SALES OFFICE:
1104 Buchanan Road, #C3
Antioch, CA 94509
Ph: (925) 776-1070
Fax: (925) 776-1074

PREMIER WIRELESS, INC.

FACTORY:
2284 Glassell Street, Unit D
Orange, CA 92865
Ph: (714) 283-1251
Fax: (714) 283-3672

CL-1200 & 1400 PROGRAMMING INSTRUCTION

CL-1200 (GINA 6000N-5, 900 MHz) and CL-1400 (GINA 8000N-5, 2.4 GHz) full duplex modems do not have externally accessible dip switches for setting channel, it is done by software command through the RS-232 port. Software commands are also used to change other operating parameters. Two of the most common parameters that need to be set initially during installation are the "RF Channel" and the "Baud Rate" of the serial data.

MODEM HOOK-UP

To check and change the modem settings, connect the modem's RS-232 port to a computer serial port (Com1 or Com2 …). Use a 9-pin (M to F) serial cable (minimum wirings: pin 2 to 2, 3 to 3 and 5 to 5) if the serial port on your computer has a DB-9 connector or a 9-pin (M) to 25-pin (F) serial cable (minimum wirings: pin 2 to 3, 3 to 2 and 5 to 7 respectively) if your computer has a DB-25 serial port connector. Use any Data Terminal Programs on your computer to display and send commands to the modem, e.g. The "HyperTerminal" program in Windows 98. Set the program properties to "direct-connect to com1 (or com2 …)" then confirm the initial baud rate is set at 9600, no parity, 1 stop bit, 8 data bits to match the default settings of the modem and flow control set to none if only three-wire connection is used. Otherwise use "Hardware" flow control if handshaking signals are required by your computer terminal, then the "Hardware Flow" switch of the modem will have to be enabled. See command set below.

PROGRAMMING

Power up the modem, type the word **GINA** *within 5 seconds* to enter the setup mode (or, if the CONMODE is set to "1", press <**CTRL**> + <**V**> three times). The modem should responds with the following prompt:

SET UP > Enter command sets

Example to set the modem to channel 10 and 4800 baud rate:

Within 5 seconds of powering up the modem, press
GINA<Enter> (to enter the setup mode, then)
CS=10<Enter>
CB=48,0,1,8<Enter>

When the baud rate is changed, the data terminal will display garbled characters until its baud rate is also adjusted to the same rate, in this case 4800 bauds. Use the commands below to set and display other parameters of the modem necessary for your installation. Type **QUIT** to exit the setup mode.

SETUP PROBLEMS

No SETUP> prompt display when modem is turned on --- Verify modem power LED is on; RS-232 interface cable is properly connected. Check pins 2 & 3 connections; a straight through 9-pin to 9-pin serial cable (not a null modem cable which has pins 2 & 3 cross-connected) should be used. If a 9-pin to 25-pin serial cable is used, pins 2 and 3 should be cross-connected.

Garbled display --- Check the terminal baud rate and data format. Default settings on the modem are 9600 bauds, no parity, 1 stop bit, 8 data bits and no hardware flow control.

COMMAND SET

This section contains the modem controller command set, definitions, and instructions for use. The modem must be in the SETUP mode to change the following parameters.

(1) CHANNEL SELECT

Mnemonic: CHSEL=N
Parameter: N=l ... 37 (CL-1400; 1 … 21 for CL-1200)
Command abbreviation: CH or CS
Default: 37 (CL-1400; 11 for CL-1200)
Example: **CHSEL=13<Enter> or CS=13<Enter>**

Description: Selects the RF channel (frequency) that the transceiver transmits and receives. When communicating with another transceiver, both units must be set to the same channel. Depending on the time of day and local atmospheric conditions, the channel number selected can affect the unit's range. If you are experiencing marginal reception conditions, try changing the channel until maximum performance is reached.

(2) COM PORT BAUD RATE

Mnemonic: COMBAUD=R,P,S,W
Parameter: R=12 (1200), 24 (2400), 48 (4800), 96 (9600), 192 (192,000) and 384 (38,400)
P=0 (None), 1 (Odd) and 2 (Even)
S=1 (1 stop bit) and 2 (2 stop bit)
W=7 (7 bit word) and 8 (8 bit word)
Command abbreviation: CB
Default: 96 (9600 baud), 0 (none), 1 (1 stop), 8 (8 bit)
Example: **COMBAUD=96,0,1,8<Enter> or CB=96,0,1,8<Enter>**

Description: COMBAUD sets the asynchronous link baud rate. COMBAUD is not related to the synchronous RF link (air speed) data rate set by RFBAUD.

(3) CONMODE

Mnemonic: CONMODE=V
Parameter: N=1 (transparent mode)
N=2 (transparent- permanent mode)
Command abbreviation: CONM
Default: N=2 (transparent- permanent mode)
Example: **CONMODE=2 <Enter> or CONM=2 <Enter>**

Description: The CONMODE command selects the mode that the modem enters immediately after the unit is powered on or QUIT is entered in setup mode.
Set CONMODE=1: The modem automatically enters the TRANSPARENT mode. To leave the TRANSPARENT mode and go to the SETUP mode, press <CTRL> + <V> three times in succession.
Set CONMODE=2: Automatically enters the TRANSPARENT PERMANENT mode. The only way to get out of the permanent transparent mode is to turn the modem off.

(4) DEFAULT WAIT OR COLLISION WAIT TIME

Mnemonic: DEFWAIT=N
Parameter: N=1 ... 255 X 10 msec
Command abbreviation: DW
Default: N=1 (10 msec)
Example: **DEFWAIT=1 <Enter> or DW=1 <Enter>**

Description: DEFWAIT forces the modem control module to pause for the time specified in the argument if the transceiver sees that the channel is occupied before transmitting. It is strongly recommended that you use a different value for each unit. If you experience missing data, try increasing the DEFWAIT time in multiples of ten until the problem is solved. If N is set at 255, the modem picks a random time interval from 10 to 680 msec to pause after each collision retry. If N is set between 1 and 254, the selected interval is fixed after each collision retry.

(5) DISPLAY

Mnemonic: DISP=C
Parameter: Where:

(A)sync=	Display asynchronous port parameters
(C)har=	Display special characters
(D)aytime=	Display date/time stored in the modem
(I)d=	Display ID parameters
(L)ink=	Display link parameters
(M)isc=	Display miscellaneous parameters
(Drilling=	Display timing parameters
(Z)=	Display command list

Command abbreviation: D
Default: Not applicable
Example: **DISP=Z <Enter> or D=Z <Enter>**

Description: DISPLAY lists the current parameter settings.

(A)sync	COMBAUD, ECHO and HARDFLOW
(D)ate	SETTD
(I)d	RID, TXP and ENR
(L)ink	PACSIZE and RFBAUD
(M)isc	CHSEL
(T)iming	DEFWAIT, PACWAIT and TXDELAY
(Z)	List Control Command Set (CCS)

(6) ECHO

Mnemonic: ECHO=N
Parameter: N=0 (OFF) or I (ON)
Command abbreviation: E
Default: 1 (ON)
Example: **ECHO=1 <Enter> or E=1 <Enter>**

Description: When ECHO is ON, characters received from the sending unit are echoed on the computer display. When ECHO is OFF, characters are not displayed. Echoing is disabled when in the transparent mode.

(7) ENABLE REPEATER

Mnemonic: ENR=N
Parameter: N=0 ... 2
0 Disable Repeater
1 Temporary Enable epeater
2 Permanently enable Repeater
Default: 0 (OFF)
Example: **ENR=0 <Enter>**

Description: Makes the modem a dedicated repeater. If ENR=1, the repeater function is temporarily enabled. When the power is shut off, the modem disables the repeater. If ENR=2, the repeater function is permanently enabled. When the modem is shut off, the repeater remains enabled.

(8) HARDWARE FLOW

Mnemonic: HARDWARE FLOW=N
Parameter: N=0 (OFF) or 1 (ON)
Command abbreviation: HF
Default: 0 (OFF)
Example: **HARDWARE FLOW=1 <Enter> or HF=1 <Enter>**

Description: When HARDWARE FLOW is ON, CTS and RTS are enabled. When HARDWARE FLOW is OFF, CTS and RTS are disabled. The HARDWARE FLOW must be disabled if your peripheral does not have any RTS and CTS flow control or if it is a three wire configuration (RXD, TXD, and GND).

(9) PACKET SIZE

Mnemonic: PACSIZE=N
Parameter: N=5 … 1024
Command abbreviation: PS
Default: 256
Example: **PACSIZE=256 <Enter> or PS=256 <Enter>**

Description: PACSIZE specifies the maximum number of user data bytes contained in each packet information field. User data are characters typed at the keyboard or sent from an ASCII file. The modem control module sends a packet when the number of characters sent from the keyboard or file reaches the number set by PACSIZE of user data bytes contained in each packet information field.

(10) PACKET WAIT

CAUTION: Do not change this parameter unless you are experienced in networking and packet timing.

Mnemonic: PACWAIT=V, N
Parameter: V=0 (EVERY) or 1 (AFTER)
N=2 ... 250 X 2 msec
Command abbreviation: PW
Default: 1, 10 (AFTER, 20 msec)
Example: **PACWAIT=1,10<Enter> or PW=1,10 <Enter>**

Description: When V is set = 0 (EVERY), characters are packetized and sequenced for transmission N X 2msec. When V is set=1 (AFTER), characters are packetized and sequenced for transmission when input from the terminal stops for N X 2 msec.

(11) REPEATER ID

Mnemonic: RID=N
Parameter: N=0 ... 99
Command abbreviation: NONE
Default: 0
Example: **RID=10 <Enter>**

Description: Sets a repeater ID local radio to serve as repeater. If a repeater function is enabled by ENR, the local radio repeats any packet with Transmitter Path (TXP) equal to 10.

(12) RESET

Mnemonic: RESET
Command abbreviation: NONE
Example: **RESET**

Description: Resets all parameters to factory settings except for COMBAUD, RFBAUD, CHANNEL, and ID.

Factory Default Settings after RESET.

COMMAND	ABBR.	DEFAULT SETTING
Conmode	CONM	2
Default Wait	DW	1
Echo	E	ON
Enable Repeater	ENR	0
Hardware Flow	HF	OFF
Packet Size	PS	256
Packet Wait	PW	1, 10 (20mSec)
Repeater ID	RID	0
Transmit Delay	TXD	5
Transmitter ID	TXID	0
Transmitter Path	TXP	0

(13) RF BAUD RATE

CAUTION: The same RF baud rate must be used at both the sending and receiving units.

Mnemonic: RFBAUD=N
Parameter: N=32 (32K), 64 (64K), 128 (128K)
Command abbreviation: RF
Default: 128 (128K),
Example: **RFBAUD=128 <Enter>**

Description: RF BAUD RATE sets the radio transmission baud rate. This is not related to the asynchronous link baud rate.

(14) SET TIME AND DATE

Mnemonic: SETTD=yymmddhhnnss
Parameter: yy=last two digits of year
mm=two digit month code, 01 - 12
dd=two digit day code, 01 - 31
hh=two, digit hour code, 00 - 23
nn=two digit minute code, 00 - 59
ss=two digit second code, 00 - 59
Command abbreviation: STD
Default: None set
Example: **STTD=950102123000<Enter> or STD=950102123000<Enter>**

Description: Sets the modem internal clock in the control module.

(15) TRANSMIT DELAY

CAUTION: Do not change this parameter unless you are experienced in networking and packet timing.

Mnemonic: TXDELAY=N
Parameter: N=3 … 255 (X5 msec)
Command abbreviation: TXD
Default: 5 (25 msec)
Example: **TXDELAY=5 <Enter> or TXD=5 <Enter>**

Description: TXDELAY sets the modem delay time. This is the time the control module waits before sending packet frame data. It is recommended that you use the default value.

(16) TRANSMITTER ID

Mnemonic: TXID=N
Parameter: N=0 ... 99
Command abbreviation: TXID
Default: 0
Example: **TXID=1 <Enter>**

Description: Set Transmit ID of the local modem. Every packet that transits through a repeater has TXP as well as a TXID address. Packets that are not transmitted through a repeater have a zero address.

(17) TRANSMITTER PATH

Mnemonic: TXPATH=N
Parameter: N=0 ... 99
Command abbreviation: TXP
Default: 0
Example: **TXPATH=10 <Enter or TXP=10 <Enter>**

Description: TXPATH sets the transmitter path for 'Repeater.' If TXPATH is set to Non-Zero, every packet sent out goes through a repeater with an ID that matches the TXP of the packet.