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**CETAC *ASXPRESS***  
**Rapid Sample Introduction System**

**Guide to Configuring CETAC Autosampler  
Firmware Personalities**

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## Overview

Since different analytical instruments and instrument control software packages have different command languages, it is necessary to configure the autosampler. Several different configurations, or personalities, are built into the autosampler.

Most CETAC ASX-520 series autosamplers can be configured using a serial communications protocol. Autosamplers which can be configured include the ASX-130, ASX-260, ASX-520, and EXR-8. This guide explains how to configure a CETAC autosampler using a terminal emulation program.

The CETAC ASXPRESS Rapid Sample Introduction System is available as an upgrade to existing CETAC autosamplers. Upgrade systems include a processor circuit board (called a “Rabbit” module) which is intended to replace the autosampler’s existing processor. This Rabbit module is pre-programmed, but requires that the unique “personality” be set to ensure compatibility with both your autosampler and your analytical instrument.

Please consult with a CETAC representative to verify that your version autosampler (“version” refers to the autosampler as is configured to operate with a specific brand of analytical instrument) is compatible with the ASXPRESS Rapid Sample Introduction System. Once compatibility is established, establish a connection with the terminal emulator program, determine the current personality of the autosampler, replace the Rabbit module, then set the new personality.

**NOTE**

Before attempting to configure your autosampler, ensure that your version autosampler is compatible with the ASXPRESS system. If you are unsure, contact CETAC Technologies for verification.

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## Determining the Current Personality

**1** Connect to the ASXPRESS Rapid Sample Introduction System.

The ASXpress system, along with all CETAC autosamplers, can be controlled using a serial communications protocol. You can use any terminal emulation program, including:

- **C-Term.** (recommended) This program is installed with the Xpress Configuration Tool software, and runs on Windows 2000 and later. See “Using C-Term™” on page 6.
- **HyperTerminal.** This program was supplied with versions of the Windows operating system through Windows XP. See “Using HyperTerminal” on page 9.

**2** Enter the command

```
gettype
```

**3** The information returned will include the personality description.

If the autosampler has been in operation without the ASXPRESS Rapid Sample Introduction System, return the autosampler to this personality after the Rabbit module has been replaced.

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## Replacing the “Rabbit” Module

**NOTE**

See the *ASXPRESS Operator’s Manual* for instructions on how to replace the Rabbit module in the autosampler. The *ASXPRESS Operator’s Manual* is available on the CD or from [www.cetac.com](http://www.cetac.com).

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## Setting the Personality

- 1 Ensure that the autosampler has been fully and properly reassembled after Rabbit module replacement.
- 2 Connect to the autosampler using a terminal emulation program.
- 3 Determine which personality to use. See **Table 1** on page 6.
- 4 Enter the command

```
settype=nnn
```

where *nnn* is the personality number.

- 5 Cycle power on the autosampler off, then back on.
- 6 Verify the personality with the `gettype` command.

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## Autosampler Personalities

Personality number	Description
0	<b>ASX-520 Standard</b> (includes Varian, Spectro, Digilab, FIA, Thermo (some models), GBC {906AA, Avanta}, LECO, PS Analytical, Seiko, Teledyne Leeman, ARL)
4	ASX-520 PE
5	ASX-520 HP/Agilent
6	ASX-520 Lachat
7	ASX-130/410 Lachat
8	<b>ASX-260 Standard</b> (includes Thermo, PE, Spectro, Trace detect, Setac, FIA, Unicam AA, MAS, Nu, GV)
9	<b>ASX-130 Standard</b> (includes MAS, PE)
14	<b>ASX-520HS Standard</b> (includes Spectro)
15	ASX-520HS HP/Agilent
16	ASX-520HS PE
17	ASX-520 MicroMass (GV Instruments)
18	ASX-520 Thermo AA
20	ASX-520HS Thermo AA
22	ASX-520 Finnigan Mat
23	<b>EXR-8 CETAC Standard</b> (includes Varian, Spectro)
24	<b>EXR-8 CETAC Standard, High Speed</b> (includes Varian, Spectro)
25	EXR-8 PE

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26	EXR-8 PE High Speed
27	ASX-520 Anatel
32	ASX-260 Micromass
33	ASX-260 Speedy (PE)
37	ASX-520HS Lachat
39	EXR-8 Lachat
40	ASX-260 Lachat
41	EXR-8HS Lachat

**Table 1** ASXPRESS Personalities

**NOTE**

Not all personalities listed in table 1 are compatible with the ASXPRESS Rapid Sample Introduction System. Please consult with CETAC Technologies to determine if your version autosampler is compatible for use with the ASXPRESS Rapid Sample Introduction System.

## Using C-Term™

C-Term is a simple terminal program developed to validate the installation and functionality of various CETAC devices. C-Term communicates through a serial (RS-232) port on the host computer. If the device is connected to a USB port, the device driver will create a virtual serial port.

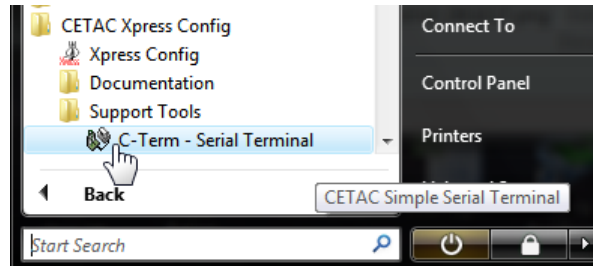
C-Term is provided on the CETAC software CD and is automatically installed with the Xpress Configuration Tool software.

### Starting C-Term

- 1 Check that the communication port connectors are properly attached between the host computer and the CETAC device.

If the communications interface between the CETAC device and the host computer is not established correctly, the device will not function.

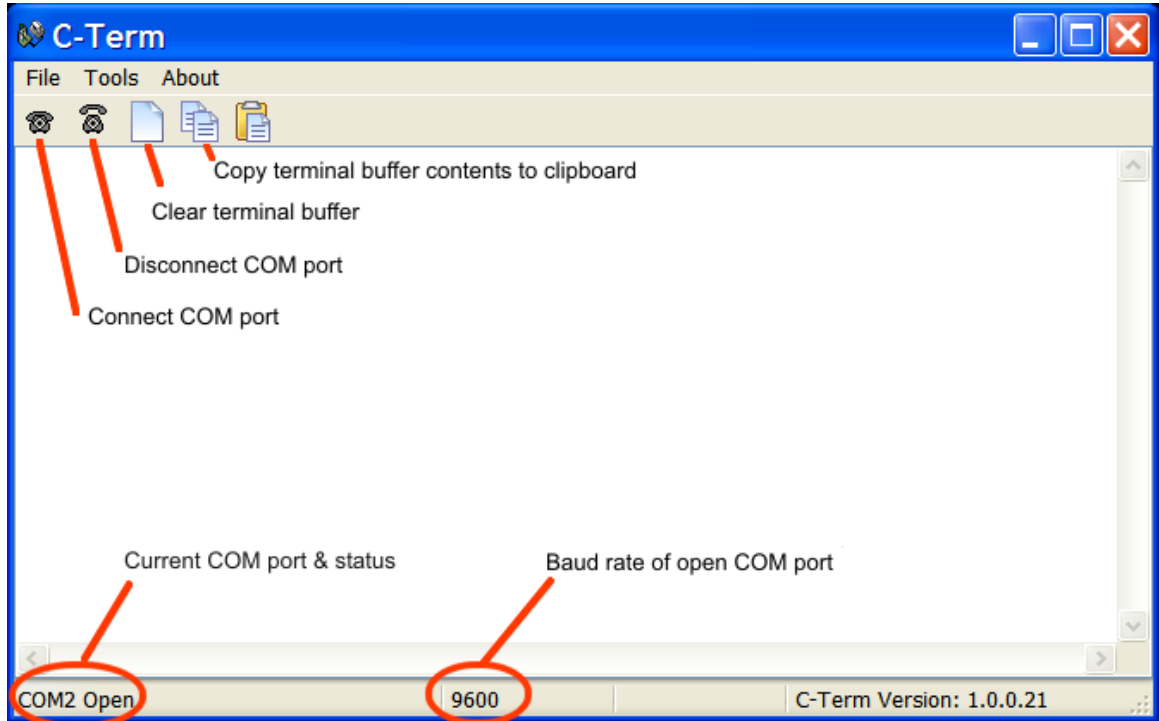
- 2 On the Start Menu, click All Programs, then CETAC Xpress Config, then Support Tools, then C-Term.



**Figure 1** Starting C-Term

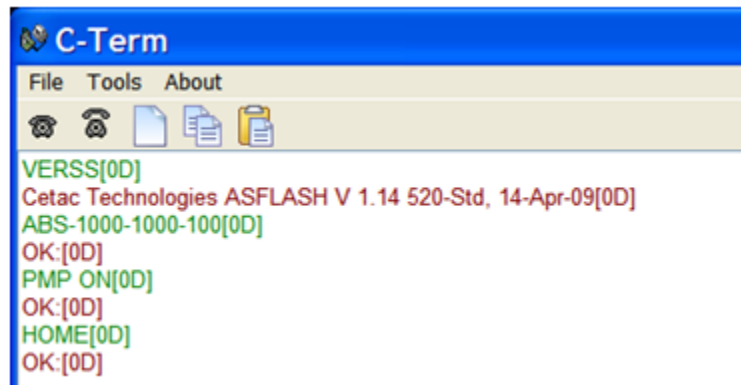
## Overview of the C-Term Window

Once C-Term is loaded, the window shown in Figure 2 will open. The majority of C-Term's functions are available from this window.



**Figure 2** C-Term Window

By default, typed commands are sent to the CETAC device connected to the opened port. The typed commands will appear in light green in the terminal buffer. Responses from the device will appear in red. Non-printing characters such as carriage returns will appear as ASCII hexadecimal numbers surrounded by square brackets, for example, **[0D]** is the carriage return character.



**Figure 3** Outgoing commands shown in green and incoming responses shown in red

## Configuring C-Term

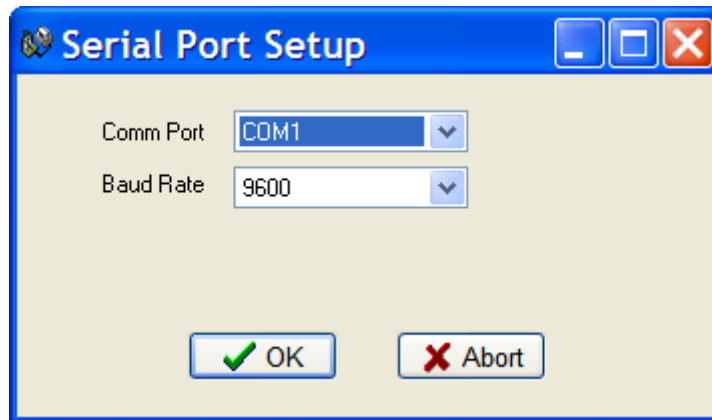
By default, C-Term attempts to open COM1 the first time it is executed. If the COM port that the CETAC device is connected to is not the default (COM1), then it will be necessary to configure C-Term to use the desired port.

The default communications configuration is appropriate for use with the vast majority of CETAC devices. Exceptions are the ASX-8000 which requires a baud rate change and the AS300 emulator which uses non-printing characters are part of its command protocol. Modifying the default settings is described below.

### NOTE

If COM1 (or the currently selected COM port) is in use by another program or is otherwise unavailable, a warning dialog box will pop up when C-Term starts stating that the COM port could not be opened.

- 1 On the Tools menu, click Setup Serial Port.



**Figure 4** Serial Port Setup Window

- 2 Select the desired COM port and, if necessary, the Baud rate used by the connected device then click OK.

The window will close and the settings will be saved. These new settings will be applied immediately and used thereafter unless changed again.

### NOTE

Except for the ASX-8x00, all CETAC devices communicate at 9600 baud (which is the default.)

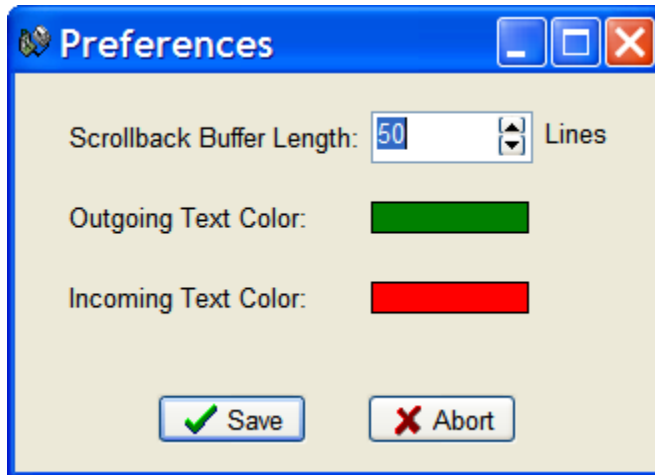
### NOTE

Only installed COM ports, including USB virtual COM ports, will appear in the **Comm Port** menu.

## Setting Preferences

If desired, the size of the scrollbar buffer or the color of the outgoing and incoming texts can be changed (to work around color blindness, for example).

- 1 On the Tools menu, click Preferences.



**Figure 5** Preferences Window

To change the Scrollback Buffer Length, either type the new value in the field or use the arrows to adjust the value up or down.

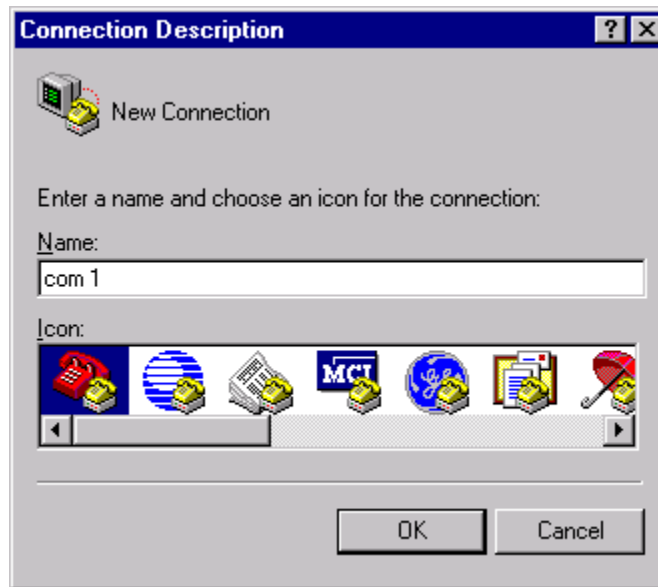
To change text color, click on the color bar and a color selection dialog box will appear. Select the new color and click **OK**.

- 2 Click Save to apply your settings and close the window.

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## Using HyperTerminal

- 1 Using a serial cable, connect the ASXPRESS Rapid Sample Introduction System with the computer. Plug each end of the serial cable into the OEM COM port of the electronics module and a COM port on the computer.
- 2 Turn on the computer and select the Accessories folder. Select the HyperTerminal folder and then the HyperTerminal program.
- 3 A window will appear as in Figure 6. Enter COM 1 in the name box. Press the OK button.



**Figure 6** “Connection Description” Window

- 4 In the Connect To window, set Connect Using to COM 1, then click OK.



**Figure 7** “Connect To” Window

- 5 In the Properties window, set Bits per second to 9600 and Flow control to None.

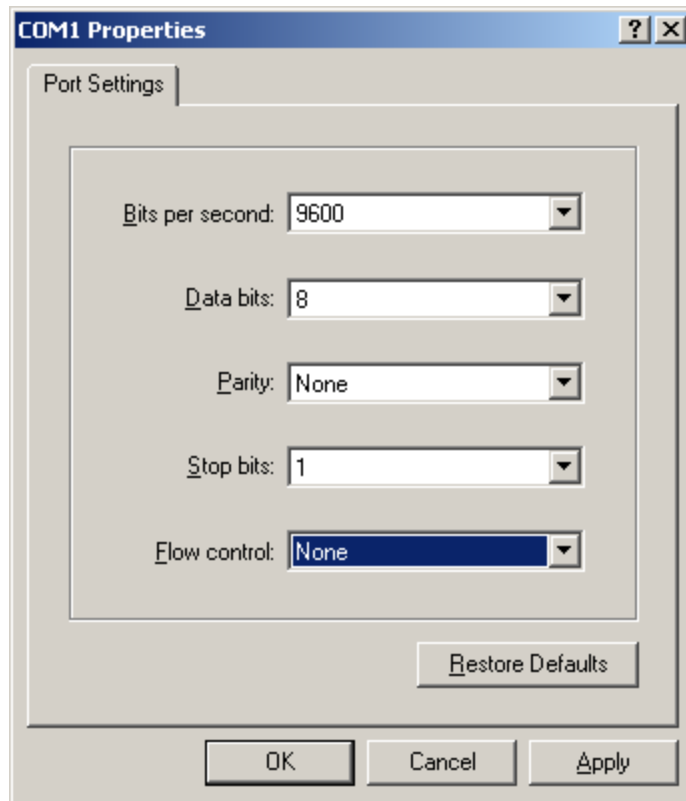


Figure 8 "COM1 Properties" Window

6 Click OK.

The HyperTerminal window will open.

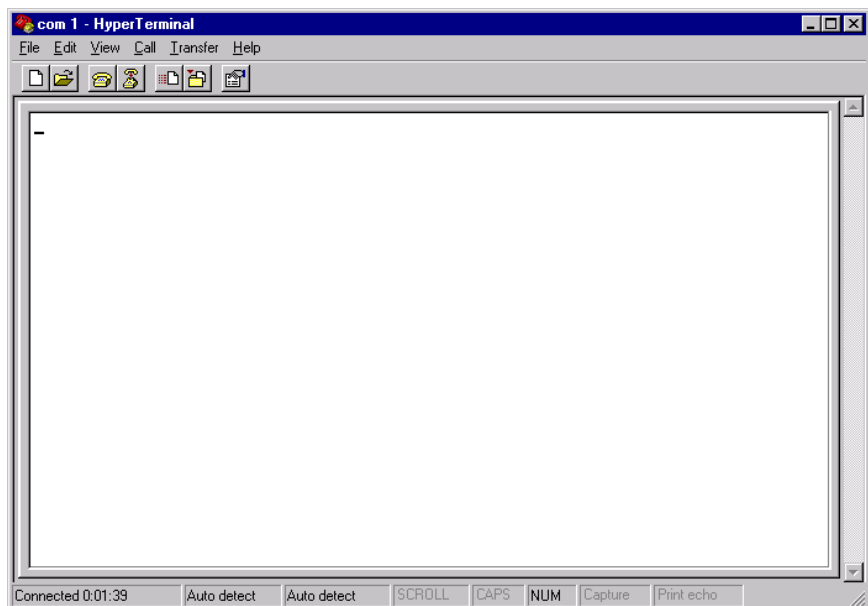


Figure 9 "Com 1 Hyperterminal" Window

7 On the File menu, click Properties.

- 8 On the Settings tab, click ASCII Setup

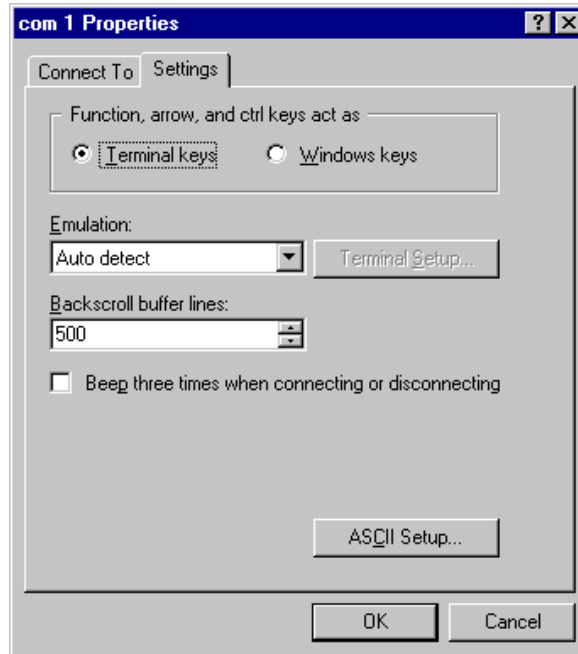


Figure 10 "Com 1 Properties" Window

- 9 Click ASCII Setup.
- 10 Enable "Echo typed characters locally" and "Append line feeds to incoming line ends," then click OK.

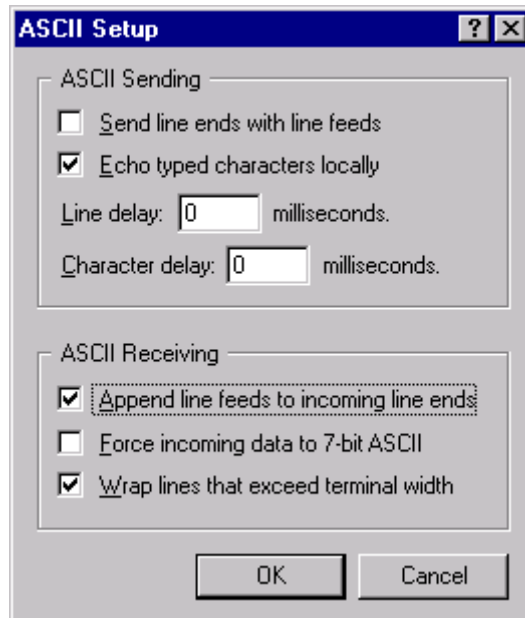


Figure 11 "ASCII Setup" Window

- 11 Turn on the ASXPRESS Rapid Sample Introduction System.  
The HyperTerminal window should display an OK.