ICONS HELP

Upload a File

Download a File

Dial the modem

Capture Terminal Input

Hangup the modem

Set communications parameters

Edit your STCOM Phone Book

Change Terminal Fonts

Launch Calculator

Launch Calendar

Launch Notepad

Shell to DOS

Locate Text on Disk

Run Script

Run Script

STCom has a very powerful script language buil into it. Clicking on this icon
will present you with a listing of existing scripts. A script file is simply
a series of automated commands that you wish STCom to perform.

For further information on script files refer to the Script File Help in
STCom.

Locate Text on Disk

Clicking on this icons will start the Text Find utility that comes with
STCom.

This utility is quite fast and very handy. How many times have you saved
a file somewhere on your system or network and couldn't remember where it
was? This utility saves you a lot of time. It allows you to specify a
certain piece of text and a search path and mask as well as specify whether
or not to make the search case sensitive. The great thing about this
utility is that it dos not search just text files. It will search any file
that matches the search mask. This means it can be databases, text, EXEs,
Etc.

Shell to DOS

Clicking this icon will simply open up a DOS session. To return to STCom
from a DOS session simply type exit or use ALT+Esc to flip through the
active sessions.

**PLEASE NOTE: IT IS NOT ADVISABLE TO HAVE A DOS SESSION OPEN AT THE
SAME TIME AS WORKING WITH THE REMOTE. IF YOU SHELL
TEMPORARILY TO PERFORM A DOS FUNCTION IT IS ADVISABLE
TO USE EXIT AS OPPOSED TO ALT+Esc.**

REFER TO THE <u>COMM.DRV</u> SECTION FOR FURTHER INFORMATION.

Launch Notepad

Clicking this icon simply starts up the notepad that comes with STCom.

The notepad is useful for browsing captured data files or reading standard
text files that you have saved on your system. It also contains a full
complement of editing features and clipboard features.

Launch Calendar

Clicking this icon simply starts up the Calendar that comes with STCom.

Launch Calculator

Clicking this icon simply starts up the calculator that comes with STCom.
This utility was added for those using STCom for business or financial
reasons.

Upload a File

Uploading a file simply means transferring a file from your system to the remote system you are currently connected with.

When you select this icon you will be presented with list of protocols to use for the transfer. Depending on the type of protocol you select you will be presented with one of two different file selection menus.

Batch Protocols

If you have selected a batch protocol, you will be presented with a batch upload dialog. This dialog allows you to select multiple files by simply double clicking on a file listed in the Files list. You can change directories and drives by double clicking on selections that appear in the Directories list.

There are 5 buttons that exist in this dialog:

OK   : This button will start the transfer once you have selected the file(s)
             that you wish to transfer.
Cancel: This button will abort the whole upload process on your side.

Help   : This button simply brings up the current help file you are reading

Add   : This button acts the same as the double click function. You will
             need to highlight the file that you wish to add to the list of
             outgoing files before this button will work.

Remove: This button simply removes the highlighted file from the Outgoing
             Files listing.

Non Batch Protocols

If you have selected a non-batch protocol, you will be presented with a select file to upload dialog. This dialog allows you to select only a single file by simply double clicking on a file listed in the Files list. You can change directories and drives by double clicking on selections that appear in the Directories list.

There are 3 buttons that exist in this dialog:

OK   : This button will start the transfer once you have selected the file
             that you wish to transfer.
Cancel: This button will abort the whole upload process on your side.

Help   : This button simply brings up the current help file you are reading

Download a File

Downloading a file simply means receiving a file from the remote system you
are currently connected with to your system.

When you select this icon you will be presented with list of protocols to
use for the transfer. Depending on the type of protocol you select you
will be presented with one of two different file selection menus.

Batch Protocols

If you have selected a batch protocol, you will be presented with a
Download Directory dialog. This dialog allows you to specify where you
wish STCom to save the file(s) you receive. You can change directories and
and drives by double clicking on a selection in the Directories Listing.

There are 3 buttons that exist in this dialog:

OK   : This button will start the transfer once you have selected the directory
          that you wish to save the files into.

Cancel: This button will abort the whole download process on your side.

Help : This button simply brings up the current help file you are reading

Non Batch Protocols

If you have selected a non-batch protocol, you will be presented with a
Choose Download Filename Dialog. This dialog allows you to specify the
Name and Directory that you wish to save this file as. You can change directories
and drives by double clicking on a selection in the Directories list.
There are 3 buttons that exist in this dialog:

OK   : This button will start the transfer once you have selected the file
          that you wish to transfer.
Cancel: This button will abort the whole Download process on your side.

Help : This button simply brings up the current help file you are reading

Dial the Modem

Dialing the modem simply means dial the phone number that you wish to establish
a telecommunications session with.

When you select this icon you will be presented with a Select Whom? Dialog.

This dialog has one field and four buttons:

Phone Number Field: This field allows you to manually type a phone number
                         that you wish to dial.

Select Button   : This button will present you with a listing of entries
                         in your STCom Phone Book.
                         Double clicking on one of the entries in this listing
                         will select the phone number that is associated with that entry.

OK   : This button will start the dialing process for the number
                         you have selected.

Cancel   : This button will abort the whole dialing process.

Help   : This button simply brings up the current help file you
                         are reading.

Hangup the Modem

Clicking this icon will immediately terminate (drop the carrier) the current telecommunications session.

Change Terminal Fonts

Changing Terminal Fonts simply means changing the size and style of the font used in the terminal window. The number, type, and abilities of the font selection will depend on the amount of fonts you have installed in Windows.

STCom defaults to using the standard system font.

When you click on this icon you will be presented with the standard Windows font selection dialog.

Set Communications Parameters

Setting communication parameters simply means setting com ports, baud rates, parity, data bits, and stop bits. All of these parameters affect the way STCom interacts with the remote system. As a general rule you will not use this option very often since all these things, except com port, are set in the Phone Book entry.

When you click on this icon you will be presented with a Communications Parameters dialog containing five groups of check boxes and three buttons.

The following is a listing of the functionality each of these groups and buttons:

Port Group   : This group specifies the com port you wish to use for communications.

Baud Group   : This group specifies the baud or BPS Rate that you wish to use when dialing the remote system. The baud rate will depend upon three different factors. 1 - The capabilities of the remote system, 2 - The capabilities of your modem, and 3 - the capabilities of the COMM.DRV you have installed in your windows SYSTEM.INI.

Parity Group   : This group specifies the parity of the remote system. There are five valid values for this field. They are as follows:

                    None - NoParity
                    Odd   - OddParity
                    Even - EvenParity
                    Space - SpaceParity
                    Mark - MarkParity

                  The default value for the parity setting is NoParity.

Data Bits Group: This group specifies the Data Bit Capabilities of the remote system. Valid entries are 5, 6, 7, 8.

Stop Bits Group: This group specifies the Stop Bit Capabilities of the remote system. Valid entries are 1, 2.

OK Button   : This button simply saves any changes or additions to the Parameters.

Cancel Button : This button simply aborts any changes or additions to the Parameters.

Help Button   : This button simply brings up the current help file you are reading.

Capture Terminal Input

Capturing terminal input simply means writing all incoming text to a text
file of your choice. This is handy when you wish to keep a certain amount
of incoming data for browsing at a later date.

Once you have started a capture you can stop capturing by clicking on this
icon again.

When you select this icon you will be presented with a Capture File Name
dialog. The filename defaults to CAPTURE.CAP. You can specify any name
for the file by typing it in the filename field. You can also specify a
directory and drive by double clicking on one of the entries in the
Directories listing.

There are four buttons available in this dialog:

OK   : This button will start the capture of terminal input. If the file
           specified already exists, you will be presented with a query dialog.
           This dialog will tell you that the file already exists and present
           you with three buttons:

           Yes   : Selecting this button tells STCom to append to the end of
                      the existing file.

           No   : Selecting this button tells STCom to overwrite the existing
                      file and start writing as if it were a new file.

           Cancel: Selecting this button aborts the whole capture sequence.

           Help : This button simply brings up the current help file you are
                      reading.

Cancel: This button will abort the whole capture sequence.

Help : This button simply brings up the current help file you are reading

Edit you STCom Phone Book

The phone book is where you will setup names, numbers, and parameters for the
various remote systems that you will be connecting with. The phone book
provides the listing of systems that you will dial when you click on the
select button that appears when you use the Dial the Modem icon.

When you click on this icon you will be presented with a listing of existing
entries in the phone book and five buttons. Double clicking on any entry in
the listing will result in the same action as highlighting an entry and
clicking the change button.

The following is a description of the function of each button:

Add   : This button will present you with a blank Phone Book Entry Dialog.

             Refer to the following text on phone book entries for further
             information.

Change: This button will present you with a Phone Book Entry Dialog with
             then fields already filled in with the highlighted entrys
             information.

             Refer to the following text on phone book entries for further
             information.

Remove: This button will delete the highlighted entry from the Phone Book.

OK   : This button simply returns you to the terminal window.

Help : This button simply brings up the current help file you are reading

Phone Book Entry Dialog

The Phone Book Entry Dialog is where you will enter all the information
pertaining to the remote system you wish to establish a telecommunications
session with.

This dialog contains ten fields and three buttons. The following is an
explanation of each field and button:

Name Field   : This field simply contains a name that you wish to
                        associate with the remote system that you will be calling.
                        This name appears in several places during the dialing
                        sequence and the remainder of the session.

Phone Field   : This field contains the phone number that will be dialed in
                        order to gain access to the remote system.

Baud Field   : This field specifies the baud or BPS Rate that you wish to
                        use when dialing the remote system. The baud rate will
                        depend upon three different factors. 1 - The capabilities
                        of the remote system, 2 - The capabilities of your modem,
                        and 3 - the capabilities of the COMM.DRV you have installed
                        in your windows SYSTEM.INI.

Parity Field   : This field specifies the parity of the remote system.
                        There are five valid values for this field. They are as
                        follows:

                        N - NoParity
                        O - OddParity
                        E - EvenParity
                        S - SpaceParity
                        M - MarkParity

                        The default value for the parity setting is NoParity. If
                        you make a mistake in this entry, it will use that default.

Data Bits Field: This field specifies the Data Bit Capabilities of the
                        remote system. Valid entries are 5, 6, 7, 8.

Stop Bits Field: This field specifies the Stop Bit Capabilities of the
                        remote system. Valid entries are 1, 2.

Duplex Field   : This field specifies the duplex, or echo capabilities, that
                        you wish to use during the session with the remote system.
                        Valid entries are F - Full, H - Half.

```
Protocol Field : This field specifies the default protocol that you wish to
                 use while communicating with the remote system.  This
                 simply means that that protocol will be highlighted
                 automatically when you perform Downloads or Uploads.

Last Call Field: This field will contain the last date that you called this
                 system on.  It is a read-only field.

Times On Field : This field will contain the amount of times you have called
                 this system.  It is a read-only field.

OK Button      : This button simply saves any changes or additions to the
                 Phone Book.

Cancel Button  : This button simply aborts any changes or additions to the
                 Phone Book.

Help Button    : This button simply brings up the current help file you are
                 reading.
```

Windows Communications Drivers

Communications applications gain a lot from the Windows architecture. These
gains, unfortunately, are offset by a loss of performance. Because of the
fact that Windows forces a lot of overhead on communications applications,
the highest achievable baud reate and throughput will always be considerably
lower than applications running under DOS.

Becuase there are some many different variables that come into play,
(Machine Speed, INI file settings, poorly acting applications, replacable
COMM.DRV files, etc.), it is impossible to tell you exactly how STCom will
act on your system.

One thing to note is that the standard COMM.DRV that is available with
Windows will only support baud rates up to 57600.

The following is a few ways that you can optimize STCom's performance on
your system:

- Use as low a buad rate as possible. ie: Don't use 38400 when linking with
  a system that only supports 2400.

- While communicating, reduce the number of DOS boxes currently running. It
  is preferable to have no DOS sessions active while STCom is running.
  Having DOS boxes running in the background always results in lower
  throughput for communications applications in Windows.

- Use a 16550A Uart, which has a 16 byte FIFO Buffer, and set <u>COMxFIFO=On</u> in
  the <u>SYSTEM.INI</u>.

- Set the <u>COMBoostTime</u> value in the <u>SYSTEM.INI</u> above 2.

- Replace the COMM.DRV in the <u>SYSTEM.INI</u> with a higher performance
  driver.

- In those cases where incoming data is extremely critical use an
  intelligent serial port board, which offloads serial interrupt processing
  tasks from the CPU.

  For highest performance and reliability, intelligent communications
  boards with replacement drivers are the best solution. Intelligent
  communications boards use a dedicated processor to handle the
  physical serial I/O. This relieves the main CPU of that burden and
  assures that received data will be retrieved in a timely fashion. The
  intelligent board then holds the received data until the Windows
  application asks for it.

  Below is a list of intelligent communications boards that we are
  aware of:

  T/PORT board from Telcor Systems Corporation, voice: 508-653-3995,
  fax: 508-651-0065.

  DigiBoard family of boards, DigiBoard Incorporated, voice:
  612-943-9020, BBS: 612-943-0812.

SYSTEM.INI Settings

The following is a listing of entries in the SYSTEM.INI that will affect performance of STCom under Windows.

Comm.Drv
The comm.drv= entry specifies the communications driver that windows will use for accessing serial ports. The default driver that comes with Windows will only support up to 57600 Baud. There are a few replacement drivers that will allow higher performance, and additional features.

Below is a list of replacement communications drivers that we are aware of:

CYBERCOM.DRV from CyberSoft Corporation Pty Ltd., also available as CYBERD.ZIP on the TurboPower BBS and on CompuServe.

TURBOCOM.DRV from Pacific Comware, voice: 503-482-2744, fax: 503-482-2627, BBS: 503-482-2633.

ComXAutoAssign

Examples:

    Com1AutoAssign=-1
    Com2AutoAssign=0
    Com3AutoAssign=2

These entries tell Windows how to handle device contention when two virtual machines attemp to access the same port.

A value of -1 tells Windows to popup a dialog box whenever a port is owned by another virtual machine.

A value of 0 tells Windows to allow virtual machines to access the port as it wishes. This value will obviously result in some weird results if two or more virtual machines are accessing the same port.

A value of 2, which is the deafult, means the virtual machines owns the port for up to 2 seconds beyond it's last port access. After that time Windows considers the port available for other virtual macines. Values greater than 1000 are ignored.

COMXFIFO
Examples:

        COM1FIFO=1
        COM2FIFO=0

These entries tell Windows whether to enable the FIFO (first in, first out) buffer available on 16550A uarts.

A value of 0 means disable the FIFO.

A value of 1 means enable the FIFO.

If the uart doesn't have a FIFO buffer this setting is ignored by Windows.

COMIrqSharing

Examples:

COMIrqSharing=Off
COMIrqSharing=On

This entry controls Windows IRQ sharing logic for ports. Windows sets this to Off unless you are using a Microchannel-bus or EISA-bus machine. You should set this to on only if you are sure your serial port hardware can share IRQs.

COMBoostTime

This entry applies to all ports. It is the number of milliseconds by which the time slice of the virtual machine is extended after processing a serial port interrupt. The default value is 2.