

VG300 Quick Installation Guide

1. Product Package

Please go through each item listed below. Your VG300 package contains the following items:

- ◆ **One VG300 Wireless Data Unit**
- ◆ **One SMA Attached CDPD Antenna**
- ◆ **One Power Connector (Pin 1 is “+”, Pin2 is “-“)**
- ◆ **One VG300 User’s Quick Installation Guide**

2. Installation & Setup

Step 1 Establish Hardware Connection

- a. Connect the cellular antenna and GPS antenna to the VG300
- b. Using the power connector to connect to available DC power supply (DC 12V or Car Battery)
- c. Connect the RS-232 9 pins interface cable to the VG300.
- d. Connect the RS-232 cable with a male DB9 connector to your host. If your host has a DB25 connecting port, you need to get a DB25 to DB9 adapter from the local electronics store.

Step 2 Establish Software Test Environment for Terminal Program

To send AT Command to VG300, you must find a communications program to be operated in ASCII terminal emulation mode under your PCs (host). This will enable the PC to function as a terminal attached to the modem and will permit you to enter the AT Command required for modem setup and diagnostics. The followings are some example programs:

WINDOWS TERMINAL in WINDOWS 3.1

HYPER TERMINAL in WINDOWS 95

TELIX or similar alternatives

In the Terminal Program you choose, set the parameters of RS-232 cable as follows:

19200 bps, 8 data bits, No parity check and 1 stop bit.

Caution: The above RS-232 parameters are set up for the communication between VG300 and the host. They are default values for VG300 Data Module. You must set the same parameters with your Terminal Programs so that the host can obtain initial connection to the module.

3. Connect to the CDPD Network

Following procedures are available for the CDPD mode only . Please switch the operation mode to the CDPD. (There are two operation modes for VG300. One is CDPD , the other is GPS.)

A. Set the IP Address

The IP Address, in form of xxx.xxx.xxx.xxx (xxx means decimal numbers from 0-255), should be provided by the CDPD network carrier or the service provider. Use the command **AT!I xxx.xxx.xxx.xxx** to set the IP Address.

B. Set the Destination Server IP Address

The Destination AVL(Automatic Vehicle Location) Server IP Address, in form of xxx.xxx.xxx.xxx (xxx means decimal numbers from 0-255). Use the command **Ats40=xxx.xxx.xxx.xxx/port #** to set the IP Address and port number. e.g. **Ats40=203.67.40.233/1025**.

C. Set UDP Tx.

Use the command **AT!g1** to set the VG300 in the UDP Tx. Mode.

D. Set Side Preference

Contact your CDPD network carrier or the service provider for the appointed Side Preference. If this information is not available, you can use either the command **AT\N3** or **AT\N4** to set Side Preference. (AT\N3: A Side Preference, AT\N4: B Side Preference)

E. Set the Auto Scan Mode

Set the channel scan mode as “Auto Scan” with the

command **AT!A1**.

F. Turn off the Hardware Flow Control

Turn off the hardware flow control with the **AT\Q0** command.

G.. Save the set-up values

Use the command **AT&W** to save all the above values.

H. Reset Z-Card 300

Use the command **ATZ** to reset VG300.

I. Check the connection

Enter the command **ATS57** to check if a response indicates **ATS57=129** appears. If yes, then Congratulations! You have connected to the CDPD network successfully.

Then you can switch the operation mode back to GPS and power on the VG300 again.

4. AT Command Sets for VG300

By using the terminal program, you can use the following AT Command to configure the VG300

1. **AT@GPS0** Modem will send customer-defined special packet for AVL Server
2. **AT@RMCn** Customer-Defined Packet Tx Time Interval n=0~3600
EX **AT@RMC30**
3. **AT@GPS1** Modem will send standard NMEA 0183 GPS Packets. NMEA 0183 GPS packets can configure the time interval by using the following AT Commands
4. **AT@GGAn** Set GGA data transmission time interval, n=0~3600 sec. Ex. **AT@GGA1**
5. **AT@GLLn** Set GGA data transmission time interval, n=0~3600 sec. Ex. **AT@GLL2**
6. **AT@GSAn** Set GGA data transmission time interval, n=0~3600 sec. Ex. **AT@GSA0**
7. **AT@GSV** Set GGA data transmission time interval, n=0~3600 sec. Ex. **AT@GSV4**
8. **AT@RMCn** Set GGA data transmission time interval, n=0~3600 sec. Ex. **AT@RMC1**
9. **AT@VTGn** Set GGA data transmission time interval, n=0~3600

sec. Ex. AT@VTG1

10. AT@ID To set the vehicle ID #

11. AT@GAPn The time interval for saving the packets into the memory when the modem is not in CDPD coverage n=0~255 minutes

12. AT@GPS to check the GPS setting profile

Example:

AT@GPS

Result:

AT@GPS1

AT@GGA=1 transmit GGA data every 1 sec.

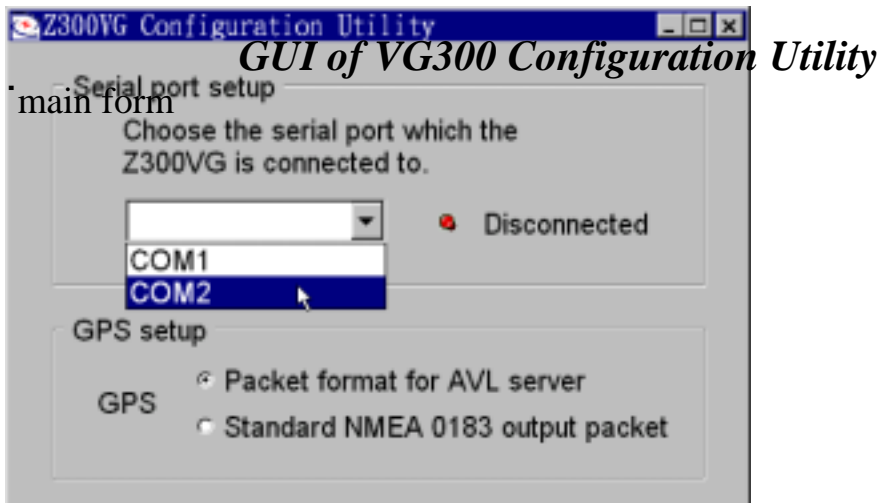
AT@GLL=2 transmit GLL data every 2 sec.

AT@GSA=0 don't transmit GSA data.

AT@GSV=4 transmit GLL data every 4 sec.

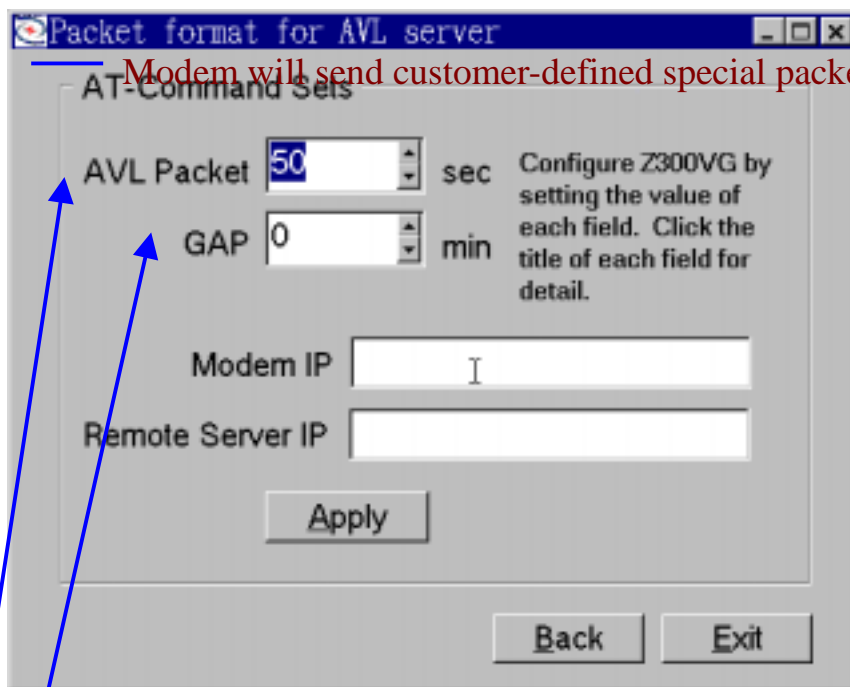
AT@RMC=1 transmit RMC data every 1 sec.

AT@VTG=30 transmit VTG data every 30 sec.



- Modem will send standard NMEA 0183 GPS Packets. NMEA 0183 GPS packets can configure the time interval by user.

form of Packet format for AVL server

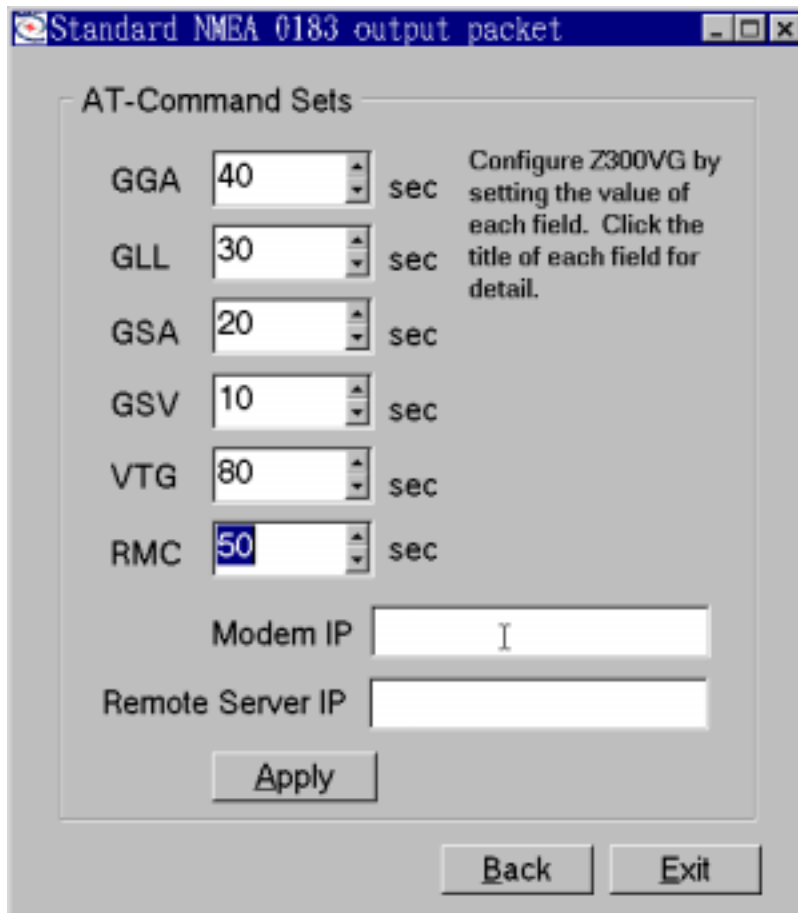


— Modem will send customer-defined special packet for AVL Server.

Customer-Defined Packet Tx Time Interval = 0~3600 second.

— The time interval for saving the packets into the memory when the modem is not in CDPD coverage. Time Interval = 0~255 minutes

form of Standard NMEA 0183 output packet



GGA data transmission time interval = 0~3600 sec.
GLL data transmission time interval = 0~3600 sec.
GSA data transmission time interval = 0~3600 sec.
GSV data transmission time interval = 0~3600 sec.
VTG data transmission time interval = 0~3600 sec.
RMC data transmission time interval = 0~3600 sec.