ComTestSerial™

Serial Communications Test Program

User's Guide

MICRORIDGE

Measurement Collection Specialists
Connect Any Gage into Any Software

ComTestSerial Communications Test Program

Created: Wednesday, April 25, 2018 at 9:32 AM in Sunriver, Oregon.

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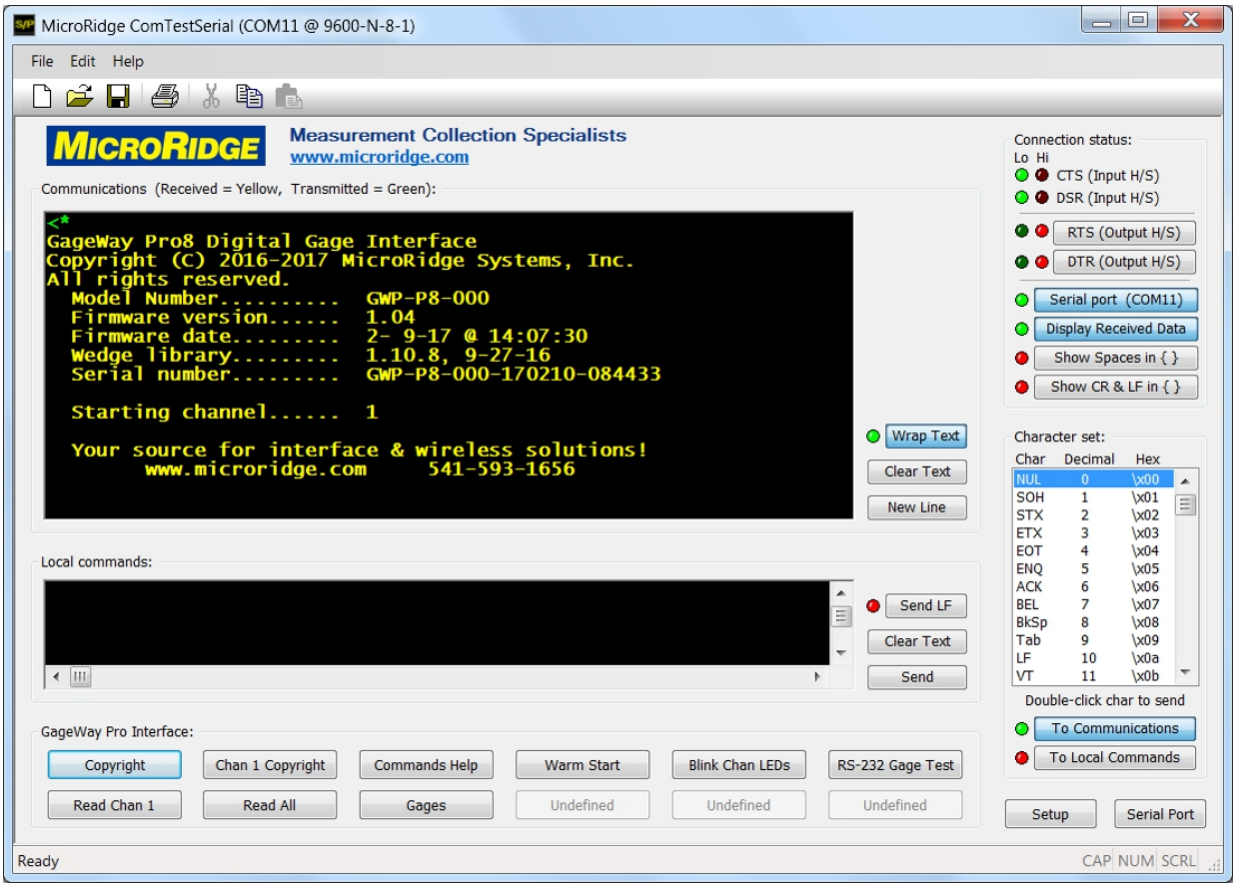
1 Introduction



The ComTestSerial communications test program allows you to test communications with any serial device. The program is very easy to use. However, it is suggested that you review the components of this help information so that you can use all of the features of ComTestSerial.

ComTestSerial supports baud rates from 300 to 115.2K and all of the commonly used communications parameters. You can select any serial port that is installed on your computer. There are user definable buttons that can be used to specify commands for your serial device.

ComTestSerial can be installed on as many computers as needed. You can also give ComTestSerial to anyone who needs a serial communications test program. You cannot modify the ComTestSerial program file in any manner. You cannot distribute ComTestSerial with any other software or hardware that is being sold or licensed.

Supported Operating Systems

ComTestSerial is designed to run on Windows XP or later.

2 Communications Window

The communications window displays the data sent to and received from the serial port. You can copy information from this window; however, you cannot paste information into the window.

If the serial port is not enabled, the communications window will be dark blue, the serial port LED will be red, and the title above the communications window will indicate the serial port is off-line. To enable the serial port, click on the Serial Port button in the connection status area of ComTestSerial. The serial port status LED will turn green when the port is enabled.

Wrap text

If the Wrap Text LED is red, information will be displayed on a line until a carriage return is received. If the LED is green, the information in this window will be wrapped so that no horizontal scrolling will be required.

Clear Text

This button clears the information in the communications window.

New Line

Move the input cursor to column 1 of a new line. Nothing is sent to the serial port when this button is pressed.

Printing

The contents of the communications window can be printed by pressing the print icon on the toolbar. If an area of this window has been selected, this selected area will be printed. If no area has been selected, printing will start with the oldest information in the window. In all cases, a maximum of 1 page of information will be printed. The font size for the printed reports can be modified by pressing the Setup button.

3 Local Commands Window

The local commands window allows you to enter a command that will be sent to the communications window when the Send button is pressed. If the serial port is enabled, this information will also be sent to the port.

Send LF

If the Send LF LED is red, a line feed (\x0a) will not be sent with a new line carriage return. If the LED is green, a line feed will be sent with each new line carriage return. A new line carriage return is created when you press the Enter key in this window. If you enter a carriage return with the hex code (\x0d), a line feed is never added to this carriage return.

Clear Text

This button clears the information in the local commands window.

Send

Send the contents of the local commands window to the communications window and to the serial port.

4 User Defined Commands

The user defined commands consist of a set of 12 buttons along the bottom of the program window. There are several sets of predefined buttons for use with MicroRidge products. Any buttons not predefined in ComTestSerial can be defined by the user by pressing the Setup 8 button. When a button is pressed, the command is displayed in the communications window and is sent out the current serial port.

The predefined command sets for MicroRidge products are listed below. Refer to the appropriate product page on the the MicroRidge web site for more information about the products.

- GageWay SM
- GageWay Pro Interfaces
- MobileCollect Wireless
- WedgeLink SP Keyboard Wedge
- WedgeLink AT Keyboard Wedge

5 Connection Status

The connection status shows the status of the serial port and display parameters. Several of the items in this status group also function as control buttons.

Input Handshake Lines CTS & DSR

These LEDs indicate the status of the input handshake lines. The status of these lines is controlled by the external serial device and cannot be changed from your PC. When the LED is green, the line is low. When the LED is red, the line is high.

Output Handshake Lines RTS & DTR

These LEDs indicate the status of the output handshake lines. The status of these lines can be controlled by clicking on the appropriate button. When the LED is green, the line is low. When the LED is red, the line is high. The normal status for these lines is high (red LED). The GageWay SM from MicroRidge uses these 2 handshake lines as a power source.

Serial port (COMx)

Press this button to enable and disable the serial port. The current serial port is shown as part of the button label. To select a new serial port, press the Serial Port 9 button in the lower right-hand corner of the window. When the serial port is disabled, the communications window will be dark blue in color and the title above the communications window will indicate that the serial port is off-line.

Display received data

Press this status button to turn on or off the update in the communications window. If the update is turned off (red LED), any information received from the serial port will be discarded.

Show space characters in { }

Press this status button to display the space character as {space} rather that a single blank. It is sometimes difficult to determine the number of space characters in a packet of data received from the serial port. This feature makes it very easy to determine the number and location of the space characters.

Show carriage return & line feed in { }

Typically packets of data from a serial device are terminated with a carriage return (CR) or a line feed (LF). If this status button is set to green, a carriage return will be displayed as {CR} and a line feed will be displayed as {LF}.

6 Character Set

There are 256 different 8-bit ASCII characters that can be sent out and received from a serial port. These characters are numbered from 0 to 255. All of the ASCII characters in the range of 31 to 126 are available on the standard keyboard and can be sent by pressing the appropriate key. A few of the ASCII control characters (0 to 31) can also be sent by pressing the appropriate key. The control characters available on the keyboard include the Escape key (27) and the carriage return (12) or Enter key. Typically none of the extended characters (127 to 255) are available on the keyboard.

To enter the control or extended characters in the local commands window you must enter them in the hex format. For example, the tab character must be entered as \x09. If you use the Character Set window to enter these special characters, they will automatically be entered in the proper format.

To enter the control or extended characters in the local commands window you must enter them via one of the following methods:

- Send them from the Character Set window
- Type the hex code into the window

To enter the control or extended characters in the communications window you must enter them via one of the following methods. You cannot enter hex codes into the communications window.

- Send them from the Character Set window
- Send them from the Local Commands window
- Send them from a user defined command

Sending characters

You can send characters from the character list to the communications window or the local commands window by any of the following methods:

- Double click the character to be sent
- Press the space bar when the character set window has the focus

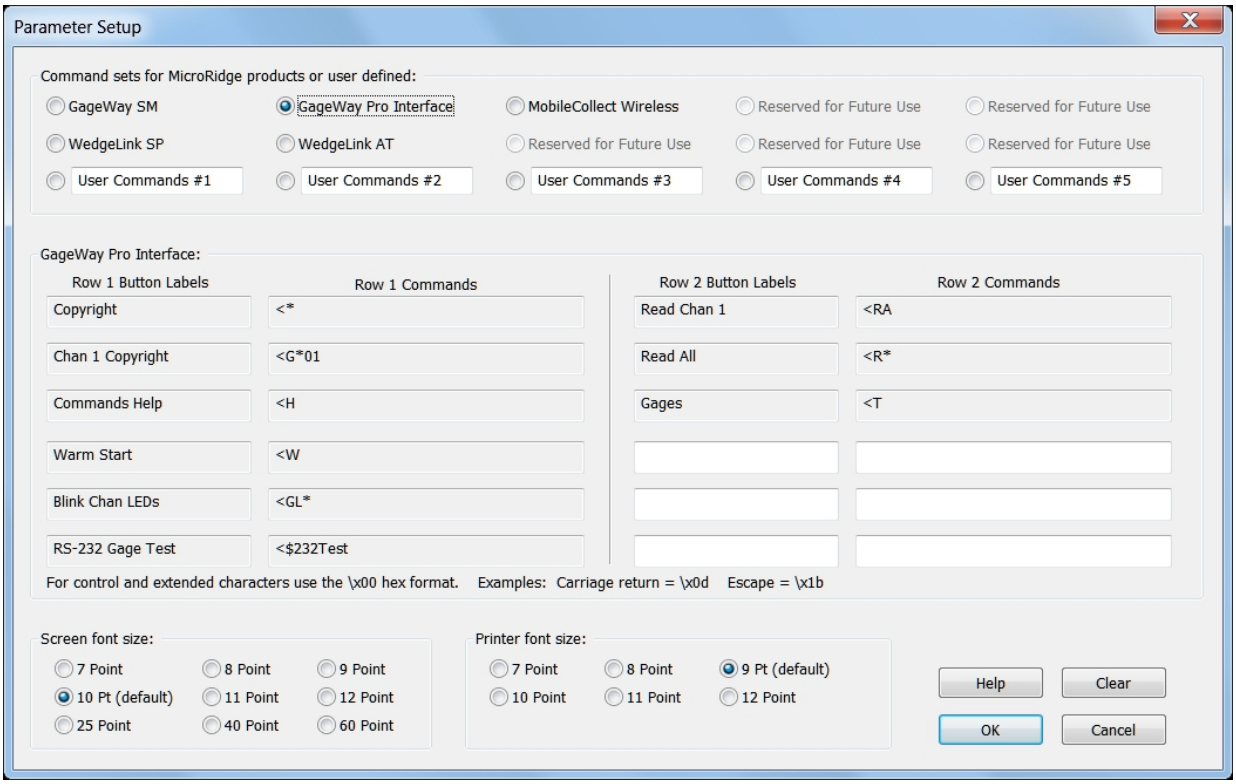
To Communications

To send characters from the character set list to the communications window, this LED must be green.

To Local commands

To send characters from the character set list to the local commands window, this LED must be green.

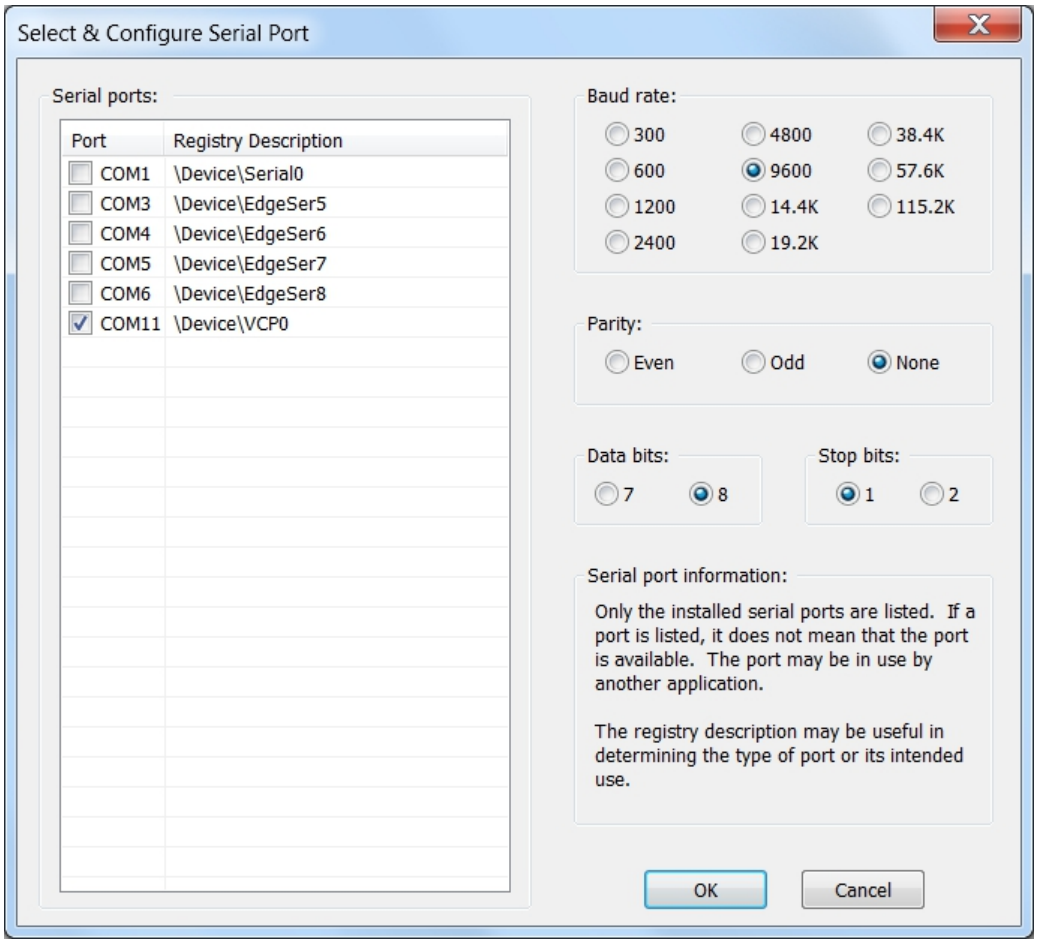
7 Setup



The Setup Button on the main ComTestSerial window provides access to setup parameters such as user definable commands and font sizes. There are 15 command sets available. Ten of these command sets are for products manufactured by MicroRidge and 5 sets are available for the user to specify commands. Each of the command sets contain 1 or more blank commands that the user can define for their own needs. All of these parameters, along with the serial port setup, can be saved to a file.

When using these commands, remember that control and extended characters must be entered in the hex format. See the Character Set 7 section for more details.

8 Serial Port



The Serial Port button provides access to the serial port selection and communication parameters settings. Getting the proper items selected in this dialog is the most important part of the ComTestSerial setup. If your selections are not correct, you will not be able to communicate with your serial device or the data received from the serial device will be all garbage.

ComTestSerial supports up to 200 serial ports. This dialog will only enable those serial ports that are actually installed. The registry description text to the right of the serial port number may be useful in determining the type or function of the serial port. For example, if a serial port is associated with a modem, you may see the word modem as part of the description. A virtual Bluetooth serial port might be reported as \Device\BtPort3.

The ComTestSerial program cannot determine the communication parameters required by a serial device. You must determine these parameters and set them appropriately in this dialog. Remember, "When all else fails, read the manual for your serial device!"

If you are having trouble getting communications with your serial device, refer to the Troubleshooting 11 section.

9 Printing

The contents of the communications window can be printed by pressing the print icon on the toolbar. If an area of this window has been selected, this selected area will be printed. If no area has been selected, printing will start with the oldest information in the window. In all cases, a maximum of 1 page of information will be printed. The font size for the printed reports can be modified by pressing the Setup 8 button.

10 Troubleshooting

The most common problems you may encounter when using the ComTestSerial program involves getting readable information into this program from your serial device. Listed below are a few situations you may encounter and some suggestion as to what you might need to do.

I cannot get any data to appear in the communications window

- Is your serial device turned on?
- Is the serial cable connected?
- Is the serial port enabled in ComTestSerial?
- Is the Display Received Data button enabled?
- Have you selected the proper serial port?

I get data, but it is all garbage

- You have not selected the correct baud rate and/or communication parameters.
- Does your serial device output human readable data?

Some data is OK, but some characters are garbage

- You have not selected the correct communication parameters.

Remember, you must set the proper serial port and communication parameters in order to communicate with your serial device. People often ask us "How do I determine the correct baud rate and communication parameters for my serial device?" Our response is "Check the equipment manual and/or contact technical support for the serial device."

11 Contact MicroRidge

Email:

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Sunriver, OR 97707-0249

Shipping Address:

MicroRidge Systems, Inc.
56888 Enterprise Drive
Sunriver, OR 97707

Note: There is no mail delivery to this address. This address should only be used for package delivery services such as UPS, FedEx, etc.

Web: www.microridge.com