

Chapter 10

Synchronous Operation

SYNCHRONOUS MODES

Your BitSURFR Pro supports two synchronous modes. Operation in each of these modes is described below.



Note

Your BitSURFR Pro cannot operate in synchronous mode if attached to a PC or asynchronous terminal (unless an add-in synchronous card is installed in your PC). It must be attached to a synchronous DTE. The BitSURFR Pro's synchronous features are designed primarily for various commercial applications.

Synchronous Mode 1: Sync Pause Mode

Synchronous mode 1 is for DTEs that are capable of both asynchronous and synchronous operation on the same port. In this mode, the BitSURFR Pro operates asynchronously in the AT command mode when off-line. The BitSURFR Pro switches over to synchronous mode after the connection is established.

Dialing is performed in the same manner as in asynchronous mode. The BitSURFR Pro sends all status and connect messages to the DTE in asynchronous mode. When a connection is made, the BitSURFR Pro delays for 5 seconds (configurable with the **S25** command) before monitoring DTR.

This delay serves two purposes. If separate dialing and communication terminals are used, this allows the terminal operator to switch the cable between the two. If separate dialing and communications software is being used on the same terminal, the delay allows time for the dialing software to complete and the communications software to initialize and turn DTR on.

After the BitSURFR Pro connects, the DSR, CD, and CTS pins will be high. This can be used by the DTE as an indication to begin sending synchronous data to the BitSURFR Pro.

The BitSURFR Pro disconnects if it detects an on-to-off transition of the DTR pin when **&D0** is not in effect, or it receives a disconnect message from the switch. After a disconnect, the BitSURFR Pro returns to the off-line state. If the BitSURFR Pro is set to auto answer, it will only answer when DTR is on or **&D0** is in effect. If you do not want the BitSURFR Pro to answer, DTR must remain low for at least 8 seconds after the ringing ends.

Synchronous Mode 2: Dial Stored Number Mode

The BitSURFR Pro will automatically dial the telephone number stored in directory entry number 0 when it detects an off-to-on transition of the DTR pin.

Once the BitSURFR Pro connects, the DSR, CD, and CTS pins will be high to indicate to the DTE that it can begin sending synchronous data.

The BitSURFR Pro disconnects upon detecting an on-to-off transition of the DTR pin when **&D0** is not in effect, or receiving a disconnect message from the switch. After disconnecting, the BitSURFR Pro hangs up and returns to the off-line state.

If the BitSURFR Pro is set to auto answer, it will only answer when DTR is on or **&D0** is in effect. If you do not want the BitSURFR Pro to answer, DTR must remain off for at least 8 seconds after the ringing ends. After that time, if DTR turns on, the BitSURFR Pro will originate a call. If DTR turns on during the ringing process, but before the required ring count is reached, the BitSURFR Pro will not originate a call.

V.25bis Dialer Synchronous Mode

When V.25bis dialer mode is selected, the correct synchronous mode is automatically set. A full description of the V.25bis dialer can be found in Chapter 12.