TROLIink
Remote Metering Software

Installation and Operation Manual

Software Revision: 185

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Introduction

Welcome

Welcome to TrolLink, an easy-to-use remote data collection application for Supertrol, Masstrol and DPFC flow computers. TrolLink is designed to provide for easy setup and data collection. TrolLink connects to flow computers using the PC's RS232 serial ports. (See note 1).

Connections supported are:

* Direct wire from PC to flow computer.
* Wireless and telephone modems.
* Ethernet LAN and Internet.

System Requirements

* Installation requires login as Administrator with full privilages granted.
* TrolLink is not designed to run as a "service".
* Should be installed on a PC to be used only for TrolLink while data collection active.

TrolLink software requires certain hardware and software installed on your computer. Minimum requirements are:

* An IBM PC or compatible with Pentium microprocessor.
* 32 MB of ram.
* 10MB free hard disk space.
* Mouse
* One free serial port.
* Modem, Hayes compatible. (Note 2)
* SVGA display color monitor capable of 600 X 400-pixel resolution or better.
* Microsoft Windows or NT.
* Kessler-Ellis Products flow computer with modem. (Notes 2, 3)

Notes:

1. Choice of connection method may require additional special factory modified communication equipment. Please consult factory for proper selection.

2. Please consult factory for proper selection of modems. If direct connect using a serial cable from PC to flow computer then a modem may not be required.

3. Flow Computers supported are Supertrol, Masstrol and DPFC. Most flow computer models require special factory modified modem equipment.

4. Serial ports may range from 1 to 256. TrolLink doesn't control how many serial ports are usable. The exact number of serial ports may be limited by Windows or other factors.

Installation

Installing Software

If you have a previous version of TrolLink installed you should backup all files in the event that you need to return to that version or access data files in the future. Depending on your Windows version and permissions assigned you may need to ask your system administrator to perform the installation.

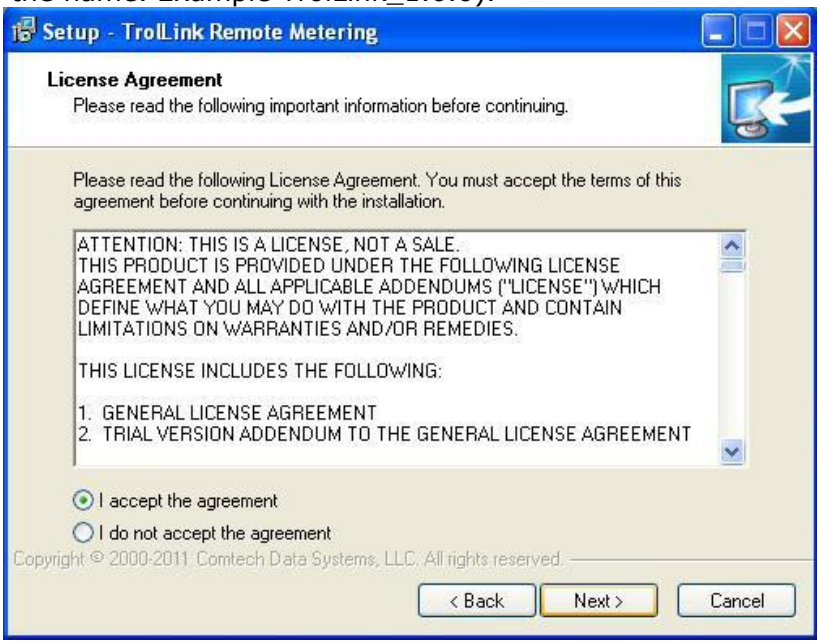
If your computer supports the "autorun" feature of the CD then you should see the TrolLink installation screen soon after loading the CD into your drive.

Otherwise, if your computer doesn't support the "autorun" feature you must manually start the installation by running the TrolLink setup program.

The program is called "setup.exe" and is located on the CD in the directory called "TrolLink\SETUP.EXE". (Note: The directory name "TrolLink" may also include a version number as part of the name. Example TrolLink_1.6.0).

When the "Welcome to the TrolLink Remote Metering Setup Wizard" screen is shown, click the "Next" button.

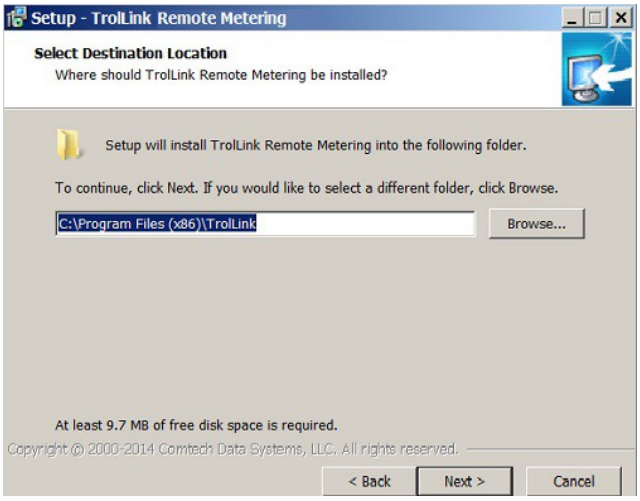
Please note that your version number may be different than the one shown on the sample screens.



Next screen is the "License Agreement". Installation continues only if the "I accept the agreement" option is selected.

Installation

The next screen offers a choice to install TrolLink into the default installation directory or choose a different directory.



There can be several other option screens shown before installation begins depending on the version of your computer operating system.

Directories
The paths shown assume the default installation directory was used.
Sub-directories will be located at a different location if you specified a different installation point and did not use the default.

Created by the setup program
C:\program files\TrolLink ------ The TrolLink program files.

Created when TrolLink is run for the first time
C:\program files\DataFiles ------ files with data collected from instruments.
C:\program files\DataFiles\cfg -- files of instrument configurations.

Possibly created depending on settings. See manual topic on "Data File Setup".
C:\program files\DataFiles\cfgbkup
C:\program files\DataFiles\bkmmddyy_hhmm
(mmddyy is 2 digit month, day, year and hhmm is hour, minute in 24hr form)

Installation

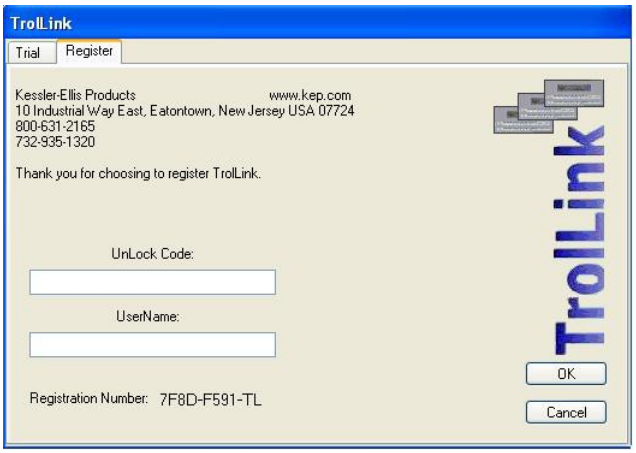
Trial period

The 'Trial' form shown to the right only pops-up whenever unregistered TrolLink is started as a reminder to register your software. Every installation of TrolLink begins as a 'Trial' version. There is a 30 day trial period limit. The "Register" button or tab displays the registration form as shown below. If TrolLink is not registered before the trial period ends then TrolLink will not load or run. Use the "Try" button to start TrolLink in the trial period.

Note: Durning the 'Trial' period, TrolLink is fully functional and can be used to collect data.

Registering TrolLink

The registration number shown at the bottom of the form and a user name are required. The computer that TrolLink is installed on generates the registration number. Choose or make-up any user name that you like.
Keep a copy of the registration number and user name in a safe place.



To register TrolLink, contact the factory listed at the top of the register form to obtain an unlock code.

Note: Character case upper and lower makes a difference when registering. Please provide the registration number and user name exactly as shown on the form.

Unlocking TrolLink

After receiving the unlock code, type it into the fields exactly as shown.
Do the same with your user name. Both are required to complete unlock.
Last step is to click-on the 'OK' button. If unlock is successful, TrolLink will start.
Once unlocked the trial and register screens will not show when starting TrolLink.

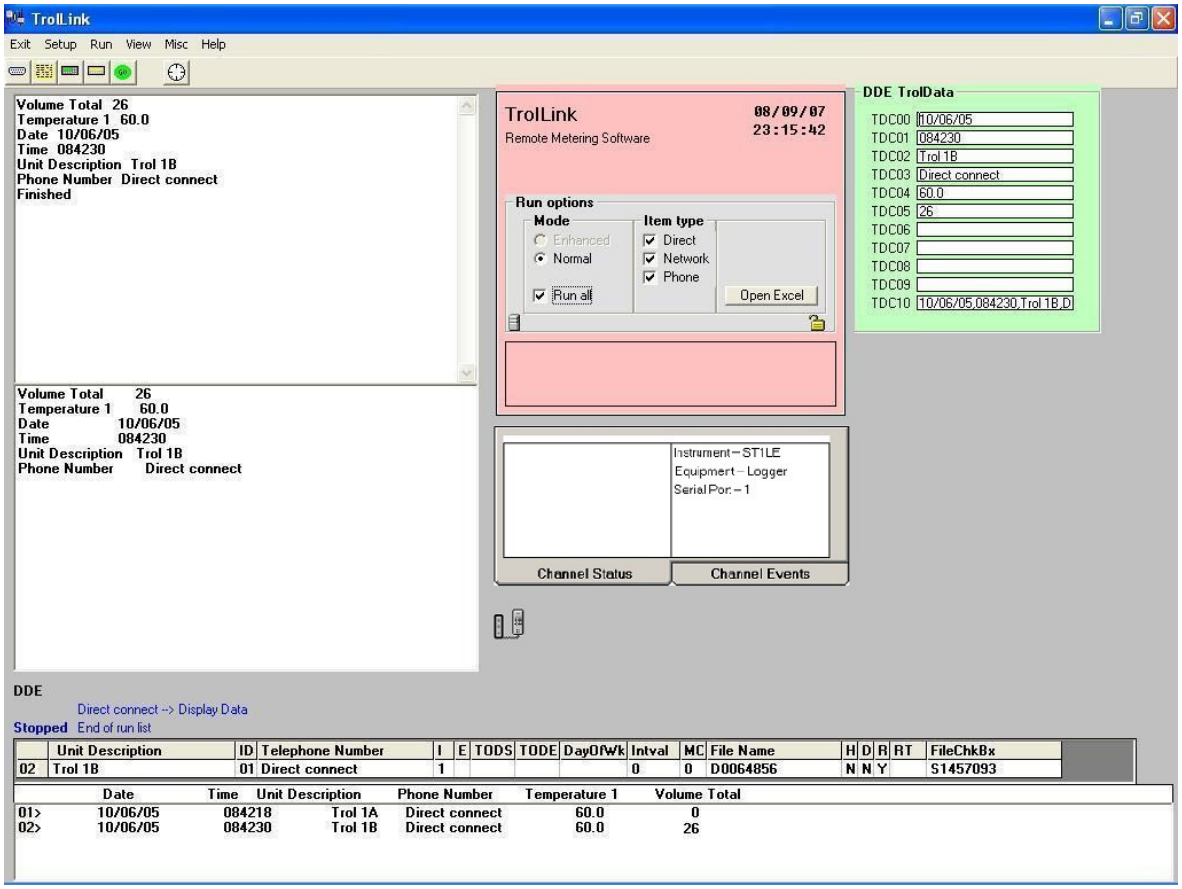
IMPORTANT:
Moving TrolLInk to another PC can be done but it requires contacting the factory BEFORE you start. TroLink binds tightly to the computer matching the registration number and it may return to 'trial' software or not run at all if moved. There's a way to move a registration unlock code. The loss of unlock code will require purchasing another copy!

Overview

TrolLink is used to collect data from several models of flow computer instruments.

There are two types of data collectable.
1. Viewable data that can be shown on the instrument display.
2. Built-in data loggers that some instruments may have.

This is the main TrolLink screen.
(Shown maximized. If screen minimized then less information is shown.)



The top part of the screen contains menu selections and an icon tool bar.

At the right top and middle are two white windowpanes. The top-most pane shows the action between TrolLink and the instrument. This is raw data and information about what TrolLink is doing.

The left-middle windowpane displays data headings selected from the instrument setup check box screen with parsed data if received.

Next is status indicating the mode TrolLink is in such as "Running" or "Stopped".

Overview

The line under the status area shows which instrument line is selected to run. The line changes colors to indicate run state.

1. White when not active.
2. Yellow when being tested to determine if it should become active or not.
3. Green if selected and in process of collecting data.
4. Red if phone list is empty.

Active is when TrolLink is trying to contact or has established a link with the instrument listed on the line for data collection. At the right of the same line are up and down arrows. The arrows are only visible when the "Run all" option is not checked. The arrows then allow manual selection of a phone list item to be run.

At the bottom of the screen is an abbreviated list of the last data collection sessions. It's used only for simple visual reference that data collection has occurred from the list of instruments.

The top-most right side shows the PC time (24-hour clock) and date. The right-middle group are the "Run options".

Below that is an active help box which shows help tips about an item or area that the mouse cursor is pointing to.

DDE registers, may also be shown if selected from the “Misc” menu.

When TrolLink is maximized, additional information areas are shown under the active help box. This area displays the Instrument, Equipment and Serial port for the currently active instrument line. Also if the “Timed Start” option is active then information about it’s state is shown.

Channel Status Tab – displays some information about instrument selected to run.

Channel Events Tab – displays communication channel events which may be helpful to understand if there are any data collection problems due to the link from computer to instrument.

Note: There may be frequent noise issues when using modems on a voice over IP channel. If collecting logger data, using the “get new – single” option may sometimes improve data collection.

Example

This example assumes TrolLink was loaded for the first time.

Start TrolLink
Click on Window's "Start" button at the lower left-hand corner of the computer's screen. Move the mouse pointer up to "Programs" then to the "TrolLink" (group). Finally, move the mouse cursor right onto "TrolLink" (program). Click the left mouse button to start the program.

When TrolLink starts the first time the message "Check the phone list before run" shows in the left top windowpane. This message informs that no instrument settings can be found. This is expected because we don't have any yet.

Setup communications
Open the communications window. Select appropriate serial port and modem settings according to how the instrument is configured. Consult factory if needed. Close the communications window.

Setup a default instrument template
Using the "Setup" menu, select "Instrument default" "Supertrol-II".
The message "File not found" appears because the template doesn't exist yet.
We are making it now.
Click "OK".
There are two check boxes next to each item. 
For now, only check the RIGHT box. 

In "Totalizers" group -- Select "Volume Total"
In "Process" group -- Select "Temperature 1", "Date" and "Time".
In "Administrative" group -- Select "Unit ID"
In "Identification" group -- Select "Unit description" and "Telephone number"

Next we pick the column that items appear in when data is saved in files.

Now check LEFT boxes only.  Be sure to leave the right boxes checked.

In "Identification" group -- Select "Unit description"
In "Administrative" group -- Select "Unit ID"
In "Identification" group -- Select "Telephone number"
In "Process" group -- Select "Time", "Date" then "Temperature 1".
In "Totalizers" group -- Select "Volume Total"

As you may have observed, when the left boxes are checked red numbers appear. The numbers represent the column number order from left to right. This is how data fields can be arranged when saved into files.

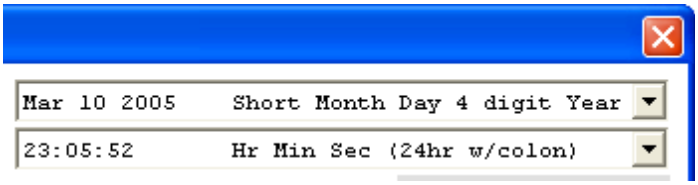
Example

If you followed the example above, the column order will be:

01 Unit description	04 Time	07 Volume Total
02 Unit ID	05 Date	
03 Telephone number	06 Temperature 1	

(You may arrange data columns in any order that your application requires.)

Now click on the drop-down menus located at the top-left and select a date and time format.



At this point we should have a default template for a Supertrol-II instrument model.

Setup Phone List
Using the "Setup" menu, select "Phone list".
The Phone List screen will display.
The list should be empty, we are adding the first instrument to it.
It is possible to add setup data direct on the phone list and you may do that if you want but the Phone form makes it easier to create and edit instrument setups. To open the Phone Form, double-click on any cell of line one. We choose line one because this is the first entry. Another way to open the Phone form is to select it from the "View" menu.
After phone form opens we are ready to describe the first instrument.
Enter the following setup information:
Line number -- 01
Unit description -- My ST2
Unit ID -- 01
Phone number -- D (Enter the letter "D" on a blank line to select "Direct connect").
Leave all of the "Enhanced mode options" fields blank.
File Name -- When you click on this line TrolLink creates a default filename if the "Phone number" field is not blank. You may use the name that TrolLink created but for our example just delete it and enter "MyST2" as the file name. Do not include the quote marks.
Now go to the group boxes at the left of the screen.
Instrument Select -- Select "2 - Supertrol 2".
Note: The default instrument is Supertrol 2. If a different instrument had been selected, then "Instrument setup" screen would pop-up.
Click the "Instrument setup" button.
With the "Setup / Instrument / Supertrol - II" screen displayed, click the "Load defaults" button. Answer "Yes" to the message box. This is how the default configuration template we made earlier is loaded to our instrument configuration. Default time, date and communication settings will also load. Examine the settings to be sure this is what you want. Changes specific to an instrument can be made at this point if it differs from defaults. Close screen to return to "Phone Form".

Example

Equipment -- Leave selections unchecked
Heading top of page -- Select "2 - column only". We want to see column headings.
Delimiter for column print -- Select "2 - Space Comma Space".

Now go to the lower left of the screen.

(Run enable) R -- Enter the letter "Y". This enables the instrument configuration.

Use "Close" buttons to close all screens.

You should now be at the main screen.

Find the "Run options" group located about middle-left of the main screen.

Mode -- Normal and Run all should be selected.
Run Type -- Select "Direct"

You should see the instrument that was setup displayed in the line towards the bottom of the screen.

At this point, if you have an instrument connected direct to your computer you may be able to collect data providing that:
1. you are using a serial cable
2. communication settings match

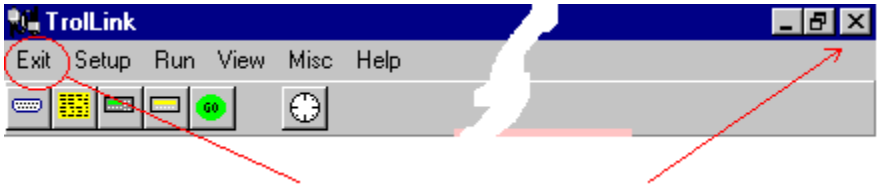
If the above is true then press the green "Go" button on the tool-bar. Providing that TrolLink was installed using the default directories then collected data will be put into file ":C\DataFiles\MyST2.txt".

You can still press "Go" even if you don't have an instrument connected. In this case the session will fail because there is nothing to collect from but you can see what happens anyway. Error message windows go away when "Go" is pressed again or by double-clicking on them.

Exit

Exit causes TrolLink to shut down and terminate running.

To exit, click-on one of the two exit selections as shown.

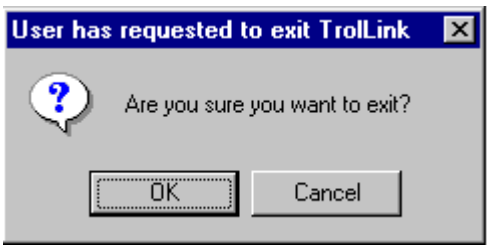


The menu selection "Exit" and the button 'X" will terminate TrolLink.
There is no functional difference between them, they both run the same exit task.

When trying to exit, TrolLink must be idle. There should be no data collection session active and the "Timed Start" (white clock button) should be inactive. An indication that TrolLink is idle is when the green "Go" button is on the toolbar. If TrolLink is active then a red "Stop" button or a clock face button with clock hand moving about the clock's face will be shown. In that case, click on the red "Stop" or active clock button to return to an idle state.

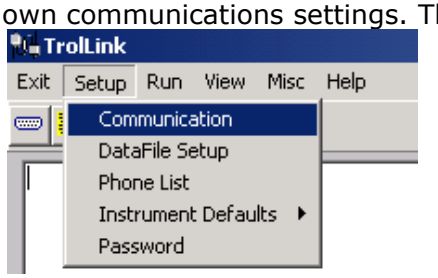
The message shown to the right will be displayed if trying to exit while a TrolLink data collection session is in progress or "Timed Start" is active. TrolLink will not exit until put into an idle state.

If TrolLink is idle then select "OK" to exit.
If you do not want to exit select "Cancel".



Communications

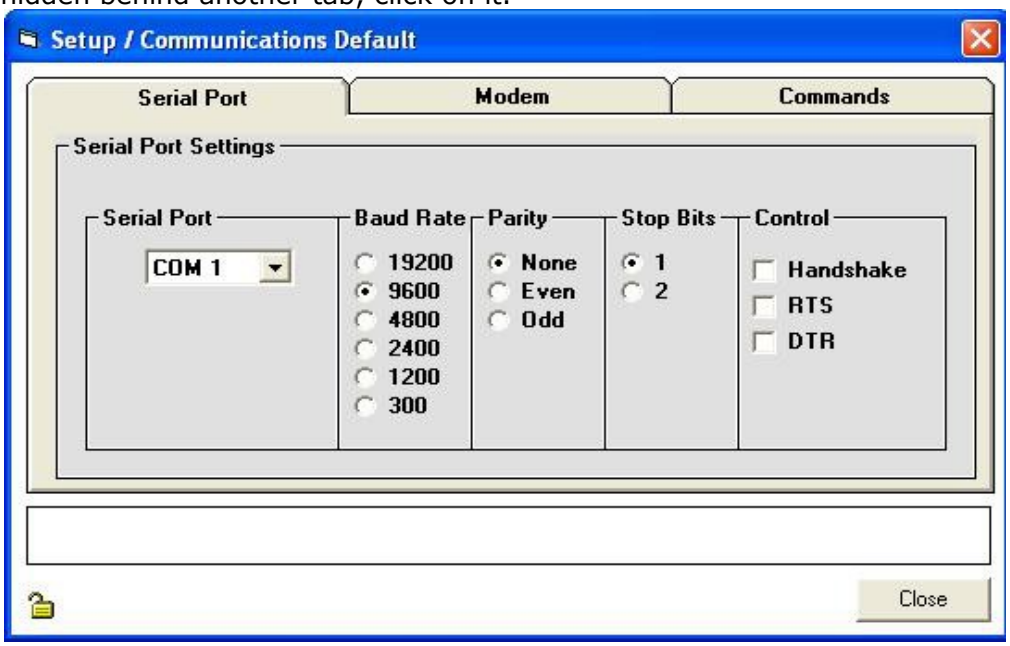
Use the communications selections to setup a default serial port and modem. Default settings can later be adopted for each instrument phone line or each may have it's own communications settings. There Are two ways to enter the communications setup screen. One way is to select the "Setup" option on the drop-down menus from the top-left of the main Troll Link screen. Next, select and click-on the "Communication" menu item.




Another way is to click-on the "Communication" button located on the tool bar.

Setup/Communications:

On the Setup/Communications screen, there are 2 tabs for default setup (shown here), Masstrol and DPFC instruments. Supertrol instruments have a third tab called "commands" (see note bottom of next page). The selected tab displays setup information that can be changed according to your requirements. To display items for a tab hidden behind another tab, click on it.

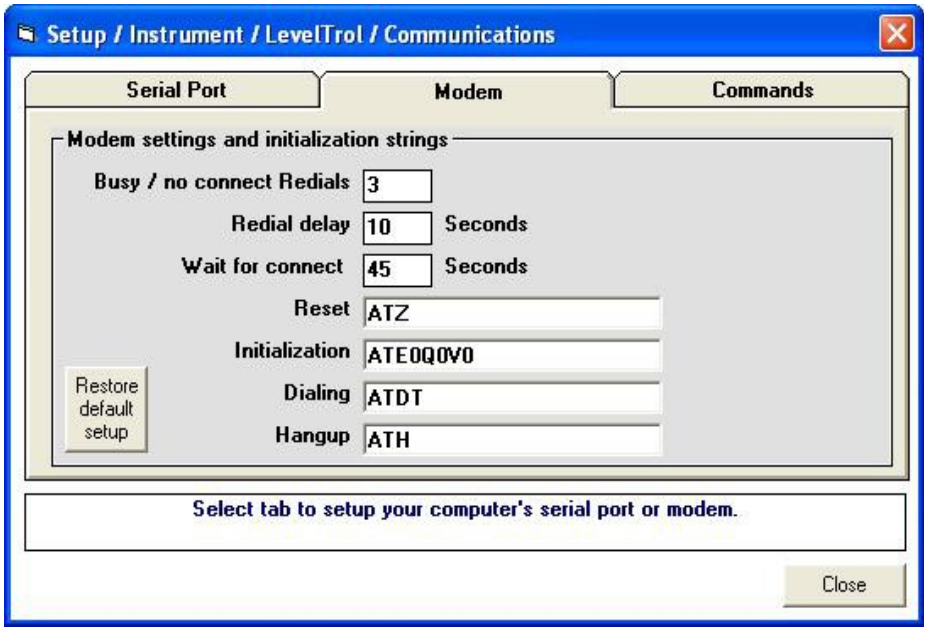


Serial Port Tab

Serial Ports	Select the serial port for data collection. The serial port selected must exist on the PC. (Note 1) Many PC's only have com1 or 2. (Note 2)
Baud Rate	Select the speed required. 300, 1200, 2400, 4800, 9600, 19200
Parity	None, Even or Odd (Default = None)
Stop Bits	1 or 2 (Default = 1)
Control	The default setting is unchecked for all when using the standard factory supplied modems and for direct connection to instrument. Consult factory if connecting to other devices.

Communications

Modem Tab



Busy / No connect Redials	How many times the Telephone Number of the instrument is redialed if no answer or if busy. Retries are made after other items in the phone list are run if any. If the number of redials is reached, an error condition is set in the phone list for the item line and no further attempts will be made for the item line until the error condition is cleared or until another event restarts it.
Redial delay	Amount of time in seconds to wait before redial. Applies separate for each instrument. Only used after entire list of instruments have completed run.
Wait for connect	Maximum wait time for remote instrument to pick-up the phone.
Reset	Command to reset modem to known factory default settings.
Initialization	Command to setup modem options.
Dialing	Command to dial a telephone number.
Hang-up	Command to hang-up a phone call.
Restore	Reloads all modem fields to TrolLink default settings.

Set the serial port and modem settings according to the requirements of the instrument manufacturer. Communication selections are usually the same as the instrument settings. Consult the factory for help with setup.

NOTE: The "Commands" tab is not used for Masstrol or DPFC instruments.
The "Commands" tab has additional options for setting the following:

Increase instrument access attemps – The default is not selected. Increases number of tries to request instrument access by sending ESC CR preamble.

Wake-up pre-command – The default is not selected. Sends additional commands to instrument in front-of each data request command. Normally TrolLink uses wake-up once when first making contact with instrument.

Delay time before sending commands (Range 0–5000ms default is 50ms). Timing delay between each command sent to instrument. Increase delay time may help if messages such-as Garbled data.

Delay before accessing next instrument – Time to wait before accessing next instrument in list. Used to wait for line to become available again (Range 0-15000ms default is 0ms).

Communications

NOTES


9-pin serial port.

1. The serial port is an I/O (Input/Output) device. An I/O device is a way to get data into and out of a computer. There are different types of I/O devices such as serial ports, parallel ports, network boards, USB (universal serial bus), etc. Most PC's have only one or two serial ports. The serial port usually has a 9-pin connector but sometimes it is a 25-pin connector. Serial ports usually are located on the back of the computer.
2. Serial ports are also known as: RS-232 ports and Com ports

A word about modems

The computer can not connect and transfer data directly to another computer or instrument through a telephone line. It works through a modem. A modem is a device that lets your computer communicate with other computers over a standard telephone line. "Modem" is short for ***mo***dulator/***dem***odulator. This term means that the modem converts the digital information from a computer to an analog signal that travels over phone lines. The receiving modem then converts the analog signal back to a digital signal for the receiving computer to work with.

The TrolLink program is designed to work with modems that use the "AT" command set. The manufacturer Hayes Microcomputer Products developed the "AT" command set and it is widely used in most modems. Some modems may support other non-AT commands however they may not work as expected with TrolLink. The modem tab has a few user modifiable fields that are provided in the event your modem requires other command strings to do basic initialization, reset, calling and hang-up functions. The default settings are known to work with the modems available from the instrument manufacturer. It is strongly recommended that you only use modems that support the AT command set fully and that are known to work with the instrument being used to collect data from. The instrument manufacturer can provide you with the proper modems.

Connection tips:

When selecting a telephone line to use with TrolLink, make sure it is not setup in a non-standard configuration or the modem may not work as expected.

Examples:

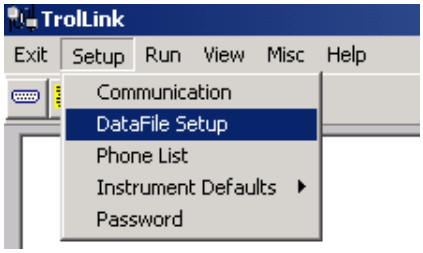
- If the telephone line carries a DSL signal for Internet then a DSL filter must be installed between the phone line and modem.
- If your installation site has a private PBX phone system be sure the line you want to use is standard analog and not digital or some other non-standard format.
- Disable extras that may be on the telephone line. Example: Call-waiting could corrupt data by inserting "beeps" if a caller happened to try calling while data was being collected

DataFile Setup

This screen contains options for data files.

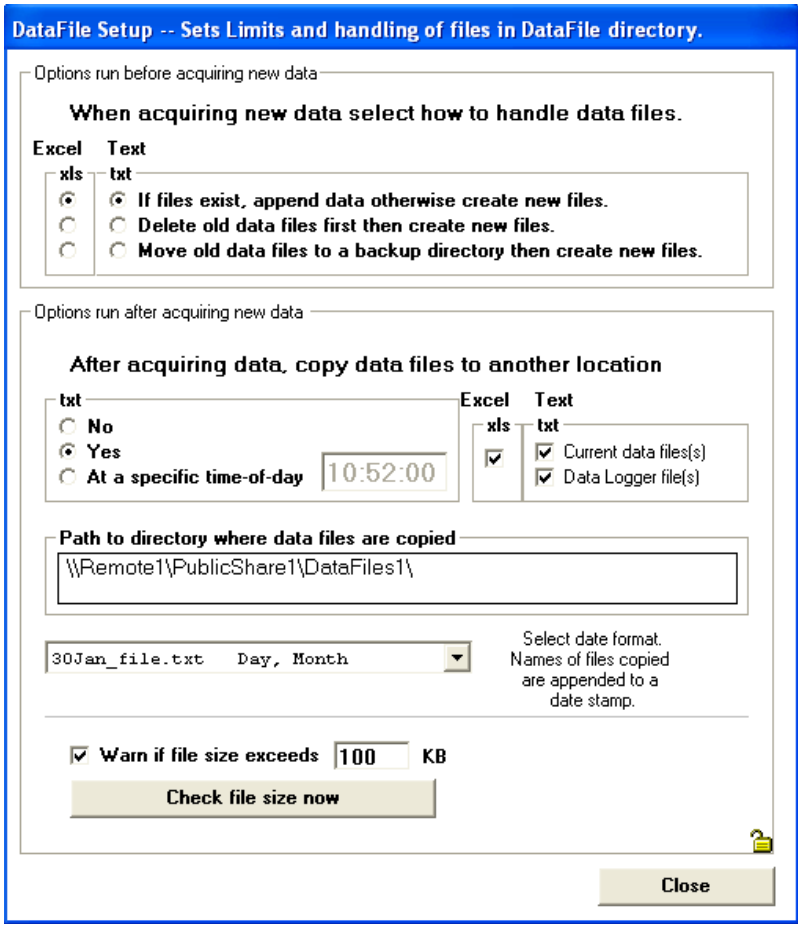
The options are:

1. Monitoring and reporting of data file size.
2. Selecting how data files are handled when new data is collected from instruments.



The "DataFile Setup" screen is opened by selecting the "Setup" option from the drop-down menus located on the top-left of the main Troll Link screen. Next, select then click-on the "DataFile Setup" menu item.

DataFile Setup Screen:



DataFile Setup

Overview:
Data file names are specified in the file name field located on individual phone item lines. See phone form manual pages for more information on file names. File name extensions of "txt" and "xls" are appended to the file name as needed.

Data acquired is written to text ("txt") files.

Optionally data may also be written to an Excel ("xls") file.

When acquiring new data, select how to handle data files:

Options:
There are three ways to handle existing data files in the DataFile directory. The data files referred to are those created from a previous data collection session. The method of handling "xls" and "txt" are independent.

TrolLink can be instructed to "append", "overwrite" or to "move" existing files to a backup directory before overwrite (delete)" when acquiring data.

* **If data files exist, append data otherwise create new files.**
If the data file doesn't exist it is created.
If the data file does exist, data is appended to the same file.

*** Delete old data files first then create new files.**
If data files exist they are deleted.
New data files are created.

*** Move old data files to a backup directory then create new files.**
A backup directory is created at the start of data collection. The backup directory name is made by using the letters "bk" along with the time and date of the data collection start.
Example: The backup file name of: bk010904_2210 shows that:
"bk" indicates that it is a backup directory
"010904" indicates the backup date as expressed as: mm/dd/yy
"_" An underscore character is used to separate date and time values.
"2210" indicates the backup time expressed as: hh/mm (24 hr clock)
(The above example indicates that the backup directory was created on January 9, 2004 at 22:10 (10:10 PM when expressed as a 12hr clock.)

Backup directories are created in the "DataFiles" directory.
Different backup directories are created each time the phone list is run.
In order for backup directories to be named and created correctly, a minimum delay of one minute must occur between runs of the phone list.

DataFile Setup

Data files with the extension of "txt:
As data is collected, older file names are moved to the backup directory. Then a new file with the same name is created in "DataFiles" to hold the new data. There may be many "txt" type data files.

Data file with the extension of "xls":
All instrument data collected for Excel are kept in one file called "TrolData.xls".

Only those files that match file names and are enabled in the phone list will be moved to the backup directory. It is possible that other files may be present in the "DataFile" directory and not moved to the backup directories.

After acquiring data, copy data files to another location:

* **NO**
  Turns-off data copy option.

* **Yes**
  Copies files to destination path after acquiring data from all enabled instruments.

* **At a specific time-of-day**
  24 hr clock – 00:00:00 to 23:59:59.
  Seconds digits not used to determine actual copy start time.
  Copies data files to destination path at a specific time-of-day after acquiring data from all enabled instruments.

Select files to copy:
Check box to enable copy of Excel, Current data files and/or Logger files.
At least 1 file type must be selected if data copy option is active.

Path to directory where data files are copied:

Click directory path box to open a path selection window.
Select the destination path where file copies should be placed.
Destination path must be on the local PC or a PC on your local area network.
Internet addresses are not supported for file copy.
If destination path is a PC on a local area network then you must be able to login to a shared directory already setup on the network PC from your local PC. A shared path may be assigned a drive letter or the path may be opened by selecting the PC from "My network places" (if using XP). Please ask your network person if you need assistance to login to your local area network PC.

Select date format:
All files copied retain their file name appended to a date stamp.
Example: Suppose selected date format is "Day, Month" and the instrument data was collected from was given file name "ONE". If date of run is Jan 30th then after data collection and copy task finishes run then the copied file will be named "30Jan_ONE".

DataFile Setup

There may be times when a selected destination path becomes unavailable.
Example: suppose the destination PC is on a local area network and that PC was off.
For added security all copied files are placed into two locations.
All copied files go to C:\Program Files\DataFiles\DataBackups
Then if destination path is available another copy of the files are placed at the destination. When finished using files in the destination path remember to also remove extra copies of same files located in directory DataBackups.

Note:
Copy does not make changes to original data files, they remain unchanged.

File Size Messages:

Towards the lower part of the "DataFile Setup" screen is a check box called: "Warn if file size exceeds [100]KB". It is enabled when checked and disabled if not. The size shown here is the default example. Change the value as required for your use.

If the check box is not enabled then there are no messages:

If the check box is enabled then following applies:

Enter a maximum file size expressed in KB (where each 1KB = 1000 bytes).
Each time the phone list is run to collect data and when finished, the size of data files located in the directory "DataFiles" are compared to the KB value.
Based on the KB value test, messages are displayed as follows:

When all files are smaller than KB test value.

CHECK FOR FILES LARGER THAN 10 KB
No files exceed size limit.

When files are equal or greater than KB test value.

CHECK FOR FILES LARGER THAN 10 KB
DataWindow.txt 28674
Log.txt 19280
D0045968.txt 12022
3 files exceed size limit

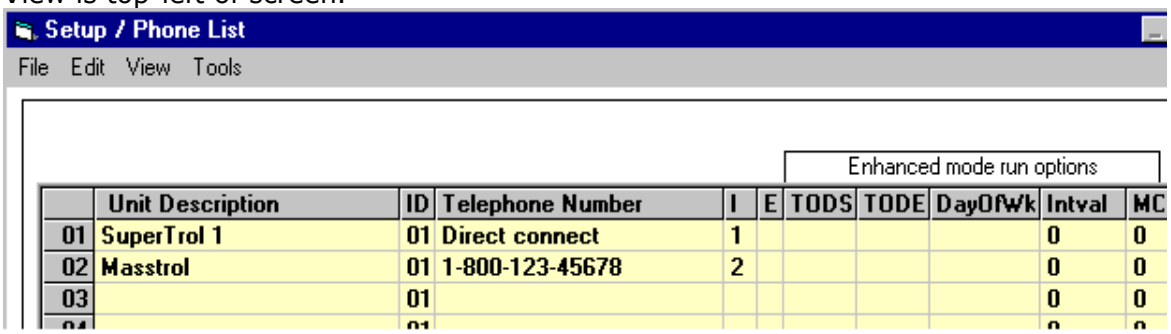
Note: The examples shown above were based on a 10 KB value entered.)

A NOTE ABOUT BACKUPS
The sole purpose of using this backup option is to separate data reads occurring at different times. It is not intended to provide backups of your data to guard against data loss. TrolLink is not a backup solution for your data. It is a very good idea that you have backups of your data and PC disks.

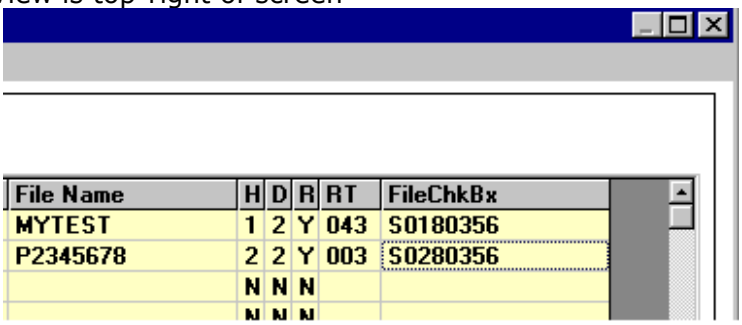
Phone List

The phone list holds configurations for the instruments. Many fields can be edited on the phone list but it is best to use the phone form screen for that purpose. Double clicking on any of the lines will open the phone form screen.

View is top-left of screen.



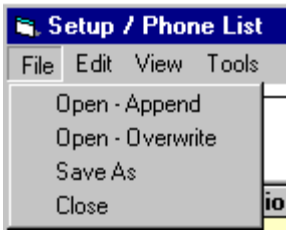
View is top-right of screen



Note: The "Enhanced mode run options" are not available in the base TrolLink software. Entering data into these fields is not required and they have no effect. Consult factory for TrolLink enhanced version.

File -- Options provide a way to create multiple phone lists for different data collection needs. Specific lists can later be loaded or combined.

Whatever list is loaded when the phone list screen is closed becomes the default run list.



Open-Append -- Adds saved phone lists to the end of the existing list.

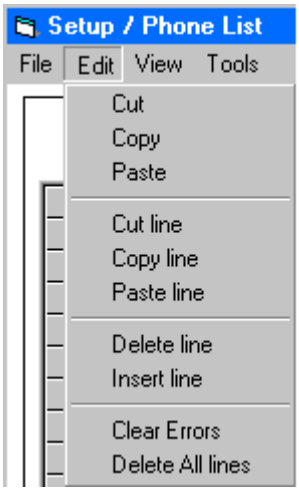
Open-Overwrite -- loads a saved phone list overwriting existing lines, starting at line one. If existing list is deleted, use this to load a saved list.

Save As -- Save existing list to a file.

Close -- Closes phone list screen and saves changes.

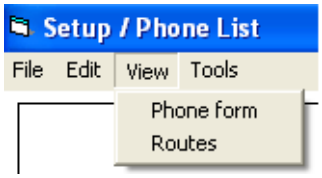
Phone List

Edit -- Options provide ways to modify phone list lines.



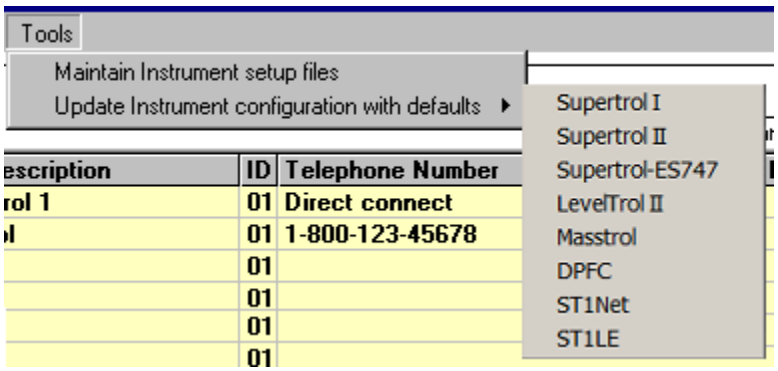
View -- Options to open the phone or routes form.

Double clicking on any of the phone list lines will also open the phone form.



Tools -- Selections act on the current loaded phone list file.

Maintain Instrument setup files -- Instrument setup files are kept in the directory "dataFiles/cfg". They are checked against the loaded phone list file.

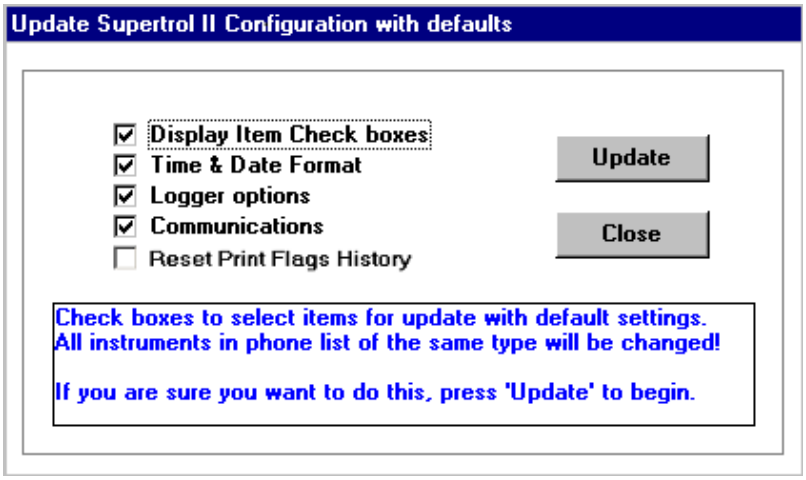


If there are files not matching then those files are moved to the backup directory "datafiles/cfgbkup". This 'cleans' the directory of unused files that may be left-over from changing phone list lines, deleting lines or renaming files on phone list. Be careful before deleting files, they may belong to other saved phone lists.

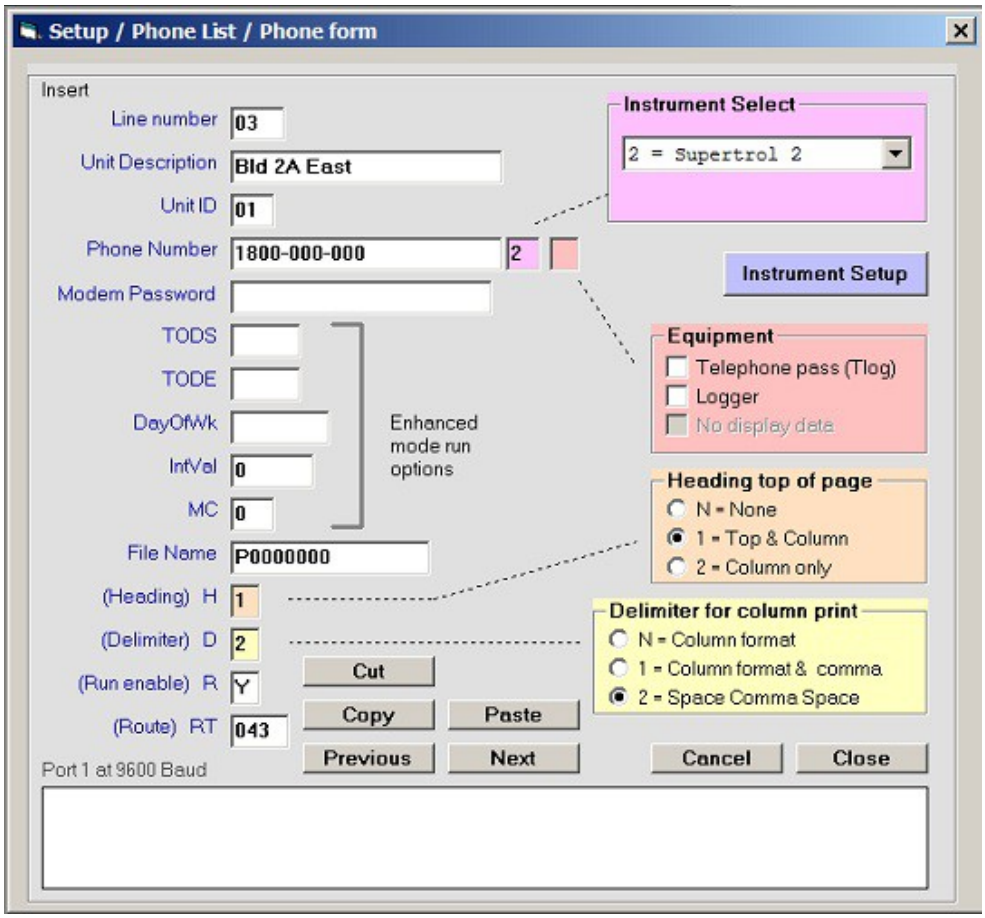
Upgrade Instrument configuration with defaults -- Allows information from default setups to be applied to all instruments of the same type. This is useful especially when instrument configurations are alike.

After selecting one of the instruments from the drop-down menu, the upgrade screen displays.

Updates apply only to the items checked.



Phone Form



Use this form to enter information about the instrument.

The bottom windowpane is an active help box that shows help tips about an item or area that the mouse cursor is pointing to.

Line Number: Indicates phone list line position where phone data form is located.

Unit Description: Enter helpful information indicating where the instrument is installed or what the instrument is being used for. Tip: Use a company name or site location where the instrument is installed.

Unit ID: Number must match instrument's ID number. Valid number range is 01–99. Default is 01. Follow instrument manufacturer's instructions to setup an ID number.

Phone Number: Enter Telephone number, Internet IP number or Direct Connection.

1. Phone Number: If using a Modem to call the instrument, enter telephone number of the instrument. Commas introduce short delays of about 2 seconds each when dialing. Dashes may be used to separate numbers for readability. Example: 9,,1-800-1234567 where the 9 is a private phone system code to obtain an outside line, the 2 commas tell the modem to pause dialing for about 4 seconds followed by the phone number. The dashes have no effect other then for readability.

Modem Password: Use only for password protected modem. Consult factory.

Phone Form

2. Internet IP number: To use internet connection instrument must be equipped with RS232 to Ethernet Adapter. Enter IP number followed by the letter "P" then the TCP port number. Example: 129.100.100.001P5001 The IP and Port number must match instrument's ethernet adapter setup. Note: the TCP port number is NOT the RS232 serial communications port number, it functions as the TCP/UDP source port number for ongoing packets. Range 1-65535 Do not use a reserved port number as incorrect operation may result. Some reserved ports are 1-1024, 9999, 14000-14009, 30704 and 30718. If not sure consult with your network administrator to select unused port.

Network Test Button: Button appears only when IP numbers are entered. Used to test conntection to remote RS232 to Ethernet Adapter. Test confirms link from TrolLink to instrument's RS232 to Ethernet Adapter, it doen't test the setup of instrument.

2. Direct Connect: If using a direct connect cable, enter the letter "D" into a blank telephone number field to indicate direct connect. This option implies that no modem is used and the instrument is attached direct to the PC using a serial cable.

TODS, TODE, DayOfWk, IntVal, MC
NOTE: The "Enhanced mode run options" are not available in the base TrolLink software. Entering data into these fields is not required and they have no effect. Consult factory for TrolLink enhanced version.

File Name: Names the disk file that will hold data collected from the instrument.

When a new file name is entered, the next successful collection of data will create a disk file with that name if it didn't already exist. If the file name is an existing file then data will be appended to it.

A file name is created by default if the File Name field was blank when the Telephone Number field is accessed. If the File Name field is left blank then data is not saved. The file name can be changed to something other than the default name.

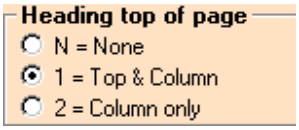
How default file names are created.

If the Telephone Number field contains a number then the file name is:
"P" + last 7 digits of the telephone number.
Example: If the number is 1-800-123-4567 then the file name is: P1234567

If the Telephone Number field is "Direct connect" then the file name is:
"D" + last 7 digits of the computer's time/date clock.
Example: D0076110

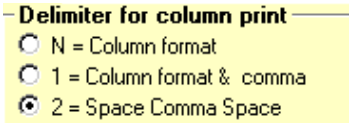
Note: The size of the disk files should be monitored from time-to-time.

(Heading) H:
Headings are used for data disk files intended to be printed out as reports. Headings are not written to existing files.



Phone Form

(Delimiter) D:
Delimiter is used for formatting data files and to separate data fields.

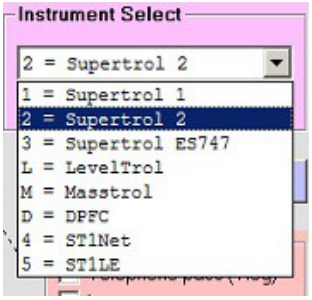


(Run enable) R:
The Run enable flag is used to enable or disable item from running.

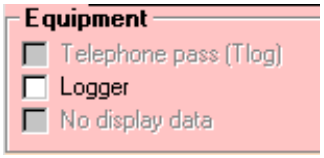
Note: If an instrument is unreachable, perhaps because of wrong setup information or because of a phone line problem then TrolLink will place an "E" in the Run field. The "E" indicates an error occurred and data collection could not happen. If this occurs, test your setup and communications. After verifying correct settings re-enable the item Run field to resume.

(Route) RT:
Leave blank if not used. Valid range is 000-999. For details, see manual pages on topic "Run options".

Select instrument from the drop-down menu then go to the "Instrument Setup" screen and choose items to collect data from.



Select equipment. Selections offered are determined by the instrument type and if it uses a phone number or direct connection.



If logger selected, the option "No display data" inhibits collection of instrument display selections.

Setup Instrument

Data to acquire is selected simply by choosing an instrument setup screen then setting or clearing checkboxes.

Default instrument templates:

When groups of instruments are configured alike, using default instrument templates can help to make setting up data collection easier. Default setup templates can be quickly copied to other instrument setups.

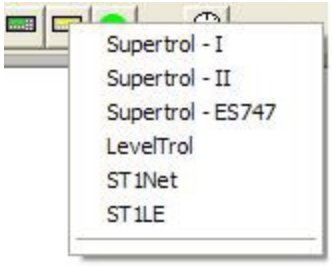
Default setups can be accessed in two ways, from setup menu or the tool bar.

Using the tool bar

To setup a default instrument template using the tool bar, click-on one of the instrument group buttons on the tool bar. An instrument list appears.

The left tool-bar green button selects Masstrol and DPFC.

The right tool-bar yellow button selects Supertols and LevelTrol.



Select the instrument type from the list to display the setup screen.

Using menus

To setup a default instrument template using the "Setup" menu; select "Instrument Defaults". An instrument list appears showing all instrument types supported. Select the instrument type from the list to display the setup screen.

After instrument type is selected the default setup template screen is shown. Each instrument type may not have exactly the same data fields available and may also have data presented using different formats. TrolLink was designed to convert and present data selections using a common screen layout.

Setup Instrument

Select data to acquire with checkboxes. Before selecting data to acquire, it is important to understand exactly what data is available from your instrument. Selecting a data field in TrolLink even if it is shown doesn't imply that it is available in the instrument or if it is, then it may not be available for the flow equation being solved. If you are not sure then please consult your instrument manual or manufacturer. Try to use only those checkboxes that are valid for your instrument type and setup.

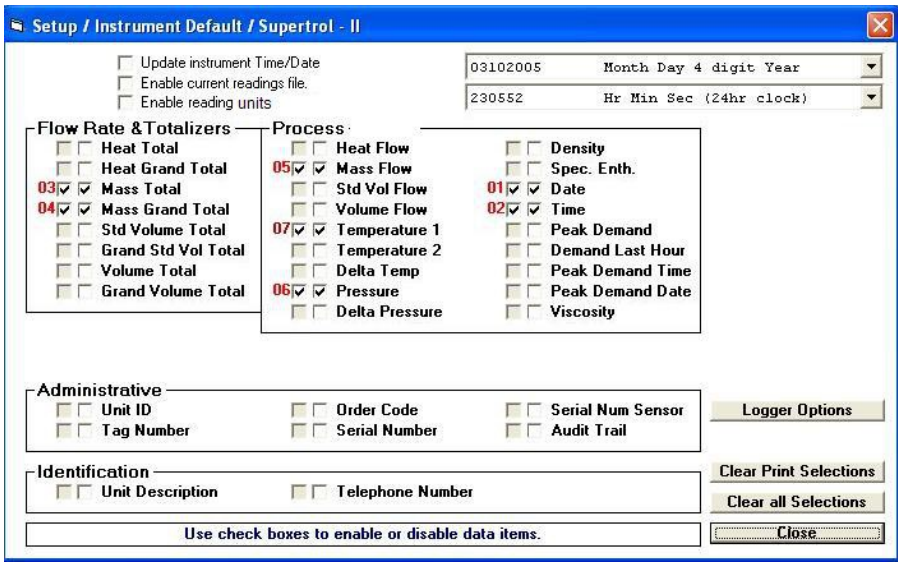
Check boxes are arranged in pairs. The right checkbox selects the data item to be acquired from the instrument. The left checkbox enables the data to be saved to a file. The red numbers represent data column order for data written to a file. The numbers appear when the left checkboxes are checked. Number one represents the left-most column. The right checkbox must be selected before the left checkbox.

Buttons

Clear Print Selections -- Clears all of the left checkboxes.
Clear all Selections ----- Clears both checkbox pairs.
Logger Options * -------- Shows data "Logger options" screen.
Communications -------- Settings for each instrument. Not shown on default screens.

* Supports the build-in data logger only.
* Not all instruments and models have a data logger.
* Please consult factory for more information.

Default setup screen for Supertrol II.

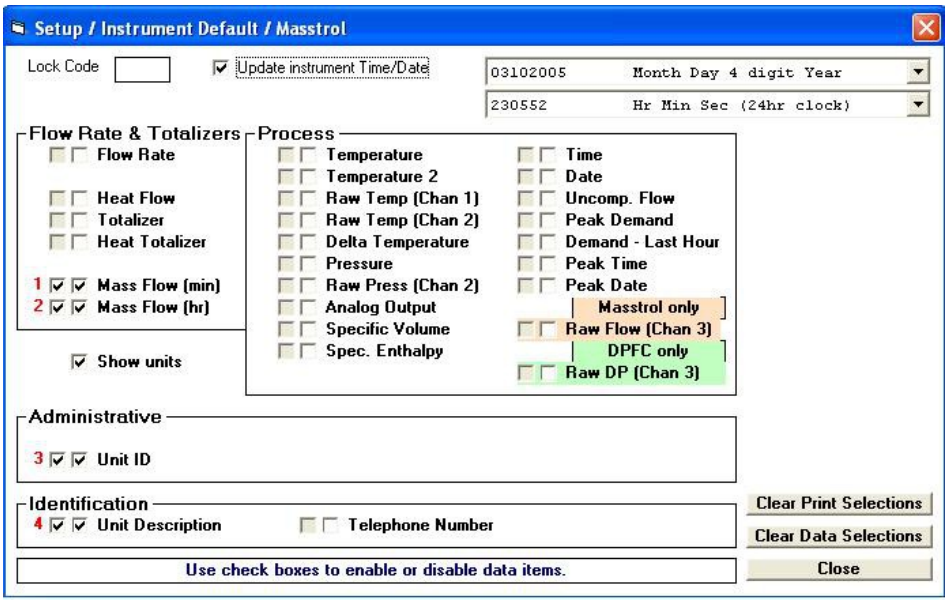


If "Update instrument Time/Date" is checked, the instrument's time and date can be updated to the PC's clock when collecting data. There are other steps required to activate this feature. See "MISC." Manual pages for details.

"Enable reading units" if checked, appends units labels from instrument if available.

Setup Instrument

Default setup screen for Masstrol and DPFC.



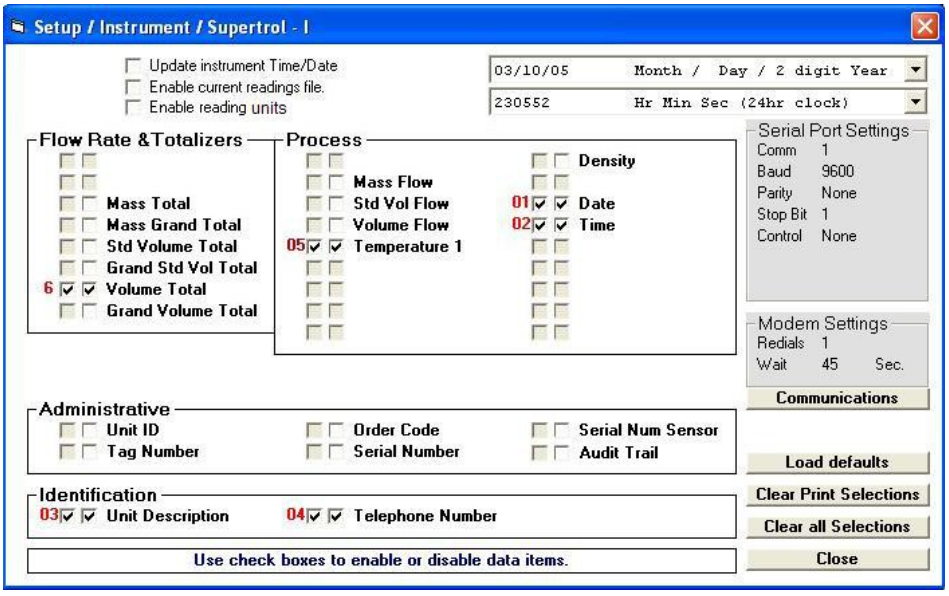
Note: If your Masstrol or DPFC instruments use a lock code, TrolLink needs to know the code to perform some tasks such as "Update instrument Time/Date" or to reset peak demand.

Setup Instrument Screen for Supertrol I.

Selected from the instrument phone form screen.

This looks like the default setup template but also has a button to "Load defaults".

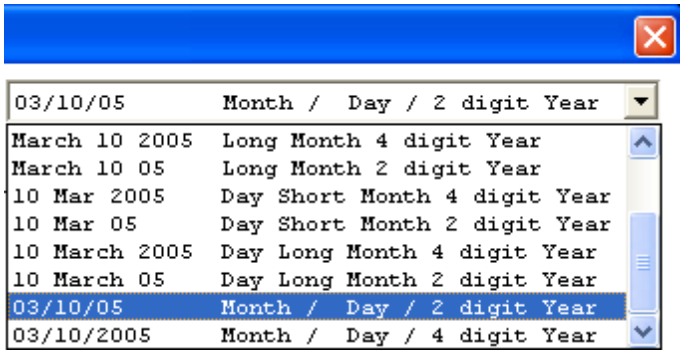
Click on "Load defaults" to copy in the default template settings. Default Time and Date format are copied also.



Format Time & Date

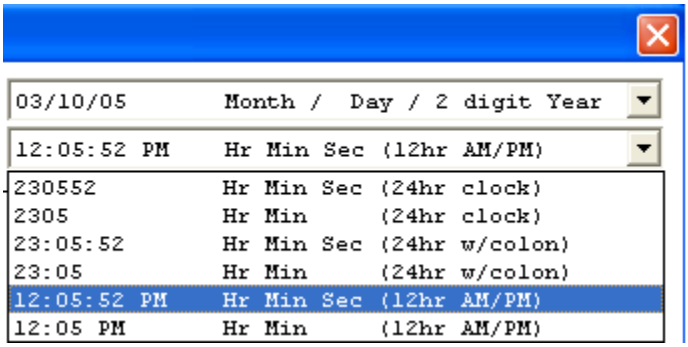
Converts data from instrument to selected format.
Located on "drop-down" menus at the top-left of "Setup Instrument" screens.

Click on the line to select the format for time and date.



Each instrument may have different date formats if needed.

Slide scroll-bar for other formats.



Each instrument may have different time formats if needed.

Logger

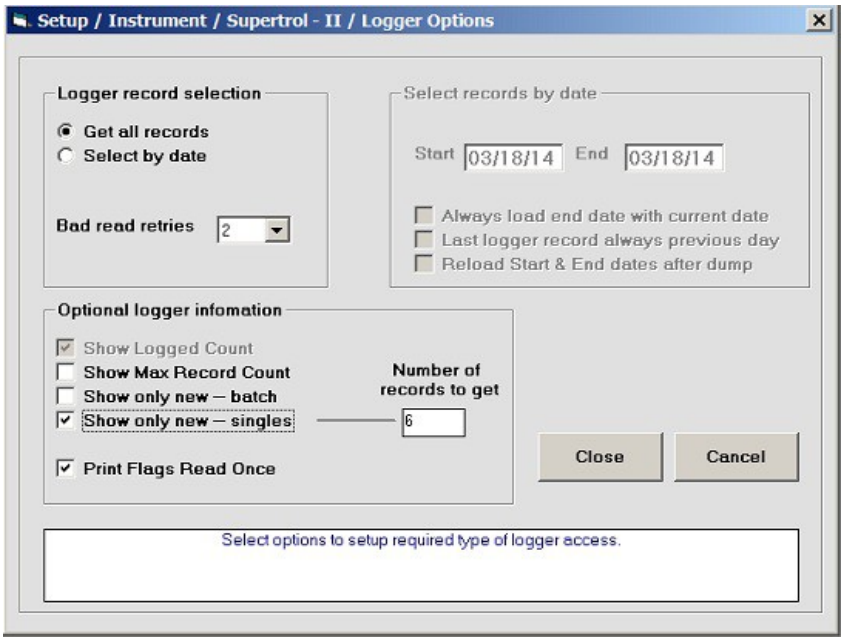
Some flow computer instruments have a built-in data logger. TrolLink can be configured to get data stored in the logger. Each instrument must be configured to use logger before trying to collect data from it. TrolLink doesn't setup instruments, it only acquires data from them.

To display the Logger options screen

Open "Phone List", then select "Phone Form". Fill in information fields then select options on the "Phone Form" for your instrument. If the instrument supports logger then the logger checkbox in the equipment group can be checked. If you do not want to get live data from the instrument check "No display data" otherwise leave it unchecked. Click the "Instrument & Logger Setup" button. Select data items you want to acquire.
Data item check boxes select both display and logger data items.

Click on the

Button to display this screen.



Logger record selection

Get all records -- Get all records stored in the instrument logger regardless of date. "Select options by date" group does not apply.
(Note: Be sure you want to do this there can a lot of records and the dump can take a long time!)
Select by date -- Get only records stored at specific dates.

Optional logger information

Show Logged Count ------- Total number of records stored in logger.
Show Max Record Count -- Maximum number of records logger can hold.

(Note: Show only new batch and singles checkboxes enabled when "Get all records" selected.)

Logger

Show only new – batch –-- Get all new records logged since last time records read.
Show only new – singles – Used to get one or more new records logged since last time records were read from logger. Gets one-at-a-time, generally slower than batch but usefull if communcation channel has "trash" or "noise". If a log record appears corrupt then an attempt is made to repeat getting the bad record.
If a value of zero is entered into "Number of records to get" field then works like batch but gets records one-at-a-time.

Print Flags Read Once – Sometimes, "noisy" or "junk" on a communication channel may cause unexpected results. The print flags comand is one that may cause problems by changing settings at the instrument. To avoid unnessary reads, the option to read print flags once is suggested. This reads once then stores settings in a local file. Then each time same instrument is accessed print flags are read from the local file, not from instrument. To clear flags from local file and next time get a new copy of flags from instrument, go to "phone list" (the yellow line screen), select "tools" then "Update instrument configuration with default". Choose the instrument group (ie. Supertrol II) then check the box "Reset print flags history". Caution: uncheck any other boxes if the corresponding action is not desired. Press the "Update" button to clear local print flags.

Clear Logger After Read (if installed) – Optional check-box appears if enabled in Misc options screen. If selected then will clear/erase all data from logger. Task runs after getting logger records. Before clearing logger, TrolLink pops-up a message then waits for a 'Yes" or 'No' confirmation. When using the clear logger option, TrolLink should not run unattended since it will wait for a response before proceeding to next instrument read.

Select records by date

Start -- Select records stored at start date.
End --- Last record date selected.

Always load end date with current date -- Before getting logger records from the instrument, the PC's date is used for the end date.

Last logger record always previous day -- Before getting logger records from the instrument, the previous day as determined by the current PC's date is loaded for the end date.

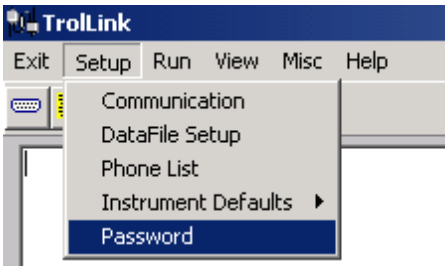
Reload Start & End dates after dump -- The same start and end dates are reloaded. Dates are not advanced.
Unless inhibited by checking the option "Reload Start & End dates after dump" the next start date is always loaded with the end date after data collection.

Note – It is important that the PC's time and date clock is set to the correct time and date. It is also important that the instrument's time and date are correct. Some time keeping chips used in PC's and instruments do not keep accurate time and date over long periods. These need periodic adjustment. TrolLink can set time and date for most instruments if that option is selected. See manual pages "MISC" and "Format Time & Date" for more information.

Password

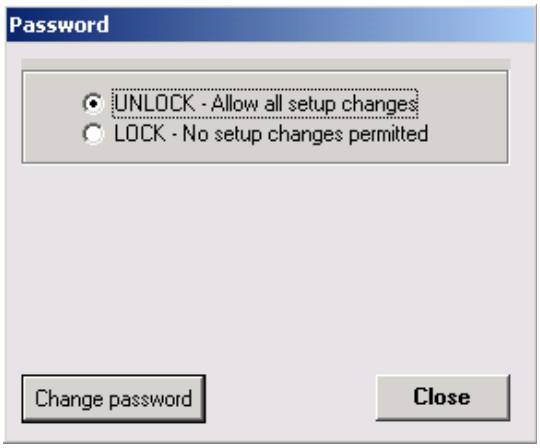
The Password option provides the TrolLink administrator with a tool to Lock and UnLock most setup screens and menus.
Locking doesn't apply to functions such as Run, Timed Start, Stop, Exit and Help.

The password and lock / unlock features are accessed from the drop-down setup menu.

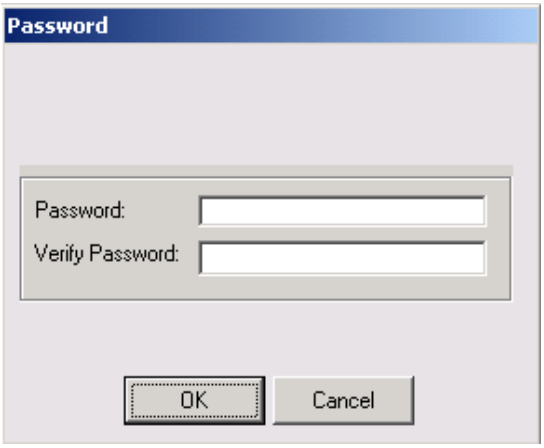


Using a password can help deter unauthorized personal from changing setup configurations.

UNLOCK, LOCK and Change password options are available when no password or when unlocked.



Enter a new password or change password requires the exact password to be reentered to verify typing was correct. Passwords are hidden and only display the * characters.



TrolLink enters the lock state when started if a Password was entered.
If no password then the unlock state is used and editing is allowed.

Notes:
Best to use simple passwords you can remember. Passwords of one word without spaces are recommended. The password feature is not intended to be secure and it is not. It is provided only as a tool to help keep the casual user from changing setup configurations. Passwords are "case" sensitive. That means the password "apple" is not the same as "Apple".

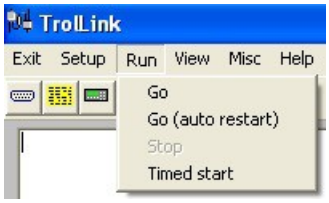
If you forget your password do the following:
Using only a text editor program like Notepad or Wordpad open the file
C:\Program Files\TrolLink\CTDSConf.ini
Find the following 2 lines
[PWD]
EDCTRL=YourPassword <-- This is where you can find your password.

Close the text editor "DO NOT SAVE" otherwise you may corrupt data!

Go

Go requests TrolLink to begin acquiring data from instruments listed in the phone list. Go is displayed only when TrolLink is stopped.

There are three ways Go can be selected.



One way is to select the "Run" option on the drop-down menu from the top-left of the main TrolLink screen. Next, select and click-on the "Go" menu item.

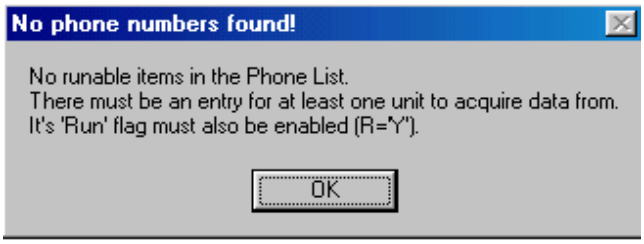
Another way is to click-on the green "Go" button located on the tool bar.

Both of these run the instrument list once, stopping after processing the last line. The "Go (auto restart) differs because it setups up a 'running loop' that must be stopped by the operator. After the last line is processed it starts again from the beginning.

After clicking-on the "Go" button TrolLink determines if it has enough setup information for an instrument so it can enter an "active" or run state. The areas that are examined for setup information are: Communications, Run options and the Phone List.

When TrolLink is running a red "Stop" button replaces the "Go button on the tool bar.

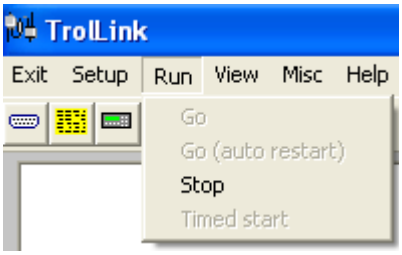
The message shown to the right will be displayed if there are not any instruments entered or enabled to run in the phone list.



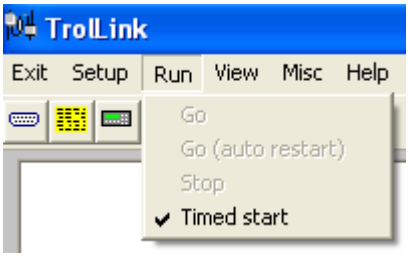
Stop

Stop requests TrolLink to end all activities of acquiring data from instruments. The "Go" button replaces the "Stop" button when TrolLink has stopped.

There are two forms of stop depending on how data collection was started.



The first form of stop applies if data collection was started by selecting "Go" from the Run menu or by clicking on the green "Go" button on the tool bar. To stop data collection, select "Stop" from the Run menu or click-on the red "Stop" button on the tool bar. 



The second form of stop applies if data collection was started by "Timed start". To stop data collection, click off the check mark next to menu item "Timed Start" or click the clock icon on the tool bar with the red hand Moving about the clock face. 

Timed Start

Timed start is used to trigger the phone list to run at a preset time and date. It can reset and run again each day until stopped by clicking on the active timer clock face or until an optional stop date is reached. A pattern of days-of-the-week to run and days to skip over can be set. The weekly pattern can be followed again-and-again if desired. Multiple runs per day are possible by entering a timer interval and the number of intervals added per session can also be limited by including a run count.

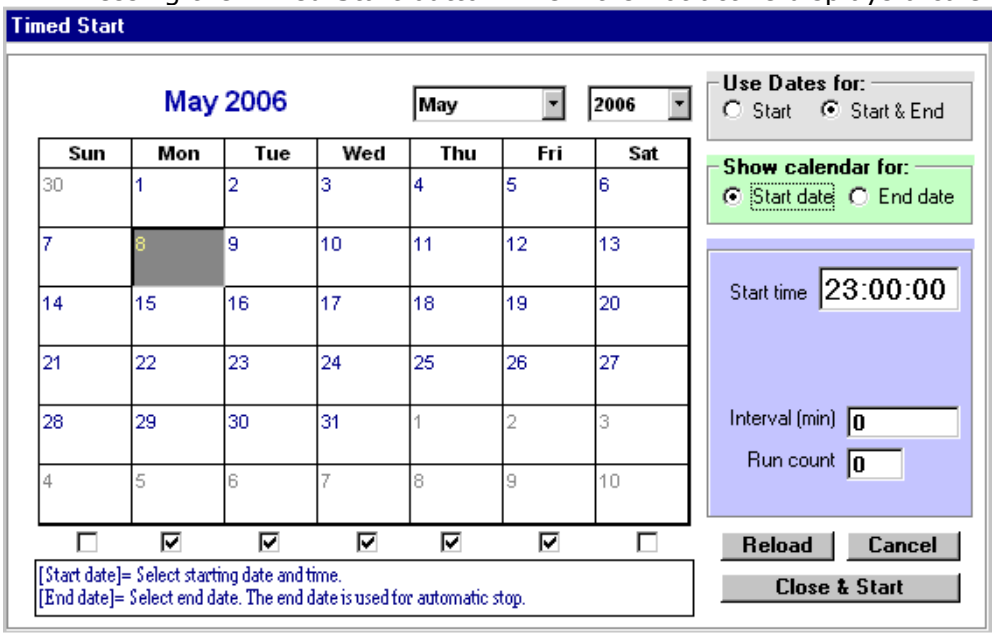
Example: Suppose data collection is desired to occur unattended for the days of: Monday, Wednesday and Friday beginning at 0100 (1AM) and repeat each week for five weeks then stop. Timed Start makes it possible to do this.

The Timed Start button is located on the main TrolLink screen tool bar. It is a white button with an analog clock face. When Timed start is not active or stopped the clock face is blank and does not show clock hands.

When active the button shows a red clock hand that moves clock-wise about the clock face to indicate Timed Start clock is active. A status line on the lower-left of the main TrolLink screen displays the next date and time the phone list will run. Time and date are derived from the PC's clock. Pressing the clock button anytime while it is active stops Timed Start and the button changes to the not active state.

Setting Timed Start date, start time and options:

Pressing the Timed Start button when it is not active displays a calendar page.



The calendar page has selections for entering Start date, start time, optional end date, interval and run count. At the bottom of each month on the calendar page and located just below each day column is a checkbox. The checkbox is used to enable or disable each day-of-the-week from being considered as a valid run day for data collection. Checkboxes are considered enabled only when checked and disabled when blank or not checked. The example calendar shown above illustrates Sun and Sat unchecked or inactive and Mon. to Friday checked or active.

Timed Start

Setting the End date:

The end date must occur on an enabled or checked day-of-the-week. If end date is used then the phone list is run up to and including the end date.

Select "Start & End" option in the "Use dates for:" group located at the top right side of the calendar month and year selections. The group box "Show calendar for:" enables.

To set the end date, select "End date" from the "Show calendar for:" group. The color of calendar days turn red and the time box is grayed (disabled). Enter an ending date.

Interval -- Minutes to add to Start time after each run of the instrument list completes. Calculates the next start time. Range 0 - 1440 minutes. Optional. (Note 6)

Run count -- Number of new start times per timed start session to allow. Use to limit the number of new start times that interval is allowed to initiate. If run count is zero then intervals are continuous. Range 0 - 99. Optional. (Note 6)

At the bottom of the calendar window are 3 buttons.

Reload:
Loads the current PC time and date to the calendar page shown.

Cancel:
Discards changes made to calendar then closes the Timed Start window.

Close and Start:
Completes setup of Timed Start by first testing for valid dates entered against the PC time and date clock. A valid start date is considered to be today's date or a future date. If today's date is used then start time entered must be later than the current PC time. When date and time check passes then Timed Start window closes and the button changes to active on the main TrolLink screen tool bar.

Overview:
After setting-up timed start and pressing the "Close and Start" button, timed start enters a sleep mode and waits for the PC's date and time to trigger a run. After timed start runs the phone list it looks for the end date. If the end date is used then it is tested against the PC's date clock to determine if Timed Start should continue another day or not. If the end date is reached then Timed start stops running the phone list. If end date is not used or if end date is not reached then it looks at "interval" & "run count" then at the next days' enabled state. If that day's checkbox is not checked it skips to the next day. Timed start continues that process until it locates a day-of-the-week that is enabled. Timed start then repeats the above process of entering a sleep mode until it is stopped by one of the following conditions:

Timed Start

1) User clicks on the active clock button.
2) Timed start reached the end date.
3) TrolLink program is shutdown, the PC is turned-off or other external cause.

When Timed Start is active it is advised not to change TrolLink settings such as phone list or communication settings especially when the run time and date is approaching. Never make changes during actual data collection. If changes are needed Timed Start should be stopped and then restarted after changes are completed.

If the PC is needed for other jobs, TrolLink can be left running and dropped down to an icon on the PC tool bar. If you do this then when finished running other programs, be sure Trolink program is still running and Timed start is active. Maximize Trollink and look at clock face to see if the hands are still moving before leaving the PC.

Notes:

1. Time of day uses the 24-hour clock format.

2. Start and stop dates require Year, Month and day.

3. Phone line items are used only if their run flag is enabled ("Y") and if they belong to the same "Item Type" group: "Phone" or "Direct". Both conditions must be true otherwise phone line items will not be used for data collection.

4. TrolLink does not lock the PC's serial ports while it is stopped or waiting for a date and time to arrive to run the phone list. That makes it possible for other programs to use the serial ports. When TrolLink begins to run the phone list to collect data, it expects to find the selected serial port available. If the serial port is not free when TrolLink tries to collect data it will not be able to run the phone list and will stop.

5. If the "Run options" group "Mode" setting called "Enhanced" is selected then Timed start waits for active data collection events to complete before trying to take-over the phone list. If another data collection event is active then the exact time that Timed start can begin depends on when the other event finishes. Consideration should be given when setting up data collection such that this conflict does not occur.
NOTE: The "Enhanced" mode is not available in the base TrolLink software and is always "Grayed-out".

6. The use of "Interval" and "Run count" are optional. "Run count" applies only to limiting how many Intervals per Timed start session may occur. A timed start session is defined as: the first time of day of a calendar date the instrument list runs to collect data as initiated by timed start. A few examples follow:

Start & End day are used. They are the same date, an Interval and Run count are present.

End day will prevent timer reload if rollover into next day and the run count will not complete.
If run of list started before date changed, processing of the list will complete.

Example 1: Start = 04/22/05, End = 04/22/05, Start Time = 23:50, Interval = 5, Run Count = 4
List will run at 23:50, 23:55 and when timer recalculates to 00:00 run day changes from 04/22/05 to 04/23/05 passing end date of 04/22/05.

Start & End day are used. They are different dates, an Interval and Run count are present.

Processing of list will complete for entire run count into next day then timer will reset.
The next run will behave as shown in example 1.

Example 2: Start = 04/22/05, End = 04/23/05, Start Time = 23:50, Interval = 5, Run Count = 4
List will run at 23:50, 23:55 and when timer recalculates to 00:00 run day changes from 04/22/05 to 04/23/05 becoming end date of 04/23/05.

Run Options

The 'Run options' group is composed of two sub-groups: 'Mode' and 'Item Type'. These options apply to the entire Phone list.

Mode

Enhanced

Items in the Phone List are evaluated and ran according to individual settings. Run-time calculations are based upon the contents of the following fields, TODS, TODE, DayOfWk, Intval, MC and Run Flag for each instrument determine when data collection will occur.

NOTE: The "Enhanced" mode is not available in the base TrolLink software and is always "Grayed-out". Consult factory for TrolLink enhanced version.

Normal

The 'Item Type' and 'Run All' selections along with individual 'Run Flags' for each instrument determine if an item line is enabled for data collection. Does not use the "Enhanced" fields; TODS, TODE, DoyOfWk, Intval and MC. Entries in any of these fields have no effect for "Normal" mode.

Run All

Available only for 'Normal' mode not used for 'Enhanced' mode.
If the 'Run All' box is checked then data collection for each of the Phone List Items starting from the first to last line is available to run. If the 'Run All' box is not checked then only the item listed in the Run Window is used to acquire data.

Item Type

Direct - When scanning the Phone List for the next instrument to acquire data from, TrolLink selects only the line items that are Direct Connect.

Network - When scanning the Phone List for the next instrument to acquire data from, TrolLink selects only the line items that have Internet IP Numbers.

Phone - When scanning the Phone List for the next instrument to acquire data from, TrolLink selects only the line items that have Telephone Numbers.

Note: Multiple boxes may be selected if instruments use different connections.

Run Options

MISC

Log events

Saves run-time historical data about data collection sessions into text files.

There are two files as follows:

1. Log.txt -- Holds start time, end time and unsuccessful attempts to collect data.

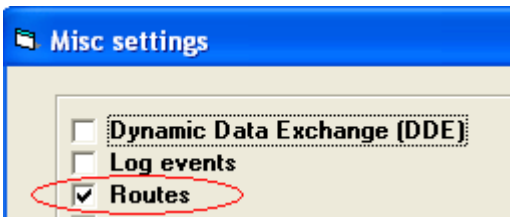
2. DataWindow.txt -- Holds a copy of the information shown in the TrolLink data window. The data window where information is copied from is the top-most left panel located on the main TrolLink screen.

Log.txt and DataWindow.txt files are located in the directory "DataFiles".
They are created if they do not exist.
If the files exist then newer data is appended onto the end of the files.
It is advised to monitor Log file sizes, they can grow large over time if not deleted.

Routes

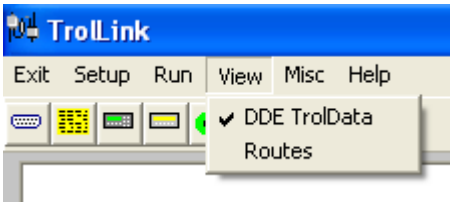
Routes can be used to:
1. Include short messages when data is collected.
2. Clear Peak value after data collection.
3. Reset time and date.

Enable routes by checking the "Routes" box located in the Misc settings group.



To view or edit the route list:

Select menu item "View"→"Routes" from the main or phone list screen.

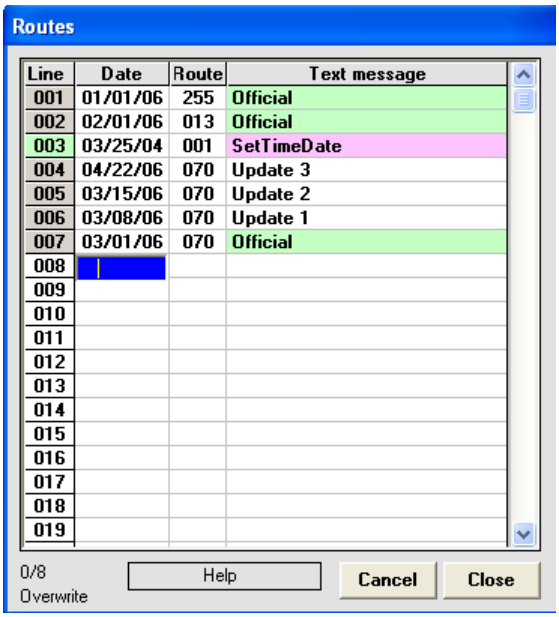


Note: If routes checkbox is not checked in misc settings group then routes are inactive and View→ routes menu is grayed-out.

Do not edit routes while TrolLink is running a data collection task.

Run Options

Routes editor



Line - The line number of a route on edit screen. (Not matched to a line in the phone list.)

Date - When route line will be tested.
(Date format is 2-digit each for month/day/year)

Route - A number used to match a route number in the phone list for an instrument. (Valid routes are 000-999).

Text message - Text to append onto a data read line. 15 character limit. The comma "," character is not allowed because it is used to separate data fields.

Special reserved text messages:
"Official" - Resets peak demand.
"SetTimeDate" - Sets time and/or date.

At the bottom-left "overwrite" or "Insert" (text) is shown. This function is toggled by the 'Insert' key.

The number group at the bottom-left (0/8) indicates the character position of the cursor in the edit field followed by the maximum number of characters the field allows. In the above example the edit field is at line 008 in the date column, at position 0. The maximum allowed characters is 8.

Help --- Click to display help topics. Click on help area to close.
Cancel - Closes routes editor window without saving.
Close -- Saves routes and closes editor window.

To insert or delete a line, left-click on a line number, the date field will select. Right-click to open a menu box. Left-click the option desired.

Routes load at run-time. If using the Timed start option, route lines used at next run are those that have the same dates as the next Timed start date.

To use routes for resetting Peak there are three additional steps required.
1. Peak demand check box for the instrument must be checked.
2. The word "Official" must be the text part of the route line in the routes.txt file.
3. The flow computer instrument must be setup to use Peak.

Summary: To print route messages the follow must be true.
a) There must be a "routes.txt" file.
b) It must contain lines with: date, number and a text message.
c) A Phone list item line must also have a matching route number.
d) The "routes" check box in the Misc group must be checked.
e) TrolLink must be running the phone list. (Started with "go" or "Timed start").

When a route date matches today's date, the line number field turns green.

When a special reserved text message is used, the field it is in changes color.

Unused fields are white.

The actual date of run is compared against each route line for a matching date. If found then the route number must match the route number of the phone list item currently running.

Excel

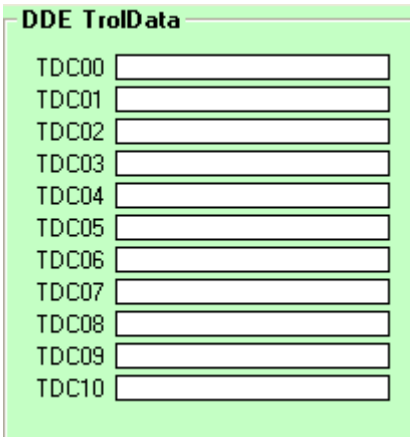
Writes data collected to an Excel spreadsheet if box is checked. You must have a working copy of Excel on your computer. (Excel is a product of the Microsoft Corporation).

View

"View" menu selections are used to show DDE registers or "Routes" edit screen.

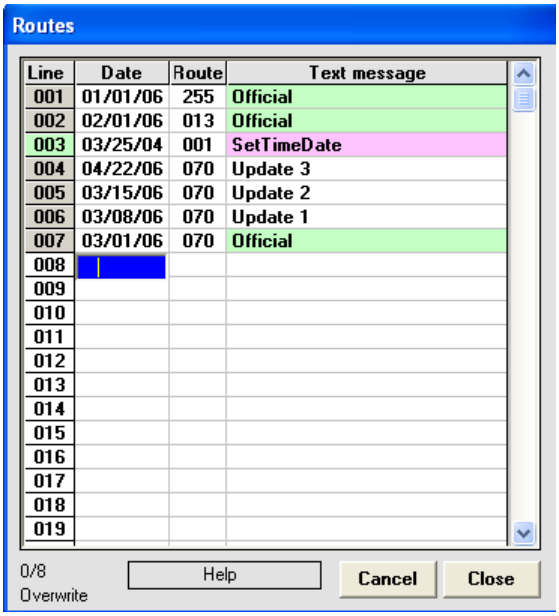
Check “DDE TrolData” to show DDE registers.

(Read more about this topic in the DDE manual section)

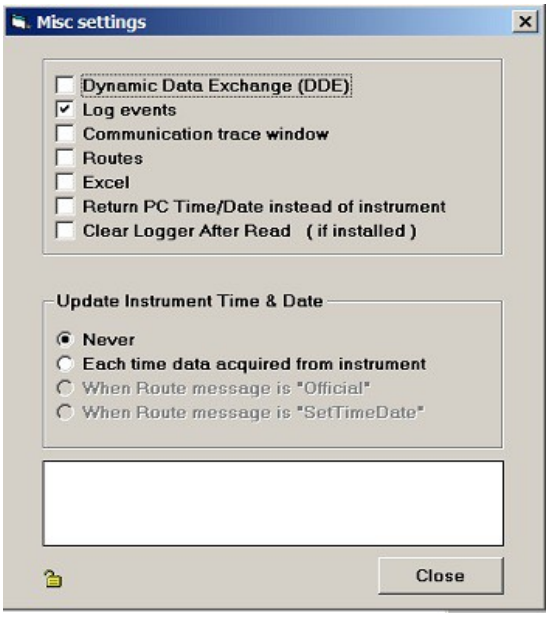


Check "Routes" to show route edit window.

(Read more about this topic in the Run Options manual section.)



MISC.



Click to toggle checks marks on and off. Options are selected when checked.

"Grayed-out" options are active only when routes are selected.

Dynamic Data Exchange (DDE)
Allows data collected from instruments to be available to (DDE) client applications.
(read more about this topic in the DDE manual section)

Log events
Saves run-time historical data about data collection sessions into text files.
See "Run Options" for details.

Communication trace window
Opens a sizable/movable window showing data exchange between instrument. Usefull for examining communications channel to see if trash/junk data. Normally not used for daily communications to instrument. (See appendix B)

Routes Routes can be used to:

1. Include short messages when data is collected.
2. Clear Peak value after data collection.
3. Set time or date in the instrument.

(Read more about this topic in the "Run Options" manual section).

Excel Writes data collected to an Excel spreadsheet.
See "Run Options" for details.

Update Instrument Time & Date Used to set instrument time and date clock to the PC time and date.

To set time and date there are three steps required.
The first two settings are for each instrument to be updated:

1. On Setup / display items screen; ☑ ☑ Date ☑ ☑ Time Check boxes must be checked

2 On "Setup / Display items / Format time and date" screen; Check item
☑ Update instrument Time/Date

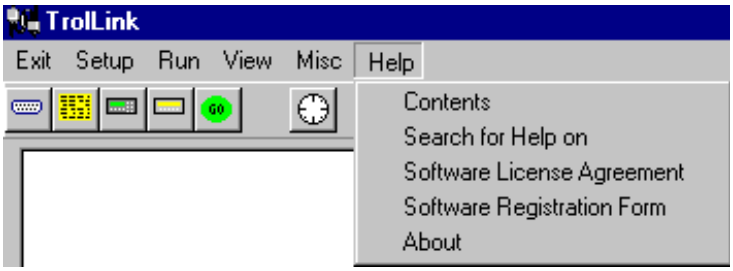
3. Check one of the "Update Instrument Time & Date selections. This is a global setting and can be used to turn on-off updates for all instruments without going into each instrument setup screen. To enable this option, items 1 & 2 must have been checked.

Time and Date update is done during the next data collection event.

Clear Logger After Read (if installed) Used to enable "Clear Logger After Read" option for each instrument on corresponding "Logger Options" screen. To clear logger, the selection must be checked in 2 places, the Misc and logger Options screens.

Help

"Help" menu contains a collection covering several topics.



Contents

Goes direct to the "table of contents" page when help starts.

Search for help on

Goes direct to the "Index" page when help starts**.**

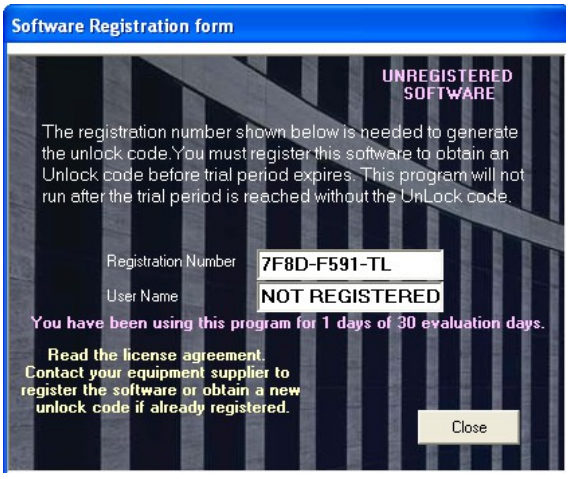
Software License Agreement

Displays the software license agreement.
See manual pages "License and Warranty".

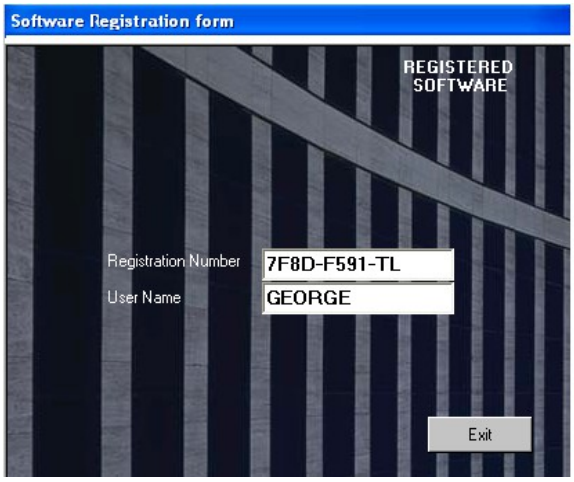
Software Registration Form

Displays the software registration form.

If not registered a reminder is shown.



If registered then registration number and user name are shown.



About

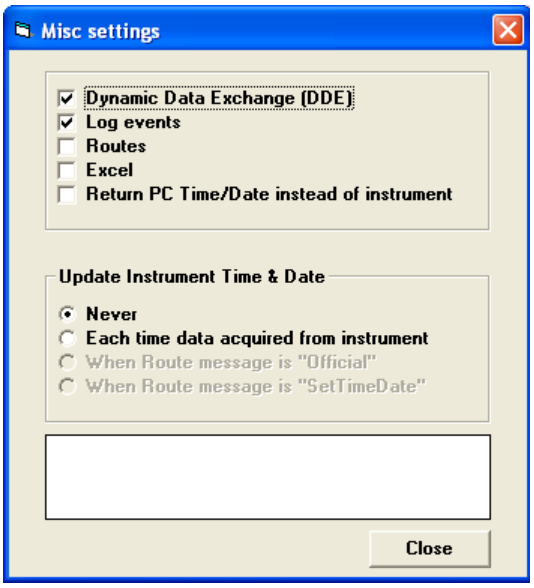
Displays software version, list of instruments Trollink collects data from, manufacturer and contact information.

DDE

Dynamic Data Exchange or DDE is a method used in Windows programs to send information or commands from one program to another. Not every program accepts DDE connections.

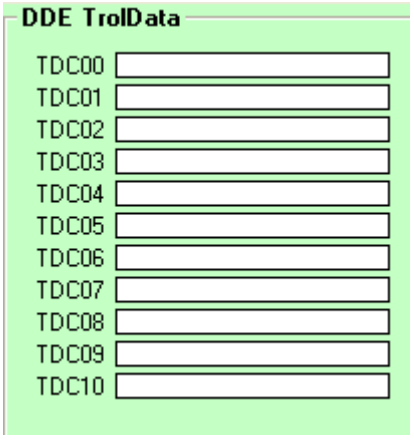
TrolLink supports DDE to provide a link to other Windows applications so they can access collected data. TrolLink operates as the DDE server (source). The other Windows application acts as the DDE client (destination).

Enable TrolLink's DDE service by checking the "Dynamic Data Exchange (DDE) option located in the "Misc settings" screen. "Misc" is a menu on the main TrolLink screen.



When TrolLink DDE is enabled the "DDE TrolData" register screen is shown and the message "DDE" is displayed at the bottom-left on the status line of the main screen.

Note:
The "DDE TrolData" register screen can be "hidden" or toggled on/off by checking the "DDE TrolData" selection located on the "View" menu. The view option doesn't enable or disable DDE, it only provides a way to hide the "DDE TrolData" screen. As long as the message "DDE" appears on the status line, DDE is active.



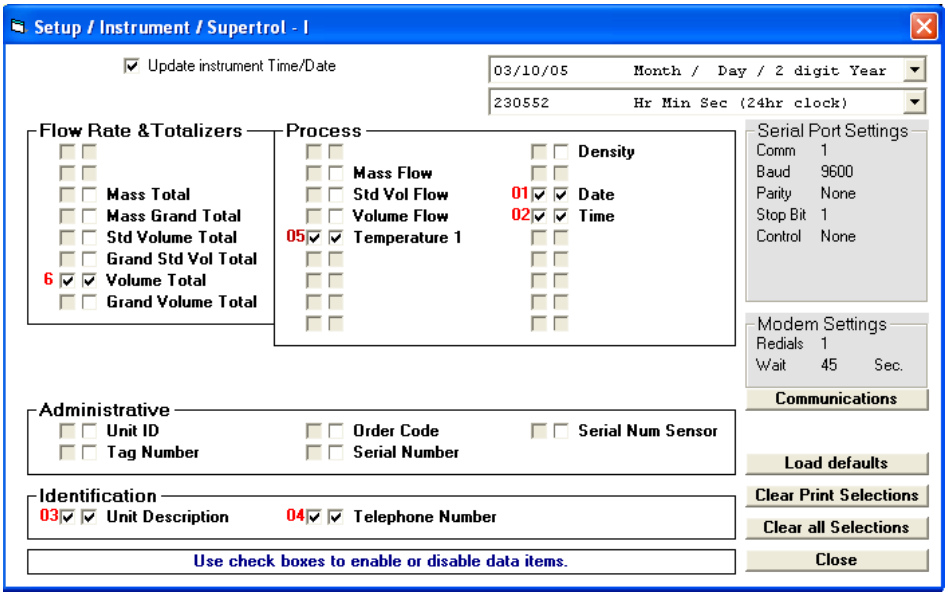
TrolLink has 11 DDE registers. The first 10 are TDC00 to TDC09 and are assigned in the same order as data items numbered on the instrument checkbox screens. The last DDE register TDC10 has a composite string of all data contained in the other registers with a comma delimiting each field.

NOTE:
The exact syntax for each DDE client application may vary somewhat. The example that follows is given only for the Microsoft Excel application installed on the same computer as TrolLink. Please refer to your application's manual for more information.

DDE

Example

Suppose the instrument model is a SuperTROL 1. The items selected for data collection are checked as shown here.



The red numbers next to the check boxes indicate the order DDE registers will be assigned for this instrument. This example results in "Date" being assigned to register TDC00, "Time" assigned to register TDC01 up to "Volume total" assigned to register TDC05. Ten DDE registers is the limit so if items checked result in more data fields than DDE registers then the extra data just isn't made available to the client application.

If there are several flow computers in the phone list then the client application may require a custom program script to capture the changing data and to store it. In short, DDE registers are not "hard" assigned to any instrument, they are reassigned-on-the-fly and reused for each instrument as data is collected.

To set up your DDE client use the following information.
Application name is TrolLink
Topic name is TrolData
Data registers or cells are named TDC00 through TDC10.

Example:
Let's setup a few Microsoft Excel spreadsheet cells to view data as it is being read by TrolLink. Assuming TrolLink is already configured we look at how to setup Excel. Open Excel to a blank worksheet. Place the cursor in cell A1 and type the formula then do the same for Cells A2 and A3.

Remember to select the appropriate format for the date and time cells.

Cell A1	=TrolLink|TrolData!TDC00	Displays date.
Cell A2	=TrolLink|TrolData!TDC01	Displays time.
Cell A3	=TrolLink|TrolData!TDC07	Display Volume Total.

Collect some data with TrolLink by pressing "Go" and you should see the data fill-in.

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You must allow a minimum of 14 business days to receive the unlock code. Moving this product to another computer after an unlock code has been entered or changing the computer operating systems, hard disks, random access memory devices and or other hardware may cause this product to promptly reject the unlock code due to the product generating a new software code and causing same to become inoperable. If this occurs a new unlock code must be obtained from the manufacturer. Our maximum aggregate liability to you in this case and that of our dealers and suppliers shall only be to issue a new unlock code within 14 business days only if it can be determined that this is the same and not another copy of the product installed on another computer. It is your responsibility to plan and provide for this product to be inoperable if you modify or make and change to the computer which this product was installed on. It is also possible that installing other programs and or operating system versions may cause this product to become inoperable or to not preform as expected.

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Any attempt to circumvent any expiry date or other mechanism contained within the software which is intended to limit your ability to use the software to a specified period is a violation of this license. Any attempt to circumvent any such expiry date technology mechanism shall result in the immediate termination of your license to use the software.

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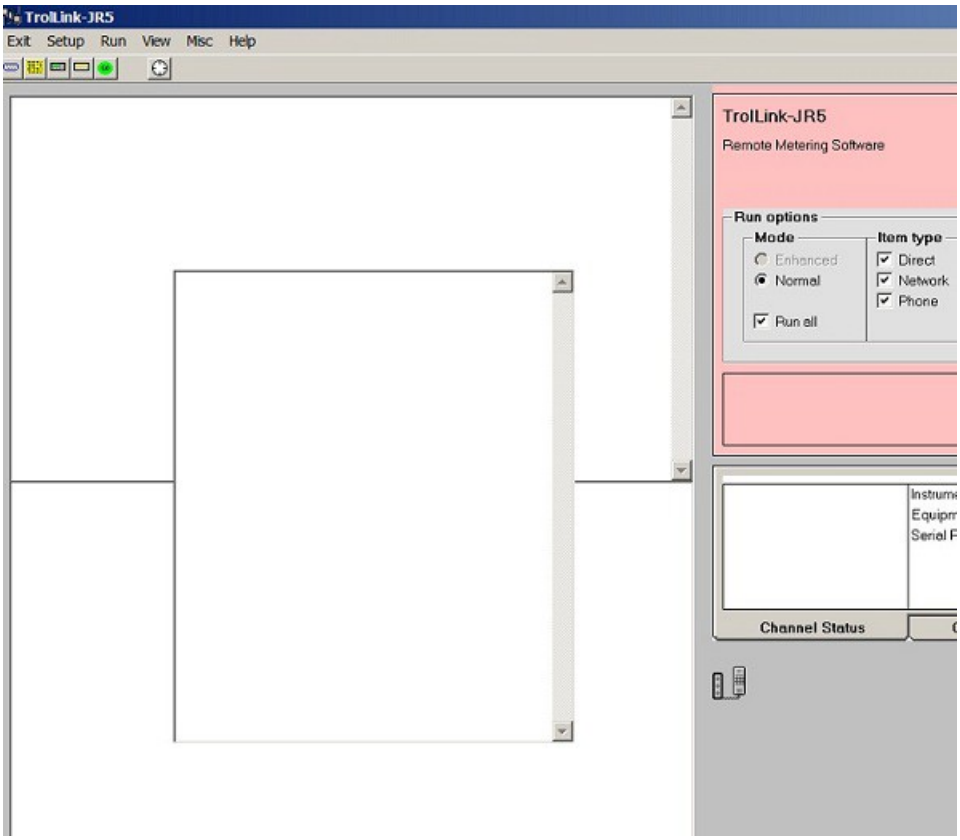
Communication Trace Window

A sizable/movable window showing data exchanges between PC and instrument. Useful for examining communications channel to see if trash/junk data. Normally not used for daily communications to instrument but as a tool to discover the quality of the communications path between PC and instrument. Data shown in the trace window is also written to a file called "DataWindow4.txt" which is usually located in the directory c:\program files\Datafiles (x86). Caution: the size of the file DataWindow4.txt will continue to grow, sometime quite large so it's advisable to turn-off trace window for normal data collection.

When first launched, the trace window will appear as follows:



How to change size and move the trace window:

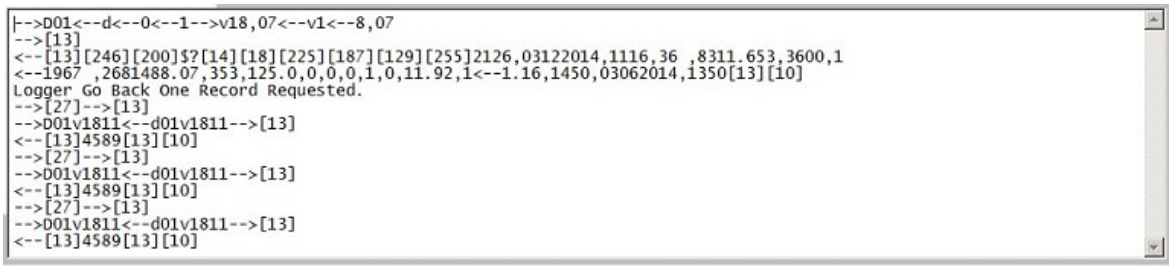
To move the trace window, place cursor onto the trace window and hold down the right or left mouse key. The mouse cursor symbol changes to a cross shape to indicate window may be moved. Move window to desired position then release mouse button.

To change window height, place mouse cursor onto lower part of window, about quarter to half inch inside window frame at window bottom. Next, press and hold mouse key. Cursor symbol will change to a vertical up/down arrow to indicate window size can be adjusted. While still holding mouse key down, move mouse to adjust length of lower part of window up or down.

To change window width, place mouse cursor onto right side of window, about a quarter to half inch inside window frame of right outer edge. Next, press and hold mouse key. Cursor symbol will change to a horizontal left/right arrow to indicate width of window can be adjusted. While still holding mouse key down, move mouse left or right to adjust width.

Communication Trace Window

Example of trace window after adjusted for height and width and showing some data exchanged between PC and instrument.



Data from PC going to instrument is proceeded with right pointing arrows "-->"
Data from instrument going to PC is proceeded with left pointing arrows "<--"
The arrow symbols "<--" and "-->" are not transmitted or received data, they are included to show direction of data.
Most data should be in the range of printable ASCII numeric characters such as 1,2... 0
Non-printable characters are displayed within brackes []
Example: [13] and [10] are none-printable characters but are usually OK because they indicate carrage return and line-feed and normally are not regarded as junk characters.
Data shown in the above window arriving from instrument channel shown as [246][200] are examples of "junk/trash data". A few random "junk/trash" characters may at times be tossed out by TrolLink if the data otherwise passes a few tests but too much "trash data" is a problem. The best way to collect good data is to start with a clean communication channel.