

DUMB MODE OF OPERATION

On the back of the modem, there is a two-pin jumper located next to the DB-25 connector. When the two pins on that jumper are connected together, the modem will then operate

in dumb mode. In this mode, the modem will operate as though it has no command mode. The dumb mode of operation is necessary for leased line^s and a range of special dial applications where the DTE expects the modem to have no command mode or where streaming data from the DTE would cause call establishment to abort.

To place the modem in dumb mode first configure the modem to the specific requirements. It is recommended that this configuration string include S2=127. Next, the configuration must be saved. Once the configuration has been saved, install the dumb mode jumper and then cycle power on the modem. It will then be in dumb mode. If it becomes necessary to reconfigure the modem, remove the dumb mode jumper and cycle power on the modem.

CERTIFICATIONS

FCC Part 68

This equipment complies with U.S. Code of Federal Regulations, Title 47, FCC Rules and Regulations Part 68. Located on the equipment is the FCC Registration Number and Ringer Equivalence Number (REN). You must provide this information to the telephone company if requested.

The Registration Number and REN will be on a label attached to the unit. The FCC requires these numbers be prominently displayed on an outside surface of the equipment.

The REN is used to determine the number of devices you may legally connect to your telephone line. In most areas, the sum of the REN of all devices connected to one line must not exceed five (5.0). You should contact your telephone company to determine the maximum REN for your calling area. The telephone company may change technical operations or procedures affecting your equipment. You will be notified of changes in advance to give you ample time to maintain uninterrupted telephone service.

If you experience trouble with this telephone equipment, please contact Ctek Inc. at 775-284-3700 Ext 1814 for information on obtaining service or repairs. The telephone company may ask that you disconnect this equipment from the network until the problem has been resolved. If your equipment continues to disrupt the network, the telephone company may temporarily disconnect service. If this occurs you will be informed of your right to file a complaint with the FCC.

This equipment may not be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs.

FCC Part 15

This equipment has been tested and complies with the limits for a Class A computing device according to U.S. Code of Federal Regulations, Title 47, FCC Rules and Regulations Part 15. Operation is subject to the following two conditions:

- (1) This device may cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Series 1000 Quick Reference Guide

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Part Number 91-001-01

This manual covers configuration and operation of all Series 1000 modems. A detailed manual on these products is available from Ctek, Inc. (www.ctekproducts.com).

FRONT PANEL LIGHTS

Indicator Label	Function	Indicator Label	Function	Indicator Label	Function
MR	Modem	OH	Off Hook	TX	Transmit
AA	Auto Answer	CD	Carrier	RX	Receive

BACK PANEL CONNECTORS

LINE - This RJ-11 connector should be used to connect the modem to a normal dial circuit or a dedicated 2-wire leased or 4-wire leased circuit. For 4-wire leased, the middle connector pair, is transmit and the connectors immediately on either side of the transmit pair make up the receive pair: [RX1 TX1 TX2 RX1]

RS-232-C - This connector provides a standard RS-232-C (V.24) interface between the modem and a wide range of DTE. The following signals are provided.

Pin	Signal	Source	PIN	Signal	Source
1	Frame Ground	DTE/DCE	6	Data Set Ready	DCE (MR)
2	Transmit Data	DTE (TX)	7	Signal Ground	DTE/DCE
3	Receive Data	DCE (RX)	8	Carrier Detect	DCE (CD)
4	Request To Send	DTE	20	Data Terminal Ready	DTE
5	Clear To Send	DCE	22	Ring Indicator	DCE

DUMB MODE - Next to the RS-232-C connector is a two-pin header. When the pins of this connector are not connected (default), the modem operates in smart mode. When they are connected, the modem operates in dumb mode. For more detail, please refer to the dumb mode section of this manual.

POWER - This connector is present on all stand-alone models and accepts a 9–12VDC power source. On rack mount versions, a different power connector is used and it provides DC voltages to the modem from the rack back plane.

AT COMMAND SET

Series 1000 modems operate in one of two states; the command state or the on-line state. When power is applied to the modem it will assume the command state. In command state the user may enter commands that will configure and control the modem. When the modem is connected to another modem and is prepared to transmit and receive data it is in on-line state. This section defines the commands that may be entered while in command state.

Attention Code – Command lines must begin with the characters *AT* and must end with a carriage

return (CR). The modem will not execute the command until it receives the CR.

Backspace Key – Will erase the previous character in the command buffer but will not erase the beginning *AT*.

Missing Parameters – Missing parameters are interpreted as 0.

Escape Code Sequence – A three-digit escape code sequence forces the modem to the command state. The factory default escape code sequence is +++.

Result Codes – Result codes are responses by the modem to commands. Result codes may be text (words) or digits.

Answer	A	Go off-hook and attempt to answer
Bell or CCITT	B0-B1	B0 = CCITT Bell B1 = Bell
Dial	Dn	Dial a phone number.
Command Echo	E0 E1	Disable command echo Enable command echo
Hang-Up	H	This command initiates a hang up sequence
Identification	I3	Display firmware release
Speaker Volume	Ln	L0-3 (low – high)
Speaker Control	Mn	M0-3 Off, On for call, Always On, On for answer
Return to online data mode	O	This command determines how the modem will enter the on-line data mode
Set Pulse Dial Default	P	Force pulse dialing until the next T command
Quiet Results Codes Control	Q0 Q1	Enable result codes Disable result codes
Read/Write S-Register	Sn=v Sn?	Selects an S-Register and performs a read or write function, or reports the value.
Auto Answer	See above	S0=0 Auto answer off, S0=1 Answer 1 ring
Set Tone Dial	T	This command forces DTMF dialing.
Result Code Form	V0 V1	Terse Verbose
Connect Message Control	W0 W1 W2	Reports DTE speed Reports line speed, error correction, protocol, DTE speed Reports DCE speed
Extended Result Codes	X0-X4	Defines the result messages that will be delivered to the DTE and controls blind dialing.
Soft Reset and Restore Profile	Z0 Z1	Restore Profile 0 Restore Profile 1
RLSD (DCD)_Option	&C0 &C1	DCD always on DCD follows carrier state of modem
DTR Option	&D0 &D1 &D2 &D3	Assumed on Go to command mode on DTR drop Hang up on DTR drop Soft Reset on DTR drop
Restore Factory Configuration	&F0 &F1	Factory default 0 Factory default 1
Flow Control	&K0 &K3 &K4 &K5 &K6	Disabled RTS/CTS XON/XOFF Transparent XON/XOFF RTS/CTS and XON/XOFF
Leased Line Operation	&Ln	&L0 = Dial, &L1 = Leased
DSR Control	&Sn	&S0 = always on, &S1 = on after answer
Display Current Configuration and Stored Profiles	&V	Reports the current (active) configuration, the stored (user) profiles, and the first four stored telephone numbers.
Store Current Configuration	&W0 &W1	Store as profile 0 Store as profile 1

Designate a Default Profile	&Y0 &Y1	Profile 0 Profile 1				
Enable Compression	%Cn	%C0=Disable, %C1=MNP5, %C2=V.42 %C3=Both				
Line Quality/Retrain	%En	%E0 = Disable, %E1 = Monitor and Retrain, %E2 = Monitor and Fallback/Fall Forward				
Answer or Originate	\Fn	0 = Answer Mode, 1 = Originate				
Auto Connect	\Hn	\H0 = Normal dial/answer, \H1 = Auto-connect as configured (leased line)				
Operating Mode	\N0 \N1 \N2 \N3 \N4 \N5	Normal speed buffered mode Direct mode MNP only MNP with fallback to normal mode V.42 only V.42 with fallback to MNP				
Enhanced Connect Message	\Vn	\V0 = Disable, \V1= Enable, presents a single line connect message with DTE and DCE speed				
Modulation Selection +MS=<Carrier>, <Automode>, <Min_RX_Rate>, <Max_RX_Rate>, <Min_TX_Rate>, <Max_TX_Rate> Automode=0 Disabled Automode=1 Enabled						
	Modulation	Carrier	Rates	Modulation	Carrier	Rates
	Bell 103	B103	300	V.22bis	V22B	2400 or 1200
	Bell 212	B212	1200	V.23	V23C	1200/75
	V.21	V21	300	V.32	V32	9.6K or 4.8K
	V.22	V22	1200	V.32bis	V32B	14.4, 12, 9.6, 7.2, or 4.8K
				V.34	V.34	16.8 19.2 21.6 24.0 26.4 28.8 31.2 33.6

FACTORY DEFAULT SETTINGS

Series 1000: B1 E1 L1 M1 Q0 T W0 X4 &C1 &D2 &G0 &K3 &L0 &S0 &T5 &Y0
%E2 \H0 \N5 \V0 +MS=V.34,1,300,33600,300,33600

LEASED LINE OPERATION

STANDARD SETUP FOR 2-WIRE LEASED LINE OPERATION - In order to configure the modem for leased line operation, it is necessary to use the following commands in your configuration string:

Originate End: &L1\H1\F1S7=200S2=127[user specific parameters]&W
Answer End: &L1\H1\F0S7=25S2=127[user specific parameters]&W

In the user specific section of each command string, commands may be entered to match the modem to the specific requirements of the attached DTE. Parameters such as error correction, compression and flow control may be defined here. Once the modems have been configured, they must be placed in dumb mode and power must then be cycled.

Four-Wire Operation

To use the Series 1000 on a four-wire circuit you must remove the units cover and connect jumper JP3 from Pin 2 to Pin 1. The unit ships from the factory with JP3 connected Pin 2 to Pin 3, which is the correct configuration for two wire circuits.