Timetek Systems

MasterTimeSyncÔ

User Guide

Version. 2.0

*Information contained herein is subject to change without prior notification

Contents

Introduction

MasterTimeSync™ is a program that will update ALPHA LED Serial Clocks & ALPHA Big Dot Signs every minute, every hour, or once a day, based on the internal clock of the PC upon which this Application is running.
MasterTimeSync™ offers two alternative ways of sending this information to the Clocks, the first being via a *Serial Connection from one of the computers Com Ports the other being via a **LAN Connection using TCP\IP.
MasterTimeSync™ can be synchronised with either an Internet based timeserver, ***GPS Module or a local timeserver on your existing network, therefore keeping all clocks to the one time.
MasterTimeSync™ has an incorporated system test feature and optional ****Bell Signal Control that with a user defined schedule can be used for Start/Finish times. The signal can also be controlled manually from the PC for special events.

* For Serial you will require a RS232 to RS485 Converter Box.

** For TCP\IP you will require an Ethernet Adapter.

*** GPS Module available from your supplier.

**** For Bell Control you will require the Bell Module.

System Requirements

- ✓ Pentium or higher processor
- ✓ Windows 98, ME, 2000 or XP
- ✓ 15MB of free hard disk space
- ✓ 32MB RAM
- ✓ Spare COM Port or Network Ability
- ✓ Internet Connection (for time settings)

Installation

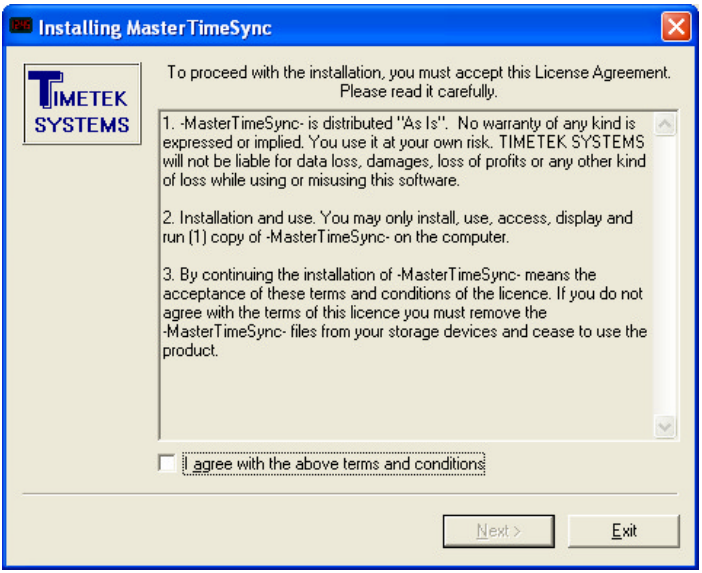
1. Insert the installation CD into the CD-ROM drive of the computer.

2. The CD should auto-run, if not press the **Start** button, and then press **Run**.

3. Type **<drive>:setup**. For example, if the CD-ROM drive is drive E, type **e:setup** then press **Enter**.

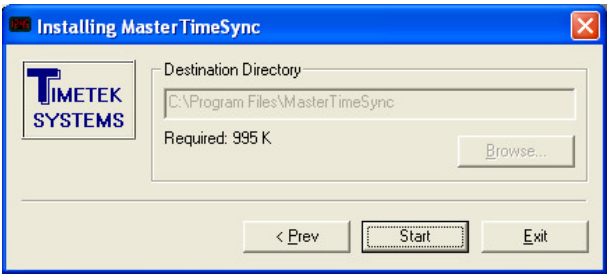
4. Select Install MasterTimeSync and enter the serial number.

5. Read the **License Agreement** carefully and if you agree check the **I agree with the above terms and conditions** box at the bottom of the screen, then press **Next**.

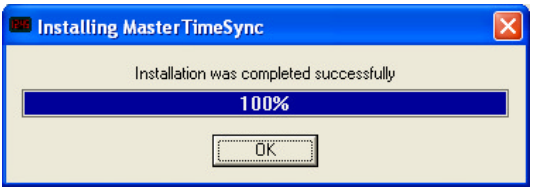


License Agreement

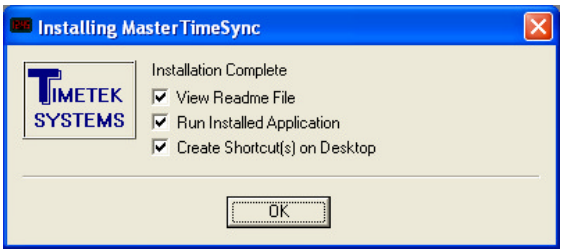
6. The next screen shows the destination folder the program will be installed to. This is a default location and cannot be changed.



7. Make note of where the folder is and then press **Start**.

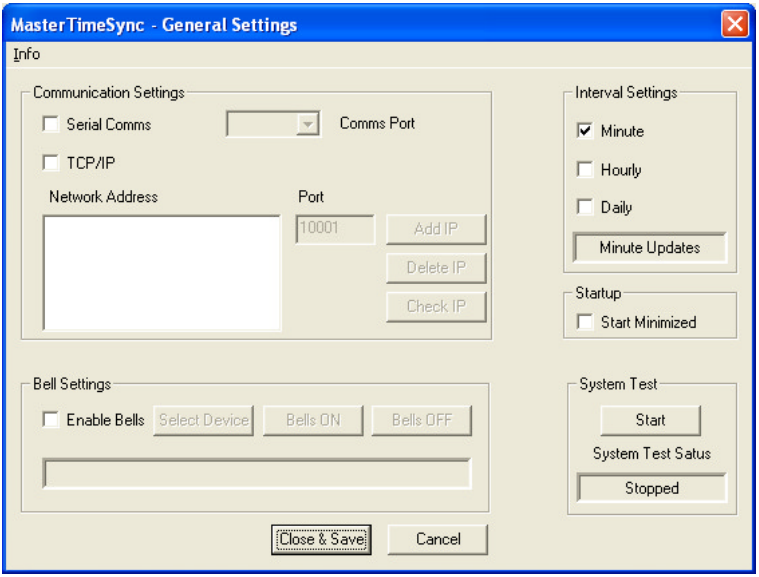


8. Upon completion of the installation, by default it will ask if you want to run the Application if you don't wish to do this un-check the **Run Installed Application** box and press **OK**.



General Settings

When you run the program for the first time the Settings screen will appear, it has five sections, Communication Settings, Interval Settings, Startup, System Test and Bell Settings. This is where you set-up things like how MasterTimeSync™ will communicate with the clocks and how often, preform system tests and enable Bell Control (optional).



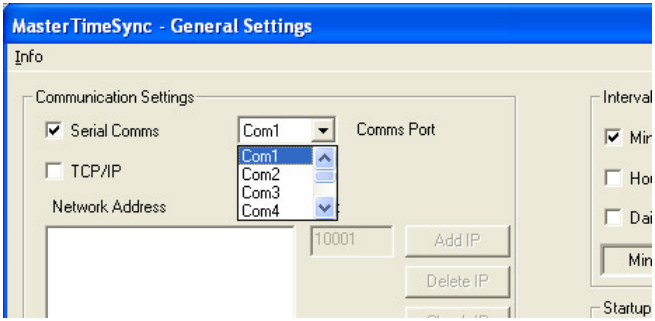
General Settings Screen

Communication Settings:

This is the section where you set-up either a Serial Connection or a TCP/IP Connection. For Serial Connection you will require a Converter Box and for TCP/IP you will require an Ethernet Adapter. (Contact you supplier for details).

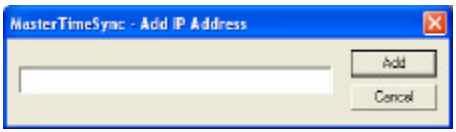
Serial Connection:

- To connect to the Alpha clock using a Serial Connection check the **Serial Comms** connection box.
- Select the Com Port that the Converter Box is attached to by using the scroll bar.
- The Baud Rate and Parameters are set by default to 9600, 8, none and 1, this cannot be changed.
- The next step is to move on to Interval Settings. (page 9)



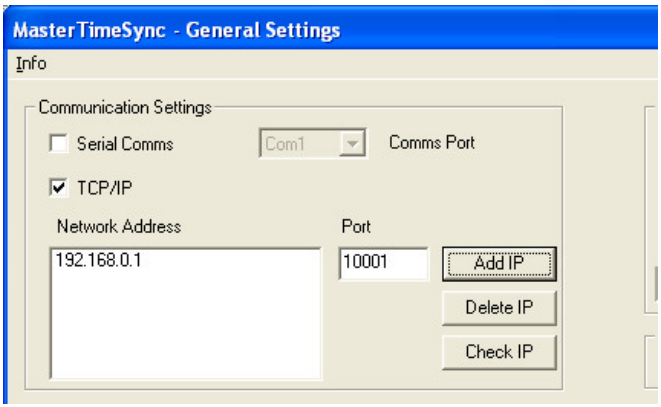
TCP\IP Connection:

- To connect to the Alpha clock using a TCP\IP Connection check the **TCP\IP** connection box.
- Then press the **Add IP** button this will bring up a screen prompting you to enter a valid TCP/IP Address, enter a Network Address (IP Address) and press **Add**.



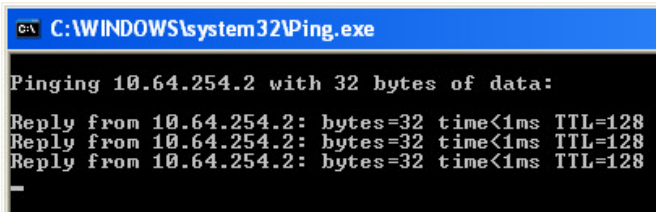
- For more than one IP Address repeat the above step.

- The IP Addresses can be viewed by selecting the drop down arrow on the Network Address Box.
- You can delete any of the IP Addresses by highlighting them and pressing **Delete IP**.



Testing IP Address:

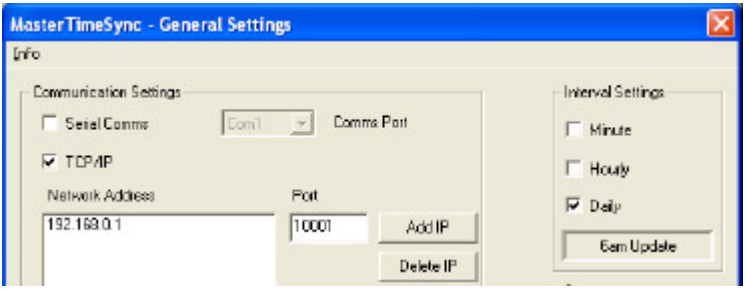
- To test communication simply highlight an IP Address and press **Check IP** this will bring up the Ping Command.
- If successful it should read Reply from (your IP Address).
- If it reads Request Timed Out check your IP Address, if the IP address is OK check all connections and cabling.
- The next step is to move on to Interval Selection. (page 9)



Interval Selection:

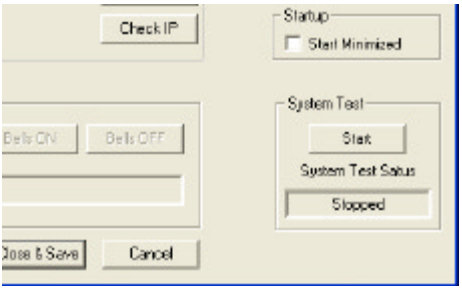
- MasterTimeSync™ offers you three options on how to send the updates to the clock.
- **Minute**, this will send an update every minute.
- **Hourly**, this will send a signal every hour on the hour.
- **Daily**, this will send one update a day at 6am.

* Default is **Minute**.



Startup:

- By selecting **Start Minimized** MasterTimeSync™ will, after restarting the PC, run in the background with an icon in the system tray. By not selecting this, the Run Screen will appear after a restart.

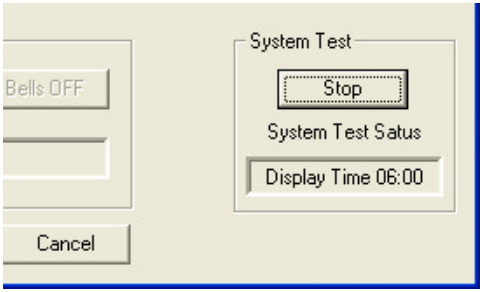


System Test:

The System Test feature is for testing communication to the clocks. It sends a signal to the clocks every 30sec, forcing the time to 6am and holds them there until the test is stoped. It is recommended that you conduct this test on a new installation. Any clocks that don't stay at 6am possibly have a cable or connection fault.

- Press **Start**, the System Test Status window will display Starting.
- When the window displays Display Time 06:00 the clocks should all be at 6am.
- Press **Stop** to end the test, the clocks will reset to time on the next minute.

* Closing the screen will also end the test.



Bell Settings:

For information on setting up signal control refer to Bells on page 15.

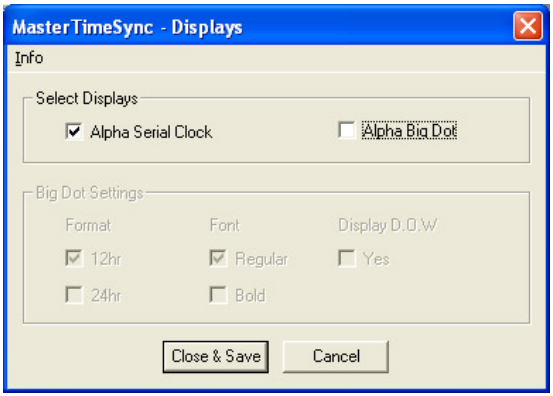
Display Settings

This is where you select the displays that you will be running on the system. Currently MasterTimeSync™ supports Alpha Serial Clocks and the Alpha Big Dot Range of Signs.

Select Displays:

- If you are only running Alpha Serial Clocks you do not have to change anything, as they are selected by default.
- Press **Close & Save.**

- To run Big Dot displays select **Alpha Big Dot**.
- This will enable the Big Dot Settings.

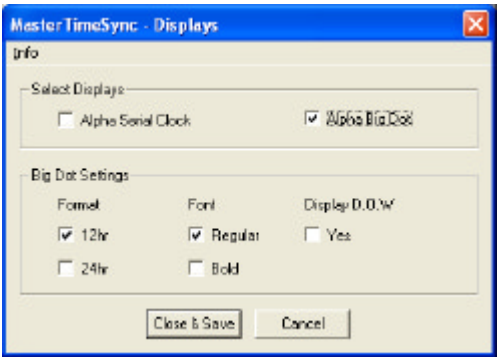


Display Settings Screen

- Then go to Big Dot Settings over the page.

Big Dot Settings:

- Select the **Format** 12hr or 24hr, this will display 6:00pm or 18:00 respectively (default 12hr).
- Select the **Font** Regular or Bold. Bold will give you a greater viewing distance (default Regular).
- Select **Yes** if you wish to display the Day Of Week on the sign (eg. Tue 6:00pm, Tue 18:00 …ect)

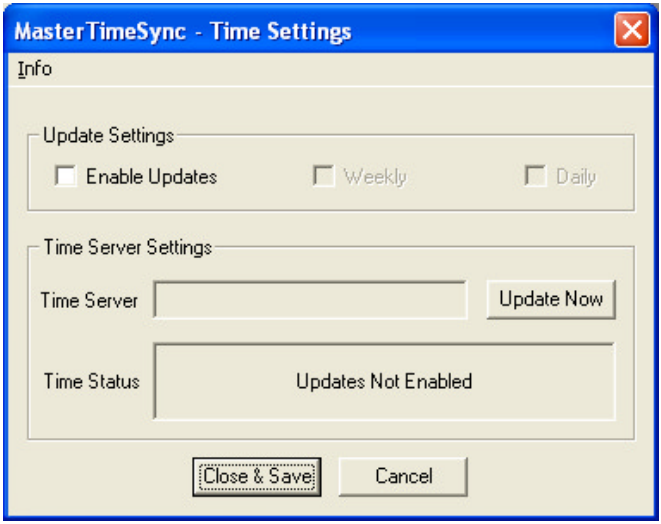


- Press **Close & Save.**

Time Settings

MasterTimeSync™ gets its time from the computers internal clock, if the PC clock is not on time the system clocks will reflect that. By using the Time Settings in MasterTimeSync™ the computers internal clock can be synchronized to a timeserver, either via an internet based timeserver such as the one at the National Institute of Standards and Technology (time.nist.gov), a time sever on the local network or a *GPS Unit that uses satellites to retrieve the time.

* Contact your supplier for details.



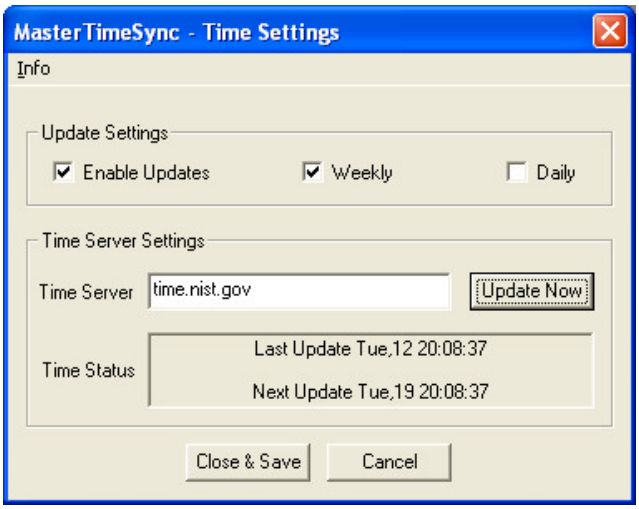
Time Settings Screen

Update Settings:

- Select **Enable Updates**.
- Then choose **Weekly** or **Daily** updates (default is **Weekly**).

Time Server Settings:

- Enter a URL or IP Address of a timeserver into the Time Server window **(**eg. Time.nist.gov).
- Then press **Update Now** this will update the system time and display the results in the Time Status window.
- The Time Status window will also display the next update time according to your selection in Update Settings.



- Press **Close & Save.**

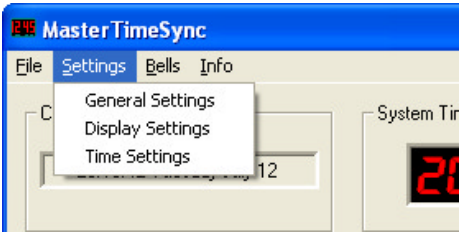
Bells

MasterTimeSync™ has the ability to control a signalling device to indicate work start stop times (eg. bell or siren). This is an optional extra and requires Bell Module available from your supplier.

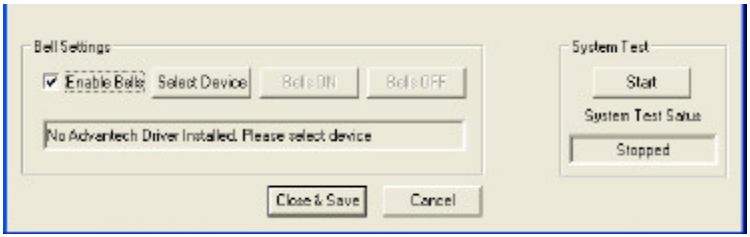
* You will not be able to enable the bells without the Bell Module.

Bell Setup:

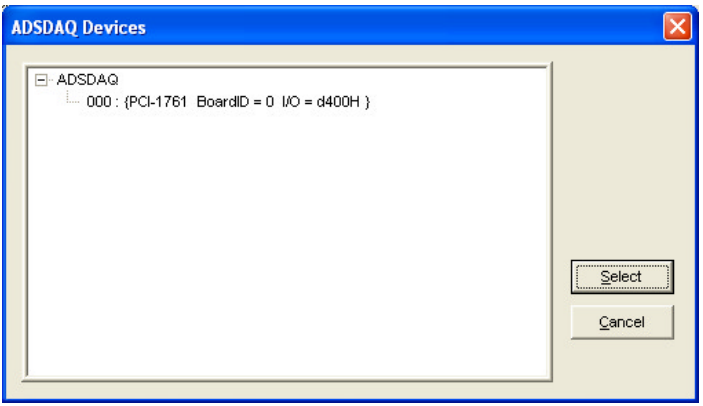
- From the run screen under **Settings,** select **General Settings**.



- Select **Enable Bells,** then press **Select Device**.

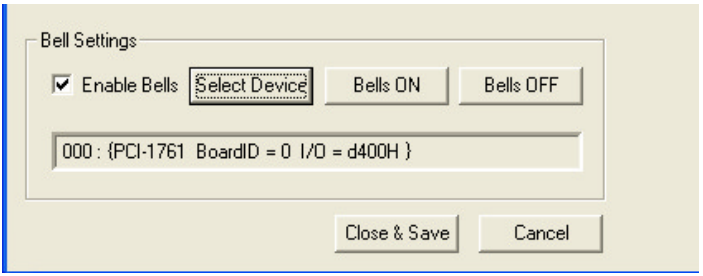


- The following screen will appear.
- Highlight the PCI-1761 device and press **Select**.



ADSDAQ Device Screen

- The device will now be displayed in the Bell Settings window.

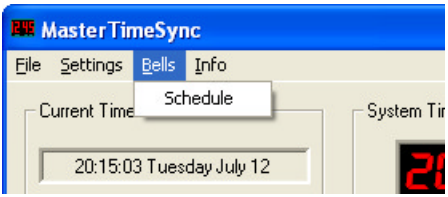


- You can test the relay by selecting **Bells On** then **Bells Off**.

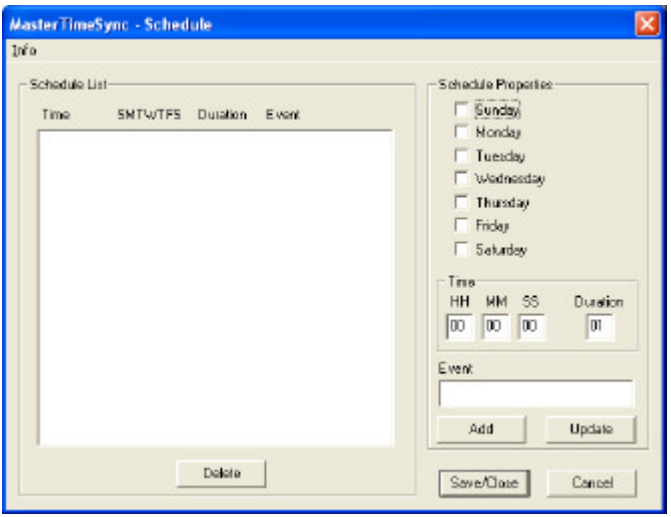
Bell Schedule:

The bell Schedule is where you input your signal events. They are entered by selecting the days of the week it is to occur, the time and the duration or length of the signal. You can also enter an event description if you like this can help identify the events in the schedule list.

- From the run screen under **Bells** select **Schedule**.



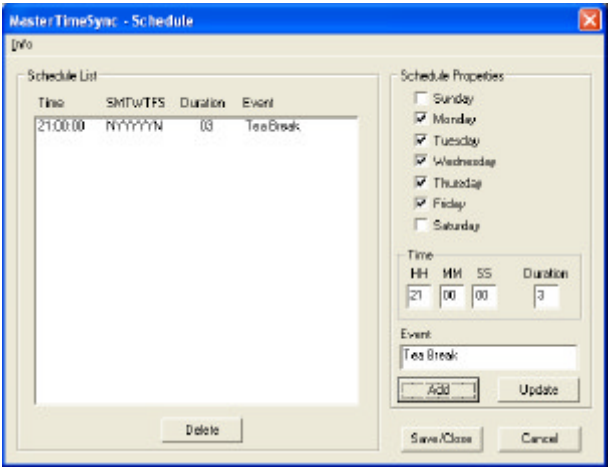
- This will open the Schedule Screen.



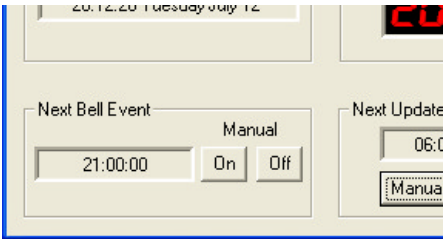
Schedule Screen

Adding Events:

- Select the box corresponding the day or days you require.
- Enter the time in 24hr format HH:MM:SS (HH = Hours, MM = Minutes, SS = Seconds).
- Enter the Duration in Seconds (max 30).
- Enter a description for the event, and then press **Add**.
- Repeat the above steps until all events are entered in the Schedule List.



- Press **Save/Close.**



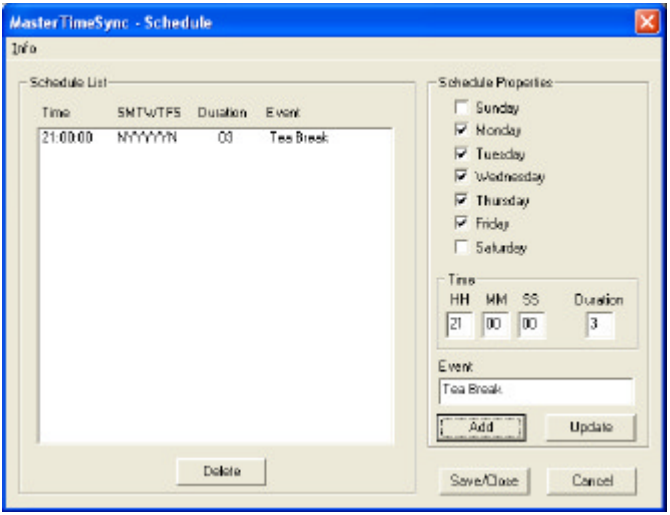
- The Next Bell Event will be displayed on the Run Screen.

Deleting Events:

- Highlight the event in the Schedule List.
- Press **Delete**.
- Press **Save/Close**.

Editing Events:

- Highlight the event in the Schedule List.
- Its properties will be displayed in the Schedule Properties.
- Make any changes required then press **Update**.
- The event will now reflect the changes in the Schedule List.

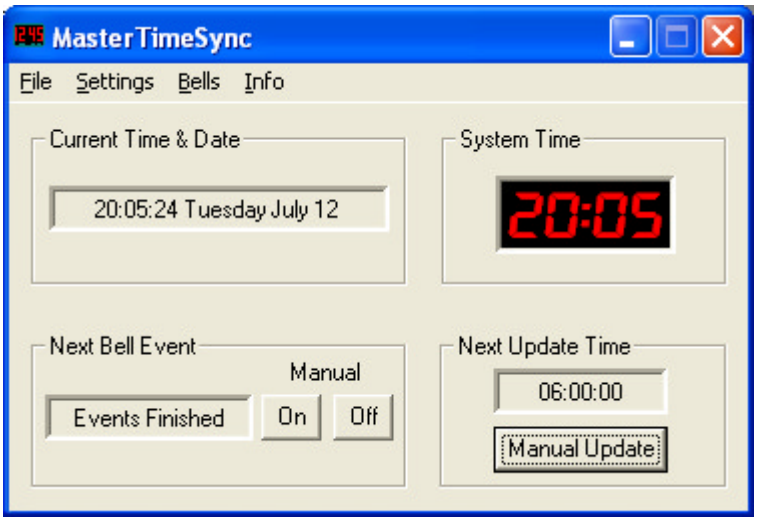


- Press **Save/Close.**

Manual Control:

At any time from the Run Screen you can operate the signal manually using the On and Off buttons. This can be used for alerting employees for meetings ect.

- To operate press the **On** button in the Next Bell Event section (this will latch the relay on).
- To cancel press the **Off** button.

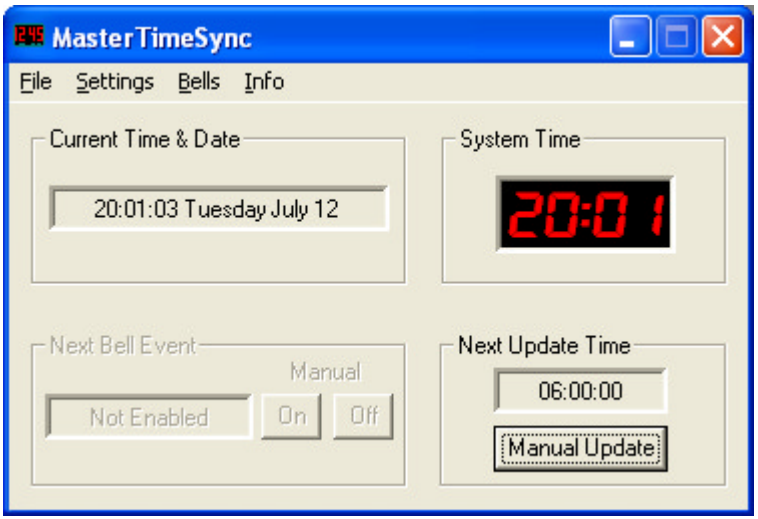


Running the Program

Once you have entered all your settings click **Save and Close** to run the program, all your settings will be saved to a file located in the installation directory.

Run Screen:

The Run Screen appears when the program is running, unless you selected Run Minimized in the General Settings, if so this screen will not appear until you double click on the MasterTimeSync™ in the system tray.



The Run Screen has four sections

- Current Time & Date.
- System Time.
- Next Update Time.
- Next Bell Event.

Current Time & Date Display:

This window displays the current date & time of the computers internal clock.

System Time:

This window displays the time the system should be reading, it is advisory only, because the clocks can't send a signal back to confirm the time they are displaying. The updates MasterTimeSync™ sends, and the current computer internal clock work out the time displayed here.

Next Update Time:

This window displays the time that the next update signal will be sent out to the system. The Manual Update button will send a signal out on the next minute.

Next Bell Event:

If you have installed the bell option this window will display the next bell event due according to the Bell Schedule. When the last event for the day has passed, it will display Events Finished, after midnight it will display the next event due on that day.
At any time from the Run Screen you can operate the signal manually using the On and Off buttons. This can be used for alerting employees for meetings ect.

Release Notes

**********MasterTimeSync V2.0*********
**********Release Notes**********

Added Features:
1. Time Server Feature.
2. System Test Feature.
3. Alpha Big Dot format (to communicate with Big Dot Signs).
4. Bell Schedule Option (to control signal devices).
5. Now runs in the System Tray.

Fixes:
1. Fixed disconnection problem with UDS after Power Failure.
2. TCP/IP port setting now adjustable.
3. Fixed problem with program running multiple times.
4. Removed Baud Rate & COM Parameter settings (as they were pre-set and could not be altered).

Acknowledgements

Version 1 code by Mark Thornhill.

Version 2 code by Matt Woodroffe.

Developed by Phil Westley.

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