the four corners of the box.
6. Once the box is securely fixed to the wall and before refitting the Lid, connect a suitable 5Vdc Power Supply to the 2.1mm Power Jack.
7. Using a suitable Type-A to Type-A USB Lead, connect the DataSend to a PC that has previously had the 'DataSend USB Configurator' installed. Ensure the PC is powered-on before connecting to the DataSend.  
**Note** There is a USB socket mounted inside the DataSend Box.
8. Configure the System as shown in the Configuration Procedure below.
9. Once the System has been configured, disconnect the USB Lead.
10. Refit the Lid and fit the supplied blanking caps to cover the lid screws.

11. Finally connect the DataSend Box to a telephone line via the RJ11 socket.

### Configuration Procedure

The DataSend is visible to Windows as a 'virtual Comport'. The 'DataSend USB Configurator' program will attempt to automatically locate the correct Comport and connect to the DataSend unit. If it fails, an error message will be displayed and manual selection of the Comport may be required.

**Note** connection failure will normally be caused by starting the program before the USB driver has fully initialized. If this is the case, simply restarting the program will fix the problem.

Once a connection has been established, the program will read the existing configuration from the DataSend. A message will be displayed indicating if the configuration data has been successfully received.

The DataSend may now be configured, as follows:

1. Choose a unique 'Network ID'. i.e. an ID that is not already used by an adjacent DataStream Network. This value must be different from the Default of 105,129,126,150. If you do not have any preference on the ID, press the 'Generate ID' button to obtain a random Network ID.
2. Carefully edit the 'DataRelay IDs' list to match the DataRelay IDs that were recorded during installation. If there are any duplicate IDs in the list, an error message will be displayed.
3. If required, enable the 'Utility Mask' option – see the 'Configuration Software Manual' for details of this option.  
**Note** if the 'Utility Mask' option is enabled, all the EndPoints need to be configured to transmit the correct Utility Code for the Nearest DataRelay.
4. Set the required 'Reading Interval' – the frequency that the latest Endpoint data is retrieved from each DataRelay module. The minimum allowed interval is a function of the number of DataRelays in the Network.  
**Note** the configuration program will automatically calculate the minimum time required to get data from all the listed DataRelays and will not allow an interval setting below this value. It will also display the maximum length of history available with the selected interval (for most settings this will be 90 days).
5. Ensure the PC's clock is set to the correct time – this will be used to set the real-time clock (RTC) in the DataSend.
6. Write the new configuration data to the DataSend by pressing the 'Write Configuration' button. Once the DataSend has been successfully updated, a 'Configuration Updated' message will be displayed.  
**Note** it is recommended that all the DataRelays should be installed and powered-on before writing the new Configuration to the DataSend unit – the DataSend unit will transmit the required Network ID to each DataRelay as it is registered with the DataSend unit.
7. Optionally import a previously generated route file by pressing the 'Import Route...' button. This will automatically store a copy of the route file in a reserved area in the DataSend's non-volatile memory. A large route file could take several minutes to copy, so a progress bar will be displayed during the transfer.  
**Note** the reserved area can store a maximum of 5119488 bytes, so the route file must be no larger than 5119488 bytes. The program will display a warning message if this size limit is exceeded.
8. Finally, start the Network running by pressing the 'Start Network' button.

See the 'Configuration Software Manual' for more details on the available settings.

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P/N DataSend900 PSTN Rev1

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### General Warnings and Safety

**Caution** Ensure a separation distance of at least 20 cm (8 inches) is normally maintained between the transmitter's antenna and the body of the user or nearby persons. The DataSend is not designed for or intended to be used in portable applications within 20 cm. (8 inches) of the body of the user.

**Warning** Changes or modifications to the product not expressly approved by BluTower could void the user's authority to operate the equipment. See FCC information below.

This sheet provides instructions needed to successfully connect and configure the DataSend for use in a DataStream Network. These instructions are only a supplement to training in the operation of the product. For further training information, contact BluTower directly.

### Regulatory Information

#### FCC Part 15 Regulation

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not transmit simultaneously with any other antenna or transmitter, except in accordance with FCC multi-transmitter product procedures.

### Regulatory Information (GPRS Modem Module)

#### Approvals

CE Mark, R&TTE

EMC: FCC Part 15, 22, 24, EN 301 489-1, EN 301 489-7, RSS 132, 133

Safety: cUL 60950-1, EN 60950-1, UL 60950-1, AS/NZS 60950-1

Network: PTCRB / RoHS Compliant

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