DAVIS

DriveRight®

Remote Download Kit

Product #8188

TABLE OF CONTENTS

Product Number: 8188

Davis Instruments Part Number: 7395.150
Remote Download Kit

Rev. B (September 25, 2002)

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

Introduction

The DriveRight Remote Download Kit allows you to download DriveRight data from any standard phone line to a host computer running DriveRight Vehicle Management Software (VMS). The DriveRight unit connects to a *user-supplied* modem which, when powered up, automatically dials the host computer and downloads the data.

This manual describes how to pre-program the *US Robotics CourierV. Everything* modem to dial and download when switched on. It also details how to connect a DriveRight unit to the pre-programmed modem for downloading.

User Requirements

To use this kit, you must supply the following equipment:

- ❑ **Host computer**
  A PC running DriveRight VMS that has a modem (referred to as "host modem") and a phone number. This computer, when operating in *host mode*, will receive downloaded DriveRight data.
- ❑ **Field modem**
  A modem with power-on dial-up capabilities that the driver can use in the field to download data to the host computer. This manual provides instructions for configuring and programming the *US Robotics Courier V. Everything* modem.

NOTE: *You may use any modem with power-on dial-up capabilities (i.e., can dial a pre-set phone number automatically when you turn it on). However, not all modems respond to the same commands or act the same way on power up. If you purchase a modem other than the* US Robotics Courier V. Everything, *you will need to modify the instructions presented here using the documentation provided with your specific modem.*

- ❑ **DriveRight unit**
  A DriveRight data logger / display unit used to monitor and store driving information.

Kit Components

Before you begin, please make sure your Remote Download Kit includes the following components.

For pre-programming the field modem:

- ❑ **Null modem cable**
  A *grey* cable with telephone plugs to connect the PC to the modem.
- ❑ **DB9 connector and DB25 connector**
  Nine-pin and 25-pin female PC connectors with telephone plugs.
- ❑ **DB25 modem connector**
  A 25-pin male modem connector with a telephone plug.

For downloading data from the field:

- ❑ **DriveRight download cabel**
  A black interface cable to connect the Drive-Right to the modem.

NOTE: *The DB25 modem connector that you use when pre-programming the modem is necessary for field use as well. In the field, it connects the modem to the field modem cable.*

Configuring the Field Modem

The following instructions explain how to pre-program the *US Robotics Courier V. Everything* modem to work correctly with the DriveRight (see note on page 1).

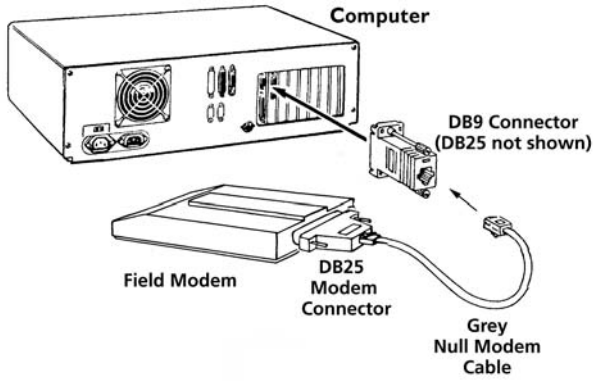
This manual shows how to use the Windows 95™ HyperTerminal accessory to program the field modem but, if you like, you may use any other communications application. You may use any computer, host or non-host, to configure and pre-program the field modem.

1. **Make sure that the field modem's dip switches are set as follows:**

Dip Switch #	1	2	3	4	5	6	7	8	9	10
Setting	off	off	off	ON	ON	off	off	ON	off	off

NOTE: *These DIP switch settings only apply to the* US Robotics Courier V. Everything *modem.*

2. **Connect the field modem to your PC.**
   Attach the DB25 modem connector to the back of the field modem. Then, find a free 9-pin or 25-pin serial port in your PC and plug in either the DB9 or DB25 connector. And, finally, link the modem and PC connectors using the *grey* null modem cable.



NOTE: *Make sure you use the* grey *cable. The* black *serial port cable provided with the DriveRight software will* ***not*** *work for pre-programming the field modem.*

3. **Turn the modem on.**

4. **On the host computer, run the HyperTerminal application.**
   To open HyperTerminal, click the **Start** button, then click **Programs**, then **Accessories**, and select **HyperTerminal**. A New Connection dialog box appears. Click **Cancel**.

5. **Set the serial port.**
   For HyperTerminal to communicate with the modem, it needs to know which serial port you are using.

   a. To set the serial port, click the **File** menu and select **Properties**.

   b. In the dialog box that appears, select the serial port the field modem is using from the Connect Using drop down list. If you are not sure, try selecting **Direct to COM1** or **Direct to COM2** - one should work.

   c. Click **OK** in the New Connection Properties dialog box

4. **Save your settings.**
   To save your settings, click the **File** menu and select **Save As** and name your modem link. You can then click on the phone icon with that name to start HyperTerminal next time.

5. **Test the connection.**

   In the HyperTerminal window, type (in **ALL CAPS** as shown)

   ```
   AT
   ```

   and press Enter. If "OK" appears in the window, you are communicating with the field modem (go on to "Pre-Programming the Field Modem" on page 4).

   If you do not get an OK, type

   ```
   ATE1V1Q
   ```

   and press Enter. Then type

   ```
   AT
   ```

   again and press Enter. You should be able see the "AT" as you type it, and you should receive an OK back. (If you receive an OK, go on to "Pre-Programming the Field Modem" on page 4.)

   If you do not receive an OK, check all your connections and try again. If you still have no success, try switching to a different serial port (see step 5 on page 3).

Pre-Programming the Field Modem

Once the HyperTerminal connection is secure, you are ready to pre-program the field modem. To set the modem to automatically download when turned on, follow the steps below. You should receive an OK after each entered command, unless stated otherwise.

1. **Set autodial capability.**
   To configure the modem to automatically dial when switched on, type

   ```
   ATS13=16
   ```

   and press Enter.

2. **Set the phone number for automatic dialing.**
   To set the phone number of the host computer, type

   ```
   AT&Z0=202-555-0455
   ```

   where "0" is zero and "202-555-0455" is the number of the host computer. Then press Enter.

3. **Ensure error-free transmission.**
   To configure the modem to use a standard error detection protocol, type

   ```
   AT&M4
   ```

   and press Enter.

4. **Save the setup.**
   To save the setup in non-volatile memory so it will load when the modem is turned on, type

   ```
   AT&W
   ```

   and press Enter.

NOTE: *If you are **NOT** using the* US Robotics Courier V. Everything, *set the field modem to operate in quiet mode. Quiet mode ensures that the DriveRight unit does not interpret chance modem responses as commands. Type*

```
ATEQ1W
```

and press Enter. You will not receive an OK after this command (nor would you see your commands echoed in the HyperTerminal window if you continued to enter them) because the modem is in quiet mode.

5. **Exit HyperTerminal.**

6. **Test the field modem.**
   To test the field modem, execute a download. It may be helpful, for this first download, to have the field modem and host computer in the same room so you can see both at once - in which case, you need two separate phone lines. However, if two lines are not possible, simply execute a download "from the field" as a driver would.

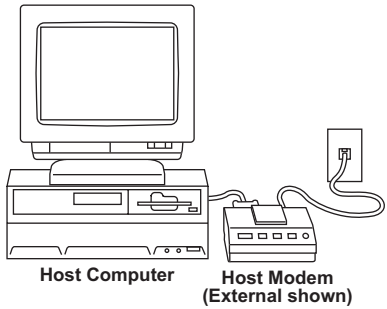
   See the following section for instructions on executing a download. If the download fails, see the troubleshooters on page 7.

Executing a Download

Executing a download is quite simple once the field modem is preprogrammed, but it does require some actions both on the host computer and in the field.

Actions on the Host Computer

1. **Make sure the host computer is connected to the phone line and number you pre-set in step 2 on page 4.**



2. **Run DriveRight VMS.**
   See software manual for instructions on how to run VMS.

3. **Set the host computer to host mode.**
   In VMS, click the Setup menu, then Host Mode, and select Host Mode On.

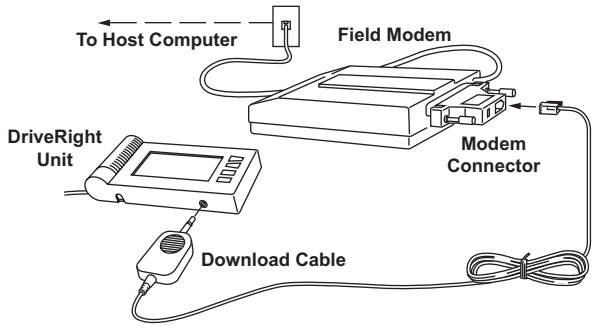
   NOTE: *Because the host computer has to be in host mode to receive the downloads, it is a good idea to set up a schedule for downloading. For example, you can instruct drivers to download anytime after business hours and then set the host computer to host mode as the last task of the day.*

   Alternatively, you can dedicate one computer full-time as the host and export data from it periodically to another computer for analysis and reporting.

Actions in the Field

1. **Make the DriveRight unit and modem connections as shown below.**

NOTE: *Plug the phone line coming from the wall jack into the modem input marked "jack" or "line" (not "phone")*



2. **Press MODE on the DriveRight unit to "wake it up" if necessary.**
   Make sure the DriveRight display shows the Current Screen (i.e. the screen with the CURRENT indicator box displayed).

3. **Turn the modem on.**
   If the modem is already on, turn it off and then on again.

   The modem should automatically dial the host computer on start-up. The host computer should answer the call and download the data.. When the CD light on the modem goes out, the download is complete. The download should never take more than five minutes.

4. **Set the modem for next use.**
   When the download is complete, turn the field modem off and unplug the DriveRight. You can leave the field modem plugged into the phone line, if you like, and plug a standard phone into the "phone" input on the modem. The phone will function normally when the modem is off.

   All future downloads can be executed with these four steps. If, for some reason, the download does not work, see "Troubleshooting" on page 7.

Troubleshooting

If you are having trouble completing a successful download, double check the following items. At the end of the checklist, we've provided a complete listing of the *Courier V. Everything* settings as a reference.

If, after consulting these troubleshooters, you still are unable to solve the problem, please call our tech support at 1-510-732-7814 (or email: support@davisnet.com) for further assistance.

- ❑ **Check all connections.**
  Also, make sure that:
  - ❑ the phone line is plugged into the "jack" or "line" input on the modem;
  - ❑ the download cable is securely plugged into the modem and the DriveRight unit;
- ❑ **Check that the DriveRight unit is "awake" and showing the Current Screen (i.e., that the CURRENT indicator box shows on the display) before turning the modem on.**
- ❑ **Check that the host computer is in host mode.**
  See "Set the host computer to host mode." on page 6.

- ❑ **Check that the phone number you pre- programmed is correct.**
  You can call the host computer using a standard phone and double check that the host answers and gives you a modem tone.
- ❑ **Check the programming of the modem to be sure you have entered each command correctly.**
  Make sure that you typed each command in ALL CAPS as shown.

  For your reference, the complete *Courier V. Everything* modem DriveRight setup is provided in the appendix on page 7.

Appendix: *Courier V.Everything* Setup

The complete *US Robotics Courier V. Everything* modem settings for DriveRight:

B0 C1 E0 F1 M1 Q1 V1 X1
BAUD=2400 PARITY=N WORDLEN=8
DIAL=TONE ON HOOK TIMER

&A1&B0&C1&D2&G0&H0&I0&K1&L0&M4&N0
&P0&R1&S0&T5&U0&X0&Y1%N6#CID=0
S00=000S01=000S02=043S03=013S04=010S05=008S06=002S07=060
S08=002S09=006S10=014S11=070S12=050S13=016S14=001S15=000
S16=000S17=000S18=000S19=000S20=000S21=010S22=017S23=019
S24=150S25=005S26=001S27=000S28=008S29=020S30=000S31=000
S32=009S33=000S34=000S35=000S36=000S37=000S38=000S39=000
S40=000S41=000S42=126S43=200S44=015S45=000S46=000S47=000
S48=000S49=000S50=000S51=000S52=000S53=000S54=064S55=000
S56=000S57=000S58=000S59=000S60=000S61=000S62=000S63=000
S64=000S65=000S66=000S67=000S68=000S69=000S70=000
LAST DIALED #: 2933529

Davis Instruments

3465 Diablo Avenue, Hayward, CA 94545-2778 U.S.A.

510-732-9229 • Fax: 510-732-9188

E-mail: info@davisnet.com • www.davisnet.com