User's Guide

Indigo terminal emulator

Indigo Terminal Emulator is the premier terminal emulation software for the Windows platform. Indigo Terminal Emulator is a powerful terminal based communication software for telnet and serial terminal communications. Indigo offers many tools and features that are unmatched in other terminal software solutions. These features include the ability to display received data in multiple byte representation formats such as ASCII, DECIMAL, HEXADECIMAL, OCTAL, BINARY, or a user defined custom format. Indigo supports VT100 and Linux terminal emulation protocols as well as a raw data view for non-terminal emulation connections. Indigo supports scripting and simultaneous connected terminal sessions. Indigo is a complete replacement for TELNET and HYPERTERM ®. Please visit the features page for more details on what Indigo has to offer.

Related Weblinks

shadeBlue WebLinks	Indigo Weblinks
• shadeBlue Website • shadeBlue Helpdesk Portal • shadeBlue Bug Tracker Portal • Frequently Asked Questions	• Indigo Download Page • Indigo Product Page • Indigo Purchase Page • Indigo Release Notes

Table of Contents

Getting Started

This section describes the minimum hardware requirements, lists the supported operating systems, and guides the user through the installation and licensing activation of Indigo Terminal Emulator.

Please select from one of the following help topics:

Version & Edition Comparison

This section provides a comparison between the *Standard* and *Professional* editions of Indigo Terminal Emulator.

Indigo V3 Professional Edition provide the following primary feature sets in addition to all the features offered in the Standard Edition.

- Support for TCP Server (*Listener Socket*)
- Support for UDP Connections (*Listener and Sender*)
- Support for Modem Dial-Up Connections
- Support for Serial File Transfer Protocols
- Support for Hi-Speed Serial Communication

The tables below will provide an in-depth feature-by-feature comparison between versions/editions of Indigo Terminal Emulator.

TCP Communication Features

Feature	Indigo Version 2	Indigo V3 Standard	Indigo V3 Professional
RAW-TCP-Client	✅	✅	✅
RAW-TCP-Server (*Listener*)			✅
Telnet	✅	✅	✅
SSH Auto	✅	✅	✅
SSH 1	✅	✅	✅
SSH 2	✅	✅	✅
SSH Username/Password Authentication	✅	✅	✅
SSH Private Key Authentication		✅	✅

SSH Fingerprint Validation & Caching		✅	✅

UDP Communication Features

Feature	Indigo Version 2	Indigo V3 Standard	Indigo V3 Professional
RAW-UDP (*Listener & Sender*)			✅

Serial Communication Features

Feature	Indigo Version 2	Indigo V3 Standard	Indigo V3 Professional
Serial RS-232	✅	✅	✅
Serial RS-422			✅
Serial RS-485			✅
Support for COM Ports above 16	⚠️ [1]	✅	✅
Auto-detect available COM Ports	⚠️ [1]	✅	✅
User-defined COM Ports	✅	✅	✅
Refresh available COM Ports		✅	✅
Support for Baud Rates up to 115,200	✅	✅	✅
Support for Baud Rates up to 921,600			✅
User-defined custom BAUD Rates			✅
Support for Built-in COM ports	✅	✅	✅
Support for Bluetooth serial ports	⚠️ [1]	✅	✅

Support for Virtual COM ports	⚠️ [1]	✅	✅
Support for USB COM ports	⚠️ [1]	✅	✅
Support for PCMCIA COM ports	⚠️ [1]	✅	✅
Support for Serial Port Expansion Cards *(ISA, PCI, PCI-Express)*	✅	✅	✅
Support for Muliserial Boards			✅

(⚠️ [1] : Limited Support)

Telephone / Modem Communication Features

Feature	Indigo Version 2	Indigo V3 Standard	Indigo V3 Professional
Support for modem dial-Up			✅
Support for Hayes compatible modem			✅
Support for TAPI compatible modem			✅
Support for USB modem			✅
Support for GSM/GPRS modem			✅

Terminal Emulation Protocols

Feature	Indigo Version 2	Indigo V3 Standard	Indigo V3 Professional
ANSI	✅	✅	✅
VT100	✅	✅	✅
Linux	✅	✅	✅

Serial File Transfer Protocols

Feature	Indigo Version 2	Indigo V3 Standard	Indigo V3 Professional
ASCII	✅	✅	✅
X-Modem			✅
X-Modem 1K			✅
X-Modem/CRC			✅
Y-Modem			✅
Y-Modem-Batch			✅
Y-Modem-Batch-G			✅
Z-Modem			✅
Z-Modem/Save			✅
Kermit			✅

Data Conversion Formats

Feature	Indigo Version 2	Indigo V3 Standard	Indigo V3 Professional
ASCII	✅	✅	✅
ASCII with Control Codes	✅	✅	✅
Hexadecimal	✅	✅	✅
Hexadecimal with Control Codes	✅	✅	✅
Mixed ASCII & Hexadecimal	✅	✅	✅
Decimal	✅	✅	✅
Octal	✅	✅	✅
Binary	✅	✅	✅
Byte Analysis	✅	✅	✅

User-Defined Custom Format	✅	✅	✅

Data Display Modes

Feature	Indigo Version 2	Indigo V3 Standard	Indigo V3 Professional
Terminal Emulation Mode (Direct)	✅	✅	✅
Raw-Data Mode (Standard)	✅	✅	✅

Pricing

Pricing information can be found here: http://www.shadeblue.com/indigo-buy

System Requirements

This section describes the minimum hardware/system requirements. Please review these requirements to ensure that your target system meets the minimum set.

- Standard Edition
- Professional Edition

Standard Edition

Minimum hardware requirements:

- 1 GHz Processor (Intel/AMD x86/x64)
- 50 MB Available Hard Drive Space
- 1 GB RAM (Memory)

Optional hardware for TCP/IP and UDP communication

- Network Interface Card

Optional hardware for serial communication:

- Built-In (Embedded) Serial Port
- USB Serial Port Adapter
- Bluetooth Serial Port Adapter
- Serial Port Expansion Cards (ISA/PCI/PCI-Express)
- Terminal Server Serial Ports (RDP)
- Virtual Serial Ports
- PCMCIA Serial Ports

Serial Signaling / Wiring Standards:

- RS-232

Professional Edition

Minimum hardware requirements:

- 1 GHz Processor (Intel/AMD x86/x64)
- 50 MB Available Hard Drive Space
- 1 GB RAM (Memory)

Optional hardware for TCP/IP and UDP communication

- Network Interface Card

Optional hardware for serial communication:

- Built-In (Embedded) Serial Port
- USB Serial Port Adapter
- Bluetooth Serial Port Adapter
- Serial Port Expansion Cards (ISA/PCI/PCI-Express)
- Terminal Server Serial Ports (RDP)
- Virtual Serial Ports
- PCMCIA Serial Ports

Serial Signaling / Wiring Standards:

- RS-232
- RS-422
- RS-485

Optional hardware for modem communication:

- TAPI Compatible Modem
- Hayes Compatible Modem

Operating System Compatibility

This section describes the supported operating systems. Please review this list to ensure that your target system is running one of the supported operating systems.

Desktop Operating Systems

- Windows XP Home Edition
- Windows XP Professional Edition

- Windows Vista Home Basic Edition
- Windows Vista Home Premium Edition
- Windows Vista Business Edition
- Windows Vista Ultimate Edition

- Windows 7 Starter Edition
- Windows 7 Home Premium Edition
- Windows 7 Professional Edition
- Windows 7 Ultimate Edition

Note

Indigo is known to be working on older versions of Windows desktop operating systems including Windows 98, Windows 2000 workstation; however these operating systems are not longer officially supported or tested for compatibility.

Windows 8 Support

We are actively testing Indigo Terminal Emulator - Version 3 with Windows 8 Beta - Consumer Preview Edition and plan on having full support available with the launch of Windows 8 which is expected later this year.

Server Operating Systems

- Windows 2003 Server Web Edition
- Windows 2003 Server Standard Edition
- Windows 2003 Server Enterprise Edition
- Windows 2003 Server Datacenter Edition
- Windows Small Business Server 2003

- Windows 2008 Server Web Edition
- Windows 2008 Server Standard Edition
- Windows 2008 Server Enterprise Edition
- Windows 2008 Server Datacenter Edition
- Windows Small Business Server 2008

Note

Indigo is known to be working on older versions of Windows server operating systems including Windows 2000 server; however these operating systems are not longer officially supported or tested for compatibility.

Installation

This section describes the installation and uninstall procedures for Indigo Terminal Emulator. .

Download Indigo Installer

If you have not already done so, please download the Indigo Installer from the shadeBlue website:

Download Indigo Terminal Emulator

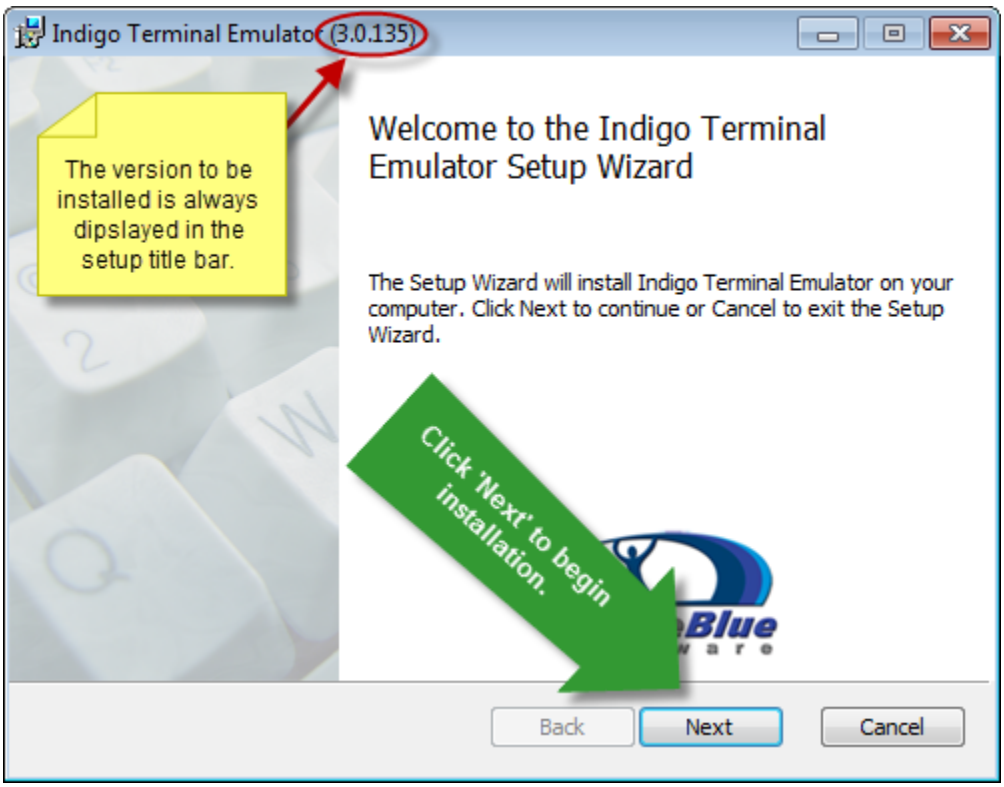
Install Indigo

Screencast

A screencast of the installation procedure is available. Click here to see the video.

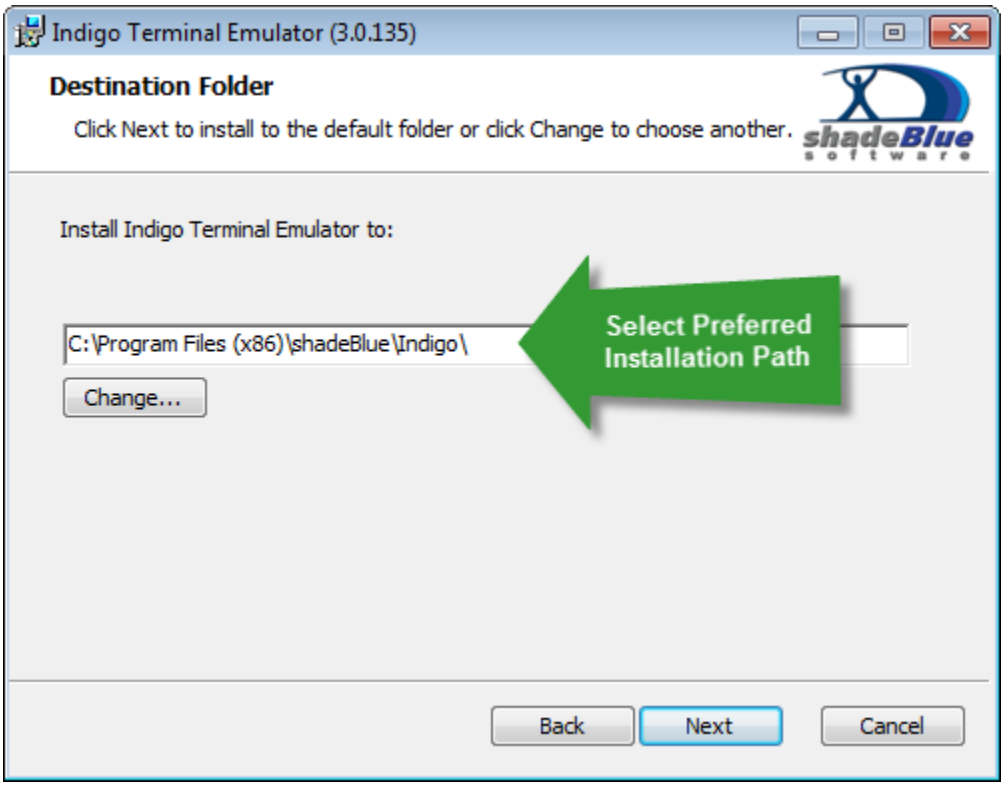
Indigo Terminal Emulator is packaged into an easy to use Windows Installer (MSI).
After downloading the installer file (*IndigoInstall.msi*) double-click the file to launch the Windows Installer.

The first dialog displayed is the *Welcome* screen.
Here you can verify the installation version in the title bar and click **Next** to continue.



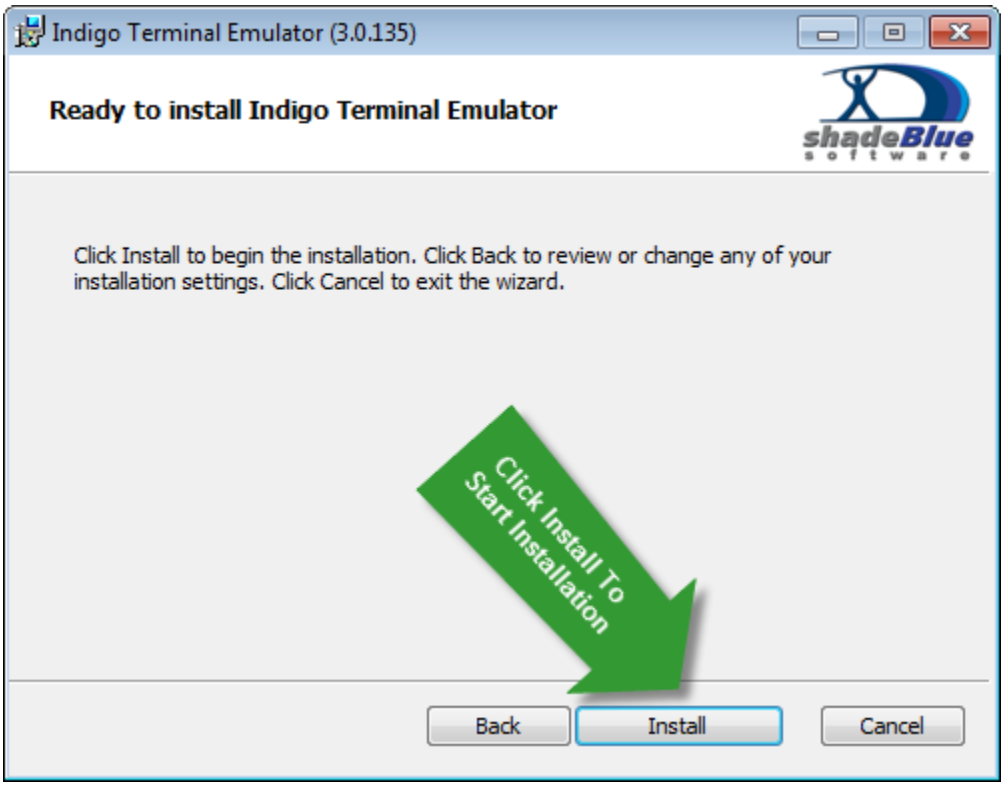
Next the End-User License Agreement dialog is displayed.
Please read this agreement carefully and if you agree and wish to proceed with the installation, you will need to confirm by checking the *I accept the terms in the License Agreement* check box.
After confirming the agreement, click **Next** to continue.

Next the installation destination dialog is displayed.
It is recommended to leave the default path defined here; however if you wish, you can click the **Change** button to define an alternate installation directory.
After selecting the desired installation directory, click **Next** to continue.

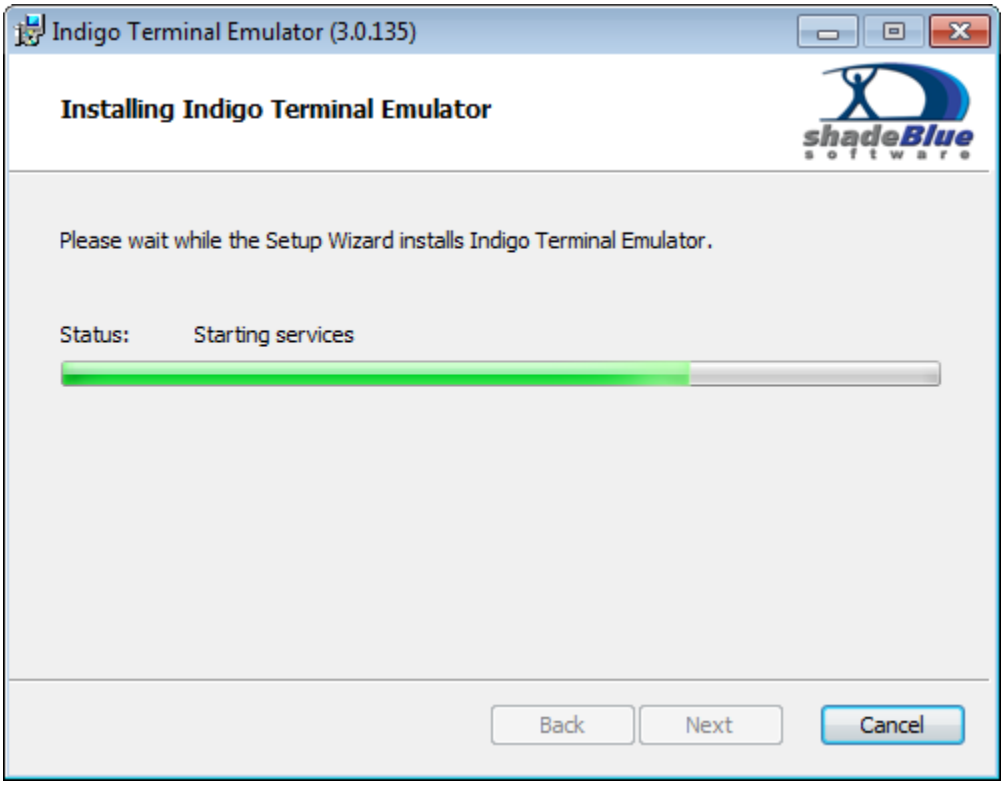


Next the installation ready confirmation dialog is displayed.

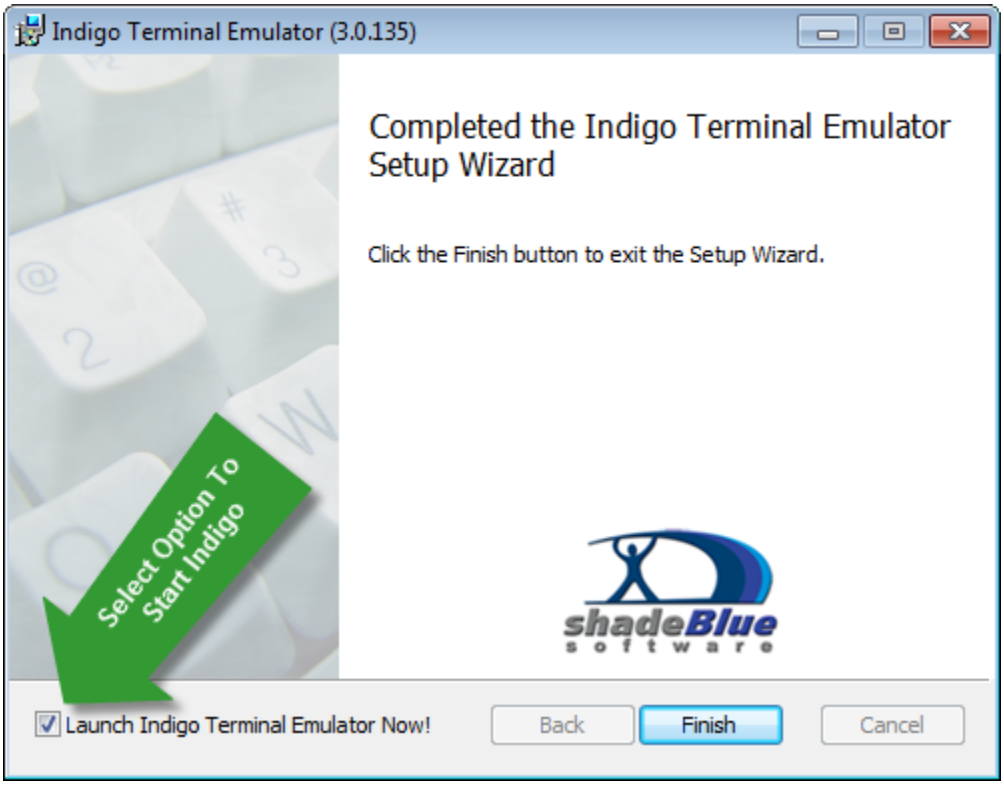
At this point the Windows Installer has collected all the necessary information and is ready to begin installing files on the system.
Click the **Install** button to begin installing Indigo on the file system.



While Indigo is installing a status dialog is displayed to illustrate the installation steps and progress.
Please wait until the installation is complete.



When the installation is complete and Indigo is ready to use the completed dialog will be displayed.
In the bottom corner there is a check box option that you can enable if you want to automatically launch the Indigo Terminal Emulator software when this dialog is closed.
Click the **Finish** button to complete the installation and close this final dialog.



Uninstall Indigo

If you wish to uninstall Indigo Terminal Emulator from your system, please to to the Windows Control Panel and select the following applet:

- Add Remove Programs (*Windows XP / 2003*)
- Programs & Features (*Windows Vista / 7 / 2008*)

Once the programs listing is loaded, you can search for "Indigo Terminal Emulator" in the list and use the Uninstall option to remove the program.

> **Note**
>
> Indigo will remove all of the program files from the file system but it will not remove any data files. Data files include: program preferences, terminal sessions, macros files, script files, library files, custom data formats, etc.
> If you want to remove all data files you will need to manually delete the Indigo data directory.
> More information on the data directory can be found here: Indigo Data Directory

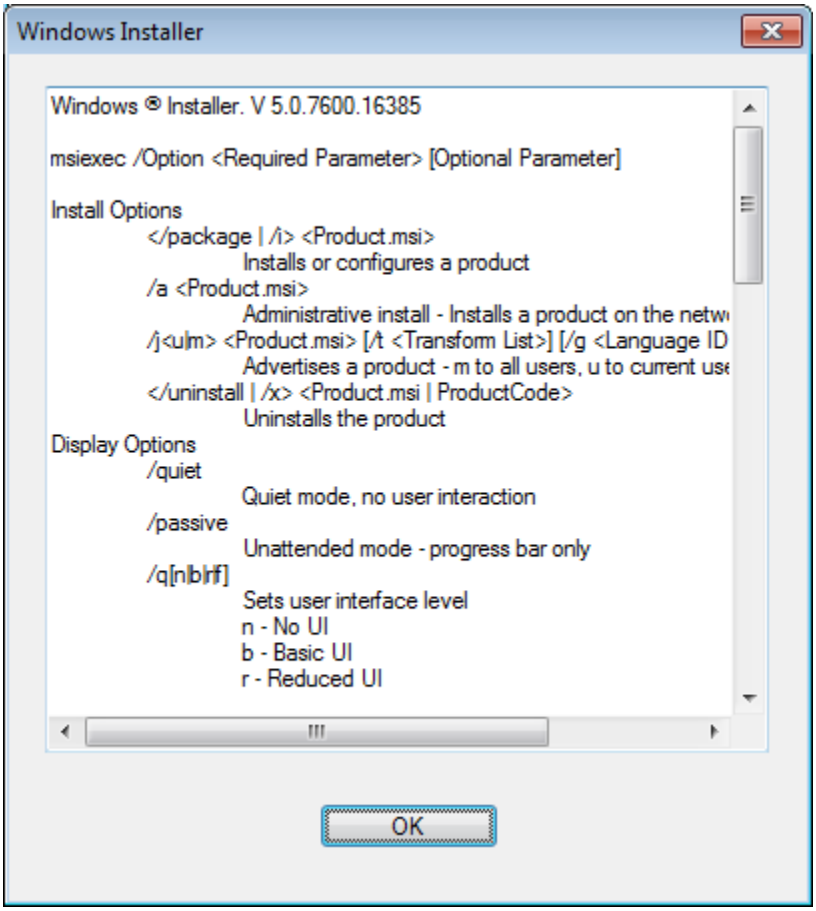
Command Line ArgumentsAdvanced Installation Information

Indigo is packaged with a Windows Installer and there are a number of command line options that can be used to perform more advanced installations.

To see a list of command line arguments, from the system shell console, enter the following command:

```
> msiexec /help
```

The following dialog will be displayed listing all the Windows Installer command line arguments and their usage.



Windows Installer command line options are also listed on this web page:
http://msdn.microsoft.com/en-us/library/aa367988(v=vs.85).aspx

Silent Installation

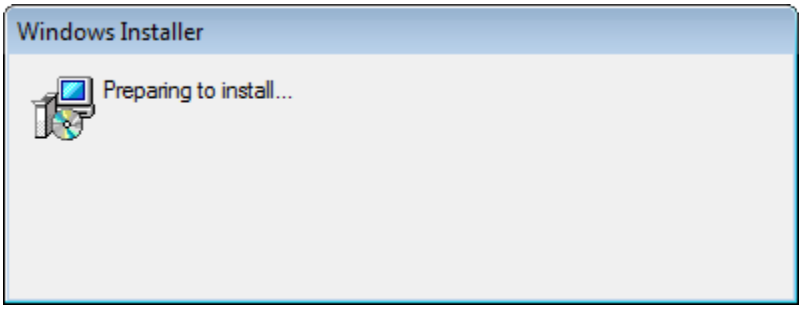
If you wish to perform a silent installation of Indigo Terminal Emulator using all the default installation options you can use the following command line on the system shell console.
A silent installation will solicit any user input and will not display any dialogues or progress to the user.

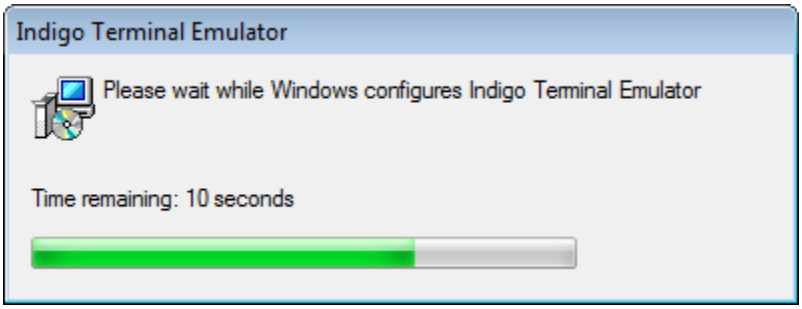
```
msiexec /package "IndigoInstall.msi" /quiet
```

Passive Installation

Another "near" silent method is to use the passive installation option.
Passive mode will display an installation progress bar but will not solicit the user for any input.

```
msiexec /package "IndigoInstall.msi"
/passive
```





Administrative Installation

The Windows Installer supports a network based installation option known as Administrative Installation.
More information about administrative installations can be found here:
http://msdn.microsoft.com/en-us/library/aa367541(v=vs.85).aspx

The following command line will perform the administrative installation.

```
msiexec /a "IndigoInstall.msi"
```

Licensing

This section describes the licensing terms for Indigo Terminal Emulator and the licensing activation/registration and transfer procedures.

Licensing Terms

Indigo Terminal Emulator is licensed to each computer it is installed on.

A single license may only be installed on a single computer.
License transfer is available for hardware replacement and/or system upgrades.

License Registration / Activation

> **Screencast**
>
> A screencast of the licensing and activation procedure is available. Click here to see the video.

A quick and easy online registration method is included in Indigo.
Upon purchasing Indigo, an email will be automatically sent that includes a license key.
Once licensed, Indigo will provide full functionality and web update capabilities.

Indigo provides two options for activating your license:

- Online Registration
- Manual Registration

Option 1: Online Registration

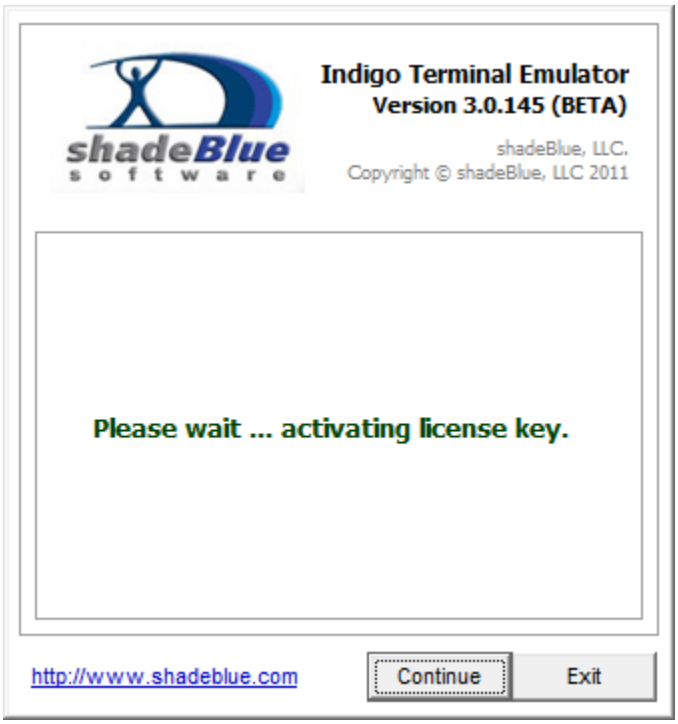
The easiest method is to use the online registration with license key option.
When prompted, select the first licensing option:
"*Activate software license with license key*"

Press *Continue* to proceed.

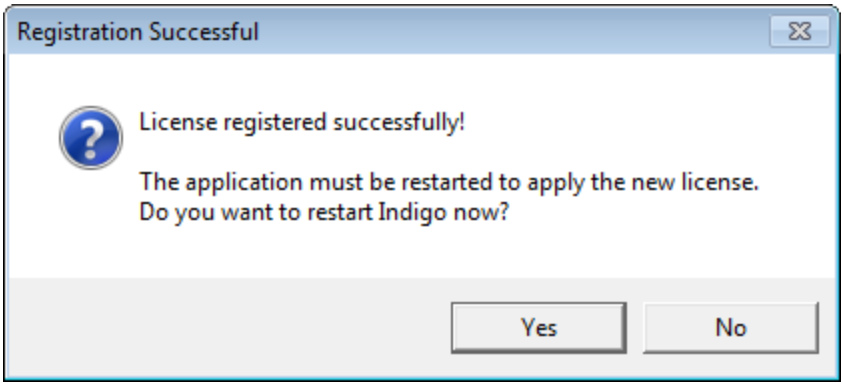
Next, enter the email address used when purchasing the license, the provided license key, and optionally a company name.

The *Continue* to perform the license registration.

Indigo will contact the licensing registration server via the Internet and complete the necessary licensing registration.



Once the license has been registered successfully, a confirmation message prompt will be displayed.

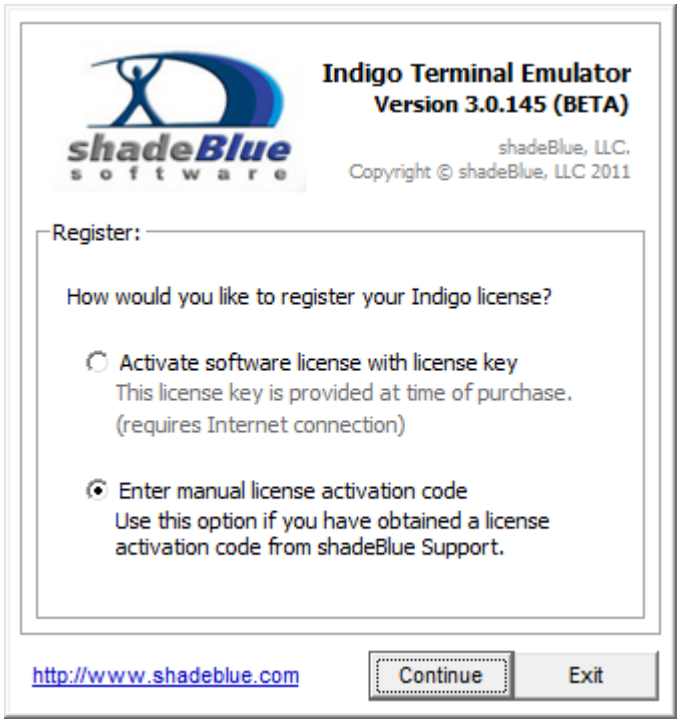


You will need to restart Indigo to complete the licensing registration.

Option 2: Manual Registration

If the target system does not have an Internet connection or your received a license activation code from shadeBlue Support, then use the manual license registration option.
(Note: If you need to obtain a license activation code, please contact shadeBlue Support)

When prompted, select the second licensing option:
"*Enter manual license activation code*"

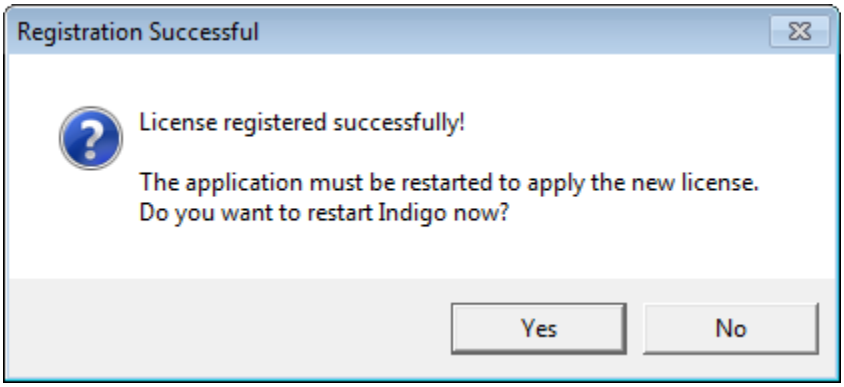


Press *Continue* to proceed.

Next, enter (*copy and paste*) the license activation code received from shadeBlue Support.

Click *Continue* to submit the license activation code.

Once the license has been registered successfully, a confirmation message prompt will be displayed.



You will need to restart Indigo to complete the licensing registration.

Getting Started / Next Steps

Now that Indigo has been installed you are ready to create your first terminal session (connection).

Create A Terminal Session

The following sections of this help documentation may be helpful to get started creating a terminal session and getting it connected to your device or host:

- Create a New Terminal Session
- Select Connection Type & Configure Connection Settings

Indigo Essentials

The following sections explore a few of the essential concepts and features of Indigo.

- Session Manager
- Terminal Emulation
- Session View Modes
- Session Command Bar
- Session Context Menu
- Quick Connect Toolbar
- Pause Incoming Data
- Local Echo
- Session Data Logging
- Web Update

Indigo Intermediate Features

The following sections explore a few of the intermediate concepts and features of Indigo.

- Split Data Window
- Session Timestamps
- Session Data Formatting
- Command Macros
- Multi-Command
- Data Converter
- Command Libraries
- Auto Reconnect
- Keep Alive
- ASCII Charts
- Window States
- Transmit Serial Break Signal
- Transmit Control Codes
- Command Prefix & Suffix
- Automated Send Commands
- Transmit File Contents

Indigo Advanced Features

The following sections explore a few of the advanced concepts and features of Indigo.

- Command Broadcasting
- Variable ManagerCommand Variables
- Command Repeater
- Custom Reboot Sequence
- Advanced Send Command Syntax
- Syntax Coloring
- Internal Commands
- Custom Data Formatting
- Character & Line Delay
- Serial File Transfers
- Serial Pass Mode
- Scripting

Indigo Video Screencasts

The following screencasts are available to help visually demonstrate various features and concepts in Indigo.

- Indigo Installation Screencast
- Licensing Screencast
- Data Logging Screencast
- Web Update Screencast
- Data Converter Screencast
- Advanced Send Commands Screencast
- Terminal Emulation Screencast
- Quick Connect Screencast
- Split Data View Screencast
- Session Data Byte Representations

Indigo Users Manual

> This section describes the general application features and guides the user through the basic functionality of Indigo Terminal Emulator.

Please select from one of the following help topics:

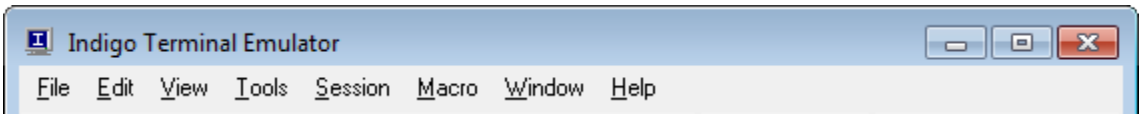
User Interface (Layout)

Indigo User Interface Layout

You can move your cursor around the image below to highlight various user interface elements that make up the Indigo application.
(Click on a user interface element to obtain more information. Note: Adobe Flash Player required.)

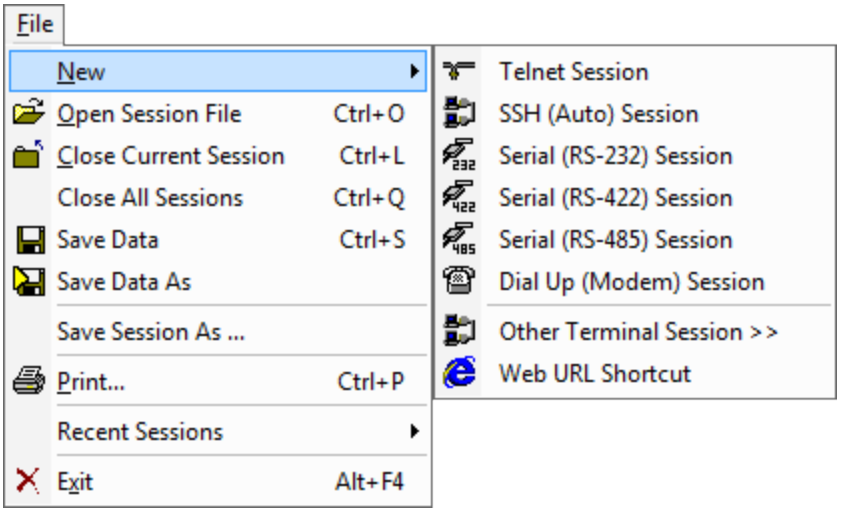
Menus

> This section describes the application menus available in Indigo Terminal Emulator.



Please select from one of the following help topics:

File Menu



File Menu

The **File** menu consists of the following options:

Name	Description
New	Opens a sub-menu with options to create new terminal sessions.
Open	Opens a file browser dialog to manually select an Indigo terminal session file on the file system.
Close	Closes the current terminal session window currently in focus.
Close All	Closes all open terminal session windows.
Save Data	Saves the terminal session data received on screen to a file. If the data has not previously been saved to a file, a file browser dialog will be displayed to allow you to select the location and file name. If this option has been previously used, then the existing file will be overwritten and you will not be prompted for the file again.
Save Data As	Saves the terminal session data received on screen to a file. This menu option will always display a file browser dialog to allow you to select the location and file name to save to.

Save Session As	Saves the current terminal session window configuration to a new Indigo session file.
Print	Prints the received data on screen from the current terminal session window to an installed printer.
Recent Sessions	Opens a sub-menu listing the recently accessed Indigo sessions. Selecting one of the listed sessions will immediately open the session.
Exit	Close and terminates the Indigo Terminal Emulator application.

File / New Sub-menu

The **File / New** sub-menu consists of the following options:

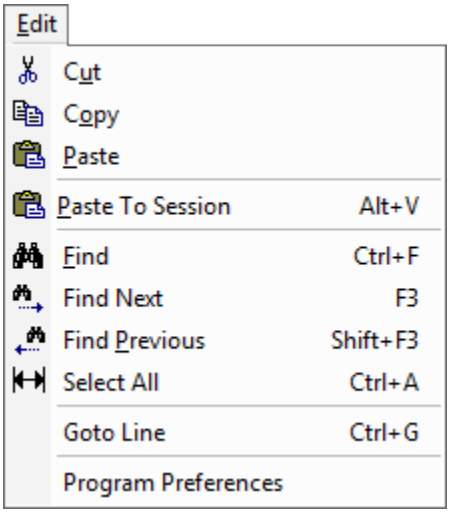
Name	Description	Pro Edition
Telnet Session	Open the new session wizard with the default options for creating a telnet connection.	
SSH (Auto) Session	Open the new session wizard with the default options for creating a SSH connection.	
Serial (RS-232) Session	Open the new session wizard with the default options for creating a serial RS-232 connection.	
Serial (RS-422) Session	Open the new session wizard with the default options for creating a serial RS-422 connection.	✅
Serial (RS-485) Session	Open the new session wizard with the default options for creating a serial RS-485 connection.	✅
Dial-Up Modem Session	Open the new session wizard with the default options for creating a dial-up connection.	✅
Other Terminal Session	Open the new session wizard with and select from a listing of available connection types.	ℹ️

Indigo supports the following terminal connection types/protocols

- Telnet
- Serial: RS232
- Serial: RS422 Serial - *Professional Edition Only*
- Serial: RS485 Serial - *Professional Edition Only*
- TAPI Modem / Dial-Up - *Professional Edition Only*
- SSH Auto
- SSH1
- SSH2
- REXEC
- RSH
- RLOGIN
- ECHO
- DAYTIME
- CHARGEN
- RAW TCP Client
- RAW UDP Client / Listener - *Professional Edition Only*
- RAW TCP Server - *Professional Edition Only*

Web URL Shortcut	Allows user to create a URL bookmark/shortcut to a web page.	

Edit Menu



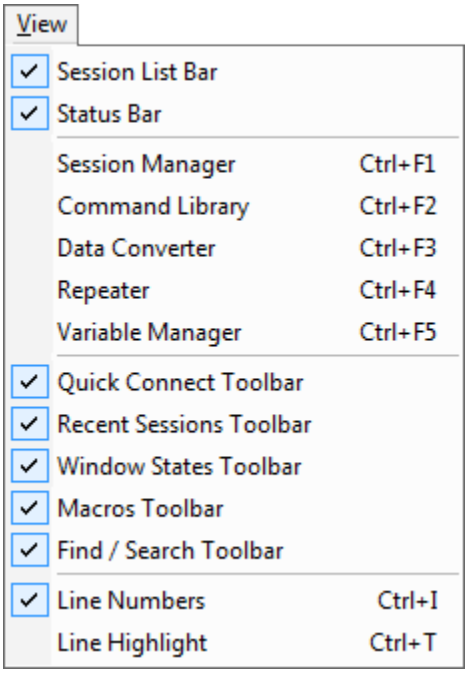
Edit Menu

The **Edit** menu consists of the following options:

Name	Description
Cut	Copies any selected text to the system clipboard and then deletes the selected text. (*If the selected text cannot be removed, then only a copy is performed.*)
Copy	Copies any selected text to the system clipboard.
Paste	Pastes text from the system clipboard to the current cursor location.
Paste To Session	Pastes text from the system clipboard directly to the connected session in the active session window.
Find	Prompts the user for text to search for in the session data window. After submitting the text query, Indigo will search for the text within the data.
Find Next	Attempts to find the next occurrence of the user provided search query text.
Find Previous	Attempts to find the previous occurrence of the user provided search query text.

Select All	Highlights all text in the session data window. (*Only available in Standard Terminal Mode*)
Goto Line	Prompts the user for a line number and then jump the cursor directly to that line number. (*Only available in Standard Terminal Mode*)
Program Preferences	Open the Indigo Terminal Emulator global application settings dialog. You can configure global application settings using this option.

View Menu



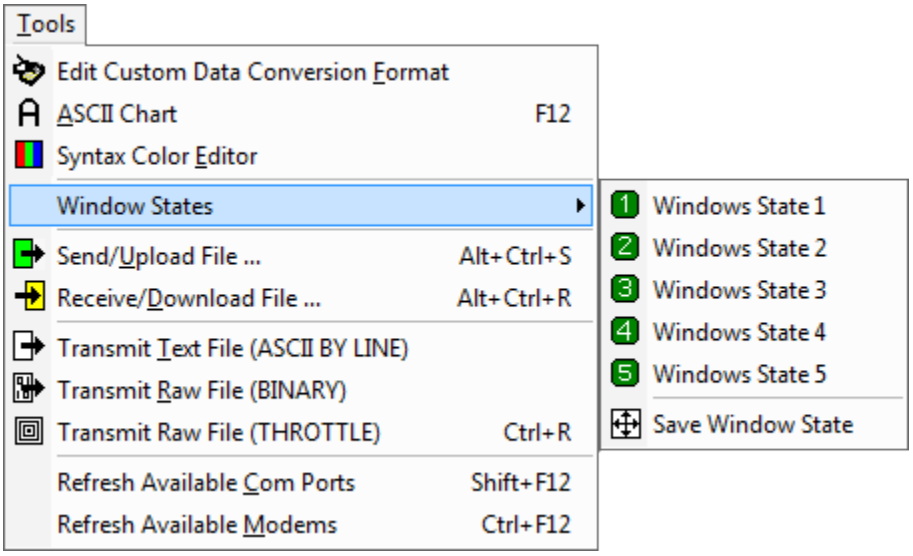
View Menu

The **View** menu consists of the following options:

Name	Description
Session List Bar	hides / shows the Session List toolbar
Status Bar	hides / shows the session Status toolbar
Session Manager	hides / shows the Session Manager widget
Command Library	hides / shows the Command Library widget
Data Converter	hides / shows the Data Converter widget

Repeater	hides / shows the Command Repeater widget
Variable Manager	hides / shows the Variable Manager widget
Quick Connect Toolbar	hides / shows the Quick Connect toolbar
Recent Sessions Toolbar	hides / shows the Recent Sessions toolbar
Window States Toolbar	hides / shows the Window States toolbar
Macro Command Toolbar	hides / shows the Macro Commands toolbar
Line Numbers	hides / shows line numbers in the standard terminal mode
Line Highlight	hides / shows line highlighter in the standard terminal mode

Tools Menu



Tools Menu

The **Tools** menu consists of the following options:

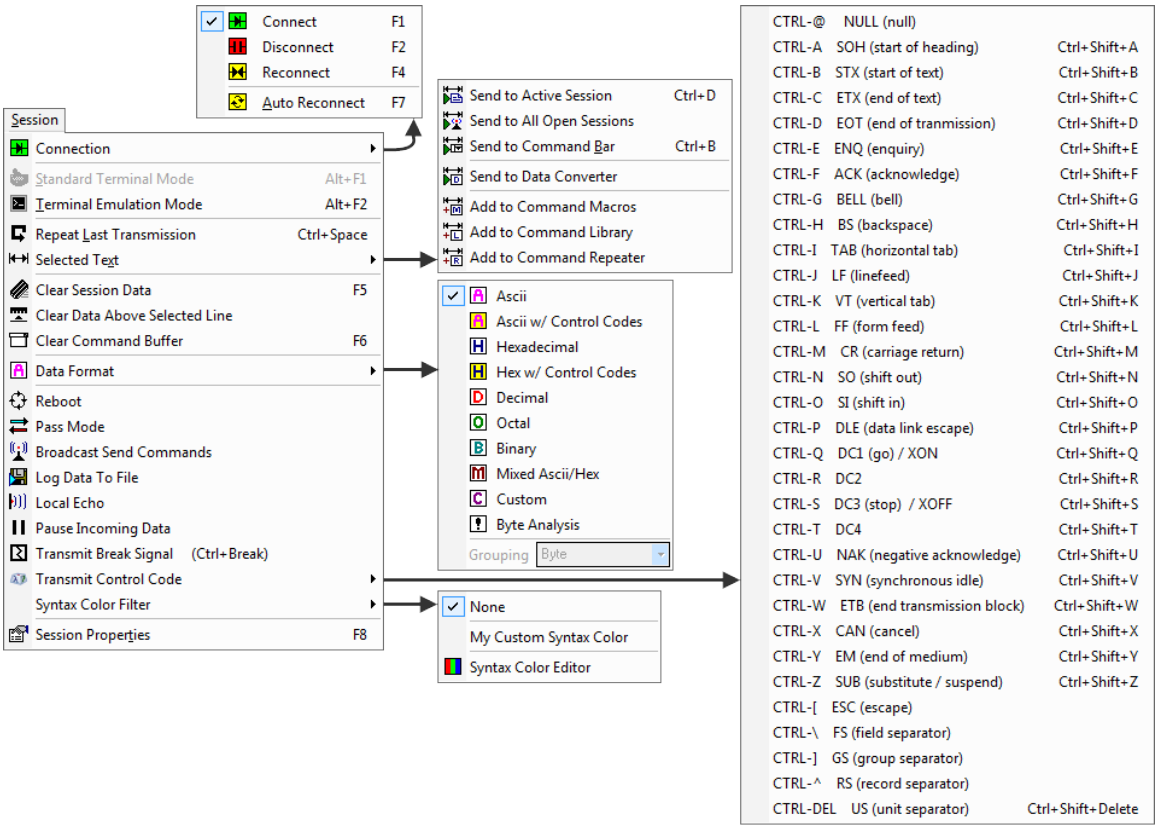
Name	Description	Pro Edition
Edit Custom Data Conversion Format	Opens the custom data format editor	
ASCII Chart	Opens the ASCII chart window	
Syntax Color Editor	Opens the Syntax Color editor	

Window States	Opens the Windows States sub-menu	
Send / Upload File	Opens the File Upload transfer tool	
Receive / Download File	Opens the File Download transfer tool	
Transmit Text File (ASCII By Line)	Opens the Text File line transfer tool	
Transmit Raw File (BINARY)	Opens the Binary File transfer tool	
Transmit Raw File (THROTTLE)	Opens the Throttled Binary File transfer tool	
Refresh Available Com Ports	Forces Indigo to query the system and refresh the list of available serial ports	
Refresh Available Modems	Forces Indigo to query the system and refresh the list of available modems	✅

Window States Sub-Menu

Name	Description
Window States (1-5)	Activates the selected window state (position & size)
Save Window State	Opens the Window State save dialog

Session Menu



Session Menu

The **Session** menu consists of the following options:

Name	Description
Connection	Opens the session connection sub-menu.
Standard Terminal Mode	Applies the standard view mode to the active session. (Note: *Do not use this view mode when attempting to connect to a session that requires terminal emulation such as VT100.*)
Terminal Emulation Mode	Applies the terminal emulation view mode to the active session. Use this option for VT100, Linux, or ANSII terminal emulation.
Repeat Last Transmission	Re-transmits the last command/data issued to the active session.
Selected Text	Opens the selected text sub-menu.
Clear Session Data	Removes all data from the data window in the active session.

Clear Data Above Selected Line	Removes all data from the data window above the cursor position. (Note: *This option is only available in the Standard Terminal Mode.*)
Clear Command Buffer	Removes all buffered / cached commands from the command bar in the active session.
Data Format	Opens the data format sub-menu.
Reboot	Transmits the custom reboot command sequence configured for the active session. The session connection will be disconnected and a based on a configured delay, the session will attempt to re-establish its connection.
Pass Mode	Opens the pass mode configuration dialog allowing to configure and enable serial pass mode. (Note: *This option is only available when connected via serial: RS232, RS422, RS485.*)
Broadcast Send Commands	If this option is enabled all commands transmitted in the active session are also broadcast and transmitted to all other open sessions.
Log Data To File	Opens the session logging tool to configure and start data logging for the active session.
Local Echo	If enabled, this option will print (*echo*) any data commands transmitted to the data window in the active session.
Pause Incoming Data	Pauses all inbound data from the connection on the active session window. (Note: *This option does not buffer data, while paused, any data received will be ignored.*)
Transmit Break Signal	Transmits a BREAK signal to the configured serial port in the active terminal session. (Note: *This option is only available when connected via serial: RS232, RS422, RS485.*)
Transmit Control Code	Opens the control code sub-menu. The selected control code will be transmitted to the active session.
Syntax Color Filter	Opens the syntax color filter sub-menu
Session Properties	Opens the session properties configuration user interface for the active session.

Selected Text Sub-Menu

Name	Description
Send to Active Session	Transmits the selected text to the current active terminal session.
Send to All Open Sessions	Transmits the selected text to all open terminal sessions.
Send to Command Bar	Copies the selected text to the command bar in the current active session window.
Send to Data Converter	Sends the selected text to the data converter tool where it will get converted into the selected data format.
Add to Command Macros	Copies the selected text and add the text as a new command macro.
Add to Command Library	Copies the selected text and add the text as a new command library command entry.
Add to Command Repeater	Copies the selected text and add the text as a new command repeater command entry.

Session Connection Sub-Menu

Name	Description
Connect	Attempts to establish a connection in the active session window.
Disconnect	Attempts to disconnect an open connection in the active session window.
Reconnect	Attempts to disconnect and then immediately re-establish a connection in the active session window.
Auto Reconnect	If this option is enabled, then when a session detects the loss of connectivity it will automatically attempt to re-establish the connection. (Note: *Serial-based connections cannot determine the loss of connectivity*.)

Session Date Byte Format Sub-menu

Name	Description

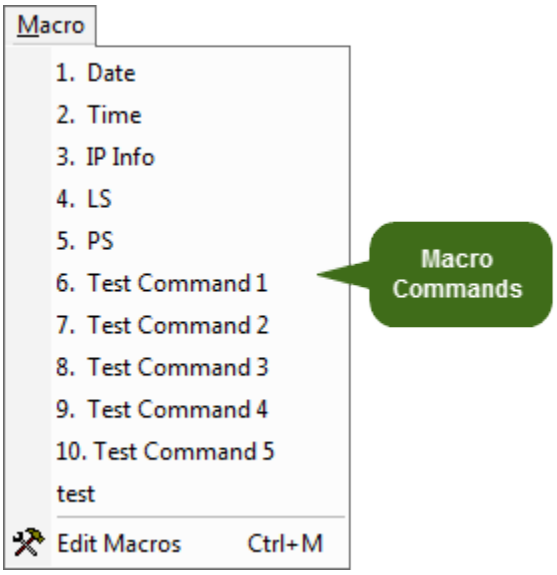
ASCII	Applies the selected data byte formatting to the active session.
ASCII w/ Control Codes	Applies the selected data byte formatting to the active session.
Hexadecimal	Applies the selected data byte formatting to the active session.
Hexadecimal w/ Control Codes	Applies the selected data byte formatting to the active session.
Decimal	Applies the selected data byte formatting to the active session.
Octal	Applies the selected data byte formatting to the active session.
Binary	Applies the selected data byte formatting to the active session.
Mixed ASCII/Hex	Applies the selected data byte formatting to the active session.
Custom	Applies the selected data byte formatting to the active session.
Byte Analysis	Applies the selected data byte formatting to the active session.
Byte Grouping	Sets the byte size representation (*BYTE*, *WORD*, *DWORD*) for displaying bytes in the following formats: • Decimal • Hexadecimal • Octal • Binary

Syntax Color Filter Sub-Menu

Name	Description
None	Removes any selected syntax color filter from the active session window.
Filter Files (1 - ...)	Applies the selected syntax color filter to the active session window.

Syntax Color Editor	Opens the syntax color editor tool.

Macro Menu

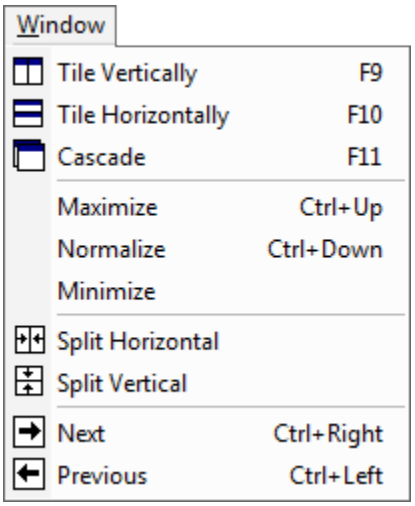


Window Menu

The **Window** menu consists of the following options:

Name	Description
Macro Commands **(1-20)**	A series (*up to 20*) of macros commands. Click the command menu item to send it to the active session.
Edit Macros	Opens the macro editor

Window Menu

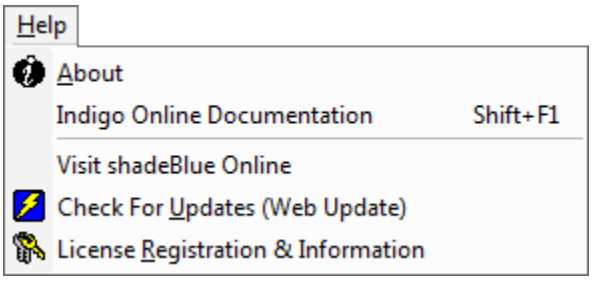


Window Menu

The **Window** menu consists of the following options:

Name	Description
Tile Vertically	Tiles multiple session windows in the vertical orientation
Tile Horizontally	Tiles multiple session windows in the horizontal orientation
Cascade	Cascades multiple session windows
Maximize	Maximizes the current session window in focus
Normalize	Normalizes the current session window in focus
Minimize	Minimizes the current session window in focus
Split Horizontal	Splits the current session data window into two data regions on the horizontal axis
Split Vertical	Splits the current session data window into two data regions on the vertical axis
Next	Advances to the next open session window
Previous	Retards to the previous open session window

Help Menu



Help Menu

The **Help** menu consists of the following options:

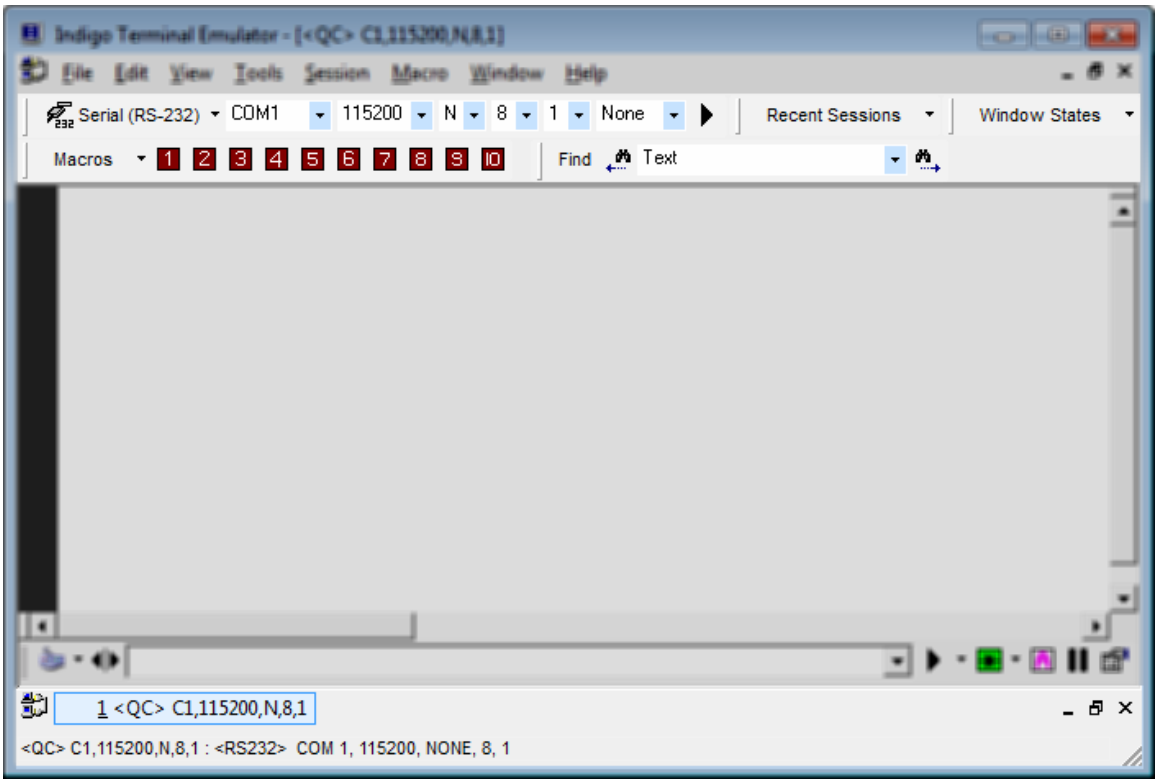
Name	Description
About	Displays program version and authoring information
Online Documentation	Opens the Online Indigo User's Guide in the user's web browser

Visit shadeBlue Online	Opens a web browser to www.shadeblue.com
Check For Updates (*Web Update*)	Connects to shadeBlue update servers and check to see if any newer application updates are available.
License Registration & Information	Displays licensing information and provides dialog to enter/submit a new license key

Toolbars

This section describes the toolbars available in Indigo Terminal Emulator.

Indigo Terminal Emulator includes a number of toolbars that bring convenience and quick access to many of the sophisticated features provided in Indigo.
All application toolbars are optional and can be enabled/disabled by the user.

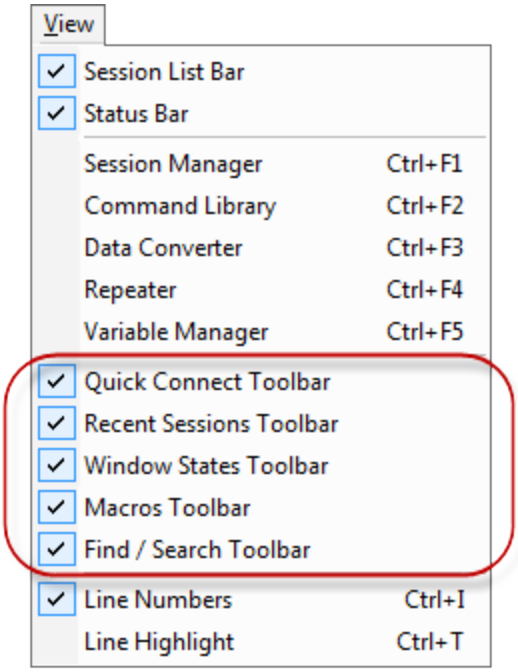


Indigo Toolbars & Topics:

Show & Hide Toolbars

Show / Hide Toolbars

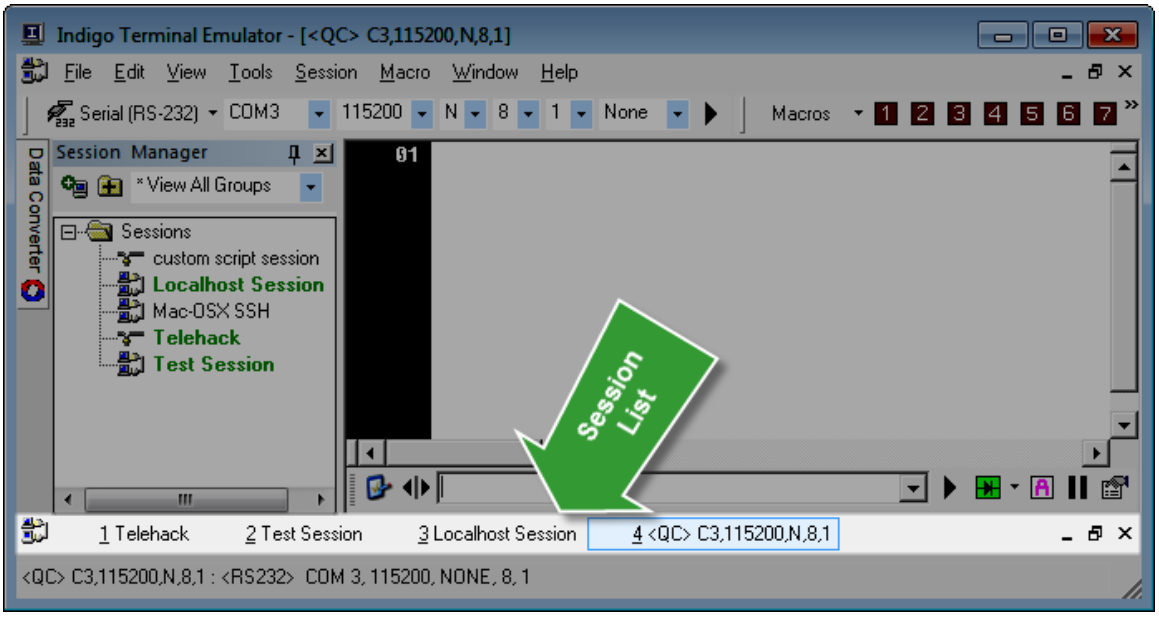
All toolbars in Indigo Terminal Emulator can be displayed and hidden via the View Menu.



Session List Toolbar

Session List Toolbar

The *Session List Toolbar* is located at the bottom of the Indigo application window and is used to display the currently open session windows.

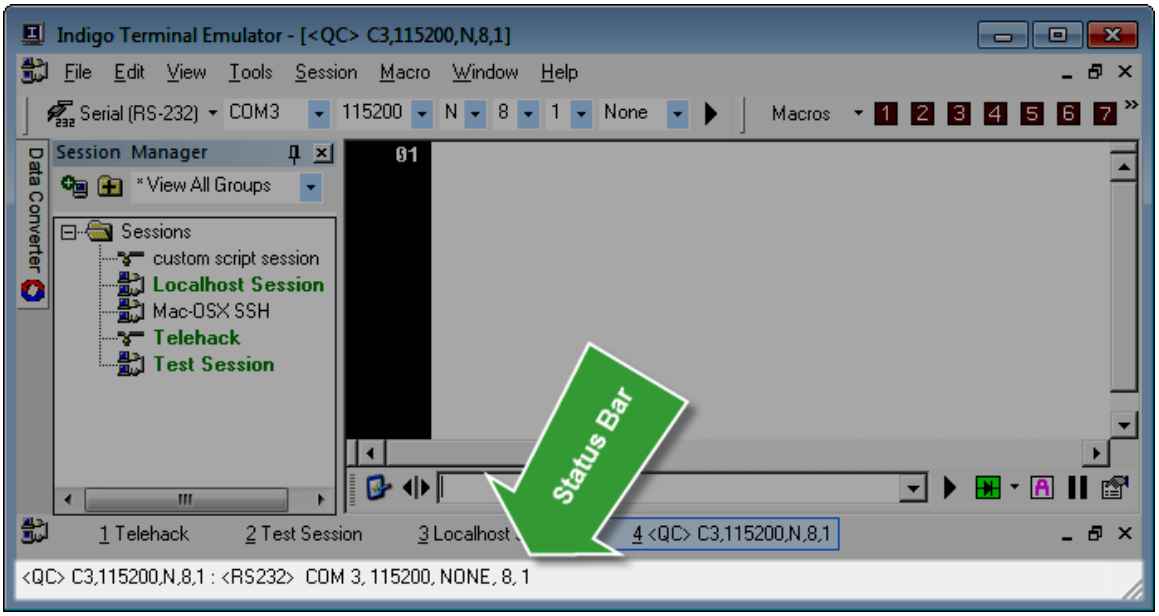


You can click on any of the named session tabs to switch focus to that session instance.
Options for minimize, maximize, and close session are available on this toolbar.

Status Toolbar

Status Toolbar

The *Status Toolbar* is located at the bottom of the Indigo application window and is used to display the session connection setting for the currently open and active session window.



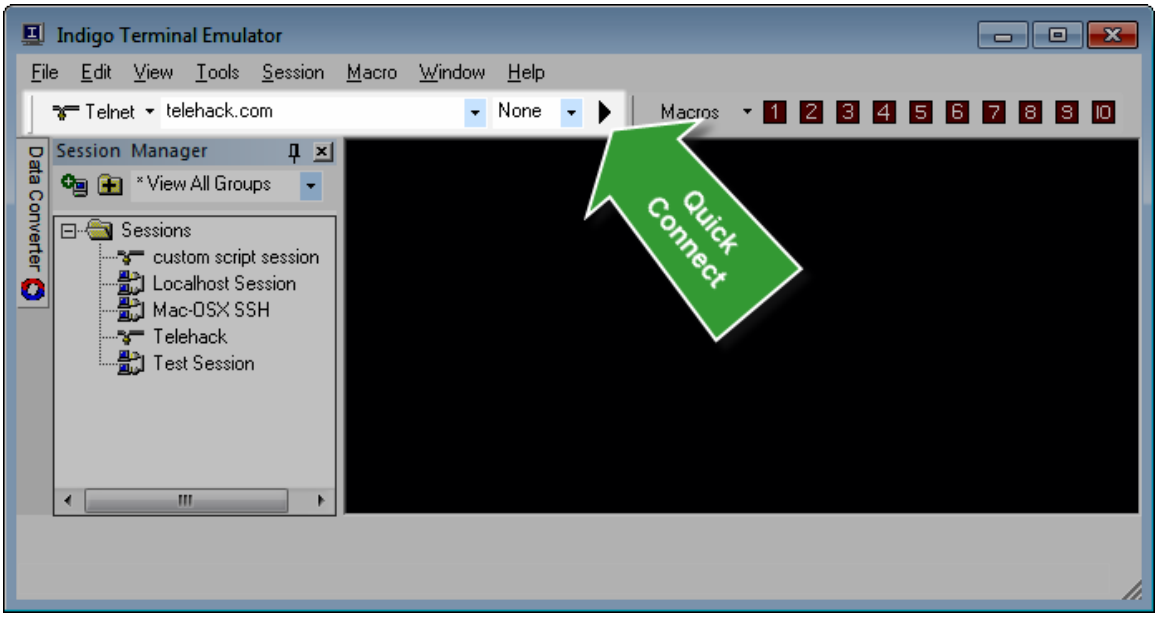
Quick Connect Toolbar

Quick Connect Toolbar

> **Screencast**
>
> A screencast demonstration the quick connect feature is available. Click here to see the video.

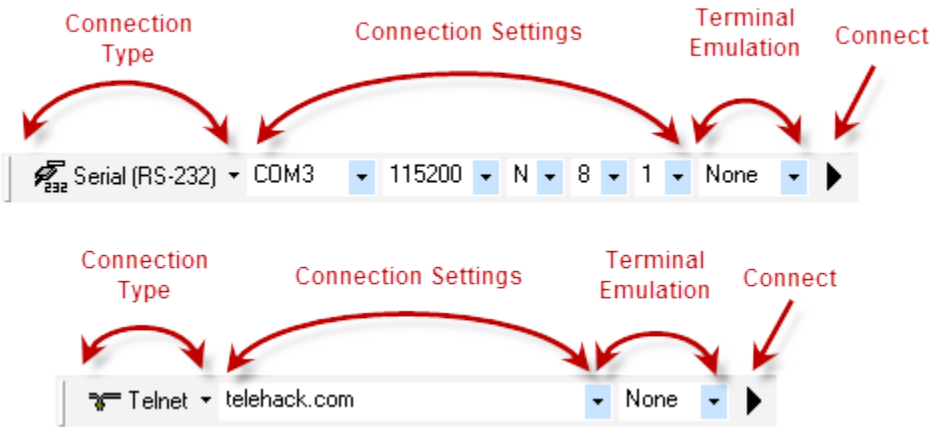
The *Quick Connect Toolbar* is provided to allow a quick and convenient method for creating one-off / impromptu terminal session connections.

The *Quick Connect Toolbar* is located at the top of the Indigo application under the menu bar.
The *Quick Connect Toolbar* can be turned on and off via the View menu.



Quick Connect Toolbar Anatomy

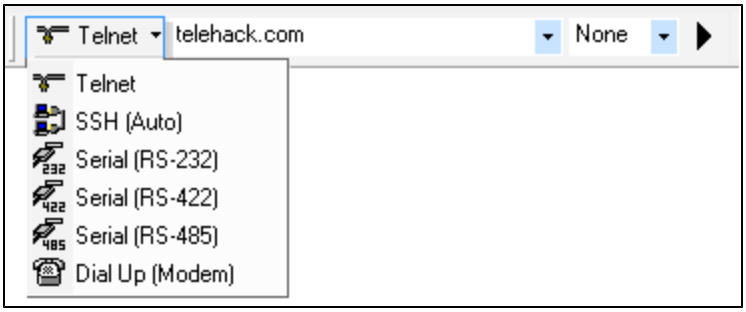
The *Quick Connect Toolbar* consists of the following parts:



Connection Type	A drop-down selection of the most popular connection types. Select the desired connection type from the listing.
Connection Settings	Based on the selected connection type, a list of connection options will be displayed. *Please note that not all connection settings are available in this toolbar.* *Some advanced settings and more complex configurations cannot be configured from the Quick Connect Toolbar.*
Terminal Emulation	Select a terminal emulation type if needed. This selection will setup the default session emulation properties and apply the appropriate default session view mode.
Connnect	The right arrow button can be used to launch the quick connect terminal session based on the selected connection type, connection settings, and terminal emulation settings. *If using the Quick Connect Toolbar with Telnet or SSH connection options, you can also press the ENTER key in the host address field to initiate the connection.*

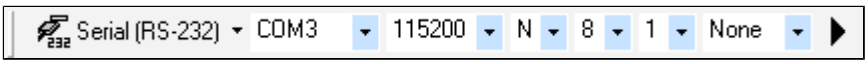
Quick Connect Examples

The *Quick Connect Toolbar* supports convenient access to the most popular connection options.

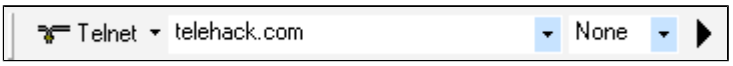


Based on the selected connection type, the *Quick Connect Toolbar* will display additional connection specific configuration options.

Example: Quick Connect Toolbar for Serial RS-232



Example: Quick Connect Toolbar for Telnet



Quick Connect Session Persistence

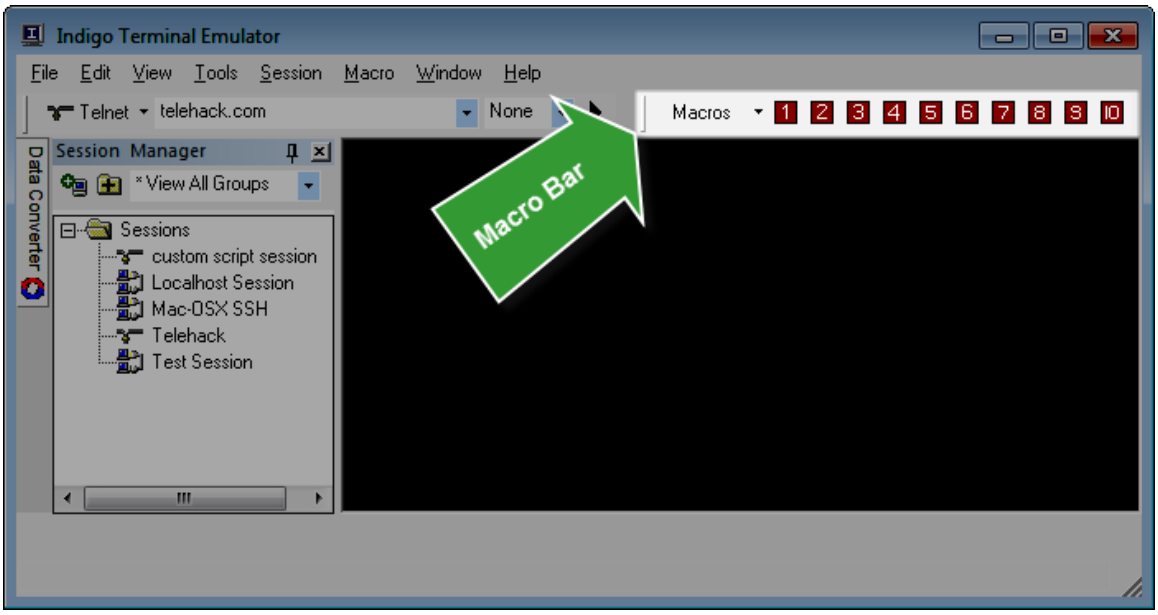
Quick Connect created session are not automatically persisted in the Session Manager.
These are intended for impromptu terminal session connections. Permanent sessions should be created via the Session Manager.

However, if you would like to permanently persist a quick connect created session instance, while the session window is open, click the **File** > **Save Session As** menu option.
You will be prompted with a file save dialog, enter a session name and click Save.
The session should now be available in the Session Manager.

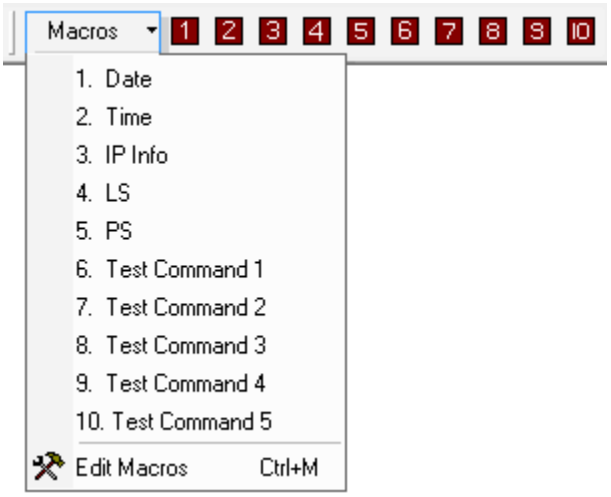
Macro Command Toolbar

Macro Command Toolbar

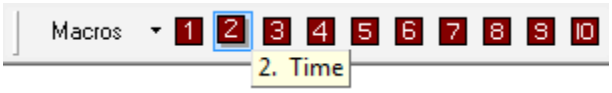
The *Macro Command Toolbar* is provided for quick access to execute and/or edit command macros.
More information on macro commands can be found here.



The *Macro Command Toolbar* can display up to 10 icons for the top ten macros.
However, you can use the drop down button to access up to 20 macros as well as the Macro Editor.



You can use the mouse pointer and hover over a macro button to see the tooltip that revels the macro name.

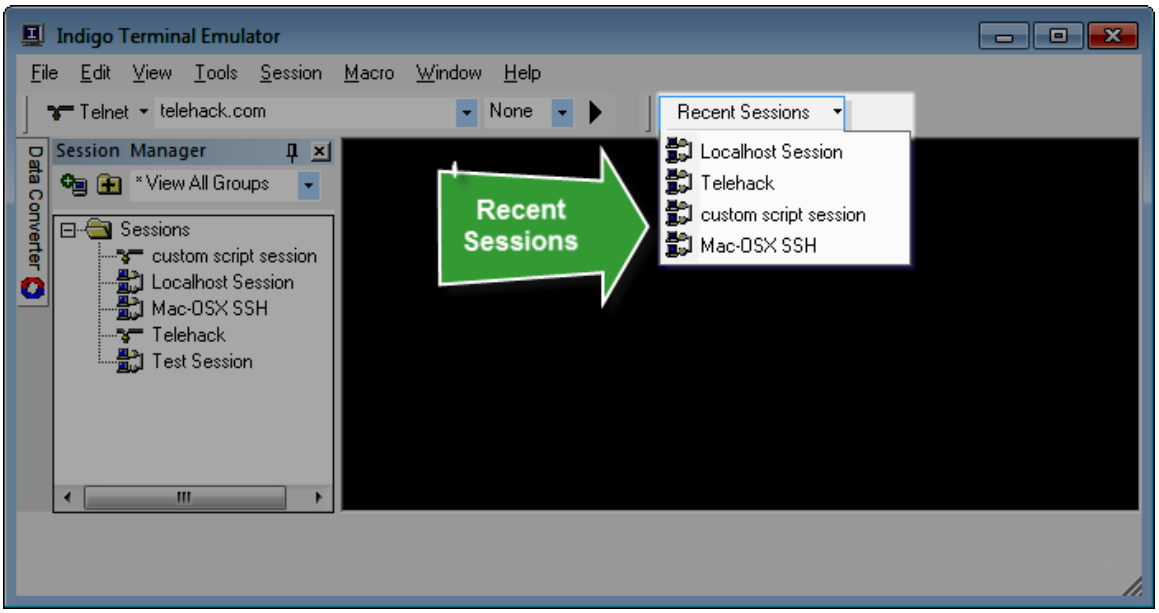


> **Macro Toolbar Buttons**
>
> Each macro command button on the toolbar is only displayed if you have a macro defined for its position.

Recent Sessions Toolbar

Recent Session Toolbar

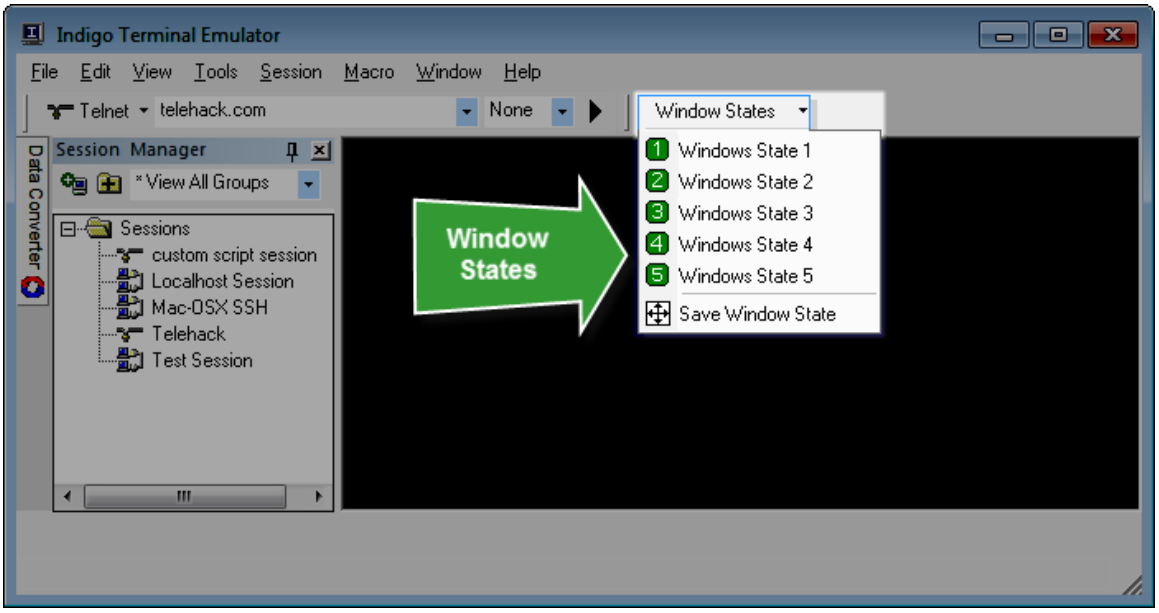
The *Recent Session Toolbar* is provided for quick access to re-open recently used terminal sessions.
Simply click the session name from the listed recently used terminal sessions to re-open that session instance.



Window States Toolbar

Window States Toolbar

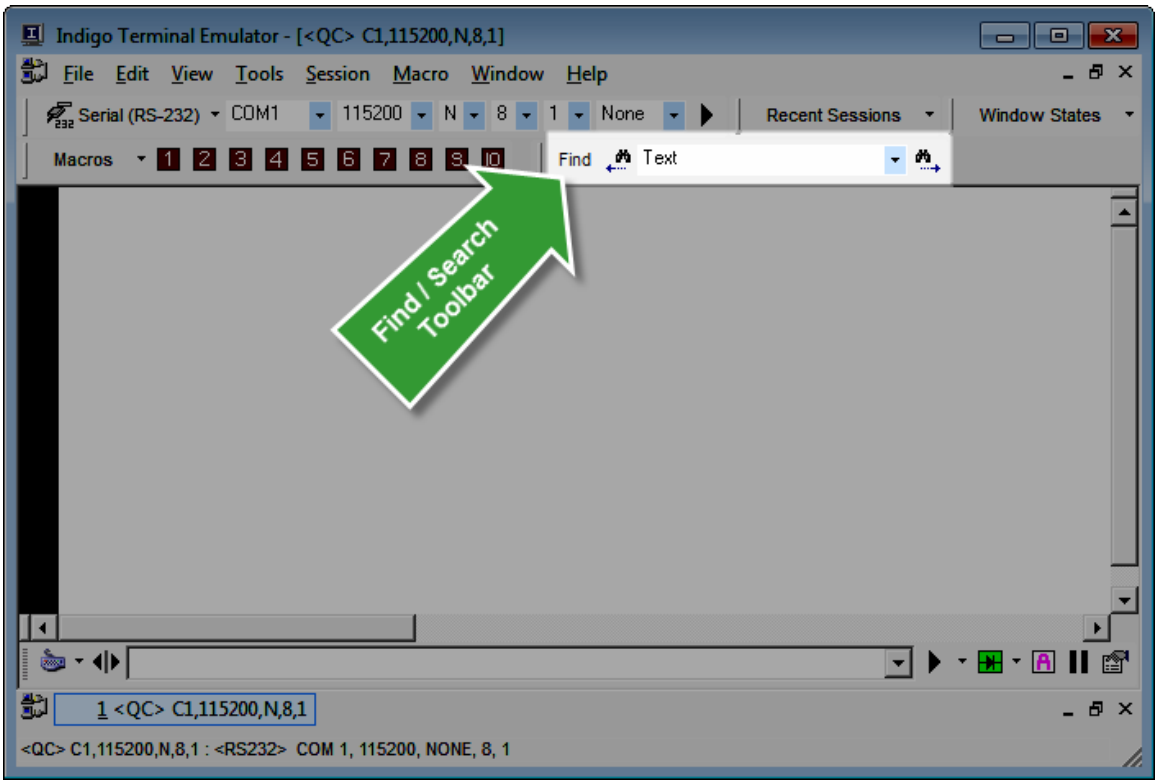
The *Windows States Toolbar* is provided for quick access to restore the Indigo Terminal application window to a stored size and position on screen.
More information on window states can be found here.



Find / Search Toolbar

Find / Search Toolbar

The *Find/Search Toolbar* is provided for quick access search for text in the session data window.
The toolbar includes a text entry to provide the search text, find next, and find previous buttons.



Terminal Sessions

Please select from one of the following help topics on terminal sesisons:

New Terminal Session

Overview

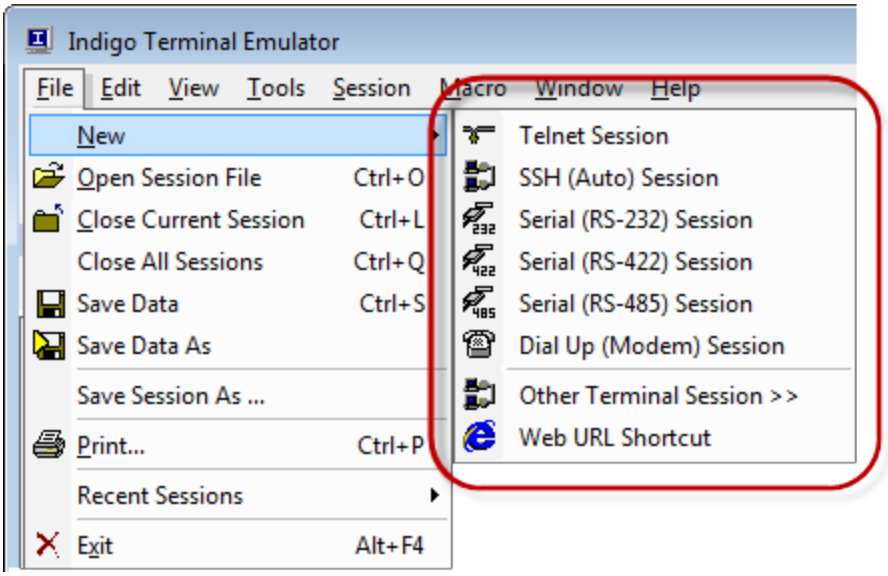
To begin using Indigo to connect to devices or remote hosts, the first thing you need to do is create Terminal Sessions. Terminal Sessions are basically the configuration context along with all connection settings and user configured options for each connection that Indigo needs to establish. Terminal Sessions also provide the user interface window where data received and transmitted is displayed.

Indigo include the following options for creating new terminal sessions.

- via File Menu
- via Session Manager
- via Quick Connect Toolbar

File > New > Session

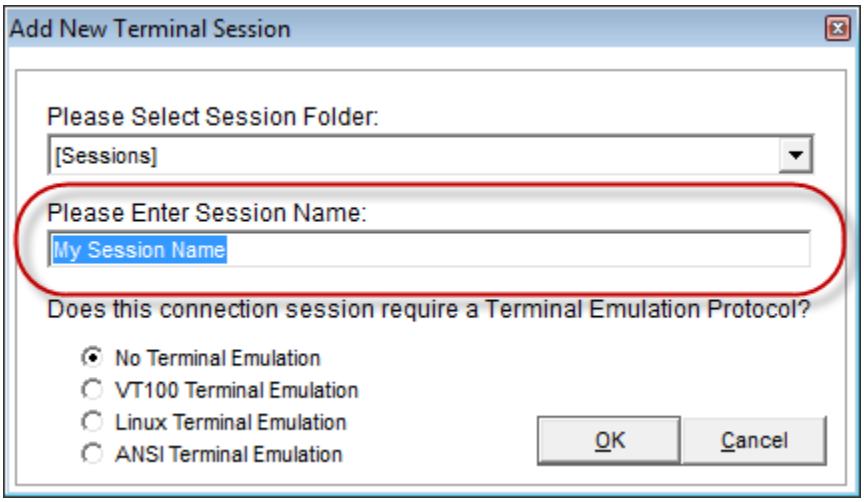
To create a new terminal session via the *File Menu*, select the *File* main menu and then *New* menu item. A popup menu will be displayed with the most popular connection types. Select the desired connection type if it is displayed; otherwise, select the *Other Terminal Sessions* option to select from the more comprehensive list of connection types
.



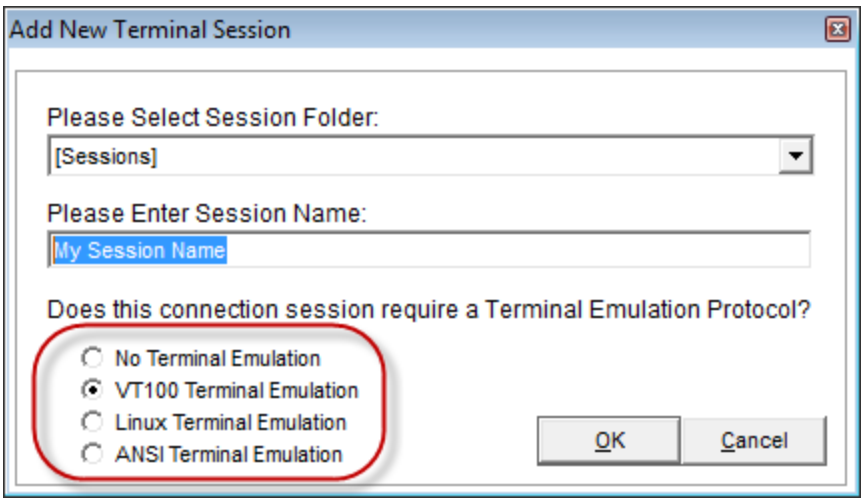
Next you will be prompted with the *New Terminal Session* dialog.

Creating a New Terminal Session

When prompted with the *New Terminal Session* dialog, please provide a new unique session name to apply to this terminal session.
(*You can optionally select a specific session folder if you have defined nested session folders in the Session Manager.*)



If the device or host you are connecting to requires a terminal emulation protocol such as VT100 or Linux, select the emulation option here.
Selecting a terminal emulation option here will configure the terminal emulation configuration properties and apply the appropriate default session view mode.

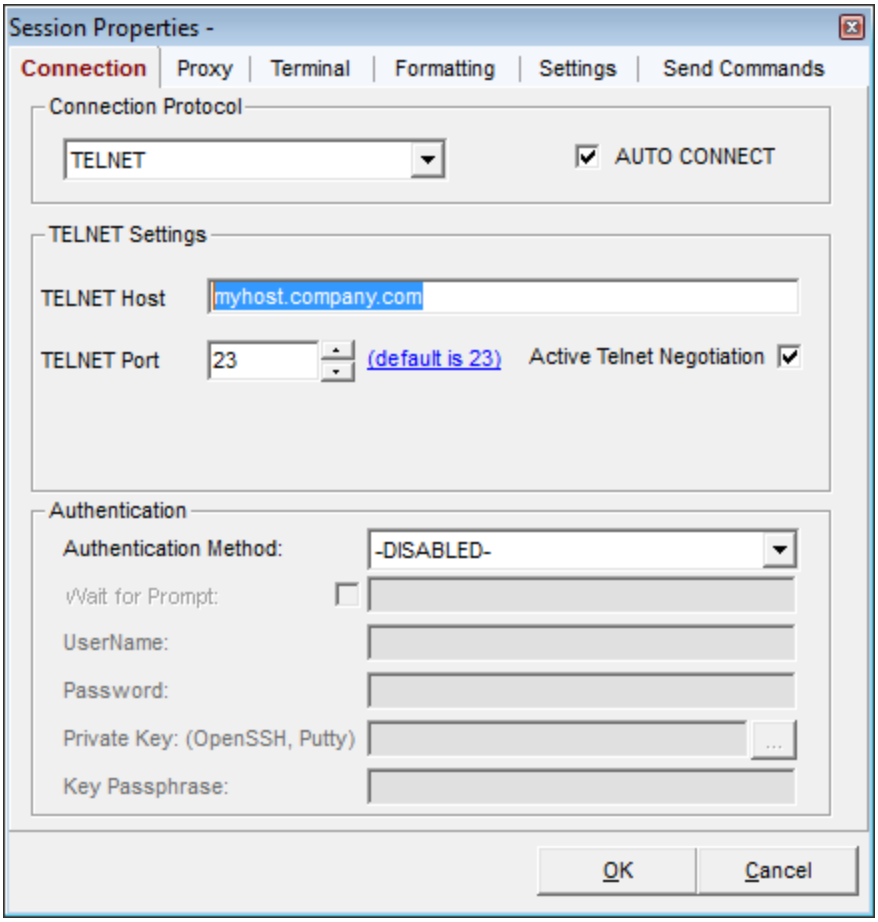


Tip

If connecting to network routers or other network appliances, usually VT100 is the recommended terminal emulation option.
If connecting to a Unix, Linux, or Apple server/workstation, usually the Linux Emulation option is the recommended terminal emulation option.
If connecting to an embedded device, usually no terminal emulation is needed.

Click the *OK* button to create the new terminal session instance.

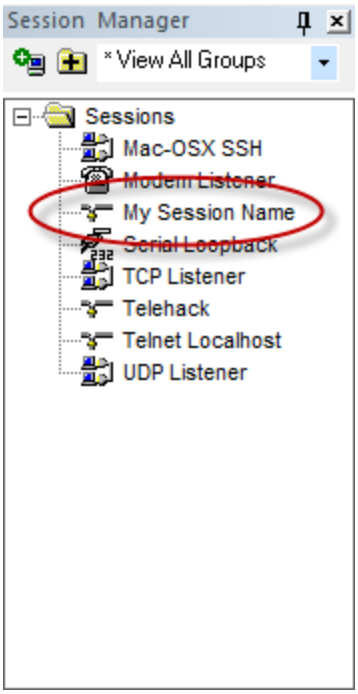
Next you will be prompted with the *Terminal Session Properties* dialog.
Here you can configure the specific connection properties and any other user preferences for this terminal session.



(*More information about the various connection types and properties can be found here.*)
(*More information about other session properties can be found here.*)

Click the *OK* button to save the terminal session properties.

The new terminal session instance will be displayed in the Session Manager.



To load this new terminal session in Indigo, double-click the named session in the Session Manager.

Connection Types

Terminal Session Connection Types

Indigo supports the following connection option for communicating with devices, servers, workstations, appliances, control systems, and other hosts.
Please note that the Professional Edition of Indigo supports a few additional connection types.

Feature	Indigo V3 Standard	Indigo V3 Professional
Serial (RS-232)	✅	✅
Serial (RS-422)		✅
Serial (RS-485)		✅
Dial-Up (Modem)		✅
Telnet	✅	✅
Secure Shell (SSH1, SSH2, SSH Auto)	✅	✅
RLOGIN	✅	✅
REXEC	✅	✅
RSH	✅	✅

ECHO	✅	✅
DAYTIME	✅	✅
CHARGEN	✅	✅
RAW-TCP-Client	✅	✅
RAW-TCP-Server (*Listener*)		✅
RAW-UDP (*Listener & Sender*)		✅

Please select a connection type above to learn more about the configuration options available for each connection type.

Terminal Emulation

Indigo Terminal Emulation Protocols

> **Screencast**
>
> A screencast demonstrating the terminal emulation capabilities is available. Click here to see the video.

Indigo supports the following terminal emulation protocols:

Terminal Emulation Protocol
None
ANSI
VT100
Linux

Depending on the device or server/host that you may be connecting to, it may require a terminal emulation protocol for the data to be rendered on screen correctly.
Terminal emulation protocols include special instruction commands in the data transmissions that are not intended to be rendered on screen, but rather control how data should be represented on screen.

Using a terminal emulation protocol may provide an enhanced terminal experience over a raw data emulation.

It is important to note that for Indigo to render the text using a terminal emulation protocol, it must be configured in the Terminal Emulation View Mode.
The standard view mode will only render the raw data received and will ignore any special control and command sequences specified in the terminal emulation protocol.
If you select a terminal emulation protocol when creating a new terminal session, Indigo will automatically display using the Terminal Emulation view mode by default.

> **Tip**
>
> If connecting to network routers or other network appliances, usually **VT100** is the recommended terminal emulation option.
> If connecting to a Unix, Linux, or Apple server/workstation, usually the **Linux** Emulation option is the recommended terminal emulation option.
> If connecting to an embedded device, usually no terminal emulation is needed.

To configure a session's terminal emulation settings after a session has been created, please edit the Session Properties and and select the Terminal Emulation Settings tab.

Session View Modes

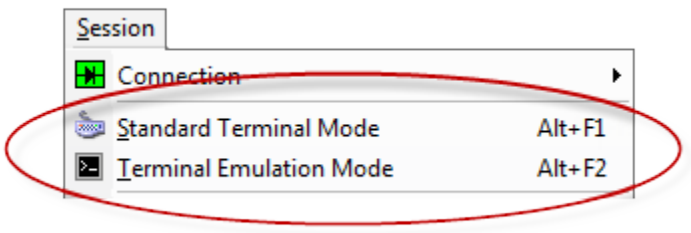
Overview

Indigo includes two distinct session view modes that control how data received from the connected device/server/host is rendered on the screen.
Each view mode include distinct features and capabilities.

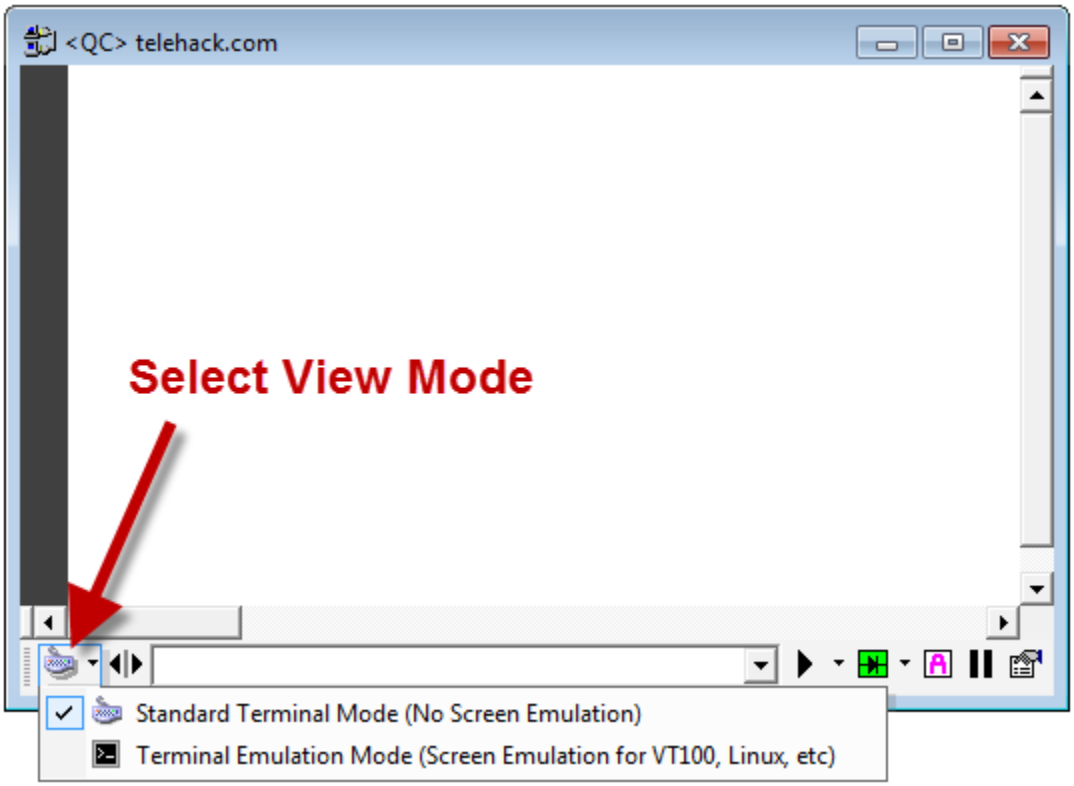
Mode Name	Description
Standard Mode	Standard Terminal Mode (No Screen Emulation) This screen mode displays raw data received from the connected device or server/host.
Terminal Emulation Mode	Terminal Emulation Mode (Screen Emulation for VT100, Lir This screen mode displays data received from the connected device or server/host using a terminal emulation protocol. **Note** This mode is **required** to properly display the data on screen when using VT100 or Linux terminal emulation protocols.

Selecting the View Mode

The session view mode can be changed while a terminal session window is open by selecting the *Session Menu* and then choosing either *Standard* or *Terminal Emulation* mode menu options.

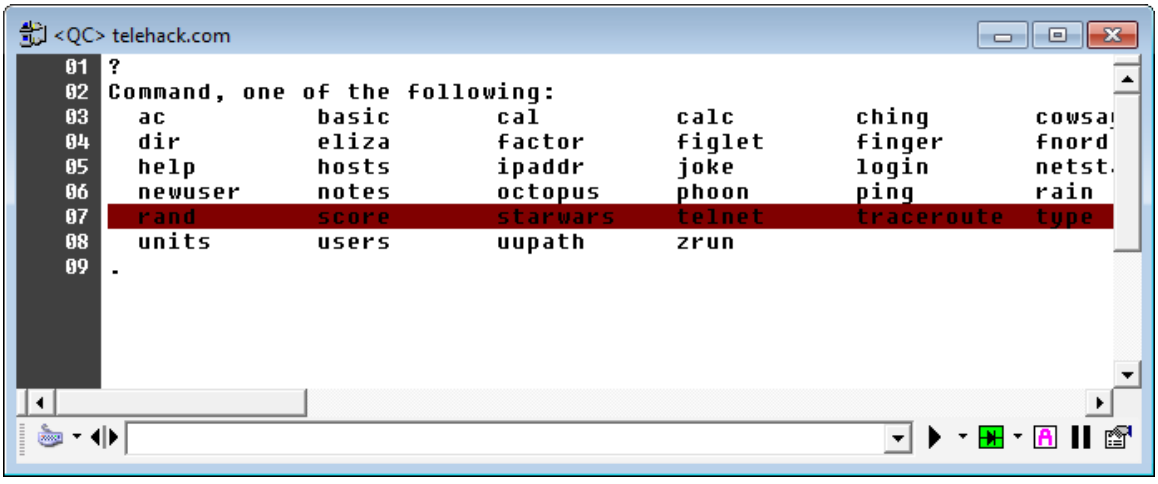


The session view mode can also be changed while a terminal session window is open by selecting the *View Mode* t oolbar option in lower left corner the session window and choosing either *Standard* or *Terminal Emulation* mode menu options.
(*You can also simply click the icon to toggle between the modes.*)



Standard Mode

The standard view mode displays raw data in the terminal session window.



The following Indigo features require the standard view mode:

- Line numbering
- Line highlighting
- Display data formatting in alternate data byte representations

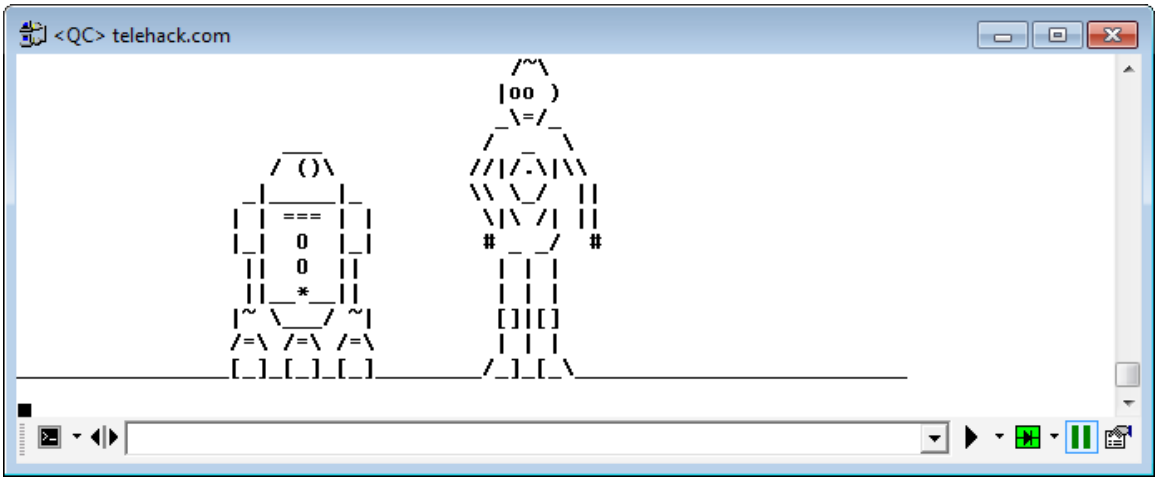
- Syntax color filtering
- Line time stamping
- Line wrapping

In standard mode, you cannot enter command instructions by directly typing in the session data window, you must instead enter and submit commands via the command bar a t the bottom of the session window.

Terminal Emulation Mode

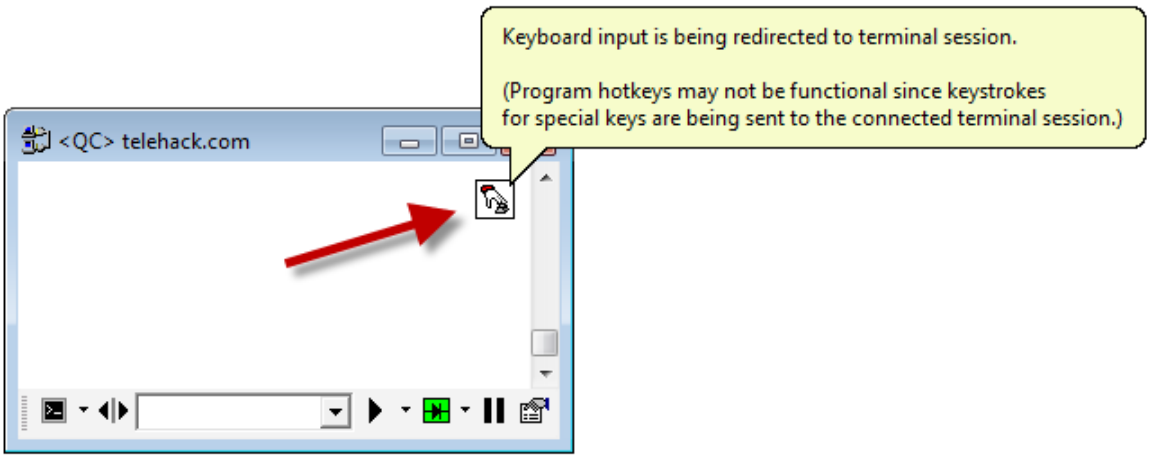
> **Screencast**
>
> A screencast of the terminal emulation mode rendering data using a terminal emulation protocol is available here. Click here to see the video.
> This screencast demonstrates terminal emulation screen control and character positioning.

The terminal emulation view mode displays data according to the selected terminal emulation protocol.



In terminal emulation mode, you can enter command instructions by placing the cursor directly in the session data window and begin typing.
You can also optionally enter and submit commands via the command bar at the bottom of the session window.

If working on a server or host where arrow buttons, tab button, function buttons, or control sequences such as CTRL-C are needed, you must place the cursor directly in the session data window and enter the keystrokes.
When the cursor is focused in the data window in while in terminal emulation mode, Indigo will display a small *finger pressing keyboard key* icon to represents that keystrokes are being redirected to the terminal session.
This means Indigo will listen for any keyboard input and send it directly to the connected session. This means that normal program hotkeys may not work since the keystrokes are being redirected to the session.



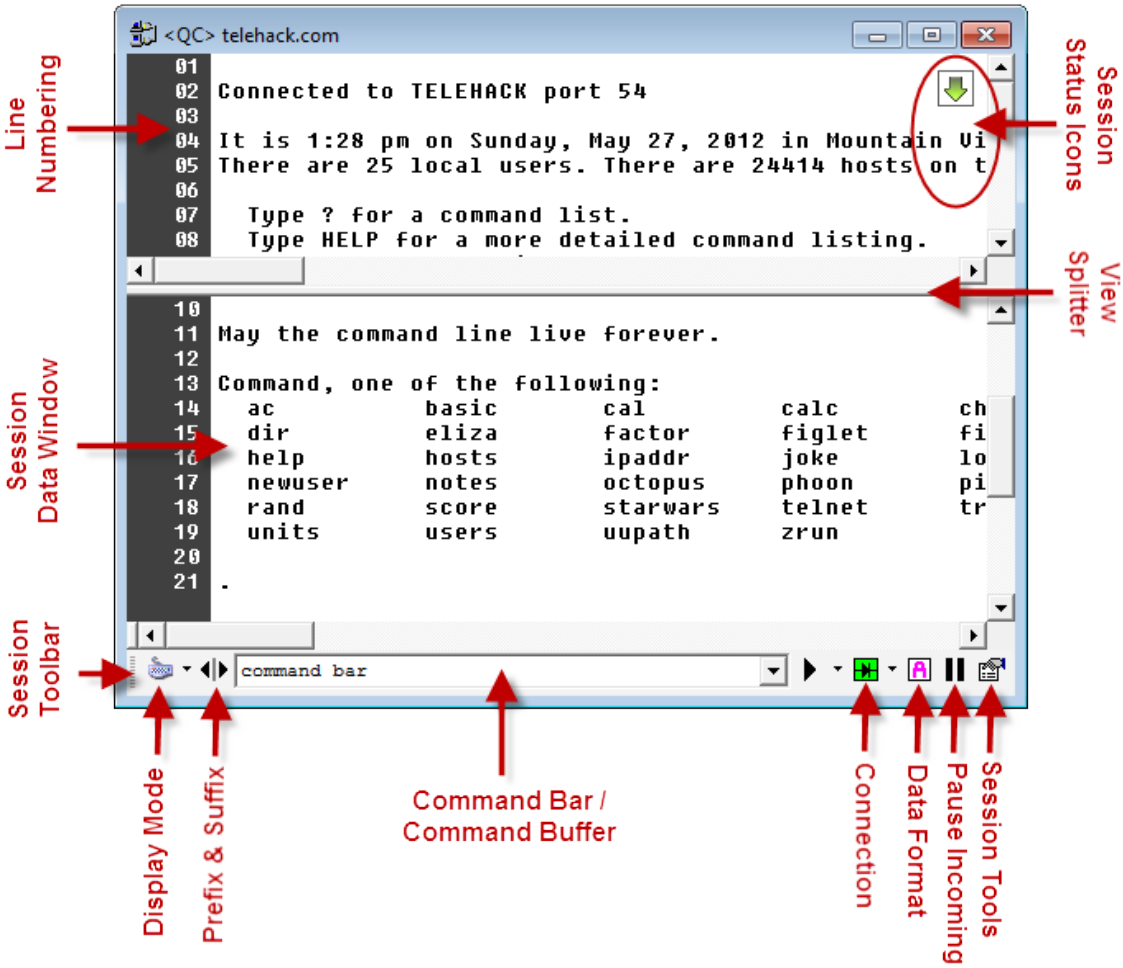
To stop keyboard redirection you can click the icon or place the cursor focus outside of the data window to a location such as the command bar.
When keyboard redirection is suspended the icon will disappear and keyboard shortcuts will resume normal functionality.

> **Note**
>
> This mode is **required** to properly display the data on screen when using VT100 or Linux terminal emulation protocols.

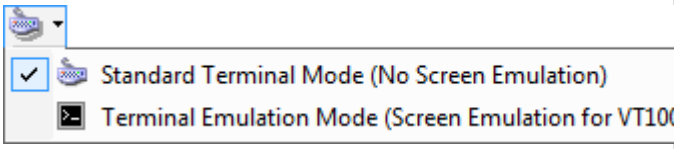
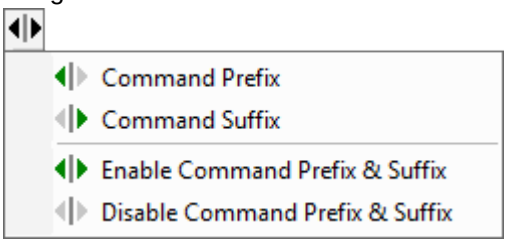
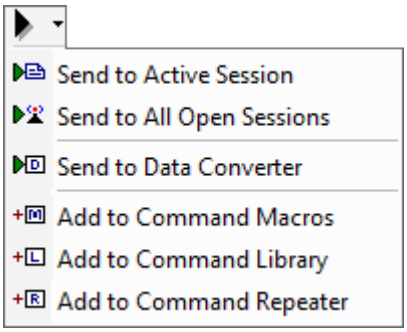
Session User Interface (Layout)

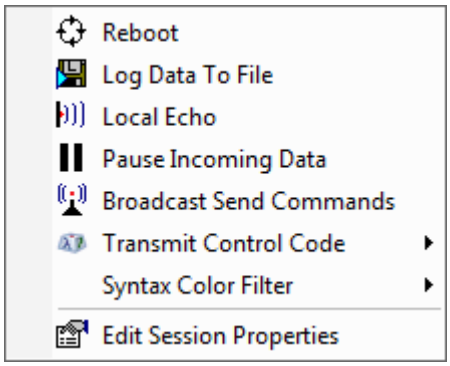
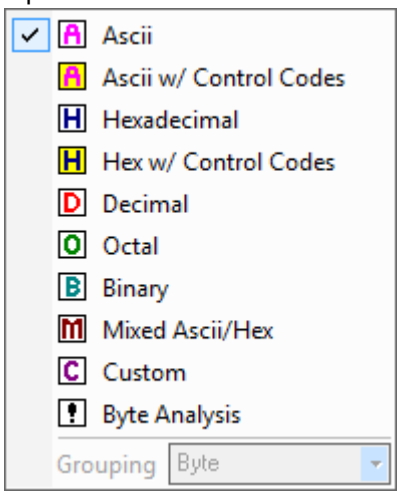
Indigo Session User Interface Layout

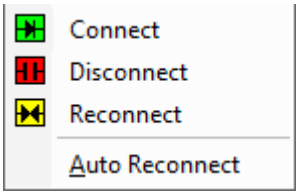
The following features and user interface elements make of the Indigo session.



Session Options	Description
Line Numbering	If using the *Standard View Mode*, you can display line numbering in the left margin of the session data window. You can enable and disable line number using the View Menu.
Session Data Window	This is the session data window where data send and received is rendered to the screen. You can right-click anywhere on the session data window to display the session context menu.
Session Toolbar	The session toolbar is located at the bottom of the session windows by default. (*This toolbar can be relocated to the top of the session window by using the mouse cursor to grab the toolbar and drag it to the top of the session window.*)

View Mode	Switch between session session view modes using the drop down selection. Or click the icon to toggle between view modes. 
Prefix & Suffix	Enable and disable command prefix and suffix options using this toolbar button. 
Command Bar/Buffer	You can enter instructions or command in this command bar and press the ENTER key to transmit them to the connected session.  The command bar includes a drop-down list of alternate targets to send the entered command.  For more information about the command bar, command buffer, and command send options, click here.
Session Status Icons	Terminal sessions will display any status icons in the upper right corner of the session data window when needed. You can hover over the status icon to display a tooltip with additional information or click the icon to disable to display more options for the feature.

Data View Splitter	When using the standard view mode, the session data window supports a split view where the data window can be divided in two regions to display different portions of the received data. Drag the view splitter to re-size the data window regions. Drag the view splitter all the way to the top to hide the split view.
Session Tools Menu	This toolbar button will display the advanced (tools) con text session menu. 
Pause Incoming Data	Clicking this toolbar button will toggle the pause incoming data feature.
Data Format	When using the standard view mode , this option will s witch the data format that data bytes are being represented in on screen. 

Connection	This toolbar option displays the current connection state and allows you to change the connection state. Clicking the icon will toggle between the connected and disconnected state. Clicking the drop-down list allow you to discretely select between: Connect, Disconnect, Reconnect, or Auto-Reconnect. 

Command Bar / Buffer

Command Bar

Perhaps one of the more important concepts to understand in Indigo is the **command bar**!

Unlike conventional terminal emulation applications where you type keystrokes directly into the data window, Indigo introduces the concept of sending data via the command bar.

> **Tip**
>
> Indigo does support directly keystroke input in the Terminal Emulation view mode and this is absolutely needed for interaction with certain connections/hosts.

> **Note**
>
> If using the standard view mode you must use the command bar to submit commands/data to the connected terminal session.

The command bar offers many features over direct keyboard input.

Feature	Description
Syntax Correction	Type and modify the full command text before submitting. This means if you make a mistake you can simple correct the mistake before sending. Some terminal connection do not adequately handle backspaces and corrections so this can be a real life saver.
Auto-Completion	Indigo supports auto-completion of text in the command bar if enabled via the Advanced Session Properties. 

Easy Copy/Paste	Some terminal emulation applications do not handle simple copy and paste of commands to send. In the command bar you can use the normal windows copy (CTRL-C) and paste (CTRL-V) shortcuts to copy and paste text into the command bar to send. You can also right-click the command bar and use the context menu to perform copy,cut, and paste operations.
Drag & Drop Text	The command bar fully supports drag and drop text. Select text from a document or another application and drag it to the command bar to stage it.
Command Staging	Since the command bar does not send the command as it is enters or as it is pasted this leaves the text in a staged state allowing you to make any additional modifications needed. Perhaps you are pasting a portion of a command that you intend to reuse multiple times but just need to modify or add some additional text. Since the command is staged and not immediately transmitted, the command bar easily facilitates this use case. To submit your staged command either press the ENTER key or use the right arrow submit toolbar next to the command bar.
Command Buffer	The command bar automatically buffers previously transmitted commands and provides easy access to re-use a previously sent text. See the section below for more information on the command buffer.
Advanced Command Syntax	Indigo supports an advanced text byte interpreter feature that can be invoked from the command bar. Using this feature you can transmit data in multiple byte representation including HEX, DEC, ASCII, OCT, BINARY or any combination of these bytes. Please see advanced send commands for more information.
Internal Commands	Indigo supports an advanced internal command interpreter feature that can be invoked from the command bar. Please see internal commands for more information.

To submit data/text from the command bar you can either press the ENTER key while the cursor is focused in the command bar text entry field or click the right arrow toolbar button to the left of the command bar.

Command Termination Bytes/Characters

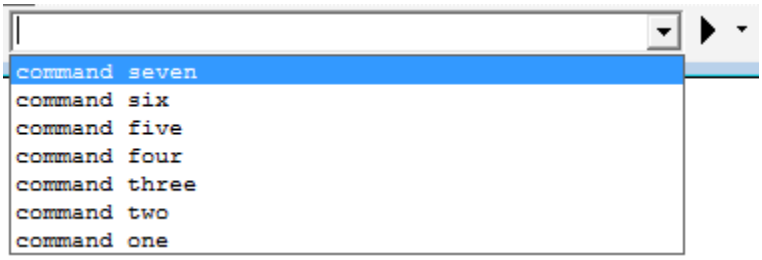
It is important to note that all commands entered into the command bar are automatically appended with command termination bytes/characters.
The default command termination bytes use in Indigo are CARRIAGE RETURN (0x0D) and LINE FEED (0x0A).

You can optionally disable or change these termination bytes in the Advanced Session Properties.

> **Note**
>
> There is one exception where command termination bytes are NOT automatically appended to the command sent via the command bar: Advanced Send Commands.
> When sending an advanced send command, Indigo does not append any termination bytes.
> If using and advanced send command it is assumed that you need/want complete control over the data bytes being transmitted; therefore, Indigo does not append these termination bytes.

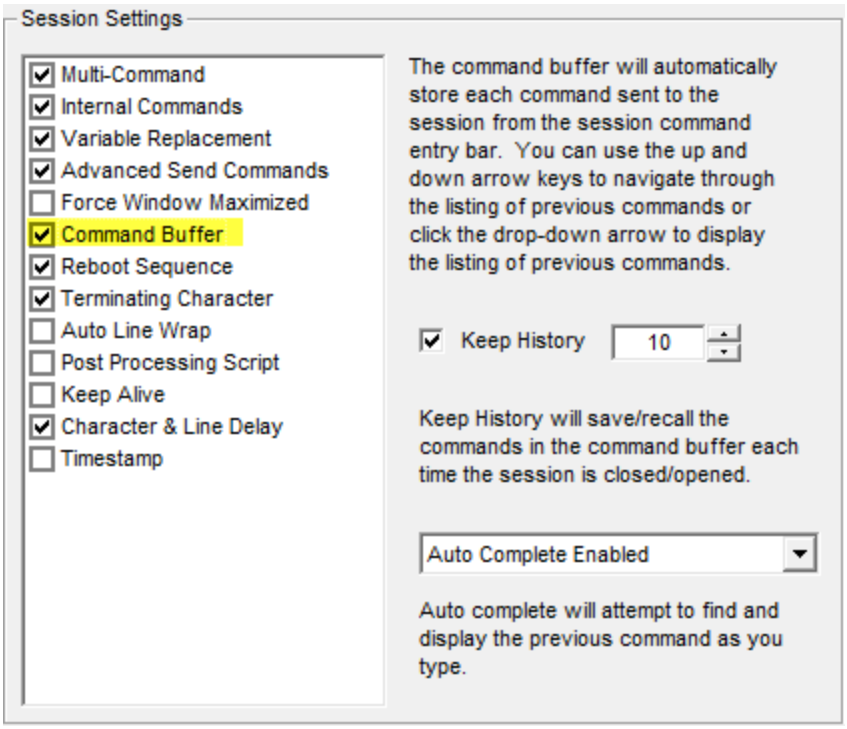
Command Buffer

The command bar automatically buffers previously transmitted commands and provides easy access to re-use a previously sent text.
You can click the drop-down option in the command bar to list and select from the previously submitted command text.

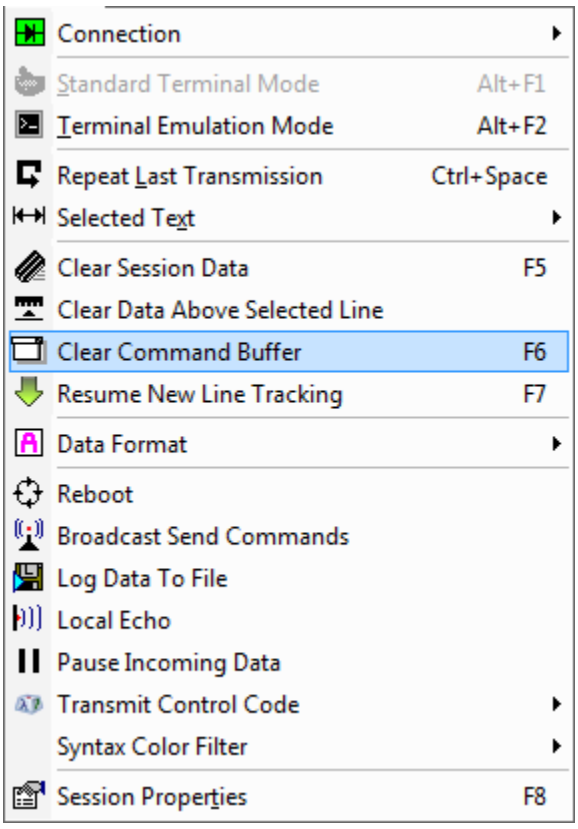


You can also press the UP arrow while the command bar text entry field has focus to access the last transmitted command text.
The UP and DOWN arrow keyboard buttons allow you to navigate through the command history.

You can enable/disable and define how many command to permanently persist in history for each terminal session via the Advanced Session Properties.

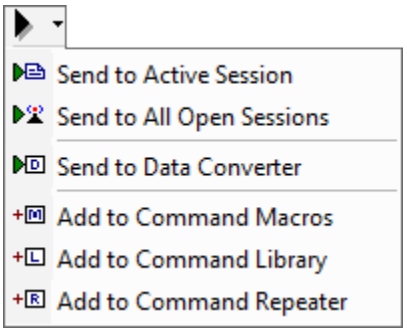


You can purge the command buffer history from the Session menu or the Session context menu using the *Clear Command Buffer* menu item.



Command Bar Text To Alternate Targets

By default the command bar transmits the command text directly to the connected session device/host. However, the command bar includes a drop-down list of alternate targets to send the command text.



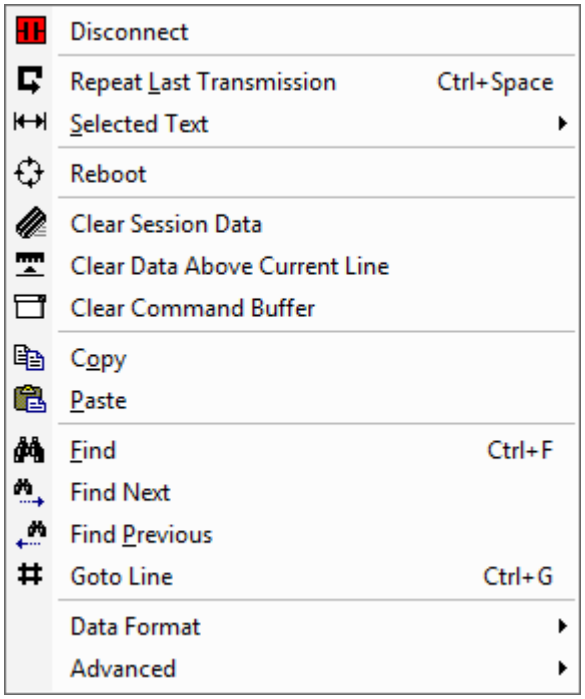
Target	Description
Send to Active Session	This option will simple transmit the command text to the session's connected device/host.
Send to All Open Sessions	This option will broadcast the command text to all open Indigo terminal session windows and it will be transmitted to each of the sessions connected devices/hosts.
Send to Data Converter	This option will send the command text to the data converter widget and it will be converted based on the data format selected in the data converter.
Add to Command Macros	This option will add the command text as a new macro command.
Add to Command Library	This option will add the command text as a new command entry in the current command library.
Add to Command Repeater	This option will add the command text as a new command entry in the current command repeater.

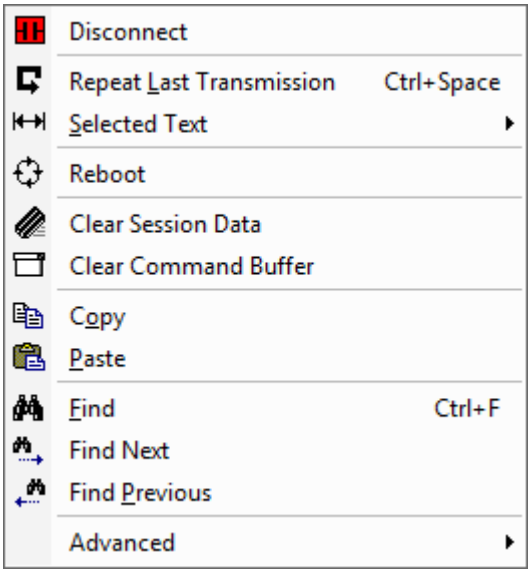
Session Context Menus

Session Context Menu

Right-click anywhere in the session data window to display the session context menu.
The context menu items will vary slightly depending on the session view mode.

Standard View Mode	Terminal Emulation View Mode

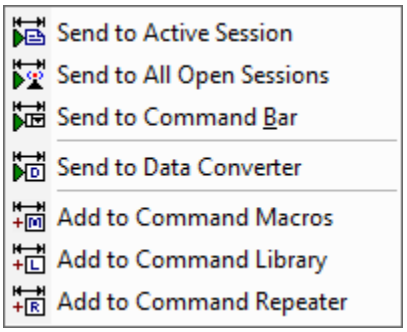




Name	Description
Connect or Disconnect	The *Connect* or *Disconnect* option will be displayed depending on the current session connection state.
Repeat Last Transmission	Re-transmits the last command/data issued to the active session.
Selected Text	Opens the selected text sub-menu.
Reboot	Transmits the custom reboot command sequence configured for the active session. The session connection will be disconnected and a based on a configured delay, the session will attempt to re-establish its connection.
Clear Session Data	Removes all data from the data window in the active session.
Clear Data Above Selected Line	Removes all data from the data window above the cursor position. (Note: *This option is only available in the Standard Terminal Mode.*)
Clear Command Buffer	Removes all buffered / cached commands from the co mmand bar in the active session.
Copy	Copies any selected text in the data window to the system clipboard.
Paste (*to session*)	Pastes text from the system clipboard directly to the connected session in the active session window.

Find	Prompts the user for text to search for in the session data window. After submitting the text query, Indigo will search for the text within the data.
Find Next	Attempts to find the next occurrence of the user provided search query text.
Find Previous	Attempts to find the previous occurrence of the user provided search query text.
Goto Line	Prompts the user for a line number and then jump the cursor directly to that line number. (*Only available in Standard Terminal Mode*)
Data Format	Opens the data format sub-menu.
Advanced	Opens the advanced (tools) session sub-menu.

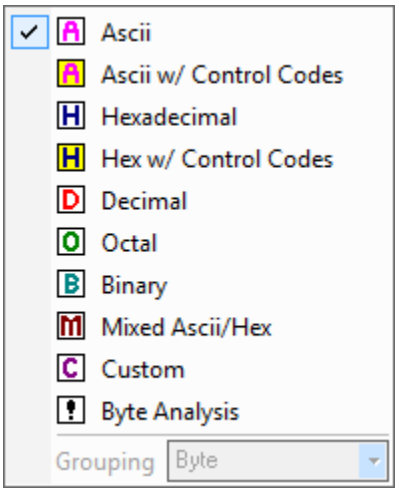
Session Selected Text Menu



Name	Description
Send to Active Session	Transmits the selected text to the current active terminal session.
Send to All Open Sessions	Transmits the selected text to all open terminal sessions.
Send to Command Bar	Copies the selected text to the command bar in the current active session window.
Send to Data Converter	Sends the selected text to the data converter tool where it will get converted into the selected data format.
Add to Command Macros	Copies the selected text and add the text as a new command macro.
Add to Command Library	Copies the selected text and add the text as a new command library command entry.

Add to Command Repeater	Copies the selected text and add the text as a new command repeater command entry.

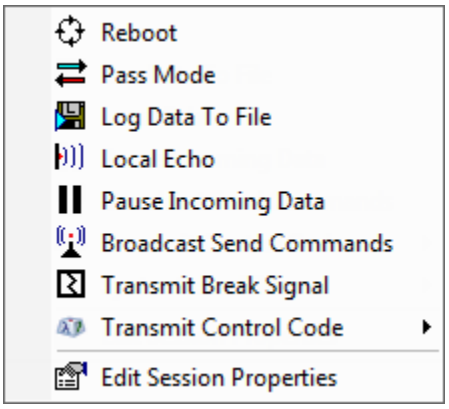
Session Data Format Menu



Name	Description
ASCII	Applies the selected data byte formatting to the active session.
ASCII w/ Control Codes	Applies the selected data byte formatting to the active session.
Hexadecimal	Applies the selected data byte formatting to the active session.
Hexadecimal w/ Control Codes	Applies the selected data byte formatting to the active session.
Decimal	Applies the selected data byte formatting to the active session.
Octal	Applies the selected data byte formatting to the active session.
Binary	Applies the selected data byte formatting to the active session.
Mixed ASCII/Hex	Applies the selected data byte formatting to the active session.
Custom	Applies the selected data byte formatting to the active session.

Byte Analysis	Applies the selected data byte formatting to the active session.
Byte Grouping	Sets the byte size representation (*BYTE, WORD, DWORD*) for displaying bytes in the following formats: • Decimal • Hexadecimal • Octal • Binary

Session Advanced (Tools) Menu



Name	Description
Reboot	Transmits the custom reboot command sequence configured for the active session. The session connection will be disconnected and a based on a configured delay, the session will attempt to re-establish its connection.
Pass Mode	Opens the pass mode configuration dialog allowing to configure and enable serial pass mode. (Note: *This option is only available when connected via serial: RS232, RS422, RS485.*)
Log Data To File	Opens the session logging tool to configure and start data logging for the active session.
Local Echo	If enabled, this option will print (*echo*) any data commands transmitted to the data window in the active session.
Pause Incoming Data	Pauses all inbound data from the connection on the active session window. (Note: *This option does not buffer data, while paused, any data received will be ignored.*)

Broadcast Send Commands	If this option is enabled all commands transmitted in the active session are also broadcast and transmitted to all other open sessions.
Transmit Break Signal	Transmits a BREAK signal to the configured serial port in the active terminal session. (Note: *This option is only available when connected via serial: RS232, RS422, RS485.*)
Transmit Control Code	Opens the control code sub-menu. The selected control code will be transmitted to the active session.
Session Properties	Opens the session properties configuration user interface for the active session.

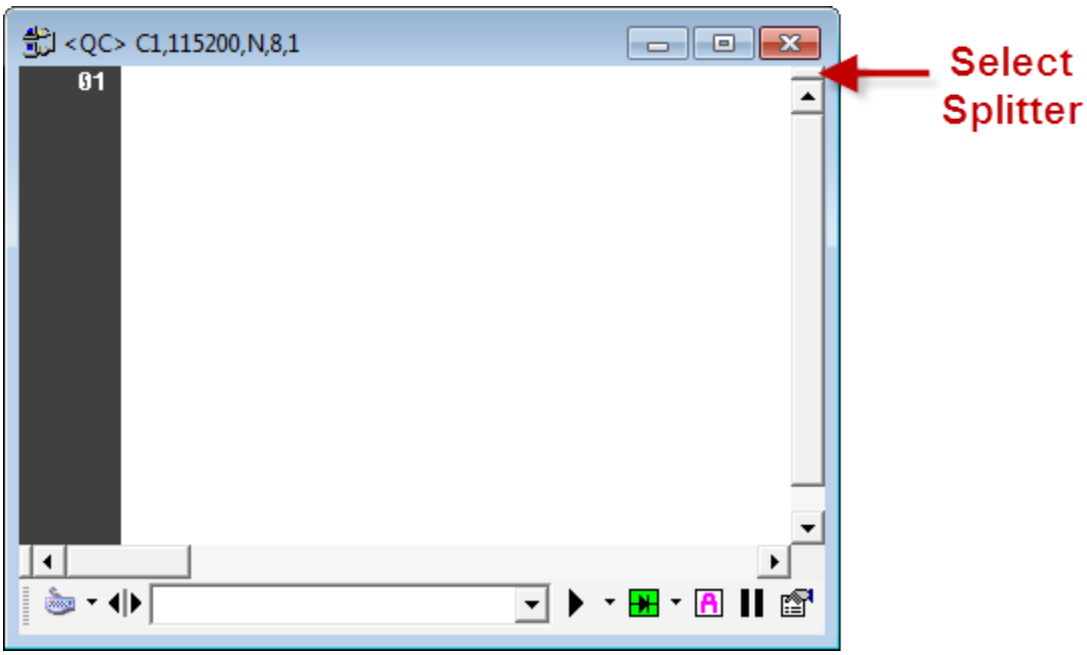
Split Data Window

> **Screencast**
>
> A screencast demonstration the split data window feature is available. Click here to see the video
> .

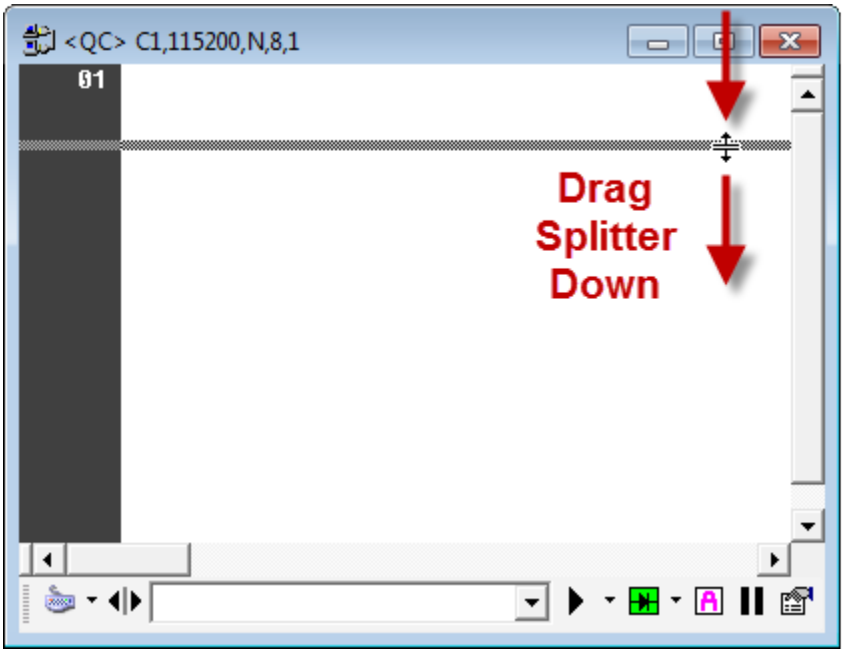
If using the standard view mode you can create split views in the session data window.
Split views allow you to view two separate area of received data simultaneously.
This is especially useful when you want one view to display the stream of newly received data and the other view to remain fixed to a specific set if previously captured data lines.
If you are familiar with the locked rows concept in Microsoft Excel, this is a similar concept.

Indigo supports both horizontal split views and vertical split view.

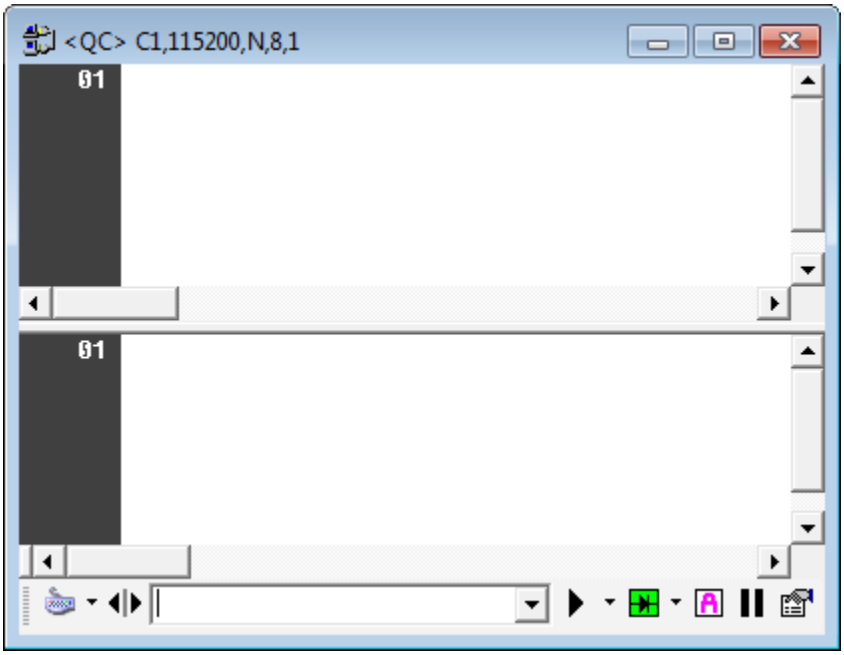
To enable a split screen view, first select the splitter drag bar above the vertical scrollbar or to the left of the horizontal scrollbar and hold down the left mouse button.



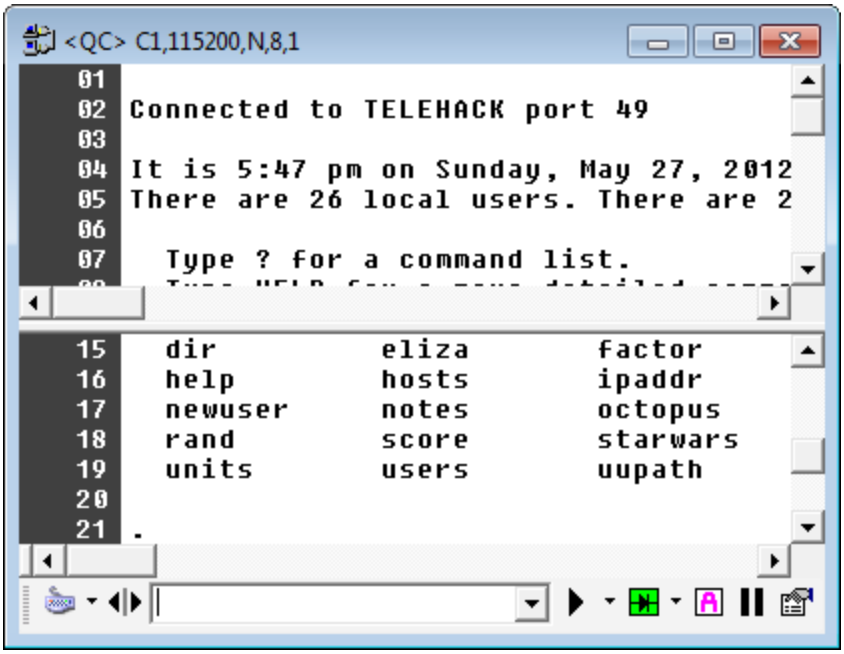
With the left mouse button held down, drag the splitter either down or to the right to create the split window.



When you have the size of the split window you like, release the mouse button.
(*You can re-select the drag bar anytime to re-size the split windows.*)

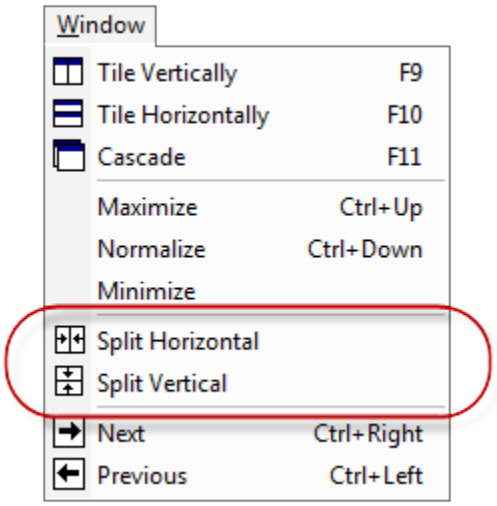


When data is received it will be displayed in both views of the split window.
You can scroll one of the views to inspect previously received data while new data streams into the other view.



Whichever split view text area last receives cursor focus is the active view where new data is updated and automatically brought into view.

You can also use the *Split Horizontal* or *Split Vertical* menu options in the Windows menu to automatically split the data window in equal proportions.

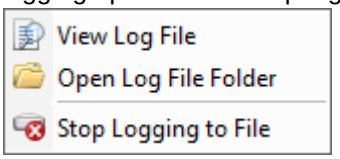


Session Status Icons

Terminal sessions may display any status icons in the upper right corner of the session data window when needed. You can hover over the status icon to display a tooltip with additional information or click the icon to disable to display more options for the feature.

The listing below are the available status icons.

Status/Name	Icon	Description

Pause		Pause incoming/received data from being rendered to the screen. (*While enabled all incoming data from the connected session is ignored and not rendered to the screen.*) Click this icon to resume rendering incoming data.
Pass Mode		This icon is displayed when the serial pass mode is enabled. Click the icon to disable serial pass mode.
Local Echo		This icon is displayed when the session's local echo feature is enabled. Click the icon to disable the local echo feature.
Logging		This icon is displayed when the session data is being actively logged to a file. Click the icon to display additional logging options or to stop logging. 
Rebooting		This icon is displayed when the session's connection is in a reboot sequence. Click the icon to stop the reboot sequence.
Line Tracking		This icon is displayed when the cursor is placed in the data window on a line of data and the session is not longer actively tracking (scrolling) to newly received data. Click the icon to jump to the newest data line and resume line tracking. (auto-scrolling)
Outbound Data Buffering		This icon is displayed when outbound data is being buffered and transmitted to the connected session on a buffered basis. Outbound data buffering will only be present when the Character and Line Delay option is enabled.

Auto Reconnect		This icon is displayed when a session is in the disconnected state and the auto-reconnect feature has been enabled. This icon represents that the session will attempt to auto-reconnect on a periodic basis until a successful connection is established. Click this icon to disable the auto-connect attempt. This will not disable the auto-connect feature for the session, just stops the auto-reconnect on the current disconnect cycle.
Keyboard Redirection		This icon is displayed in the Terminal Emulation view mode when the cursor is located inside the data window and keystrokes are being redirected directly to the connected terminal session. Click the icon to disable keyboard redirection.
Broadcasting		This icon is displayed when the current session is configured to broadcast all its outbound command to all open and connected terminal sessions. Click the icon to disable command broadcasting.
Client Connected		This icon is displayed when the current session is configured as a TCP server/listener and a remote TCP client is connected to the session. Click the icon to forcefully disconnect the TCP client.

Session Properties

Open The Session Properties Editor

Once a terminal session has been created, you may need to edit the session properties to configure additional connection parameters, session customization, or user preferences.
There following methods are available to access the session properties editor.

Location	Description

Session Manager	In the Session Manager, you can right-click a session by name and select the *Edit Session Properties* context menu option.
Session Menu	With a terminal session open, you can select the *Sessi on Properties* menu option under the *Session* menu.
System Hotkey (F8)	With a terminal session open, you can press the F8 system hot key to open the session properties dialog.
Session Context Menu	With a terminal session open, you can right-click the data window and access the session context menu. The *Edit Session Properties* menu item is located under the *Advanced* sub-menu.
Internal Command	With a terminal session open, you send the following internal command to open the session properties editor. `:properties`

All session properties and user configuration options are stored in Indigo session files (*.itf) on the file system.

Session Configuration Options

Please select from the options below for more information on specific session properties.

- Connection Settings
  - Serial Connection Settings
  - Dial Up (Modem) Connection Settings
  - Telnet Connection Settings
  - SSH Connection Settings
  - RLOGIN Connection Settings
  - REXEC Connection Settings
  - RSH Connection Settings
  - ECHO Connection Settings
  - DAYTIME Connection Settings
  - CHARGEN Connection Settings
  - Raw TCP Client Connection Settings
  - Raw TCP Server Connection Settings
  - Raw UDP Connection Settings
- Proxy Settings
- Terminal Emulation Settings
- Formatting Settings
- Advanced Session Settings
- Session Send Commands

Connection Settings

Overview

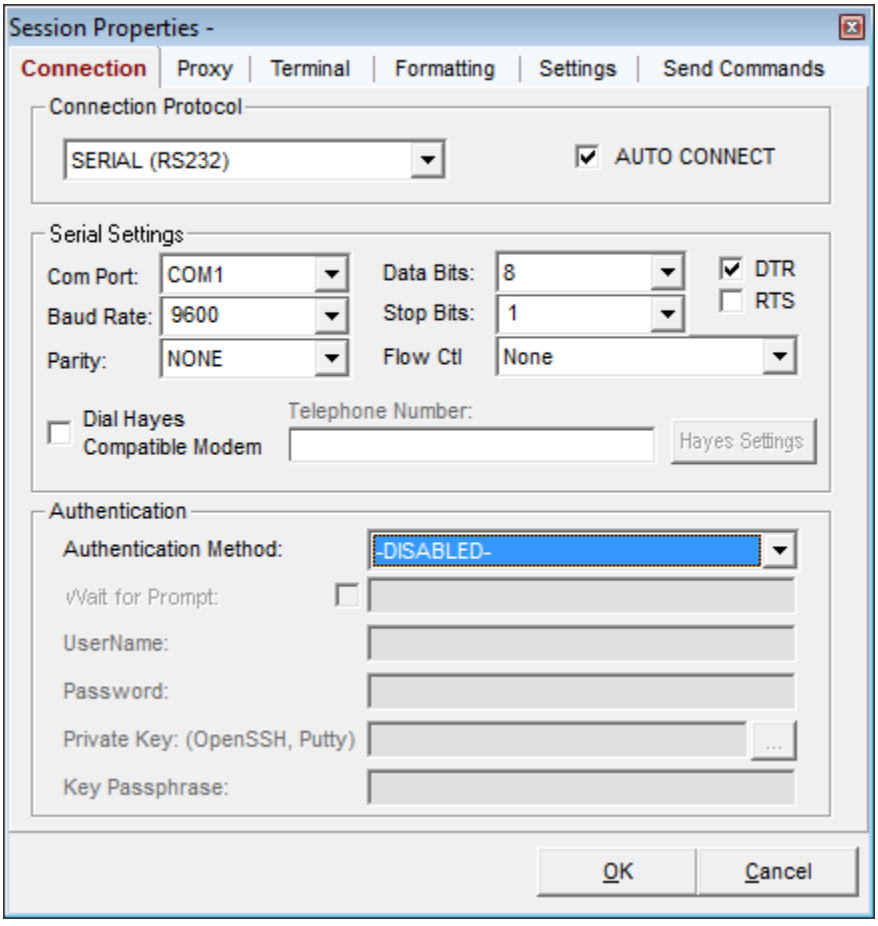
Depending on the connection type you have selected, different connection settings will be available.
Please select a connection type below to learn more about the configuration options and settings.

- Serial Connection Settings
- Dial Up (Modem) Connection Settings
- Telnet Connection Settings
- SSH Connection Settings
- RLOGIN Connection Settings
- REXEC Connection Settings
- RSH Connection Settings
- ECHO Connection Settings
- DAYTIME Connection Settings
- CHARGEN Connection Settings
- Raw TCP Client Connection Settings
- Raw TCP Server Connection Settings
- Raw UDP Connection Settings

Serial Connection Settings

Serial Connection Settings

Each of the serial connection options: RS-232, RS-422, RS-485 use the same configuration dialog and settings.



(*For more information on other session property configuration tabs, please see Session Properties.*)

The following serial configuration settings are available to properly setup your device connection and terminal session.

Setting	Description

<table>
<tr><td>Auto Connect</td><td>If this option is enabled, then the terminal session will attempt to establish a connection immediately when opened in Indigo.</td></tr>
<tr><td>Com Port</td><td>Select the com port that is connected to the target device you wish to communicate with.

This field will list the available serial com ports that have been detected on this computer.
(If your com port is not listed, you can override Indigo's automatic detection, please see the Com Ports tab in P rogram Preferences)

Indigo supports com ports addressed up to 256.</td></tr>
<tr><td>Baud Rate</td><td>Select the required baud rate for the device you are connecting to.

If you are not sure what baud rate to select, please refer to the documentation for the device you are attempting to communicate with.
(The baud rate in Indigo must match the baud rate that the connected device expects.)

Indigo supports the following baud rates:

<table><tr><th>Standard Edition</th><th>Professional Edition</th></tr><tr><td>75
110
134
150
300
600
1200
1800
2400
4800
7200
9600
14400
19200
28800
38400
57600
76900
115200</td><td>128000
230400
460800
921600
(User defined custom baud rates)</td></tr></table>
(The serial port hardware and serial drivers must support the baud rate for Indigo to apply it successfully.)</td></tr>
</table>

Parity

Select the required parity for the device you are connecting to.

If you are not sure what parity to select, please refer to the documentation for the device you are attempting to communicate with.
(*The parity in Indigo must match the parity that the connected device expects.*)

Indigo supports the following parity options:

Parity
NONE
EVEN
ODD
MARK
SPACE

Data Bits

Select the required data bits for the device you are connecting to.

If you are not sure what data bits to select, please refer to the documentation for the device you are attempting to communicate with.
(*The data bits in Indigo must match the data bits that the connected device expects.*)

Indigo support the following Data Bit options:

Data Bits
4
5
6
7
8

Stop Bits	Select the required stop bits for the device you are connecting to. If you are not sure what stop bits to select, please refer to the documentation for the device you are attempting to communicate with. (*The stop bits in Indigo must match the stop bits that the connected device expects.*) Indigo support the following Stop Bit options: **Stop Bits** 1 2

Flow Control

Select the required flow control for the device you are connecting to.

If you are not sure what flow control to select, please refer to the documentation for the device you are attempting to communicate with.
(*The flow control in Indigo must match the flow control that the connected device expects.*)

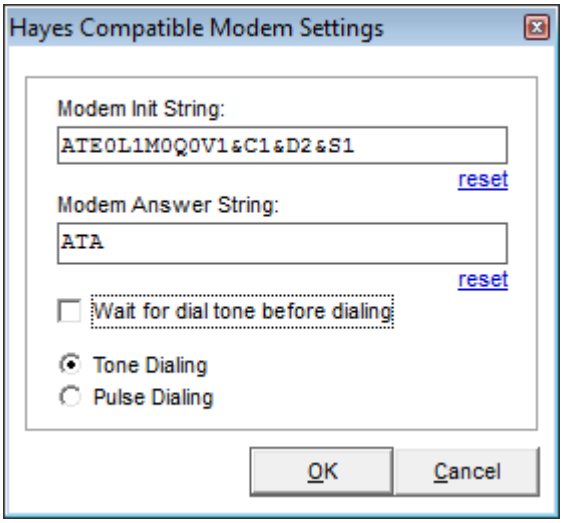
Indigo supports the following Flow Control options:

Flow Control	Hardware	Software
None		
XON/XOFF (Software)[1]		✅
RTS/CTS (Hardware)[2]	✅	
RTS/CTS and XON/XOFF	✅	✅
DTR/DSR	✅	
DTR/DSR and XON/XOFF	✅	✅
CTS/DSR	✅	
CTS/DSR and XON/XOFF	✅	✅

Most modern devices do not use flow control; however, if you are using a device that required *Hardware Flow Control* please make sure that you have the correct cable connected between the computer's serial port and the device.
Hardware flow control requires additional connected pins and may not work with if the proper cable is not connected. Please consult your device documentation for details on the cabling required.

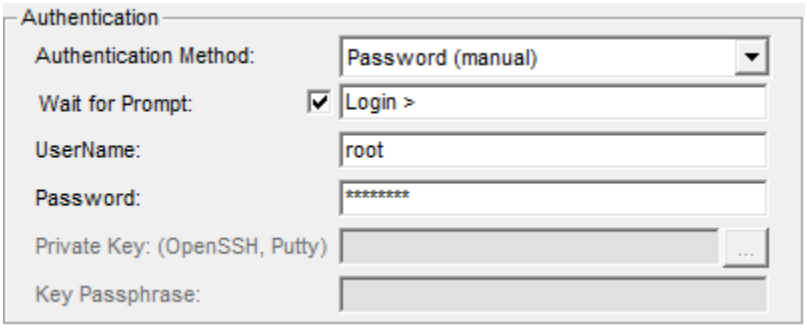
[1] The most common form of software flow control is the XON/XOFF option. If your device documentation just says Software Flow Control, then most likely if is referring to XON/XOFF.
[2] The most common form of hardware flow control is the RTS/CTS option. If your device documentation just says Hardware Flow Control, then most likely if is referring to RTS/CTS.

DTR	If you wish to force the Data Terminal Ready pin to the ON/OFF state, then you can enable/disable this configuration setting. *If using hardware flow control option with DTR, then this override setting may not be applied since DTS is part of the hardware flow control logic.*
RTS	If you wish to force the Request To Send pin to the ON/OFF state, then you can enable/disable this configuration setting. *If using hardware flow control option with RTS, then this override setting may not be applied since RTS is part of the hardware flow control logic.*
Dial Hayes Compatible Modem	*This feature is only available in the Professional Edition.* If this option is enabled, then the Indigo Terminal Session will attempt to communicate to a Hayes Compatible modem via the serial port to dial a remote connection using a telephone line. If enable, then a telephone number must be provided. *If your modem is recognized by Windows as a TAPI-compliant modem, then using the Indigo Dial-Up connection may be a simpler method for creating a dial-up connection terminal session.*
Telephone Number	*This feature is only available in the Professional Edition.* If the *Dial Hayes Compatible Modem* option is enabled then a telephone number must be provided to establish a modem connection to a remote host.

Hayes Settings	*This feature is only available in the Professional Edition.* If the *Dial Hayes Compatible Modem* option is enabled then this configuration button will be available to configure custom modem initialization and answer strings as well as tone versus pulse dialing options. 

Serial Connection Authentication Options

When using a serial connection, Indigo can provide an option for automated password authentication. Serial communication does not have an intrinsic support for authentication so this is a complete software implementation feature.



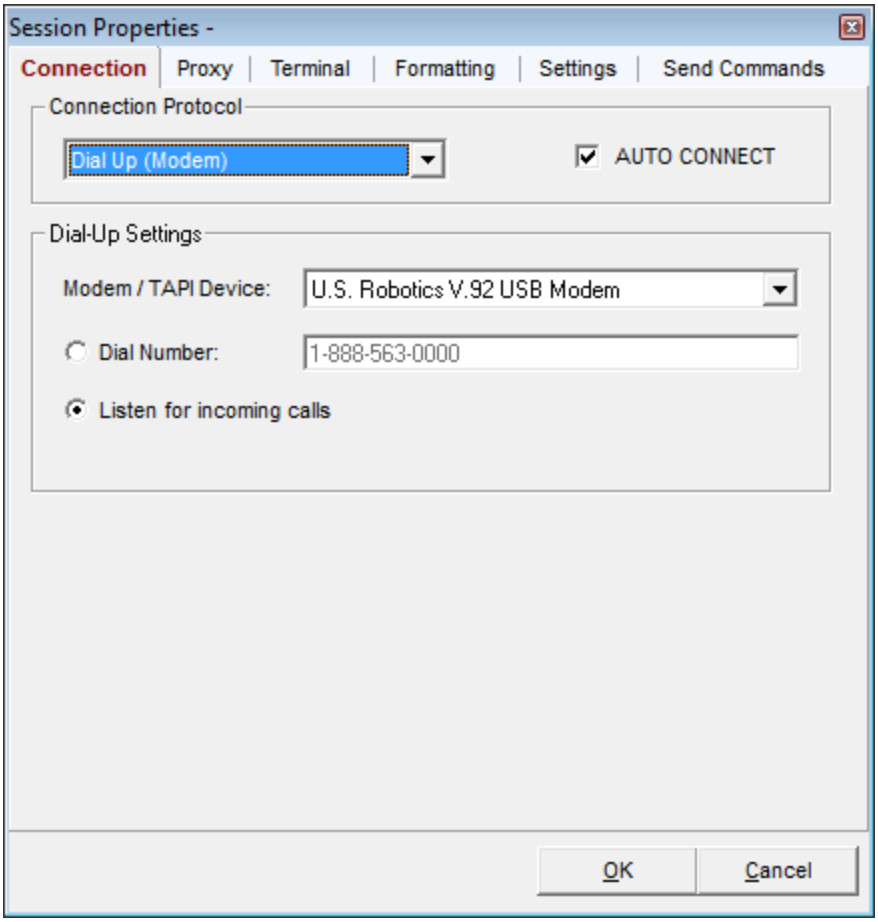
Setting	Description

<table>
<tr><td>Authentication Method</td><td>This option allows you to set the session authentication method. For serial connections, Indigo supports the following options:<table>
<tr><th>Authentication Method</th><th>Description</th></tr>
<tr><td>None</td><td>No authentication method is applied.</td></tr>
<tr><td>Password (manual)</td><td>Indigo will attempt to manually send user credentials based on the remaining authentication settings.
(This is a simple software only implementation, not a communication protocol level authentication negotiation.
Indigo will send user credentials at the time of connection based on the Wait for Prompt property.)</td></tr>
</table></td></tr>
<tr><td>Wait for Prompt</td><td>If this wait for prompt option is enabled, Indigo will wait until the prompt text is received before sending user credentials to the connected session.
If this option is not enabled, then Indigo will automatically attempt to send user credentials when the connection is established.</td></tr>
<tr><td>Username</td><td>This is the user name text that Indigo will submit when attempting to authenticate.</td></tr>
<tr><td>Password</td><td>This is the password text that Indigo will submit when attempting to authenticate.</td></tr>
</table>

Dial Up (Modem) Connection Settings

Dial Up (Modem) Connection Settings

The screenshot below depicts the Dial Up (Modem) connection settings.



(*For more information on other session property configuration tabs, please see Session Properties.*)

The following Dial Up (Modem) configuration settings are available to properly setup your device connection and terminal session.

Setting	Description
Auto Connect	If this option is enabled, then the terminal session will attempt to establish a connection immediately when opened in Indigo.

Modem / TAPI Device	The modem with which you wish to use to establish the connection should be selected here. The modem must support a TAPI compliant windows modem driver for Indigo to use the modem for the connection. (*Indigo enumerates the available modems at program start up. If your modem was installed after starting Indigo, you may need to restart Indigo.*) **Tip** You can use the RS-232 serial connection option and the Hayes modem support if you are using a Hayes-compatible modem and your modem does not have a TAPI complaint driver installed in Windows. Please see the Serial Connection Settings for more information on the Hayes modem configuration properties.
Dial Number	This option can be enabled if Indigo should make an outgoing call using the selected modem. If enabled, then this field must contain the telephone number that the modem should dial.
Listen for incoming calls	This option can be enabled if Indigo should listen for incoming calls using the selected modem.

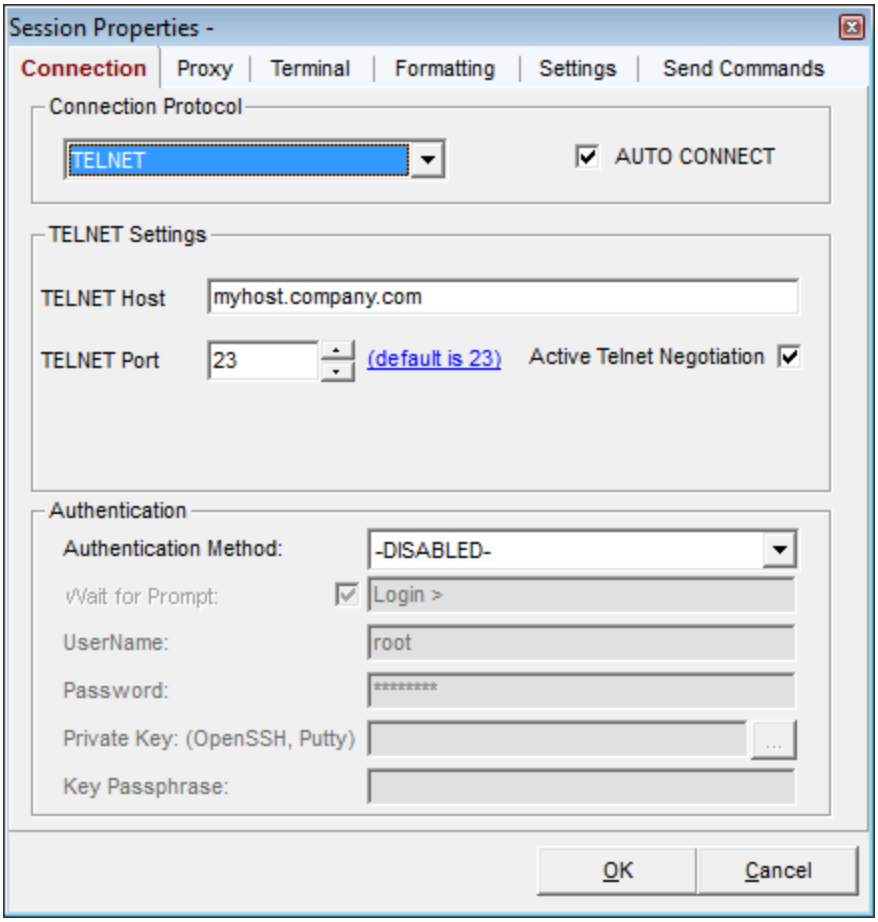
Dial Up (Modem) Connection Authentication Options

When using a Dial Up (Modem) connection, Indigo does not provide automated user authentication.
If user authentication is required, the logon request should be prompted in the session window after the modem establishes a connection.

Telnet Connection Settings

Telnet Connection Settings

The screenshot below depicts the TELNET connection settings.



(*For more information on other session property configuration tabs, please see Session Properties.*)

The following Telnet configuration settings are available to properly setup your device connection and terminal session.

Setting	Description
Auto Connect	If this option is enabled, then the terminal session will attempt to establish a connection immediately when opened in Indigo.
Telnet Host	The telnet server/host should be provided in this configuration field. This entry can be an IP address, computer name, or DNS hostname.
Telnet Port	The telnet server/host port can be used if a custom telnet port must be provided. (*The default port for the Telnet protocol is port 23*.)

Active Telnet Negotiation

In a Telnet connection, there are two types of data passed between the client and the server/host: actual text, and telnet negotiations for Telnet protocol specific extra features.

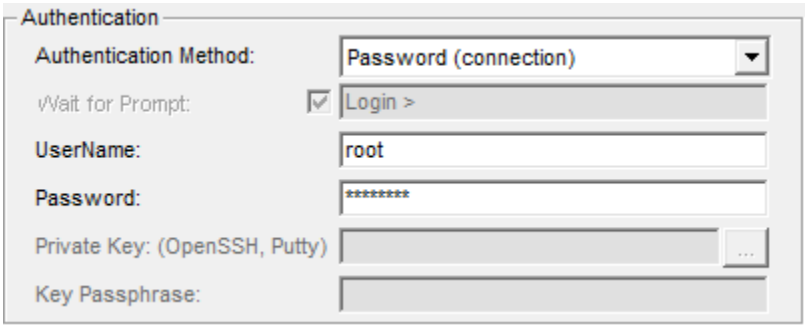
Indigo can use two different strategies for negotiation:

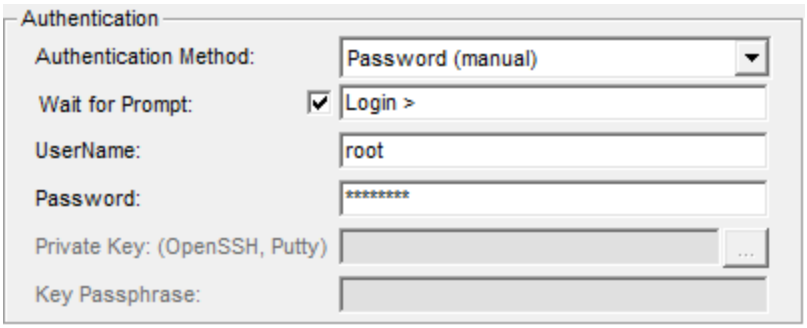
Telnet Negotiation	Description
Active	In active mode, Indigo starts to send negotiations as soon as the connection is established.
Passive (Inactive)	In passive mode, Indigo will wait to negotiate until it first sees a negotiation from the server/host.

Indigo defaults to *Active Telnet Negotiation* because if both Indigo and the server/host are operating in a passive mode, then the telnet negotiation will never take place.
However, passive mode is sometimes required in order to successfully get through certain types of firewall and Telnet proxy server. If you have trouble establishing a Telnet connection through a firewall, you could try disabling active mode to see if it helps.

Telnet Connection Authentication Options

When using a Telnet connection, Indigo can provide two options for automated password authentication.
(*The Telnet protocol intrinsically supports authentication as part of the protocol.*)





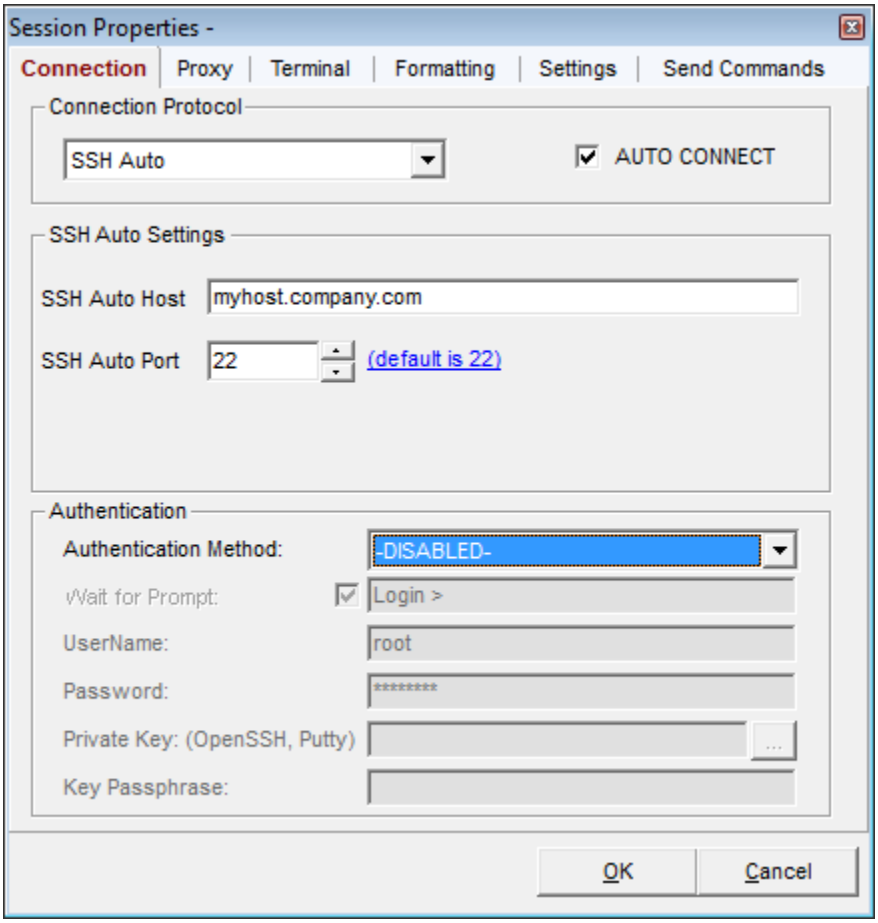
Setting	Description
Authentication Method	This option allows you to set the session authentication method. For Telnet connections, Indigo supports the following options: **Authentication Method** / **Description** None — No authentication method is applied. Password (connection) — Use this option to provide basic username and password credentials to the telnet server/host. (*This is a protocol based implementation, where the user credentials are negotiated as part of the telnet protocol at the time of connection.*) Password (manual) — Use this option to provide basic username and password credentials to the telnet server/host. (*This is a simple software only implementation, not a communication protocol level authentication negotiation. Indigo will send user credentials at the time of connection based on the Wait for Prompt property.*)

Wait For Prompt	If this wait for prompt option is enabled, Indigo will wait until the prompt text is received before sending user credentials to the connected session. If this option is not enabled, then Indigo will automatically attempt to send user credentials when the connection is established. (*This option is only available when using the Password (manual) authentication method.*)
Username	This is the user name text that Indigo will submit when attempting to authenticate.
Password	This is the password text that Indigo will submit when attempting to authenticate.

SSH Connection Settings

SSH Connection Settings

Each of the Secure Shell connection options: SSH1, SSH2, SSH AUTO use the same configuration dialog and settings.



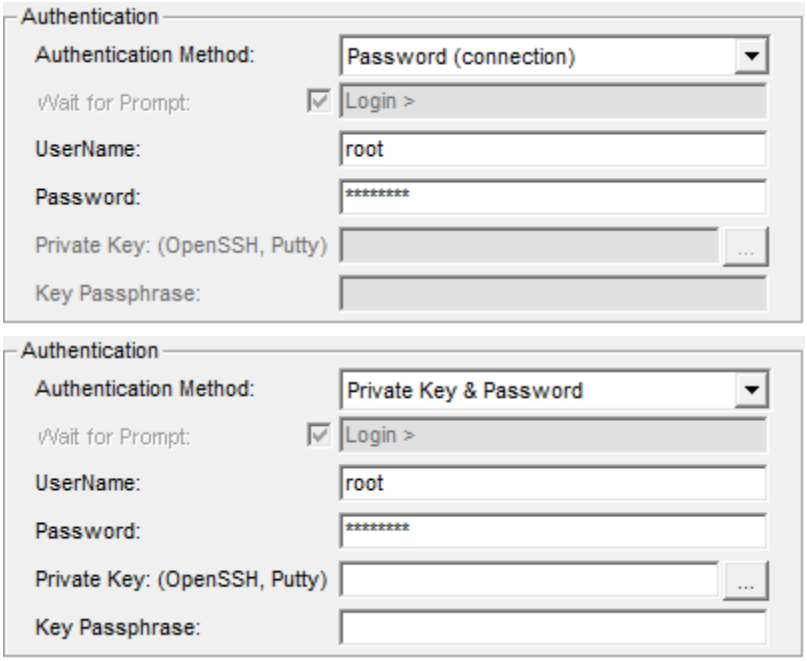
(*For more information on other session property configuration tabs, please see Session Properties.*)

The following SSH configuration settings are available to properly setup your device connection and terminal session.

Setting	Description
Auto Connect	If this option is enabled, then the terminal session will attempt to establish a connection immediately when opened in Indigo.
SSH Host	The SSH server/host should be provided in this configuration field. This entry can be an IP address, computer name, or DNS hostname.
SSH Port	The SSH server/host port can be used if a custom SSH port must be provided. (*The default port for the SSH protocol is port 22*.)

SSH Connection Authentication Options

When using a SSH connection, Indigo can provide an option for automated password authentication.
(*The SSH protocol intrinsically supports authentication as part of the protocol.*)



Setting	Description

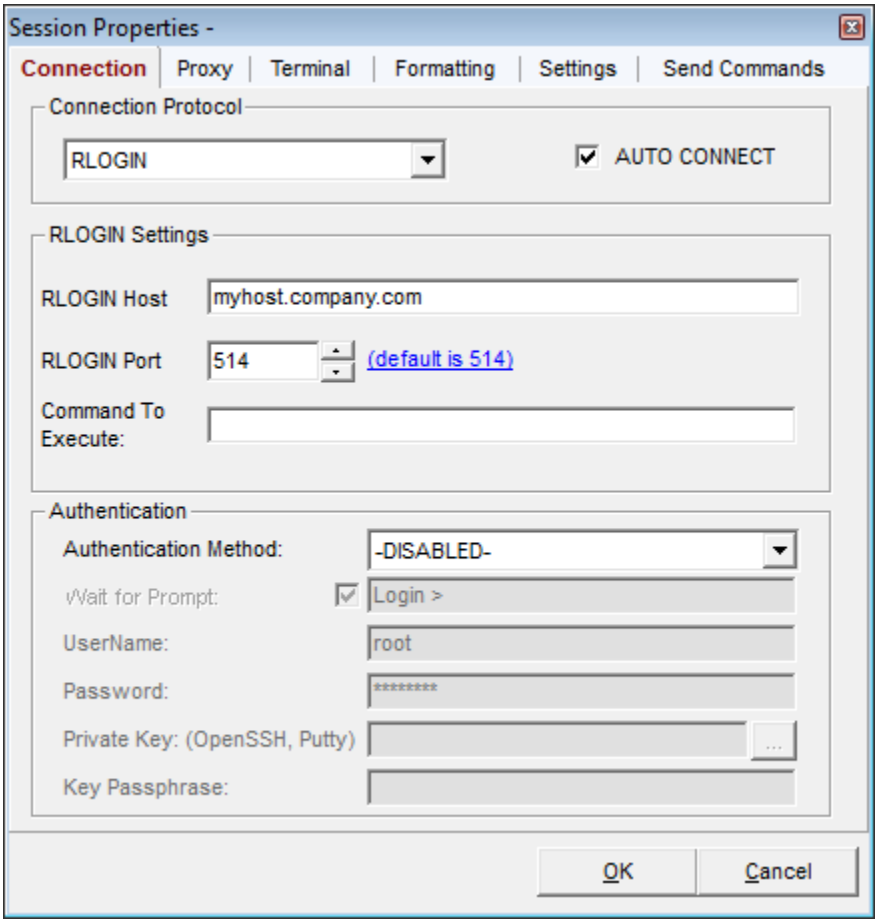
<table>
<tr><td>Authentication Method</td><td>This option allows you to set the session authentication method. For SSH connections, Indigo supports the following options:<table>
<tr><th>Authentication Method</th><th>Description</th></tr>
<tr><td>None</td><td>No authentication method is applied.</td></tr>
<tr><td>Password (connection)</td><td>Use this option to provide basic username and password credentials to the SSH server/host.
(This is a protocol based implementation, where the user credentials are negotiated as part of the SSH protocol at the time of connection.)</td></tr>
<tr><td>Private Key</td><td>Use this option when required to use private key encryption to connect to the SSH server/host.</td></tr>
<tr><td>Private Key & Password</td><td>Use this option when required to use private key encryption and user credentials to connect to the SSH server/host.</td></tr>
</table></td></tr>
<tr><td>Username</td><td>This is the user name that Indigo will provide when authenticating with the SSH server/host.
(This option is only available when using the Password or Private Key & Password authentication methods)</td></tr>
<tr><td>Password</td><td>This is the password that Indigo will provide when authenticating with the SSH server/host.
(This option is only available when using the Password or Private Key & Password authentication methods)</td></tr>
<tr><td>Private Key</td><td>This option allow you to select the private key file (*.PPK) to be used when negotiating authentication with the SSH server/host.
(This option is only available when using the Private Key or Private Key & Password authentication methods)</td></tr>
</table>

Key Passphrase	This option allow you to provide a private key passphrase to be used when negotiating authentication with the SSH server/host. This field can remain empty if your private key file does not require a passphrase. (*This option is only available when using the Private Key or Private Key & Password authentication methods*)

RLOGIN Connection Settings

RLOGIN Connection Settings

The screenshot below depicts the Remote Login (RLOGIN) connection configuration dialog and settings.



(*For more information on other session property configuration tabs, please see Session Properties.*)

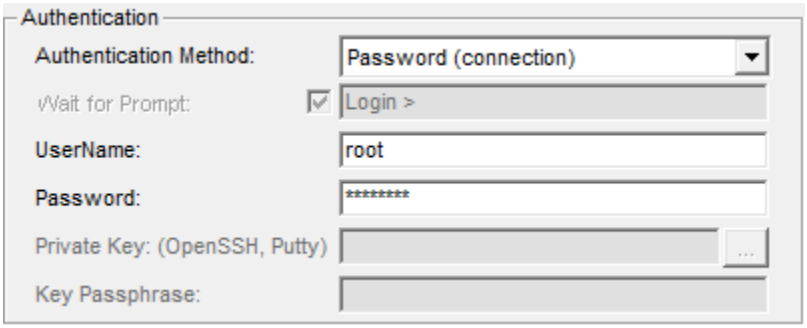
The following RLOGIN configuration settings are available to properly setup your device connection and terminal session.

Setting	Description
Auto Connect	If this option is enabled, then the terminal session will attempt to establish a connection immediately when opened in Indigo.

RLOGIN Host	The RLOGIN server/host should be provided in this configuration field. This entry can be an IP address, computer name, or DNS hostname.
RLOGIN Port	The RLOGIN server/host port can be used if a custom RLOGIN port must be provided. (*The default port for the RLOGIN protocol is port 514*.)
Command To Execute	This command instruction will be automatically sent to the server/host when a connection is established.

RLOGIN Connection Authentication Options

When using a RLOGIN connection, Indigo can provide an option for automated password authentication.
(*The RLOGIN protocol intrinsically supports authentication as part of the protocol.*)



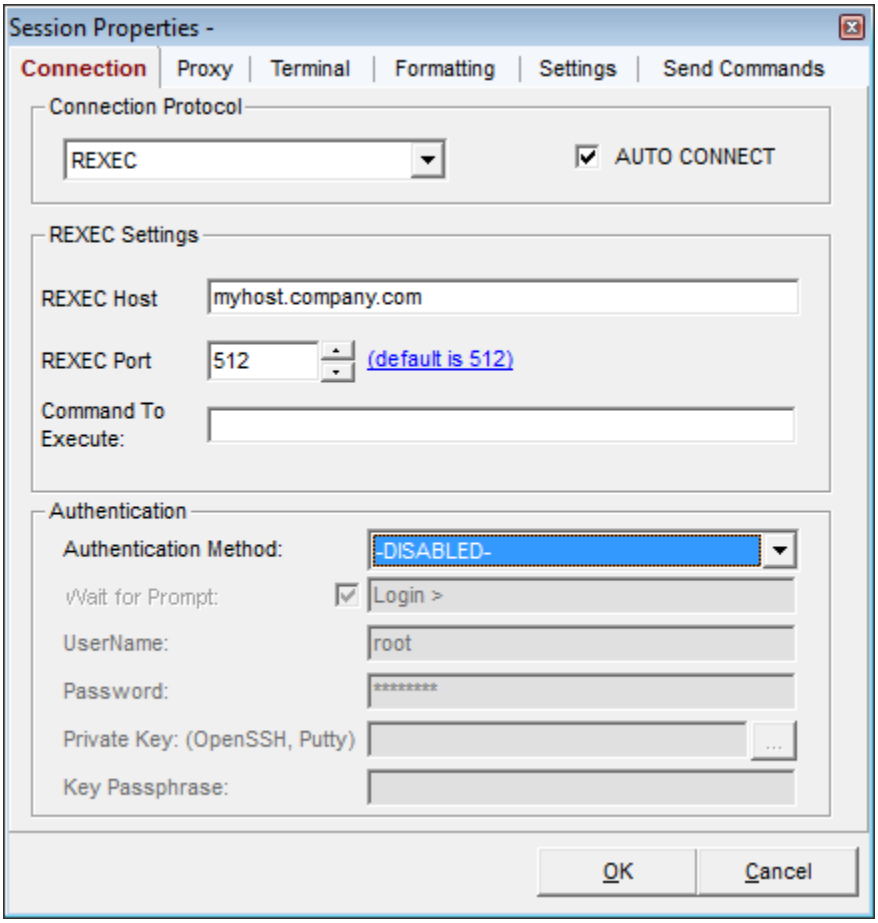
Setting	Description
Authentication Method	This option allows you to set the session authentication method. For RLOGIN connections, Indigo supports the following options: **Authentication Method** / **Description** None — No authentication method is applied. Password (connection) — Use this option to provide basic username and password credentials to the RLOGIN server/host. (*This is a protocol based implementation, where the user credentials are negotiated as part of the RLOGIN protocol at the time of connection.*)
Username	This is the user name that Indigo will provide when authenticating with the RLOGIN server/host.

Password	This is the password that Indigo will provide when authenticating with the RLOGIN server/host.

REXEC Connection Settings

REXEC Connection Settings

The screenshot below depicts the Remote Process Execution (REXEC) connection configuration dialog and settings.



(*For more information on other session property configuration tabs, please see Session Properties.*)

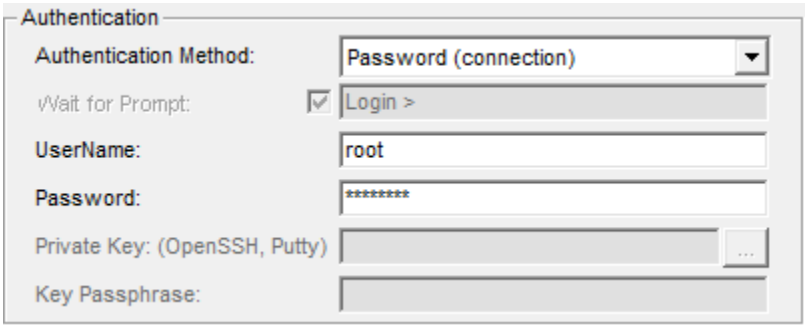
The following REXEC configuration settings are available to properly setup your device connection and terminal session.

Setting	Description
Auto Connect	If this option is enabled, then the terminal session will attempt to establish a connection immediately when opened in Indigo.
REXEC Host	The REXEC server/host should be provided in this configuration field. This entry can be an IP address, computer name, or DNS hostname.

REXEC Port	The REXEC server/host port can be used if a custom REXEC port must be provided. (*The default port for the REXEC protocol is port 512*.)
Command To Execute	This command instruction will be automatically sent to the server/host when a connection is established.

REXEC Connection Authentication Options

When using a REXEC connection, Indigo can provide an option for automated password authentication.
(*The REXEC protocol intrinsically supports authentication as part of the protocol.*)

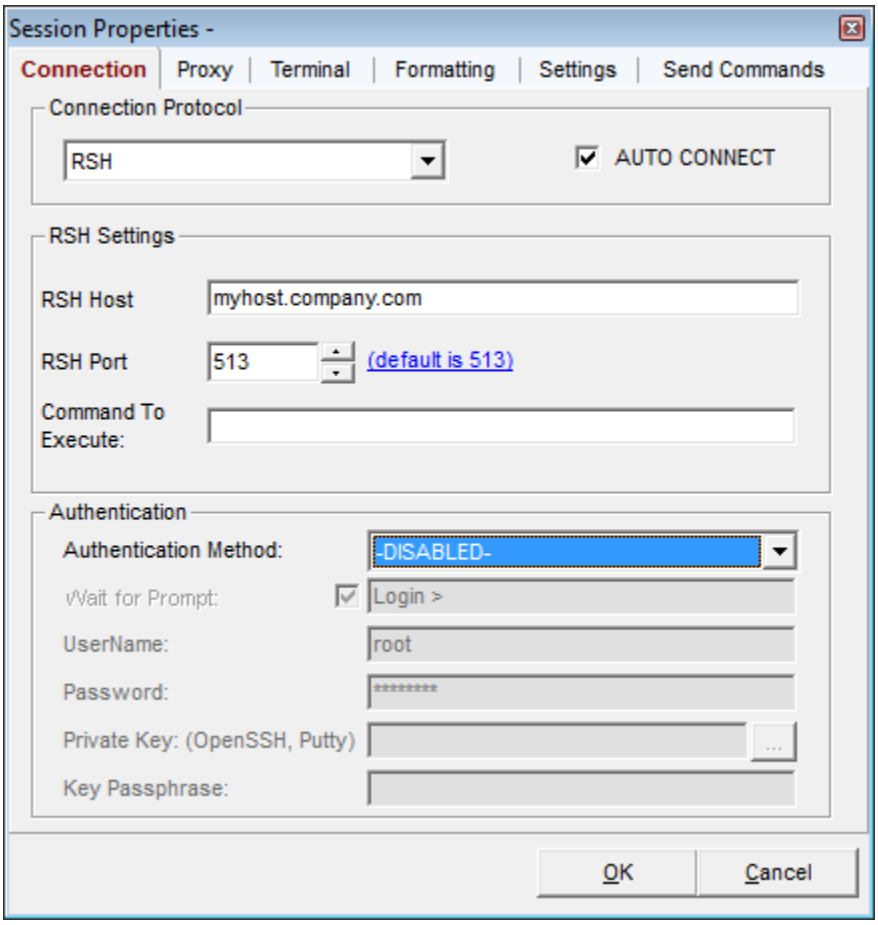


Setting	Description
Authentication Method	This option allows you to set the session authentication method. For REXEC connections, Indigo supports the following options: **Authentication Method** / **Description** None — No authentication method is applied. Password (connection) — Use this option to provide basic username and password credentials to the REXEC server/host. (*This is a protocol based implementation, where the user credentials are negotiated as part of the REXEC protocol at the time of connection.*)
Username	This is the user name that Indigo will provide when authenticating with the REXEC server/host.
Password	This is the password that Indigo will provide when authenticating with the REXEC server/host.

RSH Connection Settings

RSH Connection Settings

The screenshot below depicts the Remote Shell (RSH) connection configuration dialog and settings.



(*For more information on other session property configuration tabs, please see Session Properties.*)

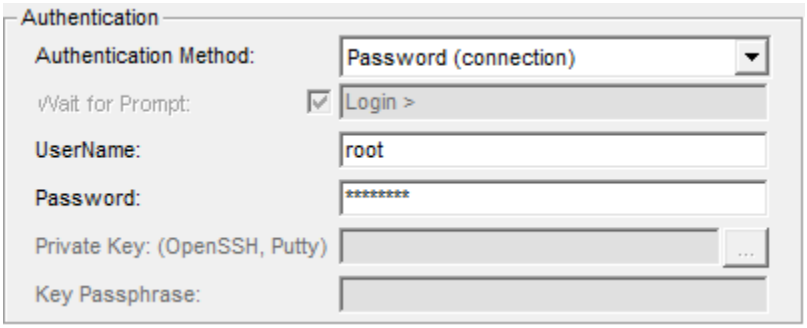
The following RSH configuration settings are available to properly setup your device connection and terminal session.

Setting	Description
Auto Connect	If this option is enabled, then the terminal session will attempt to establish a connection immediately when opened in Indigo.
RSH Host	The RSH server/host should be provided in this configuration field. This entry can be an IP address, computer name, or DNS hostname.
RSH Port	The RSH server/host port can be used if a custom RSH port must be provided. (*The default port for the RSH protocol is port 513.*)

Command To Execute	This command instruction will be automatically sent to the server/host when a connection is established.

RSH Connection Authentication Options

When using a RSH connection, Indigo can provide an option for automated password authentication.
(*The RSH protocol intrinsically supports authentication as part of the protocol.*)

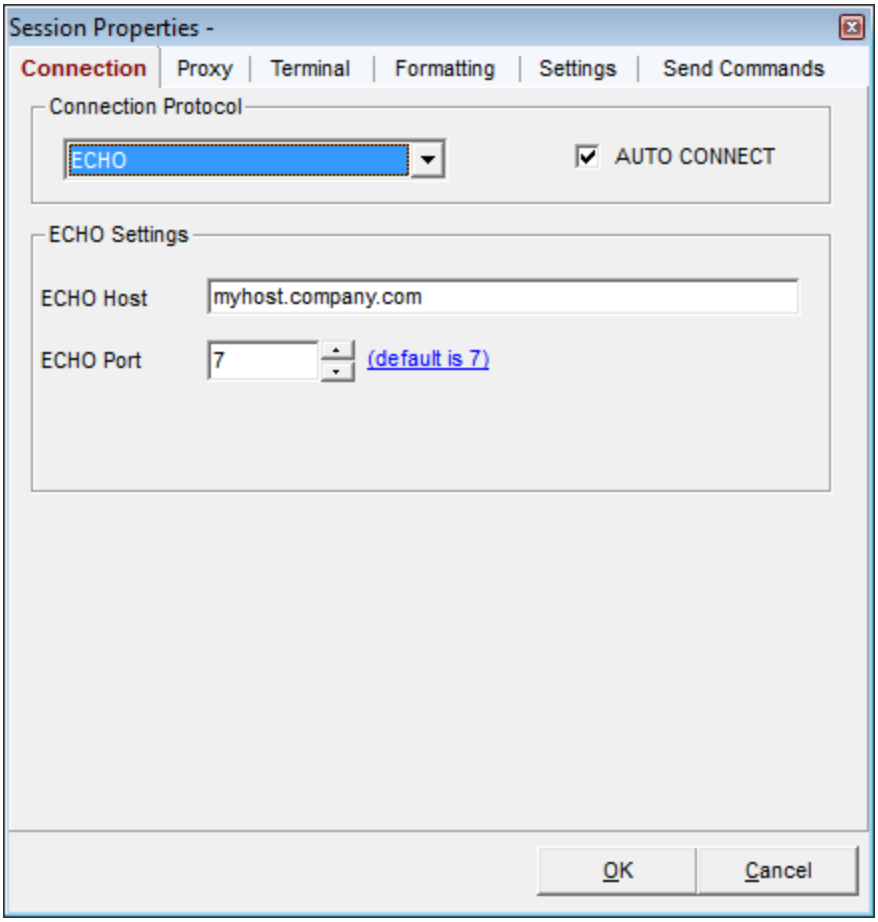


Setting	Description
Authentication Method	This option allows you to set the session authentication method. For RSH connections, Indigo supports the following options: **Authentication Method** / **Description** None — No authentication method is applied. Password (connection) — Use this option to provide basic username and password credentials to the RSH server/host. (*This is a protocol based implementation, where the user credentials are negotiated as part of the RSH protocol at the time of connection.*)
Username	This is the user name that Indigo will provide when authenticating with the RSH server/host.
Password	This is the password that Indigo will provide when authenticating with the RSH server/host.

ECHO Connection Settings

ECHO Connection Settings

The screenshot below depicts the ECHO connection configuration dialog and settings.



(*For more information on other session property configuration tabs, please see Session Properties.*)

The following ECHO configuration settings are available to properly setup your device connection and terminal session.

Setting	Description
Auto Connect	If this option is enabled, then the terminal session will attempt to establish a connection immediately when opened in Indigo.
ECHO Host	The ECHO server/host should be provided in this configuration field. This entry can be an IP address, computer name, or DNS hostname.
ECHO Port	The ECHO server/host port can be used if a custom ECHO port must be provided. (*The default port for the ECHO protocol is port 7.*)

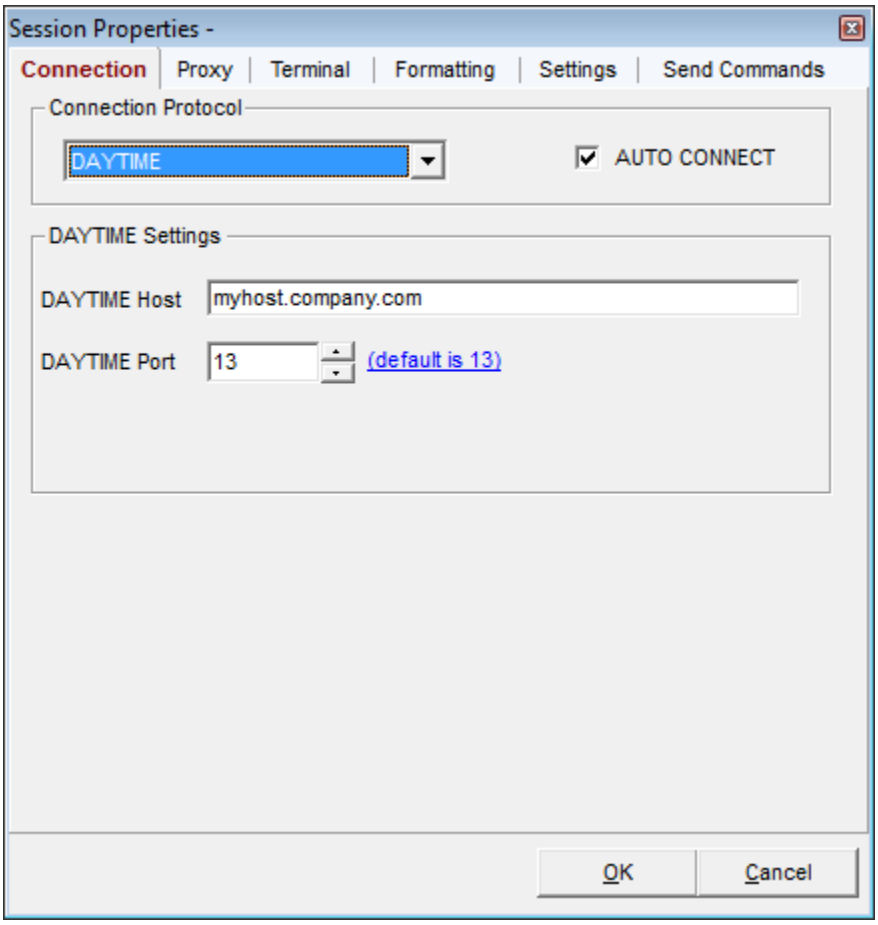
ECHO Connection Authentication Options

When using an ECHO connection, Indigo does not provide automated user authentication.

DAYTIME Connection Settings

DAYTIME Connection Settings

The screenshot below depicts the DAYTIME connection configuration dialog and settings.



(*For more information on other session property configuration tabs, please see Session Properties.*)

The following DAYTIME configuration settings are available to properly setup your device connection and terminal session.

Setting	Description
Auto Connect	If this option is enabled, then the terminal session will attempt to establish a connection immediately when opened in Indigo.
DAYTIME Host	The DAYTIME server/host should be provided in this configuration field. This entry can be an IP address, computer name, or DNS hostname.
DAYTIME Port	The DAYTIME server/host port can be used if a custom DAYTIME port must be provided. (*The default port for the DAYTIME protocol is port 13.*)

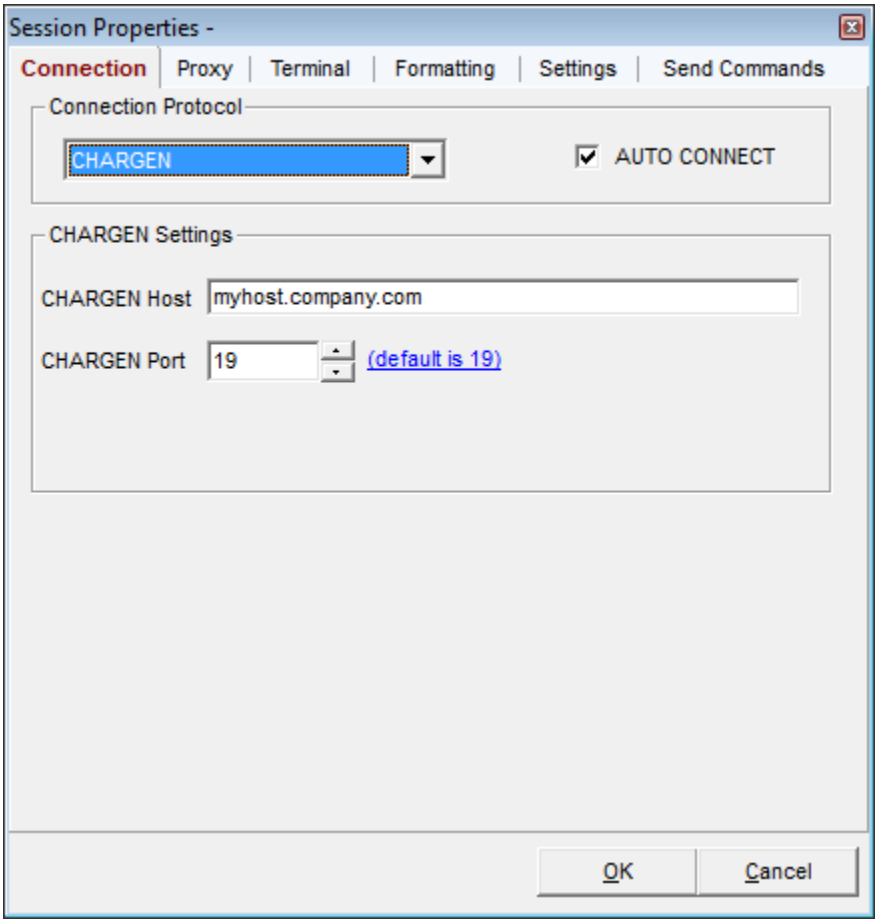
DAYTIME Connection Authentication Options

When using an DAYTIME connection, Indigo does not provide automated user authentication.

CHARGEN Connection Settings

CHARGEN Connection Settings

The screenshot below depicts the Character Generator (CHARGEN) connection configuration dialog and settings.



(*For more information on other session property configuration tabs, please see Session Properties.*)

The following CHARGEN configuration settings are available to properly setup your device connection and terminal session.

Setting	Description
Auto Connect	If this option is enabled, then the terminal session will attempt to establish a connection immediately when opened in Indigo.
CHARGEN Host	The CHARGEN server/host should be provided in this configuration field. This entry can be an IP address, computer name, or DNS hostname.

CHARGEN Port	The CHARGEN server/host port can be used if a custom CHARGEN port must be provided. (*The default port for the CHARGEN protocol is port 13*.)

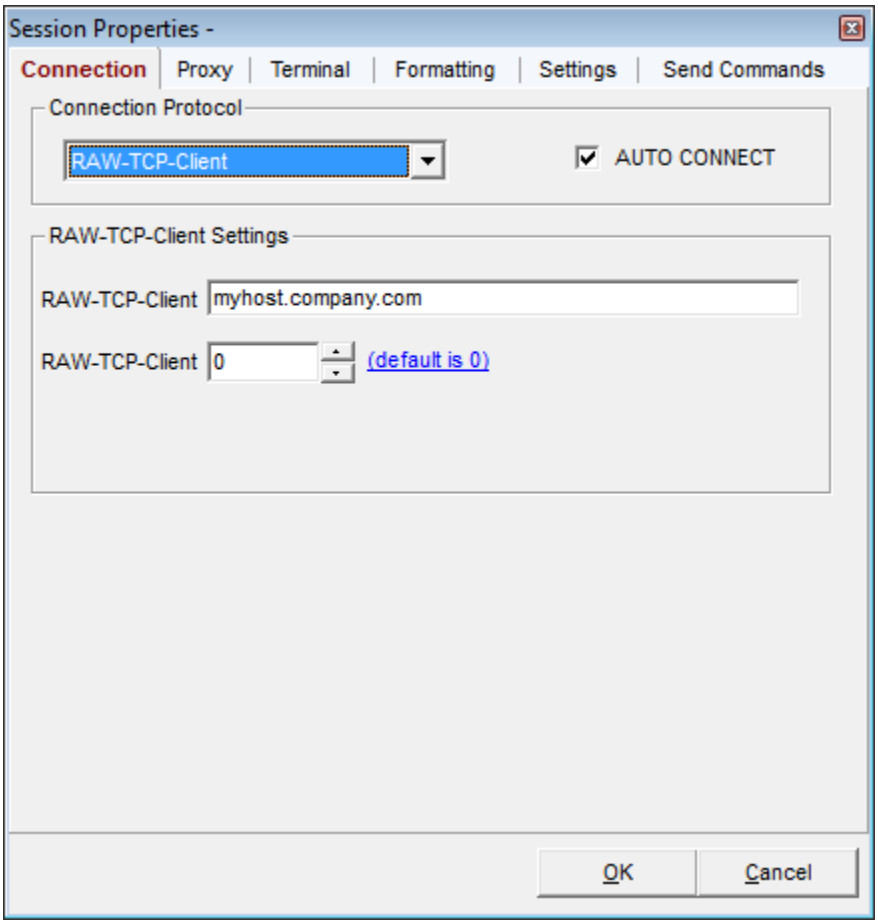
CHARGEN Connection Authentication Options

When using an CHARGEN connection, Indigo does not provide automated user authentication.

Raw TCP Client Connection Settings

Raw TCP Client Connection Settings

The screenshot below depicts the RAW-TCP-Client connection configuration dialog and settings.



(*For more information on other session property configuration tabs, please see Session Properties.*)

The following RAW-TCP-Client configuration settings are available to properly setup your device connection and terminal session.

Setting	Description
Auto Connect	If this option is enabled, then the terminal session will attempt to establish a connection immediately when opened in Indigo.

RAW-TCP-Client Host	The RAW-TCP-Client server/host should be provided in this configuration field. This entry can be an IP address, computer name, or DNS hostname.
RAW-TCP-Client Port	The RAW-TCP-Client server/host port should be used to provide the specific remote TCP port to connect to.

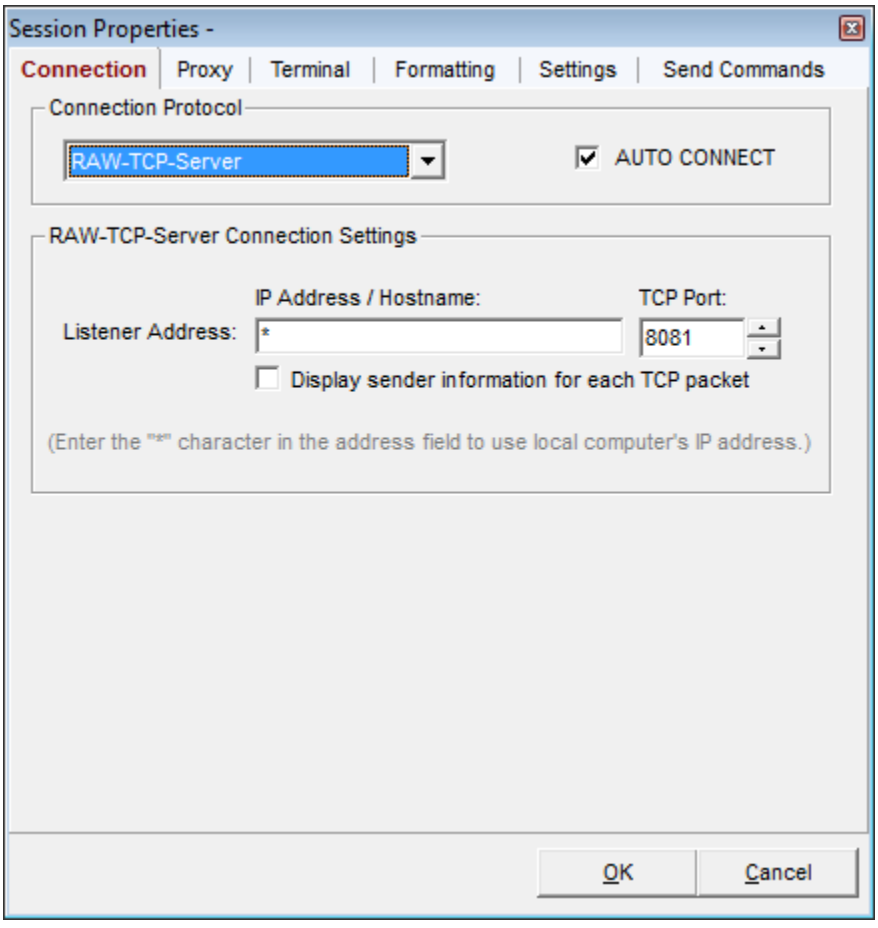
Raw TCP Client Connection Authentication Options

When using an RAW-TCP-Client connection, Indigo does not provide automated user authentication.

Raw TCP Server Connection Settings

Raw TCP Server Connection Settings

The screenshot below depicts the RAW-TCP-Server connection configuration dialog and settings.



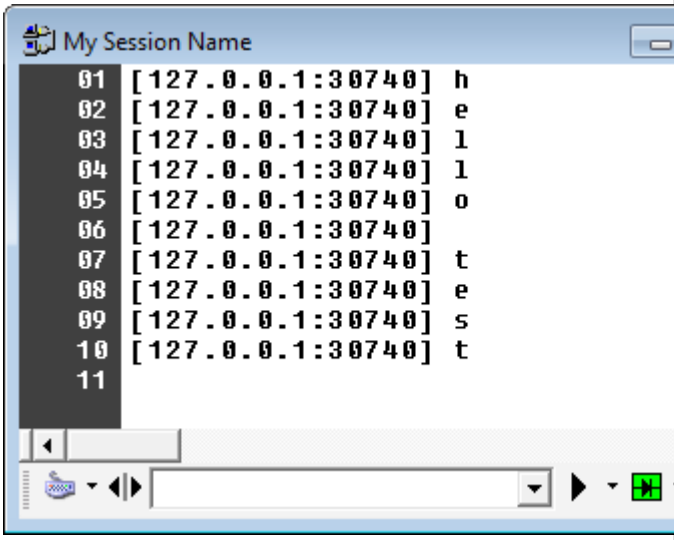
(*For more information on other session property configuration tabs, please see Session Properties.*)

The following RAW-TCP-Server configuration settings are available to properly setup your device connection and terminal session.

Setting	Description

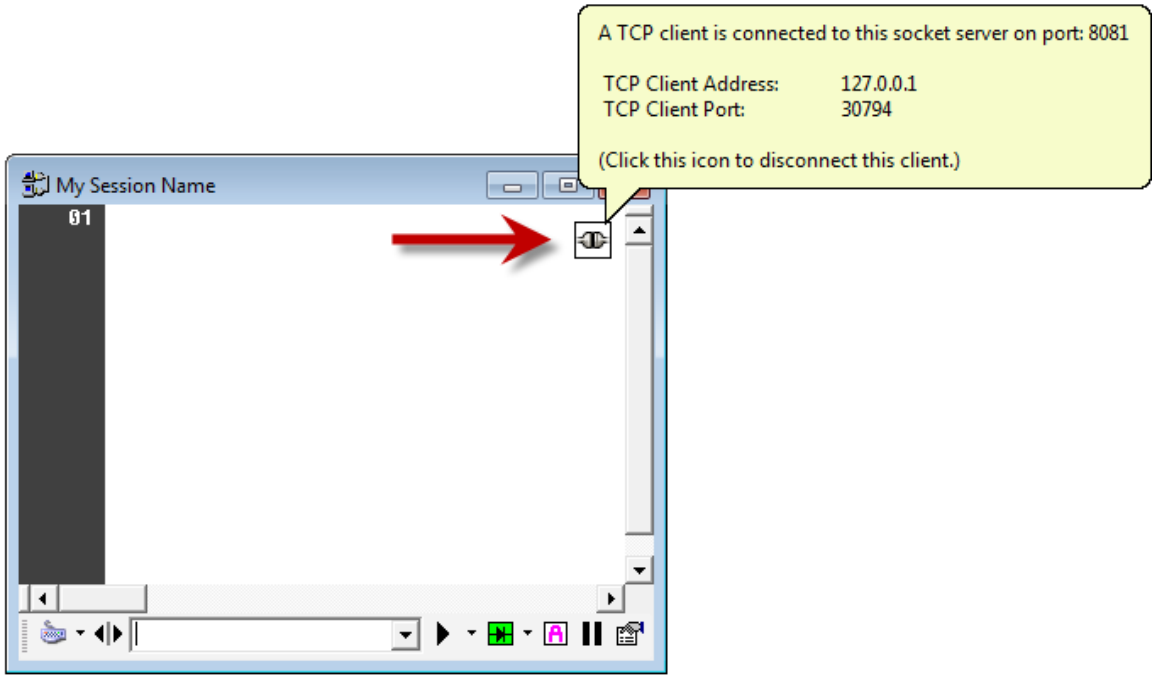
<table>
<tr><td>Auto Connect</td><td>If this option is enabled, then the terminal session will attempt to establish a connection immediately when opened in Indigo.</td></tr>
<tr><td>Listener Address</td><td>This field must contain the IP address or computer hostname on which the TCP server should host a listener socket.

<table><tr><th>Special Listener Names</th><th>Description</th></tr><tr><td>*</td><td>If an asterisk character is listed as the listener address, then Indigo will apply the computer's default IP address.
(If your computer supports multiple NICs or IP addresses, you may need to distinctly specify which address you want to listen on.)</td></tr><tr><td><code>127.0.0.1</code></td><td>This address represents the local machine and only processes running on this computer can access this listener address.</td></tr><tr><td><code>localhost</code></td><td>This address represents the local machine and only processes running on this computer can access this listener address.
(This is identical to the 127.0.0.1 address, just an alternate friendly name representation.)</td></tr></table></td></tr>
<tr><td>Listener Port</td><td>This field must contain the IP port number on which the TCP server should host a listener socket.
This port must be an available, unused TCP port on the computer where Indigo is running.</td></tr>
</table>

Display Sender Info	If this option is enabled, then Indigo will include a sender's IP address and port on each packet of data received in the Standard Terminal View Mode. See screenshot below for example: 

Raw TCP Server Connected Client

When using an RAW-TCP-Server connection, and a client has successfully connected to the TCP socket server, Indigo will display a small connection icon in the upper right corner of the terminal session window.
You can hover of this icon when the mouse pointer to reveal a tooltip with the connect client's details.
You can click this icon to forcefully disconnect the client socket.



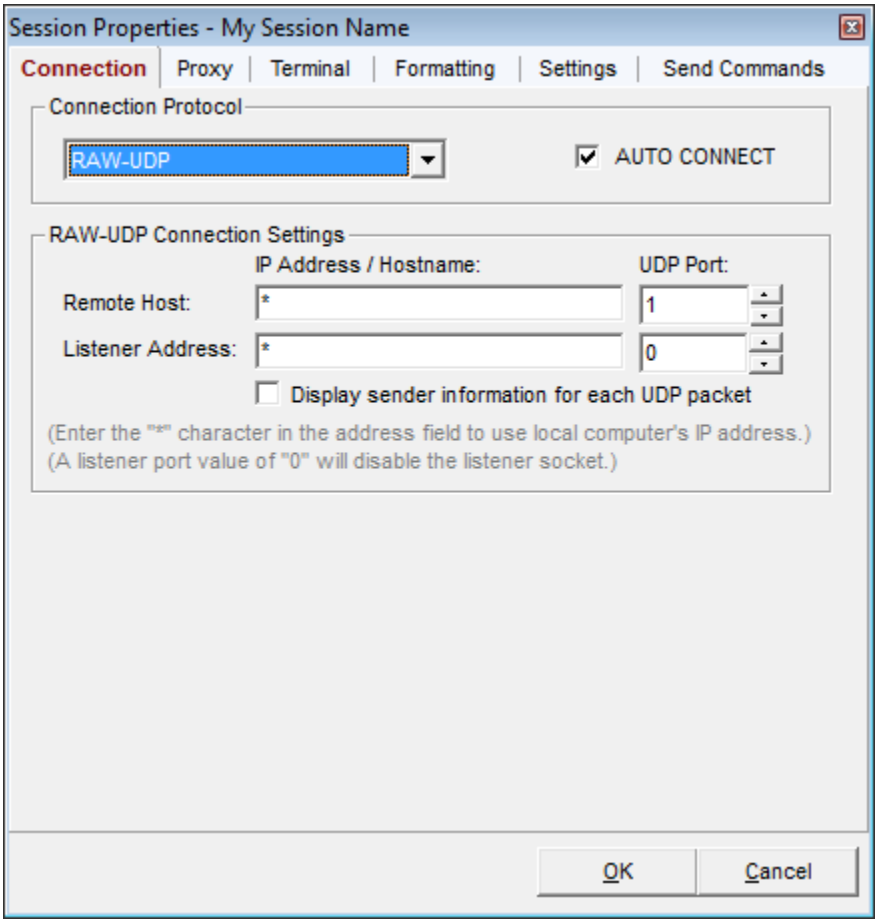
Raw TCP Server Connection Authentication Options

When using an RAW-TCP-Server connection, Indigo does not provide user authentication.

Raw UDP Connection Settings

Raw UDP Connection Settings

The screenshot below depicts the RAW-UDP connection configuration dialog and settings.



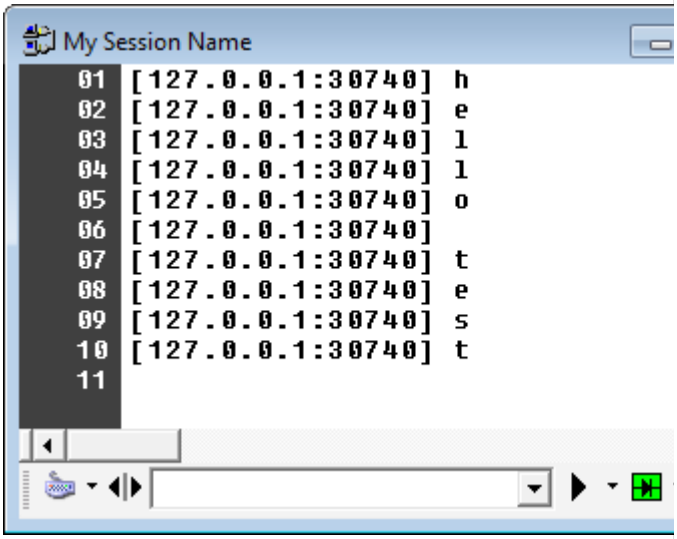
(*For more information on other session property configuration tabs, please see Session Properties.*)

The following RAW-UDP configuration settings are available to properly setup your device connection and terminal session.

Setting	Description
Auto Connect	If this option is enabled, then the terminal session will attempt to establish a connection immediately when opened in Indigo.
Remote Host Address	This field should contain the IP address or computer hostname to which the UDP sender should send UDP packets to.
Remote Host Port	This field should contain the UDP port number to which the UDP sender should send UDP packets to.

<table>
<tr>
<td>Listener Address</td>
<td>This field may contain the IP address or computer hostname on which the UDP listener should open a listener socket.
<table>
<tr><th>Special Listener Names</th><th>Description</th></tr>
<tr><td>*</td><td>If an asterisk character is listed as the listener address, then Indigo will apply the computer's default IP address.
(If your computer supports multiple NICs or IP addresses, you may need to distinctly specify which address you want to listen on.)</td></tr>
<tr><td><code>127.0.0.1</code></td><td>This address represents the local machine and only processes running on this computer can access this listener address.</td></tr>
<tr><td><code>localhost</code></td><td>This address represents the local machine and only processes running on this computer can access this listener address.
(This is identical to the 127.0.0.1 address, just an alternate friendly name representation.)</td></tr>
</table>
(Set the UDP listener port to "0" to disable the UDP listener.)</td>
</tr>
<tr>
<td>Listener Port</td>
<td>This field must contain the UDP port number on which the UDP listener should host a listener socket.
This port must be an available, unused UDP port on the computer where Indigo is running.

(Set the UDP listener port to "0" to disable the UDP listener.)</td>
</tr>
</table>

Display Sender Info	If this option is enabled, then Indigo will include a sender's IP address and port on each packet of data received in the Standard Terminal View Mode. See screenshot below for example: 

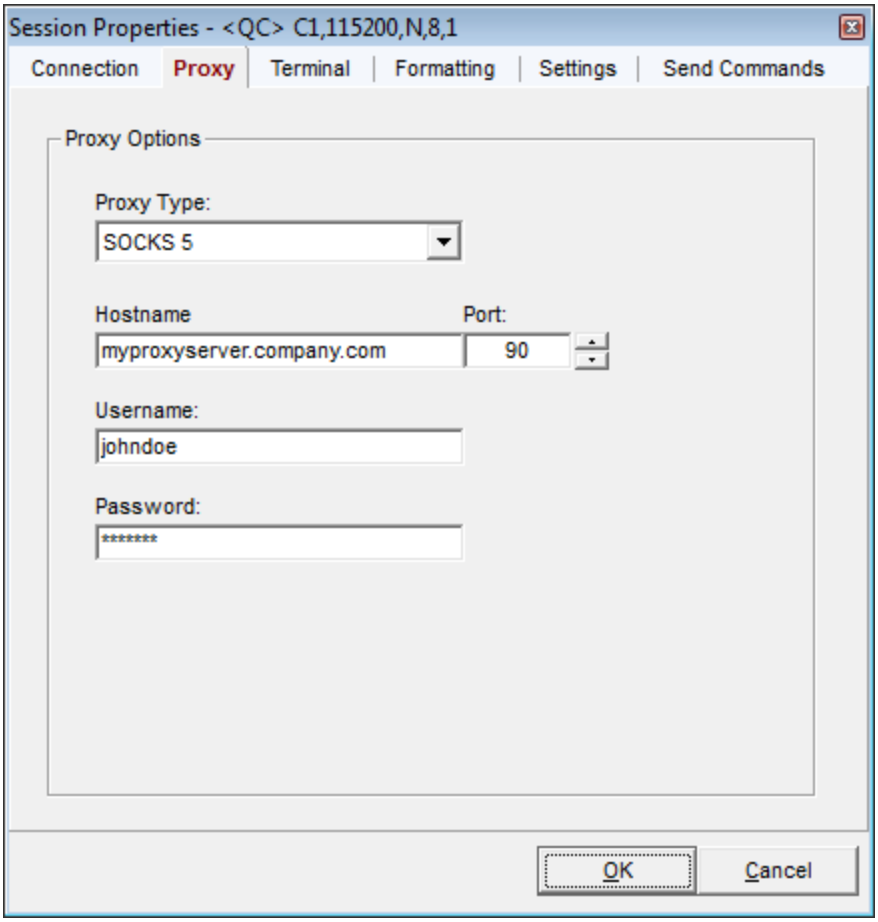
Raw UDP Connection Authentication Options

When using an RAW-UDP connection, Indigo does not provide user authentication.

Proxy Settings

Overview

The *Proxy* tab in the *Session Properties* editor tab is used to configure Indigo to communicate via a network proxy server.
If your environment requires a proxy server for an outbound network connection, this proxy configuration may be required.



Proxy Server Settings

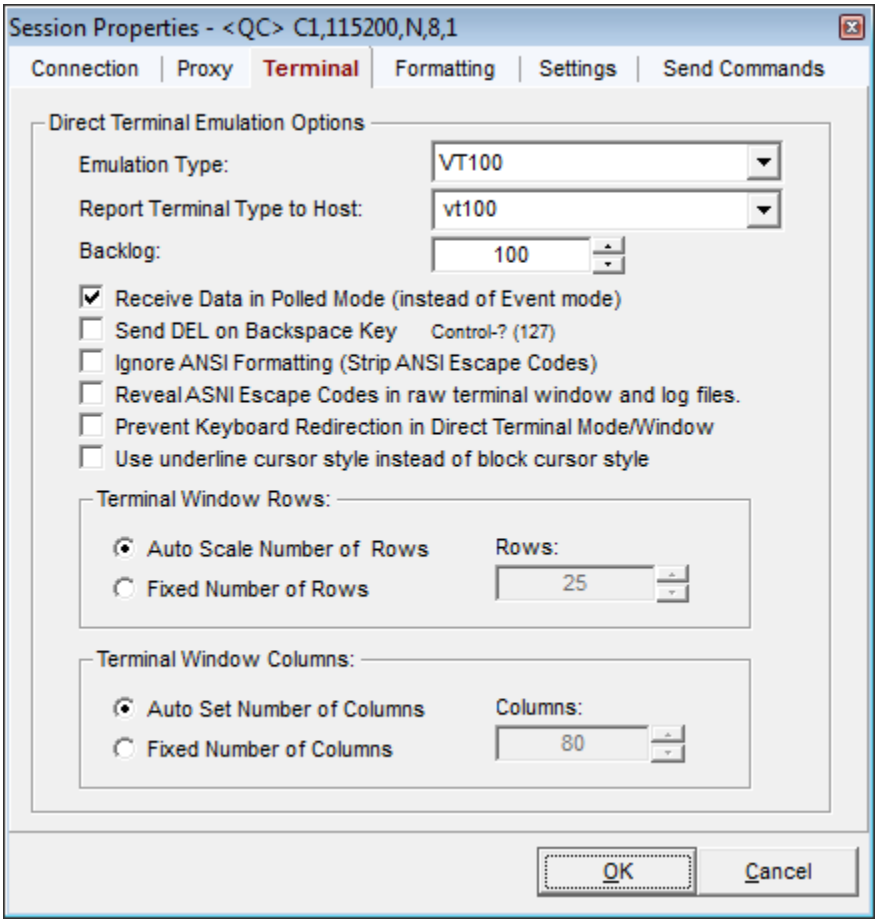
The settings listed below are required to configure Indigo for your proxy server connection.

Setting	Description
Proxy Type	Proxy server type/protocol **Supported Proxy Types** **NONE** **SOCKS 4** **SOCKS 4a** **SOCKS 5** **STANDARD** **RELAY**
Hostname/Address	Proxy server IP address, hostname, or DNS.
Port	Proxy server TCP/IP port.
Username	Proxy server user name.
Password	Proxy server user password.

Terminal Emulation Settings

Overview

The *Terminal* tab in the *Session Properties* editor tab is used to configure the terminal emulation session properties. If your device/server/host requires the use of a terminal emulation protocol, then the terminal emulation configuration can be applied here.



Terminal Emulation Types

Indigo supports the following terminal emulation types.
More information on the terminal emulation support in Indigo can be found here.

Terminal Emulation Types (Protocol)	Report to Terminal Type (Default)
None	`none`
ANSI	`ANSI`
VT100	`vt100`
Linux	`linux | xterm`

Terminal Emulation Properties

The settings listed below are available to configure the terminal emulation settings/behavior for your terminal session.

Setting	Description
Emulation Type	Select the terminal emulation type/protocol that Indigo should use for this terminal session. The list of available terminal emulation types is listed a bove.
Report Terminal Type to Host	When Indigo connects to a device or host using a terminal emulation protocol, Indigo can send a terminal type identifier to the host to help negotiate the supported and preferred emulation protocol to be applied. When you select an emulation type, a reporting terminal type identifier will be automatically applied based on the emulation type selected. You can override this settings with another type from the list or by manually typing an identifier string into the field.
Backlog	When using the Terminal Emulation view mode, the session data window supports a backlog to record previous lines of data. The number of lines to maintain in the backlog can be configured using this property. (*Standard view mode does not use the backlog as it supports a continuous listing of scrolled lines of data.*)
Receive Data in Polled Mode	This is a special setting that controls how Indigo collects data from the remote host. Typically Indigo uses an event model to process data as soon as the information is available. If this setting is enabled, Indigo will sample and process received data at timed intervals. This settings can help reduce CPU load by processing larger chunks of data on a timed basis if the device/host emits frequent data output. This setting only applies to TELNET, SSH, RAW TCP client, RAW TCP Server, and UDP connection protocols.
Send DEL on Backspace key	Some remote devices/hosts do not understand the DEL instruction byte (0x7F). If you enable this settings, Indigo will substitute the instruction when the DEL keyboard button is pressed (*i n the Terminal Emulation view mode*) with the BACKSPACE instruction byte (0x08).

Ignore ANSI formatting ***(Strip ANSI Escape Codes)***	If this option is enabled, then Indigo will remove any ANSI Escape Codes/Sequences from the data displayed in the session data window. This option will prevent your data from being displayed corrected in the Terminal Emulation view mode because it is ignoring the formatting instructions. This option would typically be used if a debugging scenario or a case where you needed to capture the contextual data but did not want to capture any of the terminal emulation escape sequences.
Reveal ANSI Escape Codes **(*standard view mode and log file*)**	If this option is enabled, then Indigo will display the ANSI Escape Codes/Sequences the data displayed in the session data window of the Standard view mode. By default, Indigo automatically strips these escape codes from the Standard view mode since they are intended as terminal instructions, not context data. This option would typically be used if a debugging scenario where you needed to capture the all data including the raw terminal emulation escape sequences/codes.
Prevent Keyboard Redirection **(*Terminal Emulation view mode*)**	If this option is enabled, then in the Terminal Emulation view mode, Indigo will never enable keyboard redirection. More information on keyboard redirection can be obtained here.
User underline cursor style instead of block cursor style	By default Indigo uses a block sytle cursor in the Terminal Emulation view mode. Enabling this option will cause Indigo to use an underline style of cursor instead. This may be desirable/preferred for some terminal hosts/devices.

Terminal Window Rows

By default, in Terminal Emulation view mode, Indigo coordinates the virtual screen size (rows and columns) with the terminal host.
This auto sizing negotiation allow Indigo to render the maximum number of rows based on the available screen real estate (size).
The sizing negotiation is dependent on the host's capability of accepting dynamic sizing.

Some device/hosts may required or prefer a fixed number of rows to properly render data. Indigo also supports fixed a row count option.

Setting	Description
Auto Scale Number of Rows	Indigo will calculate and negotiate with the host the number of rows available based on the screen/window size.
Fixed Number of Rows	Indigo will use a fixed number of rows.
Rows (*count*)	The number of rows to use when configured to use a fixed number of rows.

Terminal Windows Columns

By default, in Terminal Emulation view mode, Indigo coordinates the virtual screen size (rows and columns) with the terminal host.
This auto sizing negotiation allow Indigo to render the maximum number of columns based on the available screen real estate (size).
The sizing negotiation is dependent on the host's capability of accepting dynamic sizing.

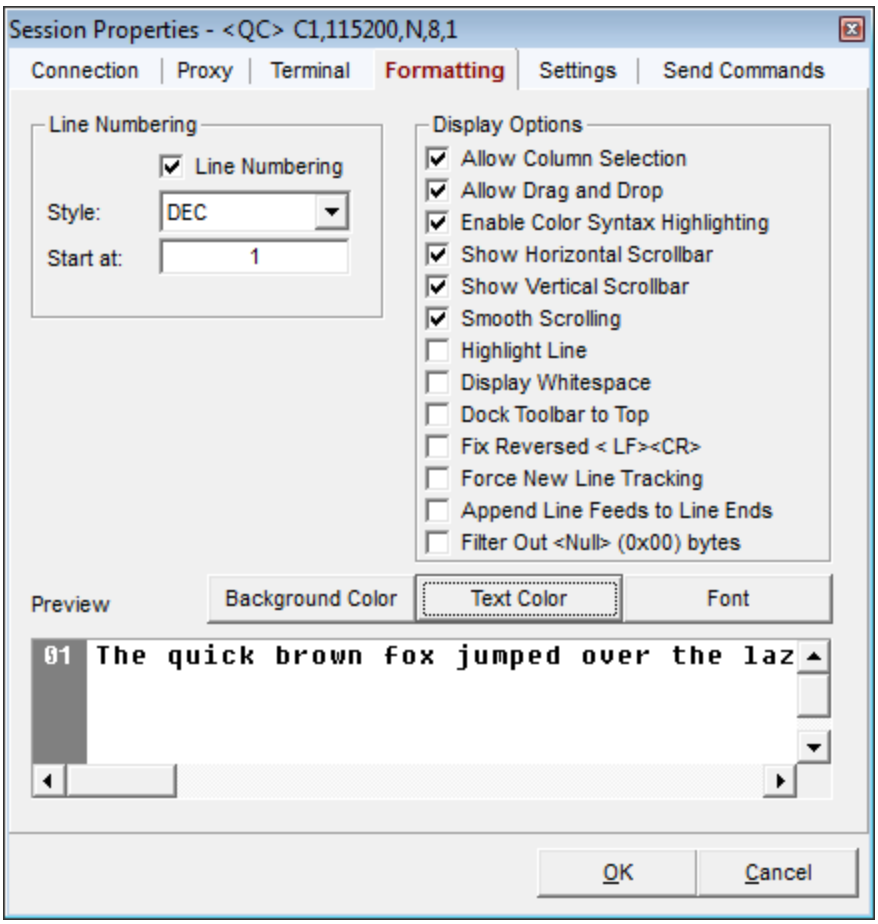
Some device/hosts may required or prefer a fixed number of columns to properly render data. Indigo also supports fixed a column count option.

Settings	Description
Auto Scale Number of Columns	Indigo will calculate and negotiate with the host the number of columns available based on the screen/window size.
Fixed Number of Columns	Indigo will use a fixed number of column.
Columns (*count*)	The number of columns to use when configured to use a fixed number of columns.

Formatting Settings

Overview

The *Formatting* tab in the *Session Properties* editor tab is used to configure some of the session user interface formatting and behavior .



Line Numbering

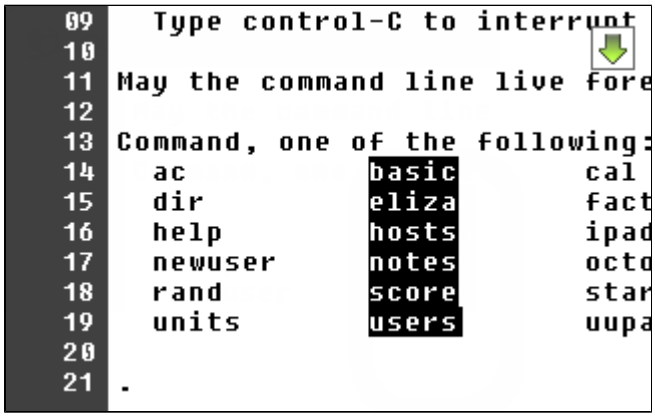
The session formatting options include the ability to configure how line numbering is displayed.

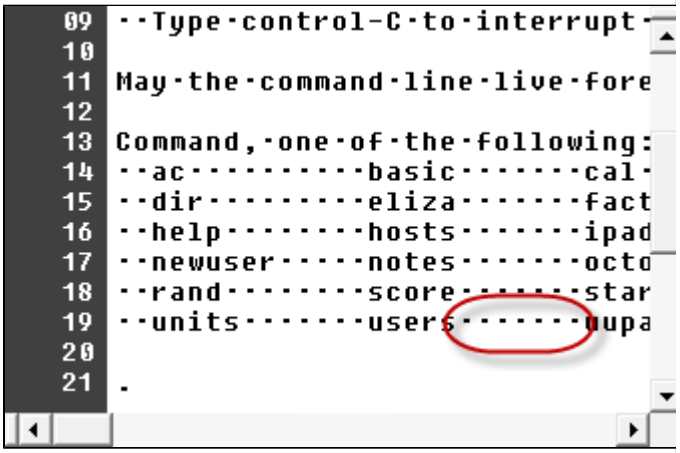
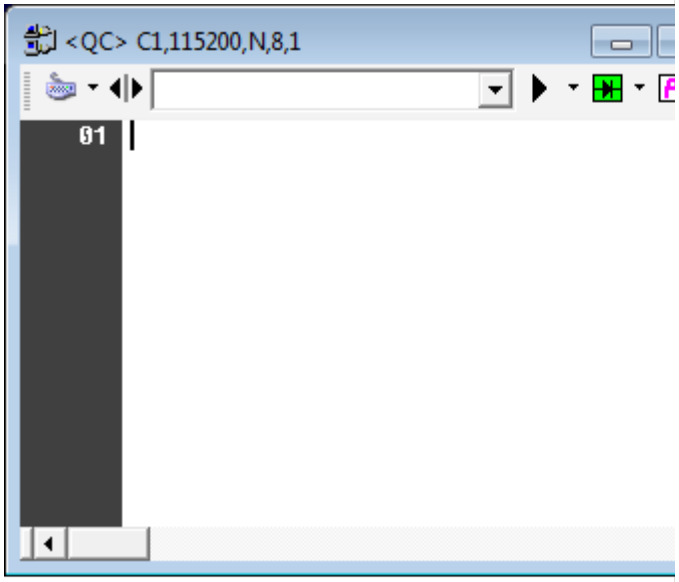
Setting	Description
Line Numbering	A checkbox is provided to enable or disable line numbering. Line numbering can also be enabled or disabled via the Edit menu.
Style/Format	Line numbering can be rendered in the following data formats: **Data Formats** BINARY DECIMAL HEXADECIMAL OCTAL

Start At	Line numbering can be configured to start at a specific line number if preferred. Typically this option is used to define the line numbering a zero-based or one-based.

Data Display Options

The session formatting options below include control over data and visual representations.

Setting	Description
Allow Column Selection	In the Standard view mode, if this option is enabled you can hold down the CTRL key and select columns of text. 
Allow Drag and Drop	In the Standard view mode, if this option is enabled you can select text in the session data window and drag and drop to text field in Indigo or to another application.
Enable Color Syntax Highlighting	In the Standard view mode, if this option is enabled the session will render colored syntax based on color syntax filters.
Show Horizontal Scrollbar	In the Standard view mode, if this option is enabled the session will display a horizontal scrollbar in the session data window.
Show Vertical Scrollbar	In the Standard view mode, if this option is enabled the session will display a vertical scrollbar in the session data window.
Smooth Scrolling	In the Standard view mode, if this option is enabled the scrolling operations will refresh the data window at a faster rate to make it more visually appealing.
Highlight Line	In the Standard view mode, if this option is enabled the session will display a line highlighter on the selected data row. This option can also be enabled/disabled via the Edit menu.

Display Whitespace	In the Standard view mode, if this option is enabled, space characters (whitespace) display a centered dot symbol to indicate that an empty space is present in the data. 
Dock Toolbar to Top	In the Standard view mode, if this option is enabled the session toolbar will be displayed at the top of the session window instead of the bottom. 

Fix Reversed <LF><CR>	Most devices/hosts output line data ending with either a *Line Feed* character only or a *Carriage Return* followed by a *Line Feed* character. Indigo handles the rendering of these type of line properly. However, some device may output lines ending with a *Line Feed* followed by a *Carriage Return* character which is not the standard behavior. If Indigo receives this it can cause additional line separation/spacing in the Standard view mode. If this option is enabled, Indigo will detect when these line ending characters that are in the reverse order and auto correct them so that Indigo can render the lines correctly.
Force New Line Tracking	In the Standard view mode, if this option is enabled then all newly received data is automatically displayed in view in the session data window. This option will force the data window to automatically scoll to the bottom line to display new data. If this option is disabled, Indigo uses the standard line tracking behavior described here.
Append Line Feeds to Line Ends	Most devices/hosts output line data ending with either a *Line Feed* character only or a *Carriage Return* followed by a *Line Feed* character. Indigo handles the rendering of these type of line properly. However, some device may output lines ending with only a *Carriage Return* character which is not the standard behavior. If Indigo receives this it can cause undesired line separation/spacing in the Standard view mode. If this option is enabled, Indigo will detect when these line ending characters and automatically include a line feed so that Indigo can render the lines correctly.
Filter Out <Null> (0x00) bytes	Null bytes (0x00) do not have a visual character to properly display textual data. These null bytes can cause undesirable characters in the data window. If this option is enable, then Indigo will detect and filter out all null bytes from the data stream.

Data Window Color & Font

The session formatting options below control the coloring and font Indigo uses to render the data in the session data window.

Setting	Description

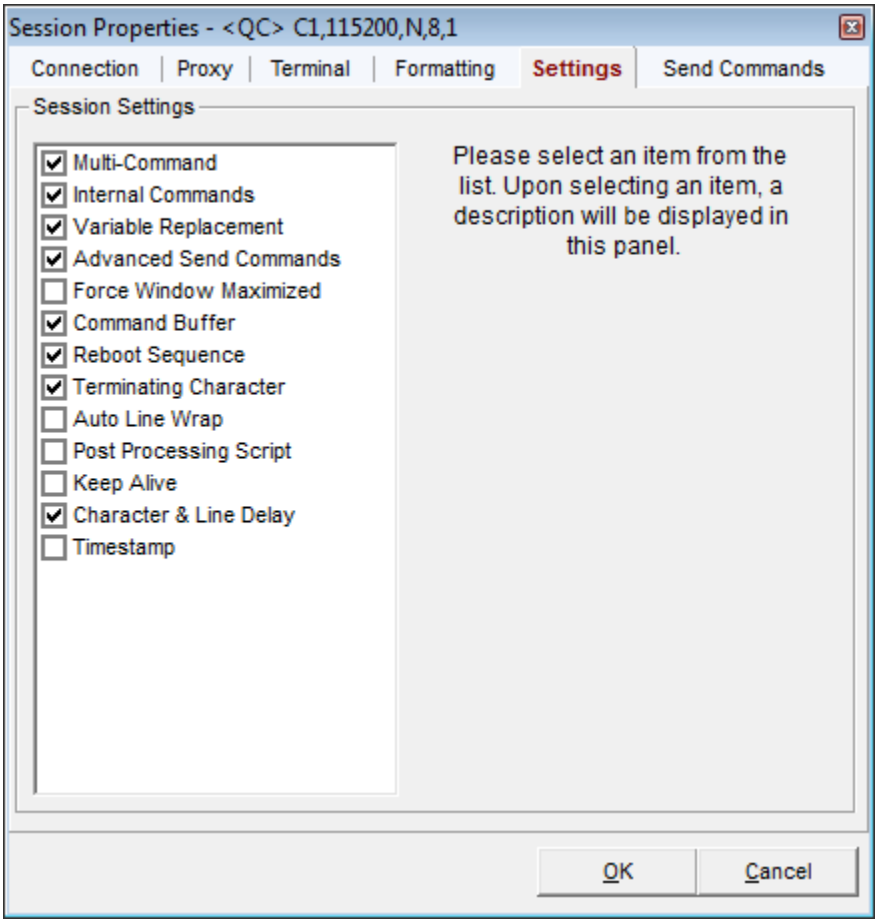
Background Color	This option allow you to set the session's background window color.
Text Color	This option allow you to set the session's textual data (foreground) color.
Font	This option allow you to set the session's textual data font used to render data.

> When using the Terminal Emulation view mode and connected to a terminal emulation protocol that controls background and text color, these user defined colors may be overridden.

Advanced Session Settings

Overview

The *Settings* in the *Session Properties* editor tab is used to enabled, disable, and configure some of the more advanced tools and options for a terminal session.
The individual features/tools are listed on the left side of the screen and include check boxes to designate if the feature is enabled or disabled.
To enable or disable a feature, you must place or remove the check from the check box in the feature listing.

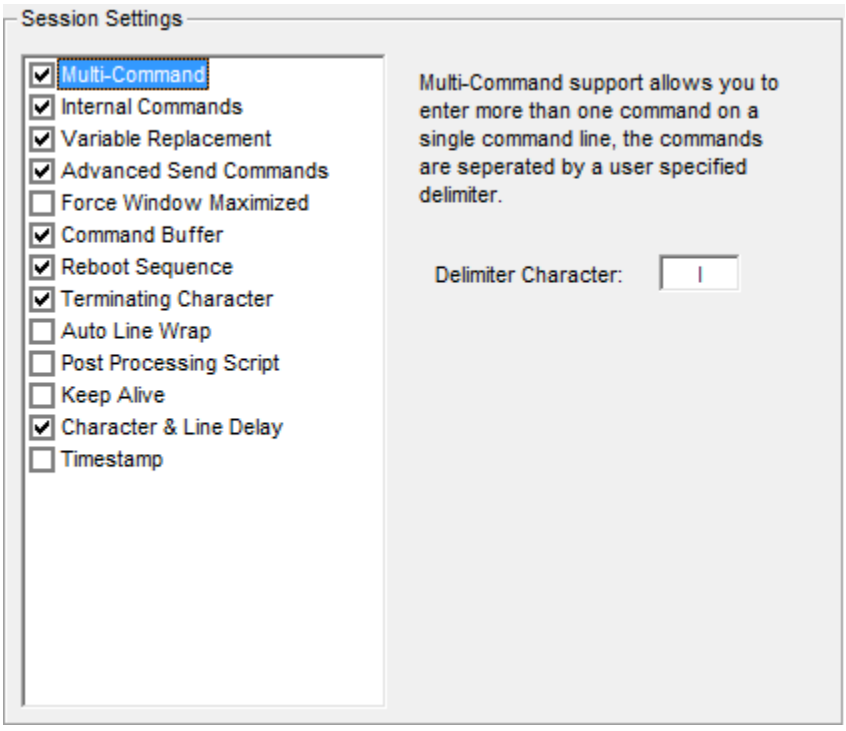


If you select a feature in the listing, a feature description and additional feature configuration options will appear on the right side panel.
Please select from the following feature sections for more information on each feature:

- Multi-Command
- Internal Commands
- Variable Replacement
- Advanced Send Commands
- Force Window Maximized
- Command Buffer
- Reboot Sequence
- Terminating Characters/Bytes
- Auto Line Wrap
- Post Processing Script
- Keep Alive
- Character & Line Delay
- Timestamp

Multi-Command

If this option is enabled, the terminal session will support Multi-Commands.
You can also change the multi-command delimiter character on this configuration panel.



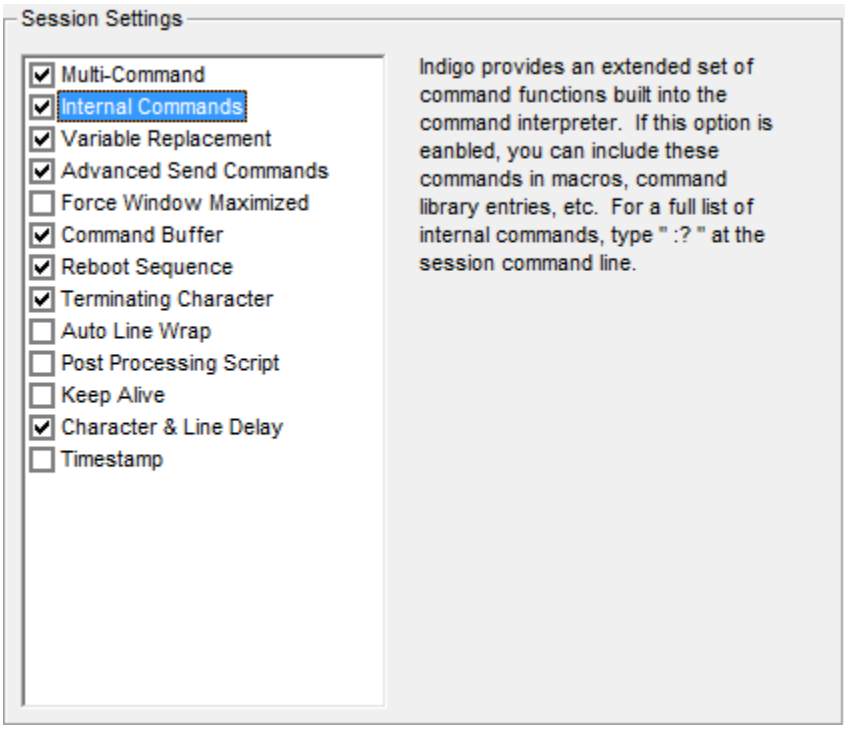
Tip

Some devices/hosts may need the use of the pipe "|" character thus you can choose to disable the multi-command or change the multi-command delimiter to another character.

Internal Commands

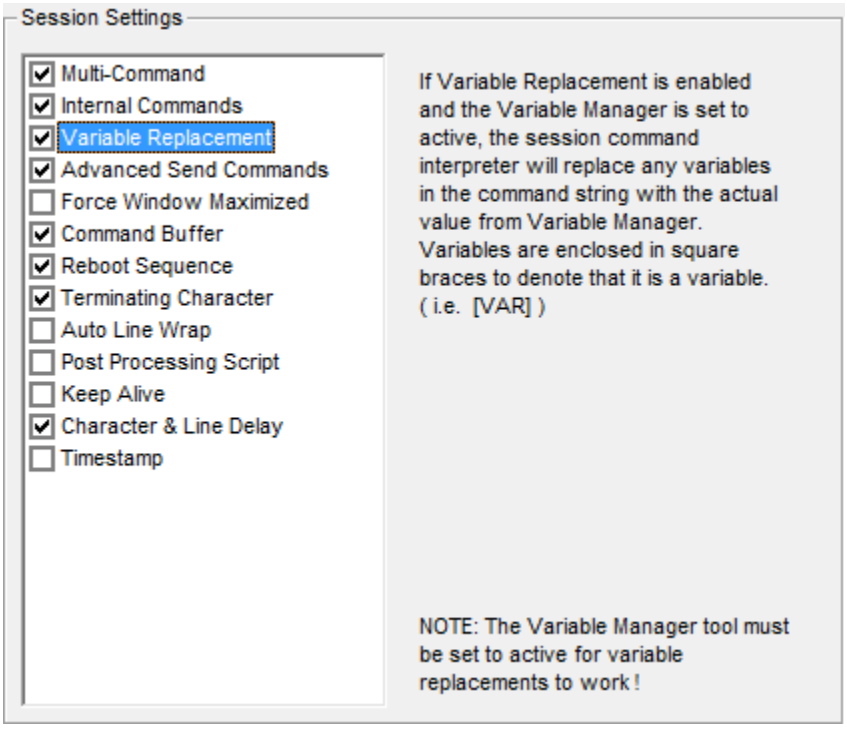
The Internal Commands feature can be enabled or disabled on this configuration panel.

If the internal command processor is interfering with your terminal session, then you can disable it for the terminal session.



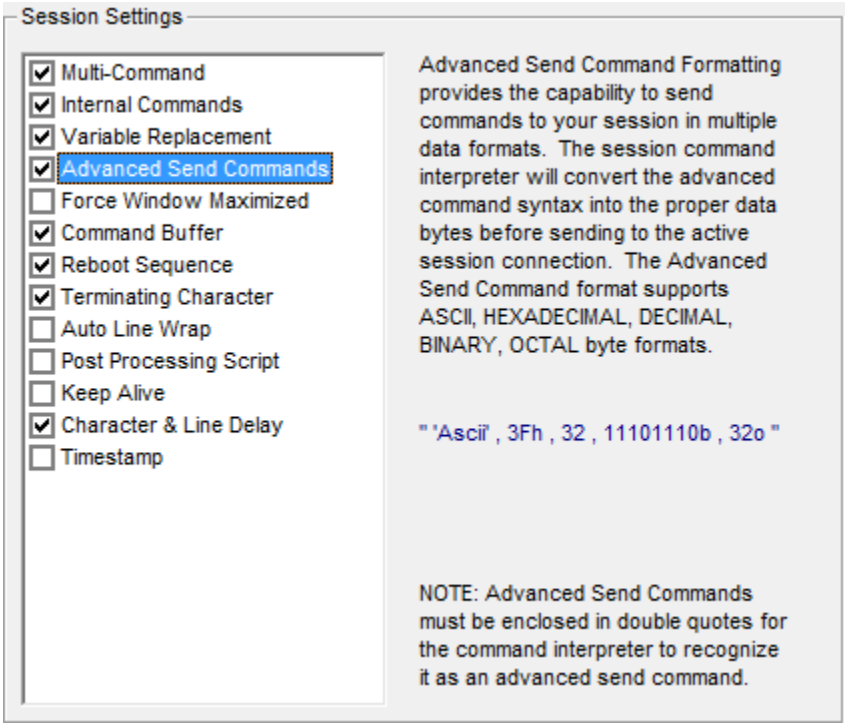
Variable Replacement

Indigo support a variable replacement feature allowing defined variables to be included in instruction commands and the Indigo interpreter would replaced the variables with the actual values.
This feature can be disabled for the terminal session.



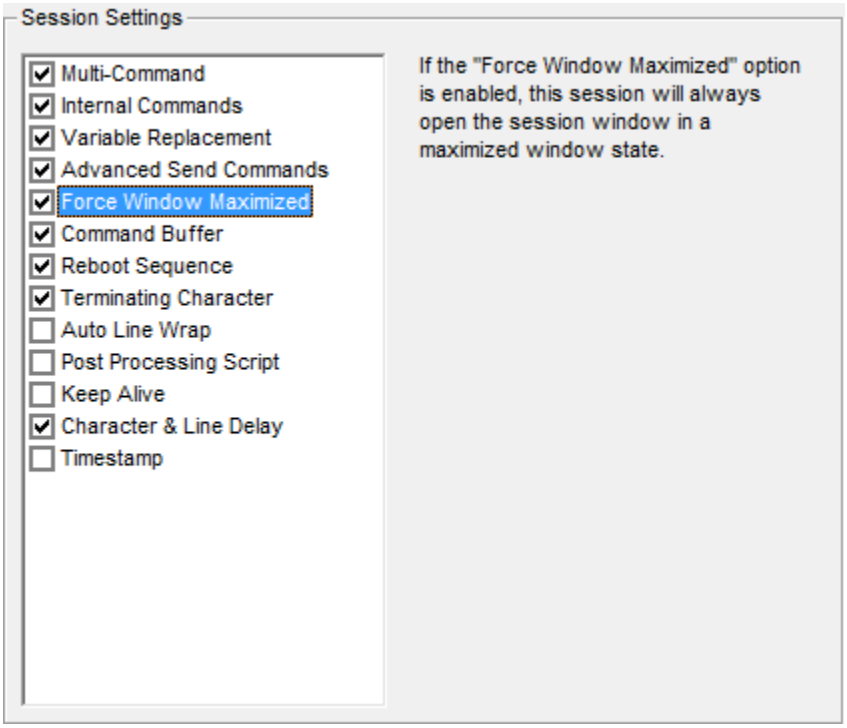
Advanced Send Commands

Indigo supports sending instruction commands in multiple data byte representations using the Advanced Send Commands feature.
If the advanced command syntax interferes with your terminal communication, you can disabled the feature on this configuration panel.



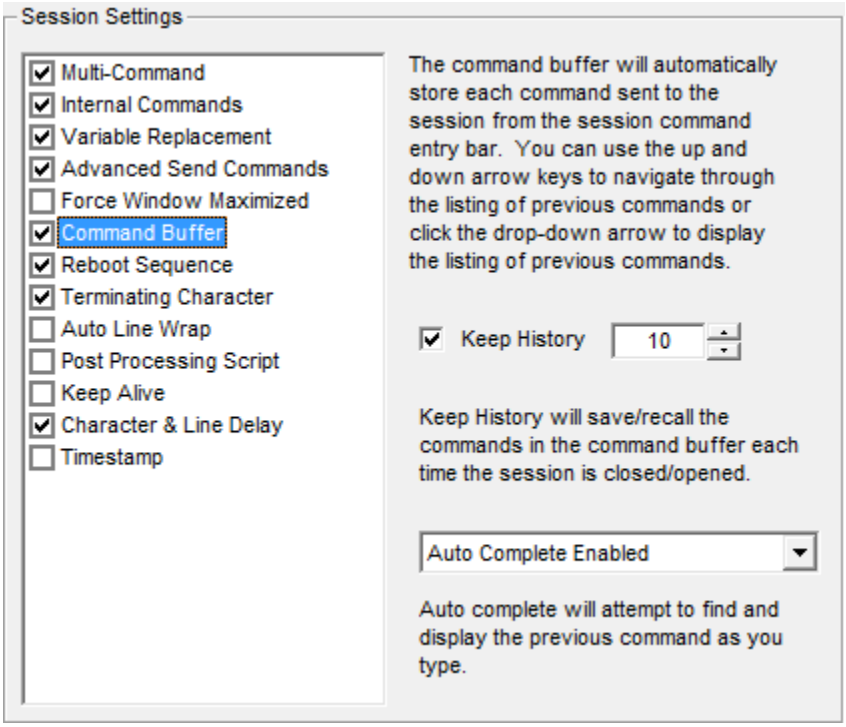
Force Window Maximized

If this option is enabled, this terminal session window will always be opened in the maximized states.



Command Buffer

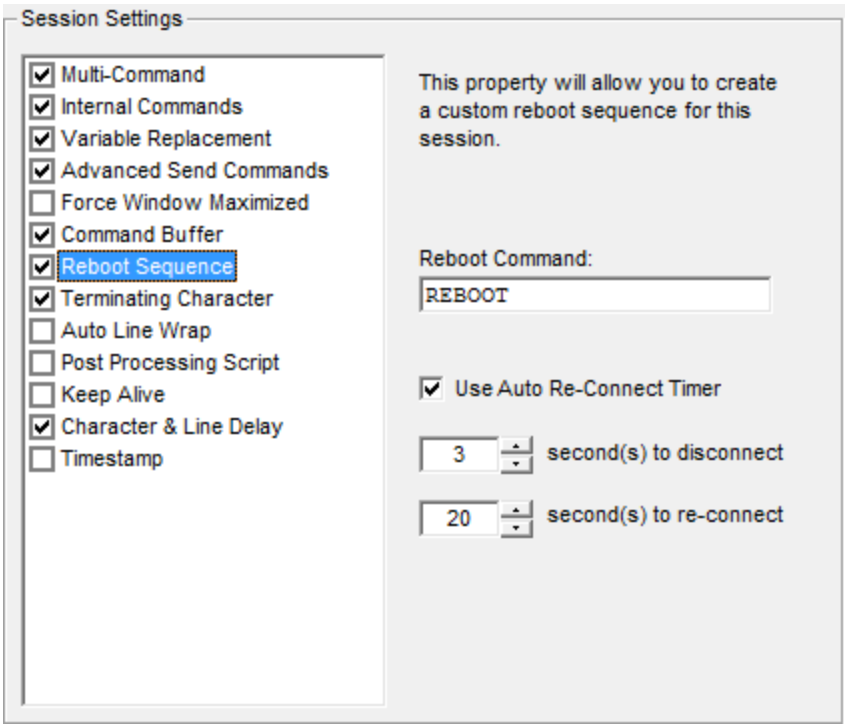
If this option is enabled, Indigo will buffer each instruction command submitted via the command bar.
Additional configuration options are available to control buffered command persistence and the auto-complete behavior of the command bar.
Please see this page for more information on the command bar and command buffer.



Auto Complete Options	Description
Auto Complete Disabled	No auto-complete is attempted on the command bar.
Auto Complete Enabled	Command auto-complete is enabled on the command bar.
Case Sensitive Auto Complete Enabled	A case sensitive command auto-complete is enabled on the command bar.

Reboot Sequence

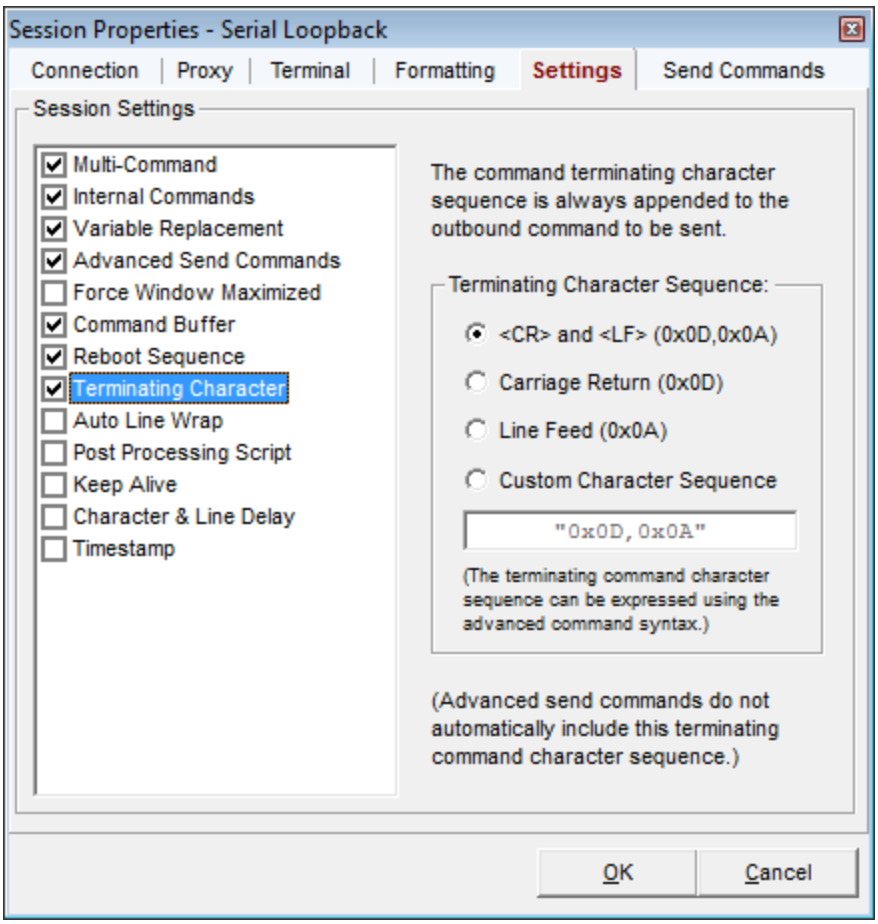
Indigo supports a custom reboot sequence feature that can issue a reboot instruction to the connected terminal session and then perform timed disconnect and re-connect of the session.
This configuration panel provide the reboot sequence options for the terminal session.
The custom reboot sequence can also be disabled if you have no need for it.



Terminating Characters/Bytes

Commands sent to a terminal connection automatically include a set of line terminating characters/bytes.
By default, Indigo includes both a carriage return (0x0D) and line feed (0x0A); however, if your device/host requires a different set of command terminating characters/bytes, you can modify them on this configuration panel.

The character sequence can be expressed using the advanced send command syntax.



Command Terminating Character Options	Description
<CR> and <LF> (0x0D,-0x0A)	This option will always send a carriage return and line feed appended to each command instruction submitted to the connected device/host in a terminal session. (*This is the default option in Indigo.*)
Carriage Return (0x0D)	This option will always send a carriage return appended to each command instruction submitted to the connected device/host in a terminal session.
Line Feed (0x0A)	This option will always send a line feed appended to each command instruction submitted to the connected device/host in a terminal session.
Custom Character Sequence	This option will allow the user to specify a custom character sequence that will be appended to each command instruction submitted to the connected device/host in a terminal session. (*The custom character sequence can be expressed using the advanced send command syntax.*)

Character	Byte in Decimal	Byte in Hex
`Carriage Return <CR>`	`13`	`0x0D`

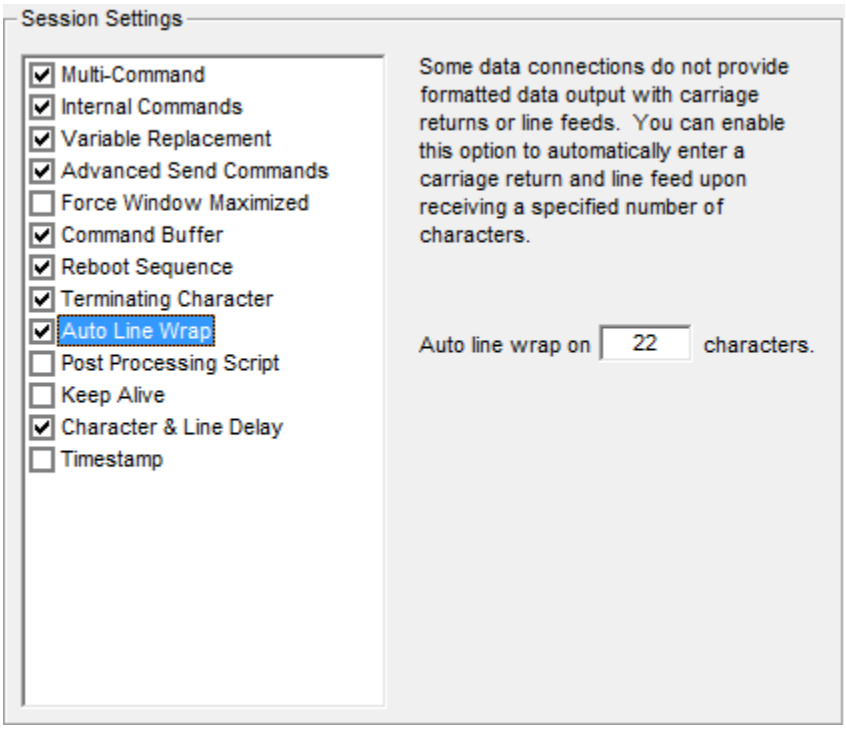
Line Feed <LF>	10	0x0A

> **Note**
>
> The command terminating characters/bytes do not apply to advanced send commands or keyboard redirected input using the Terminal Emulation view mode.

Auto Line Wrap

By default Indigo only performs line wrapping in the session data window when a line termination character is received.
Some devices/hosts do not send any carriage return (0x0D) or line feed (0x0A) characters and you may want the data to be displayed on multiple lines in the data window.
Enabling this option will force the terminal session to perform a line wrap after the specified number of characters have been rendered to a row on the screen.

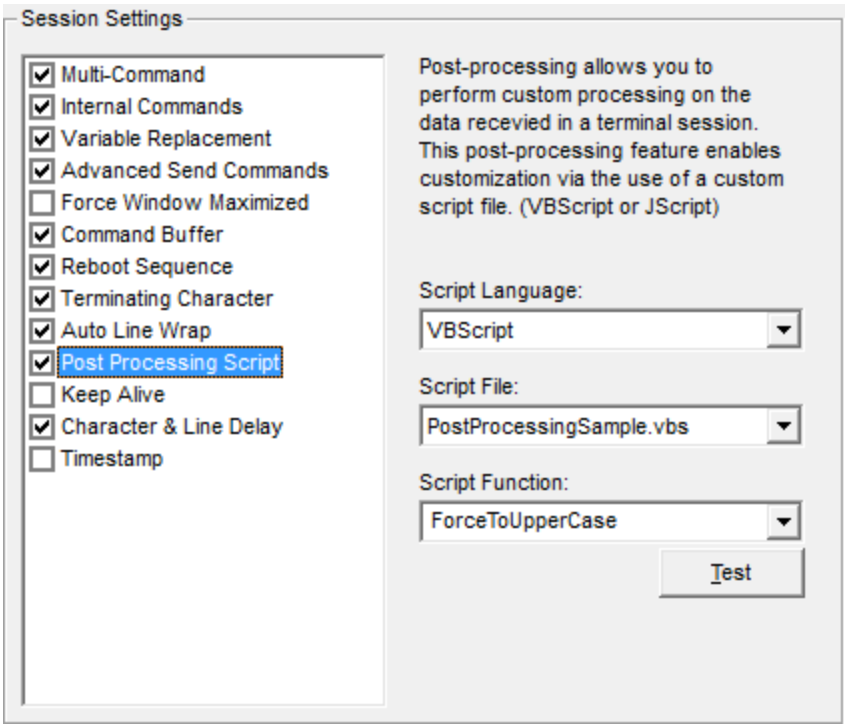
This feature is only supported in the Standard view mode.



Post Processing Script

Indigo supports a scripting feature that allows a user created script to analyze and modify data after it has been received by the terminal session and before it is rendered to the screen.
This configuration panel allow you to select the custom script file and processing function to perform.

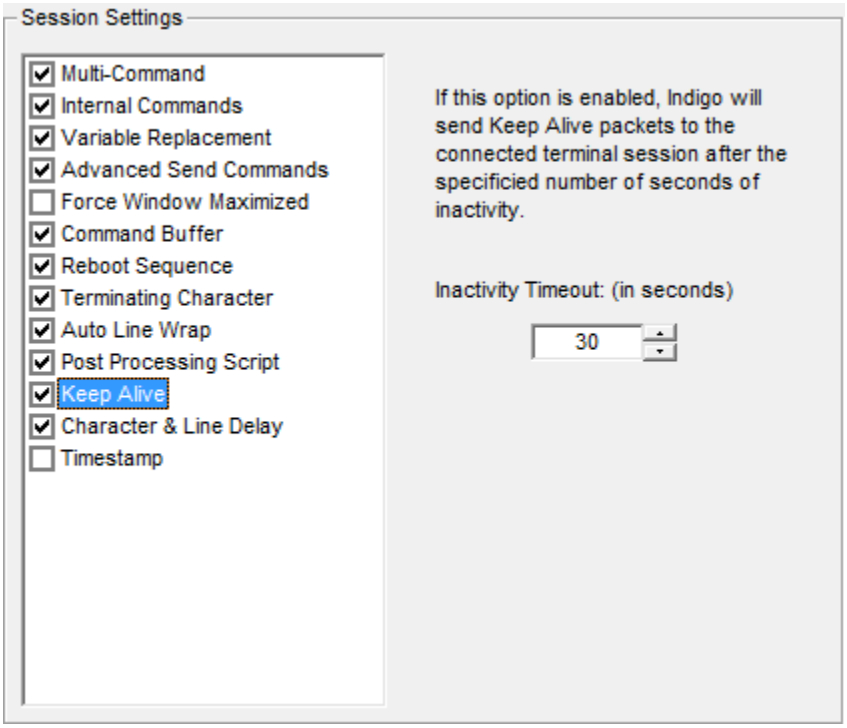
The scripting feature can be enabled or disabled for the terminal session using this configuration option.



For more information on scripting, please see the Scripting help section.

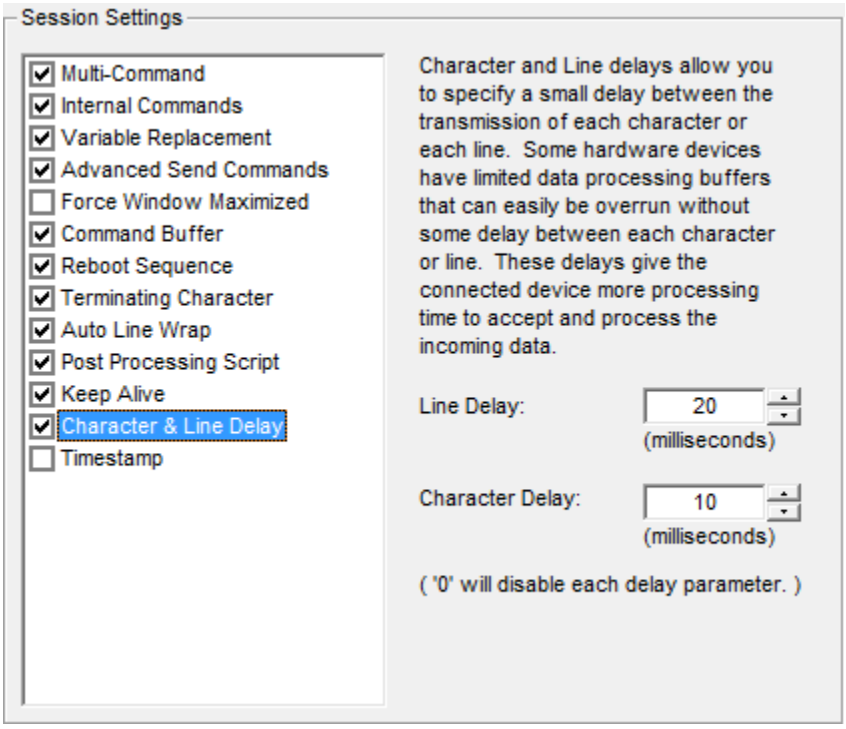
Keep Alive

Some terminal connections may support keep alive packets and Indigo can be configured to send the keep alive instruction at regular intervals to prevent the device/host from terminating the connection.
This feature may be useful if you are monitoring a device/host over time and the device/host forcefully disconnects if no activity is detected.



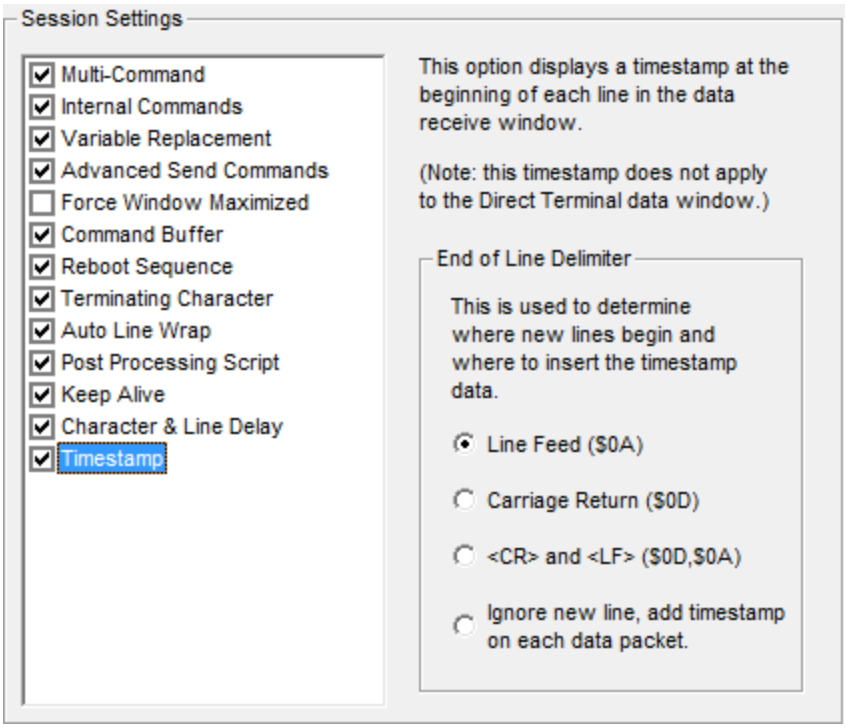
Character & Line Delay

Indigo typically transmits data commands as entire chunks of data in large packets. However, some device may not be able to process large data packets or fast data transmissions.
You can enabled this feature to buffer the outgoing command data and inject delays between character and line transmissions.
This feature may be necessary when working with limited resource embedded devices.



Timestamp

Indigo can automatically prepend data lines with timestamps to help record when data has been received by Indigo. Since the line formatting can vary between each type of terminal connection, you must configure the type of end line delimiter that Indigo should expect so that it can insert the timestamp at the appropriate locations.



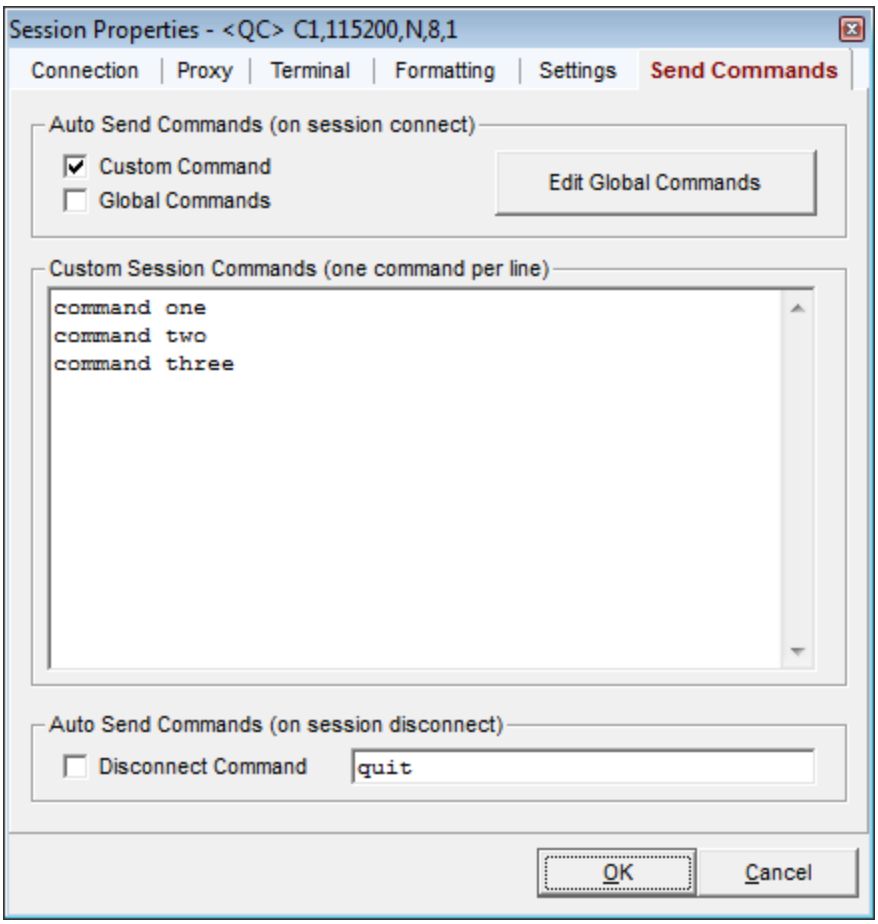
Note

If using the option to incude a timestamp on each data packet received, Indigo will not limit the timestamp to new lines, but inserts timestamp throughout the data stream.

Session Send Commands

Overview

The *Send Commands* tab in the *Session Properties* editor tab is used to configure automated commands issues to the terminal session at the time of connection or disconnection.



Auto Send Commands

Indigo terminal sessions can be configured to automatically send a series of commands/instructions to a terminal session upon connection.
These commands are send each time the terminal session establishes a connection.

Command Set	Description
Session Custom Commands	If this option is enabled, then this terminal session will transmit the configured custom session commands defined below.
Global Commands	If this option is enabled, then this terminal session will also transmit the configured custom session commands defined below.
Edit Global Commands	This option will open the global commands editor. The global commands are a series of instruction commands defined globally that can optionally be enabled for each terminal session instance.

Tip

If both global and custom session commands are selected, the global commands will be transmitted first.

Custom Session Commands

This is a series of instruction commands that will be transmitted to the terminal session upon connection defined exclusively for this terminal sessions instance.
Each command should be listed on a separate line.

This feature is especially useful if you need to always send some set of initialization or staging commands to the remote device/host when your connection is established.
Example include enabling logging or debugging on a particular device/host or navigating to a specific path or entering some diagnostics or development mode.

Disconnect Command

Indigo also supports an automated disconnect send command. You can enable this feature and define a disconnect command in the text field provided.
This may be useful if you need to transmit some logout or graceful closure instruction to the remote device/host.

> **Tip**
>
> If you need to send multiple disconnect commands, enable and use the multi-command syntax.

> **Note**
>
> The disconnect command will only be transmitted if you invoke the disconnect function, close the terminal session, or close the Indigo application and the active connection is gracefully closed. Indigo cannot transmit this disconnect command if the connection is disrupted due to a network/cabling issue or if the remote host/device terminates the connection due to timeout/inactivity.

Connection Tools & Features

Indigo supports the following connection management tools and features:

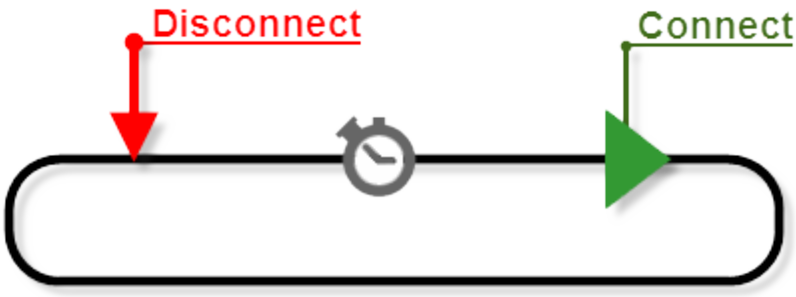
- Auto Reconnect
- Keep Alive
- Custom Reboot Sequence

Auto Reconnect

Overview

Indigo includes an *Auto-Reconnect* feature that will automatically and continually attempt to reconnect to a device/host if a connection is lost.
The connection will be attempted every 30 seconds until the connection is established, the terminal session windows is closed, or the *Auto-Reconnect* logic is suspended.

The timeline diagram below illustrates the *Auto-Reconnect* sequence.



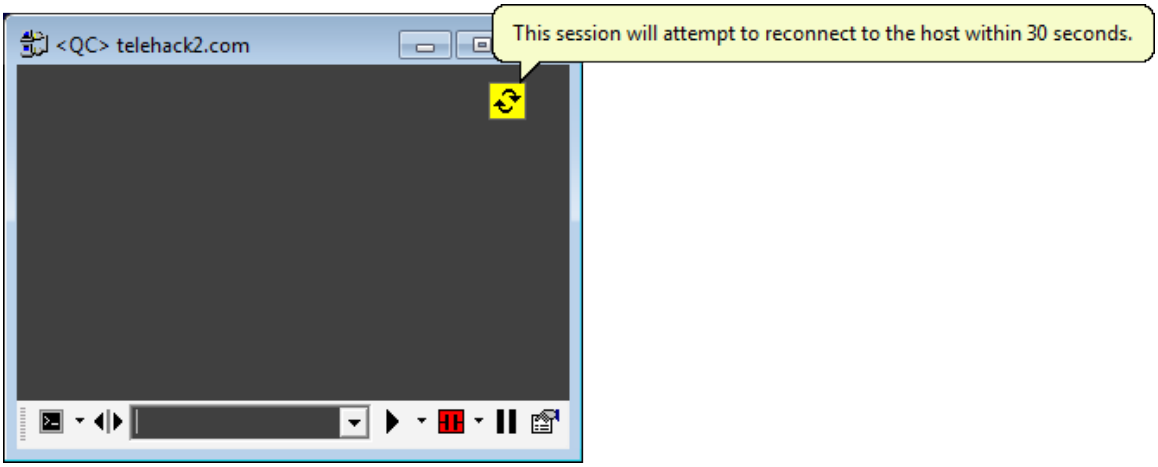
Tip

This feature can be extremely useful if you are persistently logging data on a terminal connection and need Indigo to automatically reconnect in the event of a connection disruption.

Session Status Icon

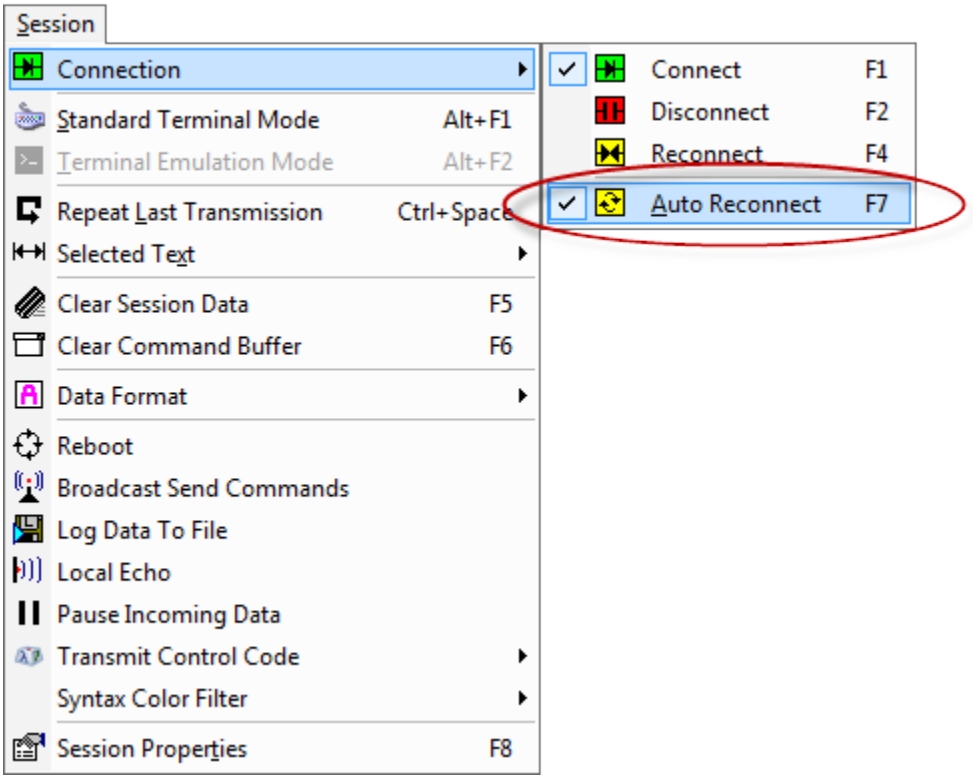
When a terminal session becomes disconnected and the *Auto-Reconnect* logic is activated, the following status icon will be displayed.

Auto Reconnect		This icon is displayed when a session is in the disconnected state and the auto-reconnect feature has been enabled. This icon represents that the session will attempt to auto-reconnect on a periodic basis until a successful connection is established. Click this icon to disable the auto-connect attempt. This will not disable the auto-connect feature for the session, just stops the auto-reconnect on the current disconnect cycle.



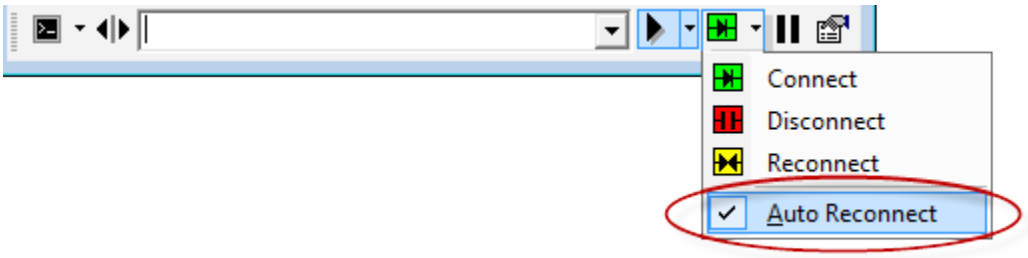
Session Menu

The session *Auto-Reconnect* feature can be enabled/disabled via the Session Menu.
A check mark next to the *Auto Reconnect* menu item indicates that the feature is enabled.



Session Toolbar

The session *Auto-Reconnect* feature can be enabled/disabled via connection button on the the terminal session toolbar.
A check mark next to the *Auto Reconnect* menu item indicates that the feature is enabled.

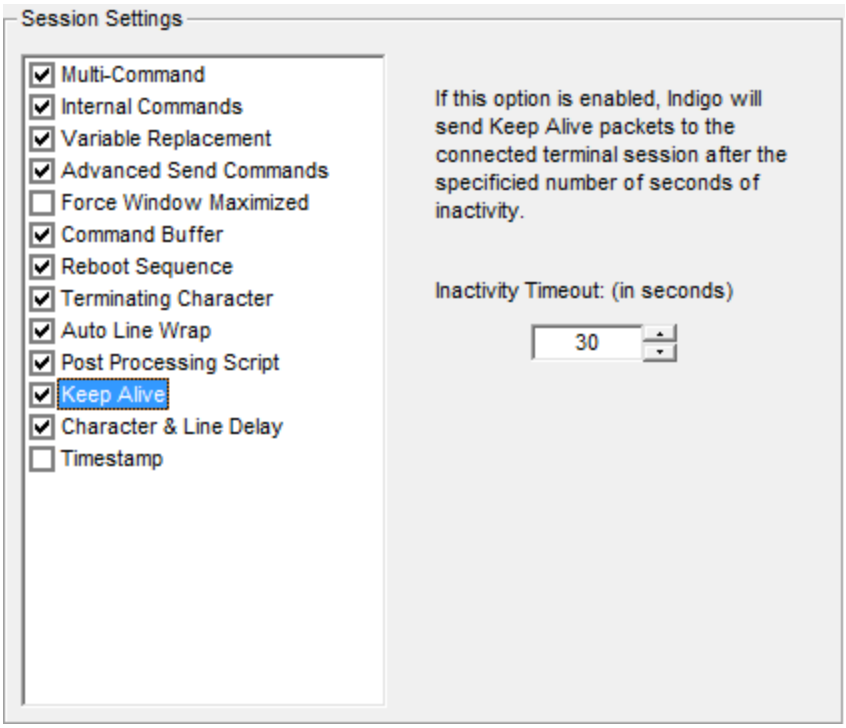


Keep Alive

Overview

Indigo includes a connection *Keep-Alive* feature to help maintain connectivity with remote device/hosts.
Some terminal connections may support keep alive packets and Indigo can be configured to send the keep alive instruction at regular intervals to prevent the device/host from terminating the connection.

The Keep -Alive feature can be enabled/disabled from the Session Properties editor on the Advanced settings tab.



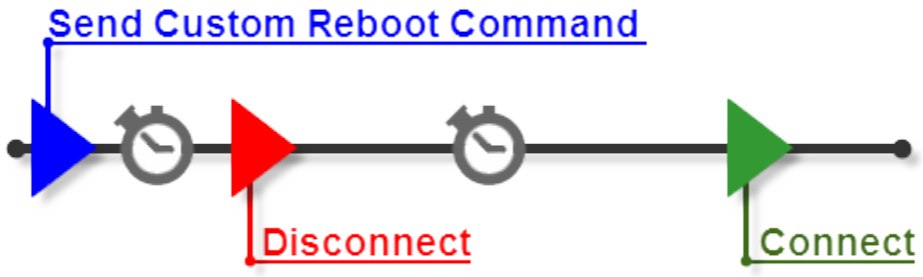
Tip

This feature may be useful if you are monitoring a device/host over time and the device/host forcefully disconnects if no activity is detected.

Custom Reboot Sequence

Overview

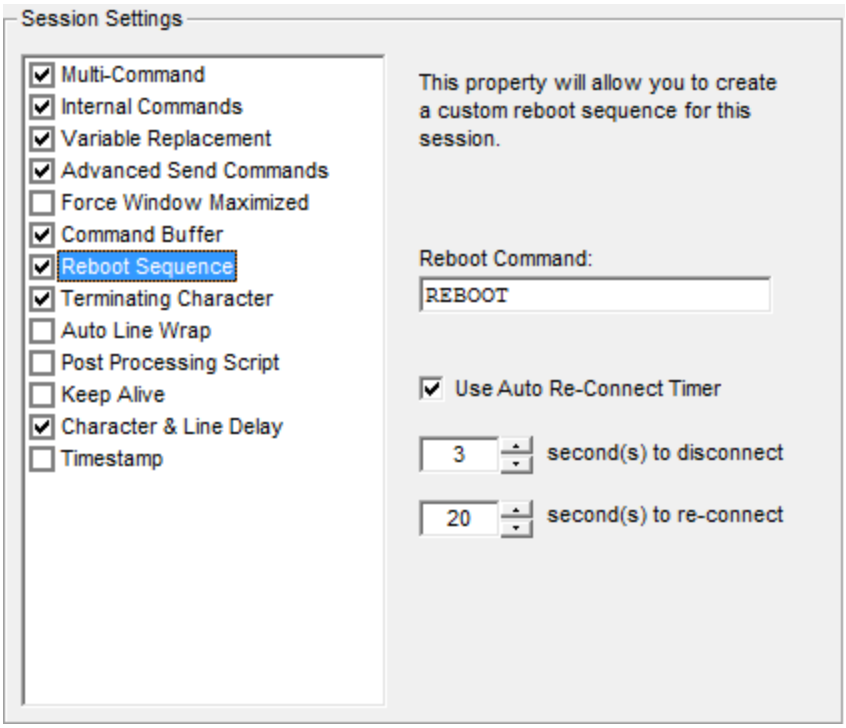
Indigo supports a custom reboot sequence feature that can issue a reboot instruction to the connected terminal session and then perform timed disconnect and re-connect of the session.
The timeline diagram below illustrates the custom reboot sequence.



Session Properties

The *Reboot Sequence* feature can be configured via the Session Properties editor on the Advanced settings tab.

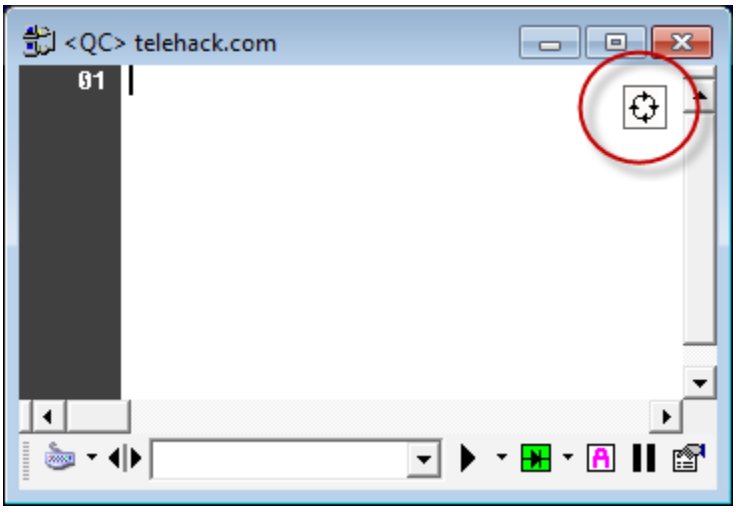
This configuration panel provide the reboot sequence options for the terminal session.
The custom reboot sequence can also be disabled if you have no need for it.



Session Status Icon

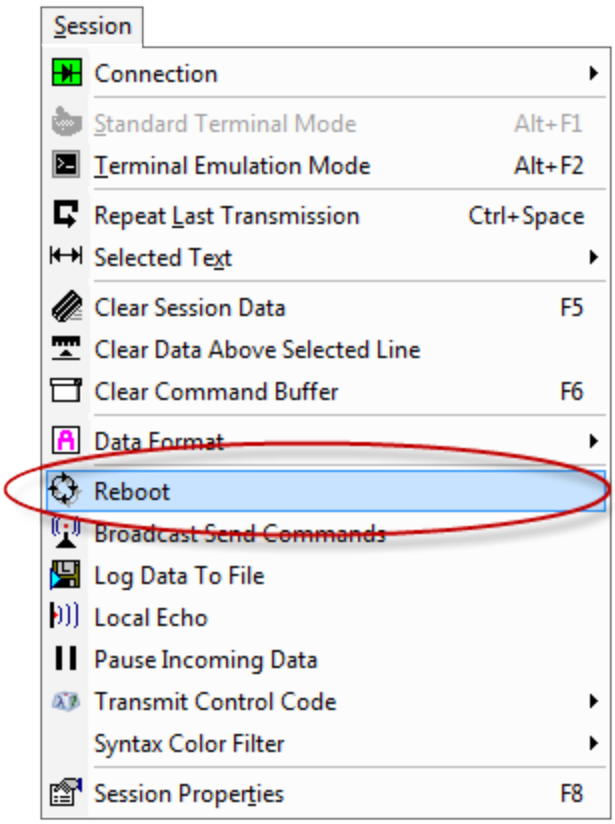
When a terminal session is in the *Rebooting* sequence, the following status icon will be displayed in the Session data window.

Rebooting		This icon is displayed when the session's connection is in a reboot sequence. Click the icon to stop the reboot sequence.



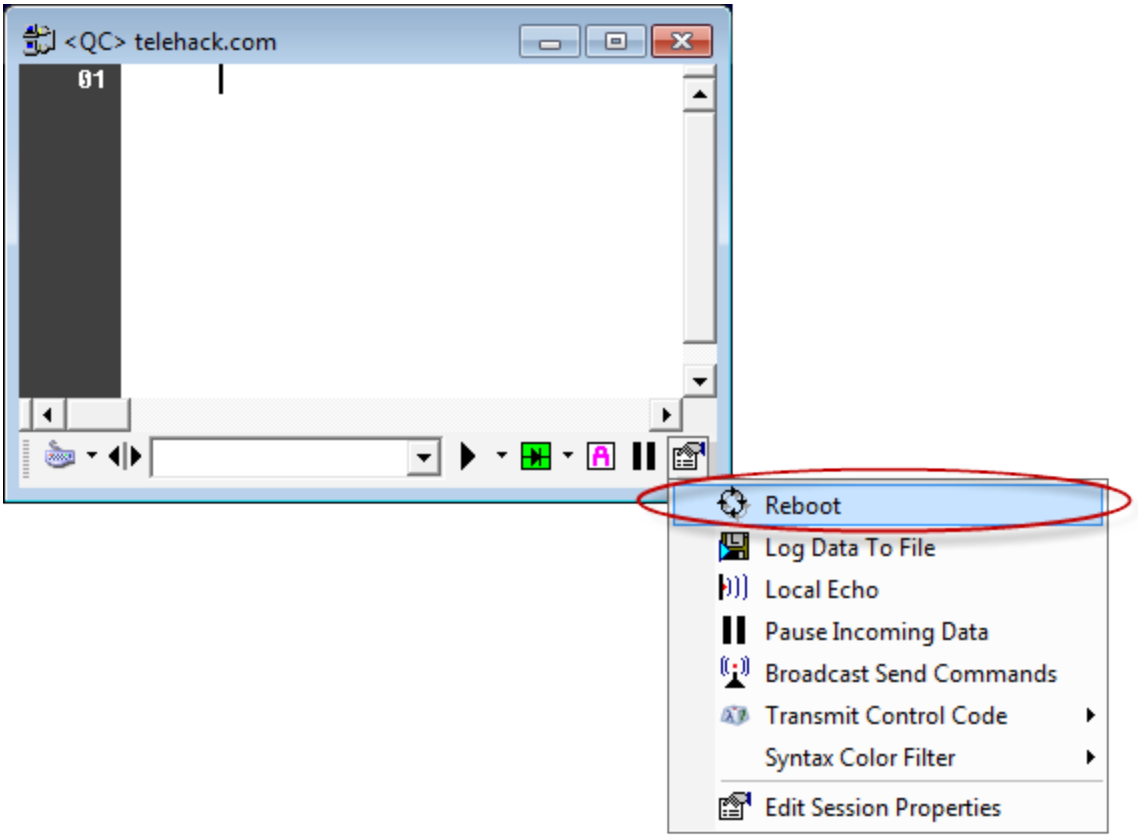
Session Menu

The *Reboot Sequence* can be initiated for a terminal session by selecting the *Reboot* item from the application Session Menu.



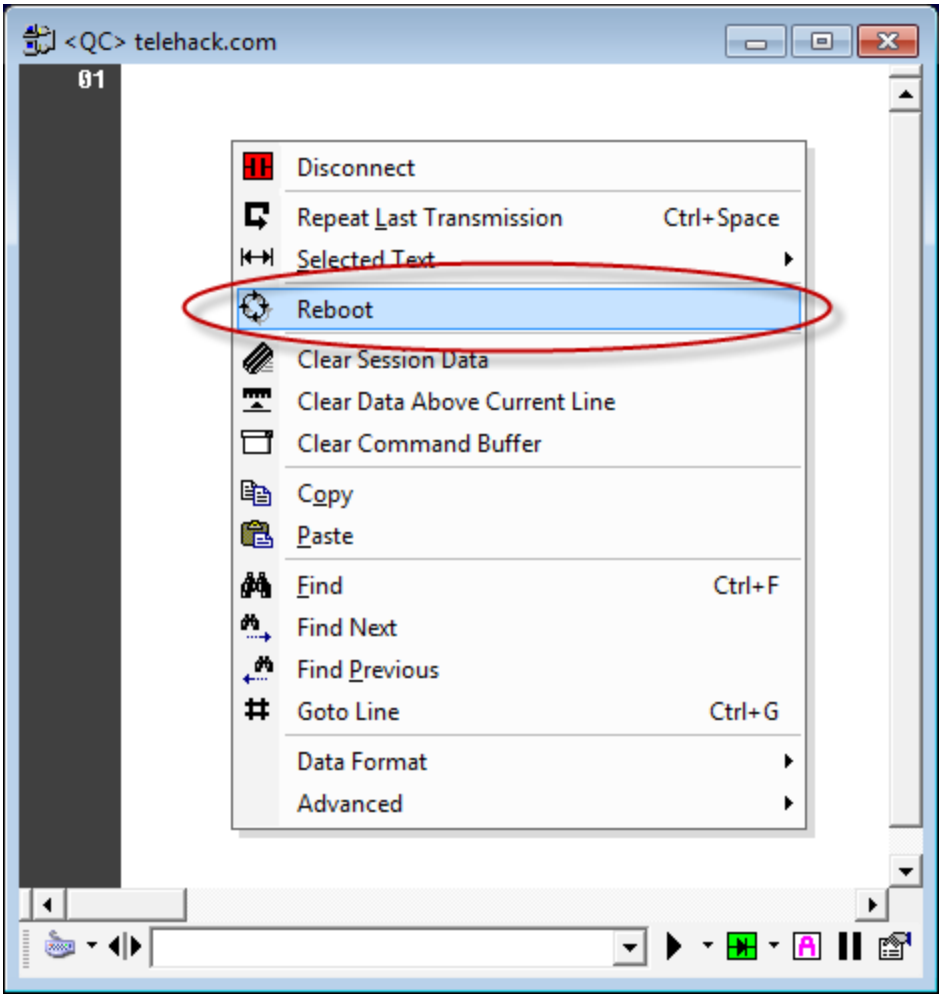
Session Toolbar

The *Reboot Sequence* can be initiated for a terminal session by selecting the *Reboot* item from the session's toolbar menu.



Session Context Menu

The *Reboot Sequence* can be initiated for a terminal session by selecting the *Reboot* item from the session's right-click context menu.



Internal Command

You can activate *Reboot Sequence* for a terminal session using the Internal Command syntax.

Example	Perform custom reboot sequence
Command	`:reboot`

Outbound Data Tools & Features

Indigo supports the following outbound data management tools and features:

- Local Echo
- Transmit Break Signal
- Transmit Control Codes
- Character and Line Delay
- Command Terminating Character(s)
- Broadcasting Commands
- Multi-Command
- Command Variable Replacement
- Command Prefix & Suffix
- Automated Send Commands
- Advanced Send Commands
- File Transfer (Serial)

- Transmit File Contents

Local Echo

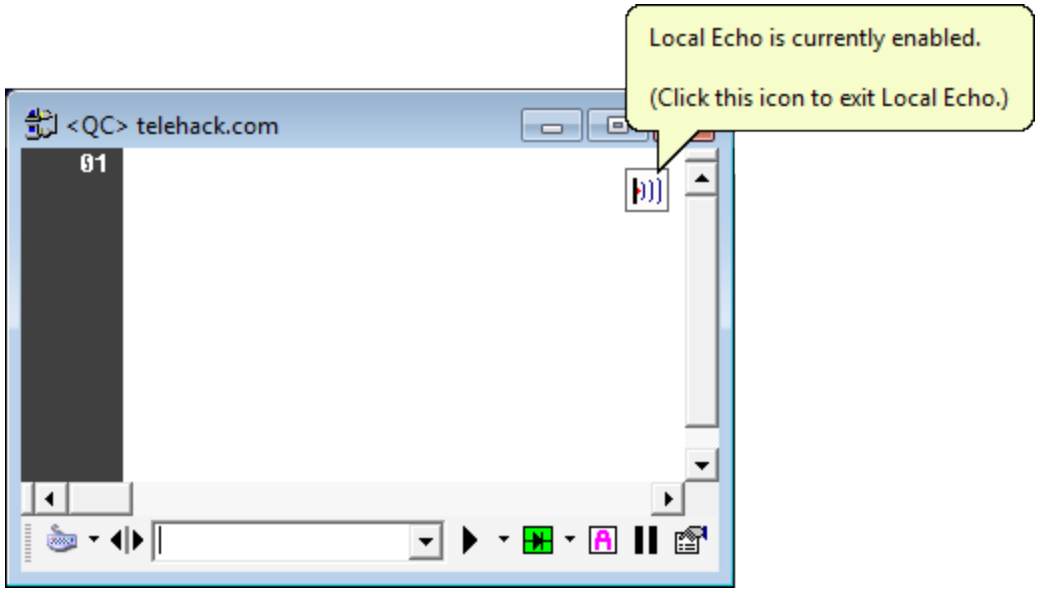
Overview

Some device/hosts do not "echo" the data commands/keys submitted to the device back out for viewing in a terminal emulator. Therefore for these type of devices, it is useful to have Indigo automatically print to the screen all data commands that are transmitted to the connected device/host. This behavior is called *Local Echo* as the software will locally echo out to the screen the submitted command instructions.

Session Status Icon

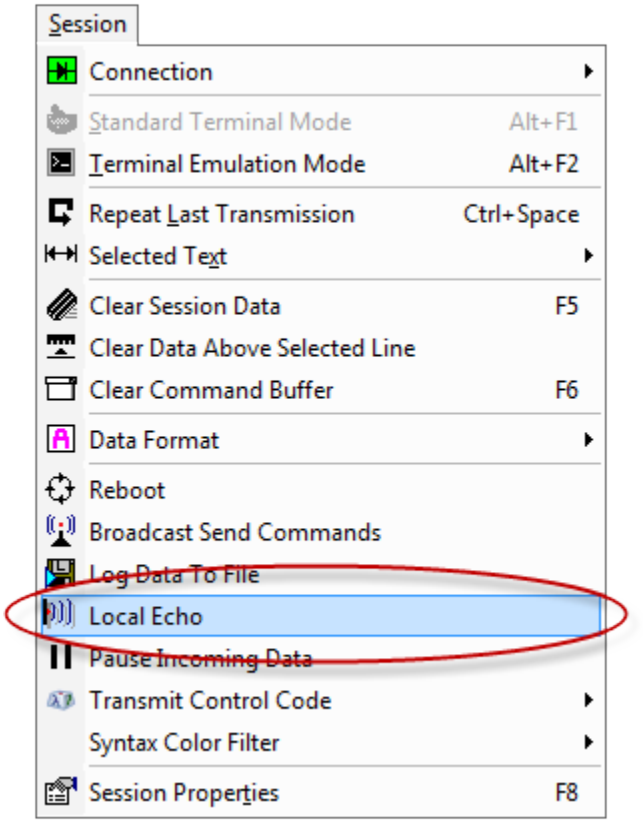
When a terminal session has the *Local Echo* feature enabled, the following status icon will be displayed.

Local Echo		This icon is displayed when the session's local echo feature is enabled. Click the icon to disable the local echo feature.



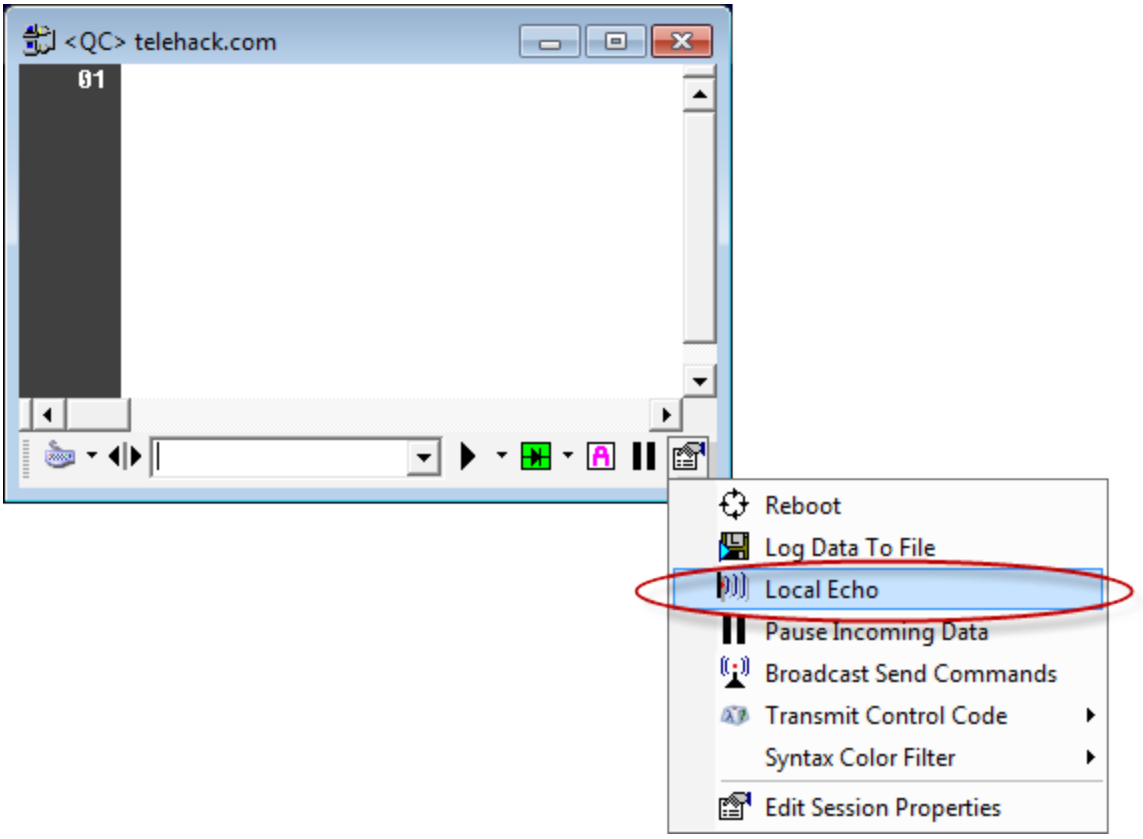
Session Menu

The session *Local Echo* feature can be enabled/disabled via the Session Menu.



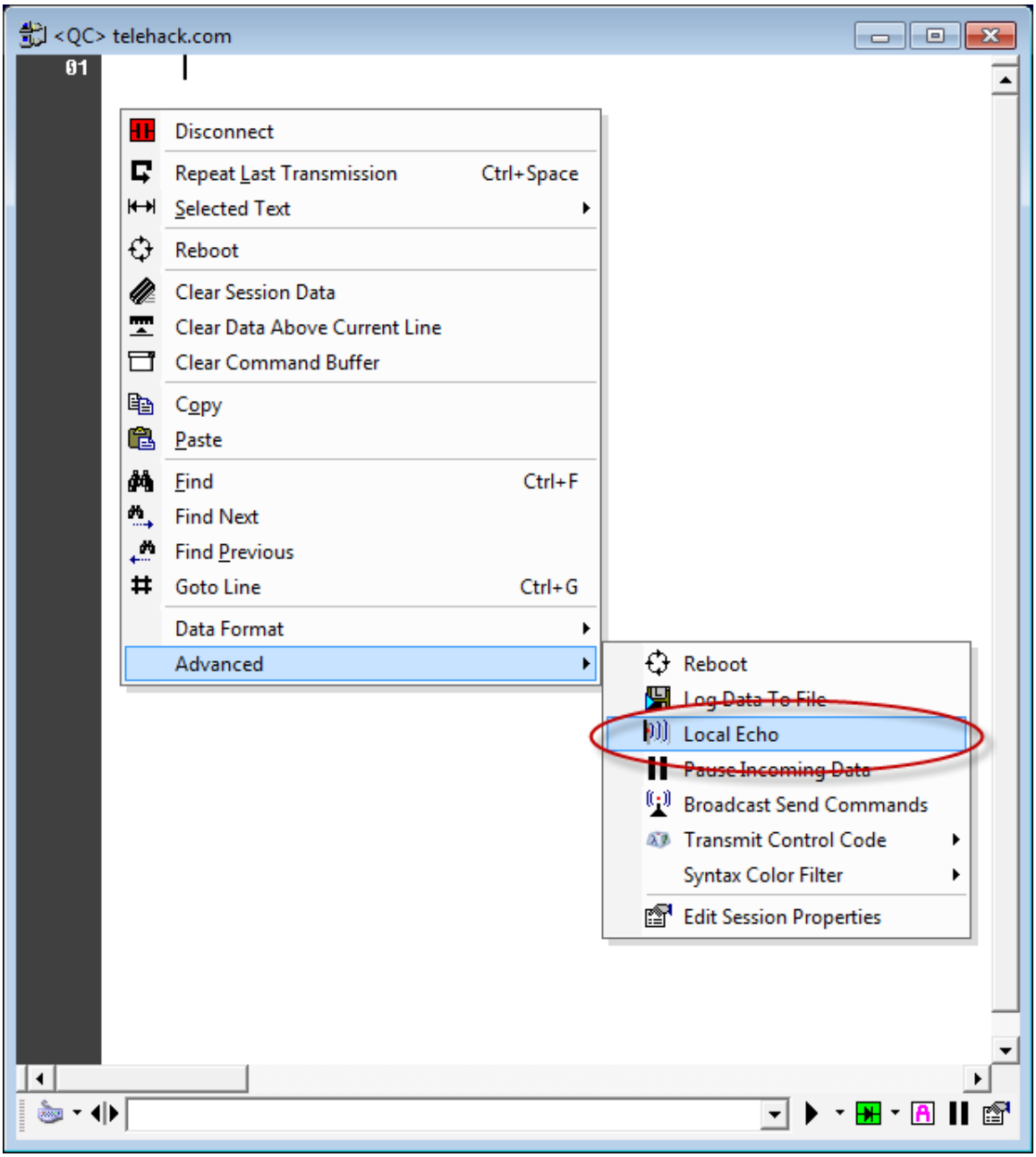
Session Toolbar

The *Local Echo* feature can be enabled/disabled for a terminal session from the session's toolbar menu.



Session Context Menu

The *Local Echo* feature can be enabled/disabled from the session's right-click context menu.



Internal Command

The *Local Echo* feature can be enabled/disabled using the Internal Command syntax.

Example	Enable the local echo feature for the session
Command	`:echo on`

Example	Disable the local echo feature for the session
Command	`:echo off`

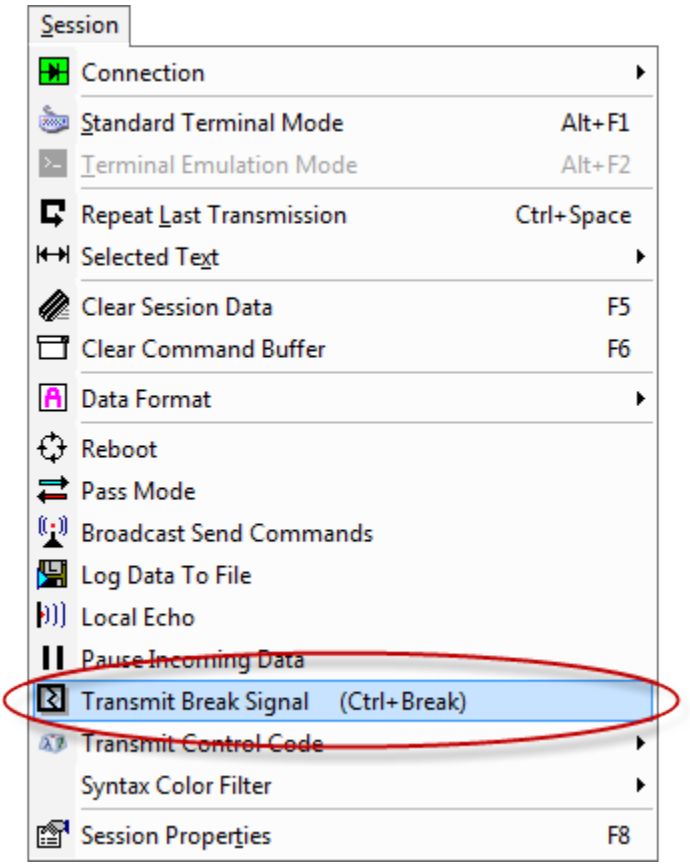
Transmit Break Signal

Overview

When connected via a serial connection, Indigo can send a *Break Signal* to the UART using one of the following methods listed below.

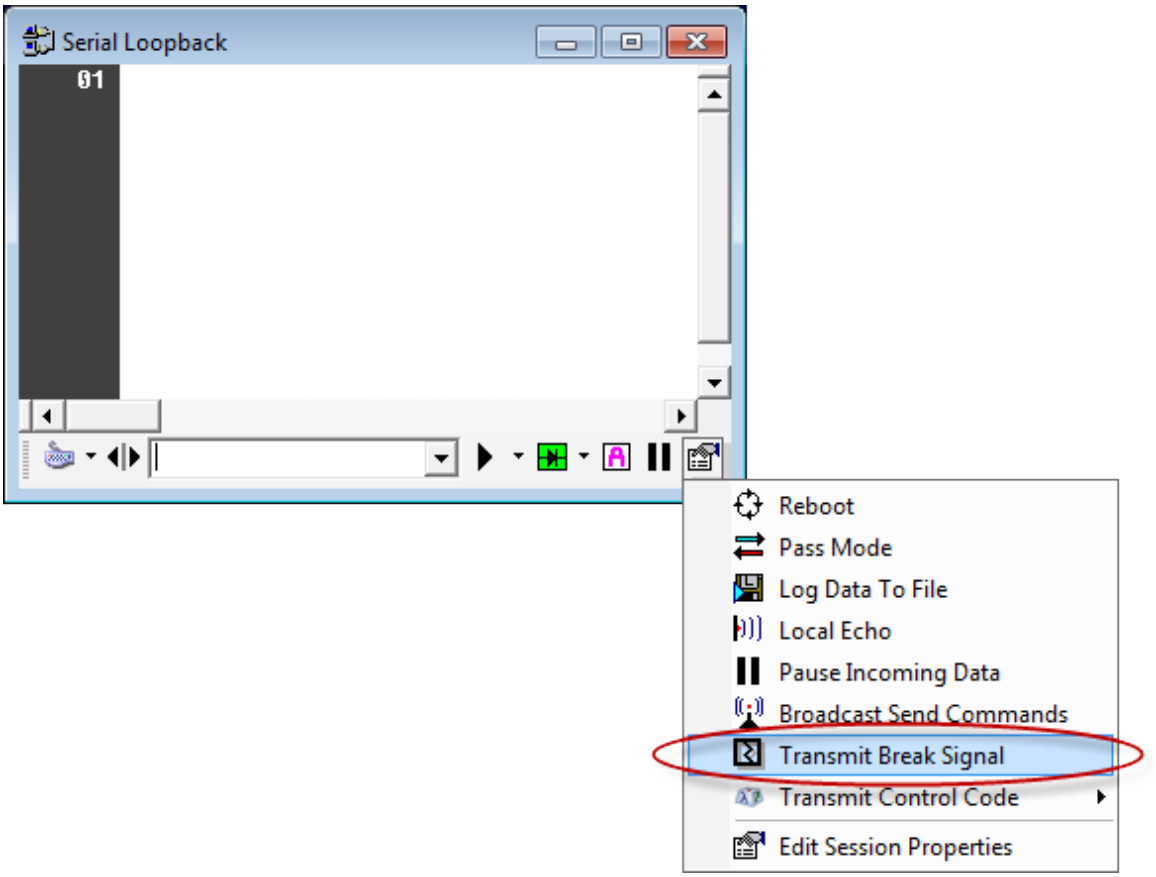
Session Menu

The *Serial Break Signal* can be sent to a serial based terminal session by selecting the *Transmit Break Signal* item from the application Session Menu.



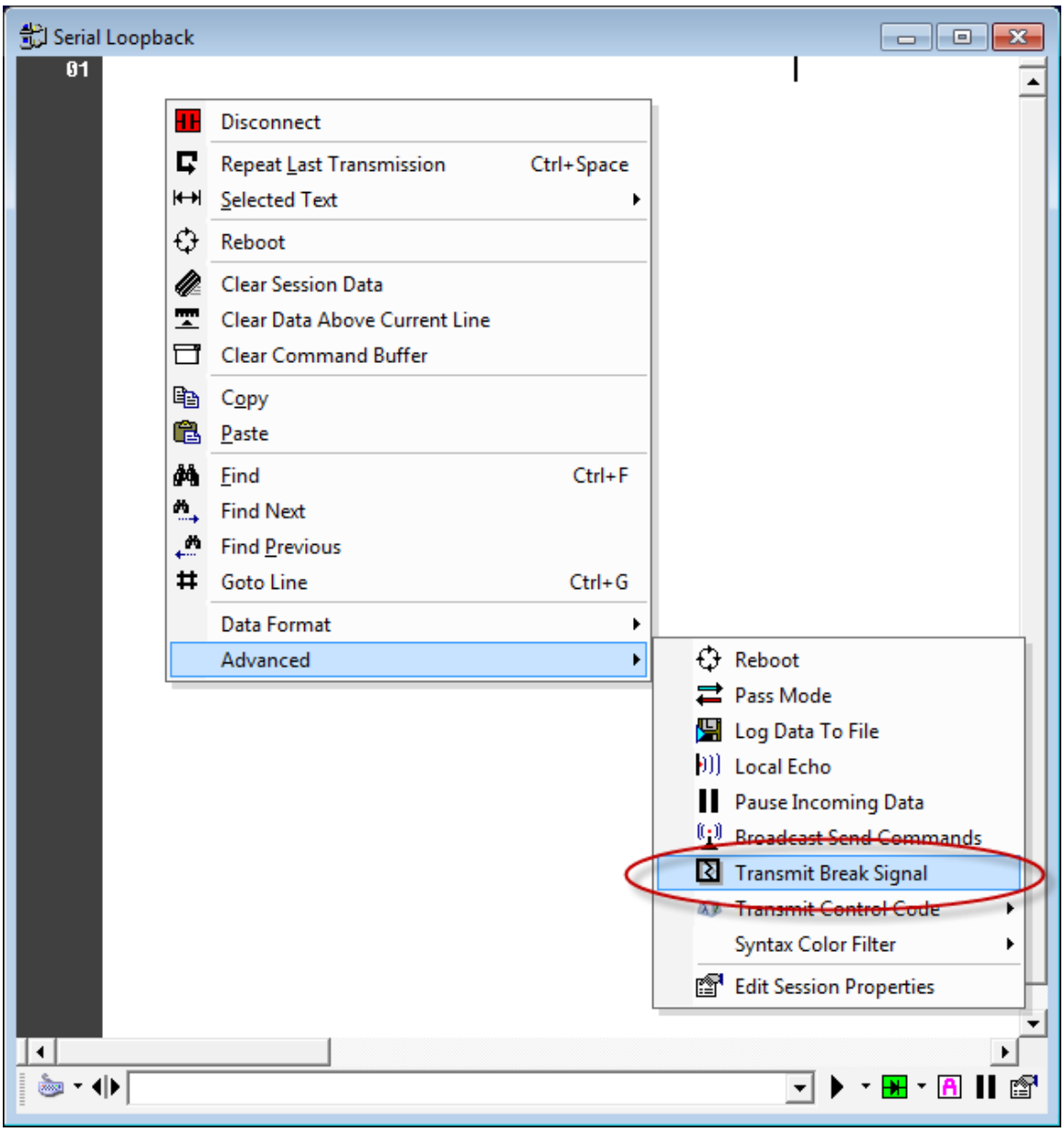
Session Toolbar

The *Serial Break Signal* can be sent to a serial based terminal session by selecting the *Transmit Break Signal* item fr om the session's toolbar menu.



Session Context Menu

The *Serial Break Signal* can be sent to a serial based terminal session by selecting the *Transmit Break Signal* item fr
om the session's right-click context menu.



Internal Command

The *Serial Break Signal* can be sent using the Internal Command syntax.

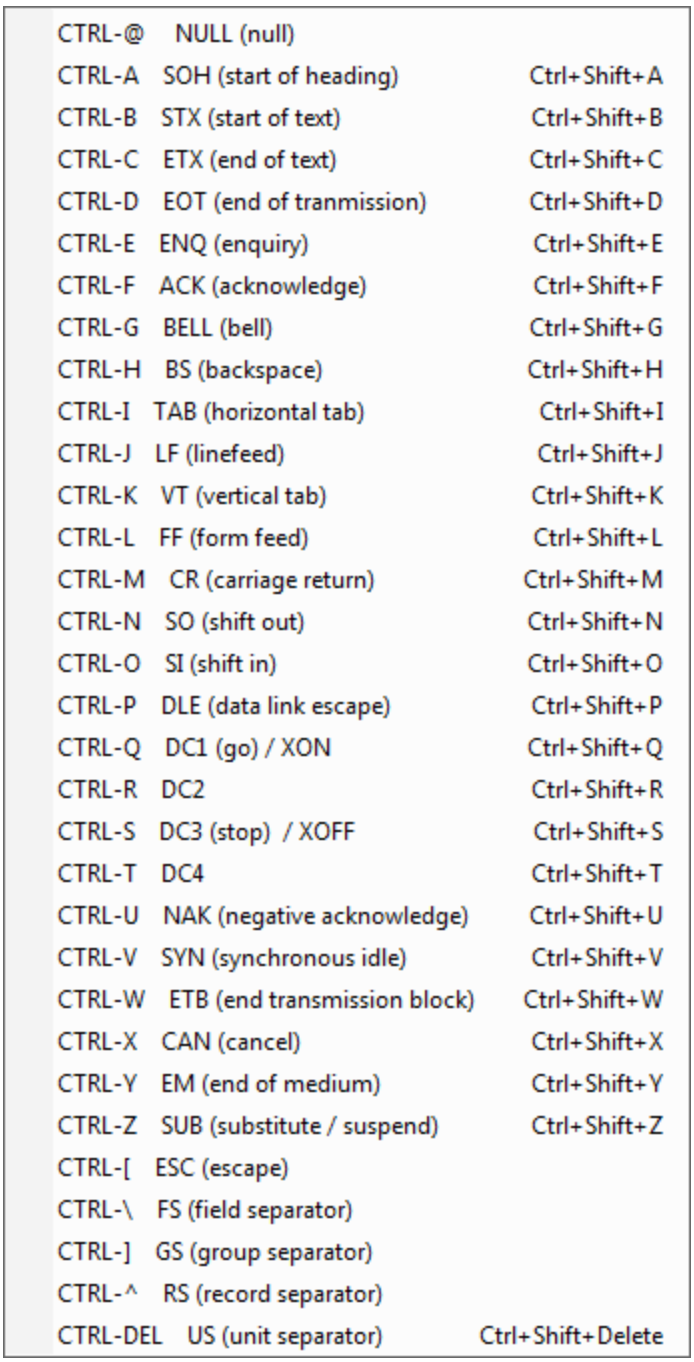
Example	Transmit the serial break signal
Command	`:break`

Transmit Control Codes

Overview

Indigo includes the ability to transmit special *Control Codes/Control Characters* to a connected device/host.

The following is a listing of the control codes built into Indigo menus. Most of these control codes can be also transmitted using the associated hotkey.



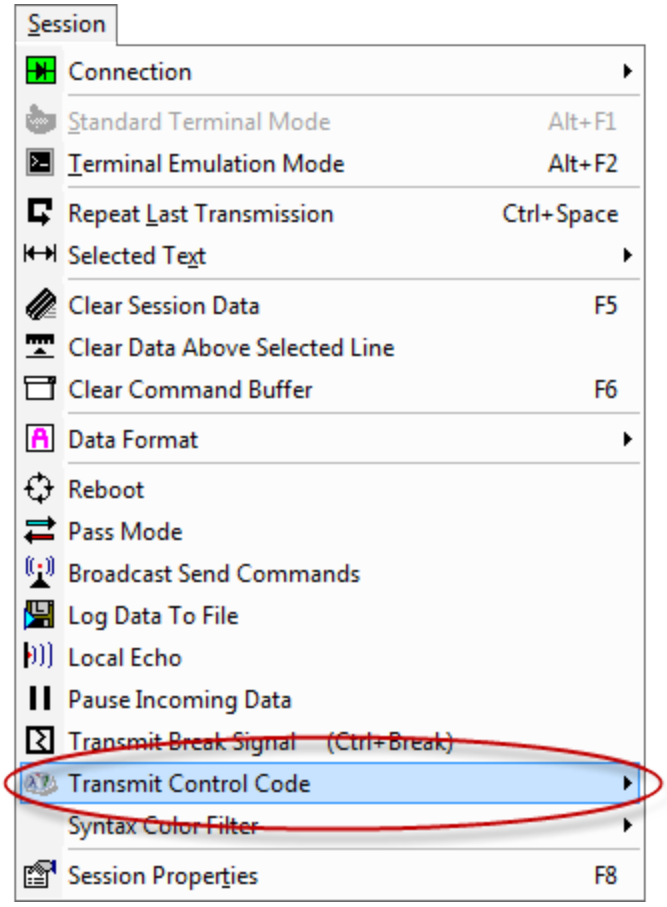
CTRL-@	NULL (null)	
CTRL-A	SOH (start of heading)	Ctrl+Shift+A
CTRL-B	STX (start of text)	Ctrl+Shift+B
CTRL-C	ETX (end of text)	Ctrl+Shift+C
CTRL-D	EOT (end of tranmission)	Ctrl+Shift+D
CTRL-E	ENQ (enquiry)	Ctrl+Shift+E
CTRL-F	ACK (acknowledge)	Ctrl+Shift+F
CTRL-G	BELL (bell)	Ctrl+Shift+G
CTRL-H	BS (backspace)	Ctrl+Shift+H
CTRL-I	TAB (horizontal tab)	Ctrl+Shift+I
CTRL-J	LF (linefeed)	Ctrl+Shift+J
CTRL-K	VT (vertical tab)	Ctrl+Shift+K
CTRL-L	FF (form feed)	Ctrl+Shift+L
CTRL-M	CR (carriage return)	Ctrl+Shift+M
CTRL-N	SO (shift out)	Ctrl+Shift+N
CTRL-O	SI (shift in)	Ctrl+Shift+O
CTRL-P	DLE (data link escape)	Ctrl+Shift+P
CTRL-Q	DC1 (go) / XON	Ctrl+Shift+Q
CTRL-R	DC2	Ctrl+Shift+R
CTRL-S	DC3 (stop) / XOFF	Ctrl+Shift+S
CTRL-T	DC4	Ctrl+Shift+T
CTRL-U	NAK (negative acknowledge)	Ctrl+Shift+U
CTRL-V	SYN (synchronous idle)	Ctrl+Shift+V
CTRL-W	ETB (end transmission block)	Ctrl+Shift+W
CTRL-X	CAN (cancel)	Ctrl+Shift+X
CTRL-Y	EM (end of medium)	Ctrl+Shift+Y
CTRL-Z	SUB (substitute / suspend)	Ctrl+Shift+Z
CTRL-[	ESC (escape)	
CTRL-\	FS (field separator)	
CTRL-]	GS (group separator)	
CTRL-^	RS (record separator)	
CTRL-DEL	US (unit separator)	Ctrl+Shift+Delete

Tip

Control codes can also be transmitted to the terminal session using the native CTRL-KEY combinations when using the Terminal Emulation view mode and when the keyboard input is being redirected to the terminal session. Control code can also be constructed and transmitted using the Advanced Send Command syntax.

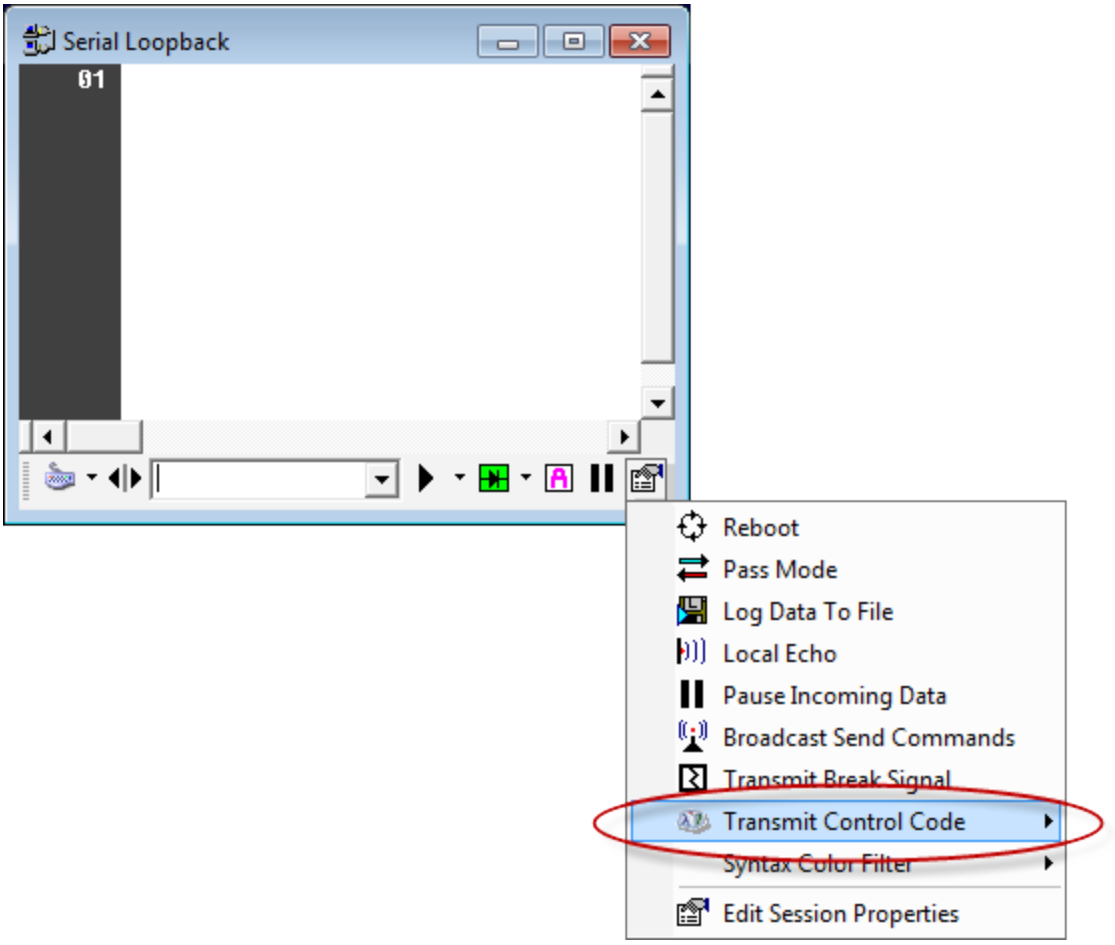
Session Menu

Control Codes/Characters can be transmitted to a terminal session by selecting an item from the the *Transmit Control Code* sub-menu from the application Session Menu.



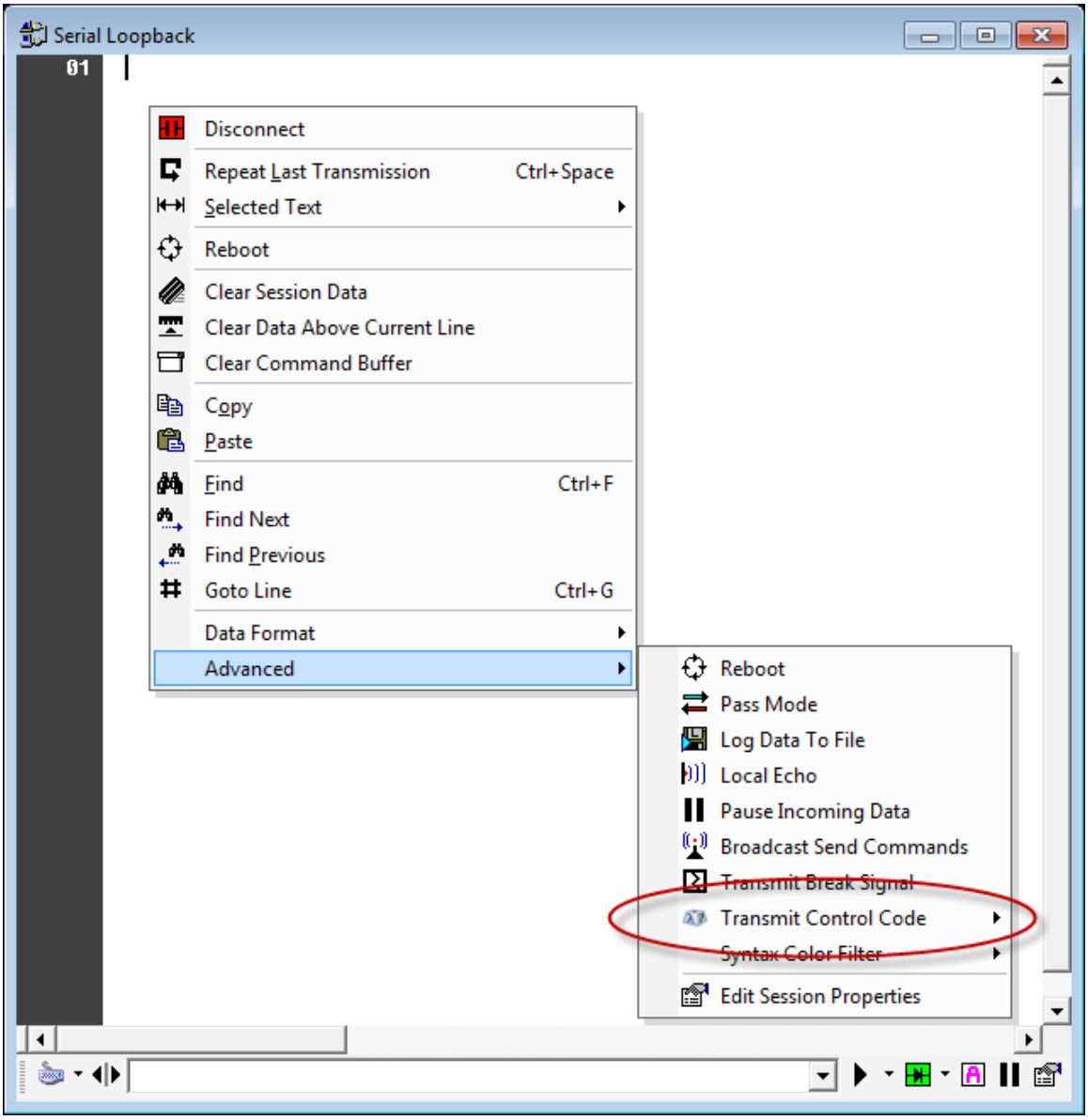
Session Toolbar

Control Codes/Characters can be transmitted to a terminal session by selecting an item from the the *Transmit Control Code* sub-menu from the session's toolbar menu.



Session Context Menu

Control Codes/Characters can be transmitted to a terminal session by selecting an item from the the *Transmit Control Code* sub-menu from the session's right-click context menu.

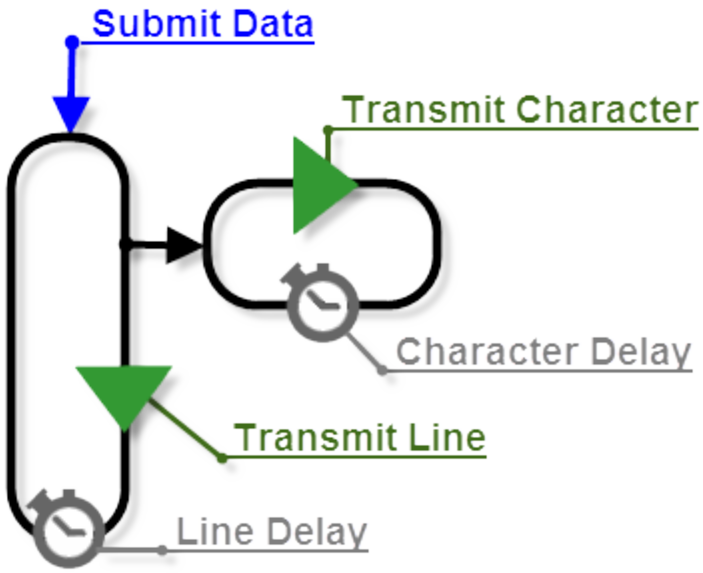


Character and Line Delay

Overview

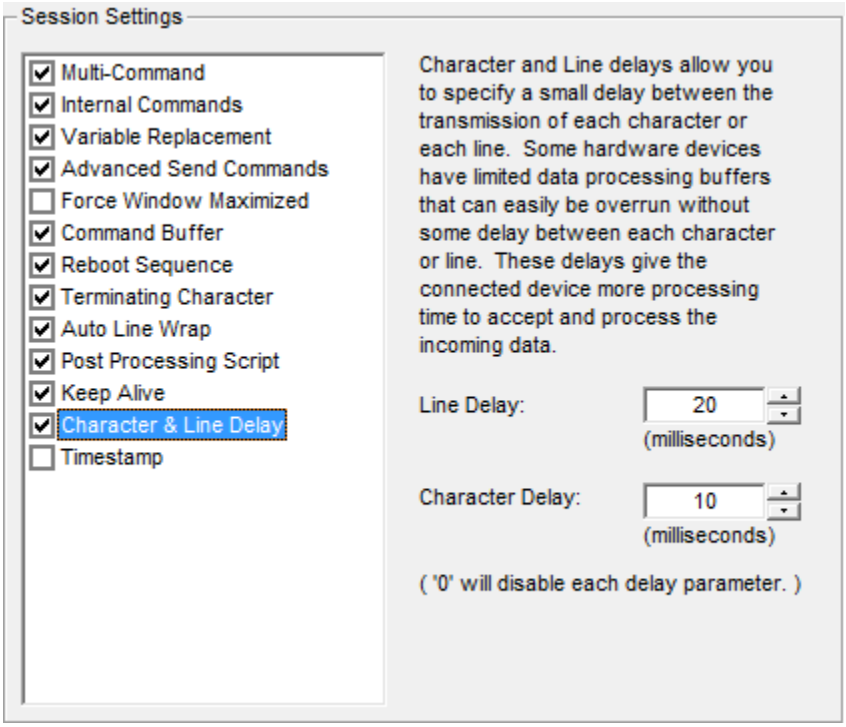
Indigo typically transmits data commands as entire chunks of data in large packets. However, some device may not be able to process large data packets or fast data transmissions.

For these cases, Indigo supports a character and line delay feature to limit/throttle the rate of data transmissions.



Session Properties

You can enabled this feature in the Session Properties editor under the Advanced tab to buffer the outgoing command data and inject delays intervals between character and line transmissions.
This feature may be necessary when working with limited resource embedded devices.

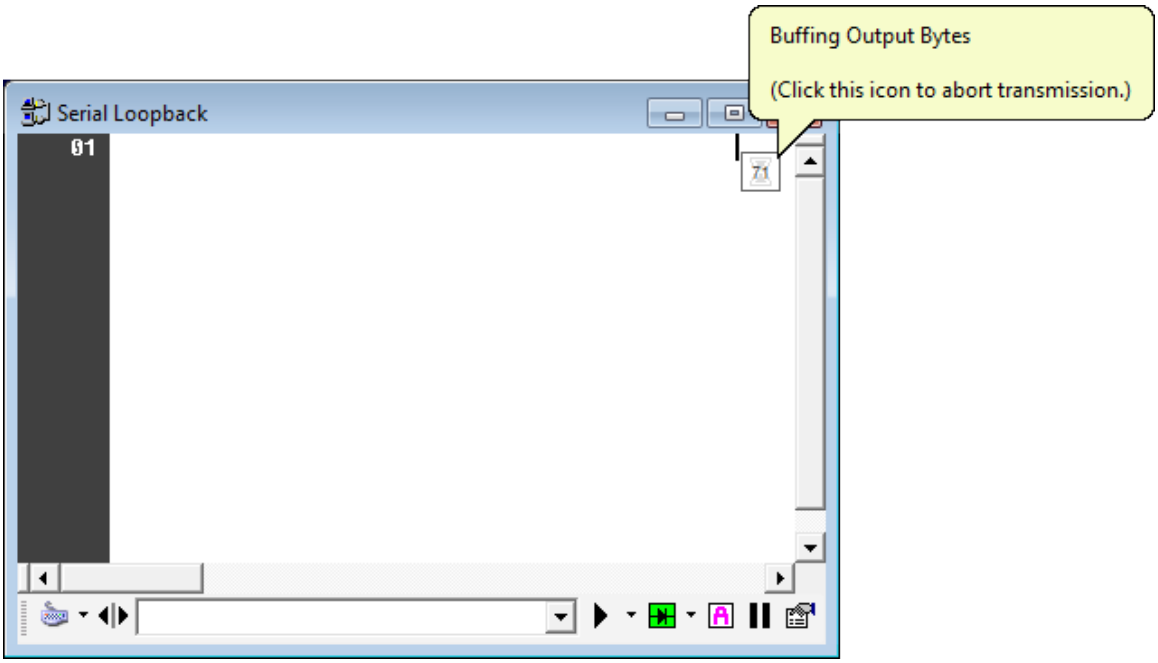


Session Status Icon

While Indigo is buffering outbound data and in the process of transmitting it using character or line delays, the following status icon will be displayed.

Outbound Data Buffering		This icon is displayed when outbound data is being buffered and transmitted to the connected session on a buffered basis. Outbound data buffering will only be present when the Character and Line Delay option is enabled. You can click this icon to abort transmitting the remaining buffered data.

> **Tip**
>
> The number of remaining buffered bytes is displayed in the status icon.



Command Terminating Character(s)

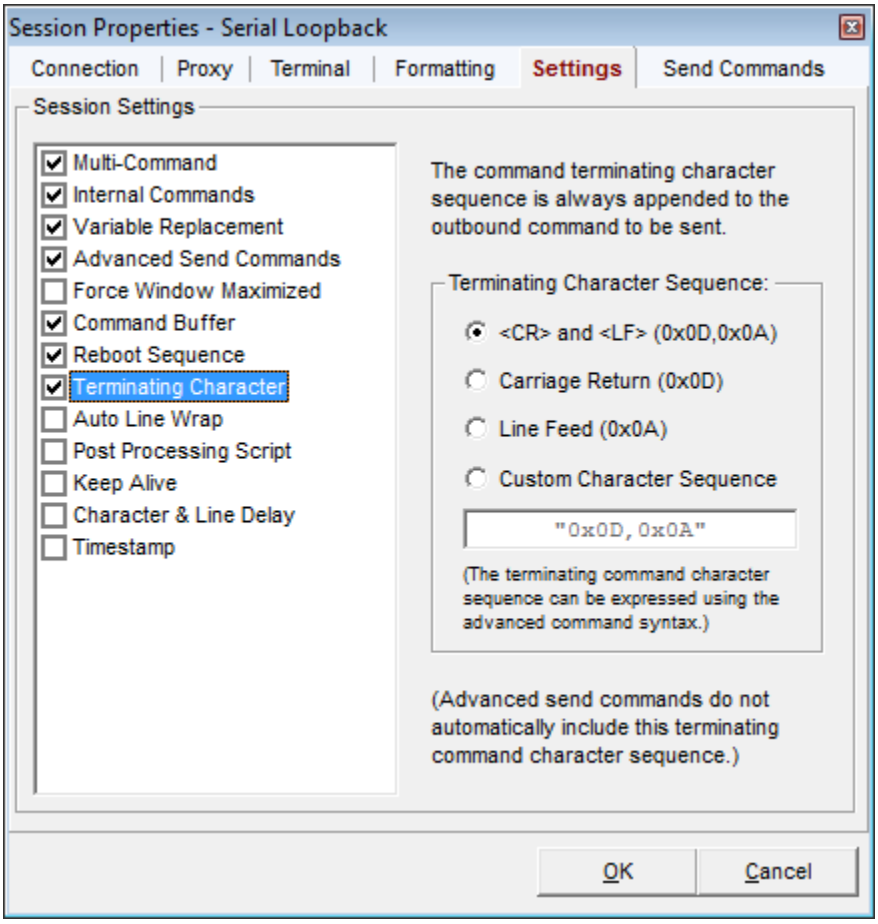
Overview

Command instructions sent to a terminal connection automatically include a set of line terminating characters/bytes appended to the end of the data string.
By default, Indigo includes both a carriage return (0x0D) and line feed (0x0A); however, if your device/host requires a different set of command terminating characters/bytes, you can provide a set of custom terminating characters.

> **Note**
>
> The command terminating characters/bytes do not apply to advanced send commands or keyboard redirected input using the Terminal Emulation view mode.

Session Properties

The command terminating character sequence can be enabled/disabled or customized with a user specified character sequence from the Session Properties editor on the Advanced settings tab.



Command Terminating Character Options	Description
<CR> and <LF> (0x0D,-0x0A)	This option will always send a carriage return and line feed appended to each command instruction submitted to the connected device/host in a terminal session. (*This is the default option in Indigo.*)
Carriage Return (0x0D)	This option will always send a carriage return appended to each command instruction submitted to the connected device/host in a terminal session.
Line Feed (0x0A)	This option will always send a line feed appended to each command instruction submitted to the connected device/host in a terminal session.
Custom Character Sequence	This option will allow the user to specify a custom character sequence that will be appended to each command instruction submitted to the connected device/host in a terminal session. (*The custom character sequence can be expressed using the advanced send command syntax.*)

> **Tip**
>
> The character sequence can be expressed using the advanced send command syntax.

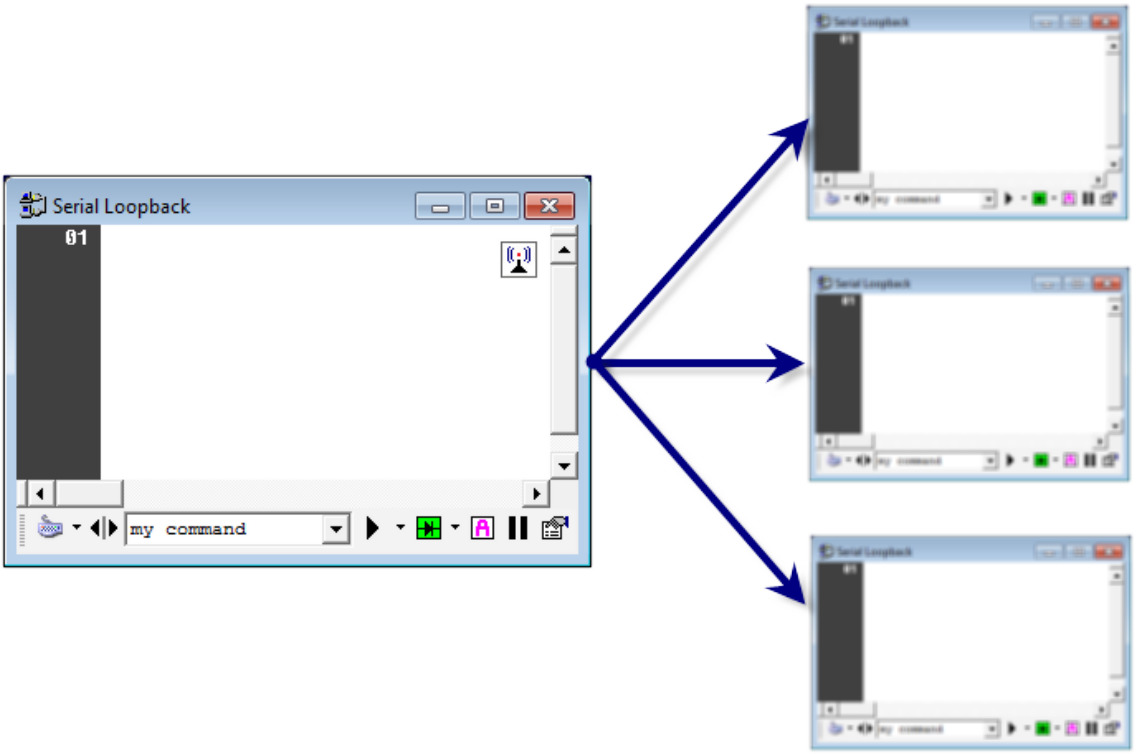
Character	Byte in Decimal	Byte in Hex
Carriage Return <CR>	13	0x0D
Line Feed <LF>	10	0x0A

Broadcasting Commands

Overview

Indigo supports a command *Broadcasting* feature that allows you to transmit command instructions from one terminal session to all open and connected terminal session windows in Indigo simultaneously.

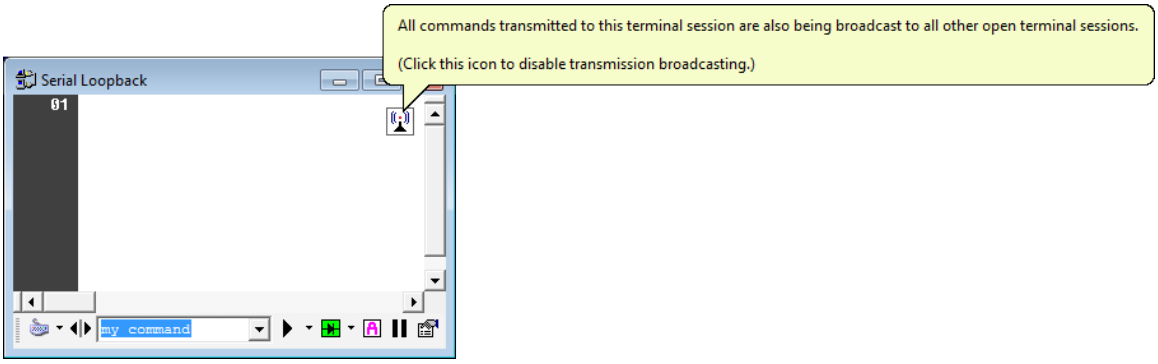
First, the session from which you want to send the command instructions must be enabled for broadcasting. Once enabled any command/data transmitted from this terminal session will also be automatically transmitted in all other open and connected terminal sessions.



Session Status Icon

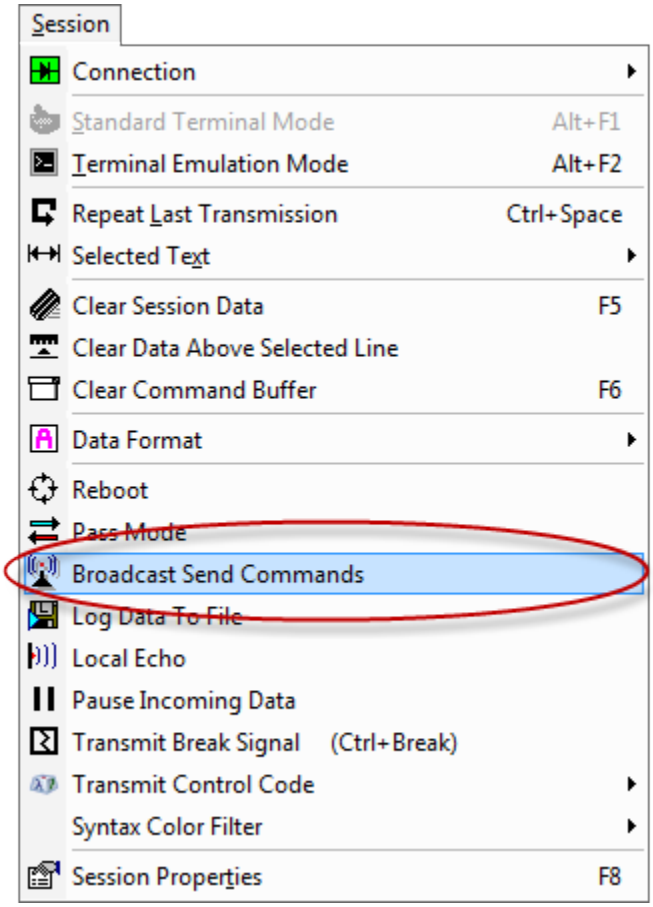
When a terminal session is enabled for command broadcasting, the following status icon will be displayed in the session window.

Broadcasting		This icon is displayed when the current session is configured to broadcast all its outbound command to all open and connected terminal sessions. Click the icon to disable command broadcasting.



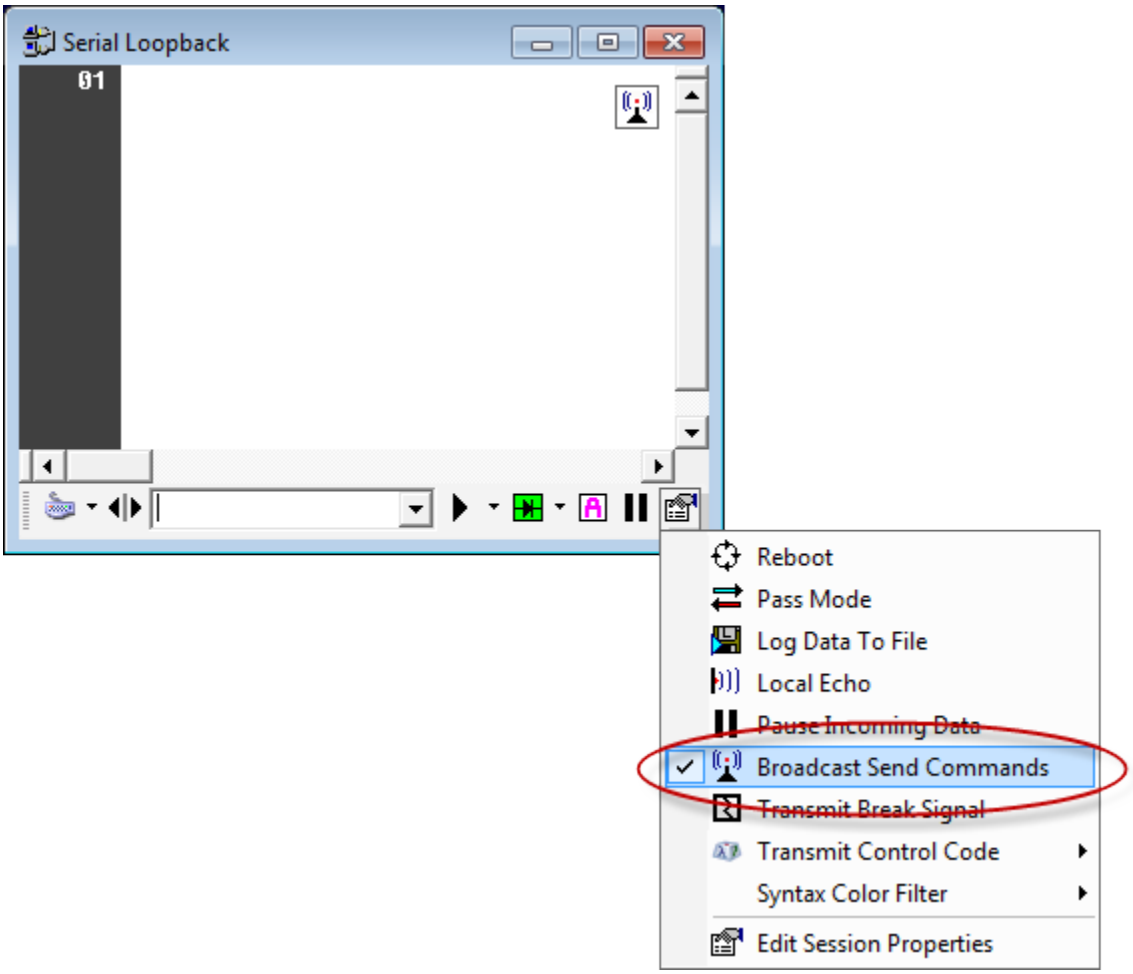
Session Menu

The *Broadcasting* feature can enabled/disabled from the application Session Menu.



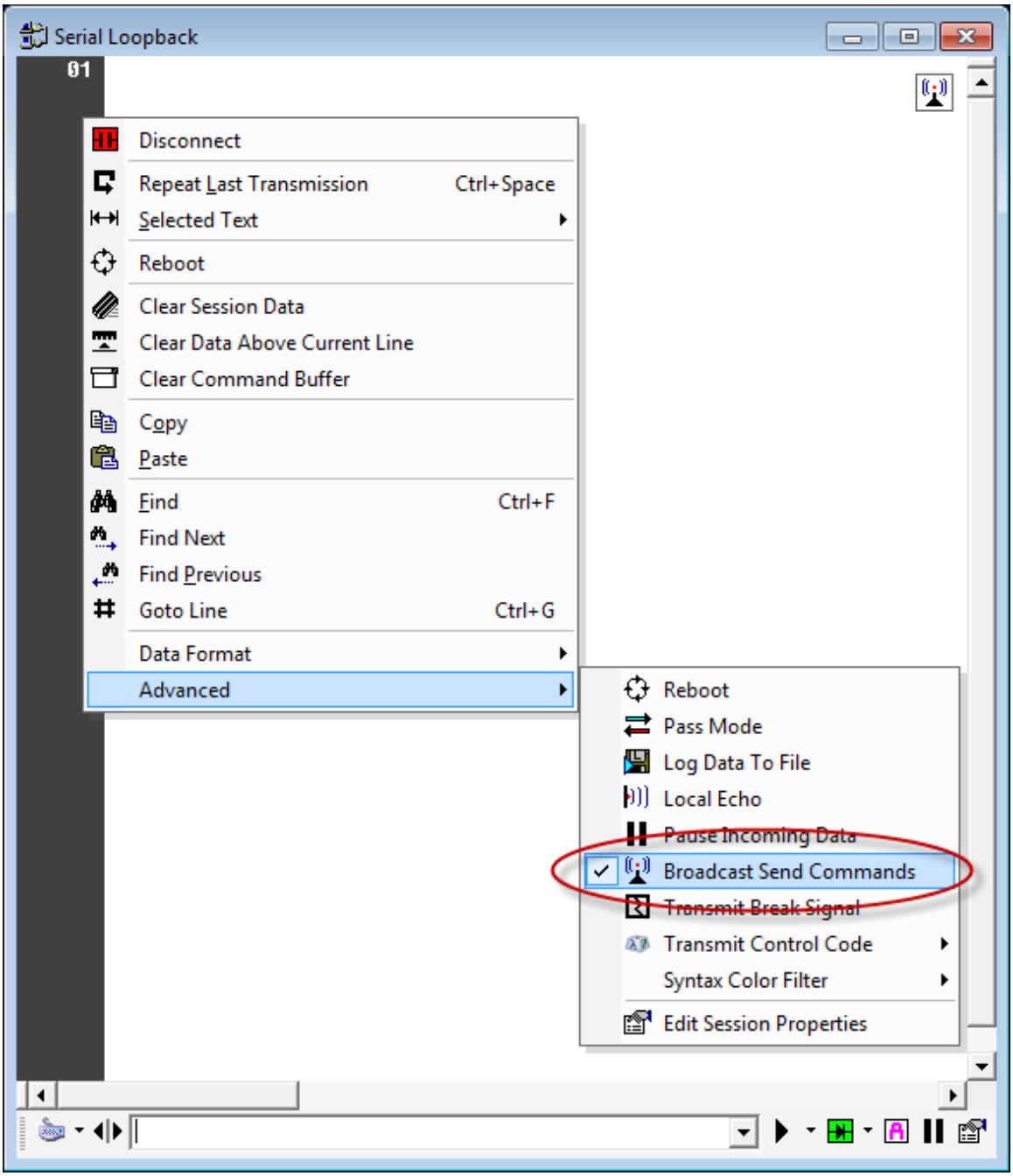
Session Toolbar

The *Broadcasting* feature can enabled/disabled from the session's toolbar menu.



Session Context Menu

The *Broadcasting* feature can enabled/disabled from the session's right-click context menu.



Multi-Command

Overview

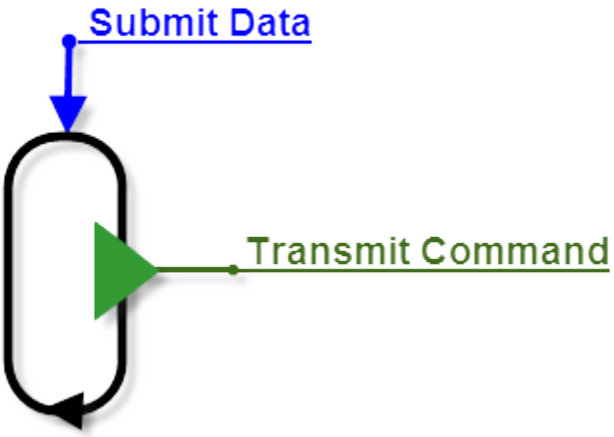
Indigo supports a *Multi-Command* feature that allows you to chain together multiple commands into a single command line expression.

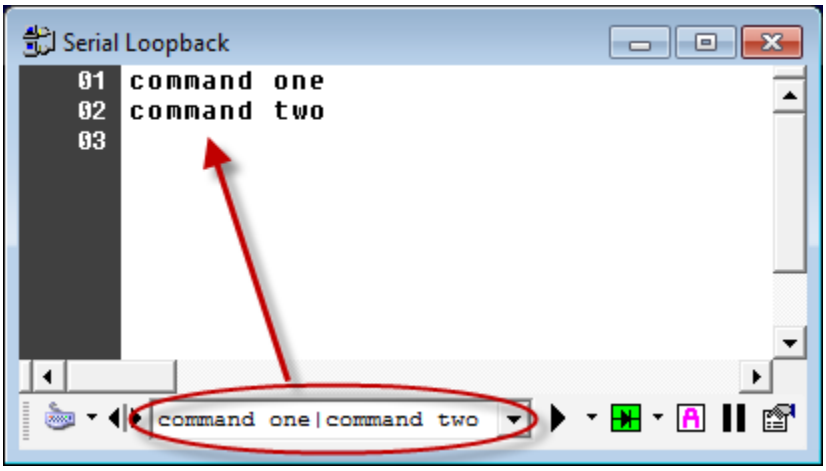
Command 1	Delimiter	Command Two
`command-one`	`|` (*pipe*)	`command-two`

Example:

```
command-one|command-two|command-three|command-four
```

When the command line is submitted, Indigo looks for the multi-command delimiter and then separates the command into multiple commands and transmits them individually to the connected device/host.
Indigo will include the command terminating characters at the end of each individual command (*unless it is an advanced send command*).





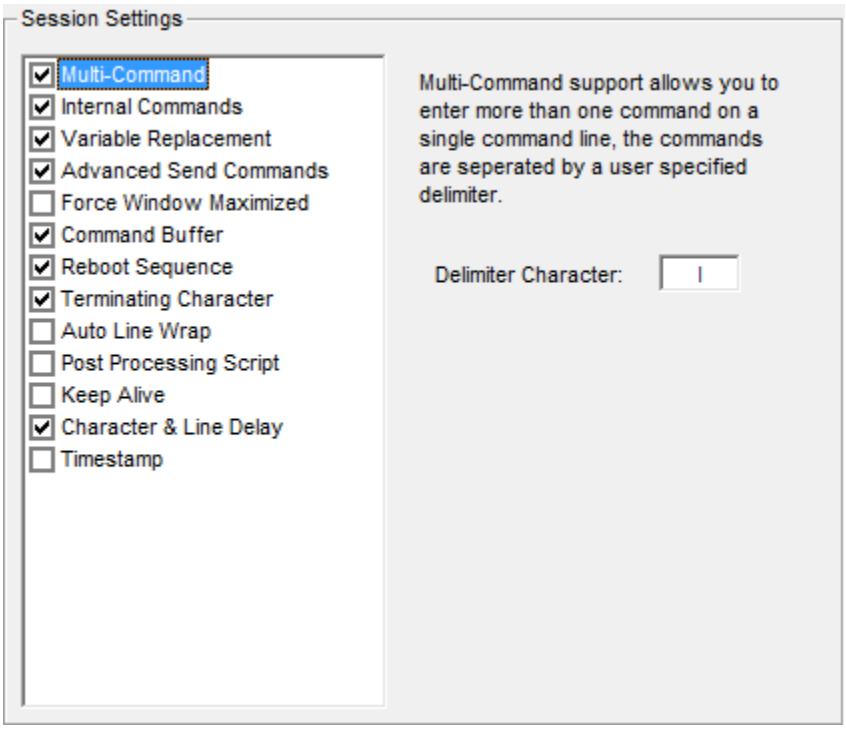
You can use the *Multi-Command* syntax to separate Advanced Send Command expressions.
Example:

```
"'HELLO'"|"0x48,0x45,0x4C,0x4C,0x4F"
```

Session Properties

The *Multi-Command* feature can be enabled, disabled, an customized in the Session Properties editor on the Advanced tab.

If this option is enabled, the terminal session will support Multi-Commands.
You can also change the multi-command delimiter character on this configuration panel.



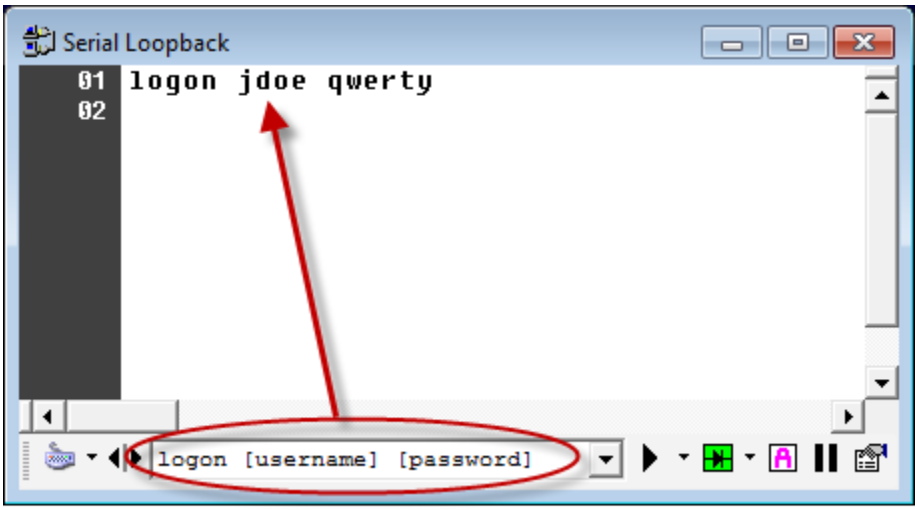
Tip

Some devices/hosts may need the use of the pipe "|" character thus you can choose to disable the multi-command or change the multi-command delimiter to another character.

Command Variable Replacement

Overview

Indigo includes a variable replacement feature that allows you to define a set of variables whose values can be substituted in command data when it is submitted to the connected device/host.



Variable	Value
USERNAME	joe
PASSWORD	qwerty

Usage

To configure variables you wish to use in Indigo, you must enter them into the Variable Manager tool.

The syntax for using a variable in your data command is simple.
Just enclose the variable name in square brackets and Indigo will search for an available replacement.

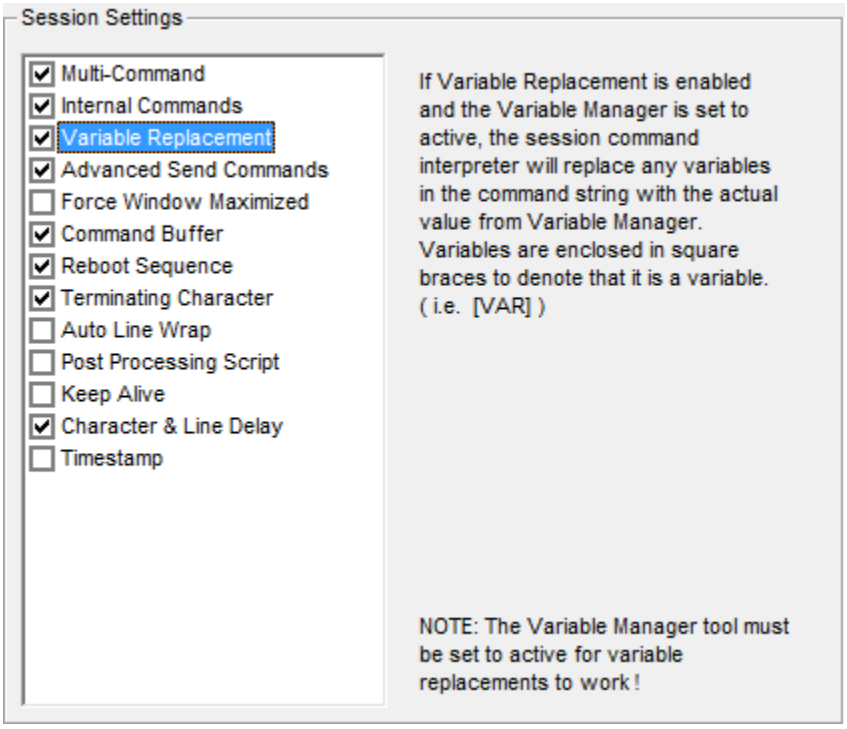
Syntax
`data [variable name] data`

Variable replacements can be used in the following places:

- Command Bar
- Paste To Session (*Edit Menu*)
- Paste from Session Context Menu
- Command Macros
- Command Library
- Command Repeater
- Session Send Commands
- Automated Send Commands

Session Properties

This feature can be enabled/disabled for a terminal session from the Advanced tab of the Session Properties editor.

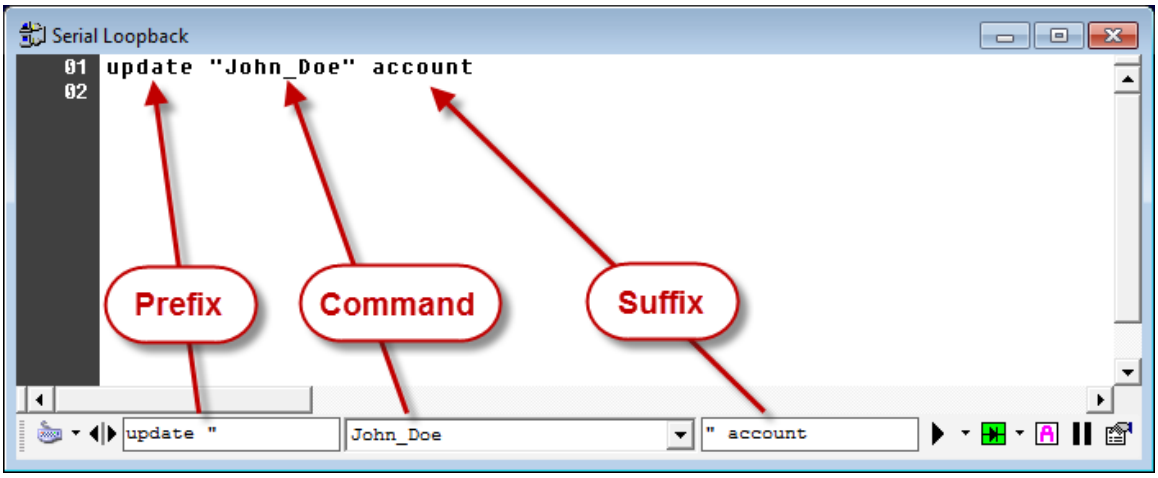


Command Prefix & Suffix

Overview

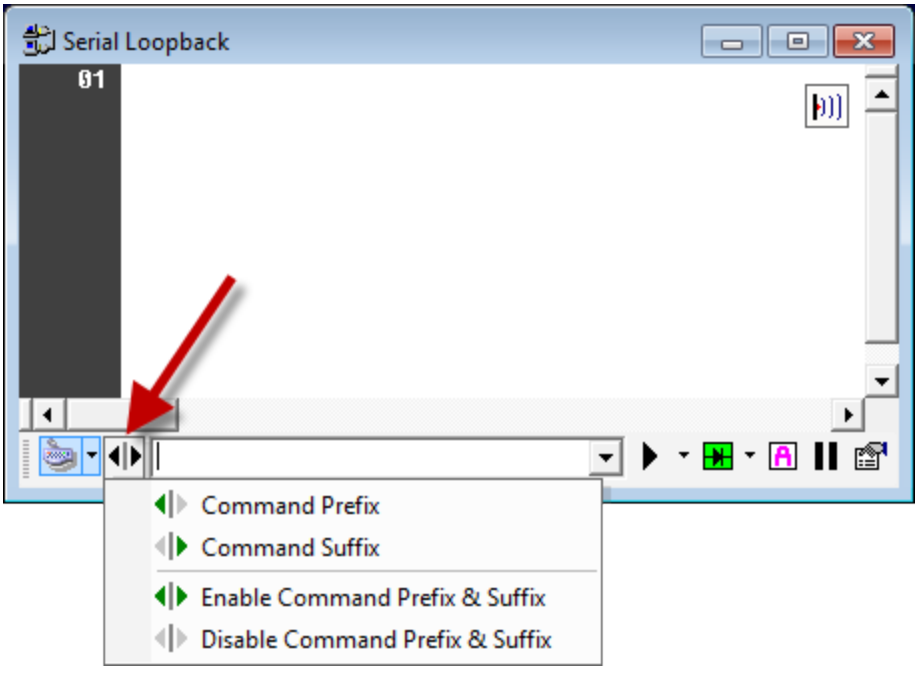
Indigo provides a *Prefix* and *Suffix* feature on the Command Bar where you can define prefix/suffix data that will be concatenated with your main command string when it is submitted to the connected device/host.

This feature can be particularly useful when you are communicating a series of commands where a portion of the command remains static and a portion needs to be modified for each command submission.



Session Toolbar

The *Prefix* and *Suffix* command feature can be accessed via the session window toolbar immediately to the left of the command bar.
You can enable/disable the *Prefix* and *Suffix* command field independently.

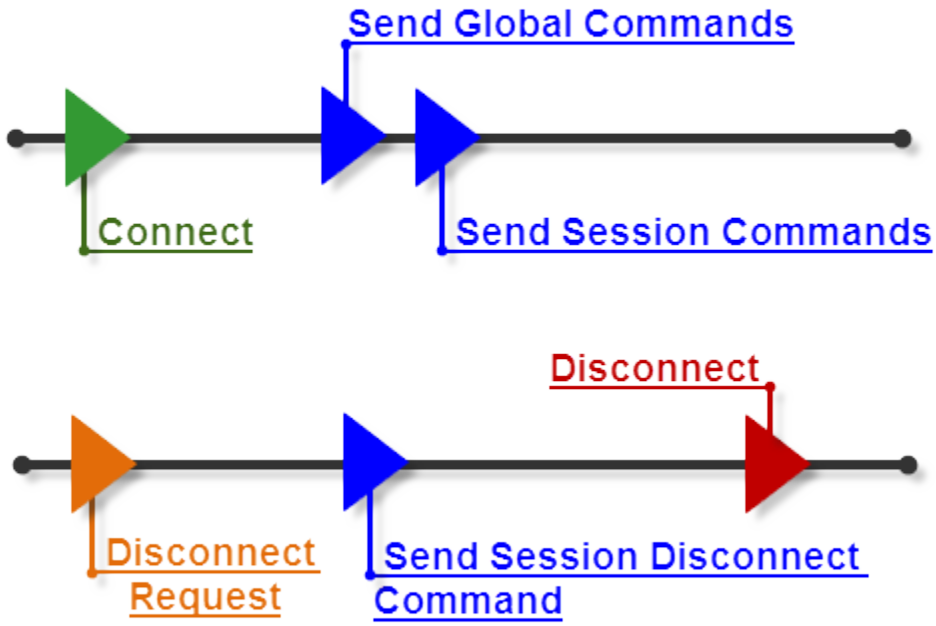


Automated Send Commands

Overview

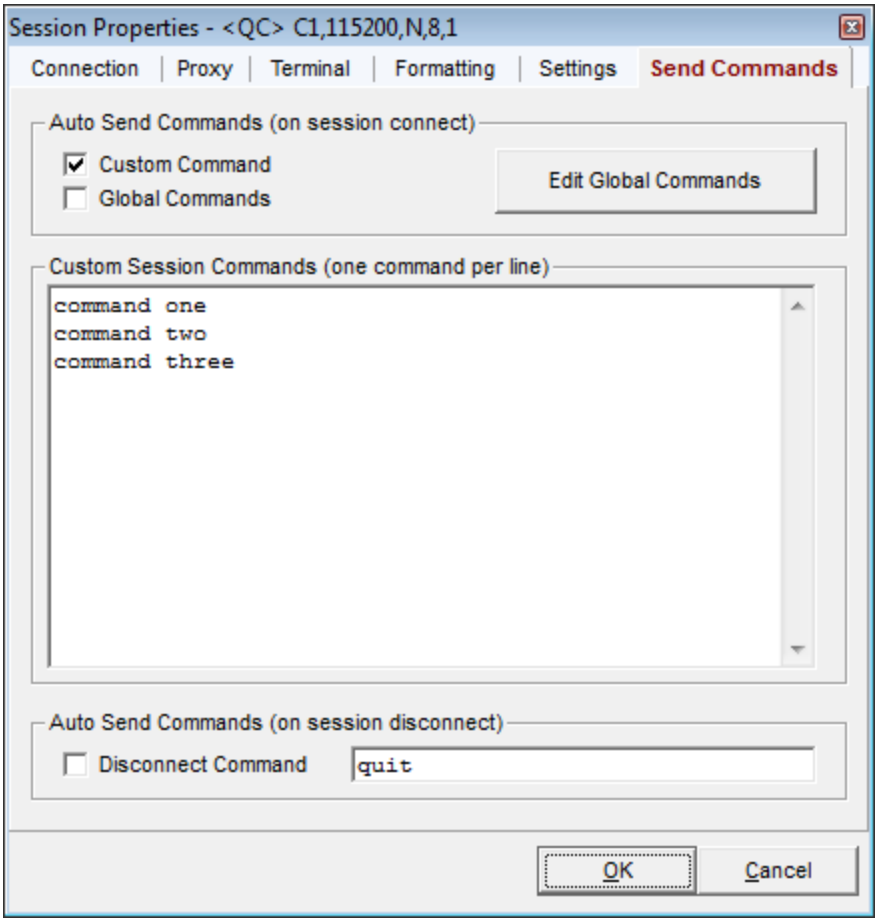
Indigo includes a feature for automatically issuing instruction commands to a terminal session at the time of device/host connection and/or disconnection.
Indigo includes support for both session based custom commands and globally defined commands.

This feature is especially useful if you need to always send some set of initialization or staging commands to the remote device/host when your connection is established.Disconnect Command



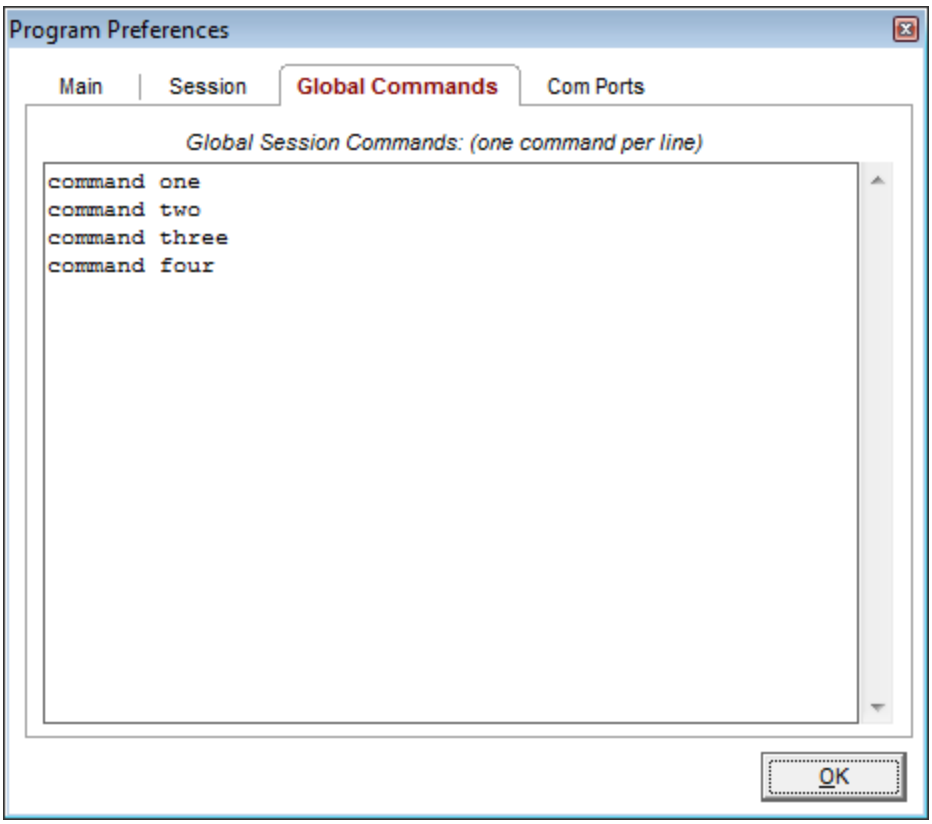
Session Properties

Indigo terminal sessions can be configured to automatically send a series of commands/instructions to a terminal session upon connection/disconnection.
The *Send Commands* tab in the *Session Properties* editor tab is used to configure automated commands issues to the terminal session at the time of connection or disconnection.



Global Send Commands

Indigo also provides a configuration editor for Global Commands in the Program Preferences editor.

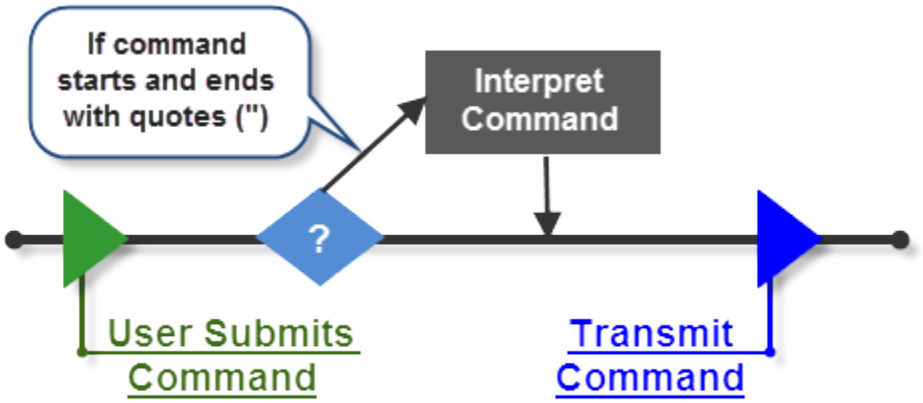


Advanced Send Commands

> **Screencast**
>
> A screencast demonstration using the advanced send command syntax is available. Click here to see the video.

Overview

When communicating with certain equipment or embedded devices, it may be desirable to send command instructions to the connected device in data byte formats other than ASCII.
Indigo supports a feature called *Advanced Send Commands* that allow you to express these alternate byte representations in a command string and Indigo will interpret the expression and transmit the appropriate data bytes.



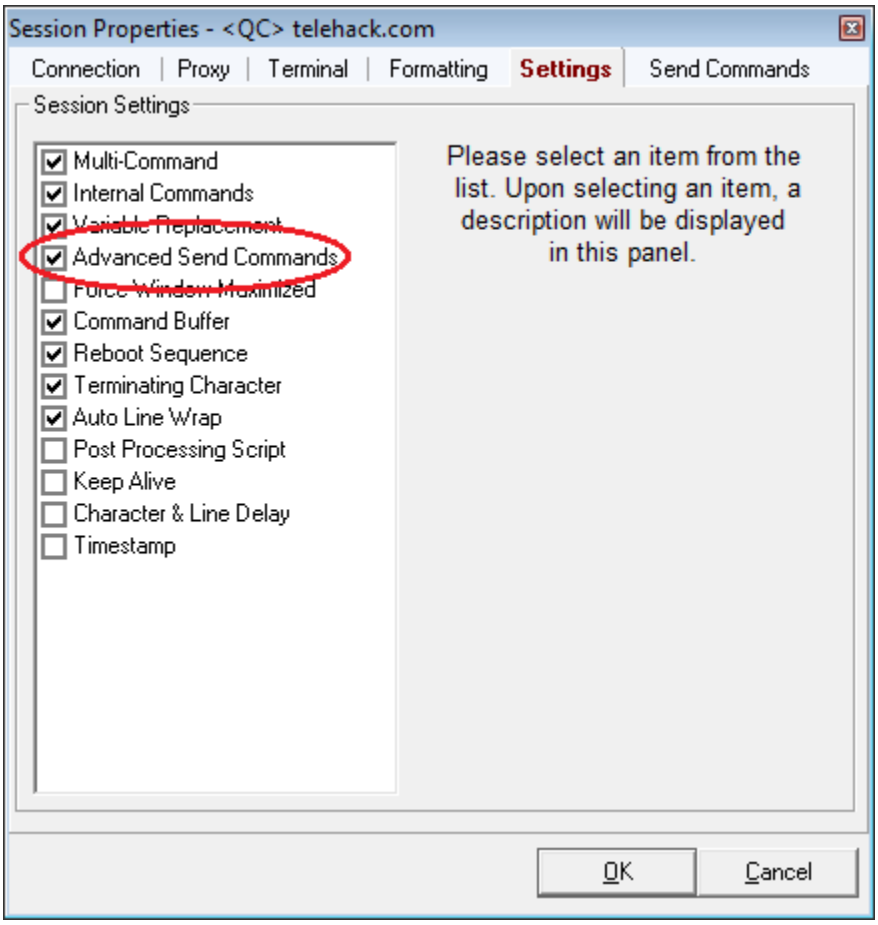
The *Advanced Send Command* syntax supports the following data byte formats:

- ASCII
- HEXADECIMAL
- DECIMAL
- OCTAL
- BINARY

Session Properties

First, the session must be configured to allow *Advanced Send Commands*.
This feature can be enabled/disabled in each session.

Navigate to the session properties and select the *Settings* tab and make sure the Advanced Send Command setting is enabled.



Syntax

To send *Advanced Data Commands* to the connected session, you must submit them using a syntax that Indigo can recognize to interpret the intended data bytes for transmission.

Please note the following requirements for sending *Advanced Send Commands*:

1. All *Advanced Data Command* expression strings must be encapsulated in double quote characters.
   The double quotes instruct Indigo that the data expression being submitted is an *Advanced Send Command*.

2. Each data byte in the command expression (*with the exception of ASCII characters*) must be separated by

commas.

3. When using the *Advanced Send Command* feature it is important to note that unlike normal command instructions sent to the connected device, Indigo will not automatically append any terminating characters to the instruction command (*By default this is a carriage return byte and line feed byte*). If your command instruction requires some form of termination, you will have to include the appropriate termination characters/bytes within the *Advanced Send Command* expression.

Below are examples of the send command: "HELLO" in each supported data byte representation

Data Type:	***Advanced Send Command Syntax:***

ASCII	ASCII strings are expressed by encapsulating the sequence of characters inside single quotes.
	`"'HELLO'"`
	ASCII characters can be individually expressed by encapsulating each character
	inside single quotes and each character separated with a comma.
	`"'H','E','L','L','O'"`

Decimal	Decimal data bytes are expressed as numeric values with no prefix or suffix identifier characters. `"72,69,76,76,79"`

Hexadecimal	Hexadecimal data bytes can be expressed as hex byte values with a 'h' suffix identifier character.
	`"48h,45h,4Ch,4Ch,4Fh"`
	Hexadecimal data bytes can be expressed as hex byte values with a '$' prefix identifier character.
	`"$48,$45,$4C,$4C,$4F"`
	Hexadecimal data bytes can be expressed as hex byte values with '0x' prefix identifier characters.
	`"0x48,0x45,0x4C,0x4C,0x4F"`

Octal	Octal data bytes can be expressed as a numeric value with a 'o' suffix identifier character. `"110o,105o,114o,114o,117o"`
Binary	Binary data bytes can be expressed as strings of zeros and ones with a 'b' suffix identifier character. `"01001000b,01000101b,01001100b,01001100b,01001111b"`
Mixed	Data bytes in the *Advanced Send Command* do not have to be expressed in only one data format. You can mix the data byte formats, the command interpreter will decipher each byte separately This example mixes binary, decimal, ASCII, and hexadecimal bytes into a single command expression. `"01001000b,69,'L','L',4Fh"`

Usage

You can use the *Advanced Send Command* syntax for any data submitted via the command bar at the bottom of the session window. They can also be used in Macro Commands and in Command Library commands.
A screencast demonstration usage of the *Advanced Send Command* syntax is available. Click here to see the video.

File Transfer (Serial)

Overview

Indigo includes a file transfer for serial connections that can transfer the a file to or from the connected device/host.

Please note that this is a different feature from the Transmit File Contents feature.
The file transfer feature uses specific file transfer protocol to send or receive a complete file between the host and computer running Indigo.
The transmit file contents feature uses transmits the contents (bytes/strings) directly to the connected device/host and does not transfer a file to the remote device/host, just sends the data contents as a raw stream of data.

Indigo support the following file transfer options:

- Supported Protocols
- Send/Upload File
- Receive/Download File

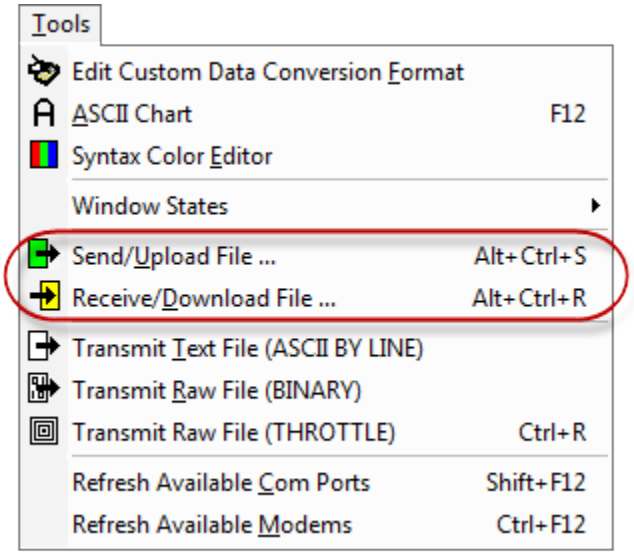
Supported Protocols

Indigo supports the following serial file transfer protocols.

Feature	Indigo V3 Standard	Indigo V3 Professional
ASCII (Send Raw Text File, No Protocol)	✅	✅
X-Modem		✅
X-Modem 1K		✅
X-Modem/CRC		✅
Y-Modem		✅
Y-Modem-Batch		✅
Y-Modem-Batch-G		✅
Z-Modem		✅
Z-Modem/Save		✅
Kermit		✅

Tools Menu

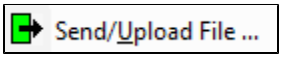
The transfer file options can be accessed using the Tools Menu.



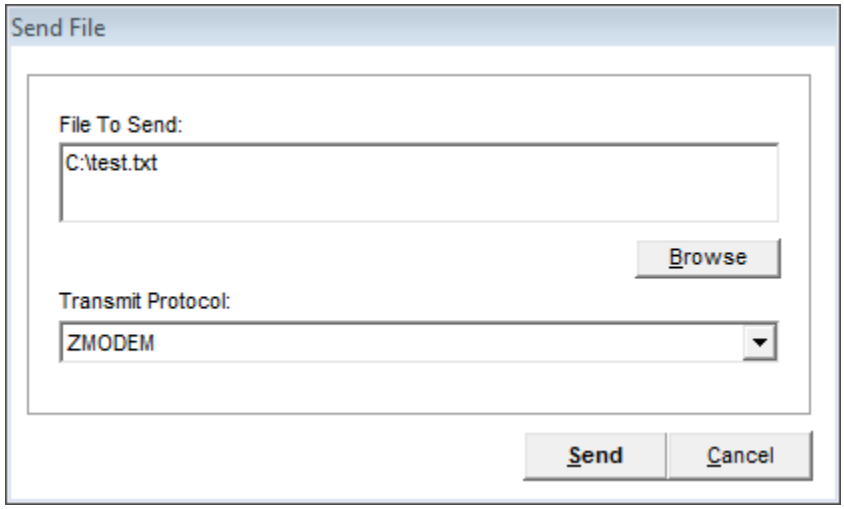
Send/Upload File

This option will transfer a file from the computer running Indigo to the remote serially connected device/host using a file transfer protocol.

The *Send/Upload File* option can be accessed using the Tools Menu.



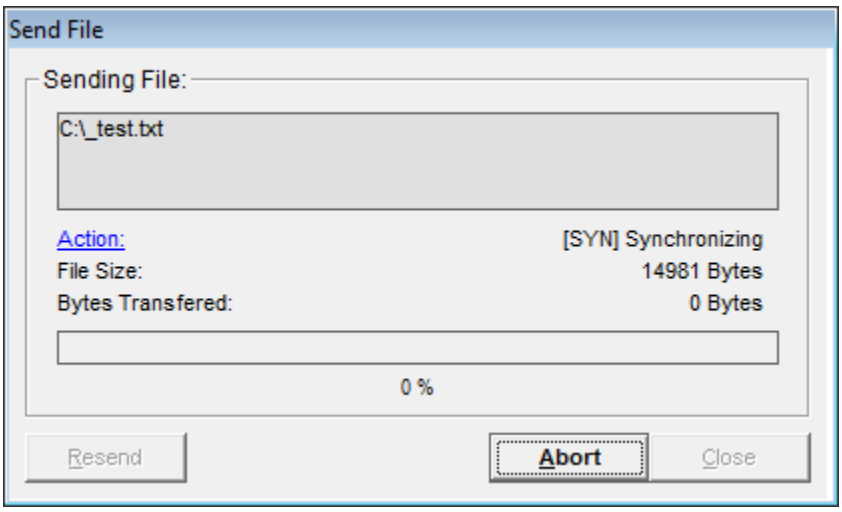
When you activate this feature will be first prompted to select a file and transmit protocol.
After selecting the file and protocol, click the Send button to start the transfer.
Indigo will negotiate the file transfer with the remote connected device/host and start transmitting the file data.
(*The remote device/host must be in the receive file mode with the same file transfer protocol before the file will be transferred.*)



Property	Description
File	The file to be transferred to the remote connected device/host.

Transmit Protocol	The file transfer protocol used to negotiate the file transfer. (*Both Indigo and the remote host must be configured to use the same file transfer protocol.*) Indigo includes the following options: • `ASCII (Send Raw Text File, No Protocol)` • `XMODEM` • `XMODEM/CRC` • `XMODEM 1K` • `YMODEM` • `YMODEM-BATCH` • `YMODEM-BATCH-G` • `ZMODEM` • `ZMODEM/Save` • `KERMIT`

Indigo will display a progress dialog to show the current transfer status.
You can *Abort* the transfer during the process if needed .



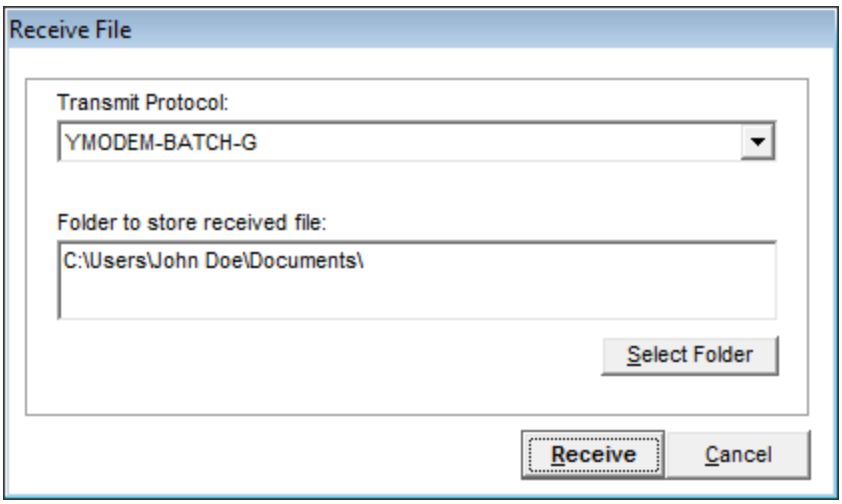
When the file transfer is complete, you can choose to close the file transfer dialog or choose to resend the file again.

Receive/Download File

This option will transfer a file from the remote serially connected device/host to the computer running Indigo using a file transfer protocol.

The *Receive/Download File* option can be accessed using the Tools Menu.

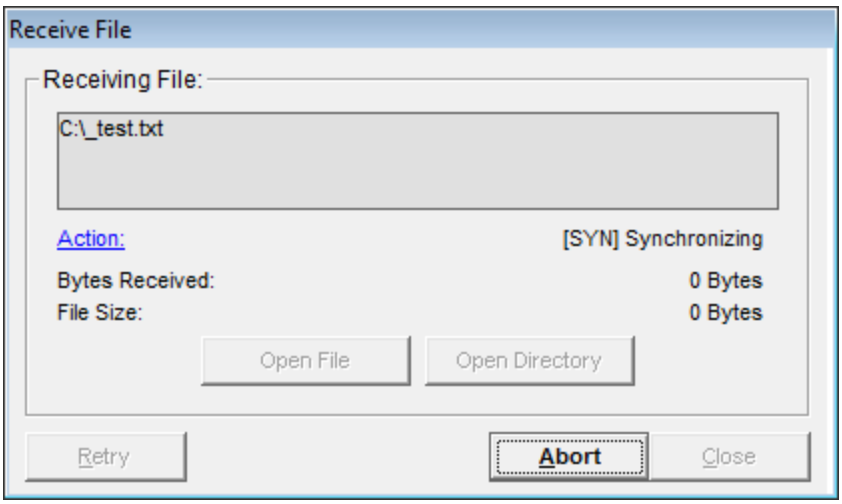
When you activate this feature will be first prompted to select a folder and transmit protocol.
After selecting the folder and protocol, click the *Receive* button to start the transfer.



Property	Description
Receive Folder	The folder on the local system where received files will be stored.
Transmit Protocol	The file transfer protocol used to negotiate the file transfer. (*Both Indigo and the remote host must be configured to use the same file transfer protocol.*) Indigo includes the following options: • `ASCII (Send Raw Text File, No Protocol)` • `XMODEM` • `XMODEM/CRC` • `XMODEM 1K` • `YMODEM` • `YMODEM-BATCH` • `YMODEM-BATCH-G` • `ZMODEM` • `ZMODEM/Save` • `KERMIT`

Indigo will negotiate the file transfer with the remote connected device/host and begin receiving the file data.
(*The remote device/host must be in the send file mode with the same file transfer protocol before the file will be transferred.*)

Indigo will display a progress dialog to show the current transfer status.
You can *Abort* the transfer during the process if needed .



When the file transfer is complete, you can choose to close the file transfer dialog or choose to receive the file again.

Transmit File Contents

Overview

Indigo includes a feature that can transmit the contents of a file to a connected device/host.

Please note that this is a different feature from the File Transfer feature.
The file transfer feature uses specific file transfer protocol to send or receive a complete file between the host and computer running Indigo.

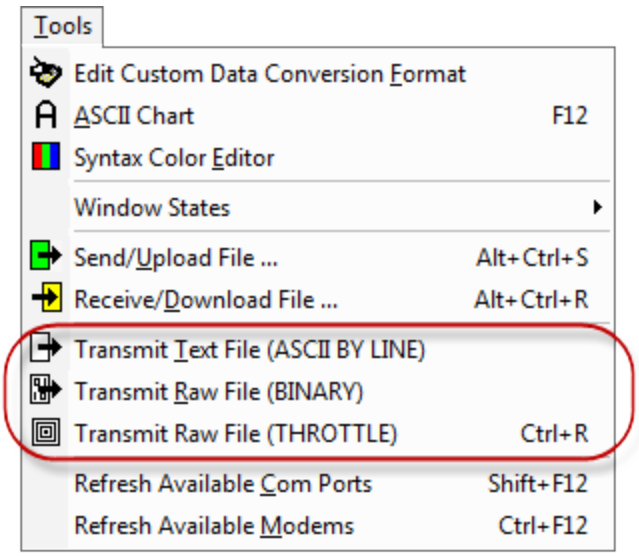
Using this feature, Indigo will open the file and transmit the contents (bytes/strings) directly to the connected device/host. This does not transfer a file to the remote device/host, just sends the data contents as a stream of data.

Indigo support the following options for transmitting file contents:

- Transmit ASCII File (*Line-By-Line*)
- Transmit RAW Binary File
- Transmit RAW Binary File using Throttling
- Internal Command

Tools Menu

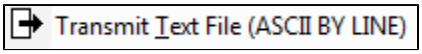
The transmit file option can be accessed using the Tools Menu.



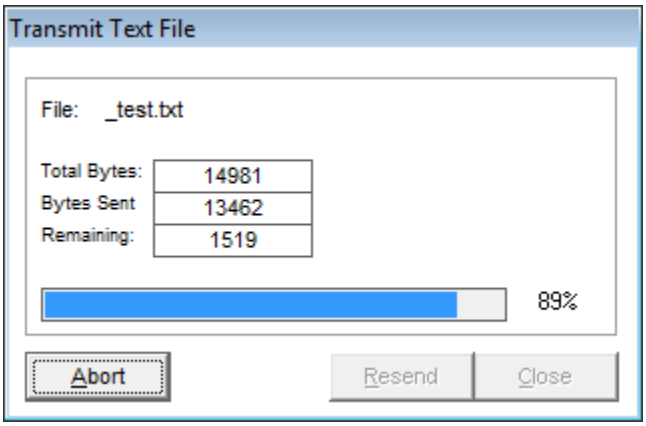
Transmit ASCII File (Line-By-Line)

This option will open a text based file and transmit each line of text as a separate command.
This is a useful option when you have a series of commands listed in a text file that you want to transmit in succession to the connected device/host.

The *Transmit Text File (ASCII BY LINE)* option can be accessed using the Tools Menu.



When you activate this feature will be first prompted to select a file.
After selecting the file, Indigo will start transmitting each line of the file and display a progress dialog to show the current transfer status.



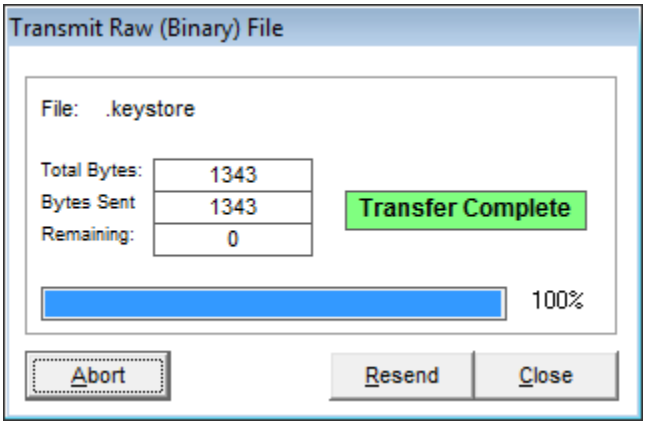
When the file content transmission is complete, you can choose to close the transmit dialog or choose to resend the contents again.

Transmit RAW Binary File

This option will open a (binary) file and transmit a stream of data to the connected device/host.
This is a useful option when you have raw data in a file that you want to transmit to the connected device/host.

The *Transmit Raw File (BINARY)* option can be accessed using the Tools Menu.

When you activate this feature will be first prompted to select a file.
After selecting the file, Indigo will start transmitting the contents of the file and display a progress dialog to show the current transfer status.



When the file content transmission is complete, you can choose to close the transmit dialog or choose to resend the contents again.

Transmit RAW Binary File using Throttling

This option will open a (*binary or text*) file and transmit blocks of data bytes to the connected device/host with delay intervals between each block to throttle the stream of data.
This is a useful option when you have data in a file that you want to transmit to the connected device/host but need to control the rate of transmission.

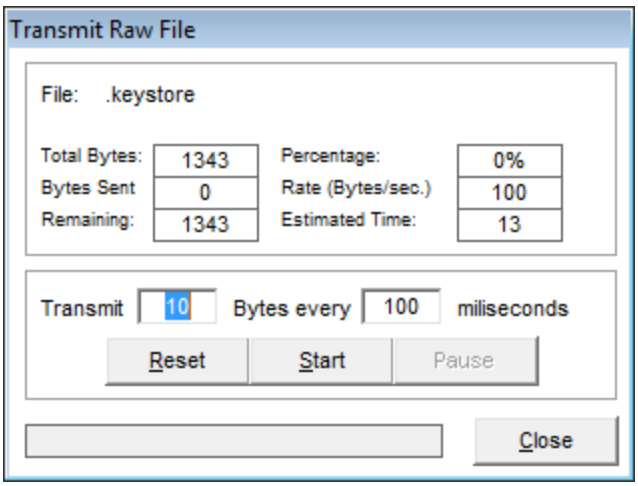
The *Transmit Raw File (THROTTLE)* option can be accessed using the Tools Menu.

When you activate this feature will be first prompted to select a file.
After selecting the file, Indigo will display a *Transmit Raw File* dialog where you can specify the following options:

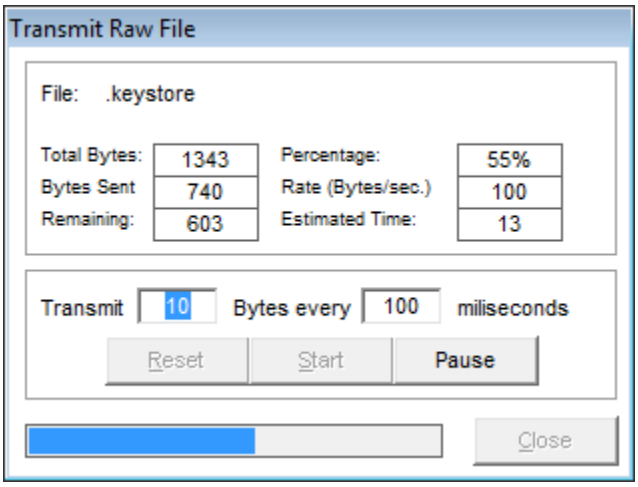
Transmit [*Block Size*] bytes every [*Timing Interval*] milliseconds.

Option	Description
Block Size	The number of bytes to include in a send block that will be transmitted to the connected device/host during each timing interval.
Timing Interval	The number milliseconds to wait between each data block that will be transmitted to the connected device/host.

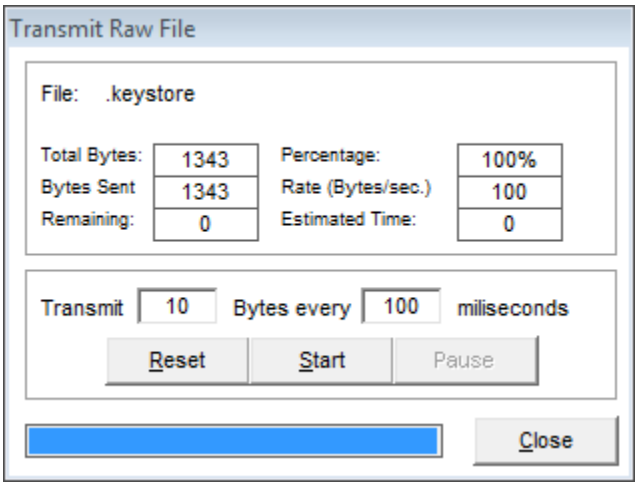
Once you have the block size and timing configured, you can click the *Start* button to begin the transfer.



Indigo will start transmitting each block of data and display a progress dialog to show the current transfer status. You can *Pause* and *Resume* the transmission during the process if needed .



When the file content transmission is complete, you can choose to close the transmit dialog or choose to reset the state and re-start the transmission again.



Internal Command

You can initiate a *Transmit File Contents* action using the Internal Command syntax.

Example	Transmit the contents of an ASCII text file
Command	`:txtextfile:<filename>`

Example	Transmit the contents of a raw binary file
Command	`:txrawfile:<filename>`

Inbound Data Tools & Features

Indigo supports the following inbound data management tools and features:

- Pause Incoming Data
- Line Numbering
- Line Highlighting
- Line Tracking
- Line Wrapping
- Timestamps

Pause Incoming Data

Overview

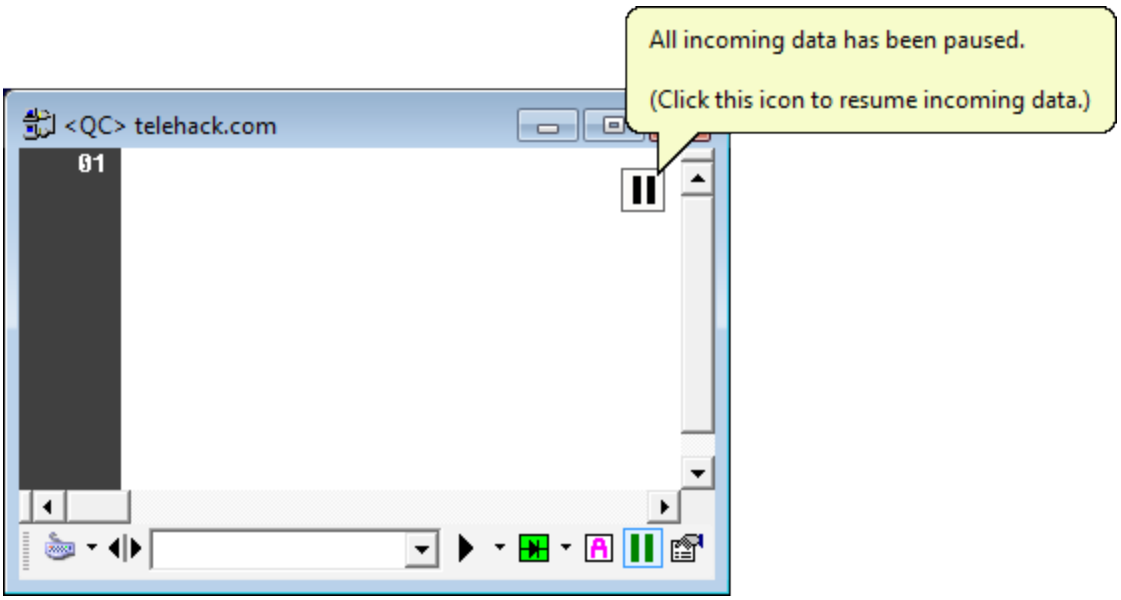
Indigo supports a *Pause* feature that suspends the receipt of incoming data from the remote connected device/host.

> **Note**
>
> The *Pause* feature will not buffer data. Indigo will ignore received data while the *Pause* feature is enabled.

Session Status Icon

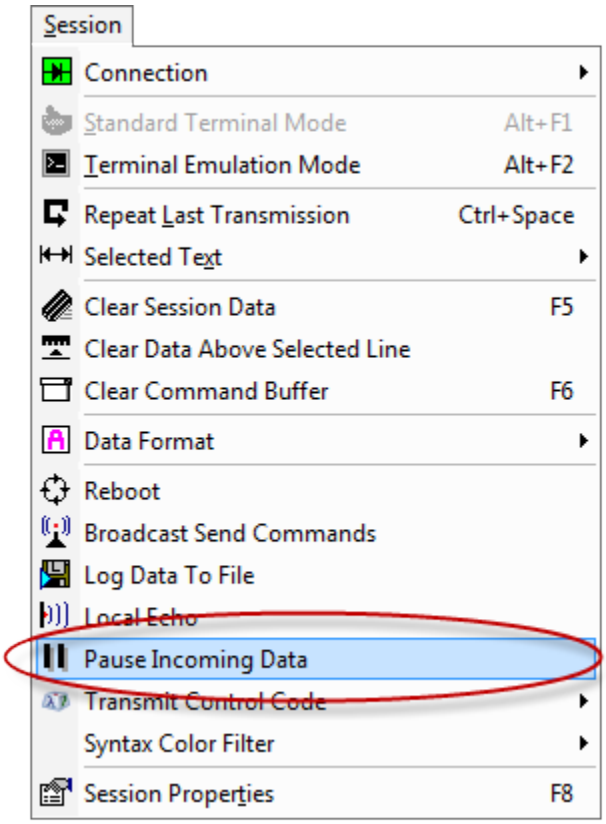
When a terminal session has the *Pause* feature enabled, the following status icon will be displayed.

Pause	⏸	Pause incoming/received data from being rendered to the screen. (*While enabled all incoming data from the connected session is ignored and not rendered to the screen.*) Click this icon to resume rendering incoming data.



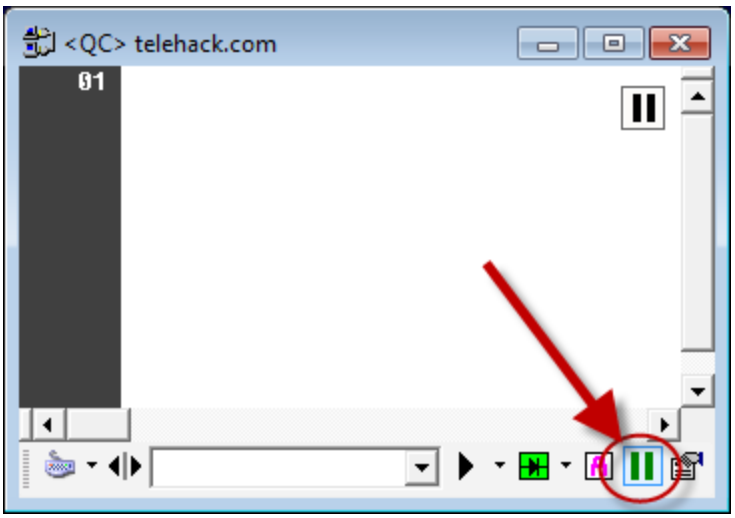
Session Menu

The session *Pause* feature can be enabled/disabled via the Session Menu.

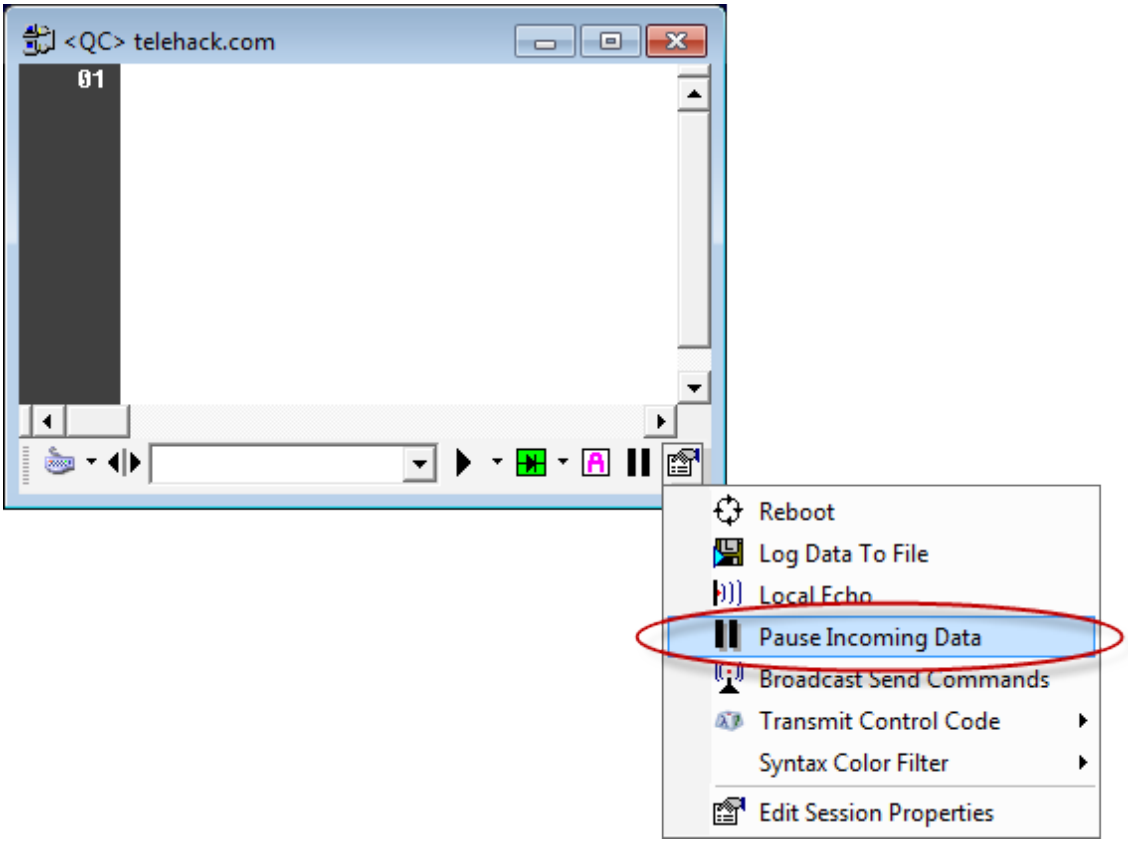


Session Toolbar

The *Pause* feature can be enabled/disabled for a terminal session from the session's toolbar.

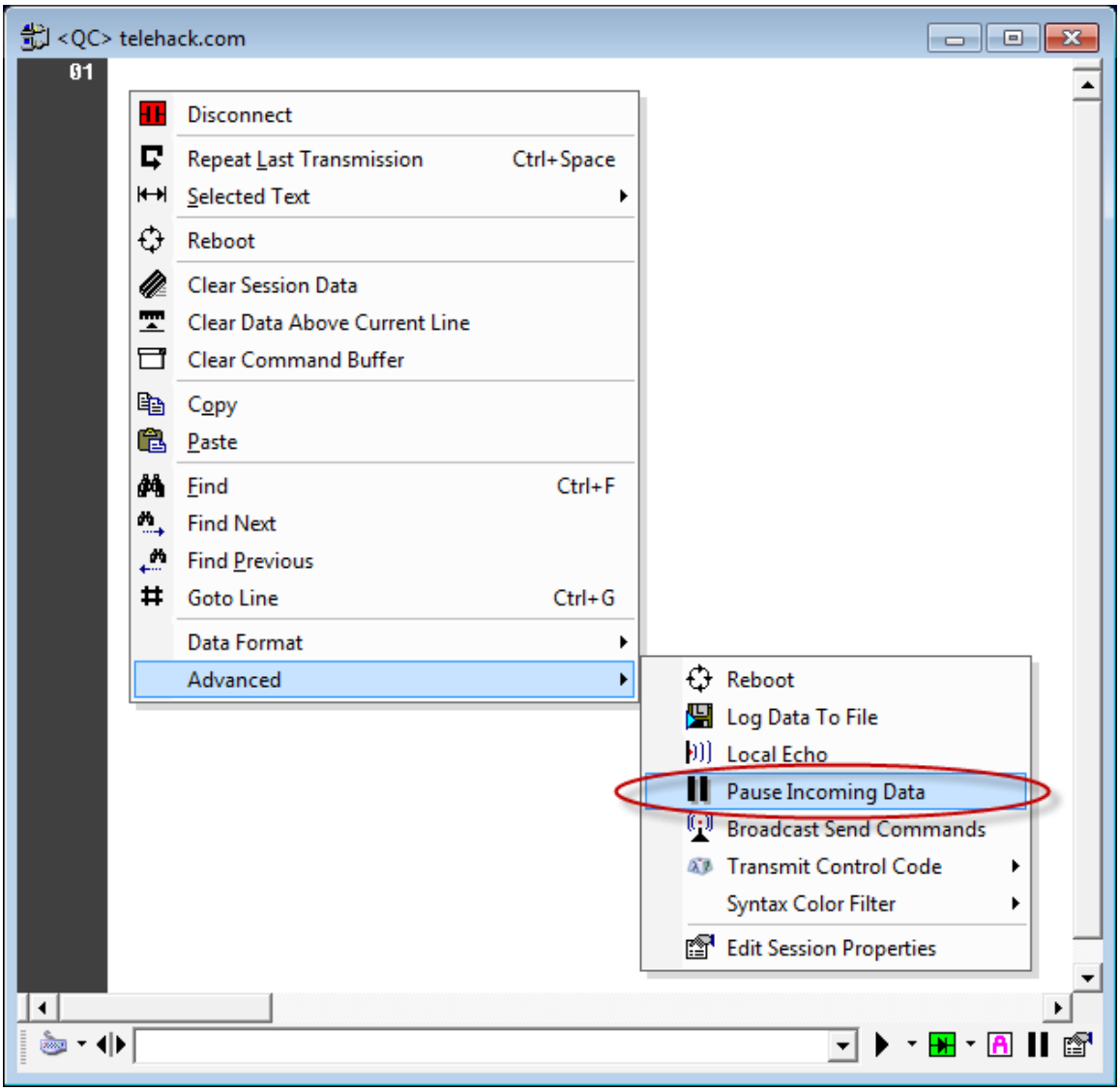


The *Pause* feature can be enabled/disabled for a terminal session from the session's toolbar menu.



Session Context Menu

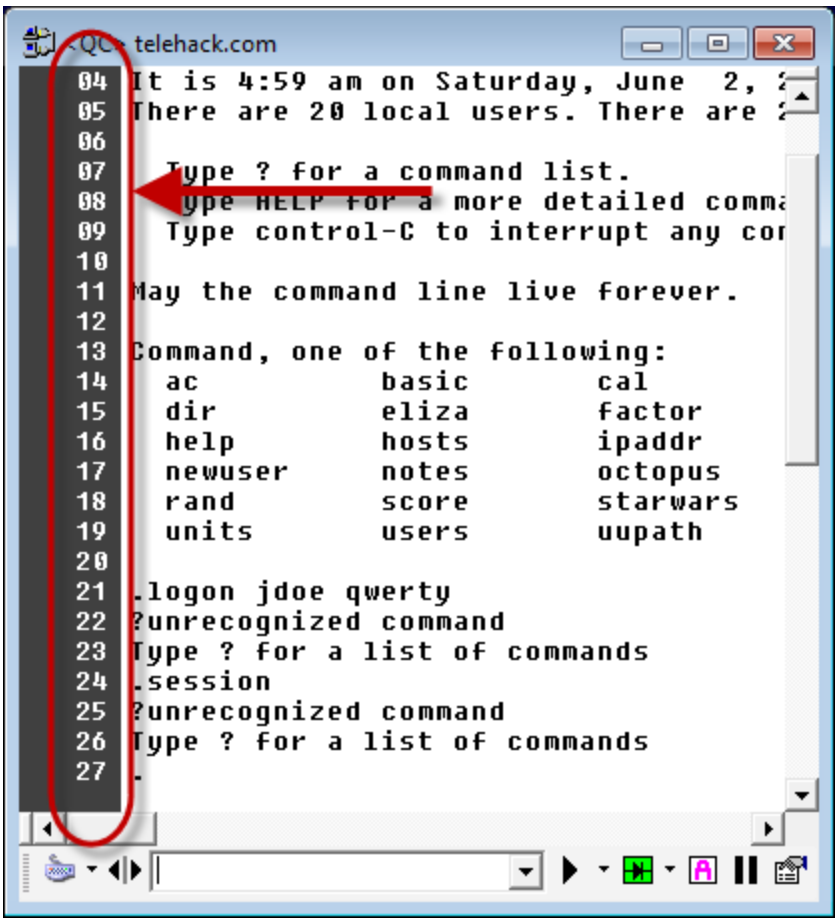
The *Pause* feature can be enabled/disabled from the session's right-click context menu.



Line Numbering

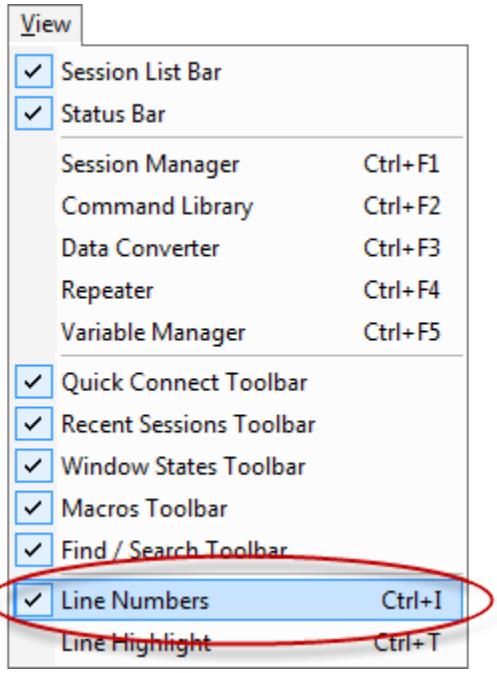
Overview

If using the *Standard View Mode*, you can enable the *Line Numbering* feature which will be displayed in the left margin of the session data window.



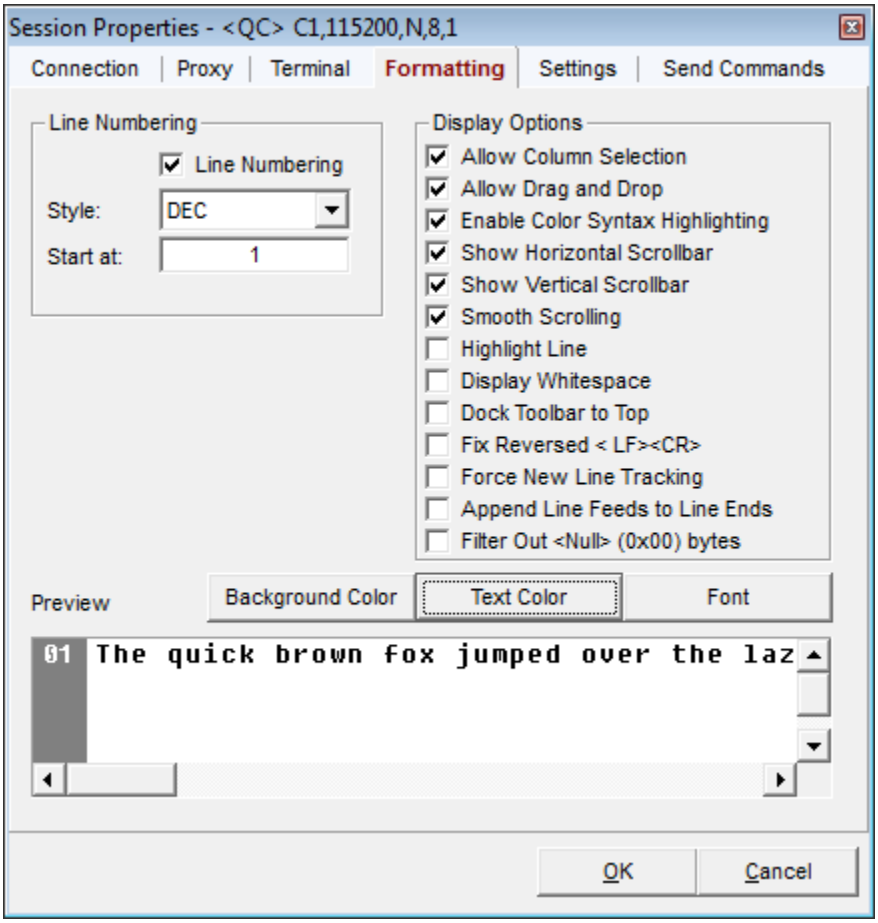
View Menu

You can enable/disable *Line Numbering* using the View Menu.



Session Properties

The *Formatting* tab in the *Session Properties* editor tab is used to configure the *Line Numbering* display options.



Line Numbering Options

The session formatting options include the ability to configure how *Line Numbering* is displayed.

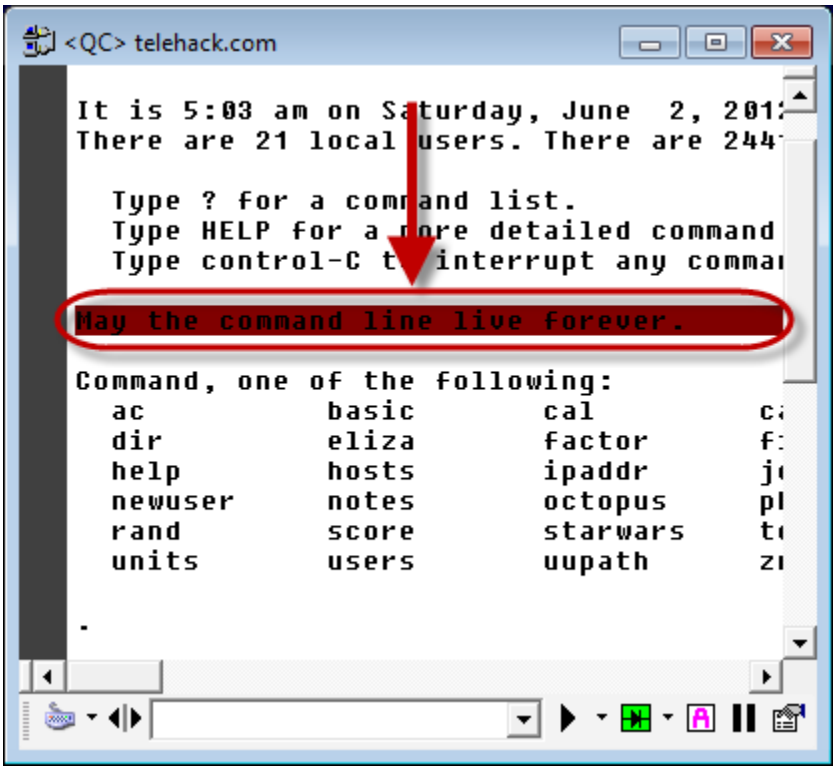
Setting	Description
Line Numbering	A checkbox is provided to enable or disable line numbering. Line numbering can also be enabled or disabled via the Edit menu.
Style/Format	Line numbering can be rendered in the following data formats: **Data Formats** BINARY DECIMAL HEXADECIMAL OCTAL

Start At	Line numbering can be configured to start at a specific line number if preferred. Typically this option is used to define the line numbering a zero-based or one-based.

Line Highlighting

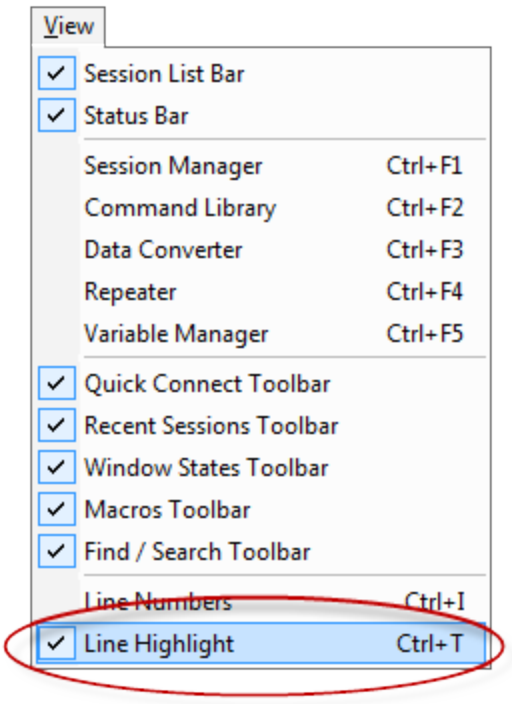
Overview

If using the *Standard View Mode*, you can enable the *Line Highlighting* feature which will display a highlighted bar on the active line where the cursor focus is positioned in the session data window.



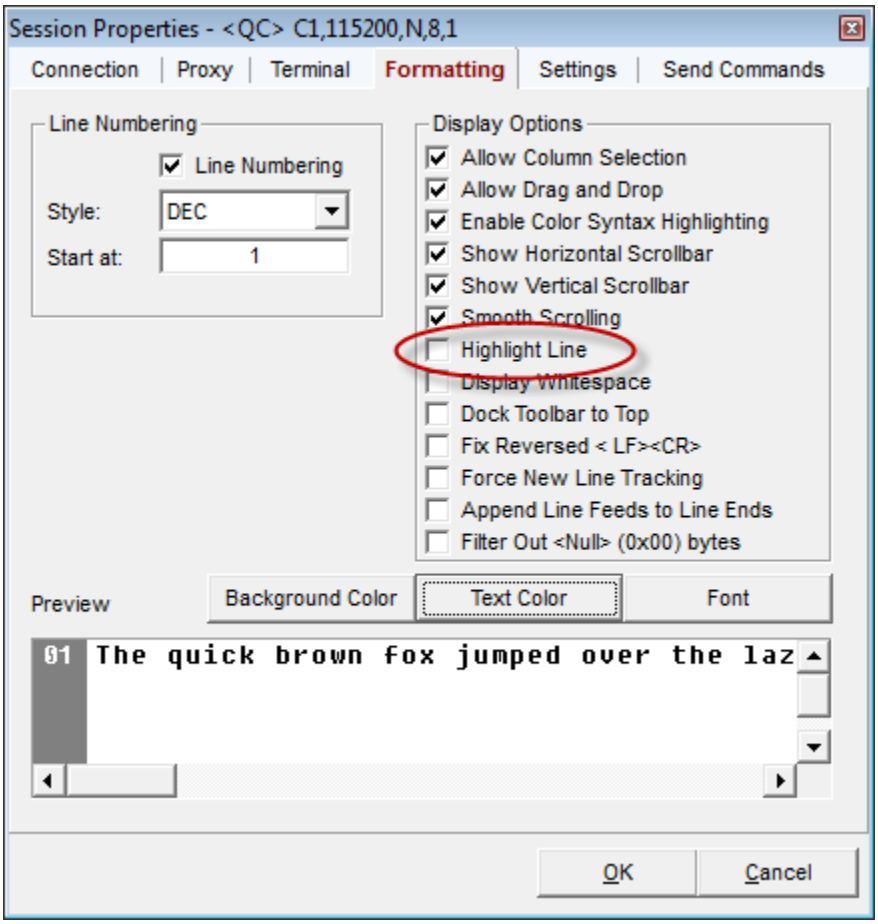
View Menu

You can enable/disable *Line Highlight* feature using the View Menu.



Session Properties

The *Formatting* tab in the *Session Properties* editor tab can be used to enabled/disable the *Line Highlight* feature.



Line Tracking

Overview

In the *Standard View Mode*, Indigo includes a *Line Tracking* feature that helps track the cursor to newly received data in the session data window.
This allows new data to be made visible in the continuous scrolling data window as it is received.

The *Line Tracking* feature is enabled by default.

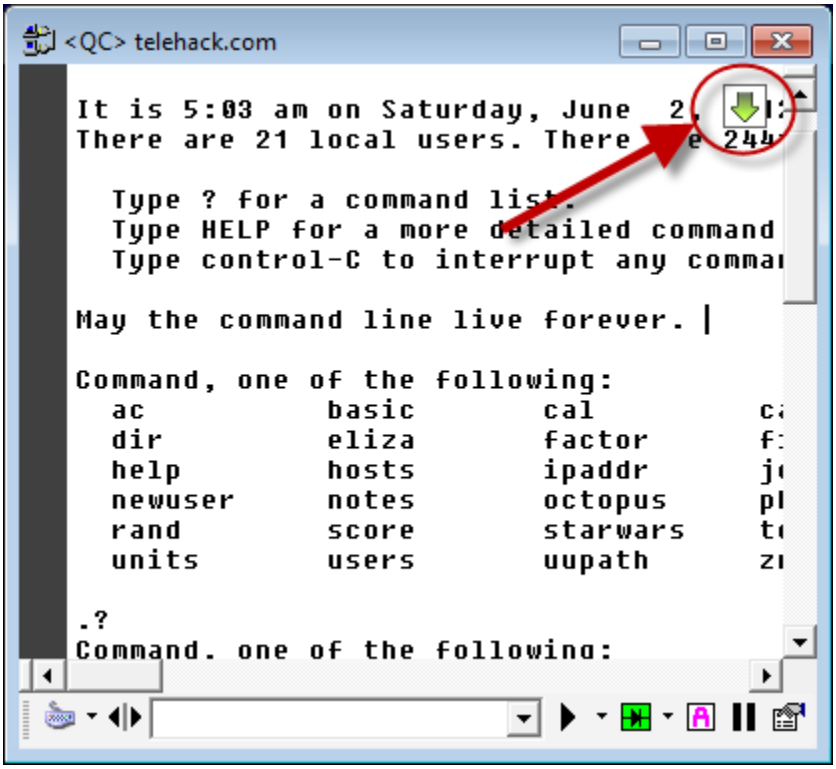
Session Status Icon

The following session status icon is displayed when *Line Tracking* is suspended.

Line Tracking		This icon is displayed when the cursor is placed in the data window on a line of data and the session is not longer actively tracking (scrolling) to newly received data. Click the icon to jump to the newest data line and resume line tracking. (auto-scrolling)

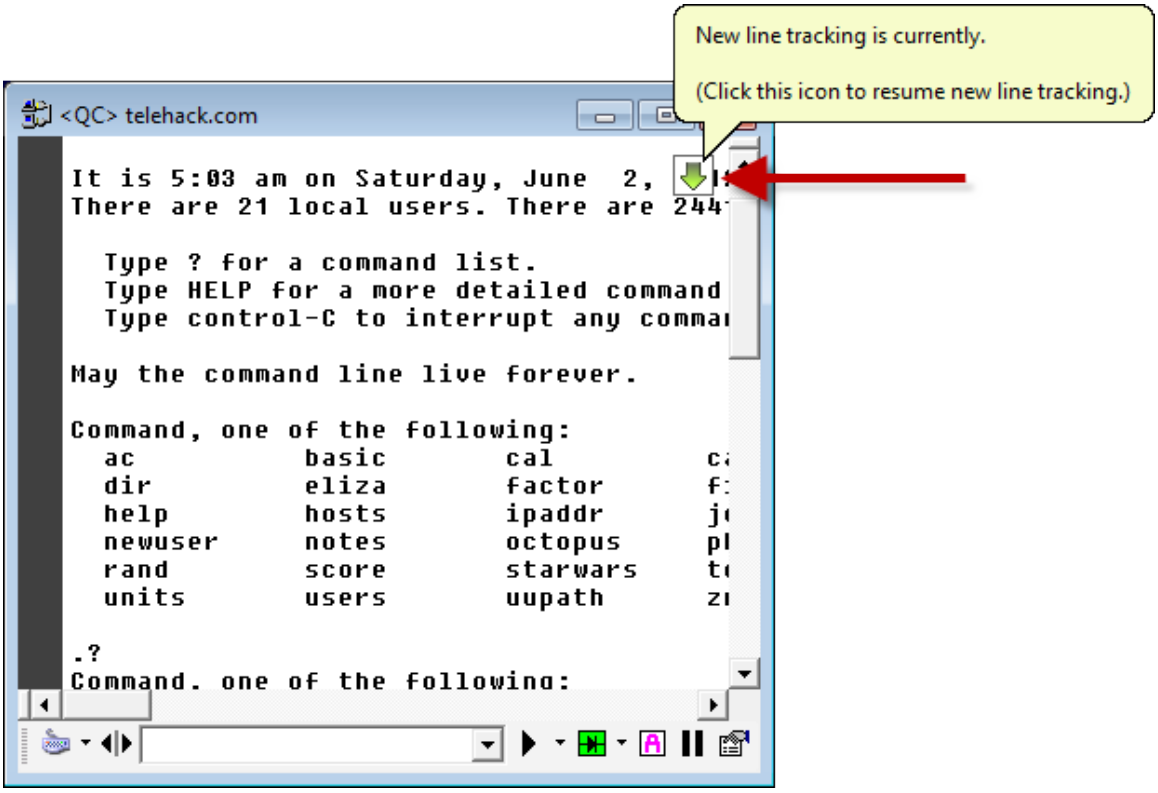
Suspend Line Tracking

If you need to inspect/review portions of the received data you can suspend *Line Tracking* by placing the cursor on the data line.
Indigo will suspend *Line Tracking* when the cursor in the session data windows is focused to a line other than the last line of data.
When *Line Tracking* is suspended a session status icon will be displayed in the session data window.



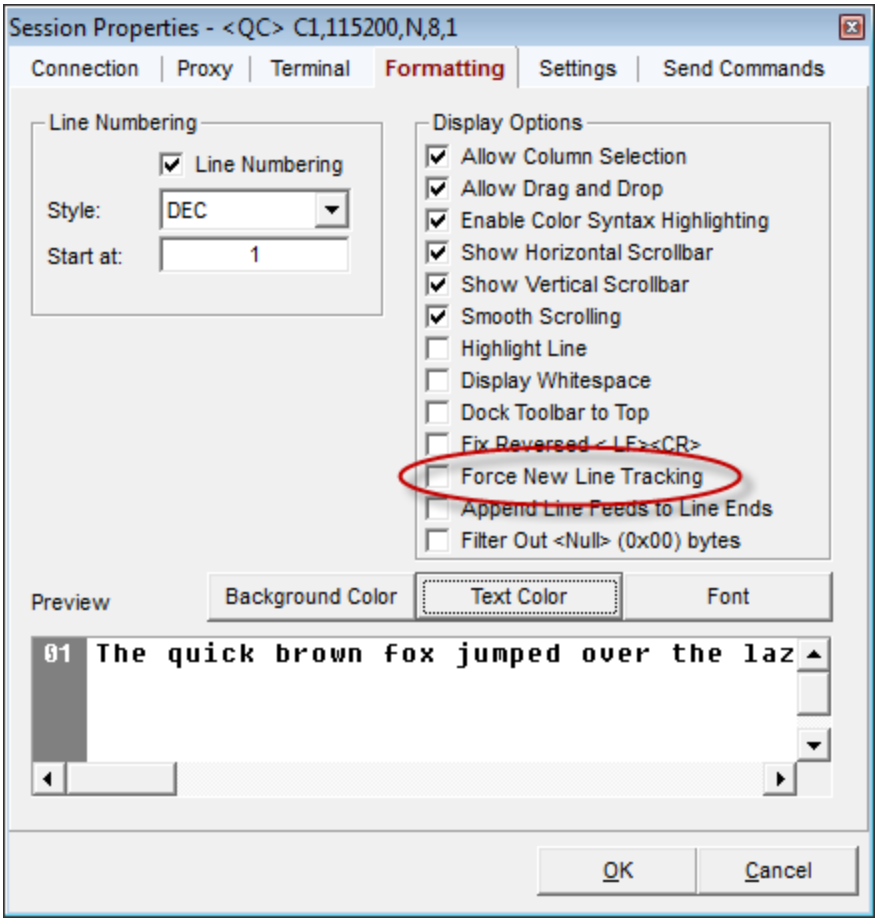
Resuming Line Tracking

To resume line tracking, you can either click the status icon or set the cursor to the last data line in the session data window.



Session Properties

The *Formatting* tab in the *Session Properties* editor tab can be used to *Force New Line Tracking*.
If this option is enabled, then Indigo will always track to the new data line.
In this mode you cannot suspend the *Line Tracking* behavior.



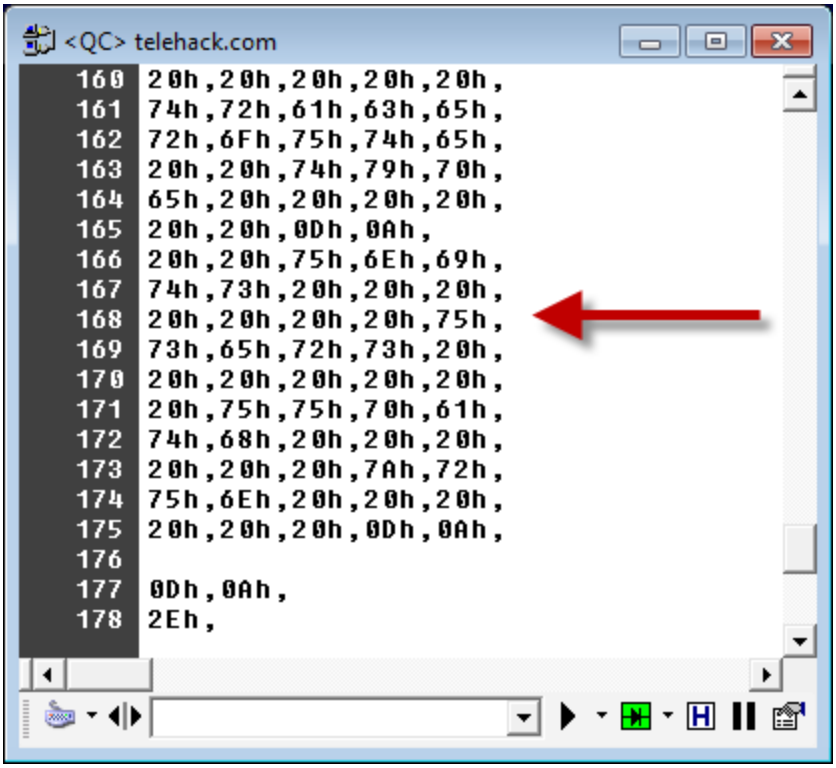
Force New Line Tracking	In the Standard view mode, if this option is enabled then all newly received data is automatically displayed in view in the session data window. This option will force the data window to automatically scoll to the bottom line to display new data. If this option is disabled, Indigo uses the standard line tracking behavior described here.

Line Wrapping

Overview

By default Indigo only performs line wrapping in the session data window when a line termination character is received.
Some devices/hosts do not send any carriage return (0x0D) or line feed (0x0A) characters and you may want the data to be displayed on multiple lines in the data window.
Enabling this option will force the terminal session to perform a line wrap after the specified number of characters have been rendered to a row on the screen.

This feature is only supported in the Standard view mode.

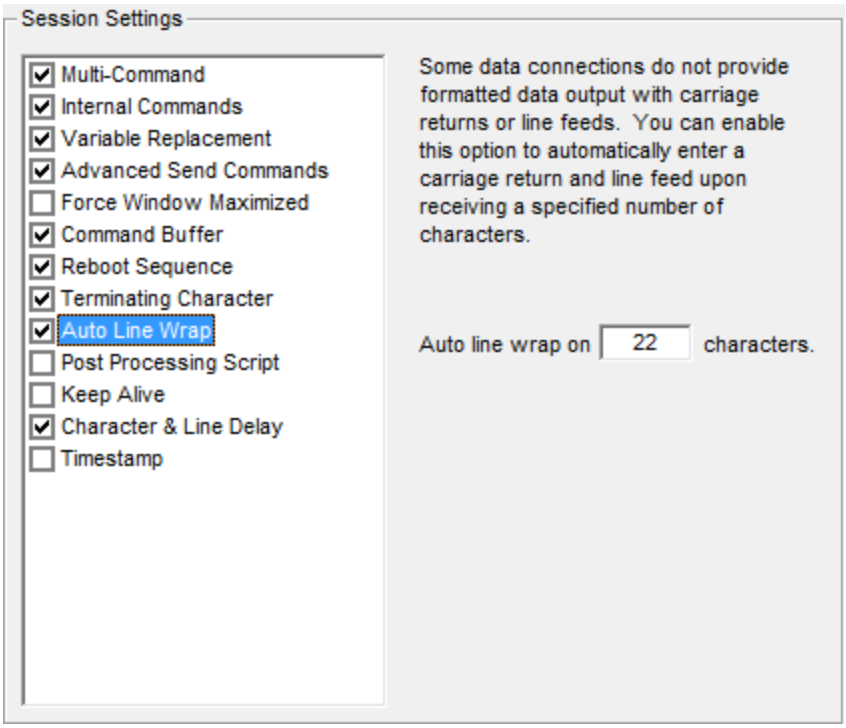


Tip

Auto line wrapping may be a useful feature to enable when working with unstructured or raw binary data.

Session Properties

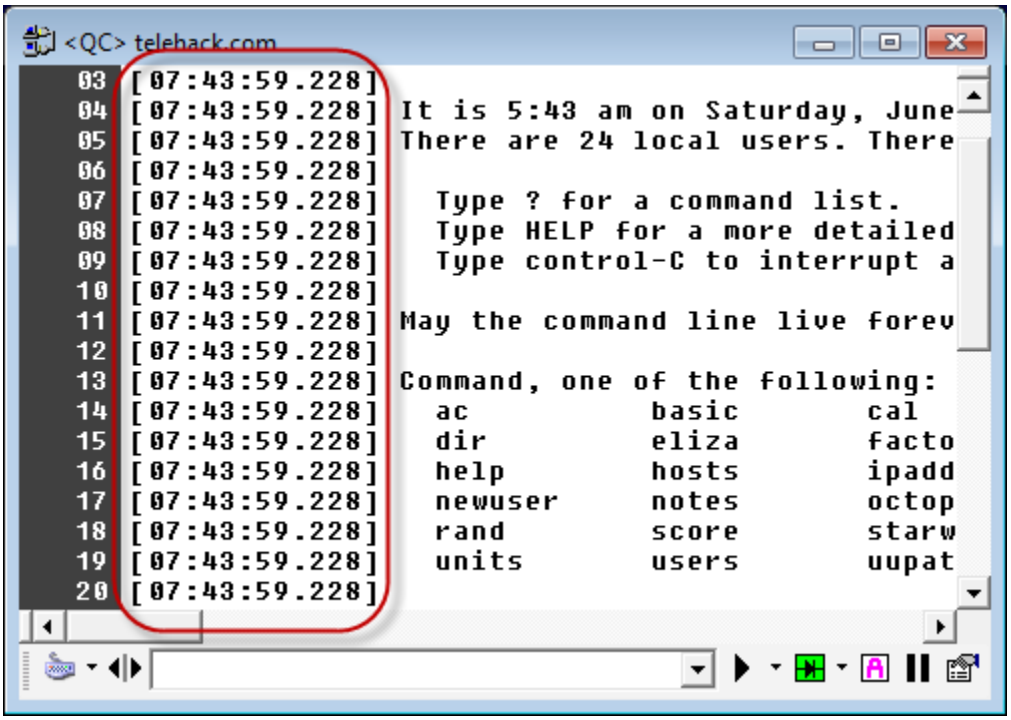
The *Line Wrapping* feature can be enabled/disabled and configured in the Advanced tab of the Session Properties e ditor.



Timestamps

Overview

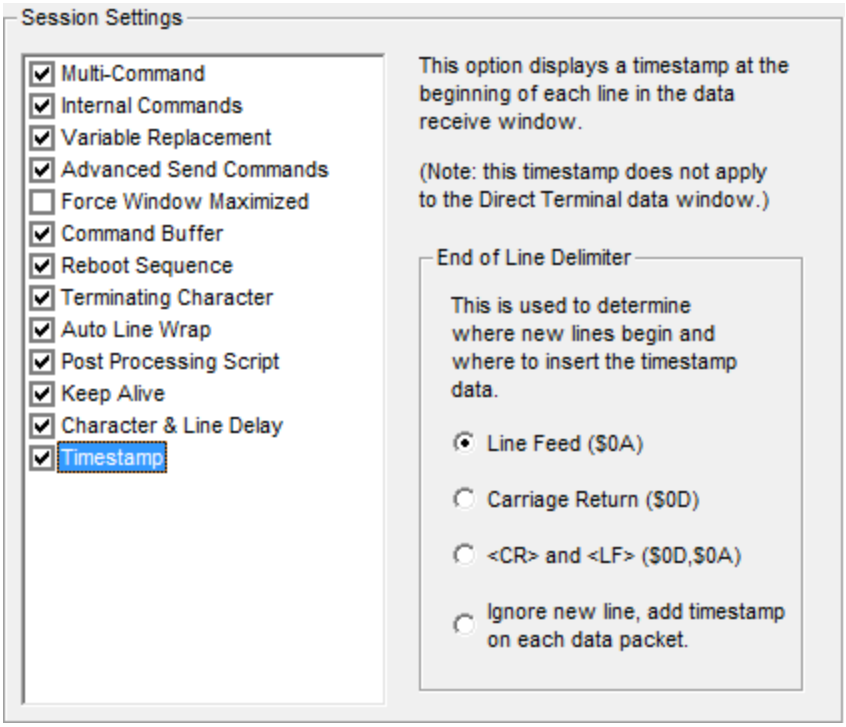
In the Standard View Mode, Indigo can automatically prepend data lines with timestamps to help record when data has been received by Indigo.
This can be a very useful feature when you need to understand the timing of the data received.



Session Properties

The *Timestamp* feature can be enabled/disabled and configured in the Advanced tab of the Session Properties edito

r.
Since the line formatting can vary between each type of terminal connection, you must configure the type of end line delimiter that Indigo should expect so that it can insert the timestamp at the appropriate locations.



> **Note**
>
> If using the option to incude a timestamp on each data packet received, Indigo will not limit the timestamp to new lines, but inserts timestamp throughout the data stream.

Data Analysis Tools & Features

Indigo supports the following data analysis tools and features:

- Session Data Formatting
- Syntax Color Filters
- Session Data Logging
- Serial Pass Mode

Session Data Formatting

Overview

> **Screencast**
>
> A screencast demonstration applying various session data byte representations is available. Click here to see the video.

Indigo includes a powerful feature that allows you to select what data representation format you would like used to display received data in the session data window.
Indigo can render the received data bytes in the following formats/representations:

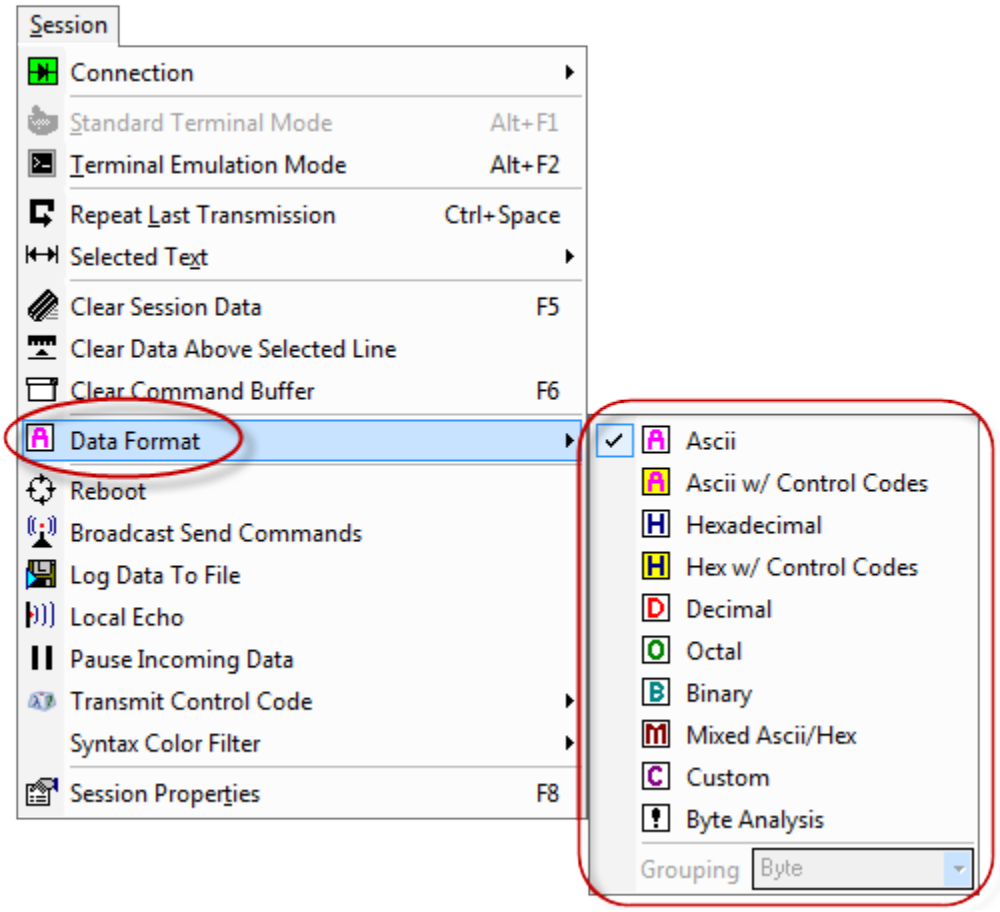
Data Format	Description
ASCII	This data format is the default format and renders received data bytes in the standard ASCII textual character representation.
ASCII with Control Codes	This data format renders data bytes that fall in the valid ASCII character range as text and the bytes typically found the the control code range (0x00 to 0x1F) with a control code label.
Hexadecimal	This data format renders displays the hexadecimal values for all data bytes received.
Hexadecimal w/ Control Codes	This data format renders displays the hexadecimal values for all data bytes received except those bytes ty pically found the the control code range (0x00 to 0x1F) which are renders as control code labels.
Decimal	This data format renders displays the decimal values for all data bytes received.
Octal	This data format renders displays the octal values for all data bytes received.
Binary	This data format renders displays the binary values for all data bytes received.
Mixed ASCII/HEX	This data format renders data bytes that fall in the valid ASCII character range as text and the bytes typically found the the control code range (0x00 to 0x1F) as their hexadecimal values.
Custom	This data format renders displays the data bytes received using the user-defined custom data format.
Byte Analysis	This data format renders displays the data bytes received using the byte-analysis rendering. This option should not be used in cases where there is a large volume of data bytes being transferred. This option will render each data byte received in multiple data data representations and can impact the performance of Indigo and the computer when there is a high frequency or large volumes of data bytes in the stream.

Tip

Indigo also includes a Data converter tool widget that can convert ASCII data to these alternate data format representations on the fly.
Click here to lean more about the Data Converter tool.

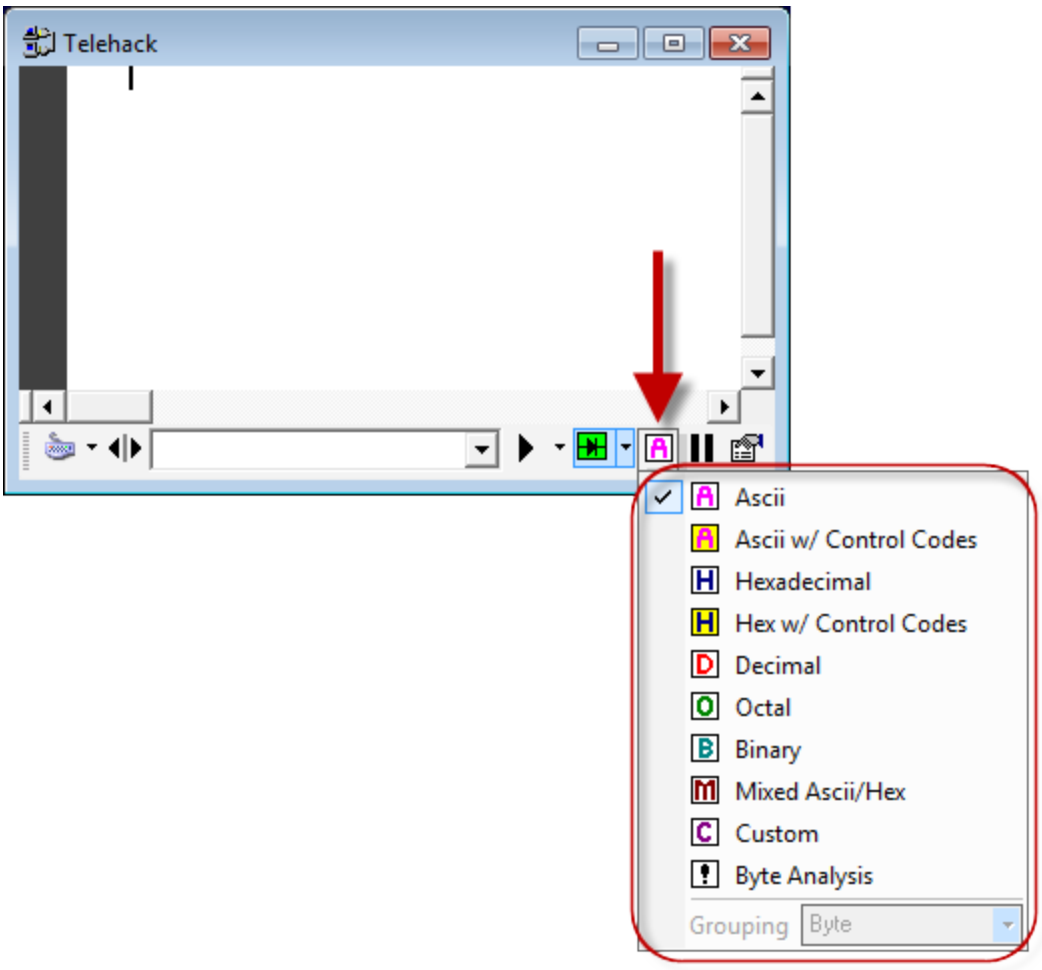
Session Menu

You can select and apply a *Data Format* to your active terminal session window from the Session Menu.



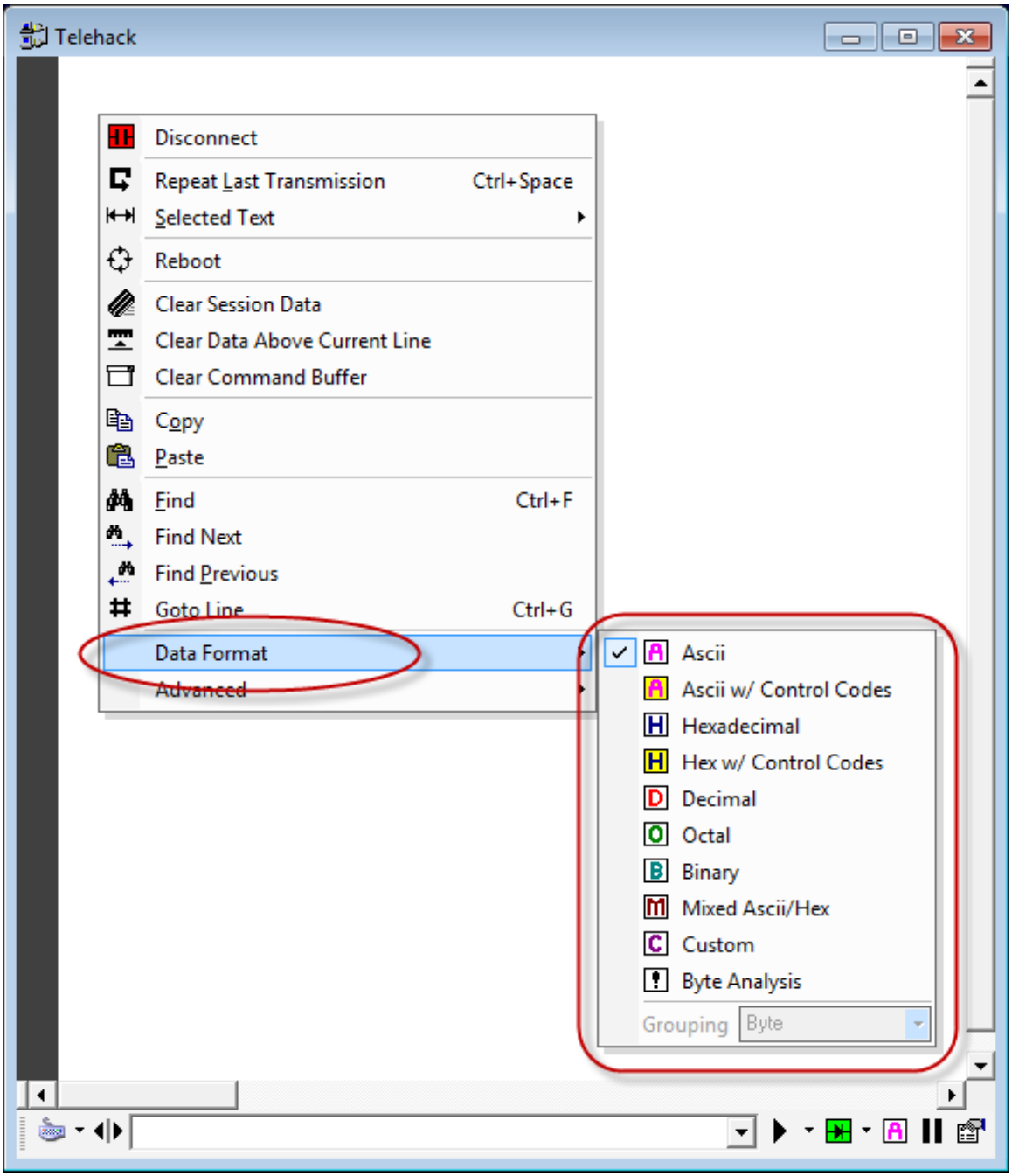
Session Toolbar

You can select and apply a *Data Format* to your active terminal session window from the session toolbar.



Session Context Menu

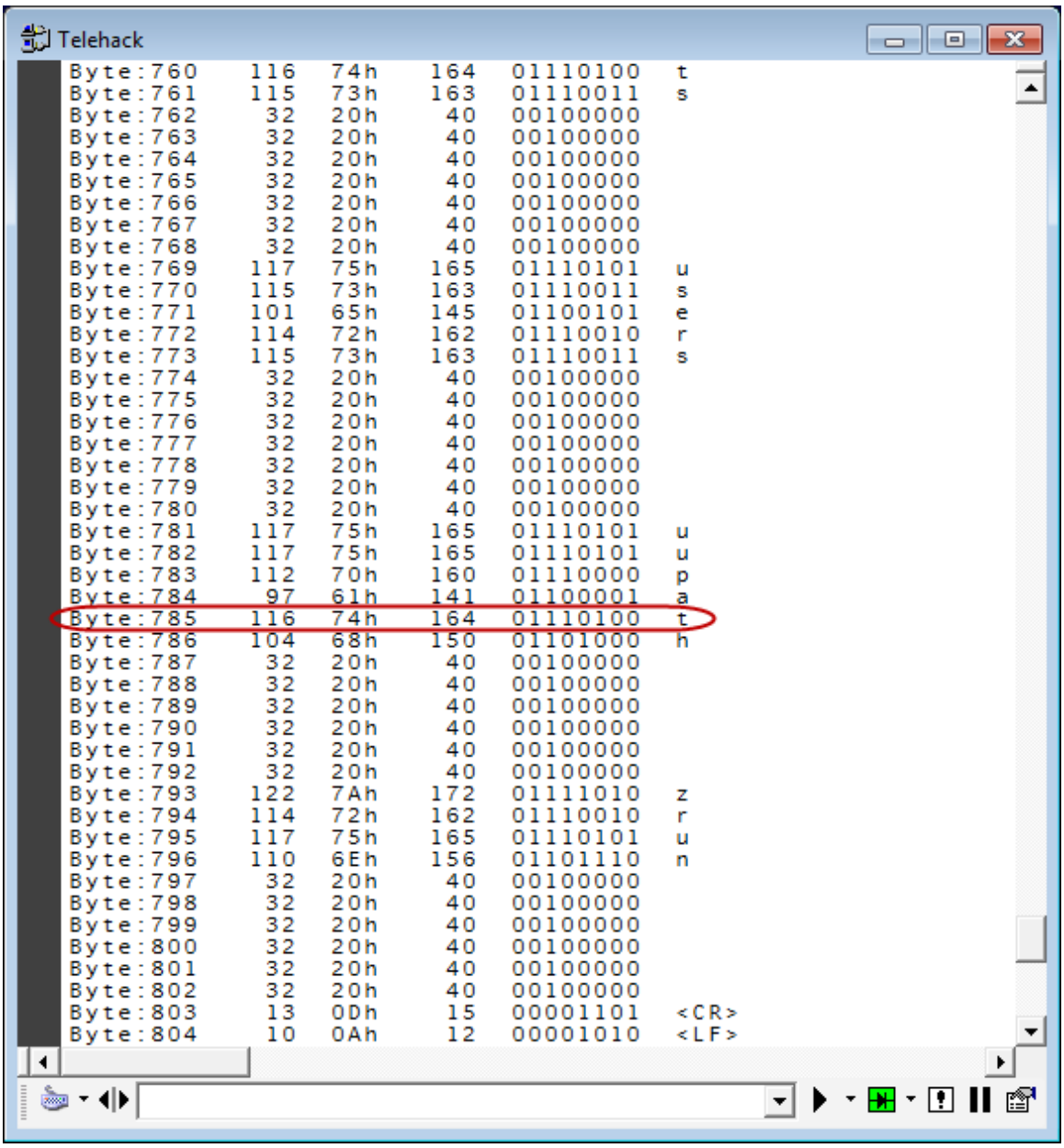
You can select and apply a *Data Format* to your active terminal session window from the session right-click context menu.



Byte Analysis Data Format

The byte-analysis data format will render each data byte on a separate line.
Each line of byte-analysis data will include the following columns:

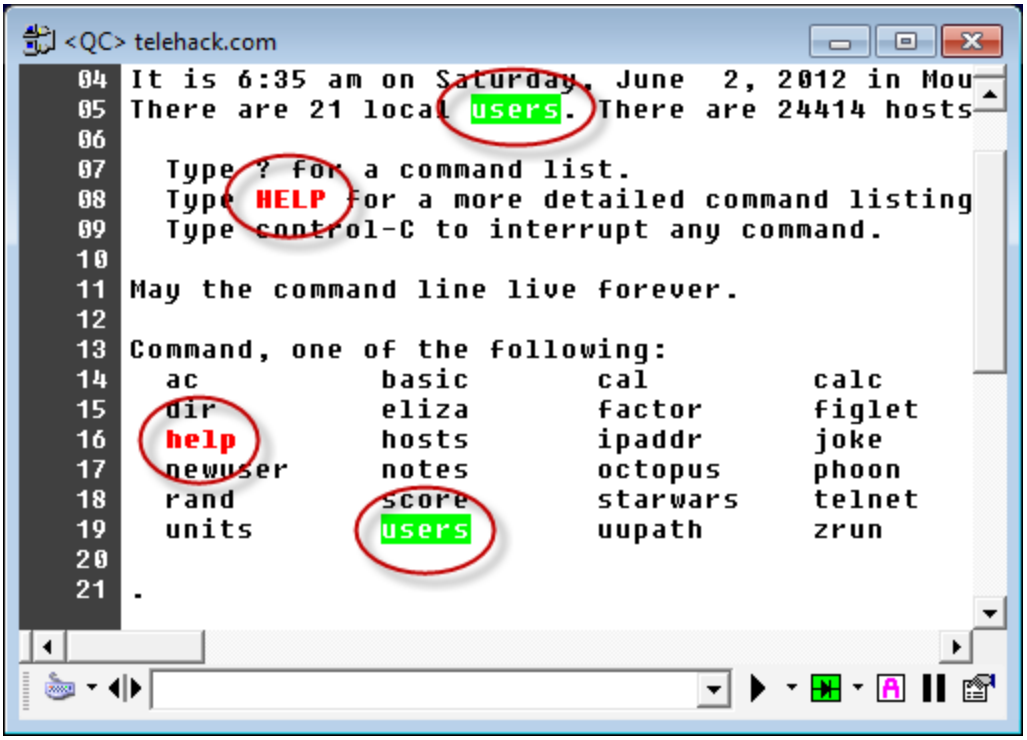
Data Type	Byte Number	Decimal	Hexadecimal	Octal	Binary	ASCII
Example	`Byte: 785`	`116`	`74h`	`164`	`01110100`	`t`



Syntax Color Filters

Overview

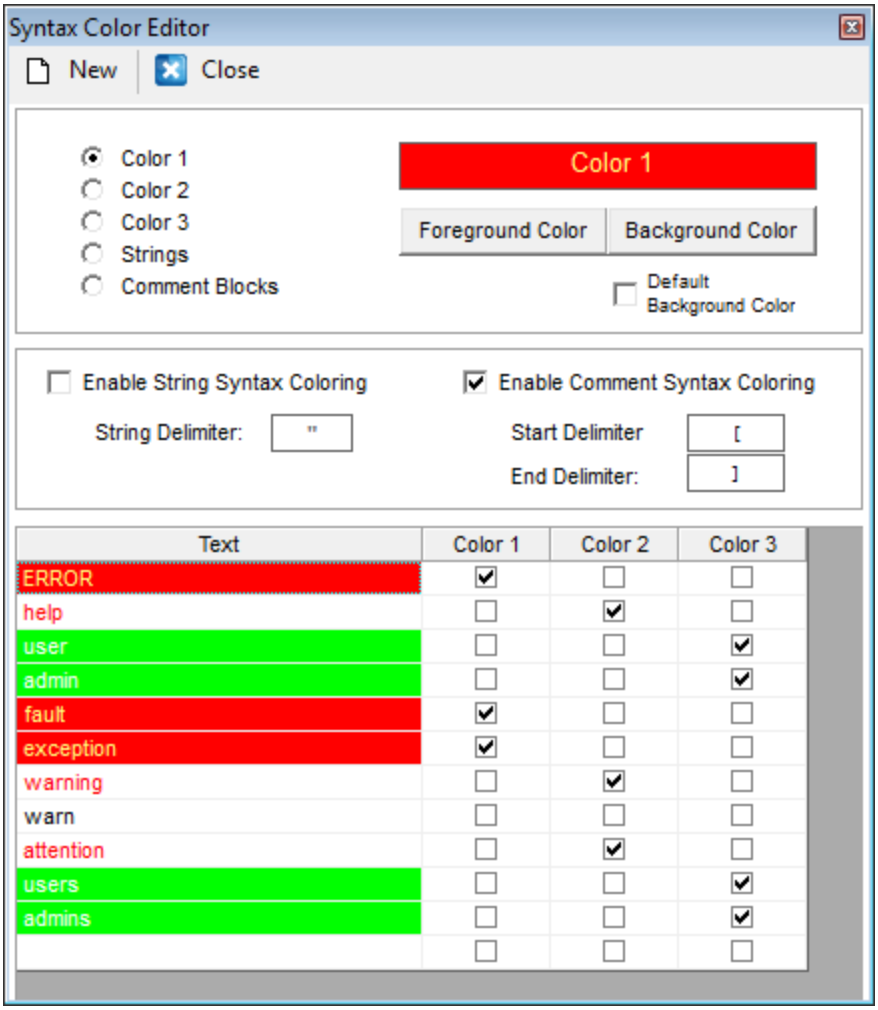
In the Standard View Mode, Indigo supports the ability to define keywords that can be rendered with one of three user defined colors.
This is a useful feature to help draw visibility/attention to targeted keywords and phrases.



Syntax Color Filters

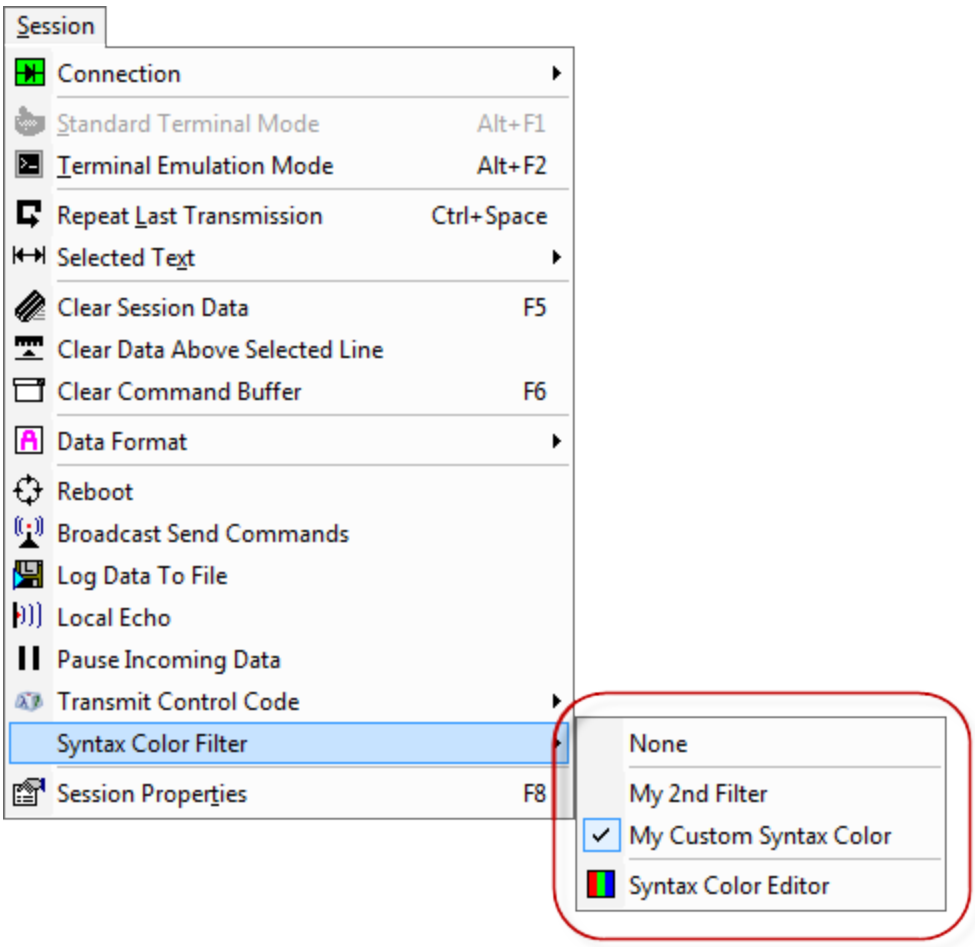
User defined keywords and colors are configured in color syntax filters.
This allow you to switch between multiple filters to provide different coloring and keywords options based on the selected filter.

Syntax color filters can be created and edited using the Syntax Color Editor tool.



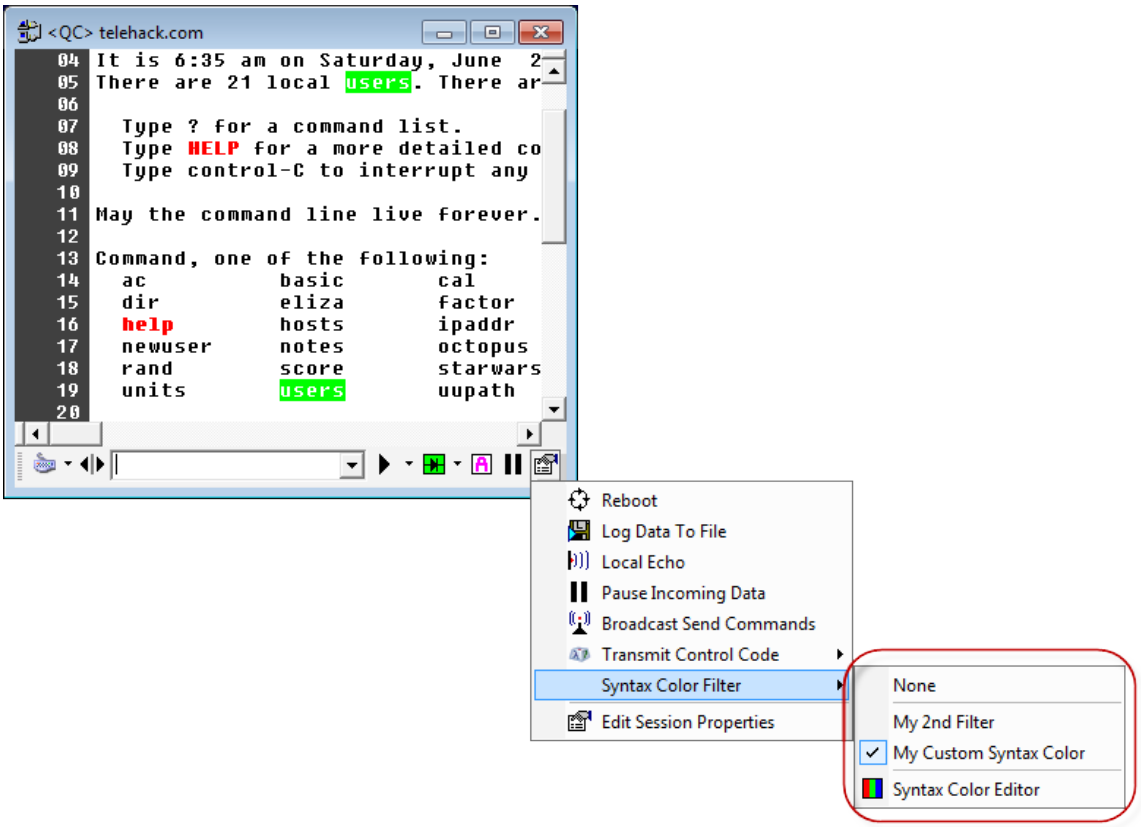
Session Menu

You can select and apply a *Syntax Color Filter* to your active terminal session window from the Session Menu.



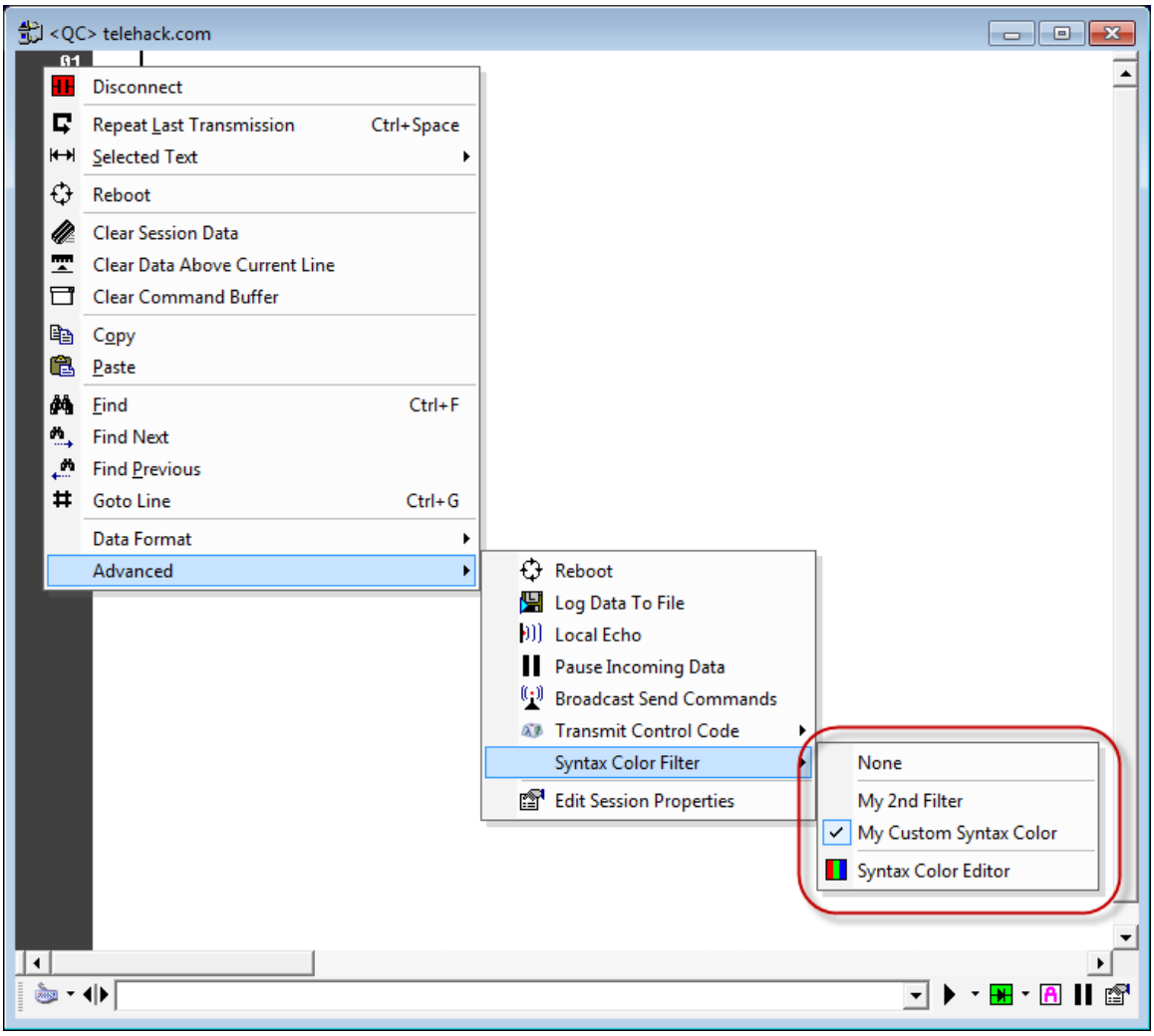
Session Toolbar

You can select and apply a *Syntax Color Filter* to your active terminal session window from the session toolbar menu.



Session Context Menu

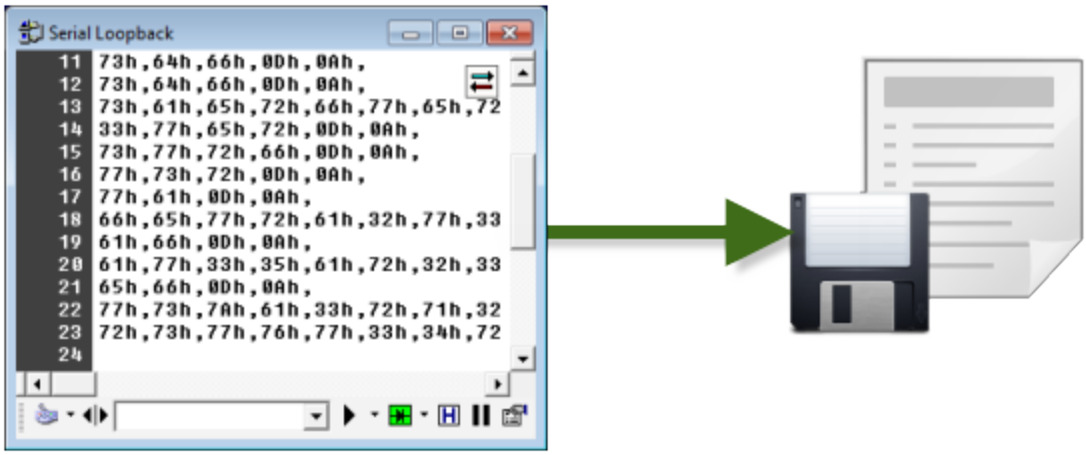
You can select and apply a *Syntax Color Filter* to your active terminal session window from the session right-click context menu..



Session Data Logging

Overview

Indigo includes a *Data Logging* feature to capture data as it is received to a persisted log file.
The data is actively written to the log file so that in the event of a power outage or computer reboot all the data received is already recorded and nothing is lost.

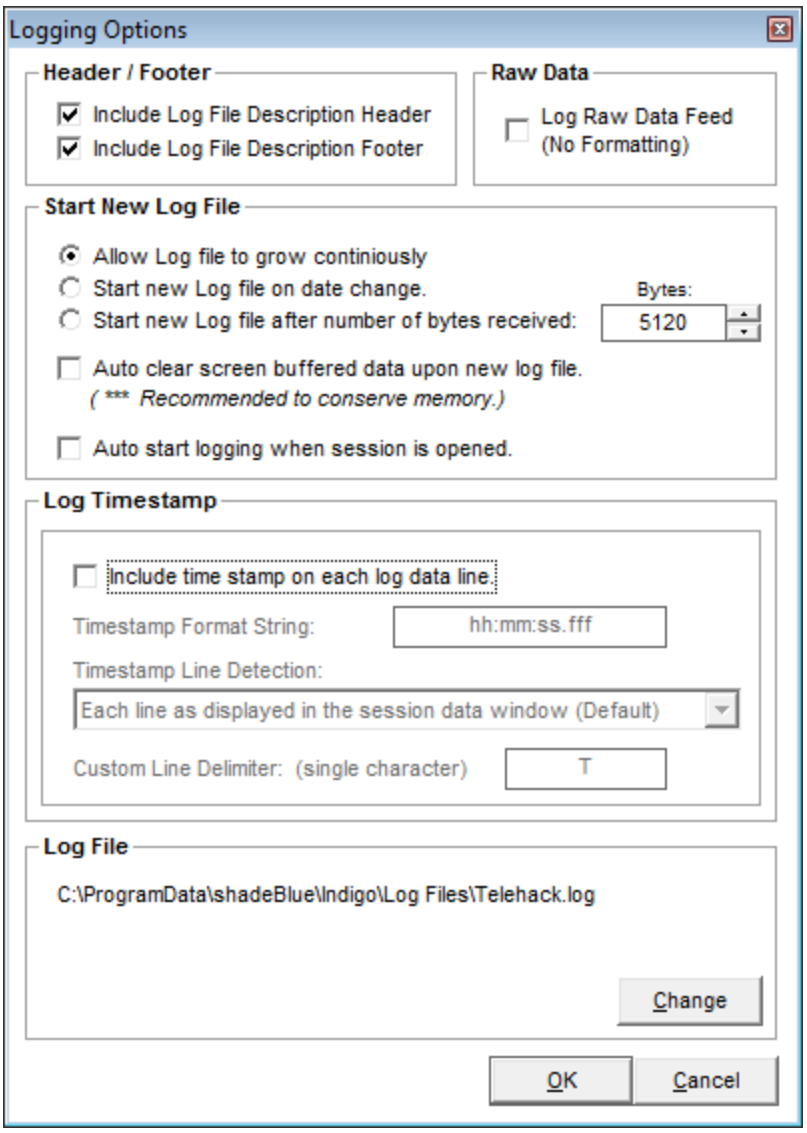


Screencast

A screencast of the data logging process is available. Click here to see the video.

Data Logging Configuration

When you enable *Pass Mode*, the following *Pass Mode Configuration* editor will be displayed.



The *Data Logging* feature includes the following configuration options:

Setting	Description
Header / Footer	
Include Log File Description Header	If this option is enabled, Indigo will include a header comment with date and time information in the log file when logging starts.
Include Log File Description Footer	If this option is enabled, Indigo will include a footer comment with date and time information in the log file when the logging is stopped or the session is closed.
Raw Data	
Log Raw Data (No Formatting)	If this option is enabled, Indigo will not attempt to determine line separation or add any formatting to the log file. The exact data received will be faithfully recorded to the log file as-is.
Start New Log File	

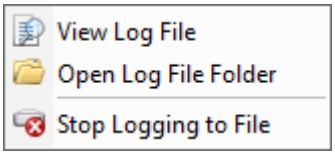
Allow Log file to grow continuously	If this option is enabled, Indigo will constantly log data to a single log file as long as the session is open.
Start new log file on date change	If this option is enabled, Indigo will start new recording to a new log file when the date changes. This is useful when recording data over multiple days and you want to break up the logging data into multiple files.
Start new log file after number of bytes received	If this option is enabled, Indigo will start new recording to a new log file after a log file reaches the specified number of bytes. This is useful when recording data over time and you want to break up the logging data into multiple manageable sized files.
Bytes Received	This option is only used when the logging is configured to start a new log file after a number of bytes have been received. This field is used to specify the maximum number of bytes in each file. This is essence determines the maximum file size.
Auto clear screen buffered data upon new log file	If this option is enabled, Indigo will clear the data from the terminal session window when a new log file is started. **This option is highly recommended when logging large amounts of data to prevent Indigo from consuming too much system memory.**
Auto start logging when session is opened	If this option is enabled, Indigo will automatically start logging when the session file is opened. The existing logging configuration option will be applied.
Log Timestamp	
Include time stamp on each log data line	If this option is enabled, Indigo will record a time stamp for each line of data received and logged. ☑ This option should not be used if the terminal session was already configured to include a timestamp in the session data window.

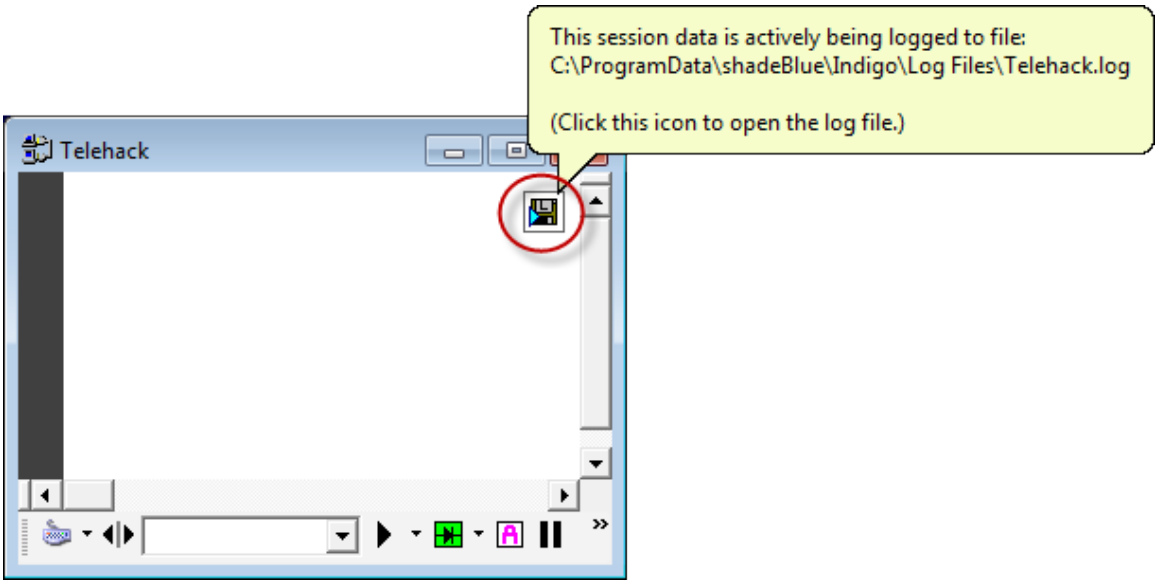
Timestamp format string	This option specifies the timestamp string format to use when recording timestamps to the log file.
	`hh - hours`
	`mm - minutes`
	`ss - seconds`
	`fff - milliseconds`

Timestamp line detection	Not all devices/hosts conform to a single line termination standard, therefore it may be necessary to define the line termination characteristics of the connection. The following options are available: • Each line as displayed in the session data window (Default) • Each line ends with a <CR> 0x0D character • Each line ends with a <LF> 0x0A character • Each line ends with a custom character • Each line is separated based on the received data packet
Custom line delimiter	If the timestamp line detection property is configured to use the: *Each line ends with a custom character option*, then this field defines the line termination character.
Log File	
Log file path	This field defines the directory and file name for the data log file.

Session Status Icon

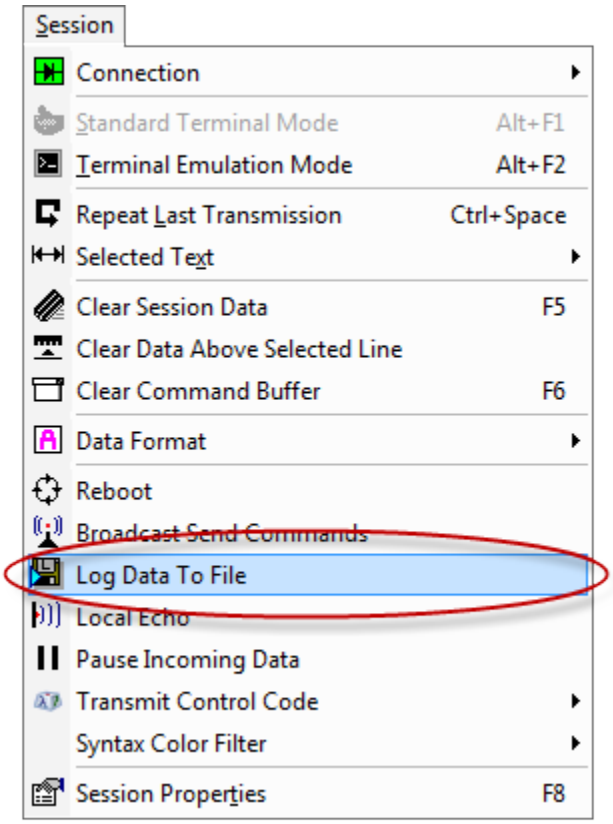
When a terminal session is actively logging data to a file, the following status icon will be displayed.

Logging		This icon is displayed when the session data is being actively logged to a file. Click the icon to display additional logging options or to stop logging. 



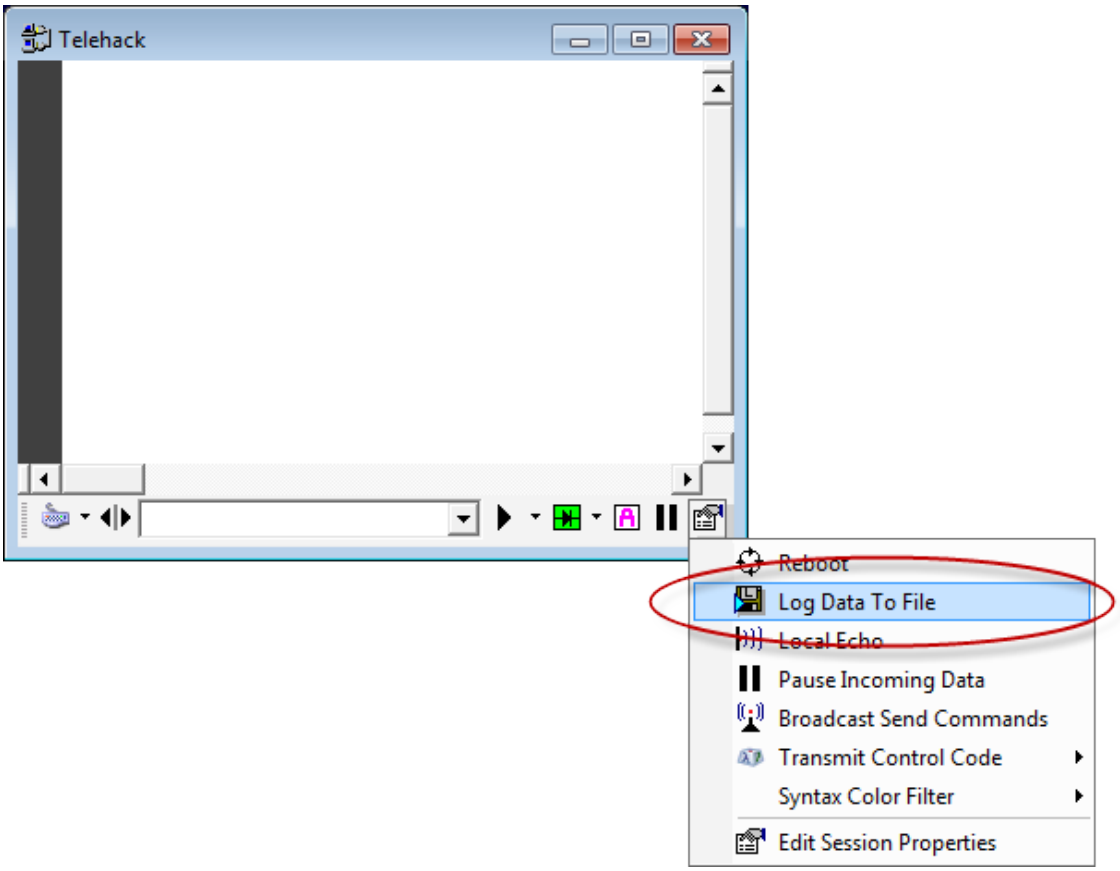
Session Menu

You can activate *Session Data Logging* from the Session Menu.



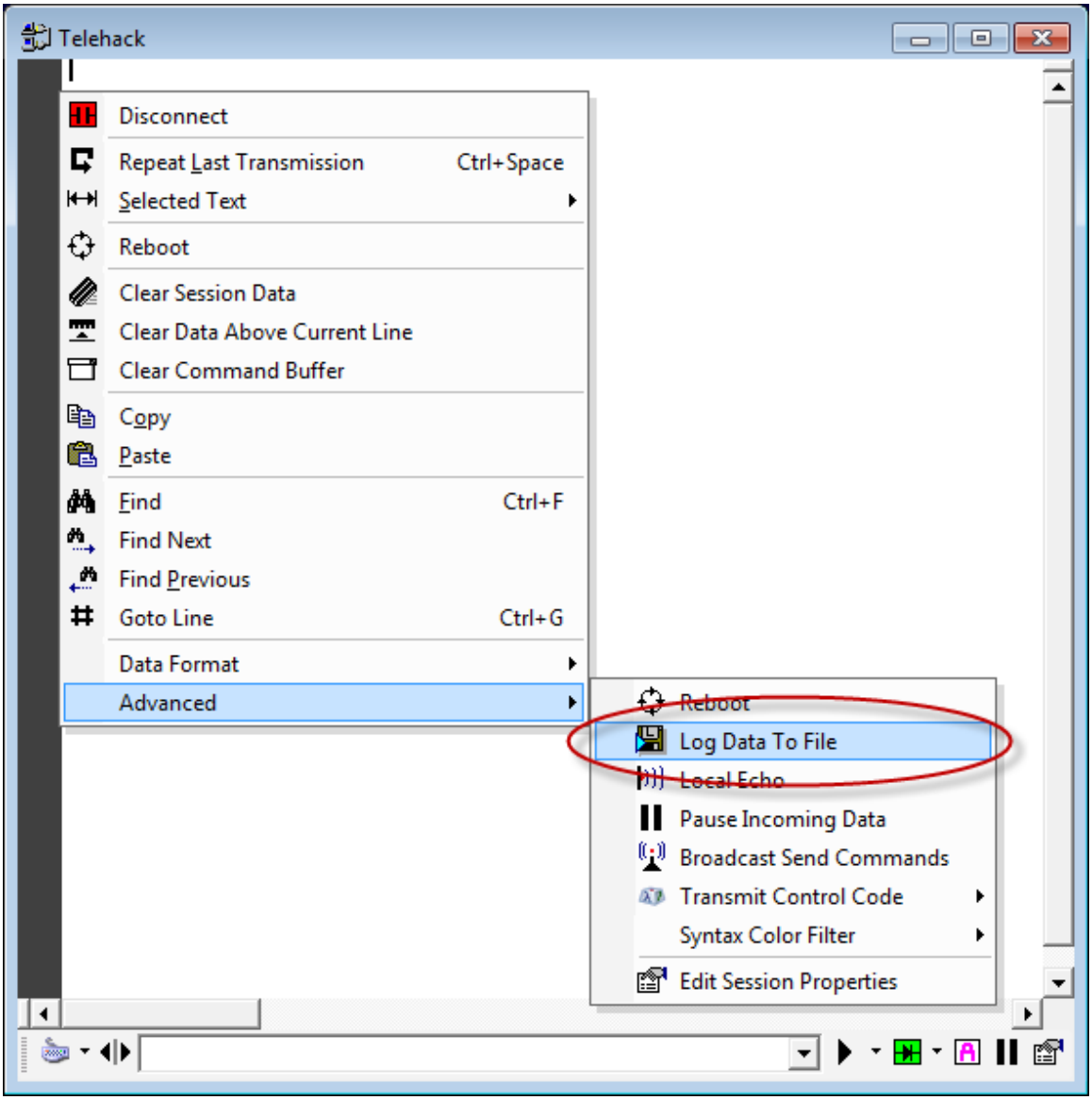
Session Toolbar

You can activate *Session Data Logging* from the session toolbar.



Session Context Menu

You can activate *Session Data Logging* feature from the session right-click context menu.



Internal Command

You can activate/deactivate *Session Data Logging* feature using the Internal Command syntax.

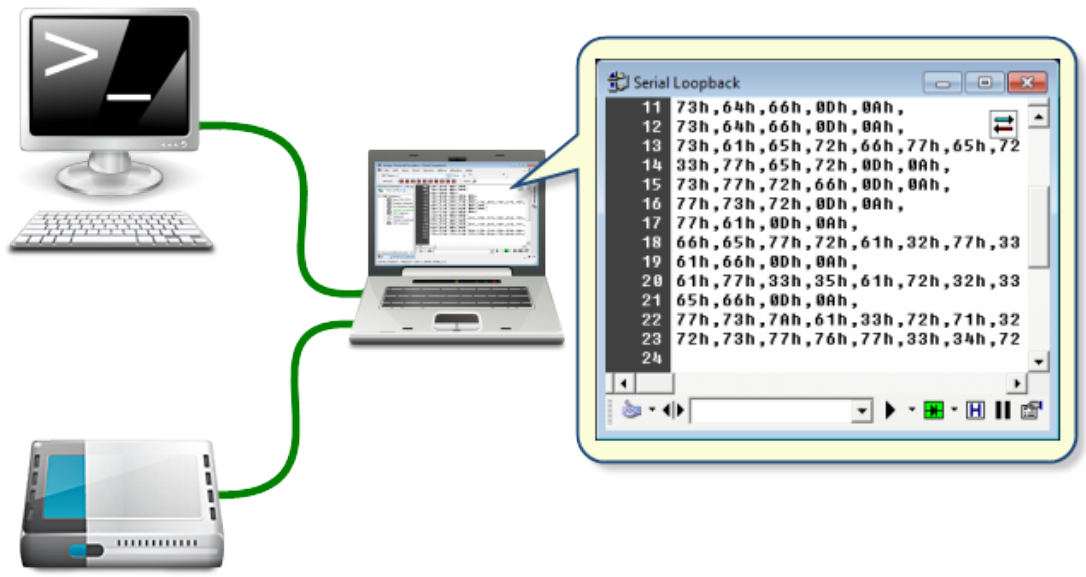
Example	Start/stop session data logging
Command	`:log`

Serial Pass Mode

Overview

Indigo includes a *Pass Mode* feature for serial connections (RS-232, RS-422, RS-485) whereby connecting the host computer running Indigo between two serial devices/terminals,
Indigo can intercept and display the serial communication between the two parties

Pass Mode refers to the notion that Indigo will pass (*or relay*) data communication between two serial connections.



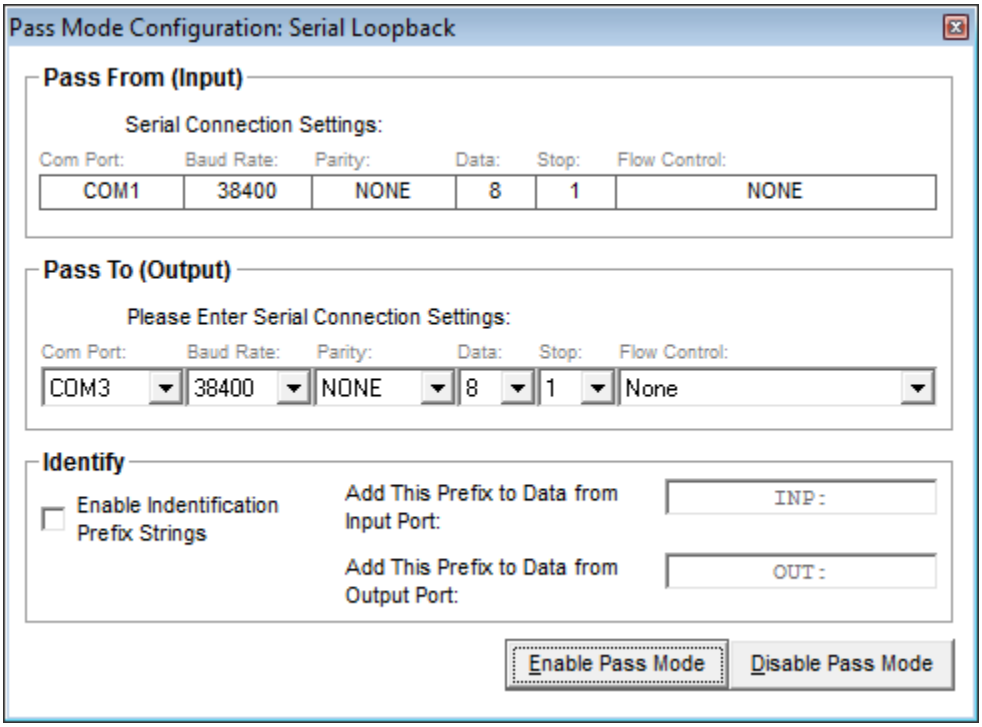
> To use *Pass Mode* you must use two serial ports on the host computer running Indigo and connect each port to the desired endpoints.

Pass Mode Configuration

When you enable *Pass Mode*, the following *Pass Mode Configuration* editor will be displayed.

You can configure the secondary serial com port and the appropriate baud rate and communication settings. Additionally you can inject prefix identifiers to data packets to help identify which data bytes came from which endpoint connection when bi-direction communication is present.

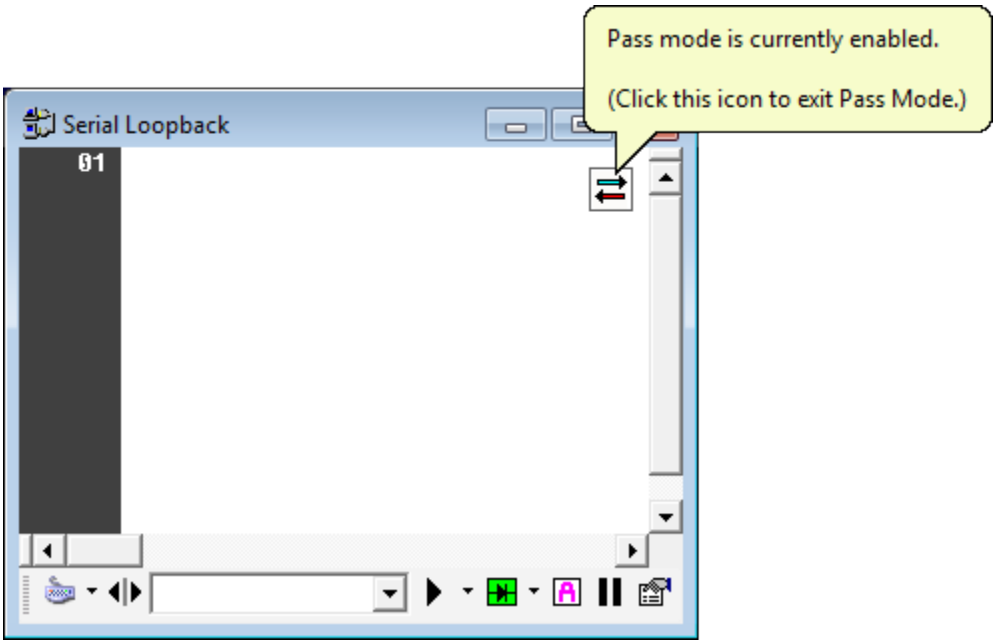
Click the *Enable Pass Mode* button when you are ready to establish the connection and start *Pass Mode*.



Session Status Icon

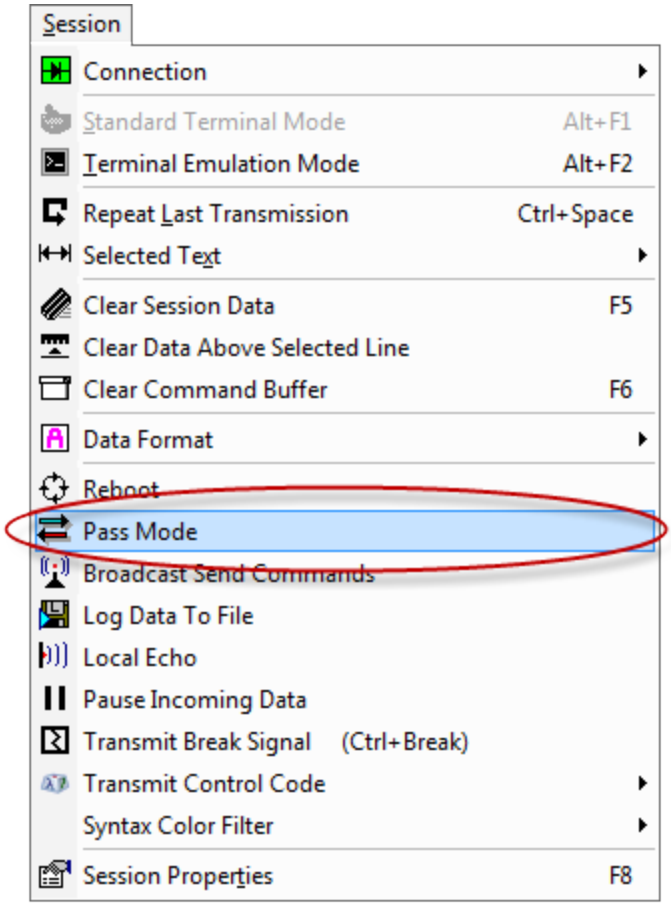
When a terminal session is enabled for *Serial Pass Mode*, the following status icon will be displayed.

Pass Mode		This icon is displayed when the serial pass mode is enabled. Click the icon to disable serial pass mode.



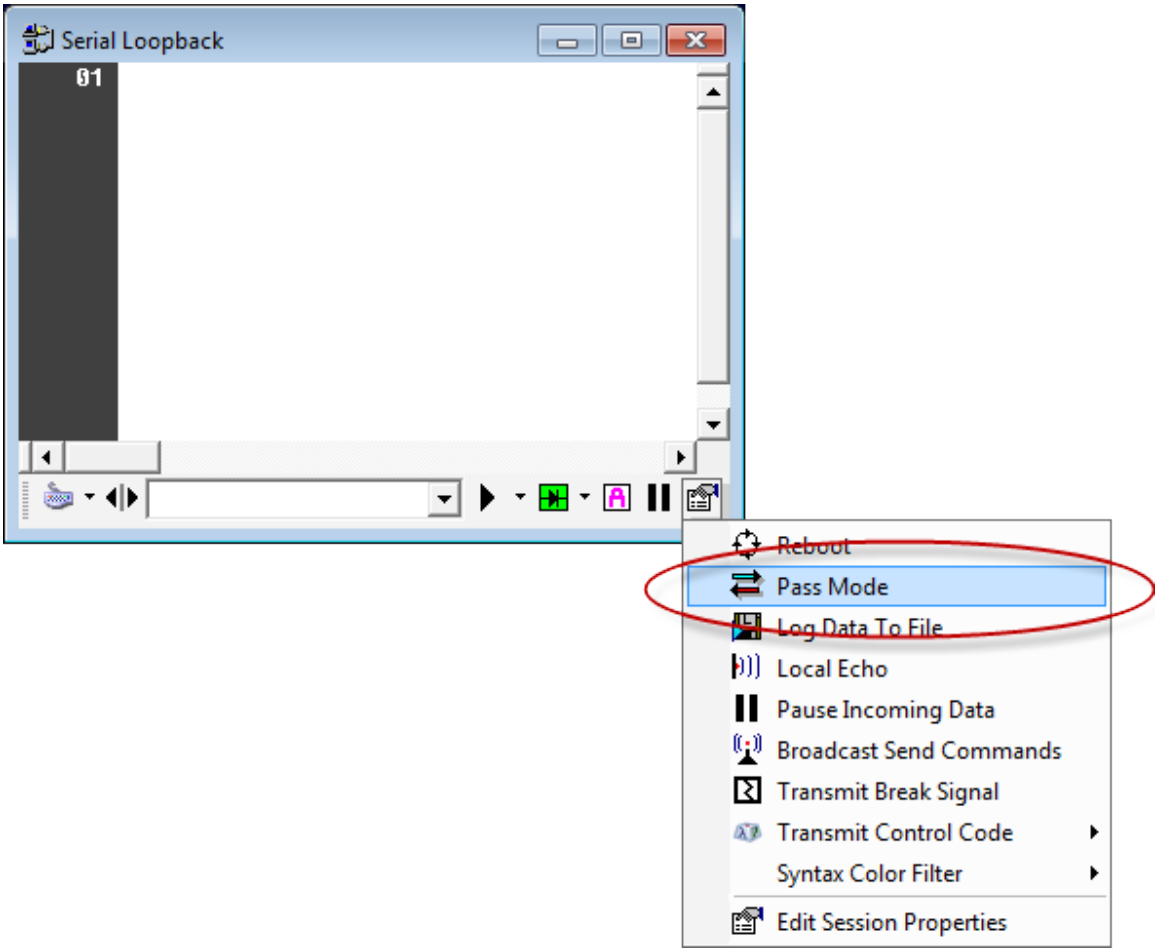
Session Menu

You can activate the *Serial Pass Mode* feature from the Session Menu.



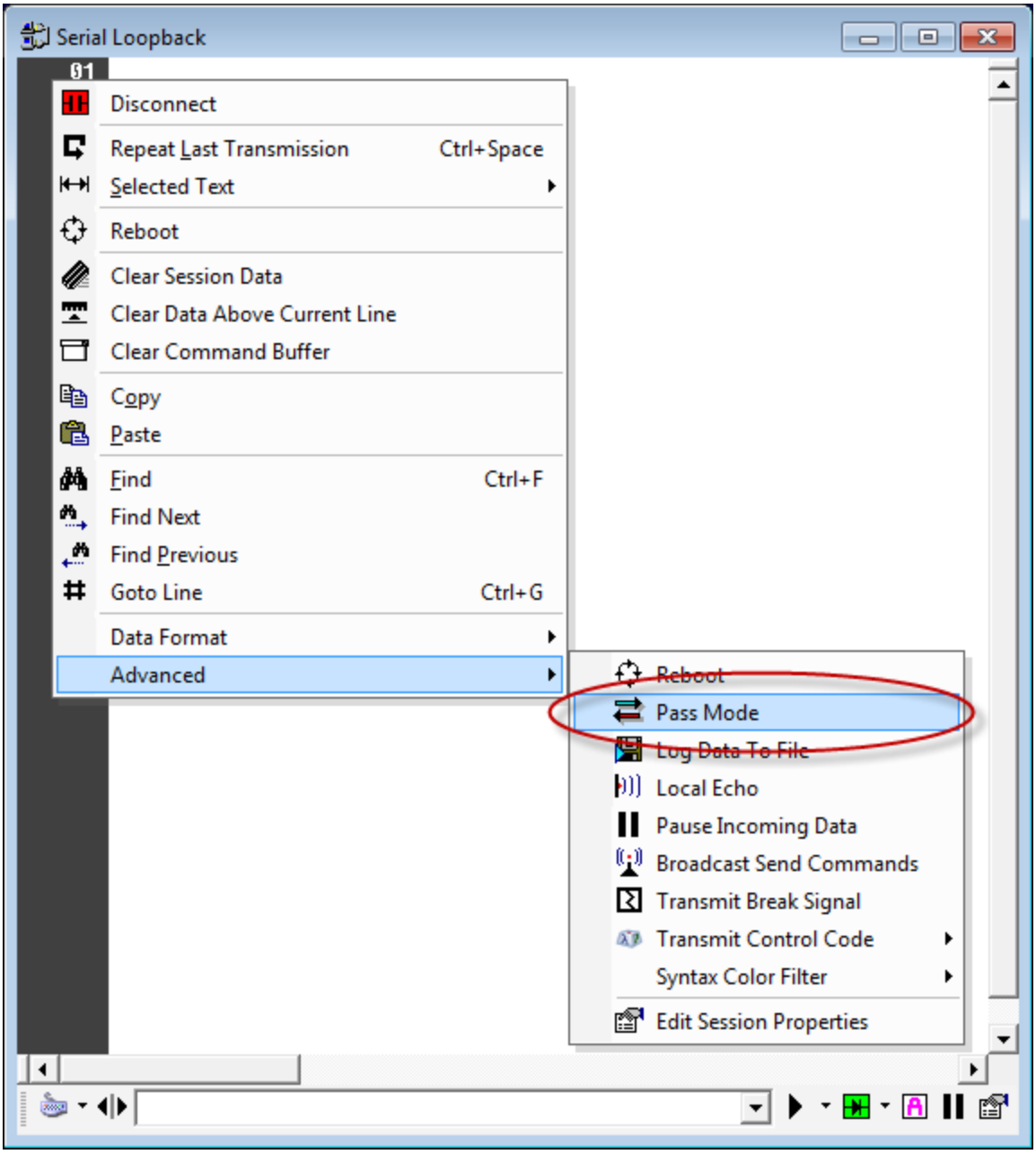
Session Toolbar

You can activate the *Serial Pass Mode* feature from the session toolbar.



Session Context Menu

You can activate the *Serial Pass Mode* feature from the session context menu.



Widgets

Overview

Indigo includes widgets which are dockable tool windows that can provide useful tools and/or usability convenience options.
Indigo includes the following widgets:

- Session Manager
- Data Converter
- Command Library
- Variable Manager
- Command Repeater

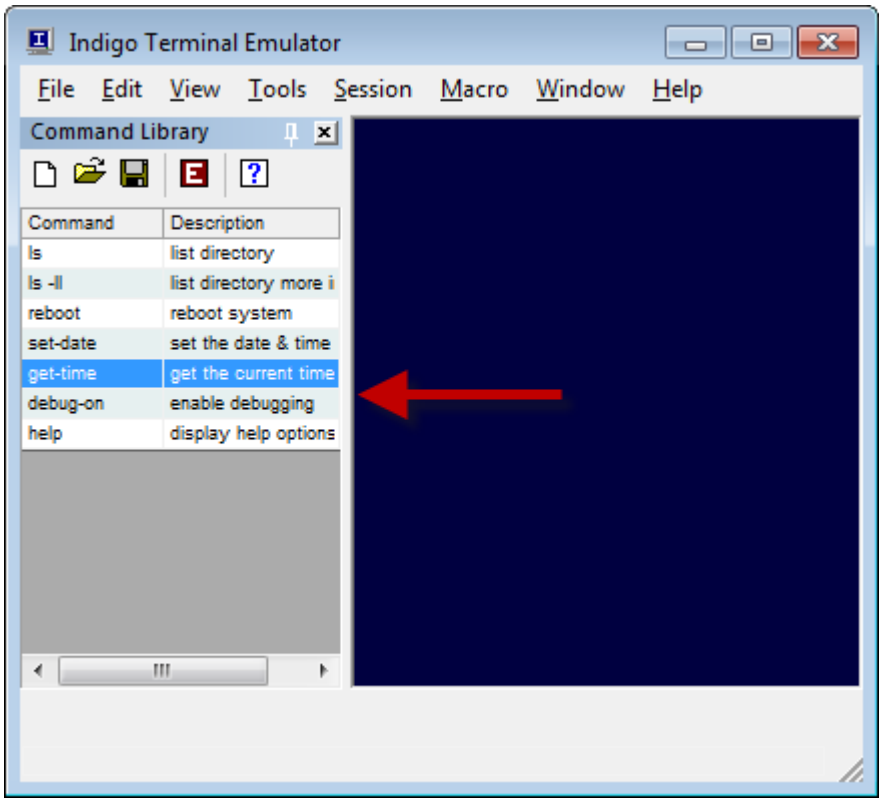
The following sections of this page will discuss the user interface layout and behavior of tool widgets.

- Widget Docking
- Widget Floating
- Widget Pinning
- Widget Re-sizing
- Multiple Widgets Tabbed
- Multiple Widgets Stacked

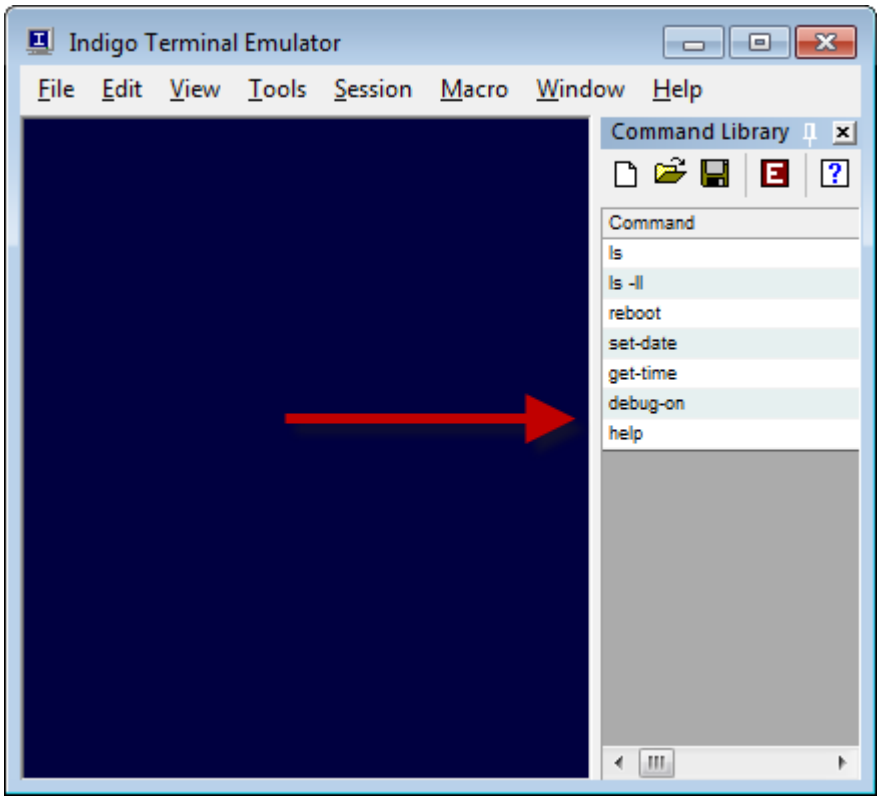
Widget Docking

Indigo's tool widgets can be docked to any side of the Indigo application window.
Select the title bar of a *Widget Tool* and you can drag it to the left, right, top, or bottom edge of the Indigo application window to dock the widget.

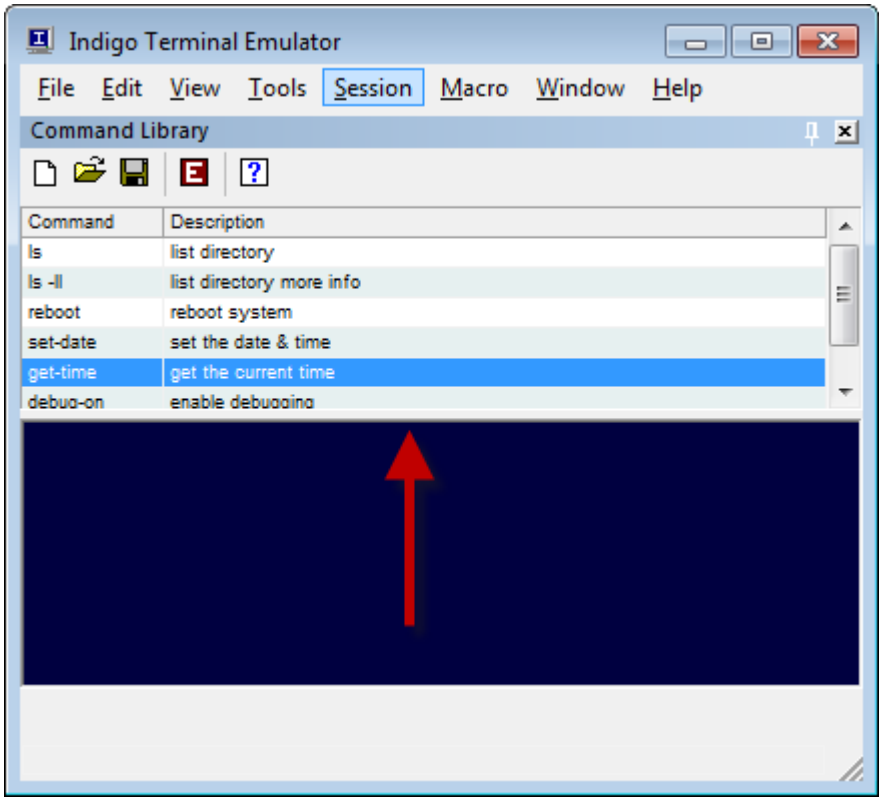
Example: *Docked Left*



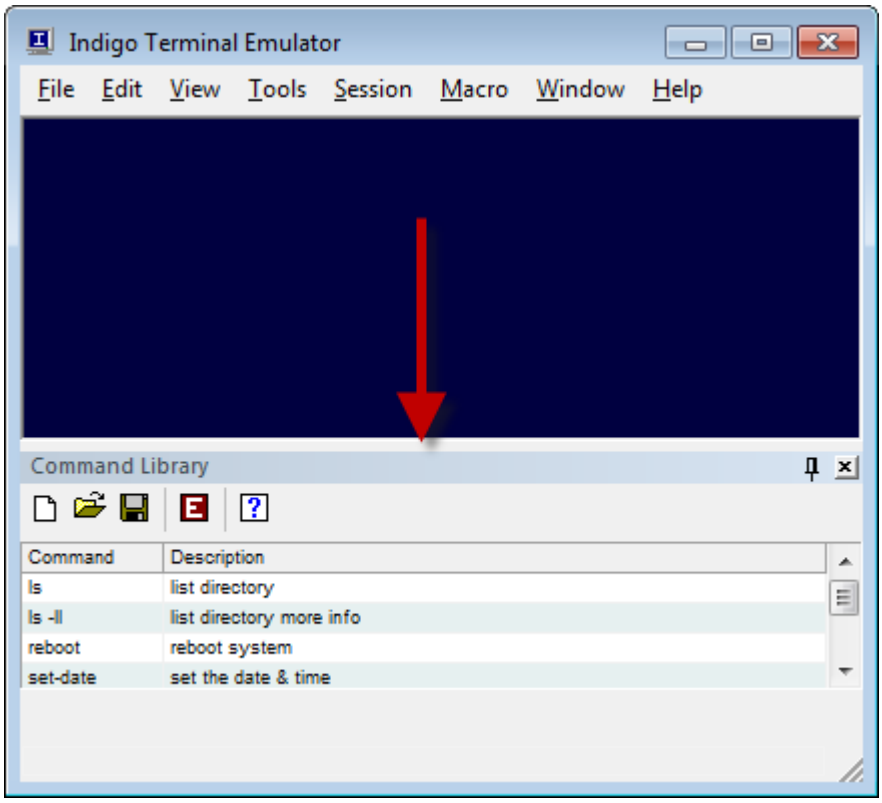
Example: *Docked Right*



Example: ***Docked Top***



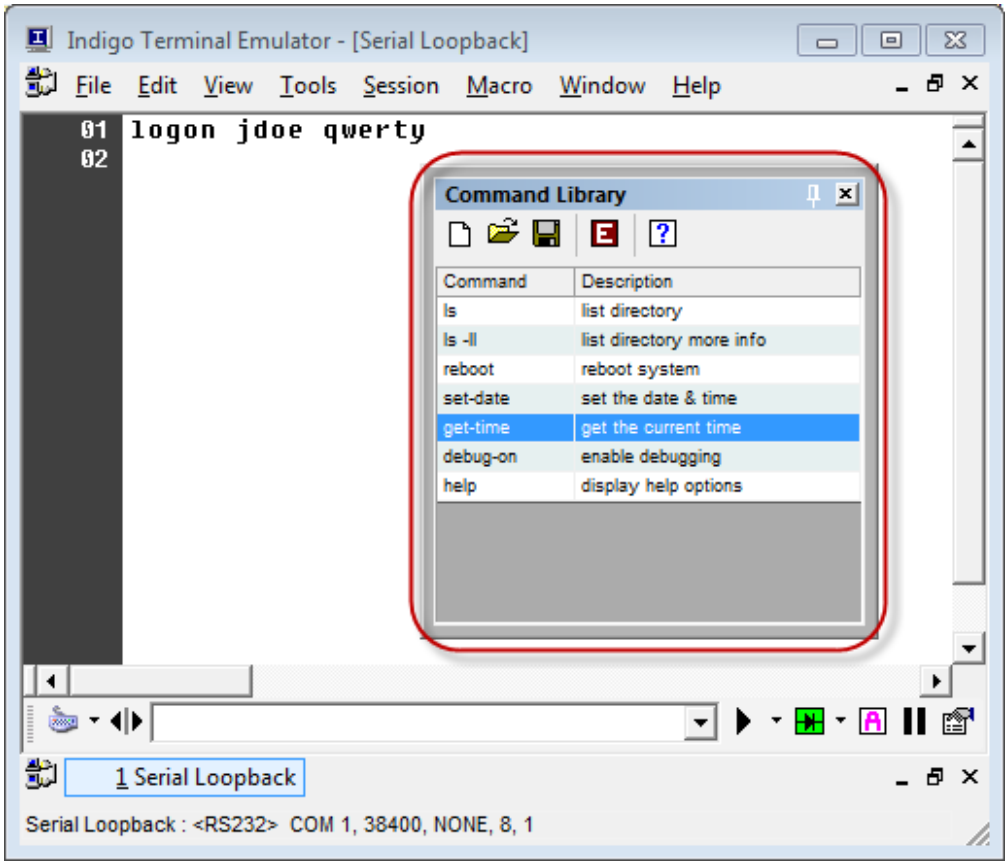
Example: ***Docked Bottom***



Widget Floating

Indigo's tool widgets can be floated where it is not attached to any side of the Indigo application window, but rather floating in a detached window.
Select the title bar of a *Widget Tool* and you can drag outside of the Indigo application window or away from the edges of the window to float the widget.

Example: *Floating*

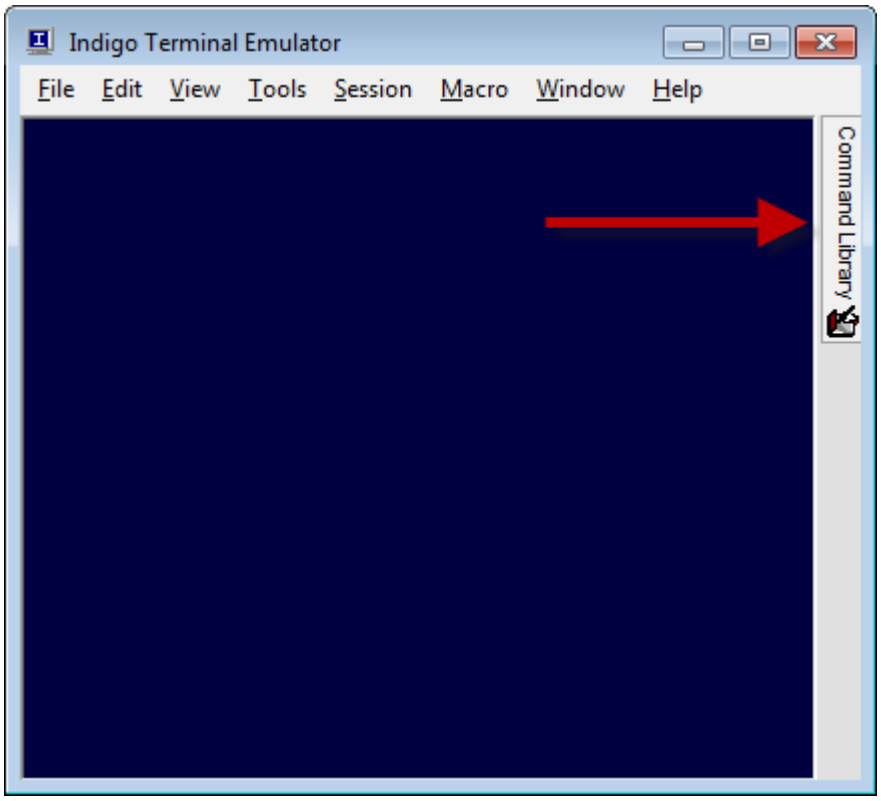


Widget Pinning

Indigo's tool widgets can pinned down to conserve valuable screen real-estate.

When a *Widget Tool* is docked, you can select the *Pin* button (📌) to pin the widget to a collapsed state.
When in the pinned state, you can hover your mouse cursor over the widget title to expand the tool window.

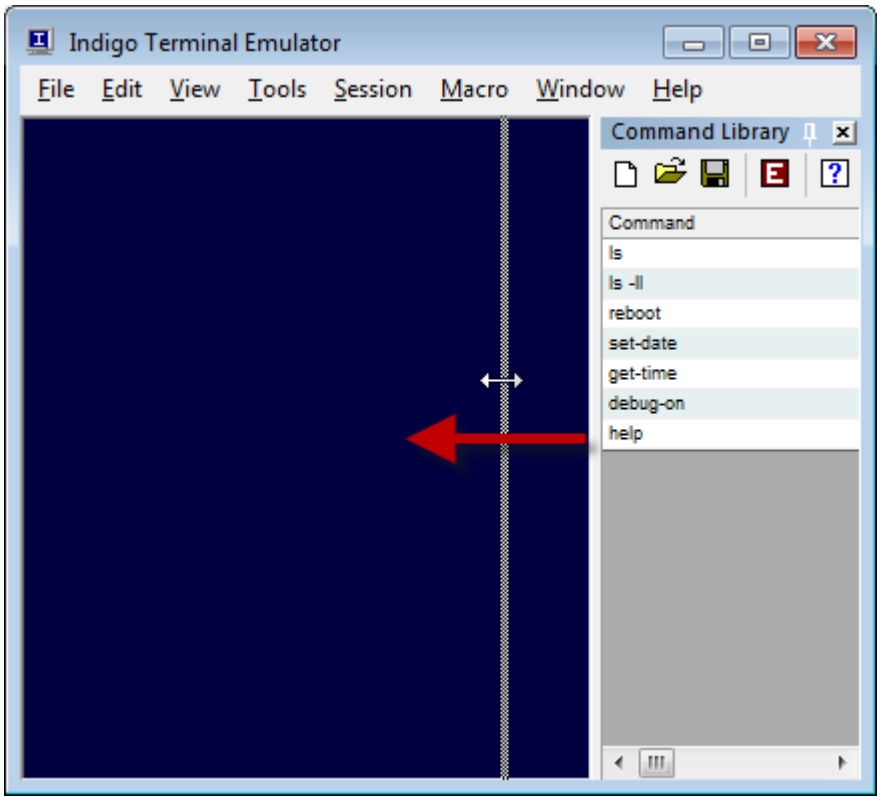
Example: *Pinned*



Widget Re-sizing

Docked tool widgets re-sized to the user preferred size.
When a *Widget Tool* is docked, you select the edge of the widget with the mouse cursor and drag it to re-size the tool window.

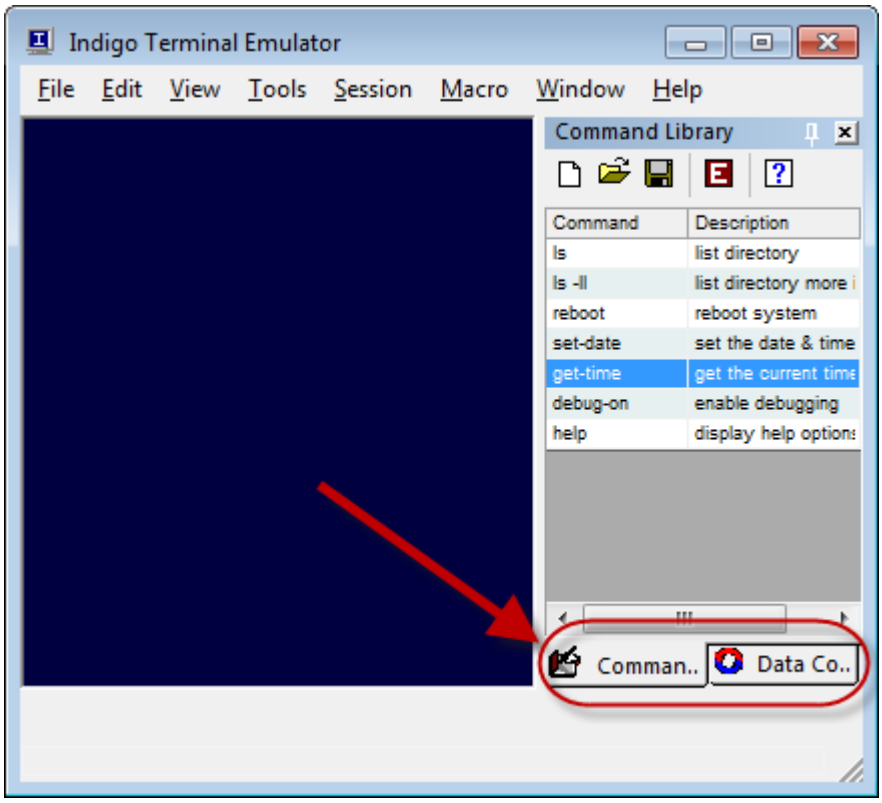
Example: *Resizing*



Multiple Widgets Tabbed

Multiple tool widgets can be tabbed on top of each other when docked to the same screen edge.
You can select the tabs to switch between the widgets.

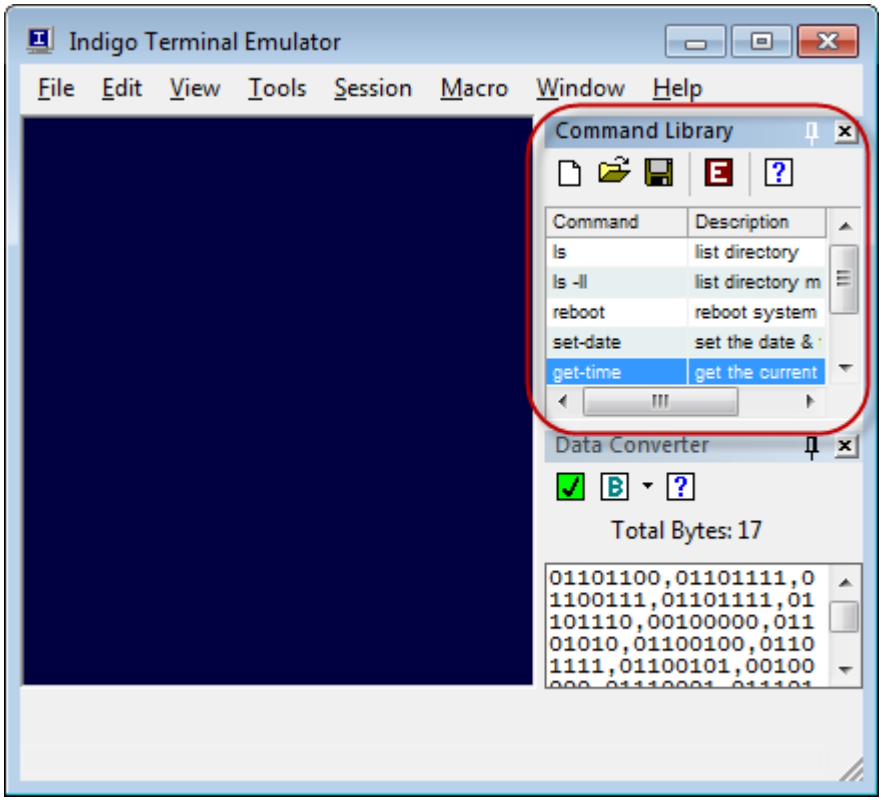
Example: *Tabbed*



Multiple Widgets Stacked

Multiple tool widgets can be stacked on top of each other when docked to the same screen edge.

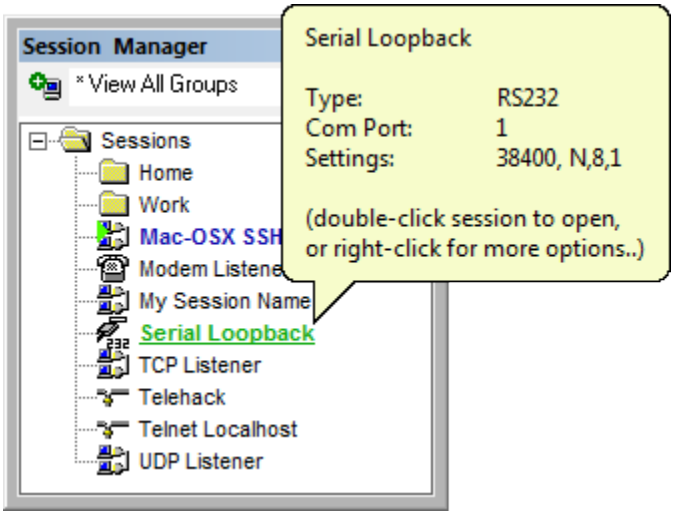
Example: *Stacked*



Session Manager

Overview

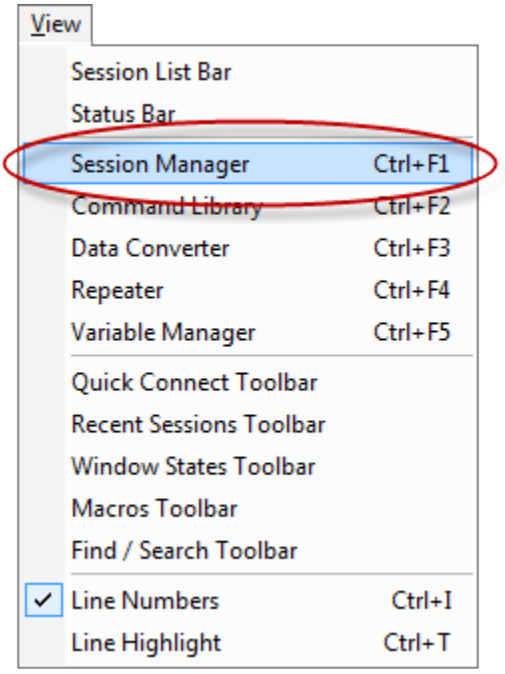
Indigo supports a *Session Manager* widget tool that allows you to create and manage all your terminal sessions. The *Session Manager* widget provides a tree-based hierarchy where you can group terminal sessions into multiple nested folders for better organization.



(*Hovering the mouse cursor over a session instance will display some session configuration information in a tooltip.*)

View Menu

The *Session Manager* widget can be displayed using the View Menu.



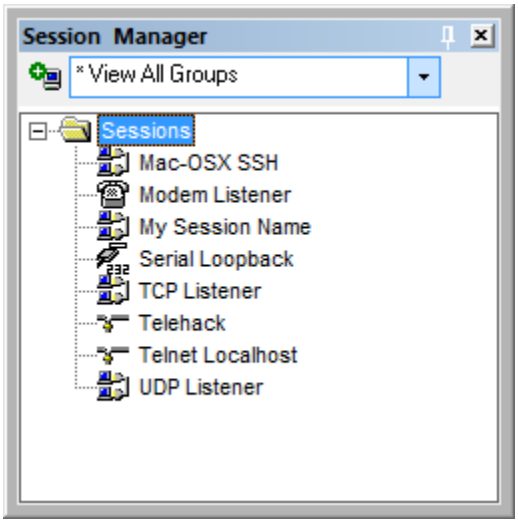
Widget Docking, Pinning, Re-sizing

Widget docking, pinning, re-sizing, etc information is listed here.

> **Tip**
>
> You will most likely prefer to have the *Session Manager* widget permanent available (*docked or pinned*) for quick access to launch your pre-configured terminal sessions.

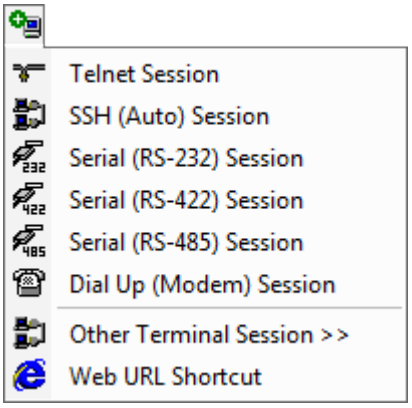
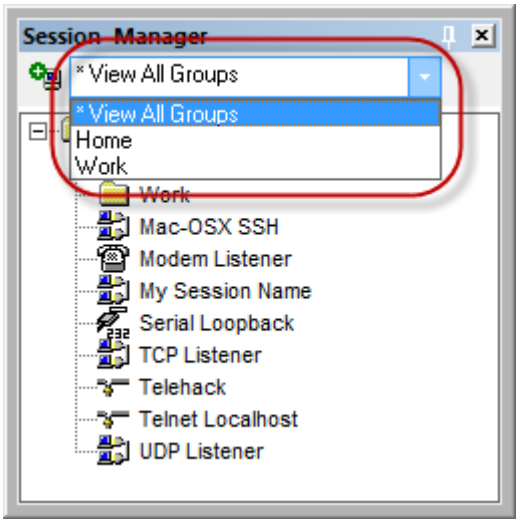
User Interface

The *Session Manager* user interface consists of a tree listing of terminal sessions with a single options toolbar.



The *Session Manager* widget options are listed below.

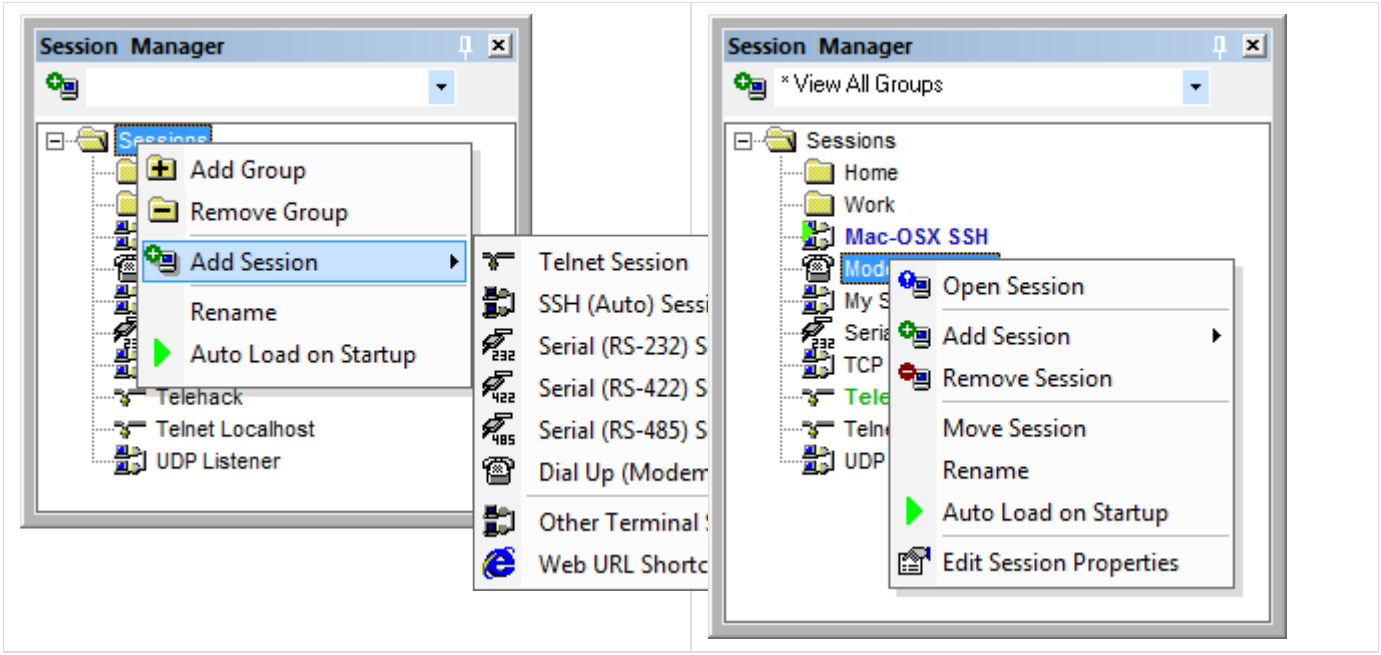
Name	Description

New Session	This option will provide a drop-down listing of connection types to create a new terminal session instance. If the desired connection type list not listed, please select the *Other Terminal Session* option.  Web Shortcuts can also be created in the *Session Manager* widget. This shortcuts simply open a URL using your default web browser.
Group Filter	This option provides a listing of the groups defined in your session tree. Selecting a group will filter the displayed session instances to only those that belong to or are descendants of that group. 

Context Menu

The *Session Manager* widget also supports a right-click context menu that provides session management options.

Context Menu when a *Group* is selected	**Context Menu when a *Session* is selected**



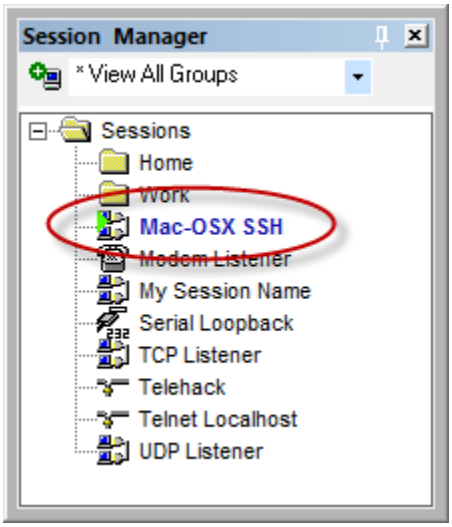
The *Session Manager* widget context menu options are listed below.

	Name	Description
	Add Group	This option will create a new group at the selected location in the session tree.
	Remove Group	This option will remove the selected group from the session tree.
	Open Session	This option will launch/open the selected terminal session.
	Add Session	This option can be used to create a new terminal session or web shortcut.
	Remove Session	This option will remove the selected terminal session from the listing. (*This option permanently deletes the terminal session and its configuration.*)
	Move Session	This option can be used to move an existing terminal session to a new group container.
	Rename	This option will prompt the user to rename the existing group or session.
	Auto Load on Startup	This option will enable/disable the selected terminal session to automatically load when the Indigo application is started.

	Edit Session Properties	This option will open the Session Properties editor for the selected terminal session.

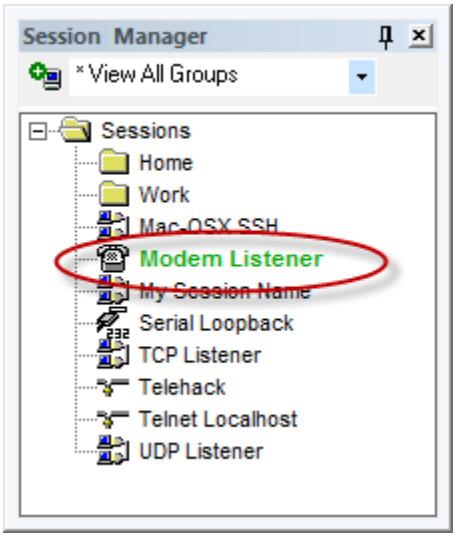
Auto Load Sessions (*Auto-Start*)

The *Session Manager* widget will display any session that is configured to auto-load on start-up with a green arrow icon ( ) and **blue bold text**.



Open Sessions

The *Session Manager* widget will display any session that is currently open in Indigo with **green bold text**.



Data Converter

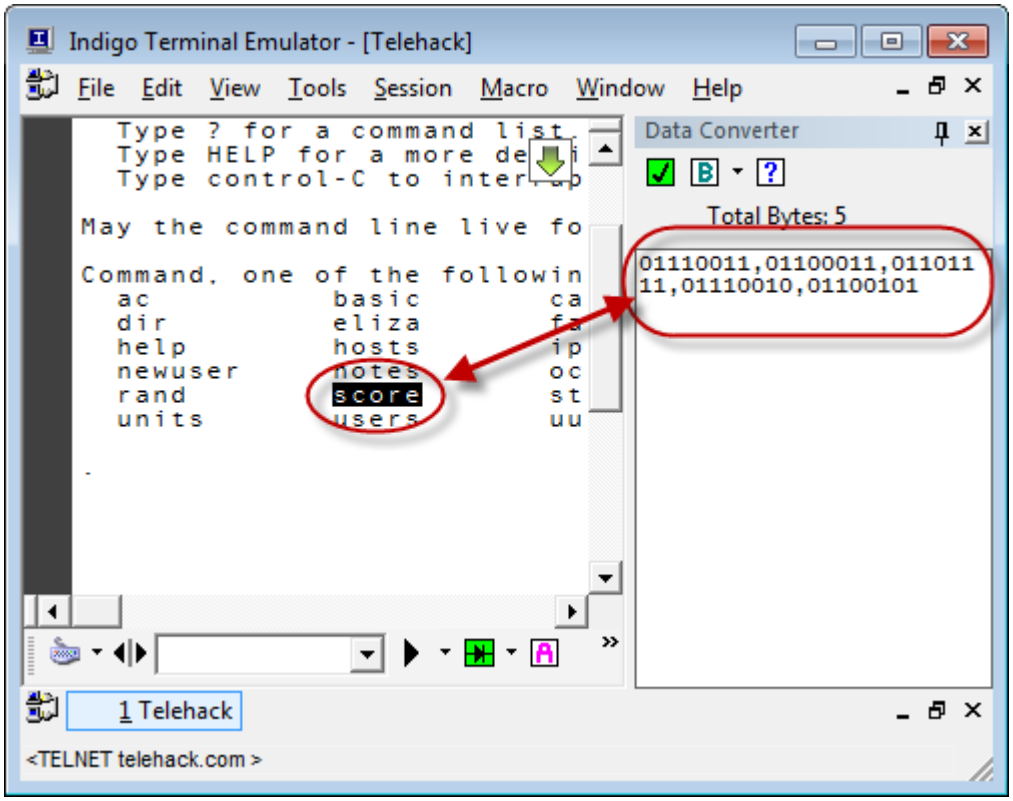
Overview

Screencast

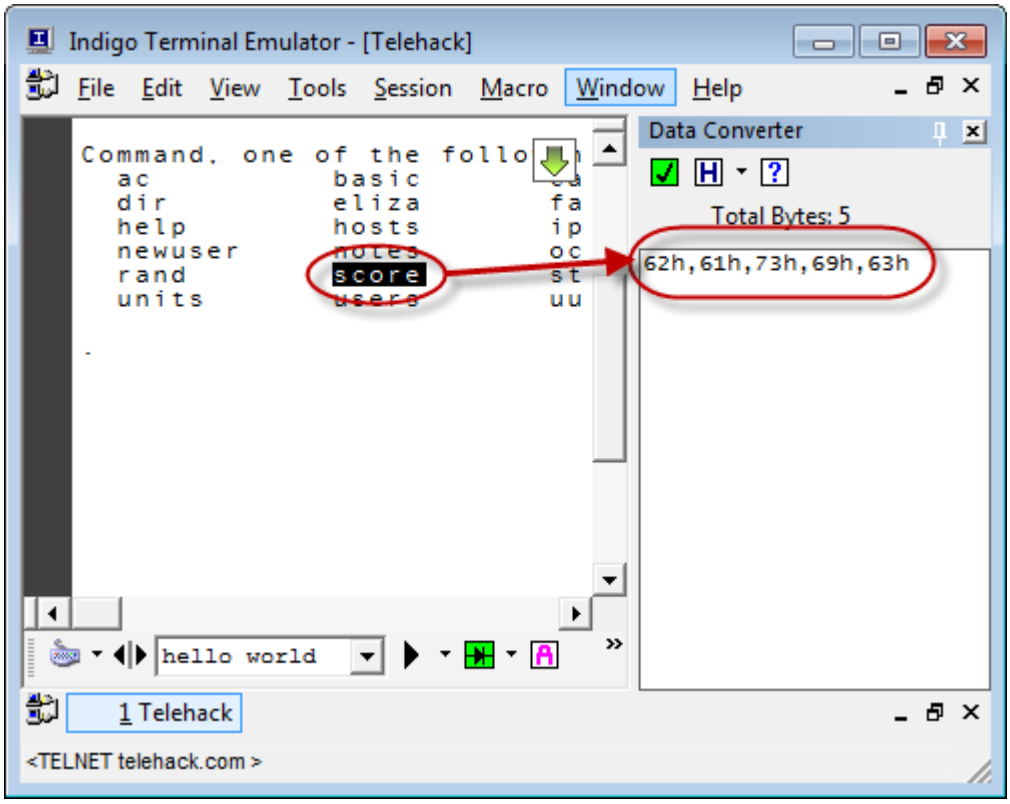
A screencast demonstration applying various session data byte representations is available. Click here to see the video.

The *Data Convert Widget* is a tool that can convert ASCII characters (text) into the other data byte representation format on the fly.
When active the *Data Converter* will convert any selected text from the session data window into the selected data format.

Example: ***The text "score" was selected and converted into the binary data format.***

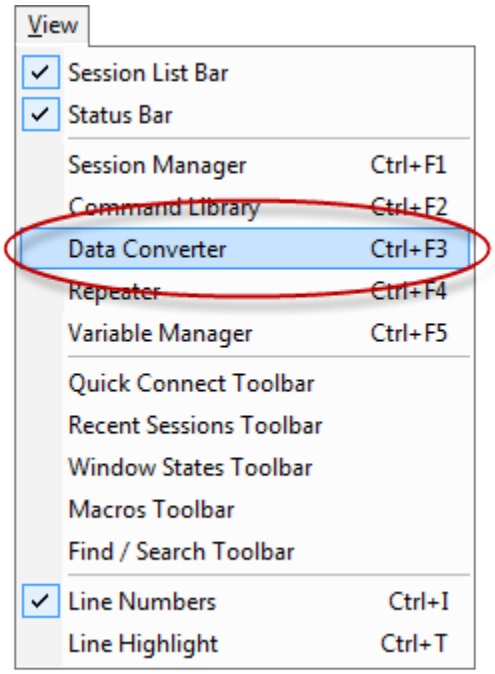


Example: ***The text "score" was selected and converted into the hexadecimal data format.***



View Menu

The *Data Converter* widget can be displayed using the View Menu.

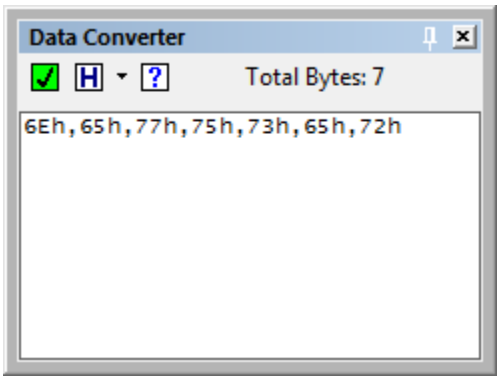


Widget Docking, Pinning, Re-sizing

Widget docking, pinning, re-sizing, etc information is listed here.

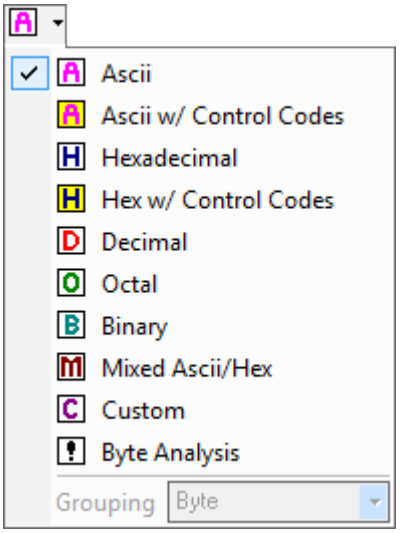
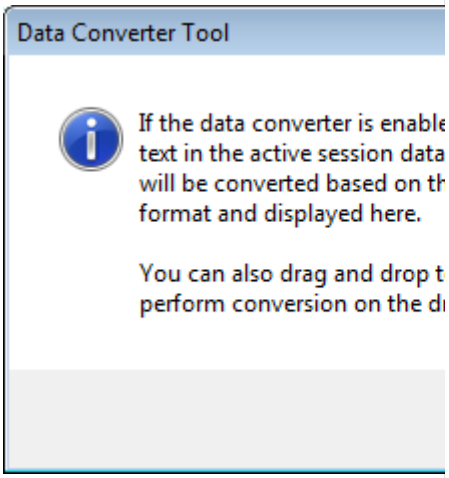
User Interface

The *Data Converter* widget user interface includes a toolbar at the top of the tool window to configure the *Data Converter* widget run-time options.



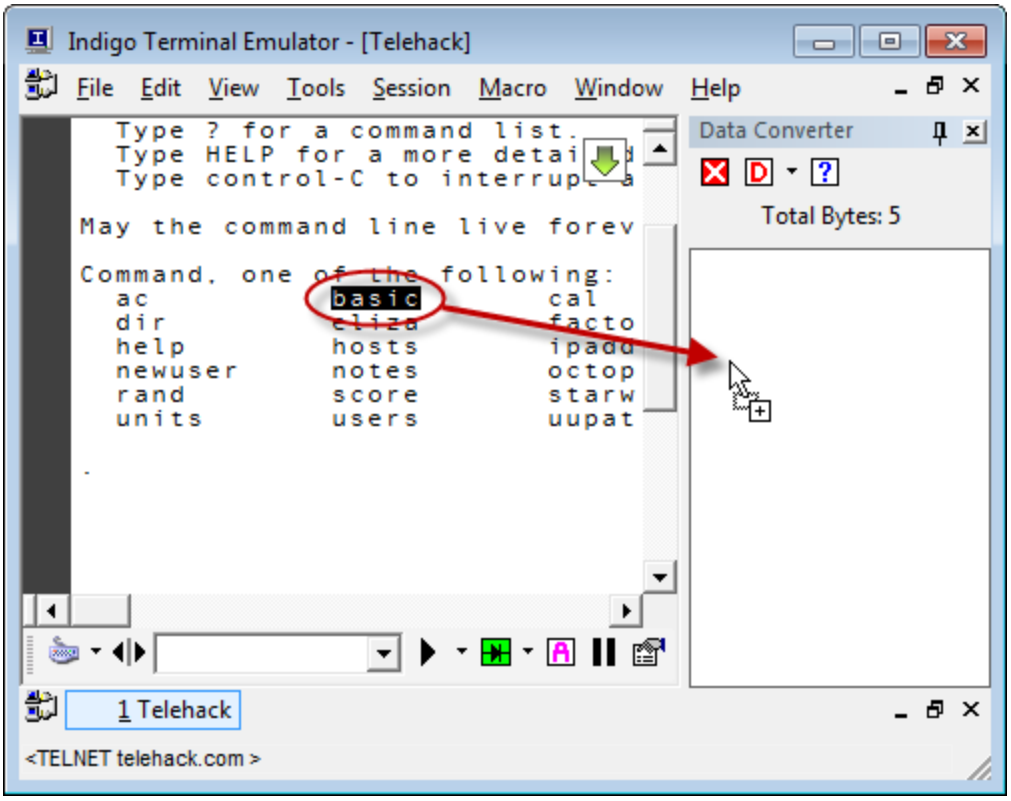
The *Data Converter* widget options are listed below.

Icon	Name	Description
	**Active Conversion**	When this option is enabled, any text data that is selected in the session data window will be automatically converted on-the-fly in the *Data Converter* widget. **Note** This option does not enable/disable the *Data Converter* widget. Is just controls whether or not this tool will actively convert selected text from the active session data window or not.

	**Data Format**	Select the desired data conversion format that the *Data Converter* widg et should apply to selected text. 
	**Help**	This option displays the following help information. 
Total Bytes: 5	**Total**	This field displays the total number of bytes/characters that were converted.

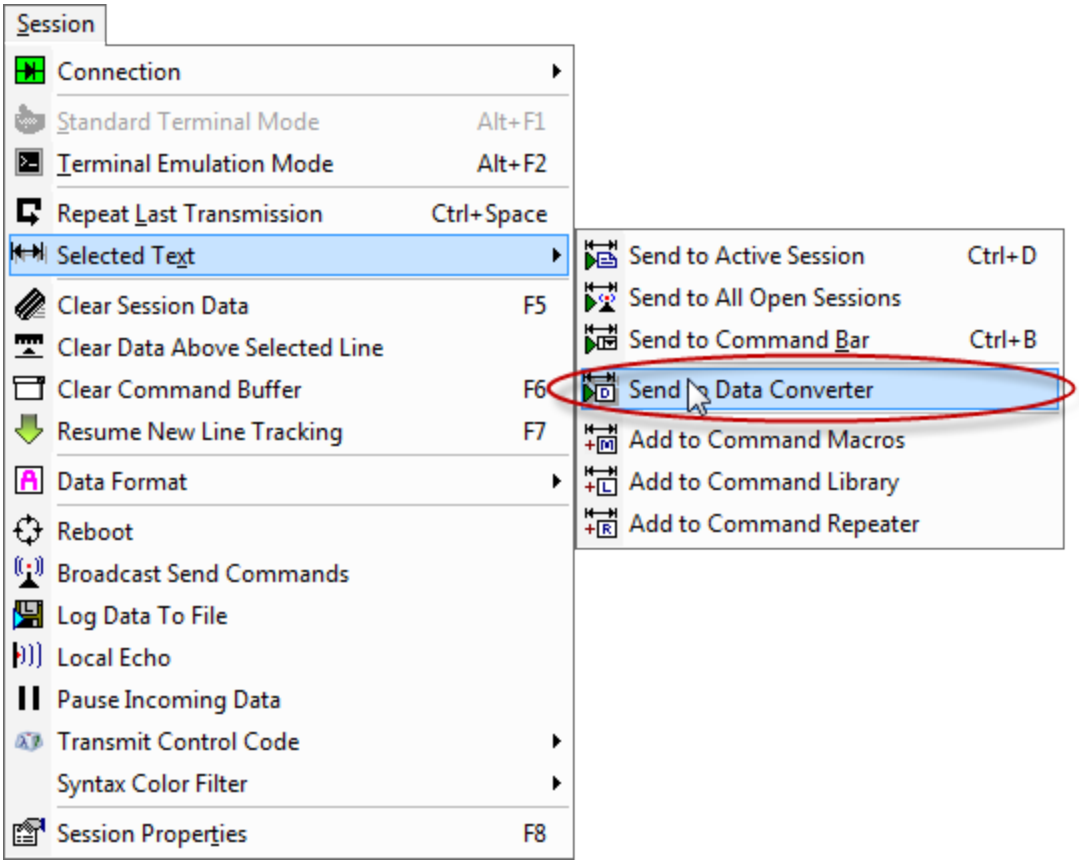
Drag & Drop

Indigo supports dragging and dropping text data into the *Data Converter* widget.
When dropped, the text will be converted to the selected data format.



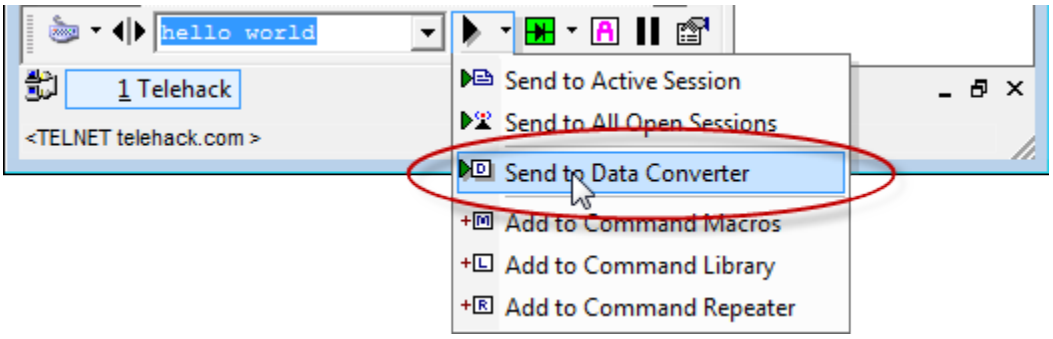
Session Menu

You can select a block of text in the session data window and then use *Send to Data Converter* option in the session menu to send the selected text to the *Data Converter* widget.
The text will be converted to the data format selected in the *Data Converter* widget.



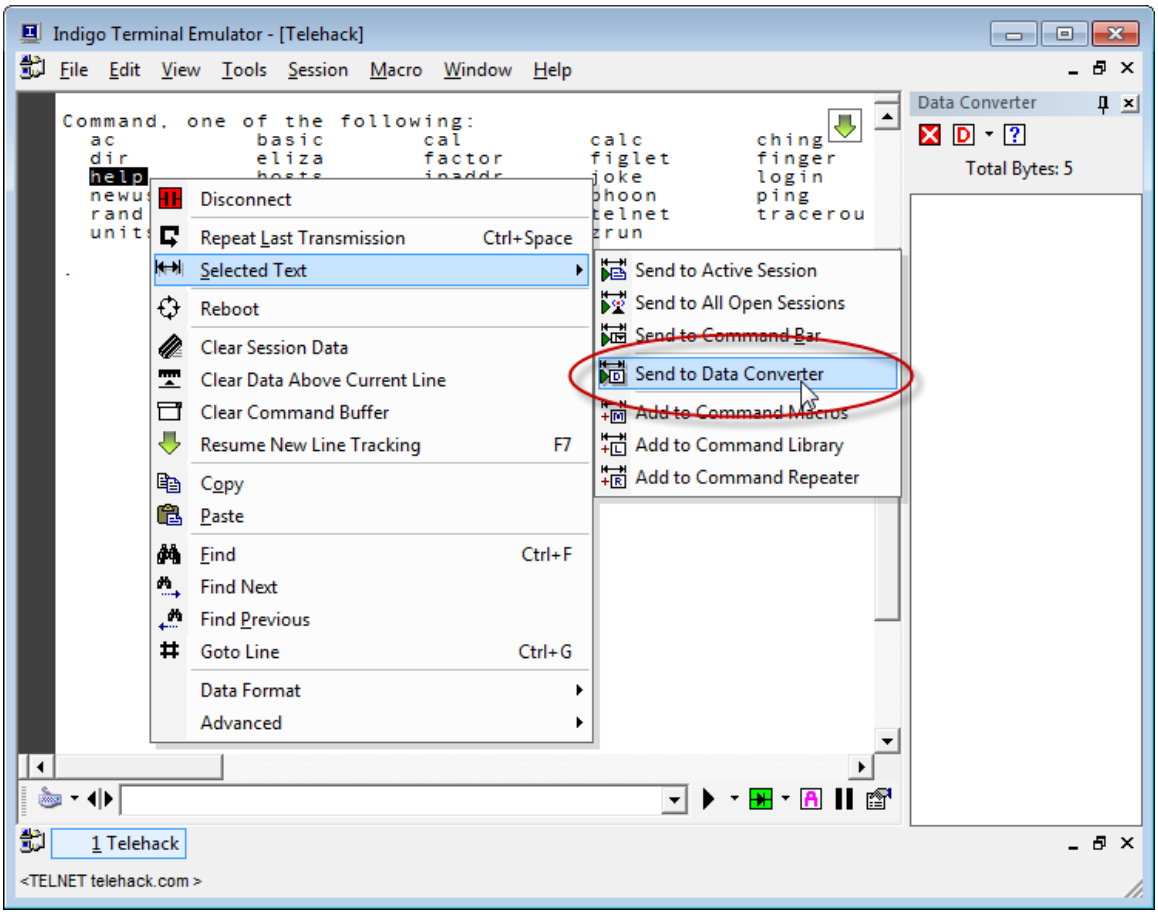
Session Toolbar

You can enter command text into the command bar and then use session toolbar to send the selected text to the *Da ta Converter* widget.
The text will be converted to the data format selected in the *Data Converter* widget.



Session Context Menu

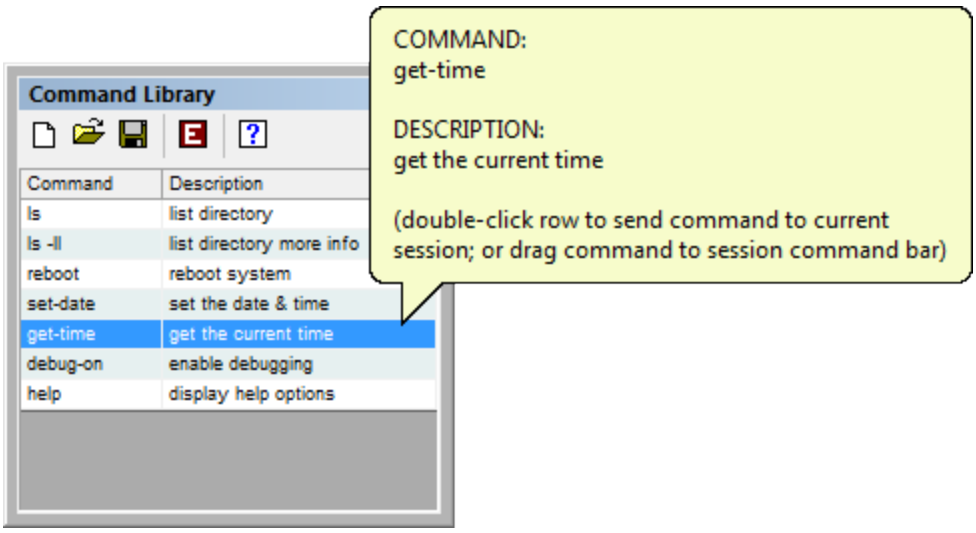
You can select a block of text in the session data window and then use the right-click session context menu to send the selected text to the *Data Converter* widget.
The text will be converted to the data format selected in the *Data Converter* widget.



Command Library

Overview

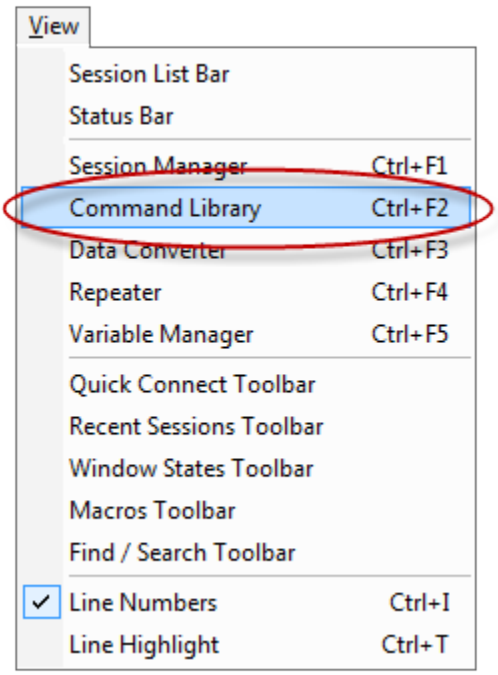
Indigo supports a *Command Library* widget tool that allows you to define collections of commands that you may want to send to a connected device/host.
This feature is very similar to the Command Macros feature, except that command macros are intended to be more of a permanent set of commands used across all sessions whereas the *Command Library* widget is targeted at creating library files of commands that can be easily swapped for different libraries as needed.
This is particularly useful is you want to build up commands sets that target a specific device or host.
Command library files can also easily be shared across multiple users of Indigo or multiple computers running Indigo.



(*Hovering the mouse cursor over a command instance will display the command information in a tooltip.*)

View Menu

The *Command Library* widget can be displayed using the View Menu.

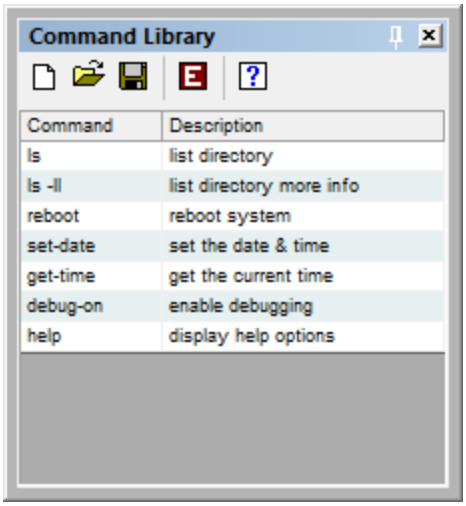


Widget Docking, Pinning, Re-sizing

Widget docking, pinning, re-sizing, etc information is listed here.

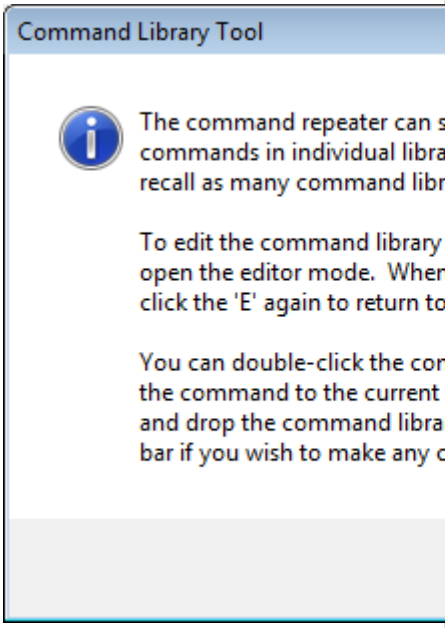
User Interface

The *Command Library* user interface consists of a grid listing of commands with a single options toolbar.

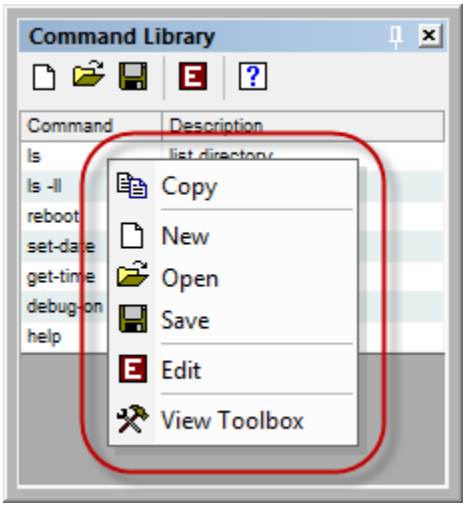


The *Command Library* widget options are listed below.

	Name	Description
	New	This option will prompt the user to create a new command library file.
	Open	This option will prompt the user to select and existing command library file. When a file is selected the *Command Library* widget will refresh and display the contents of the newly selected file.
	Save	This option will prompt the user to save the current command library file. (*The current command library file is automatically saved when the Indigo application is closed.*)
	Edit	This option will switch the *Command Library* widget into edit mode. Edit mode will allow adding and editing commands in the command library.

	Help	This option displays the following help information. 

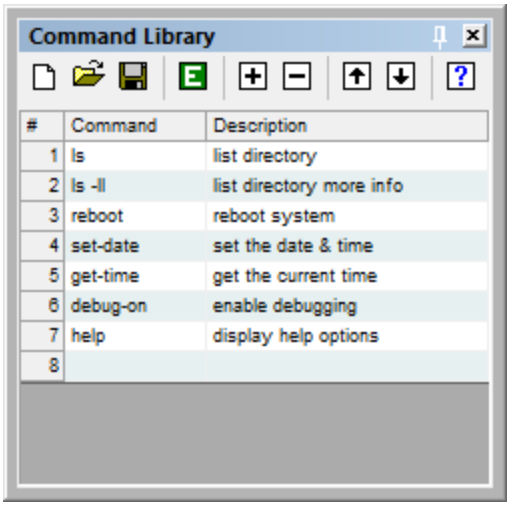
The *Command Library* widget also supports a right-click context menu that provides the same options.



(The *View Toolbox* option will show and hide the toolbar in the *Command Library* widget.)

Edit Mode User Interface

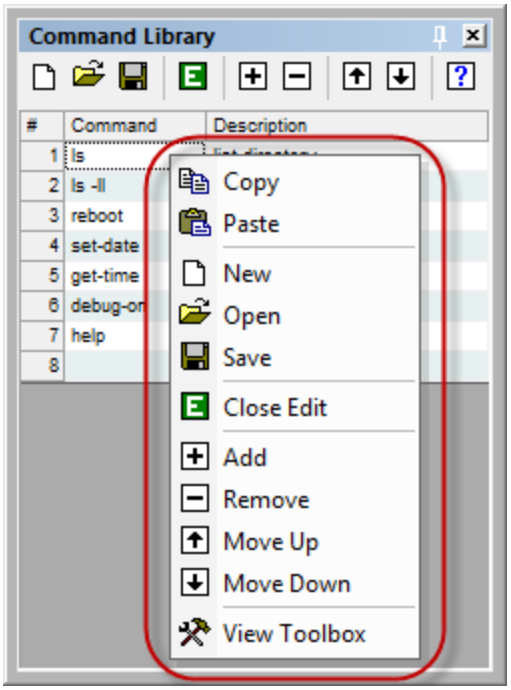
When in the edit mode, the *Command Library* user interface will include a few more toolbar options and allow editing of the commands in the data grid.



The additional *Command Library* widget options exposed in edit mode are listed below.

	Name	Description
	Exit Edit Mode	This option will exit the editing mode and return to run-time mode.
	Insert	Insert a new command row above the current selected row.
	Remove	Remove the selected command row(s). (*Note that the entire row must be selected. Click the numbered cell to select an entire row.*)
	Move Up	Move the selected command row(s) up one position in the listing. (*Note that the entire row must be selected. Click the numbered cell to select an entire row.*)
	Move Down	Move the selected command row(s) down up one position in the listing. (*Note that the entire row must be selected. Click the numbered cell to select an entire row.*)

The *Command Library* widget also supports a right-click context menu that provides the same options.



(The *View Toolbox* option will show and hide the toolbar in the *Command Library* widget.)

Double-Click to Send

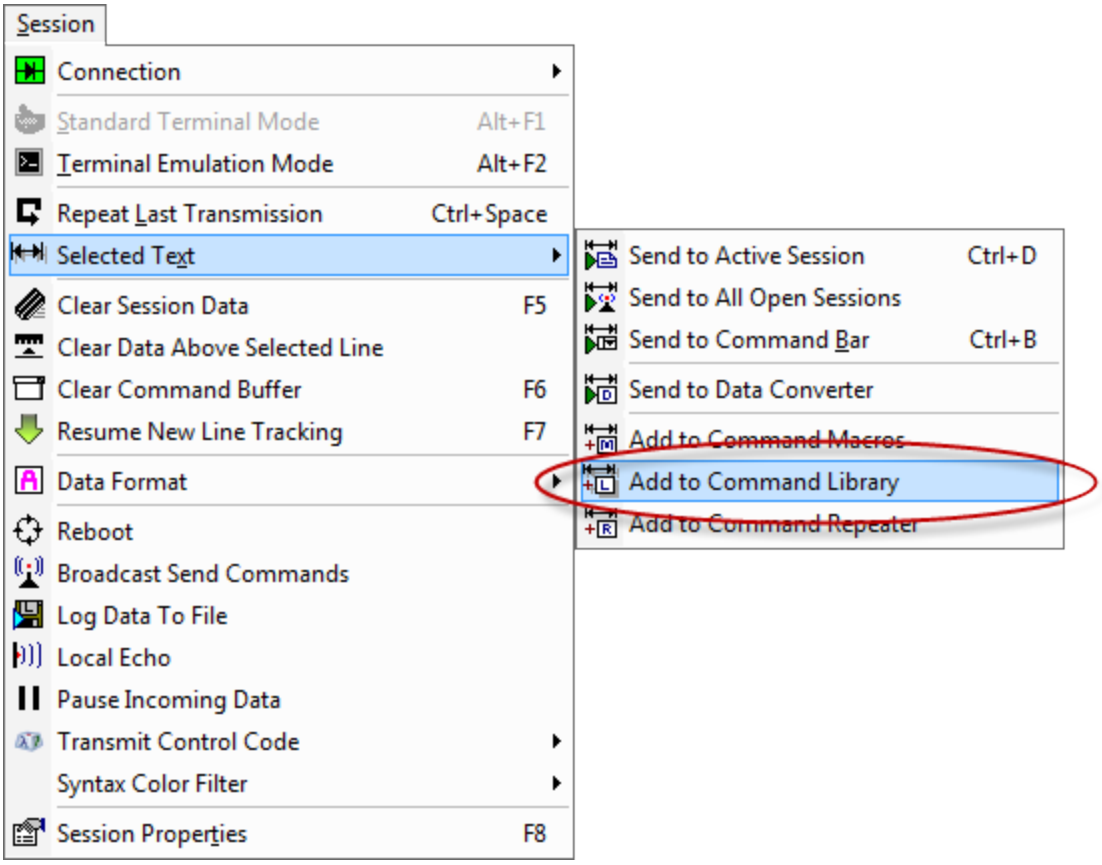
You can double-click a record in the command library and the command text will be transmitted to the connected device/host in the active terminal session.

Drag & Drop

The *Command Library* widget supports drag-and-drop.
You can select a record in the command library and drag the entry to the command bar to stage the command text.

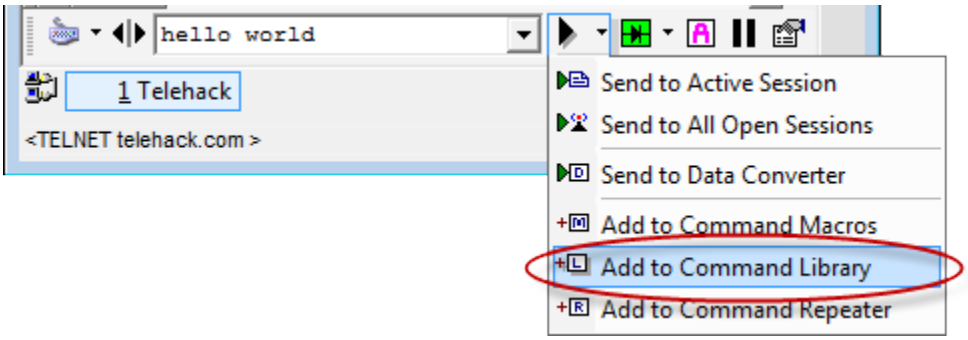
Session Menu

You can select a block of text in the session data window and then use *Add to Command Library* option in the session menu to add the selection as a new record in the *Command Library* widget.
(*The new command library record will only be added if it does not match an existing record.*)



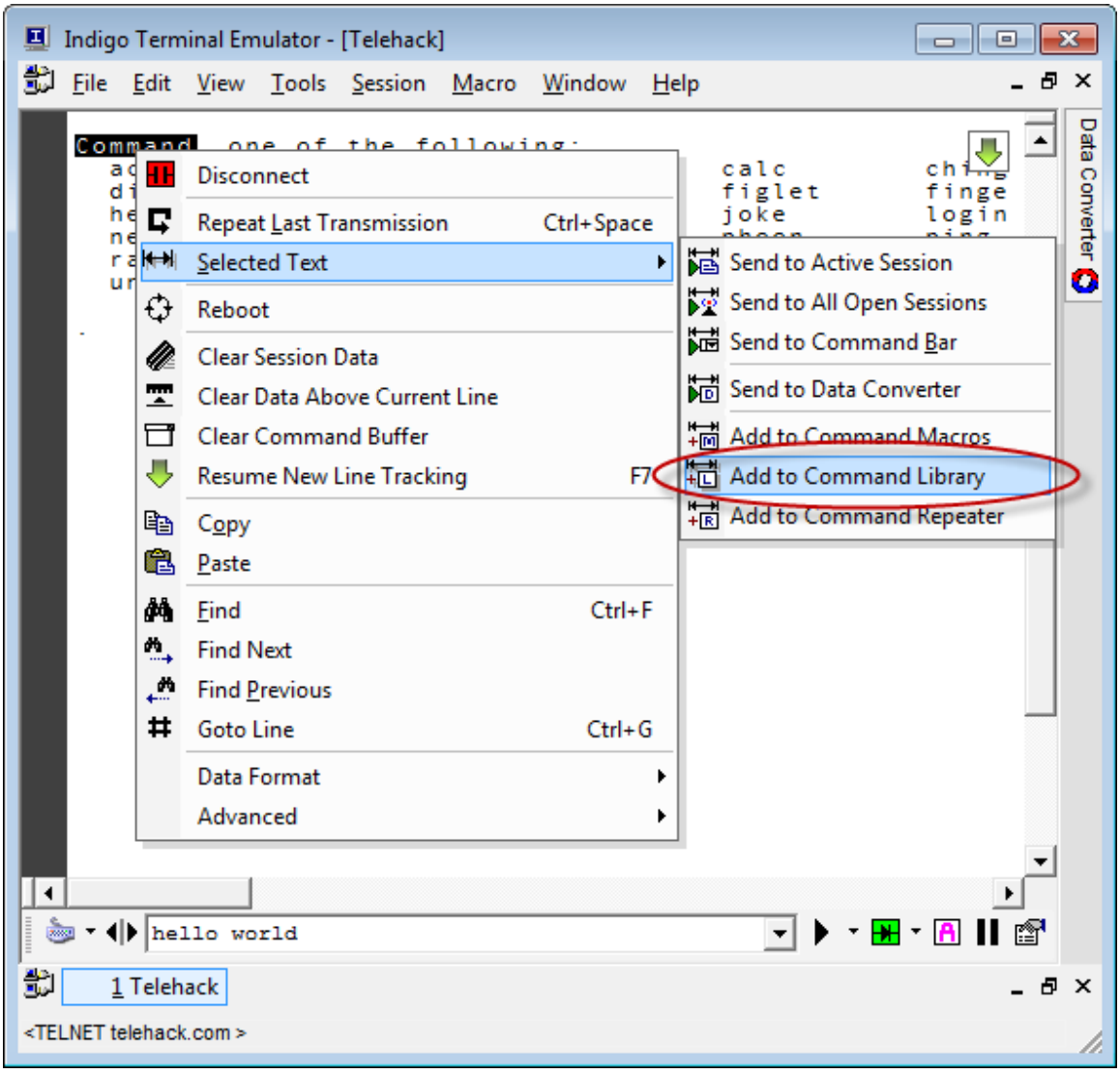
Session Toolbar

You can enter command text into the command bar and then use session toolbar to add the selected text as a new record in the *Command Library* widget.
(*The new command library record will only be added if it does not match an existing record.*)



Session Context Menu

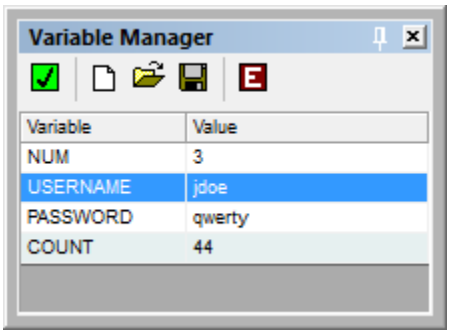
You can select a block of text in the session data window and then use the right-click session context menu to add the selection as a new record in the *Command Library* widget.
(*The new command library record will only be added if it does not match an existing record.*)



Variable Manager

Overview

Indigo includes a variable replacement feature that allows you to define a set of variables whose values can be substituted in command data when it is submitted to the connected device/host.
Indigo provide a *Variable Manager* widget tool that allows you to define collections of these replacement variables and define their substitution values.

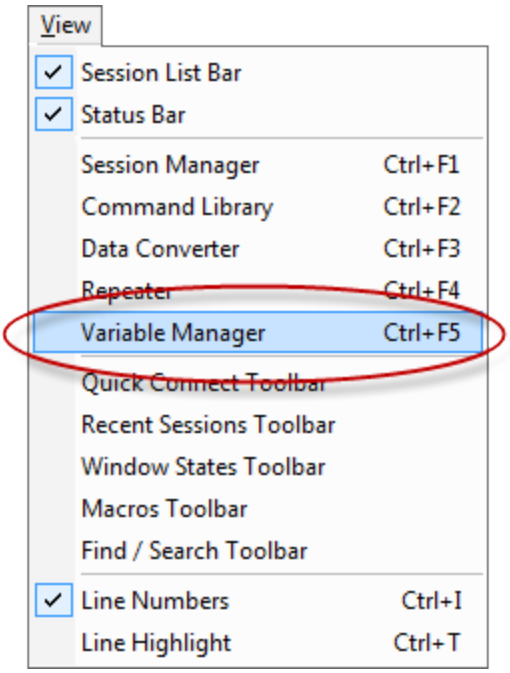


Tip

For information on how to use command variables with your terminal session, please click here.

View Menu

The *Variable Manager* widget can be displayed using the View Menu.

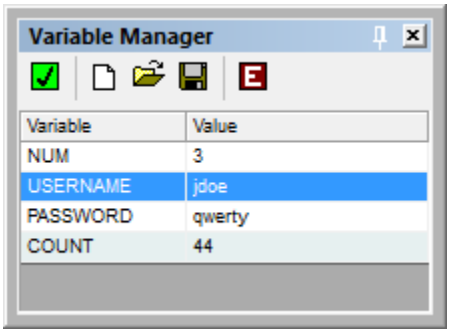


Widget Docking, Pinning, Re-sizing

Widget docking, pinning, re-sizing, etc information is listed here.

User Interface

The *Variable Manager* user interface consists of a grid listing of replacement variables with a single options toolbar.

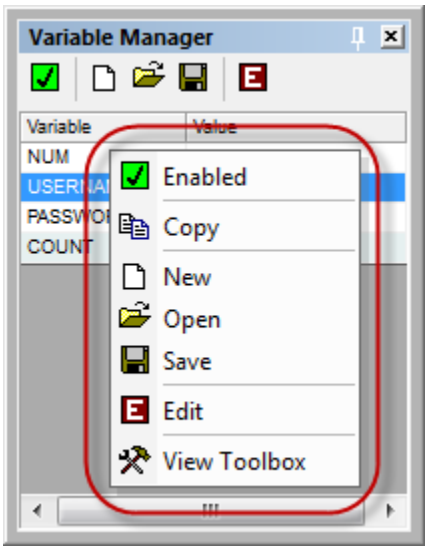


The *Variable Manager* widget options are listed below.

	Name	Description

	**Enabled**	This option will globally enable/disable the variable replacement feature.
	**New**	This option will prompt the user to create a new variable replacements data file.
	**Open**	This option will prompt the user to select and existing variable replacements data file. When a file is selected the *Variable Manager* widget will refresh and display the contents of the newly selected file.
	**Save**	This option will prompt the user to save the current variable replacement data file. (*The current variables data file is automatically saved when the Indigo application is closed.*)
	**Edit**	This option will switch the *Variable Manager* widget into edit mode. Edit mode will allow adding and editing variable replacements in the variables listing.

The *Variable Manager* widget also supports a right-click context menu that provides the same options.

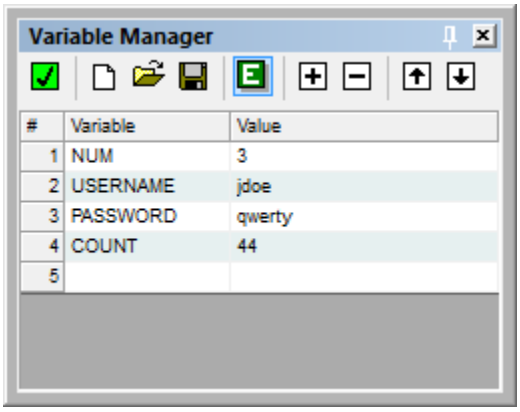


(The *View Toolbox* option will show and hide the toolbar in the *Variable Manager* widget.)

Edit Mode User Interface

When in the edit mode, the *Variable Manager* user interface will include a few more toolbar options and allow editing

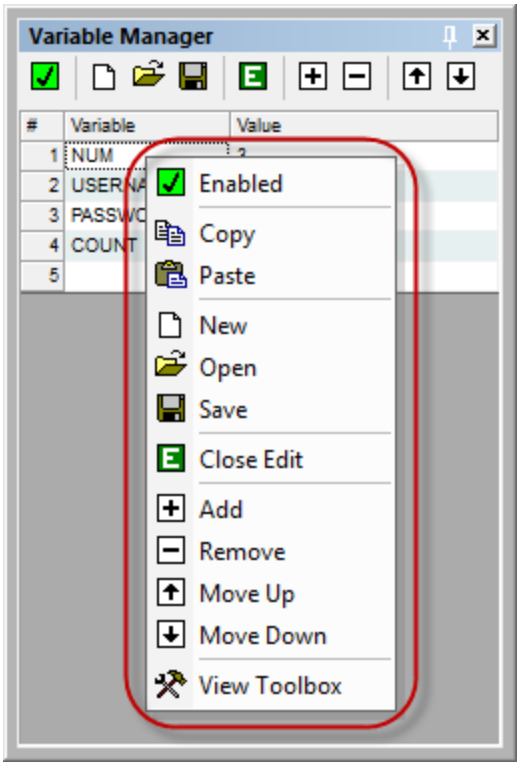
of the replacement variables in the data grid.



The additional *Variable Manager* widget options exposed in edit mode are listed below.

	Name	Description
	Exit Edit Mode	This option will exit the editing mode and return to run-time mode.
	Insert	Insert a new variable replacement row above the current selected row.
	Remove	Remove the selected variable replacement row(s). (*Note that the entire row must be selected. Click the numbered cell to select an entire row.*)
	Move Up	Move the selected variable replacement row(s) up one position in the listing. (*Note that the entire row must be selected. Click the numbered cell to select an entire row.*)
	Move Down	Move the selected variable replacement row(s) down up one position in the listing. (*Note that the entire row must be selected. Click the numbered cell to select an entire row.*)

The *Variable Manager* widget also supports a right-click context menu that provides the same options.



(The *View Toolbox* option will show and hide the toolbar in the *Variable Manager* widget.)

Double-Click to Send

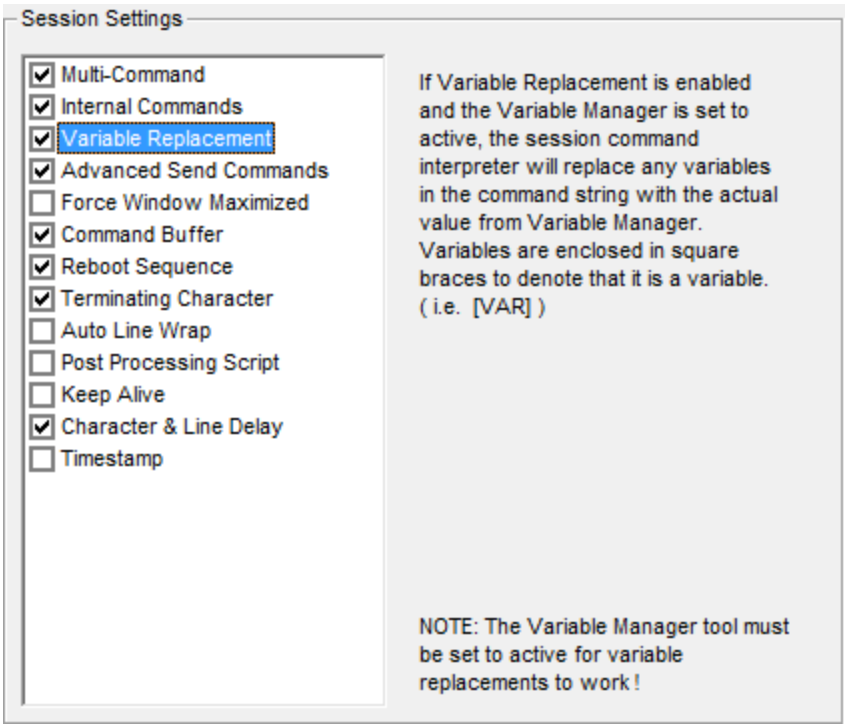
You can double-click a record in the variable manager and the variable replacement token (name) will be appended to the text in the command bar.

Drag & Drop

The *Variable Manager* widget supports drag-and-drop.
You can select a record in the variable manager and drag the entry to the command bar to stage the variable in the command text.

Session Properties

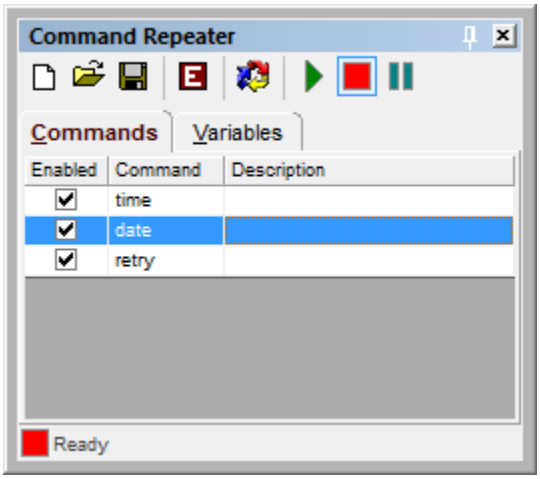
The variable replacement feature can be enabled/disabled in the terminal Session Properties editor under the Advanced tab.



Command Repeater

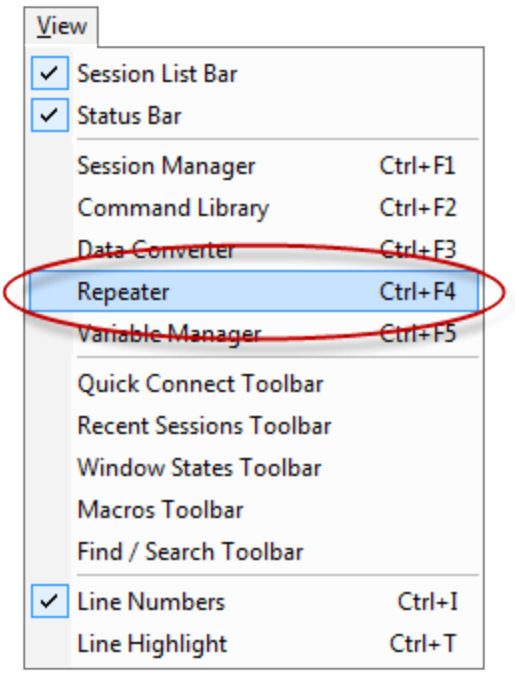
Overview

Indigo supports a *Command Repeater* widget tool that allows you to define collections of commands and variables that you can use to send repeated commands to a connected device/host.
This is particularly useful is you want to send one or more commands repeatedly for testing or for querying a device/host.
You can also include dynamic variables in the repeated commands where the variable substitution can be updated via a mathematical expression on each repeat cycle.



View Menu

The *Command Repeater* widget can be displayed using the View Menu.

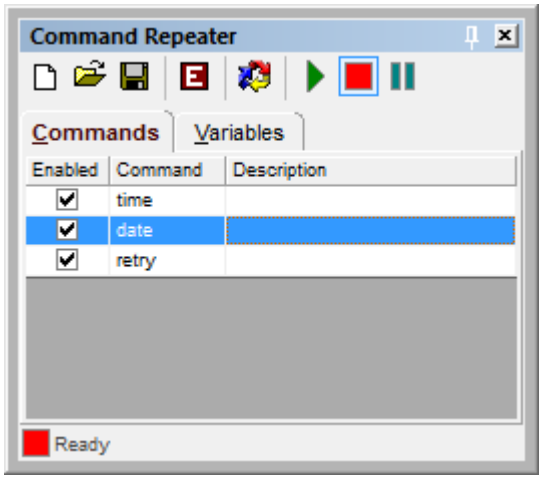
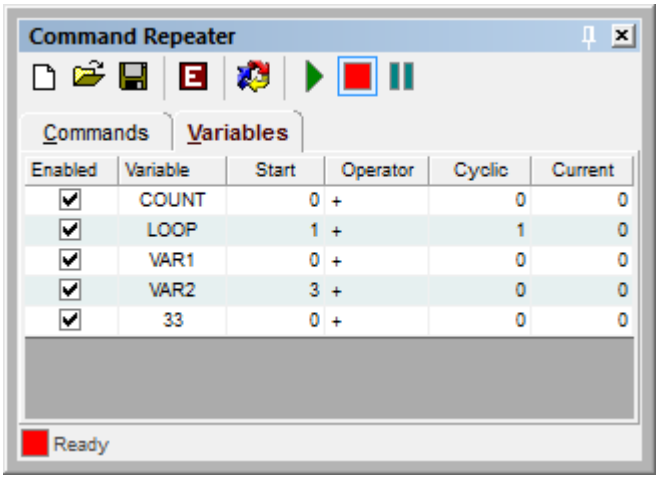


Widget Docking, Pinning, Re-sizing

Widget docking, pinning, re-sizing, etc information is listed here.

User Interface

The *Command Repeater* user interface consists of a grid listing of commands and variables with a single options toolbar and a status bar.

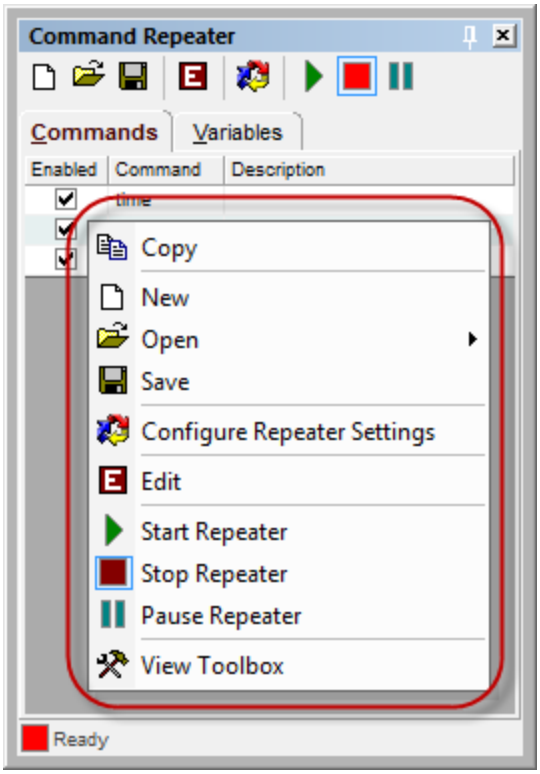
Command Tab	Variables Tab
	

The *Command Repeater* widget options are listed below.

	Name	Description
🗋	**New**	This option will prompt the user to create a new command repeater data file.

	**Open**	This option will prompt the user to select and existing command repeater data file. When a file is selected the *Command Repeater* widget will refresh and display the contents of the newly selected file.
	**Save**	This option will prompt the user to save the current command repeater data file. (*The current command repeater data file is automatically saved when the Indigo application is closed.*)
	**Edit**	This option will switch the *Command Repeater* widget into edit mode. Edit mode will allow adding and editing commands on the command tab. **Tip** Existing variable replacement values can be edited even when not in edit mode.
	**Configure**	This option will open the *Command Repeater* run-time settings
	**Start**	This option will start/resume sending commands from the *Command Repeater* to the active terminal session.
	**Stop**	This option will stop sending commands from the *Command Repeater* to the active terminal session.
	**Pause**	This option will pause/resume sending commands from the *Command Repeater* to the active terminal session.

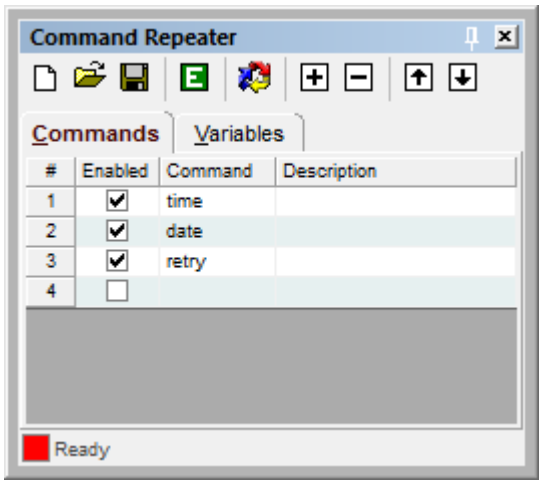
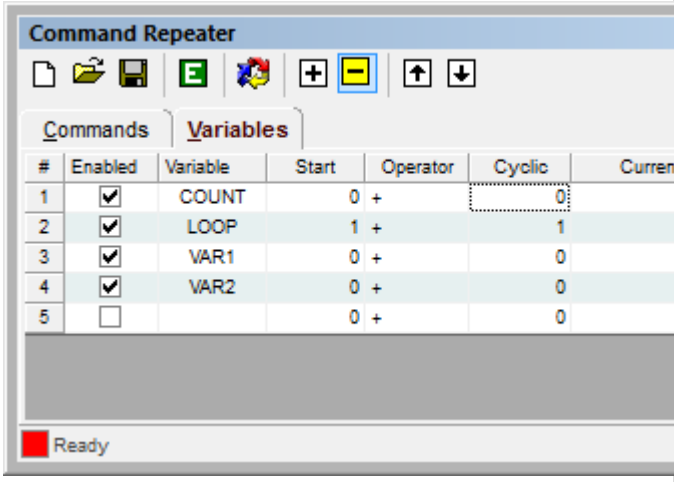
The *Command Repeater* widget also supports a right-click context menu that provides the same options.



(The *View Toolbox* option will show and hide the toolbar in the *Command Repeater* widget.)

Edit Mode User Interface

When in the edit mode, the *Command Repeater* user interface will include a few more toolbar options and allow editing of the commands in the data grid.

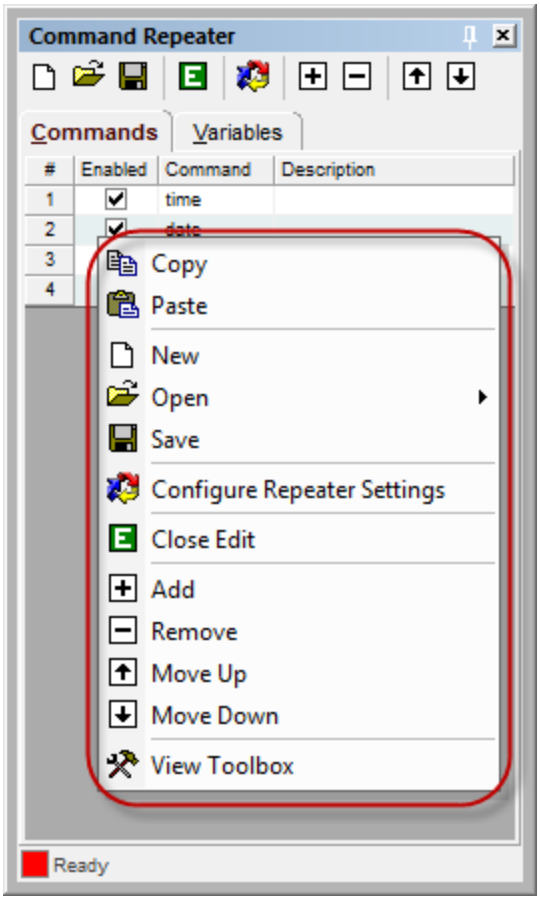
Command Tab	Variables Tab
	

The additional *Command Repeater* widget options exposed in edit mode are listed below.

	Name	Description

	Exit Edit Mode	This option will exit the editing mode and return to run-time mode.
	Insert	Insert a new command row or variable replacement row above the current selected row depending on which tab is selected.
	Remove	Remove the selected command row(s)or variable replacement row(s) depending on which tab is selected. (*Note that the entire row must be selected. Click the numbered cell to select an entire row.*)
	Move Up	Move the selected command row(s) or variable replacement row(s) up one position in the listing depending on which tab is selected. (*Note that the entire row must be selected. Click the numbered cell to select an entire row.*)
	Move Down	Move the selected command row(s) or variable replacement row(s) down up one position in the listing d epending on which tab is selected. (*Note that the entire row must be selected. Click the numbered cell to select an entire row.*)

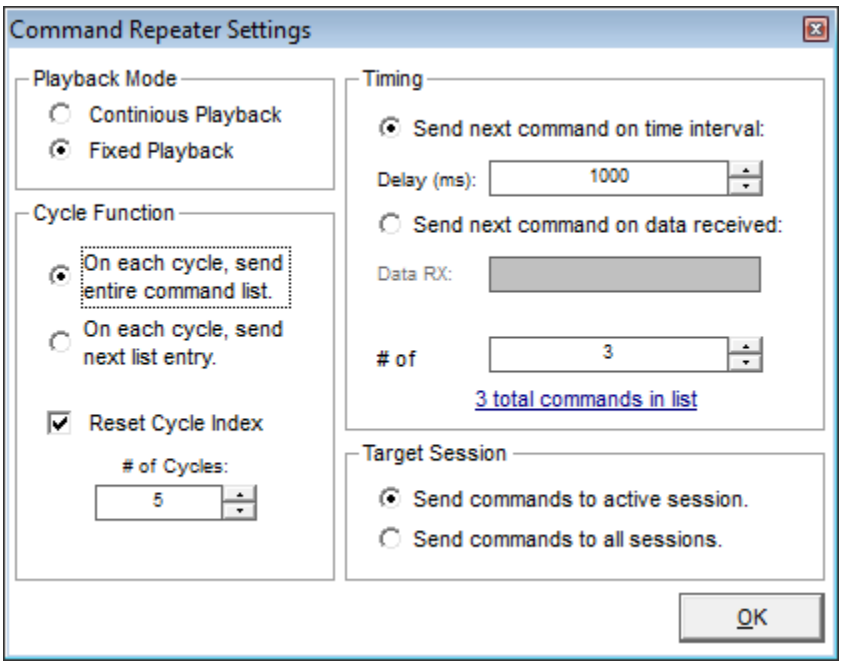
The *Command Repeater* widget also supports a right-click context menu that provides the same options.



(The *View Toolbox* option will show and hide the toolbar in the *Command Repeater* widget.)

Run-time Settings

The *Command Repeater* includes run-time configuration options to determine the repeater behavior. Use the *Configure Repeater Settings* option to access this dialog.

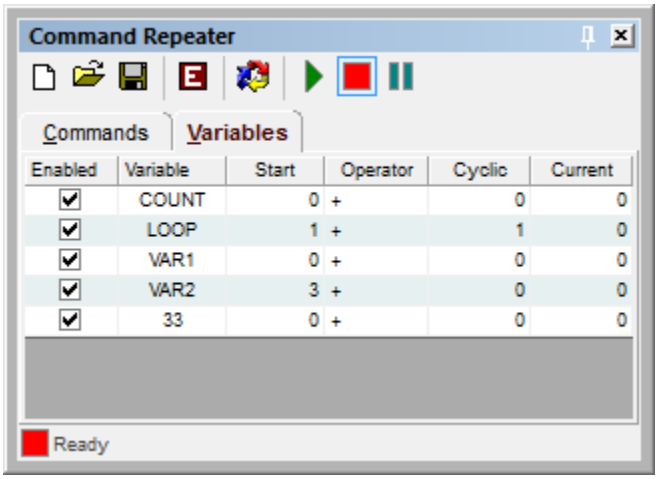


Playback Mode	
Continuous Playback	If this option is selected, the *Command Repeater* will iterate over the defined command listing and then continually start over and repeat the listing.
Fixed Playback	If this option is selected, the *Command Repeater* will iterate over the defined command listing once and then stop.
Cycle Function	
On each cycle, send entire command list	If this option is selected, the *Command Repeater* will iterate over the defined command listing and transmit all the commands during each repeater cycle.
On each cycle, send next list entry	If this option is selected, the *Command Repeater* will iterate over the defined command listing and transmit only one command during each repeater cycle.
Reset Cycle Index	If this option is selected, the *Command Repeater* will reset the repeat cycle index counter when the targeted number of repeat cycles have been reached.
Number of Cycles	If the *Reset Cycle Index* option is selected, then this field will be used to define the number of cycles at which to reset the repeat cycle index count.
Timing	
Send next command on time interval	If this option is selected, the *Command Repeater* will initiate the repeater cycle based on a user defined time interval.
Delay (ms)	If the *Send next command on time interval* option is selected, then this field will define the number of milliseconds for the time cycle delay interval.
Send next command on data received	If this option is selected, the *Command Repeater* will initiate the repeater cycle only over having received a specific target data string.
Data RX	If the *Send next command on data received* option is selected, then this field will define the target received data string to watch for.
Number of	If the *Fixed Playback* option is selected, then this field will be provided to define the number of repeat cycles the *Command Repeater* should invoke. (*Note that if the reset cycle index option is enabled, then it could affect the total number of cycles that will be repeated.*)
Target Session	
Send commands to active session	If this option is selected, the *Command Repeater* will transmit its data commands to only the selected/active terminal session.

Send commands to all sessions	If this option is selected, the *Command Repeater* will transmit its data commands to all open and connected terminal sessions.

Variable Cycling

The Command Repeater can perform a simple mathematical equation on a variable expression on each repeater cycle.



The following fields for a replacement variable row defines the variable properties and mathematical equation properties.

Name	Description
Enabled	This option allows you to enable/disable specific variables.
Variable	This field defines the variable replacement name/token. To embed a variable in command data, please see Command Variable Replacement
Start	This field defines the seed value or initiating start value that the variable will be assigned when the *Command Repeater* cycle starts. The variable value will always be rest to this start value when the *Command Repeater* is re-started.
Operator	This field defines the math operation to perform on each repeater cycle. The *Command Repeater* can perform addition, subtraction, multiplication, and division.
Cyclic	This field defines the operand value to use in the equation on each repeater cycle.
Current	This field displays the current value derived from the equation after each cycle.

The mathematical equation is applied to each variable on each repeater cycle .

Expression

```
CURRENT = START

FOR EACH CYCLE
{
  CURRENT = CURRENT [+|-|*|/] CYCLIC
}
```

> **Tip**
>
> You can pause the *Command Repeater* and modify a variable's current value, operator, cycle operand, etc. and resume the repeater cycle.

> **Tip**
>
> You can also use variables defined in the Variable Manager with commands listed in the *Command Repeater*.

Double-Click to Send

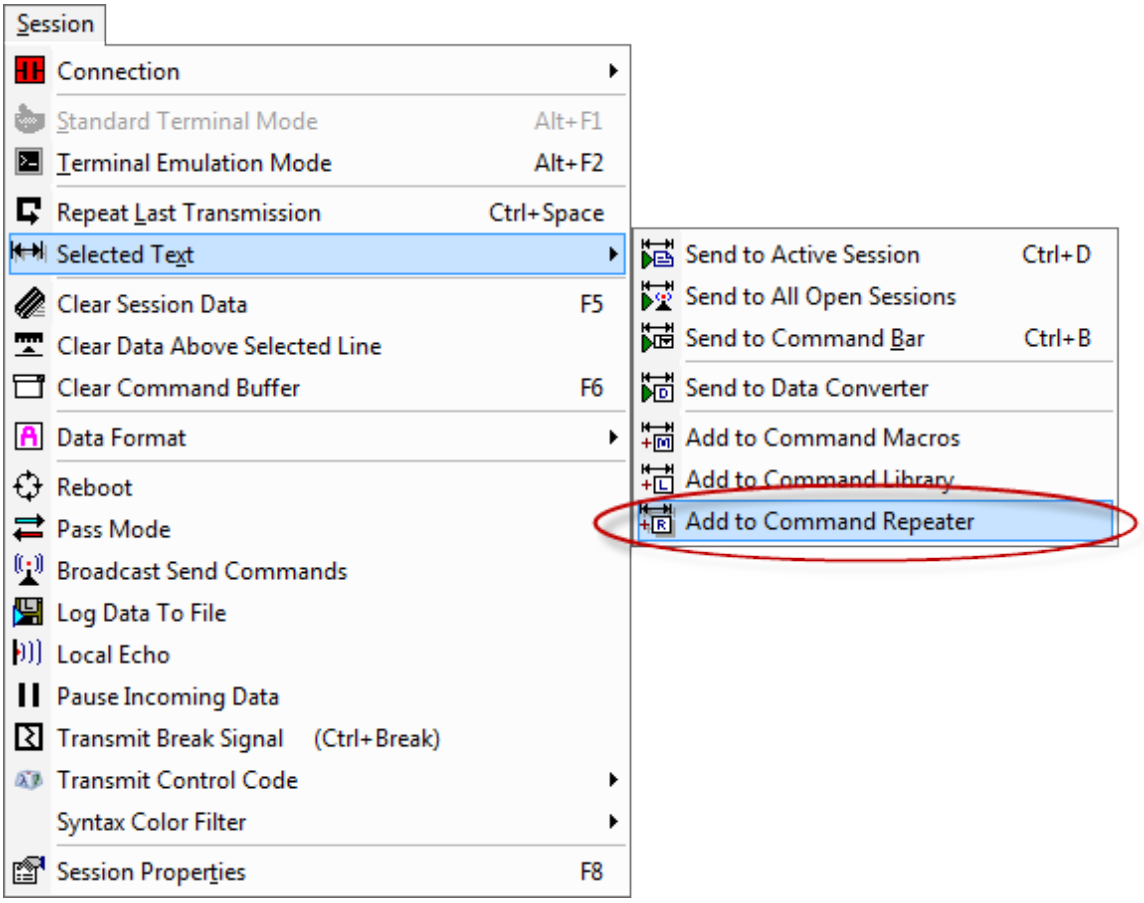
You can double-click a record in the commands tab of the *Command Repeater* widget and the command text will be transmitted to the connected device/host in the active terminal session.

Drag & Drop

The *Command Repeater* widget supports drag-and-drop.
You can select a command record in the command tab of the *Command Repeater* widget and drag the entry to the command bar to stage the command text.

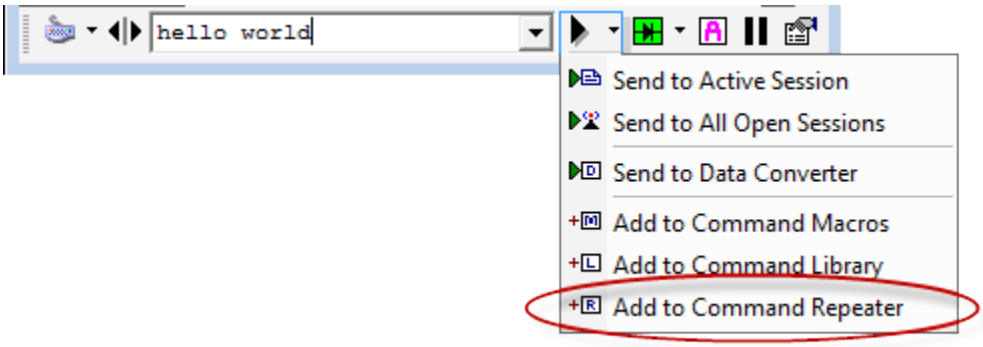
Session Menu

You can select a block of text in the session data window and then use *Add to Command Repeater* option in the session menu to add the selection as a new command record in the *Command Repeater* widget.
(*The new command record will only be added if it does not match an existing record.*)



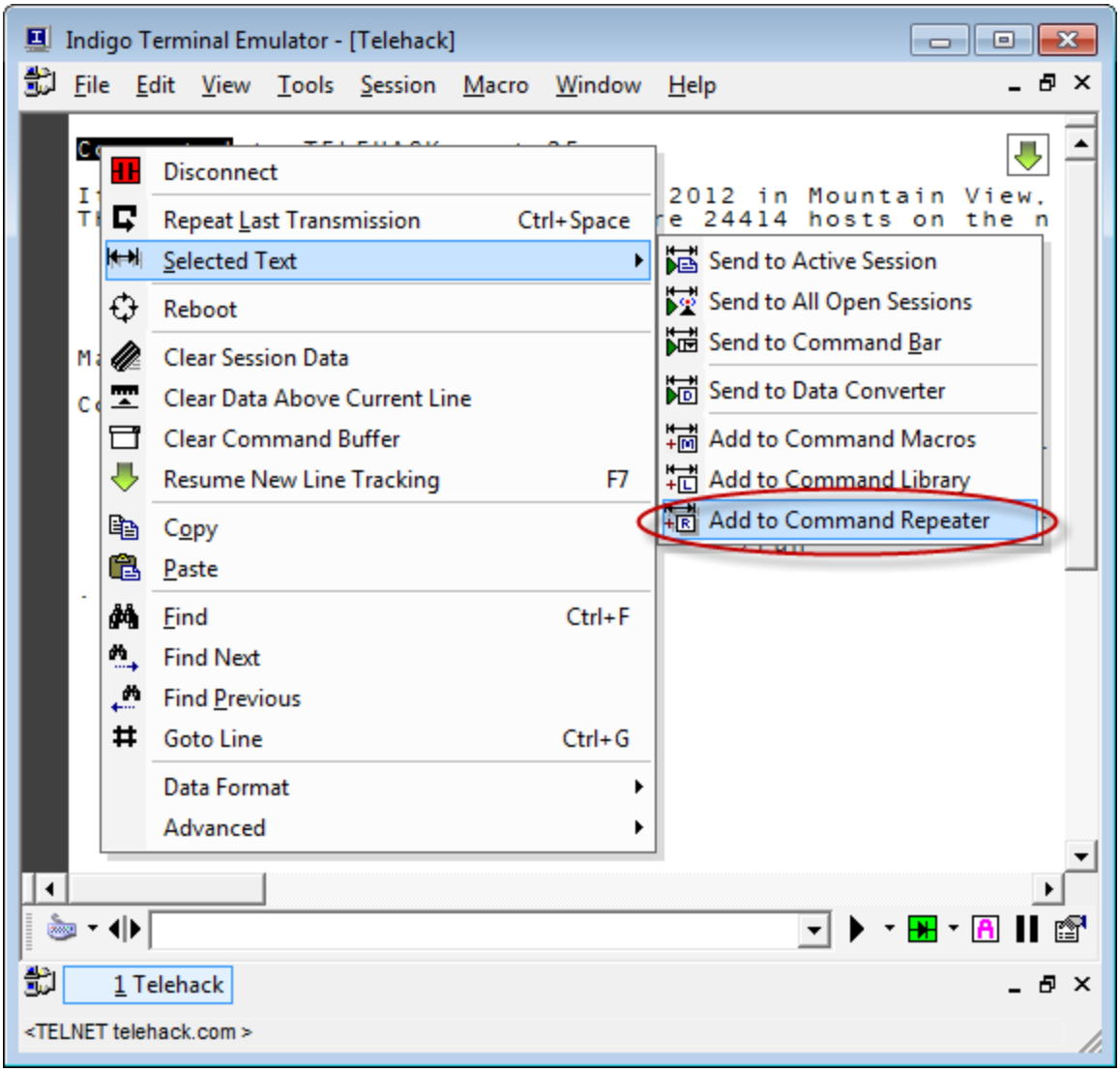
Session Toolbar

You can enter command text into the command bar and then use session toolbar to add the selected text as a new command record in the *Command Repeater* widget.
(*The new command record will only be added if it does not match an existing record.*)



Session Context Menu

You can select a block of text in the session data window and then use the right-click session context menu to add the selection as a new command record in the *Command Repeater* widget.
(*The new command record will only be added if it does not match an existing record.*)



Tools

Indigo Internal Commands

Overview

Indigo includes a set of internal commands and an internal command processor that can perform various application tasks.
Internal commands are invoked by sending the internal command instruction to a terminal session.

All internal commands (*except the cls command*) start with a color character.

Internal commands can be included and sequenced in multi-commands.

Internal Commands

The following list includes the internal commands that Indigo supports.

Internal Commands

```
-------------------------------------------------------------------------
- INDIGO: Internal Command Listing                                       -
-------------------------------------------------------------------------
- cls                       : clear screen                               -
- :help                     : display internal command listing           -
- :?                        : display internal command listing           -
- :d                        : disconnect session                         -
- :c                        : connect session                            -
- :rc                       : disconnect, then reconnect session         -
- :t                        : toggle connection state                    -
- :reboot                   : reboot session                             -
- :echo <on|off>            : enable/disable local echo                  -
- :log                      : toggle session data logging on/off         -
- :log:<logfile>            : start logging data to specified log file   -
- :macro:<macro #>          : execute a macro by macro number            -
- :tileh                    : tile windows horizontally                  -
- :tilev                    : tile windows vertically                    -
- :cascade                  : cascade windows                            -
- :maximize                 : maximize session window                    -
- :minimize                 : minimize session window                    -
- :properties               : edit session properties                    -
- :launch:<filename>        : launch a file                              -
- :web                      : open web browser to current address        -
- :web:<address>            : open web browser to speficied address      -
- :close                    : close session                              -
- :closeall                 : close all open sessions                    -
- :exit                     : exit program                               -
- :about                    : display about dialog                       -
- :helpfile                 : display Indigo's help file                 -
- :break                    : send BREAK signal to RS232 session         -
- :p:<milliseconds>         : pause remaining commands (non-blocking)    -
- :s:<milliseconds>         : sleep remaining commands (blocking)        -
- :@<script.function>       : execute VBScript method in script file     -
- :!<script.function>       : execute method in post processing script   -
- :=<scipt code>            : execute VBScript code                      -
- :txtextfile:<filename>    : transmit text file (ASCII) content by line -
- :txrawfile:<filename>     : transmit raw file (BINARY) content         -
-------------------------------------------------------------------------
```

Tip

You can send the "**`:help`**" or "**`:?`**" command any time in a terminal session window to display the listing of available internal commands.

Examples

Example	clear the session data window
Command	`cls`

Example	Transmit the serial break signal
Command	`:break`

Example	Enable logging for the terminal session
Command	`:log`

Example	Perform the custom reboot sequence.
Command	`:reboot`

Example	Transmit the contents of an ASCII text file
Command	`:txtextfile:<`*`filename`*`>`

Example	Enable the local echo feature for the session
Command	`:echo on`

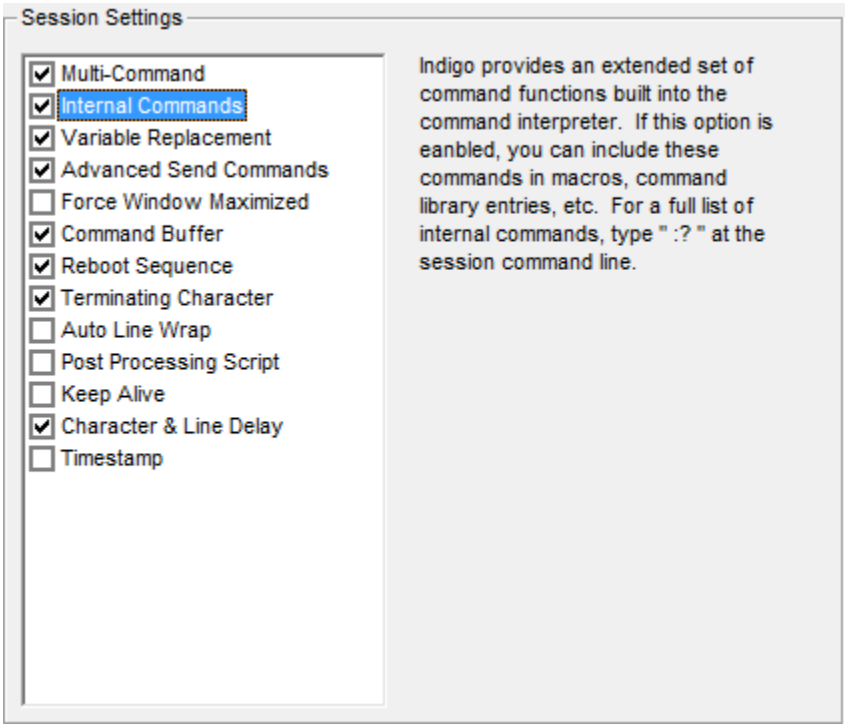
Example	Transmit command macro #2
Command	`:macro:2`

Example	Send two commands separated by a 3 second pause delay *(This example uses the multi-command syntax)*
Command	*`command-one`*`|:p:3000|`*`command-two`*

Example	Send a "quit" command, close the connection, wait 15 seconds and then reconnect *(This example uses the multi-command syntax)*
Command	`quit|:d|:p:15000|:c`

Session Properties

The *Internal Commands* feature can be enabled/disabled in the Advanced tab of the Session Properties editor. If the internal command processor is interfering with your terminal session, then you can disable it for the terminal session.



Macro Commands

Overview

Indigo supports a *Macro Command* feature that allows the storage of commonly used instructions commands. These commands are made easily and conveniently accessible via assigned hotkeys, the macro menu and the

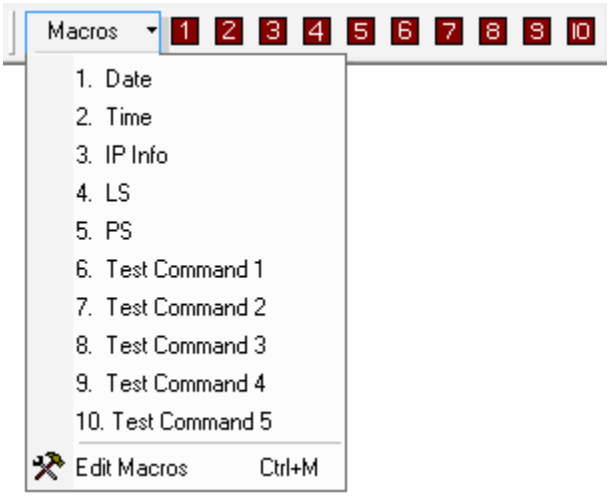
macro toolbar.

When a macro is selected the *Macro Command* will be send directly to the connected device/host in the active terminal session window.

Macro Command Toolbar

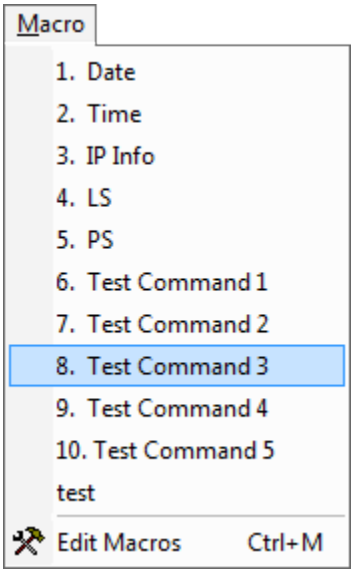
Command macros can be accessed using the Macro Command Toolbar.

The *Macro Command Toolbar* can display up to 10 icons for the top ten macros.
However, you can use the drop down button to access up to 20 macros as well as the Macro Menu.



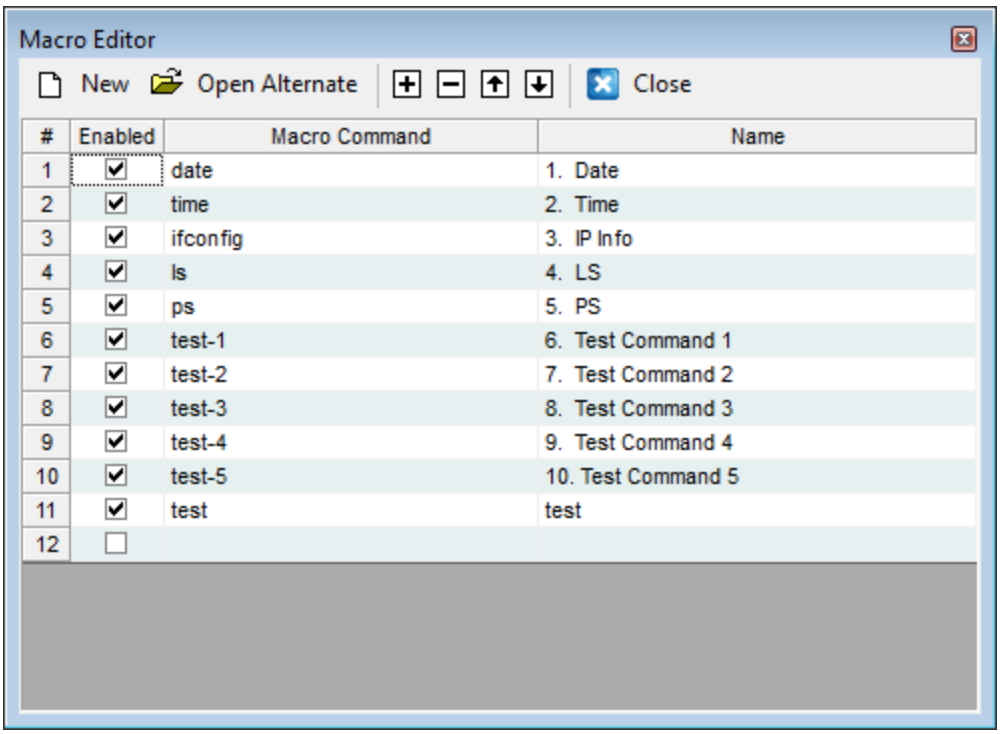
Macros Menu

Command macros can be accessed using the Macro Menu.



Macro Command Editor

Command macros can be created and edited using the Macro Command Editor.



The Macro Editor can be access from the Macro Menu or the Macro Toolbar.

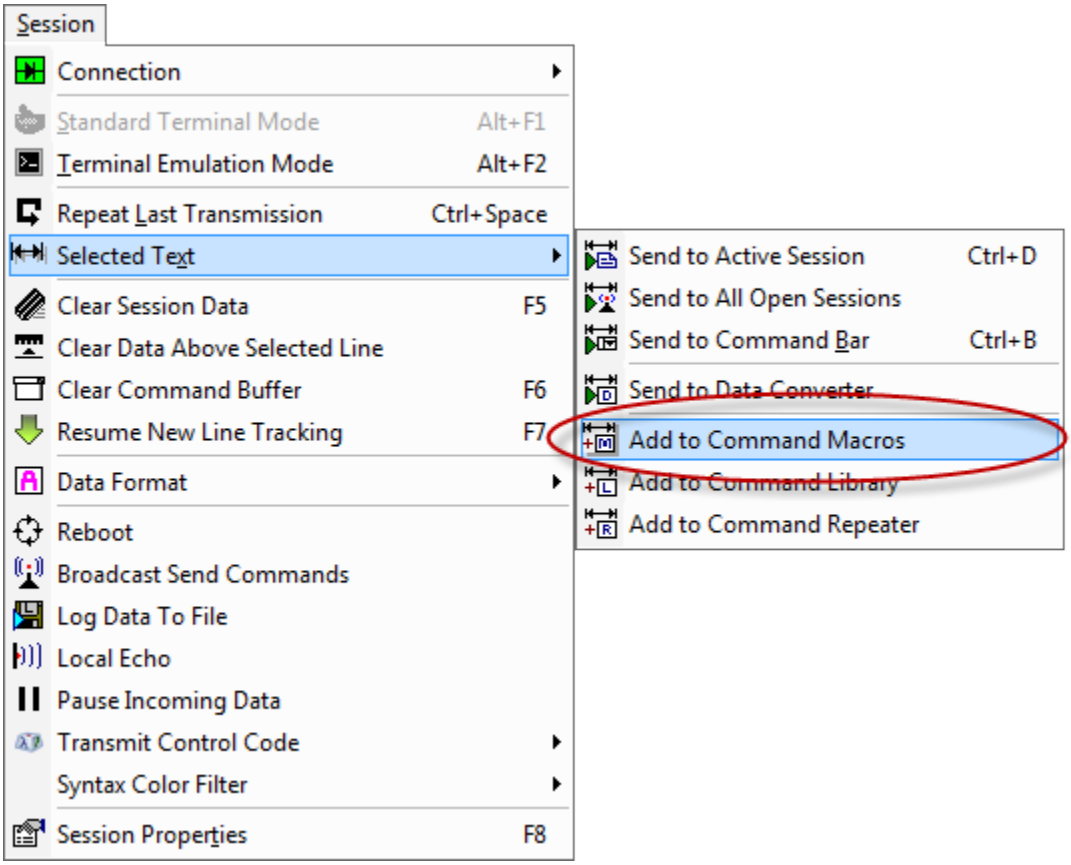
Using the command *Macro Editor*, you can create and manage the command macros using the following options.

	Option	Description
	New	Create a new user macro command data file.
	Open Alternate	Open an alternate existing user macro command data file.
	Insert	Insert a new command macro row above the current selected row.
	Remove	Remove the selected command macro row(s). (*Note that the entire row must be selected. Click the numbered cell to select an entire row.*)
	Move Up	Move the selected command macro row(s) up one position in the listing. (*Note that the entire row must be selected. Click the numbered cell to select an entire row.*)
	Move Down	Move the selected command macro row(s) down up one position in the listing. (*Note that the entire row must be selected. Click the numbered cell to select an entire row.*)

	Close	Close and save the command macro data file.

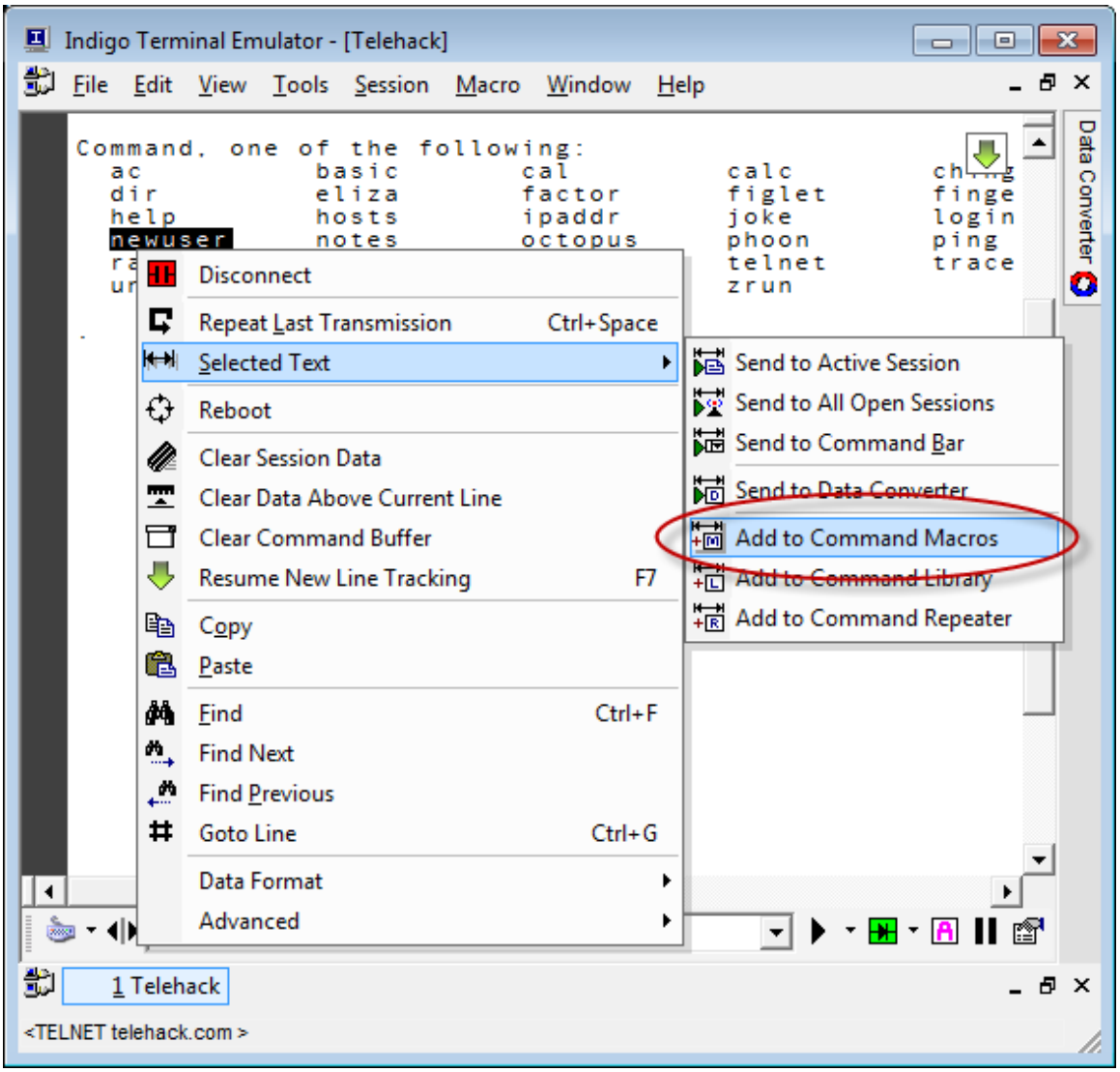
Session Menu

A *Macro Command* can be added to the macro listing by selecting text in the session data window and then using the *Add To Command Macros* option via the Session Menu.



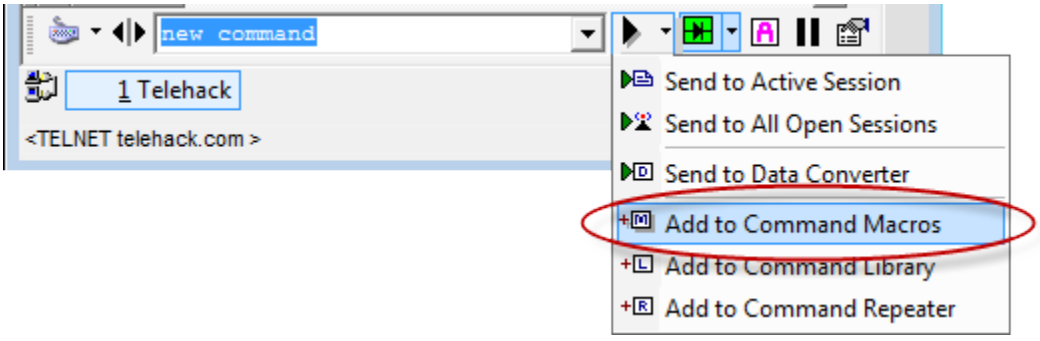
Session Context Menu

A *Macro Command* can be added to the macro listing by selecting text in the session data window and then using the *Add To Command Macros* option via the session right-click context menu.



Session Toolbar

A *Macro Command* can be added to the macro listing by entering command text into the Command Bar and then using the *Add To Command Macros* option via the Session Toolbar.



Internal Command

Command Macros can be invoked using the Internal Command syntax.

Example	Transmit command macro #2

Command	`:macro:2`

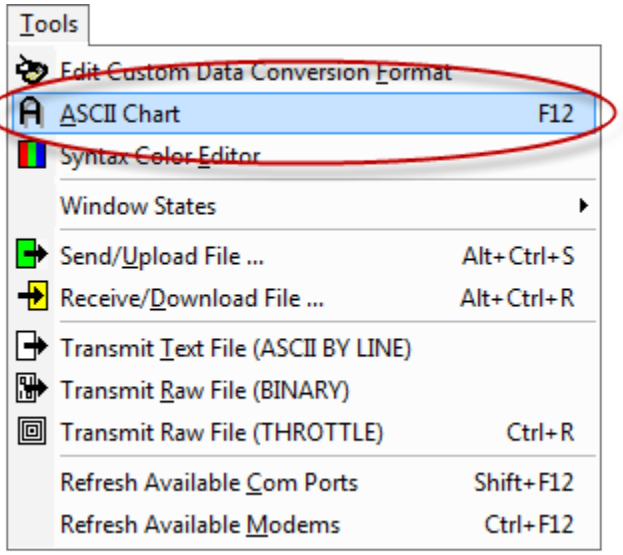
ASCII Chart

Overview

Indigo includes a series of ASCII tables and charts for quick and convenient reference.
Click the **F12** hotkey anytime in Indigo to display the ASCII charts.

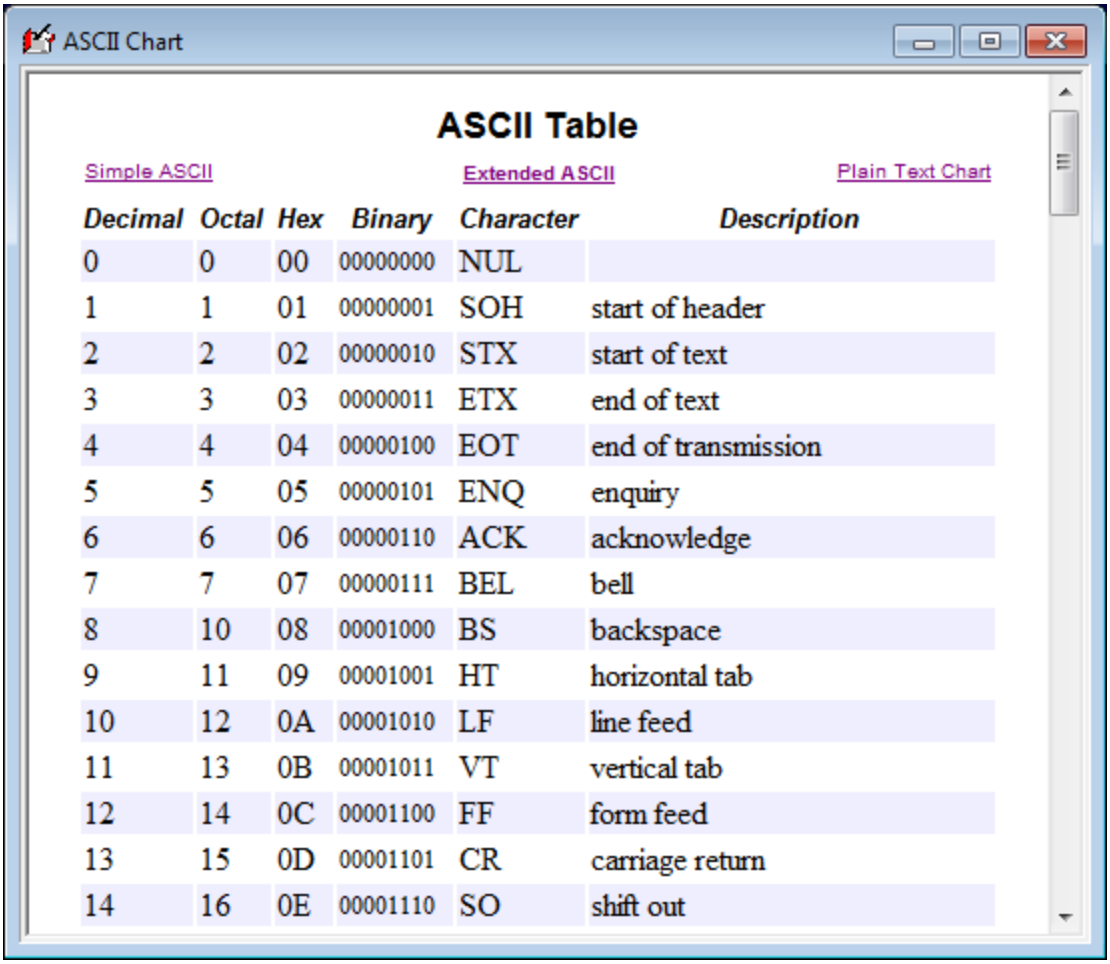
Tools Menu

The ASCII Chart tool can be accessed via the Tools Menu.



ASCII Table

The following ASCII reference table is provided in the Indigo ASCII Charts.



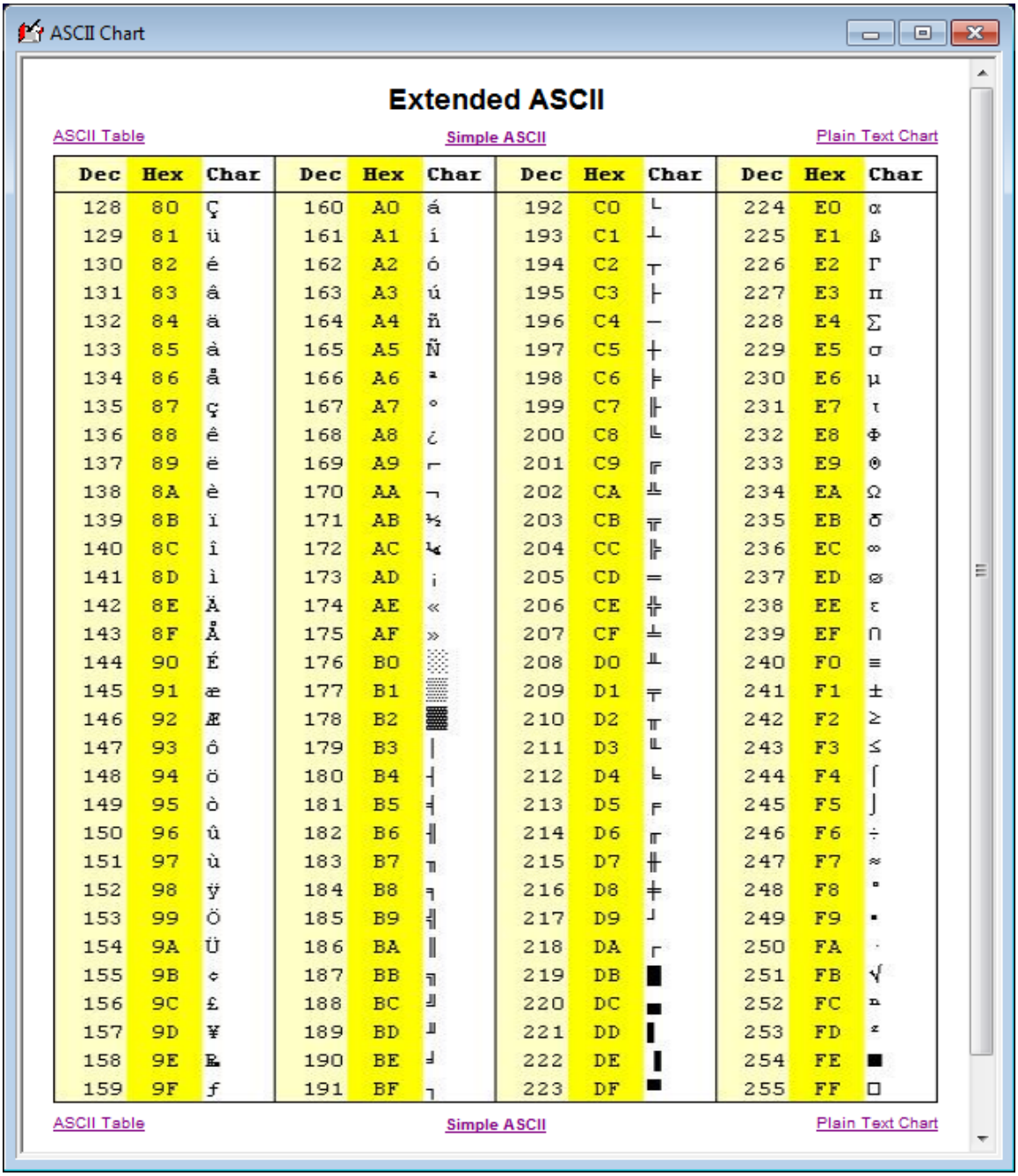
Simple ASCII Chart

The following ASCII reference chart is provided in the Indigo ASCII Charts.

Dec	Hex	Char	Dec	Hex	Char	Dec	Hex	Char	Dec	Hex	Char
0	00	Null	32	20	Space	64	40	@	96	60	`
1	01	Start of heading	33	21	!	65	41	A	97	61	a
2	02	Start of text	34	22	"	66	42	B	98	62	b
3	03	End of text	35	23	#	67	43	C	99	63	c
4	04	End of transmit	36	24	$	68	44	D	100	64	d
5	05	Enquiry	37	25	%	69	45	E	101	65	e
6	06	Acknowledge	38	26	&	70	46	F	102	66	f
7	07	Audible bell	39	27	'	71	47	G	103	67	g
8	08	Backspace	40	28	(	72	48	H	104	68	h
9	09	Horizontal tab	41	29	)	73	49	I	105	69	i
10	0A	Line feed	42	2A	*	74	4A	J	106	6A	j
11	0B	Vertical tab	43	2B	+	75	4B	K	107	6B	k
12	0C	Form feed	44	2C	,	76	4C	L	108	6C	l
13	0D	Carriage return	45	2D	-	77	4D	M	109	6D	m
14	0E	Shift out	46	2E	.	78	4E	N	110	6E	n
15	0F	Shift in	47	2F	/	79	4F	O	111	6F	o
16	10	Data link escape	48	30	0	80	50	P	112	70	p
17	11	Device control 1	49	31	1	81	51	Q	113	71	q
18	12	Device control 2	50	32	2	82	52	R	114	72	r
19	13	Device control 3	51	33	3	83	53	S	115	73	s
20	14	Device control 4	52	34	4	84	54	T	116	74	t
21	15	Neg. acknowledge	53	35	5	85	55	U	117	75	u
22	16	Synchronous idle	54	36	6	86	56	V	118	76	v
23	17	End trans. block	55	37	7	87	57	W	119	77	w
24	18	Cancel	56	38	8	88	58	X	120	78	x
25	19	End of medium	57	39	9	89	59	Y	121	79	y
26	1A	Substitution	58	3A	:	90	5A	Z	122	7A	z
27	1B	Escape	59	3B	;	91	5B	[	123	7B	{
28	1C	File separator	60	3C	<	92	5C	\	124	7C	|
29	1D	Group separator	61	3D	=	93	5D	]	125	7D	}
30	1E	Record separator	62	3E	>	94	5E	^	126	7E	~
31	1F	Unit separator	63	3F	?	95	5F	_	127	7F	□

Extended ASCII Chart

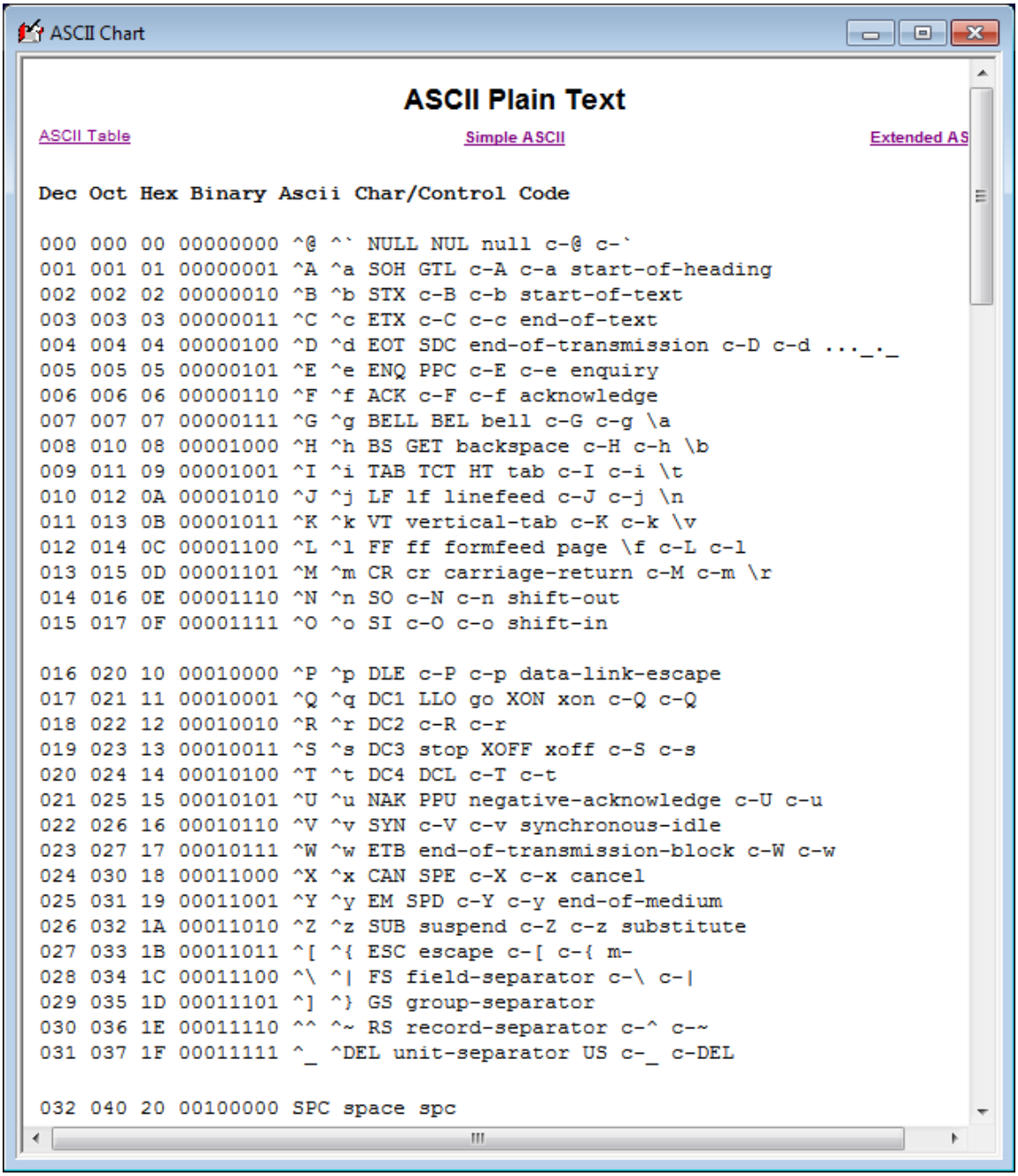
The following ASCII reference chart is provided in the Indigo ASCII Charts.



Dec	Hex	Char	Dec	Hex	Char	Dec	Hex	Char	Dec	Hex	Char
128	80	Ç	160	A0	á	192	C0	└	224	E0	α
129	81	ü	161	A1	í	193	C1	┴	225	E1	ß
130	82	é	162	A2	ó	194	C2	┬	226	E2	Γ
131	83	â	163	A3	ú	195	C3	├	227	E3	π
132	84	ä	164	A4	ñ	196	C4	─	228	E4	Σ
133	85	à	165	A5	Ñ	197	C5	┼	229	E5	σ
134	86	å	166	A6	ª	198	C6	╞	230	E6	µ
135	87	ç	167	A7	º	199	C7	╟	231	E7	τ
136	88	ê	168	A8	¿	200	C8	╚	232	E8	Φ
137	89	ë	169	A9	⌐	201	C9	╔	233	E9	Θ
138	8A	è	170	AA	¬	202	CA	╩	234	EA	Ω
139	8B	ï	171	AB	½	203	CB	╦	235	EB	δ
140	8C	î	172	AC	¼	204	CC	╠	236	EC	∞
141	8D	ì	173	AD	¡	205	CD	═	237	ED	ø
142	8E	Ä	174	AE	«	206	CE	╬	238	EE	ε
143	8F	Å	175	AF	»	207	CF	╧	239	EF	∩
144	90	É	176	B0	░	208	D0	╨	240	F0	≡
145	91	æ	177	B1	▒	209	D1	╤	241	F1	±
146	92	Æ	178	B2	▓	210	D2	╥	242	F2	≥
147	93	ô	179	B3	│	211	D3	╙	243	F3	≤
148	94	ö	180	B4	┤	212	D4	╘	244	F4	⌠
149	95	ò	181	B5	╡	213	D5	╒	245	F5	⌡
150	96	û	182	B6	╢	214	D6	╓	246	F6	÷
151	97	ù	183	B7	╖	215	D7	╫	247	F7	≈
152	98	ÿ	184	B8	╕	216	D8	╪	248	F8	°
153	99	Ö	185	B9	╣	217	D9	┘	249	F9	∙
154	9A	Ü	186	BA	║	218	DA	┌	250	FA	·
155	9B	¢	187	BB	╗	219	DB	█	251	FB	√
156	9C	£	188	BC	╝	220	DC	▄	252	FC	ⁿ
157	9D	¥	189	BD	╜	221	DD	▌	253	FD	²
158	9E	₧	190	BE	╛	222	DE	▐	254	FE	■
159	9F	ƒ	191	BF	┐	223	DF	▀	255	FF	

ASCII Plain Text Reference

The following ASCII reference document is provided in the Indigo ASCII Charts.



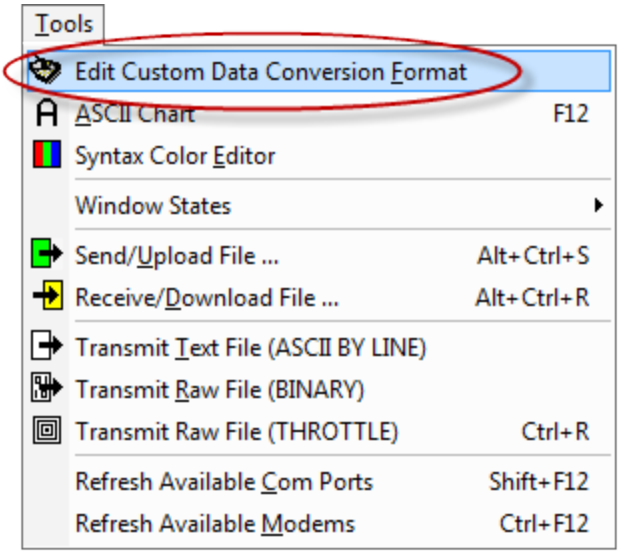
Custom Data Editor

Overview

Indigo include this tool providing users the ability to define their own custom data format.
Users can configure a session to render data bytes received using this custom data format.

Tools Menu

You can access the *Custom Data Conversion Format Editor* from the Tools Menu.

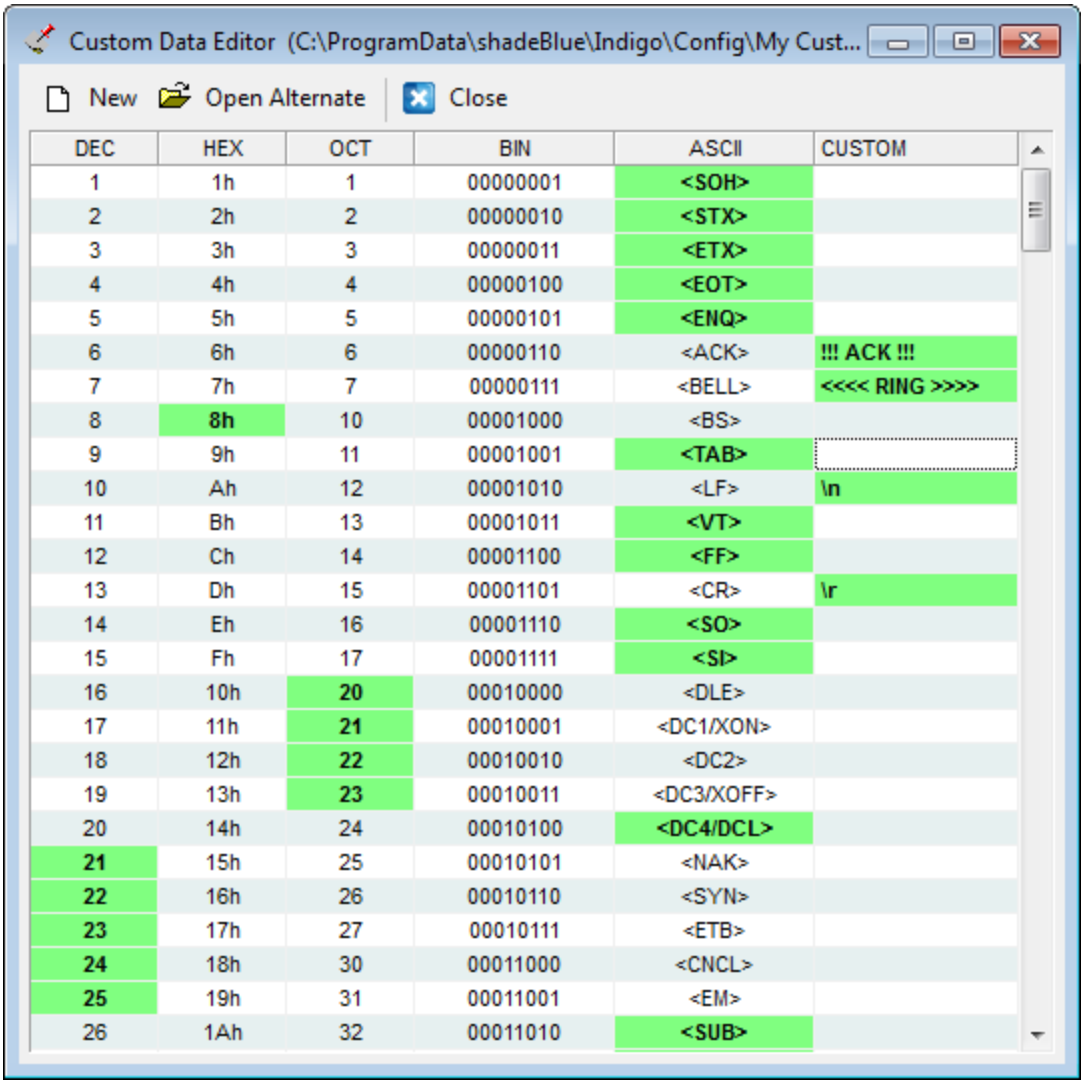


Custom Data Conversion Format Editor

The *Custom Data Conversion Format Editor* displays bytes from 1 to 255.

Each column represents a different display representation for the bytes.
You can select a cell to configure a byte's data representation.
The green highlighted cells indicate which data representation will be rendered for the data byte.

The *Custom* column allows users to enter their own text to be rendered for a data byte.
You can mix and match data format representations.

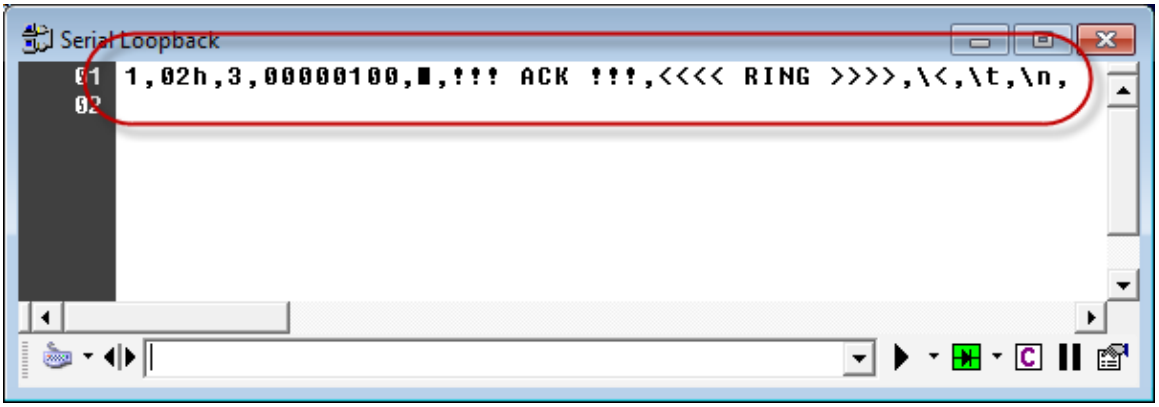


DEC	HEX	OCT	BIN	ASCII	CUSTOM
1	1h	1	00000001	<SOH>	
2	2h	2	00000010	<STX>	
3	3h	3	00000011	<ETX>	
4	4h	4	00000100	<EOT>	
5	5h	5	00000101	<ENQ>	
6	6h	6	00000110	<ACK>	!!! ACK !!!
7	7h	7	00000111	<BELL>	<<<< RING >>>>
8	8h	10	00001000	<BS>	
9	9h	11	00001001	<TAB>	
10	Ah	12	00001010	<LF>	\n
11	Bh	13	00001011	<VT>	
12	Ch	14	00001100	<FF>	
13	Dh	15	00001101	<CR>	\r
14	Eh	16	00001110	<SO>	
15	Fh	17	00001111	<SI>	
16	10h	20	00010000	<DLE>	
17	11h	21	00010001	<DC1/XON>	
18	12h	22	00010010	<DC2>	
19	13h	23	00010011	<DC3/XOFF>	
20	14h	24	00010100	<DC4/DCL>	
21	15h	25	00010101	<NAK>	
22	16h	26	00010110	<SYN>	
23	17h	27	00010111	<ETB>	
24	18h	30	00011000	<CNCL>	
25	19h	31	00011001	<EM>	
26	1Ah	32	00011010	<SUB>	

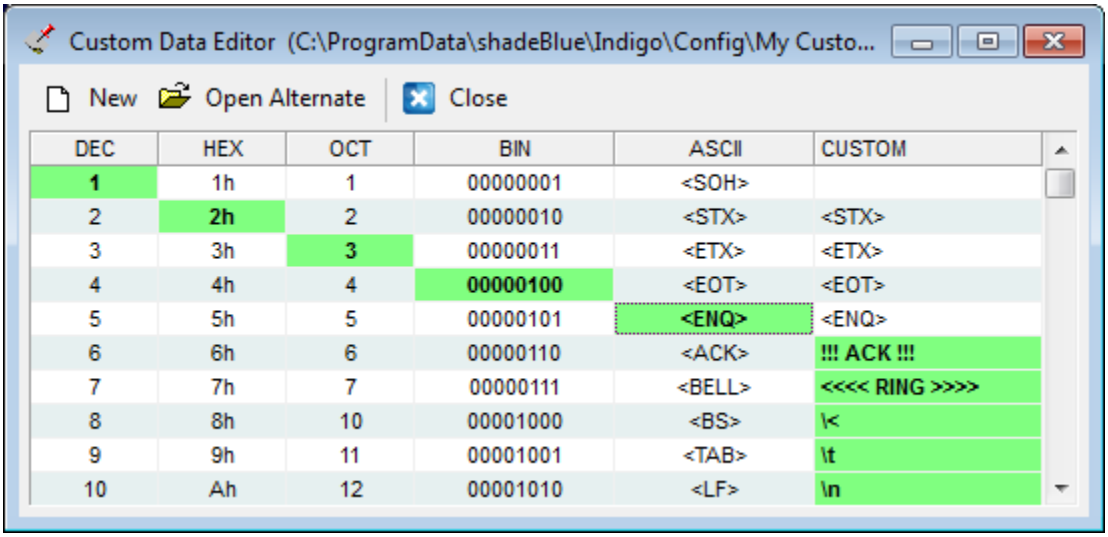
When your custom configuration is complete, click the *Close* button to save the custom data format.
(*You can also create new custom data format files or open an alternate custom data format file using the toolbar options.*)

Example

The following screenshot is an example of data bytes 1 though 10 being rendered using the custom data configuration shown below.



This is the custom data format configuration applied to this example.
Note that byte #5 could not be rendered because 0x05 (<ENQ>) is not a valid/render-able ASCII character.



DEC	HEX	OCT	BIN	ASCII	CUSTOM
1	1h	1	00000001	<SOH>	
2	2h	2	00000010	<STX>	<STX>
3	3h	3	00000011	<ETX>	<ETX>
4	4h	4	00000100	<EOT>	<EOT>
5	5h	5	00000101	<ENQ>	<ENQ>
6	6h	6	00000110	<ACK>	!!! ACK !!!
7	7h	7	00000111	<BELL>	<<<< RING >>>>
8	8h	10	00001000	<BS>	\<
9	9h	11	00001001	<TAB>	\t
10	Ah	12	00001010	<LF>	\n

Syntax Color Editor

Overview

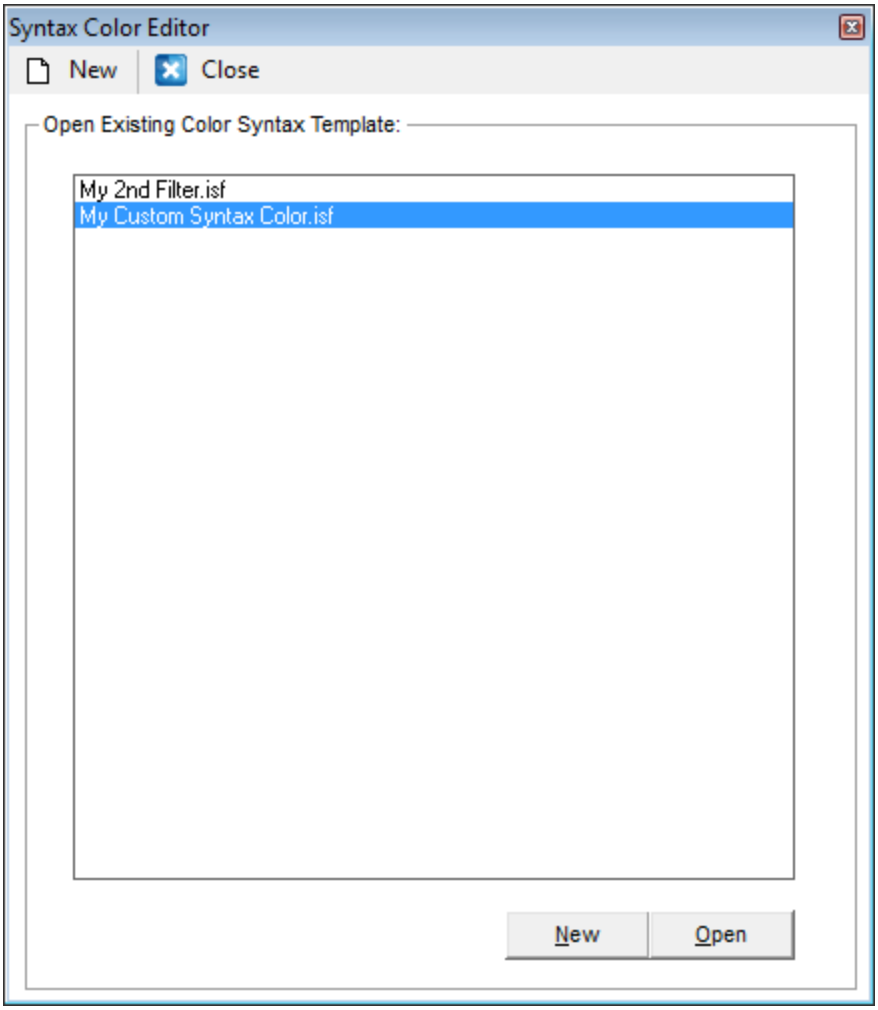
In the Standard View Mode, Indigo supports a syntax coloring feature where you can define keywords that can be rendered with one of three user defined colors.
This is a useful feature to help draw visibility/attention to targeted keywords and phrases.

User defined keywords and colors are configured in color syntax filters.
The *Syntax Color Editor* is used create and edit these syntax color filters.

> **Note**
>
> Click here to learn more about applying a Syntax Color Filter to a terminal session window.

Syntax Color Editor

When the *Syntax Color Editor* is launched, you can choose to create a *New* syntax color filter or edit and existing color filter.

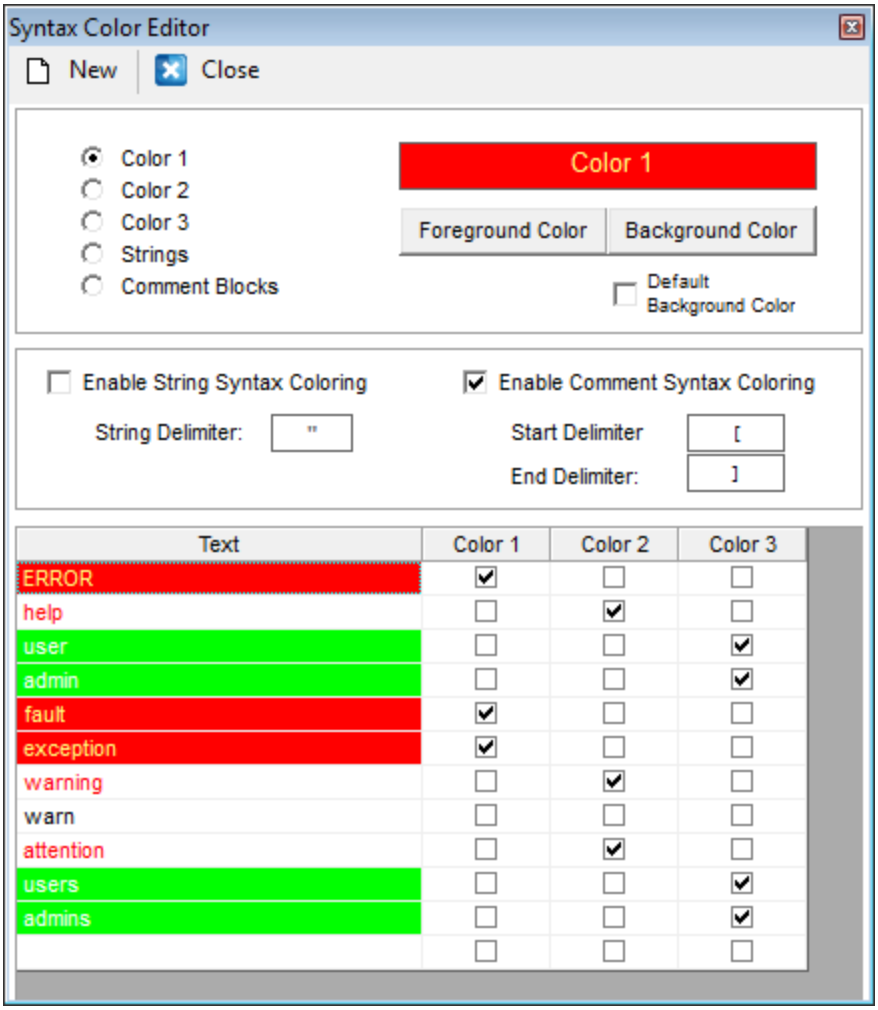


After creating a new or selecting an existing color filter, the editor dialog will be displayed.

You can select from the various color options and define the foreground and background colors.
(*To set a background color, you must uncheck the Default Background Color checkbox.*)

In the botton portion of the Syntax Color Editor, you can define a list of keywords that you want to apply a color filter to.
After adding a keyword, select from the three color options that you want to apply to that keyword.

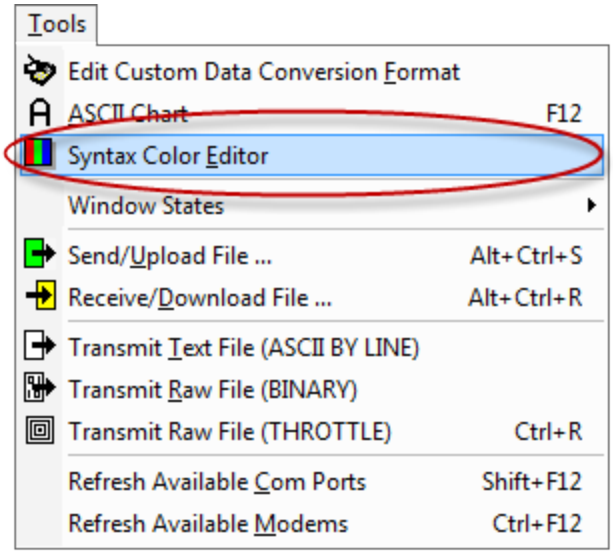
When you have completed the desired configuration, click the *Close* button at the top of the dialog to save and close the editor.



> The *Syntax Color Editor* also supports color filters for strings enclosed in a delimiter and comments defined between a start and end delimiter.

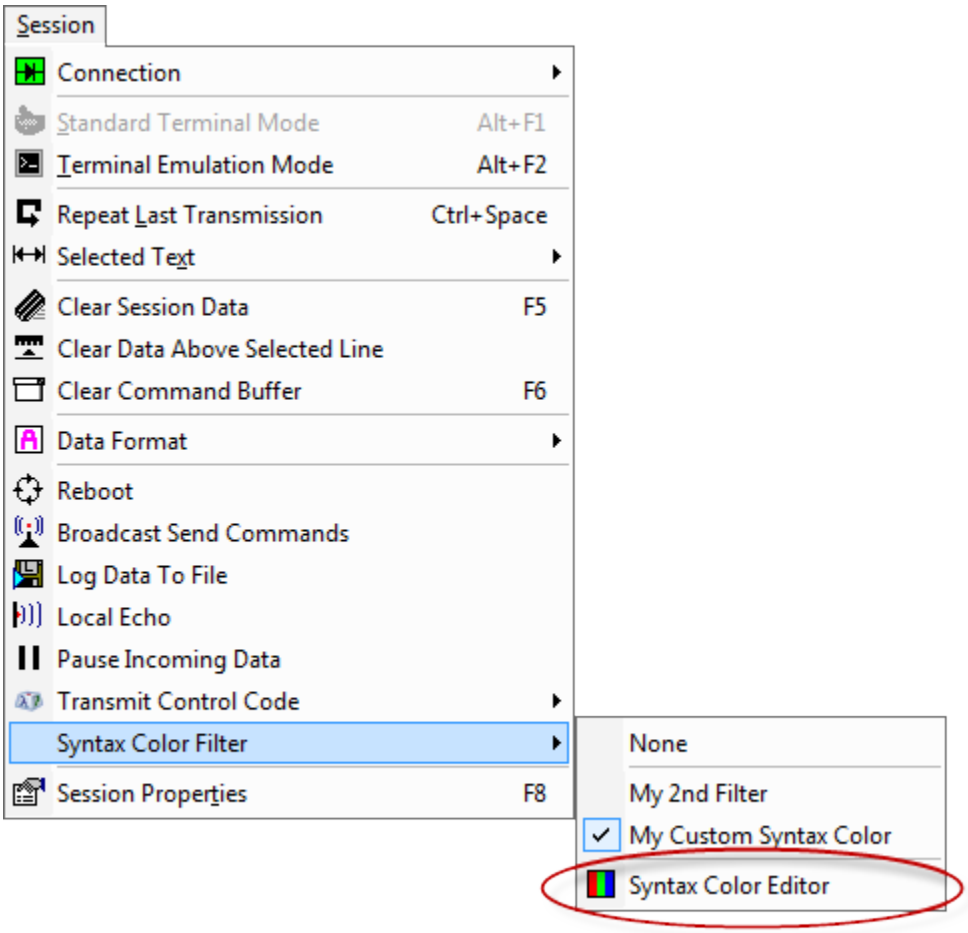
Tools Menu

You can access the *Syntax Color Editor* from the Tools Menu.



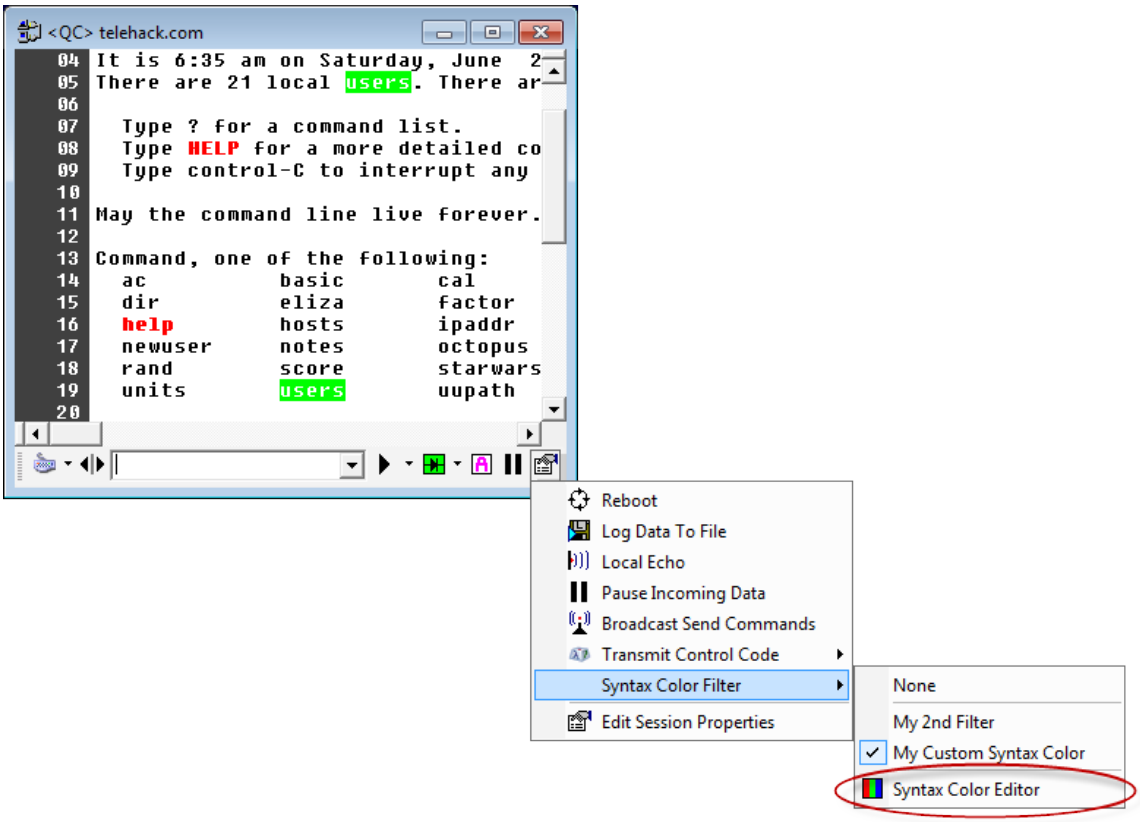
Session Menu

You can access the *Syntax Color Editor* from the Session Menu.



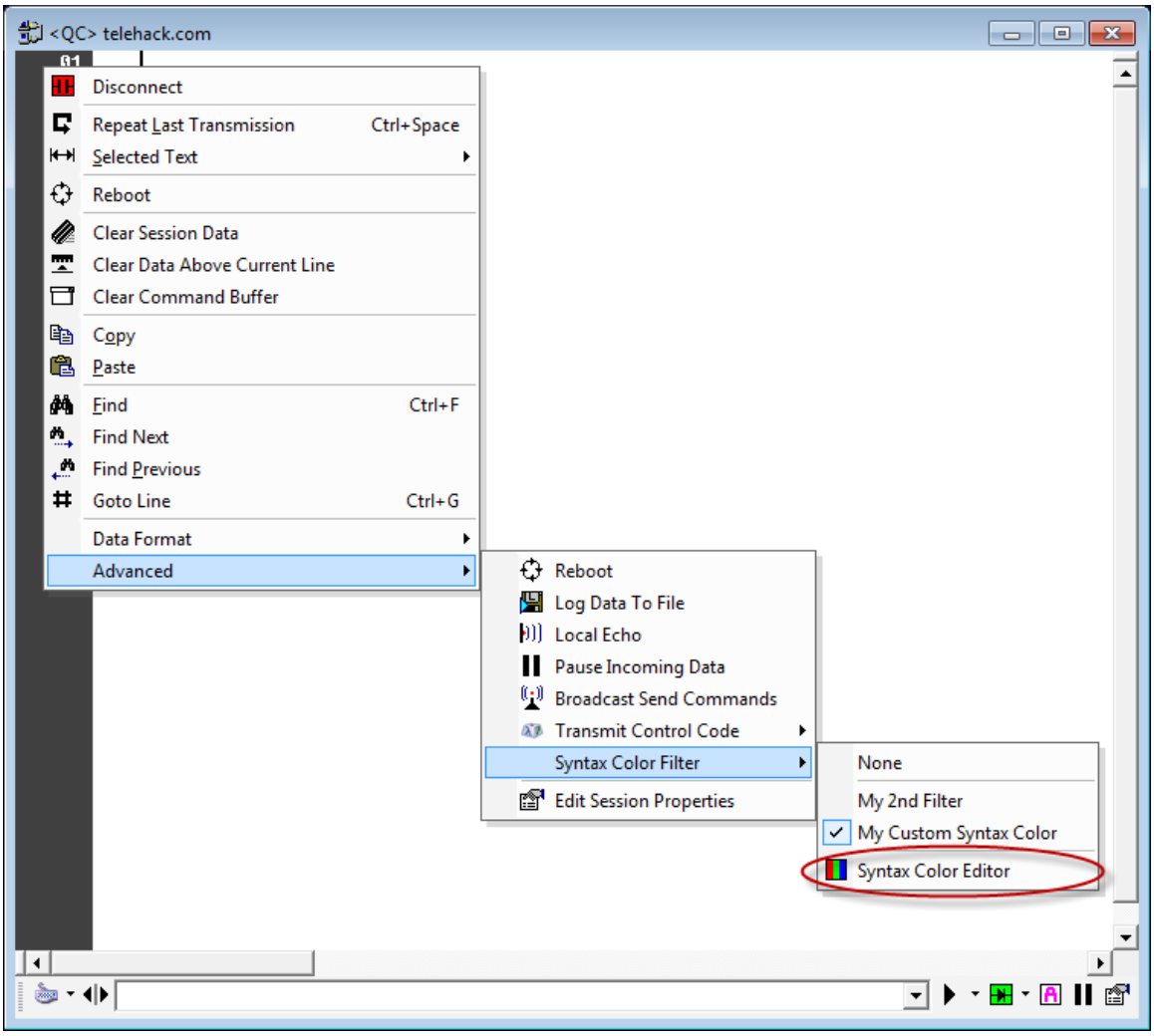
Session Toolbar

You can access the *Syntax Color Editor* from the session toolbar menu.



Session Context Menu

You can access the *Syntax Color Editor* from the session right-click context menu..



Window States

Overview

Indigo's provides a unique size and positioning feature called *Window States*.
Each *Window State* represents the position in the Indigo application on screen and the size of the Indigo application window.

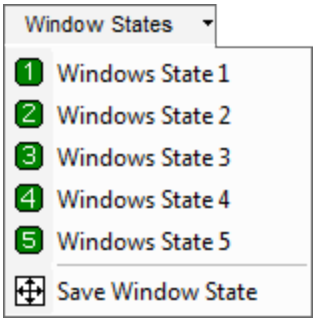
You can use this *Window State* feature to store and recall the Indigo application to specific sizes and locations on screen.

The Window States can be accessed using the following options:

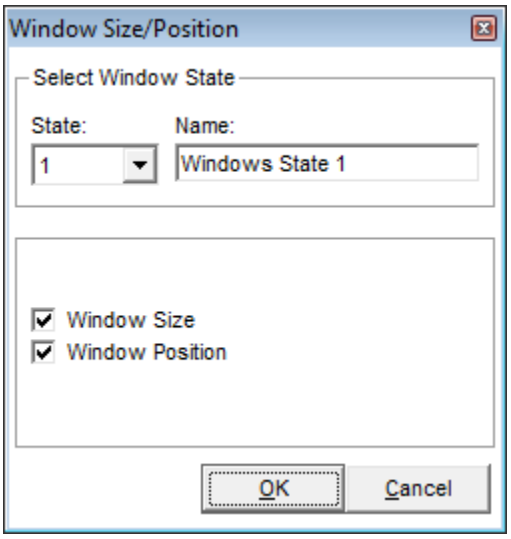
- Application Toolbar
- Tools Menu

Saving/Editing a Window State

There are five window state slot locations that you can store to.
Simply set the program window to the location on the screen and to the size that you like, then click the *Save Window State* option on one of the menus or toolbars.



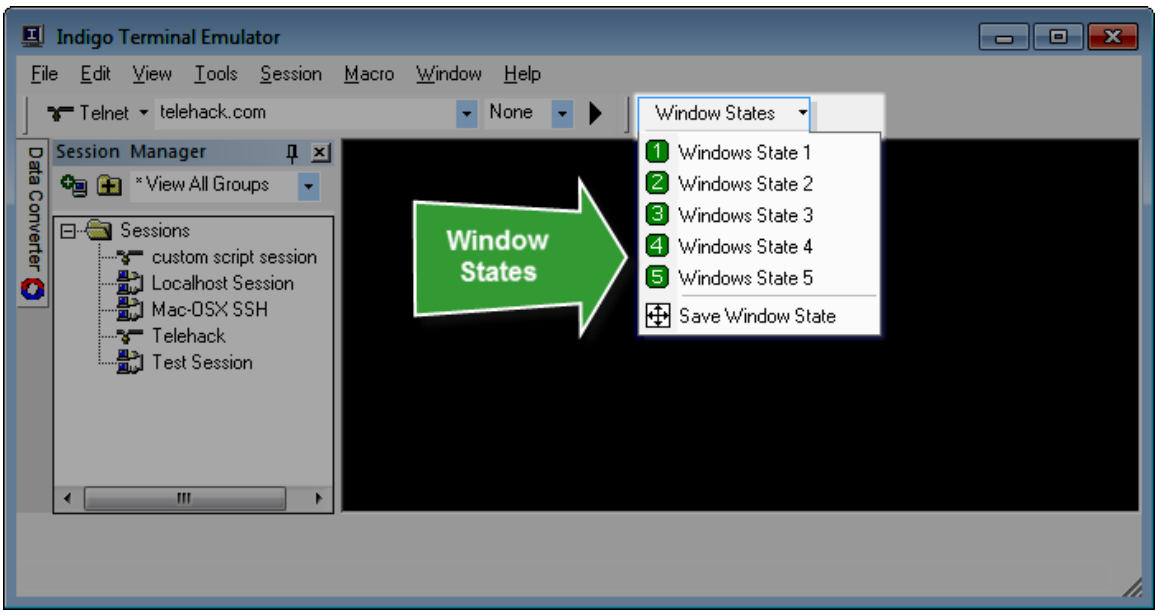
A Windows State editor will be displayed allowing you to select the state number (1-5) and provide a state friendly name.
You can also optionally choose if the *Window State* should persist both size and position or just size or position.



When you have the configuration complete, click the OK button to save the *Window State*.

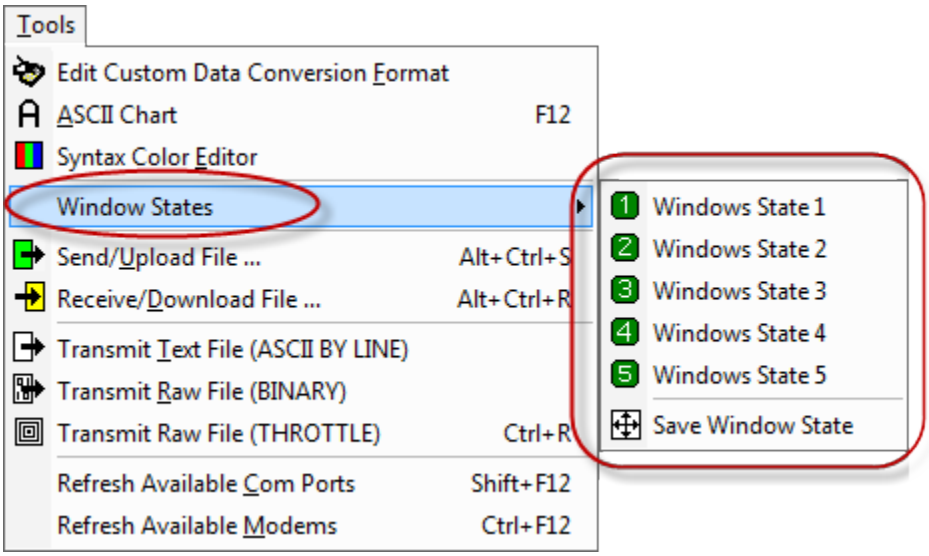
Application Toolbar

Windows States can be access form the Windows States Toolbar.



Tools Menu

Windows States can be access form the Tools Menu.



Scripting

Overview

Indigo supports the following scripting options:

- In-Session Command Scripting
- Post Processing Scripts

In-Session Command Scripting

In-Session Command Scripting allows you to send commands to the terminal session using Internal Command syntax.
The following types of scripting methods can be invoked.

Description	Executes a script function from a named script file. Transmit return data to connected device/host.
Syntax	`:@<script-name>.<script-function>`
Example	`:@PostProcessingSample.ForceToUpperCase( "hello world")`

Description	Executes a script function from the currently configured session *Post-Processing* script file. Transmit return data to connected device/host.
Syntax	`:!<script-function>`
Example	`:!MyCustomFunction()`

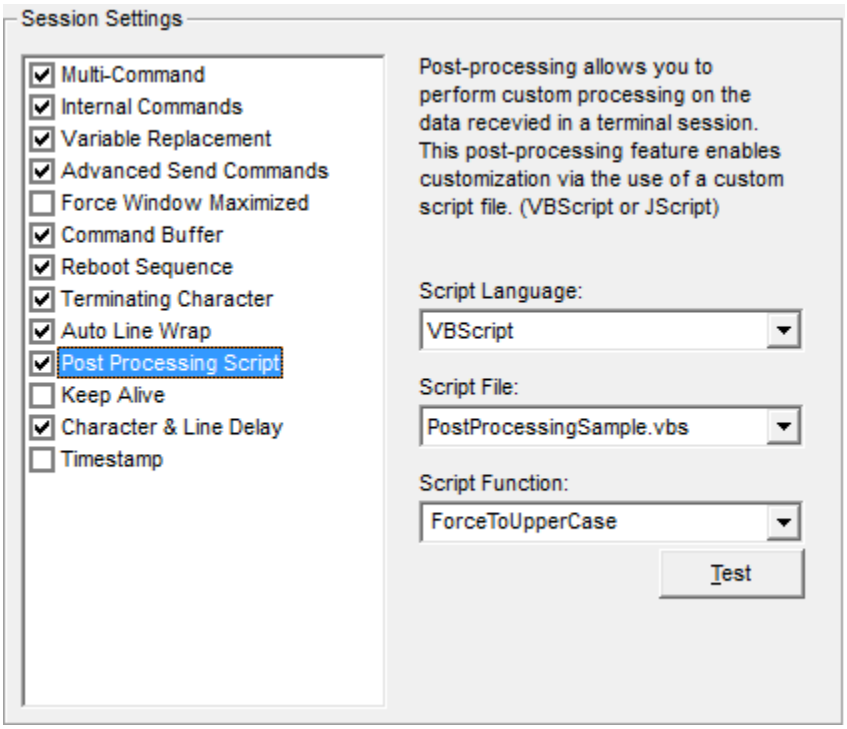
Description	Executes a VBScript code expression Transmit return data to connected device/host.

Syntax	`:=<script-code>`
Example	`:=Host.Post("Hello World")`
Example	`:=UCase("hello world")`

Post Processing Scripts

Indigo supports a *Post-Processing* scripting feature that allows a user created script to analyze and modify data after it has been received.
Post-Processing scripting enables you to execute a script function to process data received from a terminal session before it is rendered to the screen.

To use this feature, *Post-Processing* scripting must be enabled and configured for each session in the Advanced tab of the Session Properties editor.



Property	Description
Post Processing Script	This option must be checked before the session will use *Post-Processing* scripting.
Script Language	Select the scripting language used in the script file. • VBScript • JScript
Script File	Select the script file to use. (*This script file must exist in the Scripts data directory.*)
Script Function	Select the desired script function to be invoked when this terminal session receives data.

Test	This button provides a simple option to test an invocation of your script function.

In the example configuration above the "**ForceToUpperCase**" function is selected from the "**PostProcessingSample.vbs**" script file.

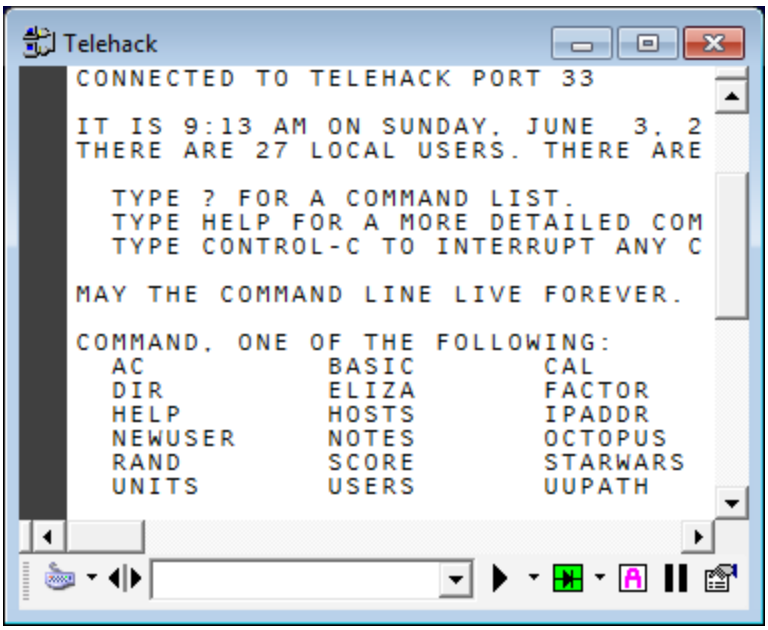
The code snippet below illustrates this function.

Post-Processing Script Example

```
'//----------------------------------------
-----------------
'// A Function will allow you to specify the
return data
'// which will get displayed to the session
data window
'//----------------------------------------
-----------------
Function ForceToUpperCase(ByVal sData)

  '//force all incomming data to upper case
  ForceToUpperCase = UCase(sData)
End Function
```

When this *Post-Processing* script function is enabled, all textual data received will be forced into upper case before it is displayed on screen.
The screenshot below is an example of data received and displayed after being processed by this script function.



Script File Location

Script files should be placed in the "Scripts" directory under the Indigo Data Directory.

OS Version	Directory Location
Windows XP	`C:\Document and Settings\All Users\Application Data\shadeBlue\Indigo\Scripts`
Windows 2003 Server	`C:\Document and Settings\All Users\Application Data\shadeBlue\Indigo\Scripts`
Windows Vista	`C:\ProgramData\shadeBlue\Indigo\Scripts`
Windows 7	`C:\ProgramData\shadeBlue\Indigo\Scripts`
Windows 8	`C:\ProgramData\shadeBlue\Indigo\Scripts`
Windows 2008 Server	`C:\ProgramData\shadeBlue\Indigo\Scripts`

> **Info**
>
> The *C:\ProgramData* directory is hidden by default in Windows.

Examples

Indigo includes two files to help get you started with writing your own scripts.

(These files are both located in the *Scripts* directory referenced above.)

File	Description

PostProcessingSample.vbs	This script file includes a number of example post-processing functions and event handlers.
Indigo Scripting Host API.txt	This is a text document that defines the available methods and events provided by the scripting "**Host**" object.

> If you are creating your own script functions, please create a new script file and do not create your customization in the "PostProcessingSample.vbs" file.
> This file may be automatically overwritten in Indigo version updates, thus losing your customization.

Web Update

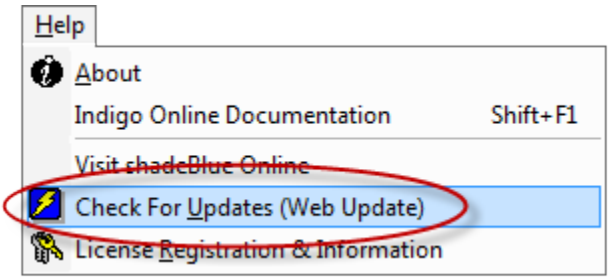
Overview

Indigo includes a web update feature to help you stay up to date with the latest version.

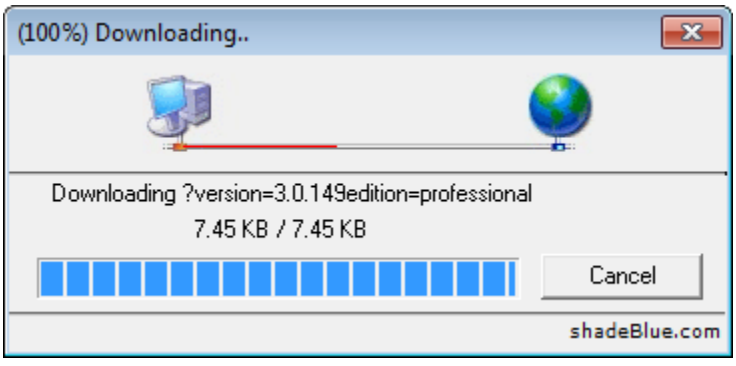
> **Screencast**
>
> A screencast of the web update procedure is available. Click here to see the video.

Check For Updates

A *Check for Updates* using *Web Update* can be launched from the Help Menu.

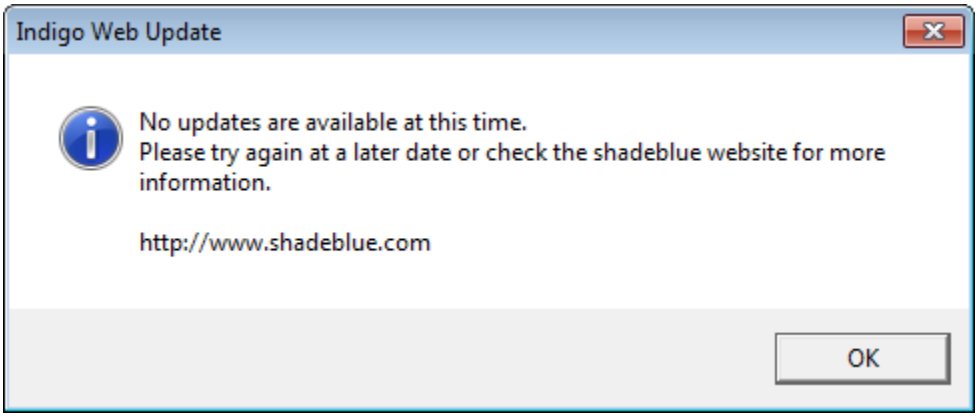


Indigo will attempt to connect via your Internet connection to see is there is a newer version of Indigo available for download.



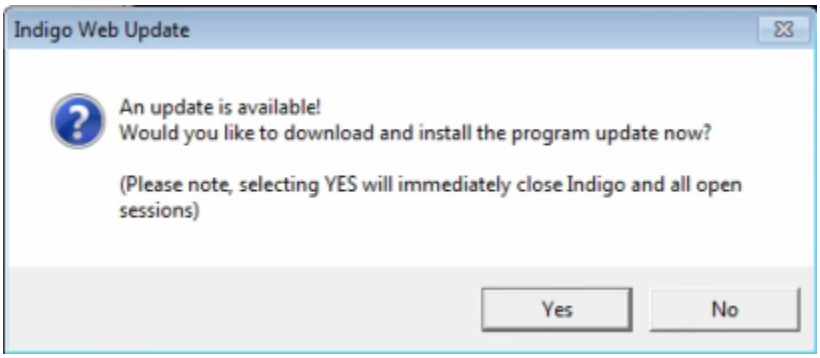
No Update Available

If no updates are available, the following message will be displayed:

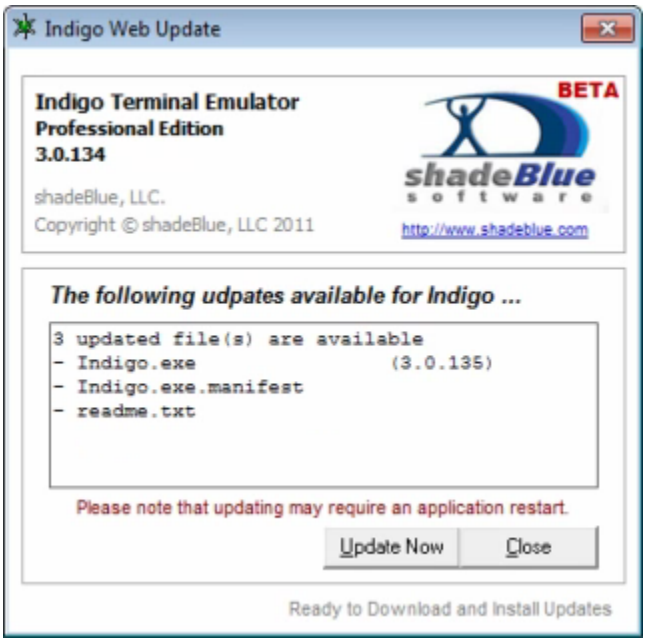


Perform An Update

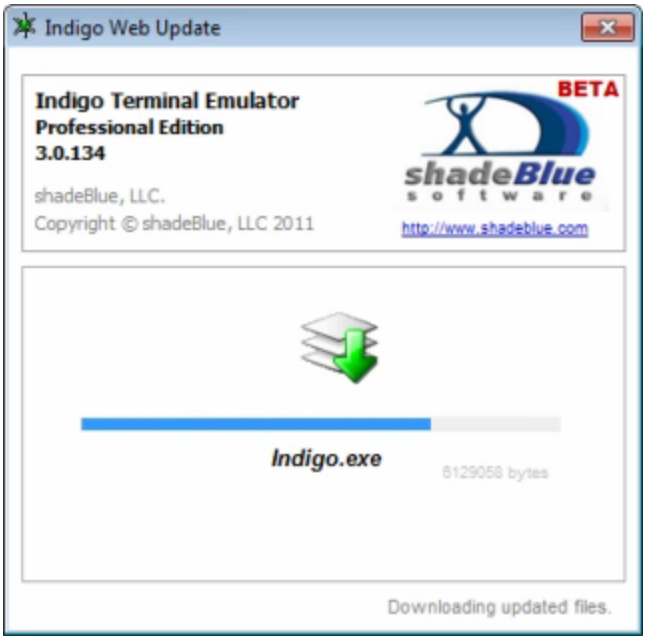
If an update is available you will be prompted to confirm if you want to close Indigo an perform the update.



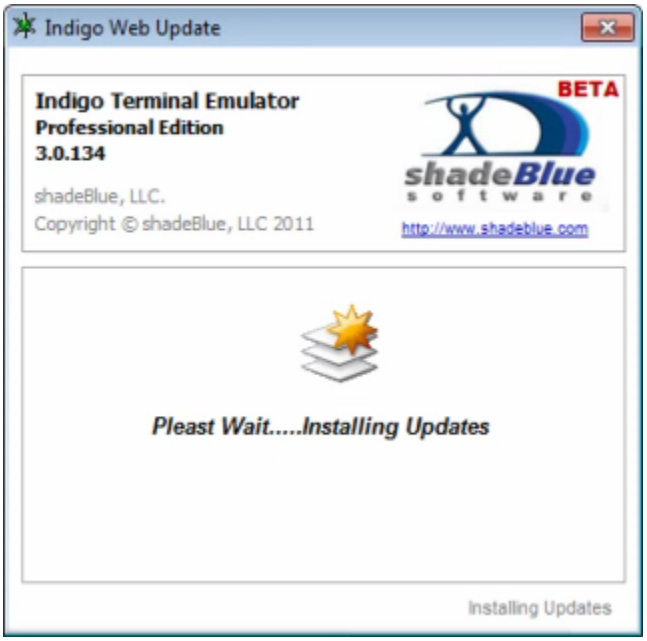
The *Web Update* utility will be started and display information about the available update.
Click the *Update Now* button to proceed with the update.



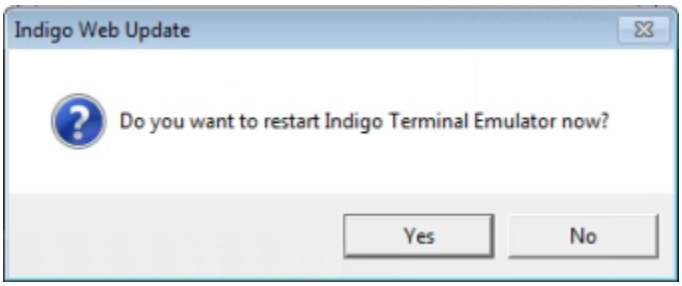
The *Web Update* utility will start downloading all the necessary update files.



The *Web Update* utility will then install the downloaded update files.



When the update is complete, you will be prompted with the option to restart the Indigo application.



> **Note**
>
> A web update of the Indigo software will require the application to be shutdown and restarted. In some (rare) case you may be prompted to re-start the computer after a web update.

Program Preferences

Indigo includes a Program Preferences editor to configure global application settings.
The Program Preferences editor can be accessed using the Edit Menu.

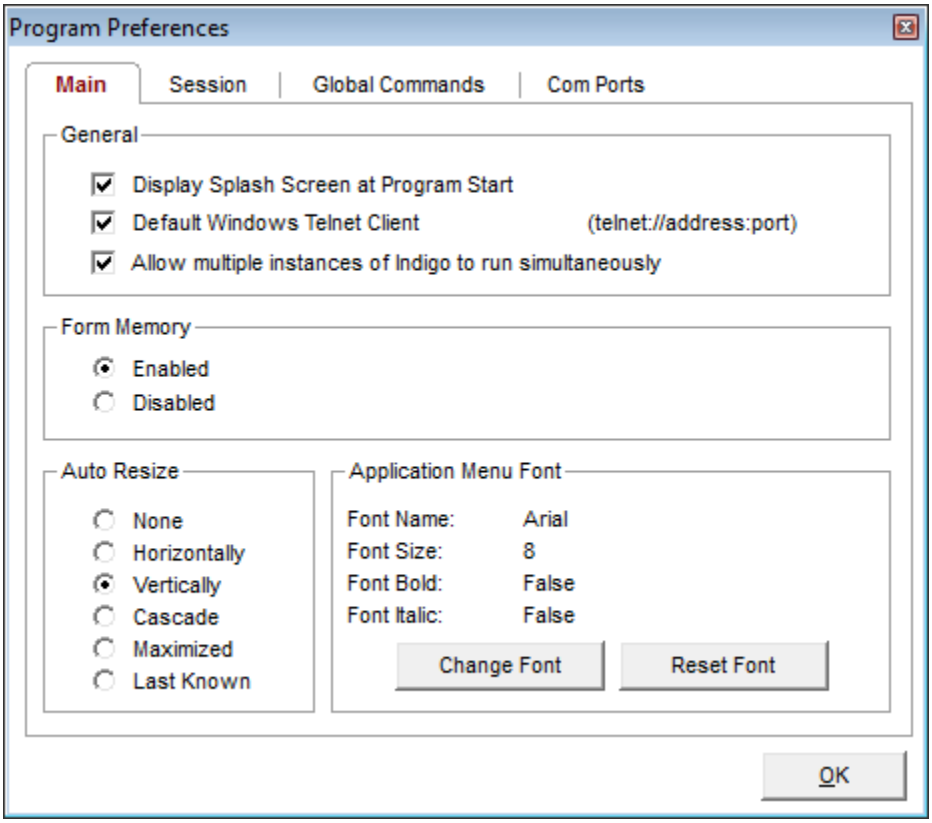
Please select from the options below for more information on the individual tabbed pages in the Program Preferences editor.

- Main Application Preferences
- Session Global Preferences
- Global Session Commands
- Serial/Com Port Detection

Main Application Preferences

Overview

Indigo provides a number of customizable options and user preferences to personalize Indigo's behavior.



Configuration Properties

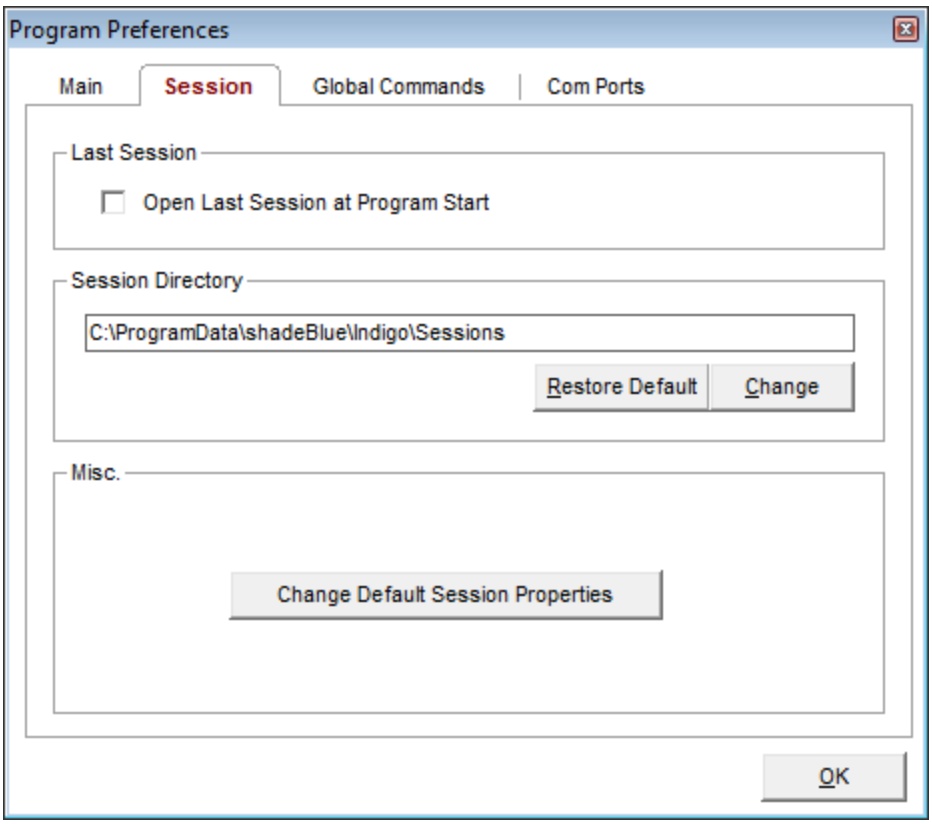
The following configuration properties control the application launch, size, position and fonts.

Settings	Description
Display Splash Screen	If this option is enabled, Indigo will display a splash screen each time Indigo is started. (*If running an evaluation copy of Indigo, the splash screen will always be displayed*.)
Default Windows Telnet Client	If this option is enabled, Indigo will register itself at the default application handler for any URI request with the telnet:// protocol handler.
Allow Multiple Instances of Indigo	If this option is enabled, you can launch multiple instances of the Indigo application.
Form Memory	If this option is enabled, Indigo will remember the application container's size and position on screen between application launches.
Auto Resize	If this option is set to a value other than None, then each time a terminal session window is opened it will automatically be resized based on this setting.
Application Menu Font	This option allows you to change the application menu font to a user selected font name and size.

Session Global Preferences

Overview

Indigo provides a number of customizable options to globally control terminal sessions.



Session Preferences

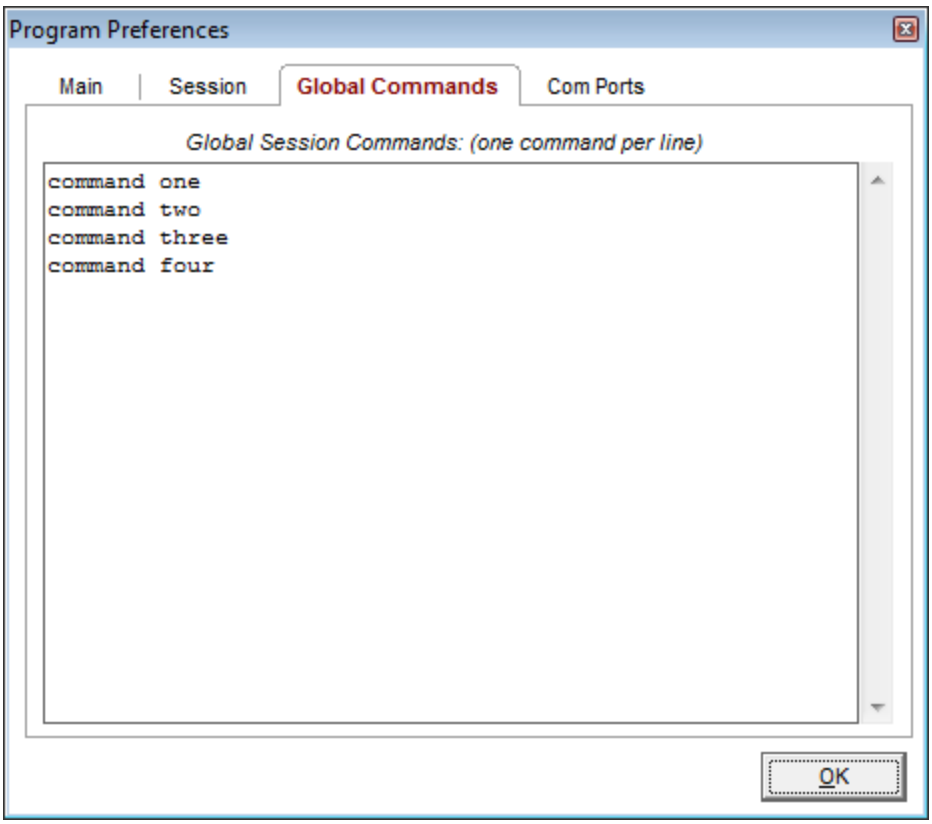
The configuration options below control terminal sessions in Indigo.

Setting	Description
Open Last Session at Program Start	If this option is enabled, Indigo will automatically open the last terminal session when the program is restarted.
Session Directory	This option controls where Indigo will look to find its session files that are displayed in the Session Manager . This option can be useful if you want to change where Indigo stores its sessions such as on a network drive, DropBox folder or other collaborative location.
Default Session Properties	This option will display the Session Properties Editor and allow you to make modification to the default session settings. All new terminal sessions that get created use these default session setting as the initial configuration properties.

Global Session Commands

Overview

Indigo provides support for a global set of commands that can be optionally transmitted to a terminal connection automatically upon connection.



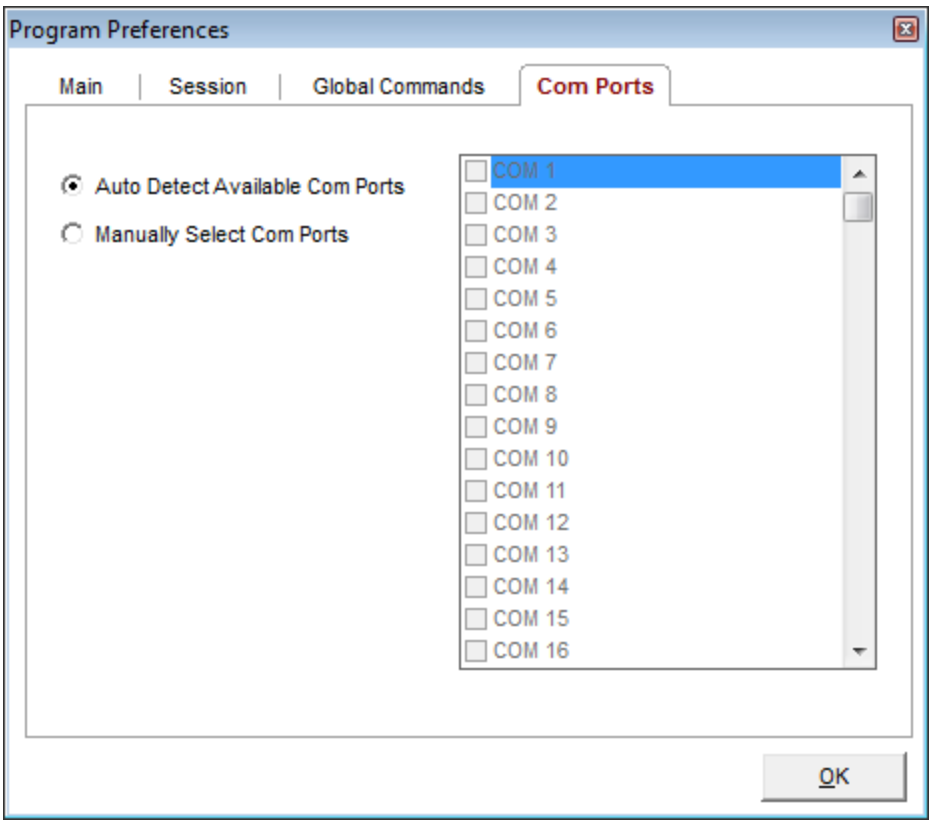
Each command should be listed on a separate line.

For more information on how to configure a terminal session to make use of these global commands, please see the Custom Commands configuration under the Session Properties.

Serial/Com Port Detection

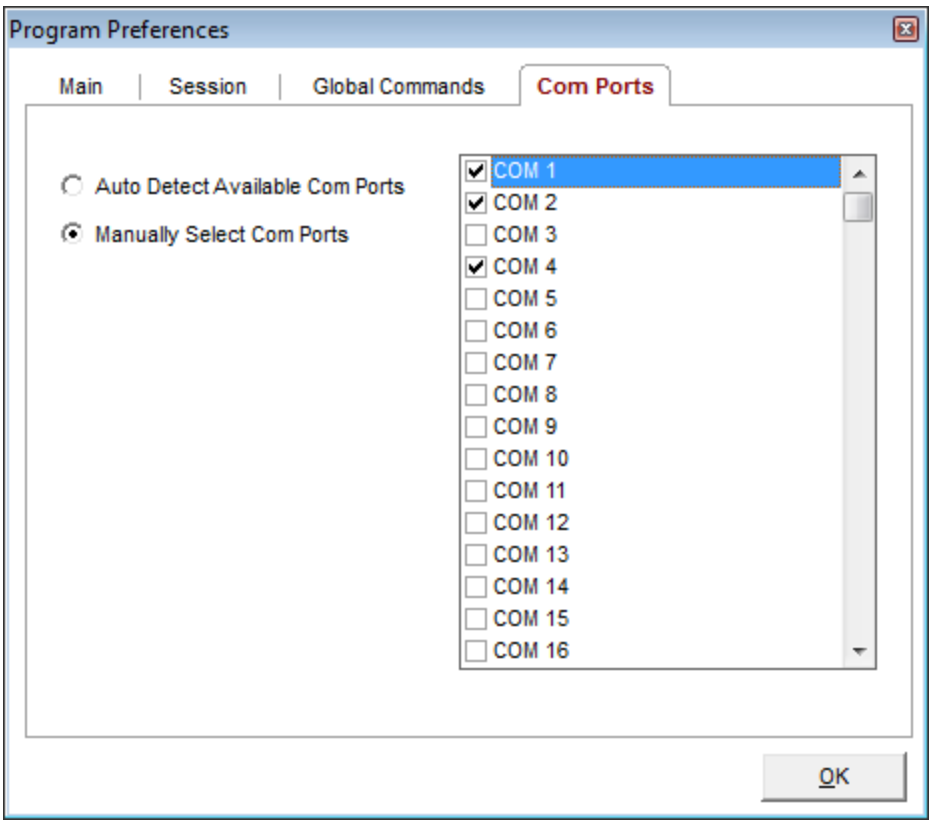
Automatic Com Port Detection

Indigo includes automatic serial port detection to provide a listing of available serial ports installed on the computer. This detection populates the listing of available com ports in the Quick Connect toolbar and the Session Serial Connection settings dialog.



Manually Selected Com Ports

The automatic serial port detection routine works perfectly on the vast majority of serial ports; however, there are rare occasions where this detection process does not properly detect certain com ports.
For these edge cases, Indigo provide the option allowing the user to manually specify which serial ports should be displayed and made accessible in Indigo.



Indigo Data Directory

Overview

When Indigo is installed and used all user data is persisted in a data directory.
This data directory contains the following Indigo data files:

- Indigo Terminal Sessions [1]
- Indigo Program Preferences (*user preferences*)
- Session Data Log Files
- Command Libraries
- Command Macros
- Command Variables
- Command Repeater Data
- Custom Data Conversion Formats
- Quick Connect Session Configuration
- Syntax Color Files
- Script Files
- Web Update Log Files
- SSH Connection Fingerprints

([1] : An alternate session file directory can be configured via Indigo Program Preferences.)

Location

The Indigo data directory is stored in the following location on the file system:

OS Version	Directory Location
Windows XP	`C:\Document and Settings\All Users\Application Data\shadeBlue\Indigo`
Windows 2003 Server	`C:\Document and Settings\All Users\Application Data\shadeBlue\Indigo`
Windows Vista	`C:\ProgramData\shadeBlue\Indigo`
Windows 7	`C:\ProgramData\shadeBlue\Indigo`
Windows 8	`C:\ProgramData\shadeBlue\Indigo`
Windows 2008 Server	`C:\ProgramData\shadeBlue\Indigo`

Note

The *C:\ProgramData* directory is hidden by default in Windows.

Backup

If you want to backup all your Indigo data, the Indigo data directory referenced above is the most important directory to backup.

Uninstall

A normal Indigo application uninstall will not remove this data directory. If you wish to permanently remove this data, then make sure Indigo is uninstalled and then manually delete this folder and all its contents.

Video Tutorials (Screencasts)

This section lists the available screencast video tutorials for Indigo Terminal Emulator.

Please select from one of the following video tutorials:

Indigo Installation Screencast

Instructions

A step-by-step outline of the installation procedure with screenshots is available here: Installation

(Click on the video window above to play the video clip.)

If you cannot see the video, you can use the following link to view the video on screencast.com
http://www.screencast.com/t/45Nxakmgo

Licensing Screencast

Instructions

A step-by-step outline of the licensing and activation procedure with screenshots is available here: Licensing

(Click on the video window above to play the video clip.)

If you cannot see the video, you can use the following link to view the video on screencast.com
http://www.screencast.com/t/FG0Kh1Mi6Nw

Data Logging Screencast

Instructions

Detailed instructions for session data logging along with screenshots can be found here: Session Data Logging

(Click on the video window above to play the video clip.)

If you cannot see the video, you can use the following link to view the video on screencast.com
http://www.screencast.com/t/Am9XGQBZ8

Web Update Screencast

Instructions

Step-by-step instructions of the web update procedure along with screenshots are available here: Web Update

(Click on the video window above to play the video clip.)

If you cannot see the video, you can use the following link to view the video on screencast.com
http://www.screencast.com/t/Ius3SngYg

Data Converter Screencast

Instructions

Detailed instructions of the data converter tool with screenshots are available here: Data Converter

(Click on the video window above to play the video clip.)

If you cannot see the video, you can use the following link to view the video on screencast.com
http://www.screencast.com/t/ZarD0R5b

Advanced Send Commands Screencast

Instructions

Detailed usage instructions for this feature can be found here: Advanced Send Commands

(Click on the video window above to play the video clip.)

If you cannot see the video, you can use the following link to view the video on screencast.com
http://www.screencast.com/t/9PWlJbVUyWz

Terminal Emulation Screencast

Instructions

The terminal emulation options and listing of supported emulations are referenced here: Terminal Emulation

(Click on the video window above to play the video clip.)

If you cannot see the video, you can use the following link to view the video on screencast.com
http://www.screencast.com/t/QajgydYTYoj

Quick Connect Screencast

Instructions

Instructions for the Quick Connect Toolbar along with screenshots are available here: Quick Connect Toolbar

(Click on the video window above to play the video clip.)

If you cannot see the video, you can use the following link to view the video on screencast.com
http://www.screencast.com/t/aXOlzLDGy

Split Data View Screencast

Instructions

Instructions for the Split Data Window along with screenshots are available here: Split Data Window

(Click on the video window above to play the video clip.)

If you cannot see the video, you can use the following link to view the video on screencast.com
http://www.screencast.com/t/adBgcvl5lB

Session Data Byte Representations

Instructions

Detailed instructions covering session data conversion with screenshots are available here: Session Data Formatting

(Click on the video window above to play the video clip.)

If you cannot see the video, you can use the following link to view the video on screencast.com
http://www.screencast.com/t/tRKkUTT0