DriveRight®
Base Station
for Wireless Download System
Installation Manual

Includes:

Base Station for Wireless Download System (#8130)

For Use with:

Wireless On-Board Module (#8129)

Configuration Cable for Wireless On-Board Module (#8131)

Regulatory Compliance

CE EC EMC Compliance

This product complies with the essential protection requirements of the EC EMC Directive 89/336/EC.

FCC Part 15.247

FCC ID: OUR-XBEEPRO

IC RSS-210

IC ID: 4214A-XBEEPRO

FCC Part 15 Class B Registration Warning

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modification not expressly approved in writing by Davis Instruments may void the warranty and void the user's authority to operate this equipment.

For Products: #8130 Rev. A (9/1/06)

Davis Instruments Part Number: 7395.223

Base Station for Wireless Download Installation Manual

Davis Instruments

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Base Station for Wireless Download System Installation

The Base Station for Wireless Download System is one of three products that work together to give your DriveRight fleet the ability to download data directly from the DriveRight devices to the FMS database in the fleet office, without any actions by your fleet drivers. With this system, there is no need for the drivers to carry the DriveRight device or SmartCard into the fleet office. The data moves wirelessly from the vehicle to the FMS database.

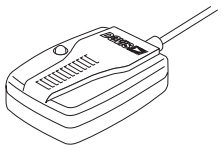
This manual provides the instructions necessary to install the wireless Base Station (#8130) to a computer. Refer to the *DriveRight Fleet Management Software Online Help* for instructions on how to configure the Base Station and Wireless On-Board Modules for use with your fleet.

Wireless System Overview

The Wireless System consists of three products:

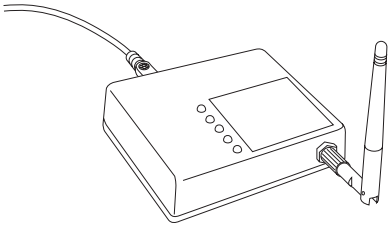
- The Wireless On-Board Module (#8129) (requires #8127 GPS/Wireless Interface Module)
- The Base Station for Wireless Download System (#8130)
- The Configuration Cable for Wireless On-Board Module (#8131)

Wireless On-Board Module (#8129)



This module installs in the vehicle and connects to the DriveRight device through the GPS\Wireless Interface Module (#8127). Once the vehicle is parked in the fleet parking lot, this module communicates with a Base Station (#8130) and moves the DriveRight data to the FMS database.

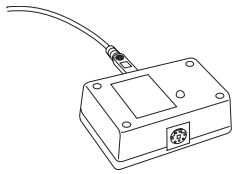
Base Station for Wireless On-Board Module (#8130)



The Base Station connects to a computer running FMS via a USB connection. It communicates with all the Wireless On-Board Modules (#8129) installed in your fleet and moves the data from the DriveRight devices to the FMS database. Using FMS, this operation can be performed daily for all the vehicles in your fleet, or only for selected vehicles. You can also initiate a manual download from selected vehicles or from your whole fleet.

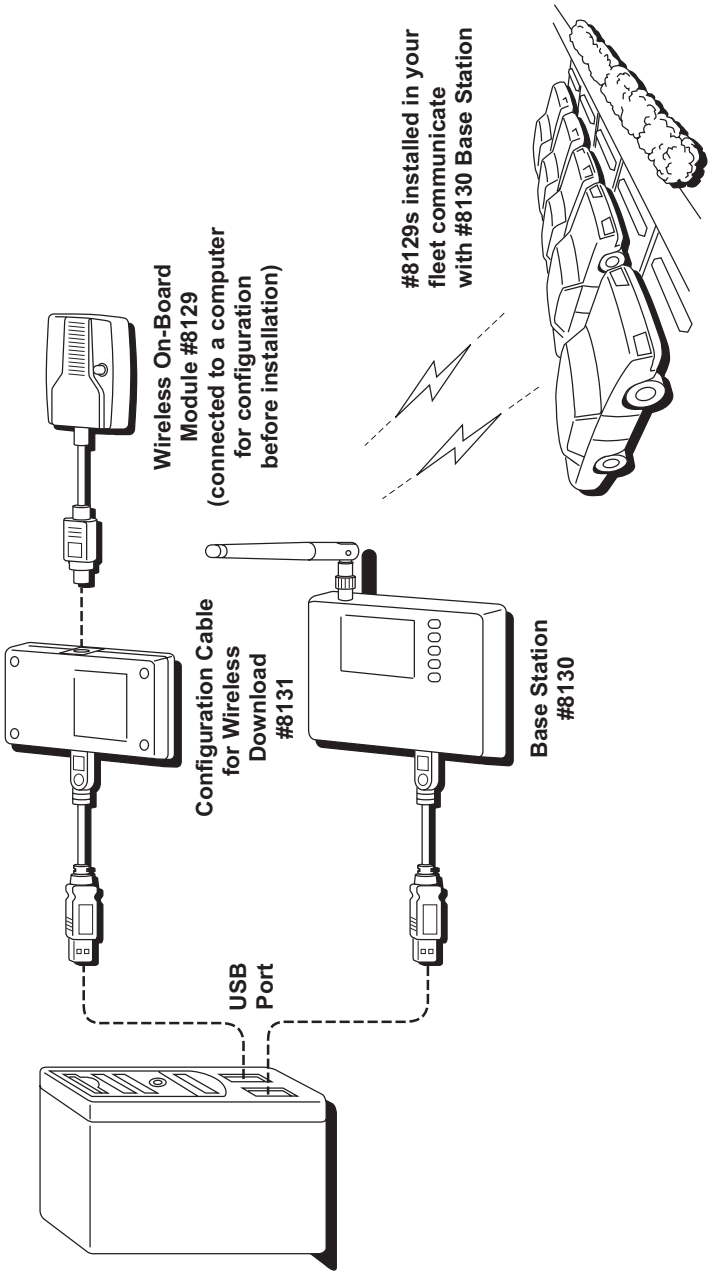
Configuration Cable for Wireless On-Board Module (#8131)

This adapter connects to the computer running FMS via a USB connection. It connects a single Wireless On-Board Module (#8129) to the computer so that it can be configured for initial use in your fleet. See the Configuration Cable Installation Manual for more information.



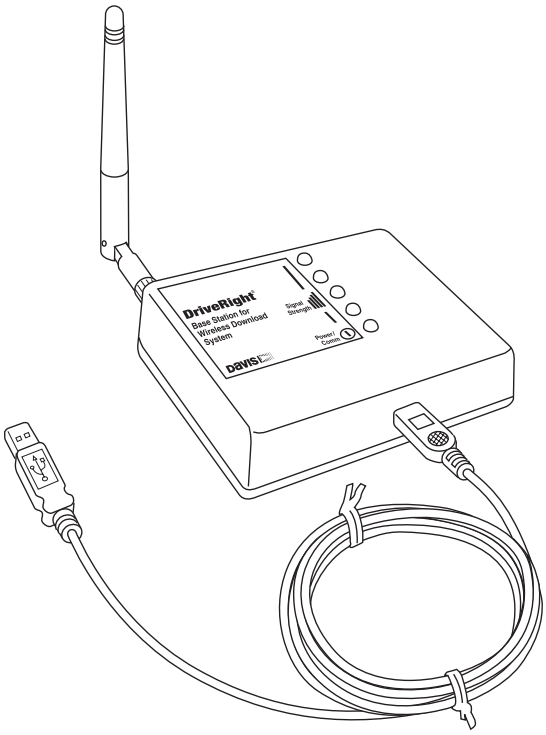
Wireless Download System Network Set Up

The following diagram is of a sample Wireless Download System network.

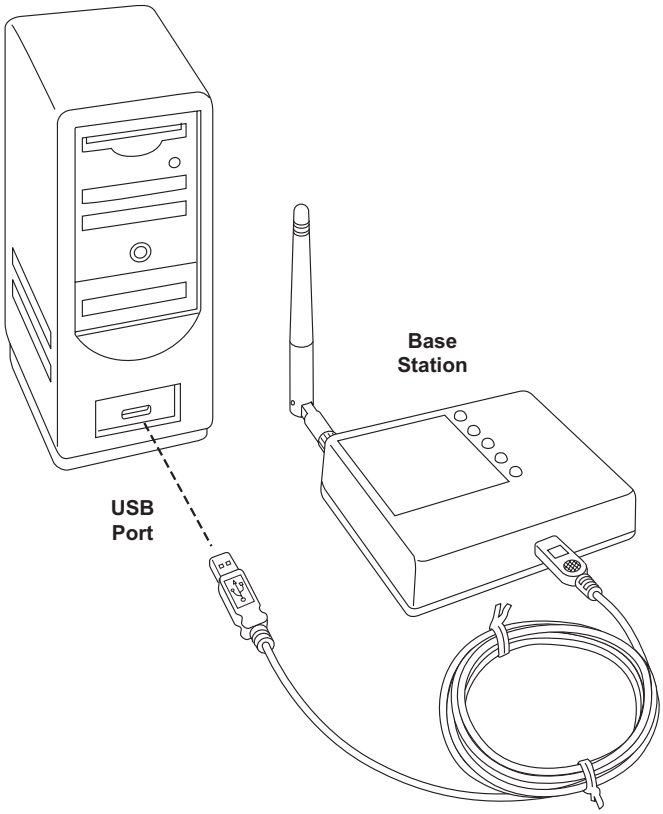


Base Station Components and Installation

The Base Station comes with the USB cable pictured below:



The Base Station can be connected to any computer via a USB port and is compatible with DriveRight FMS version 3.7 or later.



1. Update FMS to 3.7 or install the FMS software if necessary. Install the USB drivers following the instructions provided in the FMS Online Help
2. Locate a free USB port on your computer and connect the USB connector to the port.
3. Insert the USB - Mini B connector into the USB slot of the Base Station.
4. Follow the FMS Online Help instructions for configuring the Base Station.

Placing the Base Station

Connecting the Base Station directly to a USB port allows a maximum cable length of 16.5" (5 m). The Base Station is capable of communicating with the vehicles in your fleet over a distance of at least 600' (200 m). line of sight, without walls. See “Appendix: Advanced Connections” on page 8 for information on advanced Base Station networks that allow for greater distances between the computer and the Base Station.

Use the five LEDs on the Base Station to determine a location with good signal strength between the Wireless On-Board Modules and the Base Station. The Bottom LED displays green to indicate that the Base Station is on and yellow to indicate it is communicating with the computer. The top four LEDs indicate the current signal strength between the Base Station and the Wireless On-Board Modules. Four LEDs indicate excellent signal strength. One or no LEDs indicates poor signal strength.

If your location requires more than one Base Station for good coverage of your fleet, repeat installation instructions 2-4 on the previous page for each additional Base Station. The FMS system limit is 5 Base Stations.

Base Station Specifications

Size (l x w x h)	4.40'' x 3.25'' x 0.91'' (111 mm x 83 mm x 23 mm)
Weight	4.0 oz (0.113 kg)
Operating Range	-40°F to +185°F (-40°C to +85°C)
Storage Range	-40°F to +194°F (-40°C to +90°C)
Electrical Specifications	
Powered By	USB
Typical Standby Current	30mA
Typical Transmit Current	250mA
Connector Type	USB Mini-B
Cable	
Length	96'' (2.4 m)
Cable Type	USB A to Mini-B
Wireless Transmitter Specifications	
Frequency	ISM 2.4GHz
Protocol	IEEE 805.15.4
Channels	12
Line of Sight Range	600' (200 m)
Output Power	60mW (18dBm) (US) 10mW (10dBm) (Europe)
Receiver Sensitivity	-100dBM (1% packet error rate)
Agency Certifications	FCC, IC, CE

Contacting Davis Technical Support

If you have questions or encounter problems installing or operating your Base Station, please contact Davis Technical Support.

Note: Please do not return items to the factory for repair without prior authorization.

Phone Support

(510) 732-7814 – Monday - Friday, 7:00 a.m. - 5:30 p.m. Pacific Time.

(510) 670-0589 – Fax to Technical Support.

E-mail Support

support@davisnet.com – E-mail to Technical Support.

info@davisnet.com – E-mail to Davis Instruments.

Web Support

www.davisnet.com – Copies of User Manuals and Installation Manuals are available on the “Support” page. Watch for FAQs and other updates.

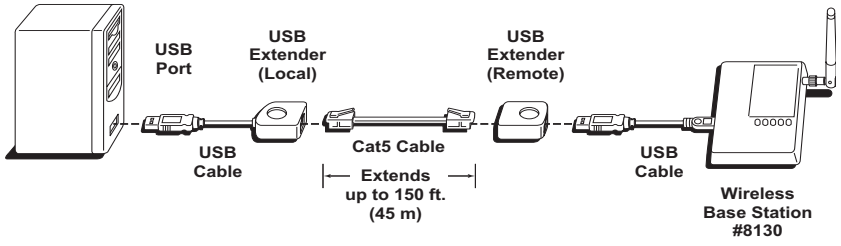
Appendix: Advanced Connections

The Base Station connects to a computer running FMS using a USB Interface. The USB specifications requires that the total cable length is no more than 16.5' (5 m).

Note: The advanced connection solutions described below include products that are not available for purchase through Davis Instruments.

USB Extender

A USB Extender is an inexpensive device which uses a small block at each end of a Category 5 cable to amplify and shape USB signals. It receives the needed power for the small blocks at both ends of the cable from the USB port, and requires no external power. Since the extra cable length is invisible to the computer, there are no drivers, or any other software to install on the computer. This solution allows the Base Station to be installed up to 150' (45 m) from the computer.



We have tested the base station with the VAD-1120, and any similar product should work as well.

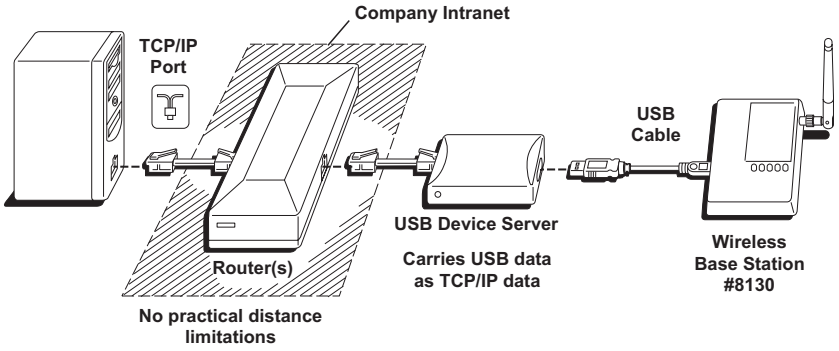
A Google search for the term “USB Extender” should give you multiple product choices.

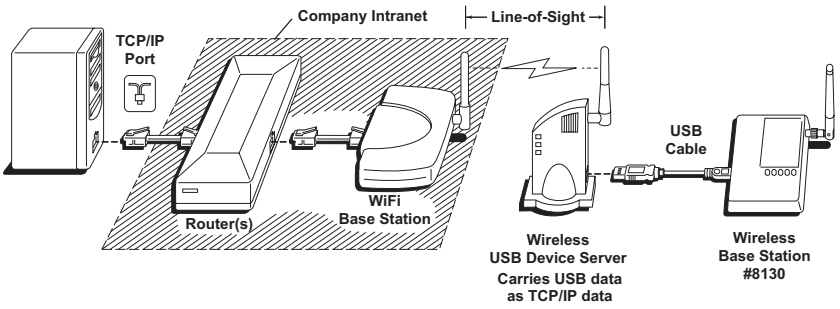
USB Device Server

The USB device server is a small box which provides a USB connection for the Base Station and connects to the computer running FMS through your company intranet. The USB server carries the USB data as TCP/IP data and transfers it via the company intranet to the computer running FMS. There are no practical distance limits since it used the company intranet. The USB Server comes with a wall lump power supply, and requires connection to the power line.

In addition to the USB server box itself, there is an application which has to be installed on your computer that creates a virtual USB port for FMS to use to connect to the Base Station.

There two versions of USB servers available. One uses your wired intranet. The other contains a WiFi transceiver and connects with a WiFi base station on your company intranet.





We have tested the base station with the Silex SX-2000U2 wired USB Device Server and with the Silex SX-2000WG Wireless USB Device Server, and any similar product should work as well.

A Google search for the term “USB Server” should give you multiple product choices.

Davis Instruments built its own advanced network. Read more about our advanced installation experience at:

http://www.davisnet.com/support/drive.html.

Notes: