Tapco Configuration Tool
TAPCO
TRAFFIC & PARKING CONTROL COMPANY
Controller Settings
Time Clock Configuration
Data Management
Time Slot Flash Pattern
Version 2.1.3

BLINKERBEAM
TAPCO
800.236.0112

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Warning and Caution Statements and Notes:

Read These Prior to Assembly and Installation!

Warning, Caution and Note statements are used to emphasize important and critical information in this guide.

⚠ WARNING

Identifies a potentially hazardous situation which, if not avoided, could result in death or serious injury. Warning statements may describe what you should do to avoid the risk of exposure to the hazard, and may include potential consequences of not avoiding the hazard. Understand and heed all Warnings in this document!

⚠ CAUTION

Indicates an unsafe practice which could potentially result in minor or moderate injury. It may also be used to alert against unsafe practices that can cause component damage and void warranties. Understand and heed all Cautions in this document!

NOTE: Notes are used to inform you about beneficial tips, techniques and processes regarding the installation, operation, programming or maintenance of your system: they typically are not hazard-related.

Although we have included many potential hazards you may encounter during assembly and installation of this equipment, we cannot predict all of the possible hazards: these statements should not be a substitute for your judgment and experience.

If you have any questions that are not answered by this Guide, contact your Distributor or TAPCO Technical Support.

TAPCO Technical Support

Phone 866-753-6255 (M-F 8-5 CT)

Email blinkertech@tapconet.com

⚠ WARNING

Wherever AC power is present, electrical installation and servicing MUST be performed ONLY by a qualified electrician: serious personal injury or death may result from contact with hazardous AC power. BEFORE performing any wiring procedures or servicing, disconnect AC power source and verify the circuit breaker is 'OFF'.

⚠ WARNING

Batteries normally produce explosive gases which can cause personal injury or death. Therefore, do not allow flames, sparks or lit tobacco to come near batteries. Always provide ventilation when charging or working near a battery, and wear gloves, goggles and an apron. Batteries contain sulfuric acid which burns skin, eyes and clothing. Disconnect the fuses and/or solar panel leads before removing or replacing any electrical components. To disconnect batteries, always detach the negative terminal first (to prevent arcing). To re-connect, always attach the battery's positive terminal first and connect the battery's negative terminal lead last.

⚠ WARNING

Use appropriate OSHA-approved Protective Clothing and Devices, Cut-proof Gloves and Safety Glasses while performing all procedures. Failure to do so could result in death or serious injury.

⚠ WARNING

Read and understand ALL Warnings and Cautions in this Guide (including those on the previous page) BEFORE proceeding with assembly, installation and servicing.

Read the Notes statements to facilitate installation, operation, programming and maintenance.

Changes or modifications to TAPCO equipment not expressly approved in writing by TAPCO could damage the components and voids any warranty.

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NOTE: When installing or using the Configuration Software, you will need either an RS232 cable OR a USB to Serial converter cable connecting your PC and controller.

If you did not receive a bagged kit that includes a cable, it is available separately from TAPCO.

If your computer does not have the proper driver for Serial cable connection, you can select the driver for your operating system on the TAPCO thumb drive and download it to your computer.

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Software Installation

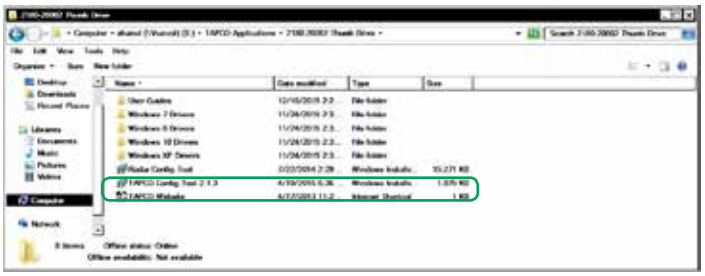
NOTE: When installing or using the Configuration Software, you will need an RS232 cable (or USB to Serial converter cable) connecting your PC and controller: cables are available separately from TAPCO.

If your computer does not have the proper driver for Serial cable connection, you can select the driver for your operating system on the TAPCO thumb drive and download it to your computer.

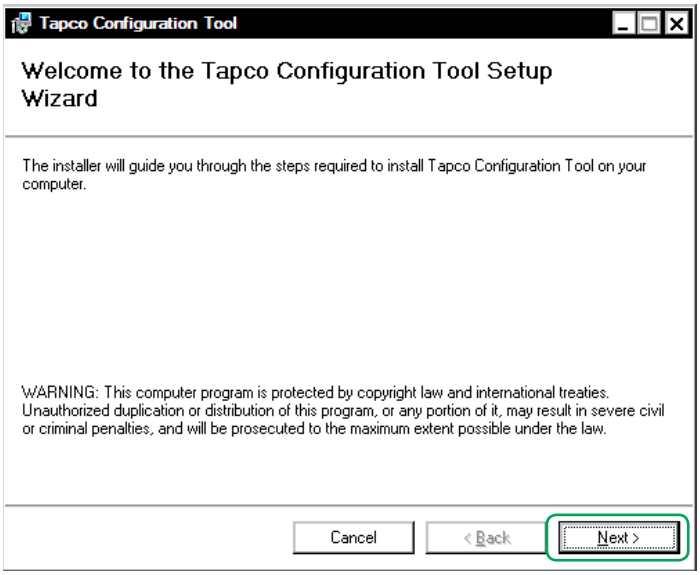
1. Power up your computer, preferably running Microsoft® Windows XP 32 bit. *Windows Vista and Windows 7 operating systems may require additional drivers and support, which are located on the thumb drive included with your order. If your thumb drive is corrupt you may download USB Cable Driver from the following web link:* http://www.ftdichip.com/Drivers/VCP.htm

2. Insert the included thumb drive into one of your computer's USB ports. When it appears, double-click the thumb drive icon on your desktop to open it.

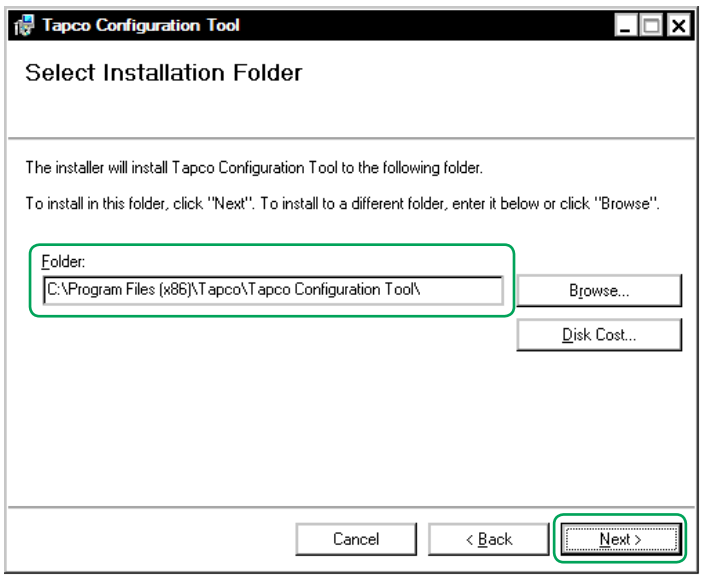
3. Double-click 'TAPCO Config Tool 2.1.3' file.



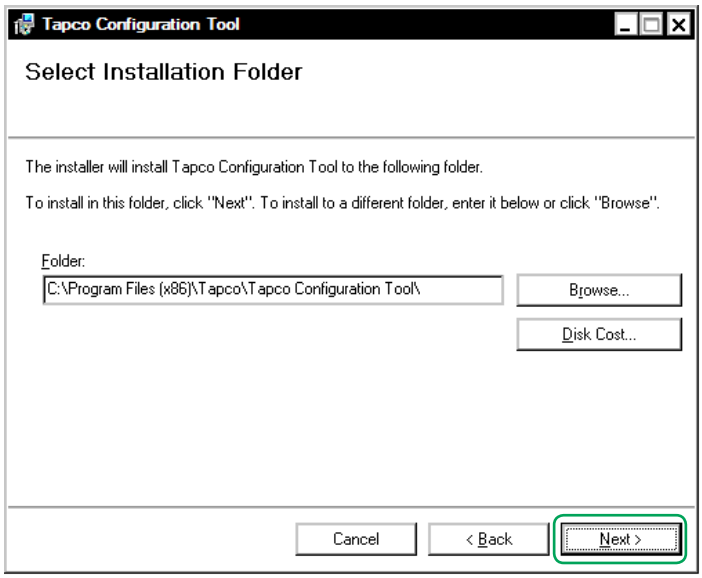
4. Once the Tool Setup Wizard initializes, you will see the following window: click on 'Next'.



5. The 'Select Installation Folder' window appears. By default the Configuration Tool system documentation will be stored in the 'Program Files' folder of your computer's hard drive: To select a different location to install software, click 'Browse...' and select a different location; if you wish to limit access to other Users of the computer, select the 'Just me' button; then click 'Next'.



6. The 'Confirm Installation Folder' window appears. Click 'Next'. Your computer may prompt you to allow the software to be uploaded to your computer. To do so, click 'Allow'.



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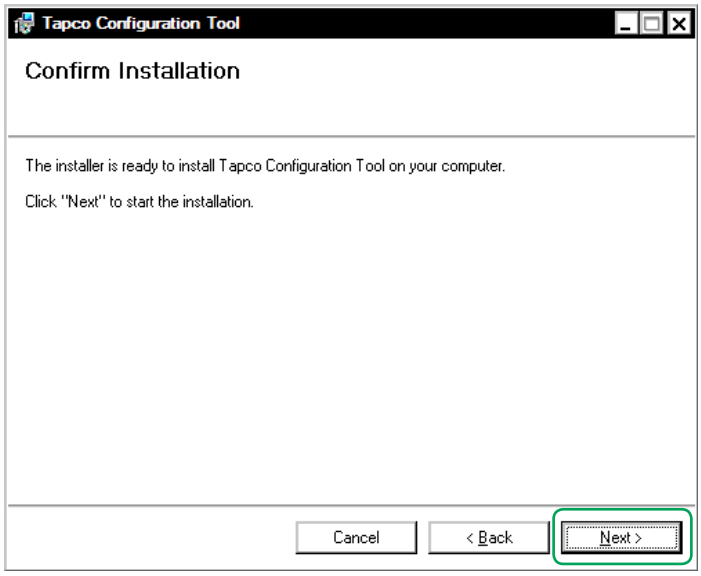
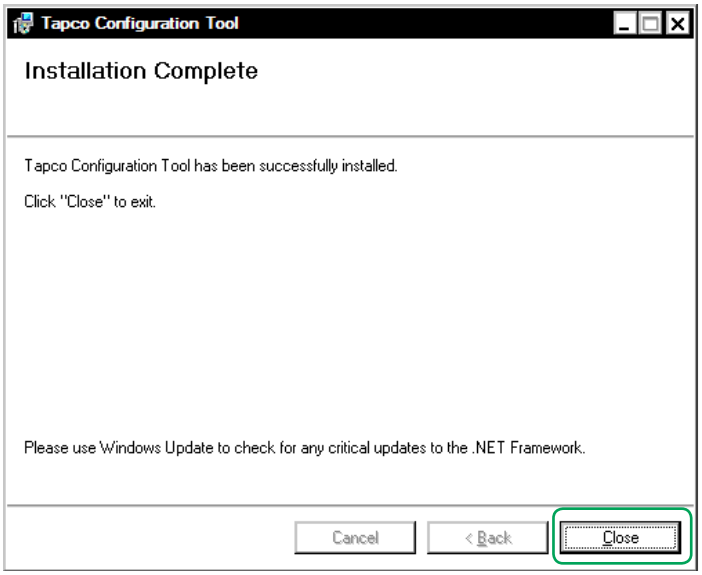
Software Installation (continued)

7. The 'Confirm Installation' window appears. Click 'Next'. You may be prompted to allow changes to your computer: if so, click 'Yes'.

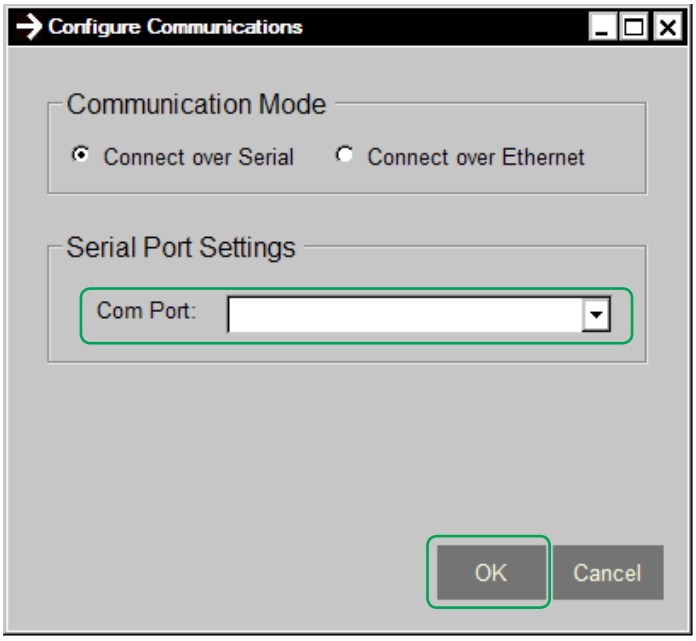


6. The 'Installation Complete' window appears. Click 'Close'.

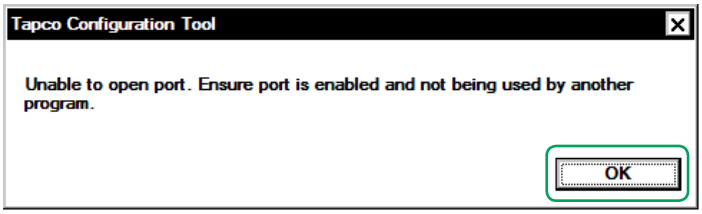


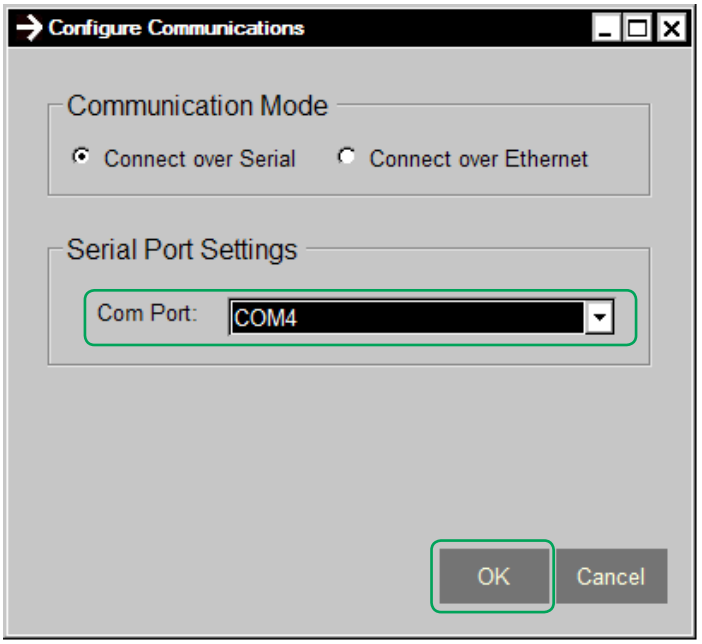
7. The TAPCO Configuration Tool icon will now be available on your desktop. Double-click on it to open the Tool.

4. You may need to configure the correct Com Port for your computer. If so, select the correct port and click 'OK'.



If your RS232 or USB cable is not connected, or if the Com Port is already being used by another program, this error message will pop up. Connect the cable properly and click 'OK'.





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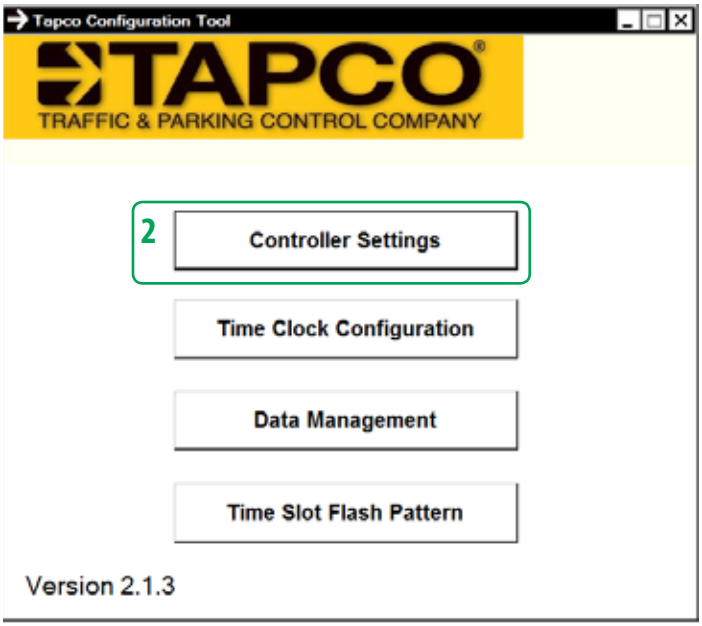
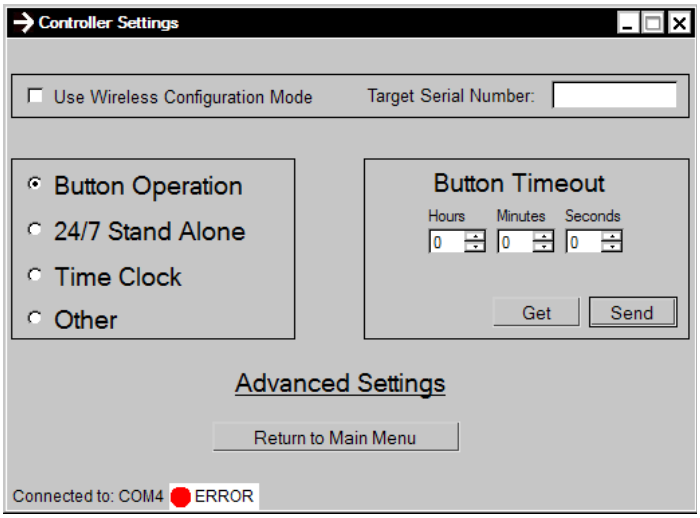
Use the TAPCO Configuration Tool software has many functions. The 'Controller Settings' window allows you to change the flash duration (Button Timeout) if desired: the default is 30 seconds.

1. Double-click the desktop link to open the software. The Configuration Tool main menu page will appear.

2. Click on the Controller Settings button: you'll see the Controller Settings window as illustrated below.



If your RS232 or USB cable is not connected, or if the Com Port is already being used by another program, the error message at the bottom left of the panel will pop up, as shown below. Connect the cable properly, click 'Return to Main Menu' and Repeat Step 2. When properly connected The 'Connected to:' at the bottom left of the panel will read '● READY'



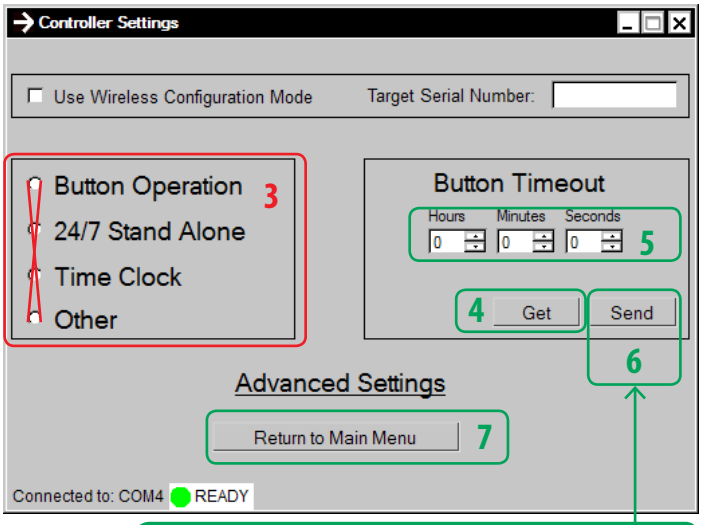
3. DO NOT change the type of activation in this panel: it should automatically select the appropriate setting based on the profile for your system.

4. If you wish to retrieve the current settings for the Button Timeout (if used), a.k.a. flash duration, click on the 'Get' button.

5. To edit the Timeout (flash duration), type in the desired value (or click on the up/down arrow buttons) after the Hours, Minutes or Seconds panes to adjust each to the desired duration.

6. When the desired Timeout (duration) is set, click on the 'Send' button to apply the new time to the controller. If you wish to verify that the Timeout is set correctly, click on 'Get' again. The applied settings will be displayed in the time panes. Amend values if necessary, then click on the 'Send' button.

7. You may now close the application if you wish, or click on the 'Return to Main Menu' button to continue.



NOTE: You must click on the 'Send' button to save and apply any changes you've made to settings.

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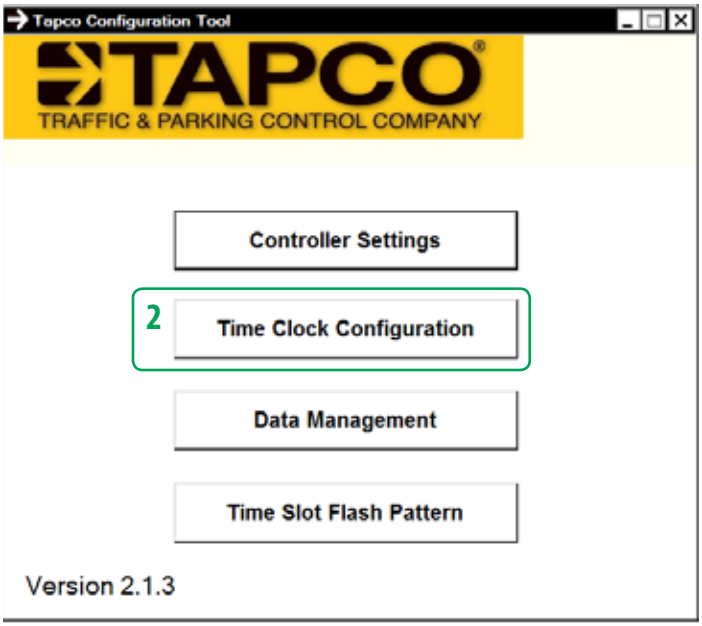
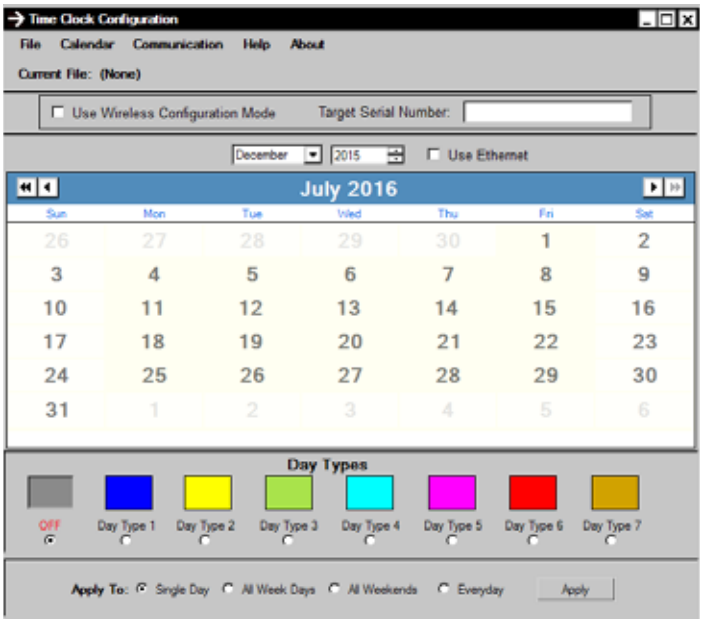
To activate your traffic control devices, you must have the Time Clock button selected (see section 'Controller Settings); then you can schedule Calendar activation of your device(s) that are linked to that particular controller.

1. Double-click the desktop link to open the software. The Configuration Tool main menu page will appear.

2. Click on the Time Clock Configuration button. The Calendar (Time Clock Configuration) window will appear, as shown below. When opened initially it will display by default a 'blank' calendar with no days selected, indicated by an off-white background.

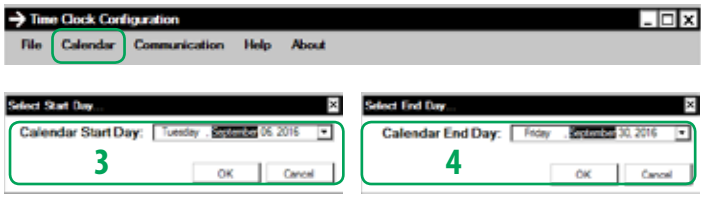




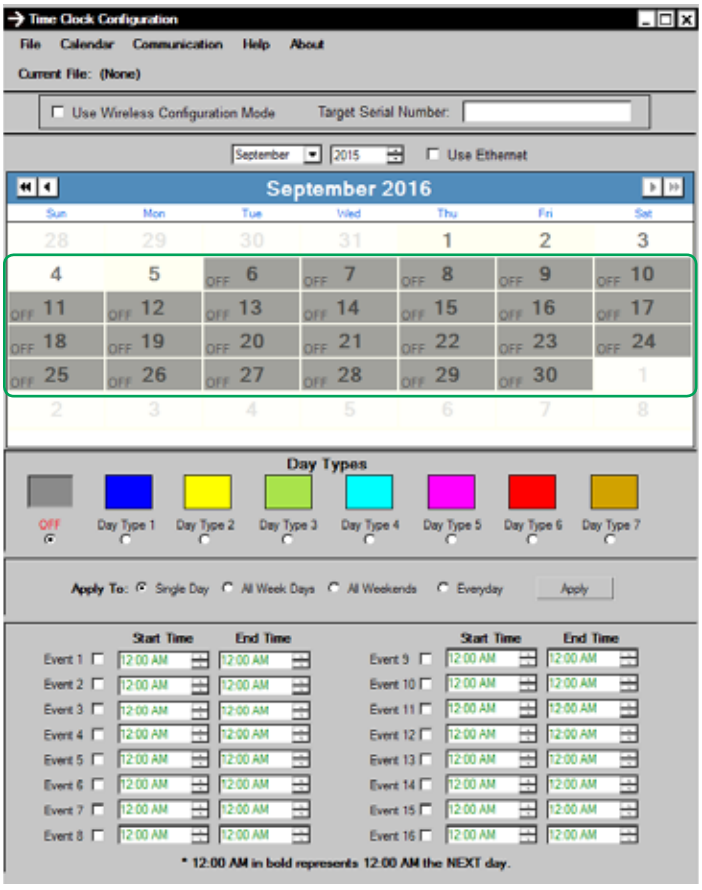
3. To create a schedule, start by setting the start and end dates* of your MOST COMMON schedule. Click on the 'Calendar' tab at the top of the Time Clock Configuration window, then select 'Set Start Day' from the drop-down menu. Enter the date on which you would like the schedule to start; then click 'OK'.

4. Then, select the End Day: Click on the 'Calendar' tab and then select 'Set End Day'. Enter the date on which you would like the schedule to end; then click 'OK'.

**Note that the Set End Day defaults to two years after the Set Start Day. The End Day cannot be set to more than two years after the Start Date. Set End Day as needed.*



With your most common schedule's start and end **days** selected, the calendar for those days will now be shaded, indicating that you can select a Day Type for this calendar schedule. Your event start and end times for activation(s) can now be applied.



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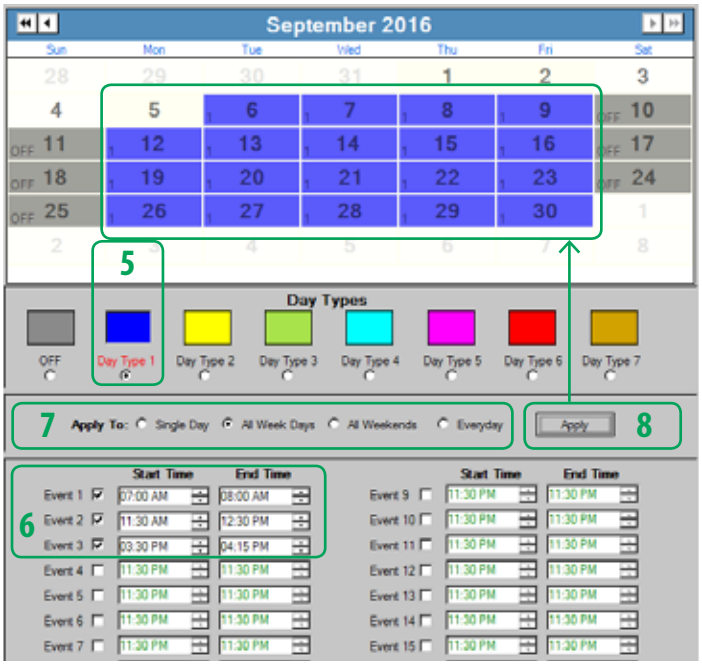
NOTE: You can program from 1 to 16 Events (activations with start and stop times) per Day Type. You can save up to 7 different Day Types, each with its unique set of activation times (events). Thus you can apply recurring scheduled activation intervals simply by selecting a Day Type and then clicking on a desired day or range of dates, saving you considerable time in scheduling.

5. Select a Day Type by clicking the button below it. *Note: You can schedule up to 16 events (starting and stopping times) for that Day Type. The 'OFF' Day Type means no events are scheduled for that day. White areas on the calendar are also OFF day types.*

6. *Events **must** be programmed sequentially, so start with the **earliest** event time and progress through the day. The start time of each ensuing event MUST be **after** the end time of the previous event.* To edit the selected Day Type's start time and end time for each event, you must first select the check box to the right of the event number. Then adjust the start time and end time by clicking on either the hour, minute or AM/PM; then change to the desired value by typing in or using the up/down arrows. Repeat the process for each additional event for that Day Type.

7. Now that you've set up all event times for a Day Type, check the button for the days to which you'll apply the event activations: to a single day; to all weekdays; to all weekends; or to every day.

8. When completed, click on the 'Apply' button. The selected calendar dates will change color to the Day Type color.



9. Repeat Steps 5 though 8 for all other Day Types. To quickly turn off activations for any individual day, simply click the button under the 'OFF' Day Type, then click on the calendar date or dates you wish to have no activations.

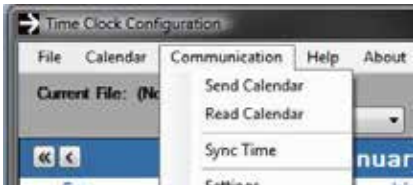
10. Next, synchronize the time with your computer to reflect the local time zone. To do this, select the 'Communication' tab on the menu and click on 'Sync Time'.

11. Next, save your schedule by selecting the 'File' tab in the menu, then clicking on 'Save'. Enter a descriptive name for the calendar schedule and save it to a standard location on your computer. *Descriptive names could be something like '2016 1st Semester' or '2016 Spring Break'.* Once you name the file it will be shown as 'Current File: (YourName)'

12. Now you can apply the calendar settings to the device controller's Time Clock. To do this, select the 'Communication' tab in the menu, then click on 'Send Calendar'. This will load the calendar settings you have created onto the connected controller's Time Clock.

Your Time Clock is now scheduled.

Note: You may repeat the process for scheduling additional time frames by starting again with Step 3.* ***Or, to create a schedule similar to a previous one: select File, click on 'Load'; then modify the Dates and Day Types; and then 'Save As' with a new name.*



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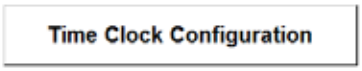
The TAPCO Configuration Tool software includes a Data Management feature that enables you to set up time 'bins' for data collection and exporting the data into a Microsoft Excel™ .xls file format for further manipulation and reporting.

With this Configuration Tool you will need to set up each controller location in your system individually. This will provide activation information for each device's controller in your system.

1. Double-click the desktop link to open the software.

2. On the Main Page, click on the 'Time Clock Configuration' button.



3. Once the calendar window opens, be sure to check that 'Communication Status' located at the bottom of the page appears with a green indicator showing a 'Connected' message, as shown below. If it doesn't, check your cable connection at your computer. If it still doesn't show as connected, you may need additional drivers and support. Contact TAPCO Technical Support if you have any questions.

4. Now that you are connected, you may begin setup of the Data Management feature on your controller. Select the 'Communication' tab and then click on 'Sync Time'.

5. 'Sync Time' accesses and synchronizes the internal real time clock on your controller with your PC's time. **Be sure to verify your computer's time is accurate before performing a 'Synch'.** Once you have verified your computer's time, select the 'Synch PC with Device' option.

6. Next, select 'Get Device Time' to verify that the device time is the same as your computer's time. If the Device Time is not the same as your computer's time, repeat steps 4-6.

7. Once you have completed step 5 and/or step 6, select 'OK'.

8. Now that the controller is set with the correct time and date we will set the controller's daylight savings time settings. Select the 'Calendar' tab and then click 'DST Settings.'

9. If Daylight Savings Time is used in your locality, click the checkbox for 'Enable Daylight Savings Time.'

10. Once DST is enabled, the software will default with the standard DST start and end days. Once you have verified the correct start and end days, click 'Synch DST Settings with Device'. This will send the DST settings to the controller.

11. After the DST 'Synch' is complete, click the 'Get Device DST Settings' button to verify correct settings in the controller.

12. Once completed, select 'OK'.

13. You can now close the Time Clock Configuration Calendar window.
If prompted to 'Save the current configuration file' you can select 'No', as this is not necessary for Data Collection.

Close the application or choose from the main menu page for other features.

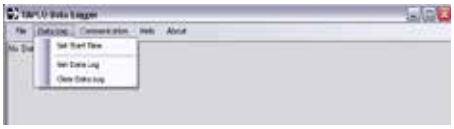
Repeat this process for each controller that you wish to configure.

The Data Management Tool is used to set up and manage the data collection feature on your controllers.

1. On the Main Page, click on the 'Data Management' button.

2. Once the Data Management window opens, be sure the green Communication Status button at the bottom of the window is on; the display will read 'Connected'.

3. Next select the 'Data Log' tab in the menu; then click on 'Set Start Time'.



4. The 'Set Start Time Parameters' window allows you to select the starting date and time for collecting data. Using the calendar-based panes and arrows, choose the date and time you want to start collecting data.

5. Next, select the interval you want to collect activation data. This interval setting will store the amount of count data in the time interval selected. The options are 1 minute, 5 minutes, 15 minutes, 30 minutes, 1 hour and 24 hours. ***Note: The lower the interval, the lower the amount of data that can be stored.** Typically, 1 hour intervals will give you about 2 weeks worth of activation data.

The option to Overwrite Old Data is available by selecting the checkbox 'Overwrite Old Data' , which will begin to overwrite the oldest data when the memory is full. For additional information you may contact TAPCO Technical Support at 1-866-753-6255.

6. Once complete, select 'Send Values to Device'. *The software will warn you that the operation will clear all current data log information.* See next page for instructions on saving data. If acceptable, select 'Continue'. The controller is now set to start collecting data.

7. After sending the values to device, select the 'Get Values from Device' tab to verify that the correct settings are installed. Once completed, select 'OK'.

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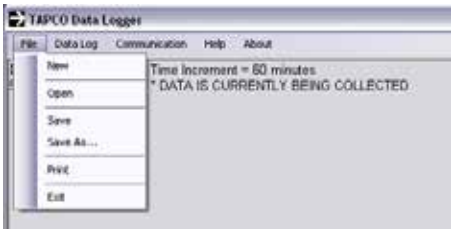
The Controller always collects data from the beginning of the start date and time using the intervals preset during the configuration (previous page). To download data from the controller, start by establishing a connection.

1. On the TAPCO Configuration Tool Main Page, click on the 'Data Management' button.

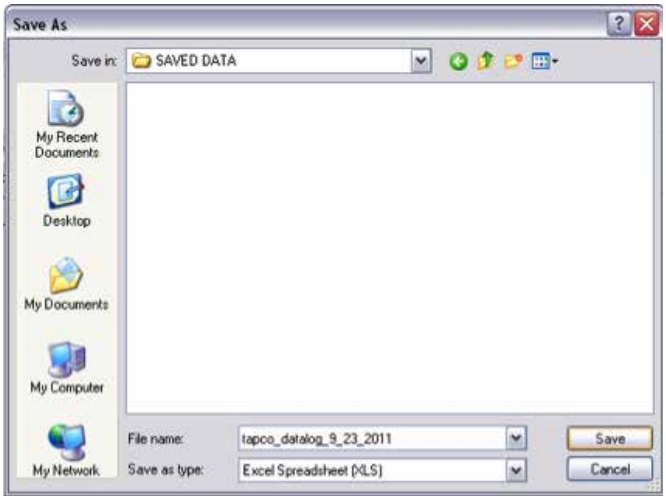
2. To begin downloading the data from the controller, select the 'Data Log' tab, then click on 'Get Data Log'. The status bar at the bottom of window will display the progress. Once completed, the collected data will be displayed in the open window in a basic text format.

3. The next step is to save this data onto your computer (or network if available). Begin by selecting the 'File' tab, then click 'Save As'.

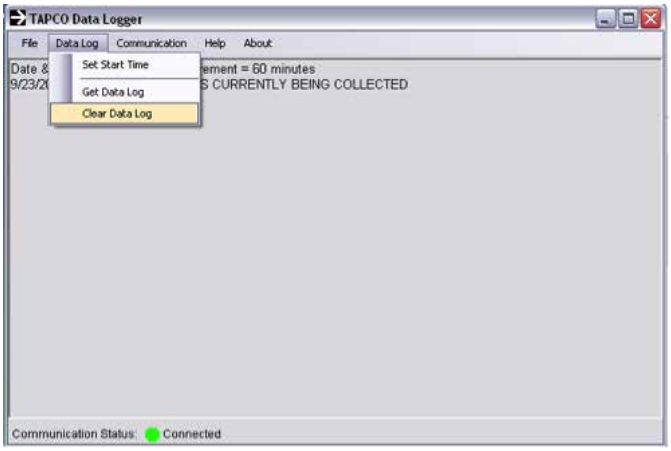


4. This will prompt you to name and to save the file to a specific location on your computer (or network if available).

Once completed, click on 'Save'. *Note: the file will be saved as an .xls Microsoft Excel Spreadsheet. This file can then be opened and manipulated for further reporting. Free Excel reader apps are available on the internet.*



5. Lastly, in order to clear the internal data, select the 'Data Log' tab and then click on 'Clear Data Log'. This will clear all internal memory and will continue collecting data as configured in the 'Set Start Time' window.



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For technical support:

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E-mail blinkertech@tapconet.com

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