Dolphin
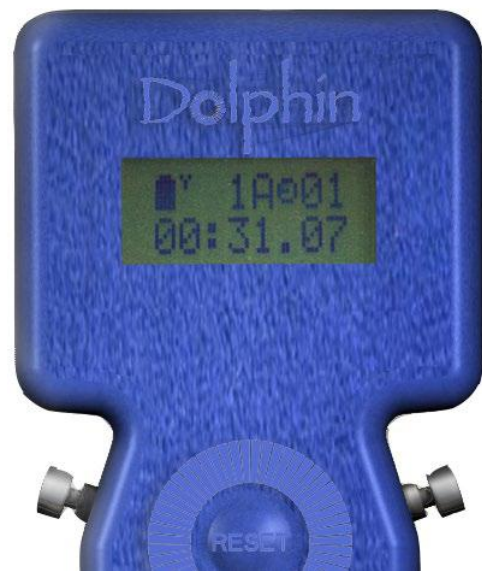
Wireless Stopwatch Timing System

User Guide
For Dolphin version 5 and later

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A PLAYCORE Company

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Information in this manual is subject to change without notice. Pictures and illustrations may not accurately depict your version. Please check our website for the most current information; our user manuals are available online in the customer service section of our website.

FCC Compliance Statement:
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Dolphin stop watch, Dolphin starter, and Dolphin base contain FCC ID:TFB-FreeStar

Table of Contents

Introduction

Thank you for purchasing a Dolphin system. This system of wireless stopwatches makes running a swim meet much easier and faster. It has been designed to interface seamlessly with various meet management software programs; contact your software vendor about compatibility of their program and Dolphin. Please note that knowledge of your meet management software is required to use Dolphin effectively.

How to Use this Manual

If you like to start with an overview of the process, and refer to the manual only when you need it, see the Theory of Operation and the Overview below.

If you like step-by-step instructions, turn to **Initial Set Up**, beginning on page 4, and start there. After the step-by-step Software and Hardware instructions, there are separate instructions for what needs to be done during the meet by the Lane Timers (page 14), the Starting Official (page 13), and the Computer Operator (page 7).

Theory of Operation

The Dolphin system includes
- Dolphin software to be loaded on the meet management computer (Windows 7 or higher required). The software accepts the information from the Base unit and writes files that can be accessed by meet management software.
- A Wireless Stopwatch for each Lane Timer. Watches can be started automatically via the Starter, or started individually for Manual Start/Stop backup times.
- A Wireless Starter
    o Can be used to start all of the Stopwatches with a synchronized start
    o Can be connected to an electronic start system (CTS Infinity/Infinity Pro, Championship Start System, or Championship Elite for example). In this case, the start impulse from the electronic start system will start the watches automatically.
- A Base unit, which is connected to the meet management computer with a standard USB cable (included with the Dolphin system). The Base unit receives information from the starter and the lane watches

Overview for setting up and using the Dolphin System:

1. Confirm that your meet management software supports Dolphin, and is installed on the computer you will be using. If it is not, follow the software provider's instructions for installing it.
2. Install the Dolphin software from www.coloradotime.com/dolphindownload. Refer to Software Installation on page 4.
3. Ensure that firmware for Dolphin watches and Dolphin base are at 1.51 or higher and that Dolphin starter firmware is at 1.31 or higher. For information on updating device firmware, refer to Dolphin Device Updates on page 26.
4. Configure your meet management software to use the Dolphin System. Refer to Software Set Up beginning on page 4 for details.
5. Set up the Dolphin hardware the way you will be using it. Refer to the beginning of page 5.
6. At least a day before the first meet, practice with the Dolphin system so you are familiar with what to do. Refer to the Computer Operator Instructions (page 7),
Starting Official Instructions (page 13) and Lane Timer Instructions (page 14).
You may also find the Troubleshooting section useful (page 22).
7. Note that there are separate instruction sheets for the Computer Operator, Starting Official and Lane Timers, and a sheet of Dolphin Basics. These instructions describe only what each of those individuals need to do with their part of the Dolphin system. Many facilities find it useful to print extra copies of these pages to use in training those individuals. This manual was loaded on your computer (CTSDolphin\DOCS folder) when you installed the software. The most recent version is available on our website (www.coloradotime.com), in the customer service section.

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Dolphin Software

Sub-Screens

There are five sub-screens in the Dolphin Software

Live Screen (page 17)	Displays the current state of the timing system
Signals Screen (page 17)	Shows the signal strength and battery levels of connected Dolphin units
Events Screen (page 18)	Where event data is managed such as event name, number, heats, and splits
Settings Screen (page 19)	This screen contains settings for printing, base, streaming, logging, scoreboard, and general Dolphin settings
View Log Screen (page 21)	Displays results of previous races

Hotkeys

Press the indicated key as a shortcut to that action.
- **V** – Display about dialog box.
- **P** – Manually set the event to the previous event.
- **N** - Manually set the event to the next event.
- **G** – Manually set the heat to the previous heat number.
- **H** – Manually set the heat to the next heat number.
- **F1** – Display the Live sub-screen.
- **F2** – Display the Signals sub-screen.
- **F3** – Display the Events sub-screen.
- **F4** – Display the Settings sub-screen.
- **F5** – Display the View Log sub-screen.
- **L** – Load events file. (Only when Events sub-screen is active)
- **S** – Save events file. (Only when Events sub-screen is active)
- **C** – Clear all event data when in the Events screen.
- **R** – Reset the Dolphin system.

Initial Set Up

Software Installation

(Do NOT connect Dolphin hardware until software has been installed)
1. Ensure that your meet management software is installed on the computer you will be using for Dolphin. If not, install it first.
   NOTE*: If you have questions regarding using your meet management software, please see the help files within the software, or contact your software vendor.*
2. Download and install the latest updates for your meet management software.
3. Install Dolphin from www.coloradotime.com/dolphindownload

Software Set Up

There are two ways Dolphin can be used as far as meet management software is concerned. Choose the method your facility will be using and follow the instructions below.

Dolphin Standalone Operation (Sports Timer not used)

In this mode, the Dolphin wireless watches are the primary times for results, and a sports timer is not used.
   1. Connect base unit to computer with USB cable, and open your meet management software.
   2. If required by your meet management software, configure it for Colorado Time Systems Dolphin as the primary timing system.

Dolphin with Sports Timer (Gen7, System 6, or System 5)

If you are using a sports timer (CTS Gen7, System 6 or System 5, for example) in addition to Dolphin, you may need a backup mode in your meet management software. For example, Hy-Tek's Meet Manager requires the Dolphin Backup Mode Option, which is sold separately by Hy-Tek. Contact Hy-Tek for details (Shop online at www.hy-tekltd.com or call 866.456.5111). Other software packages may have their own specific requirements.

In this mode, the Dolphin wireless stopwatches are the backup watches, while the touchpads and buttons are the primary timing system.
   1. Connect base unit to computer with USB cable, and open your meet management software.
   2. If required by your meet management software, configure it for CTS Dolphin as the backup mode
   3. Configure your software for the primary timing system.

Hardware Set Up

Setting up the Base

1. Connect base unit to computer with a standard USB cable (included with the Dolphin system).

2. Open the Dolphin software, and set the channel on the base:
   - Click **Settings** located in the bottom of the window
   - Select the desired channel (0-15) by clicking within the **Channel** box.
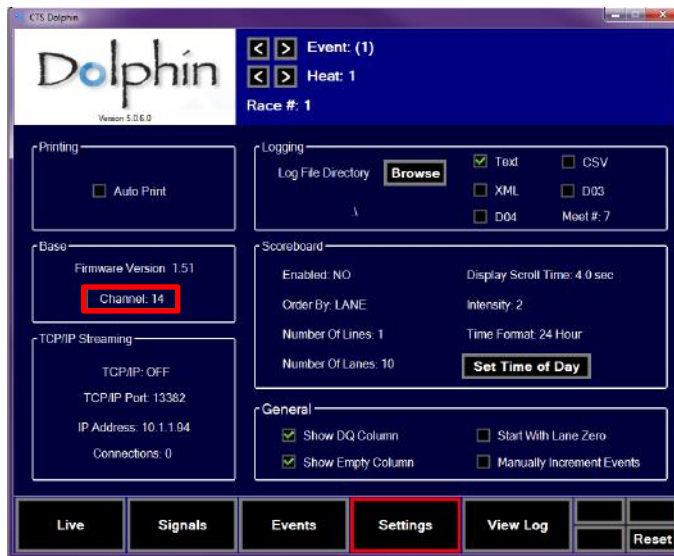
Setting up the Starter

There are three ways to use Dolphin to *start* timing a race. Choose the method your facility will be using and follow the instructions below.

Method 1: Wireless Manual Start/Stop
Wireless Manual Start/Stop means that the Dolphin wireless stopwatches are used strictly like standard stopwatches: each Lane Timer uses the Dolphin watch to start, stop and reset individually. The data is transmitted wirelessly to the base, and stored on the laptop for access by your meet management software. This method meets all ruling bodies' (FINA, NCAA, USS, NFHS, YMCA) requirements for backup timing.

To set up for this method, put the Dolphin Starter back in the case. It is not used for wireless manual start/stop. Go on to Setting up the Stopwatches beginning on page 6.

Method 2: Synchronized Start/Manual Stop
Synchronized Start/Manual Stop means that the Starting Official starts all watches simultaneously with the Dolphin Starter, and the Lane Timers stop them individually. See page 6 for details on disabling manual start on Dolphin stop watches.
1. To set up for this method, turn the Dolphin Starter on (press and hold the Reset button).
2. Enter the menu (press and hold both buttons).
3. Once in the menu, press Reset to advance to the CHAN setting.
4. Press Start/Stop to change the channel to the same number as the Dolphin base.
5. Press Reset to exit the menu.

Method 3: Electronic Start System
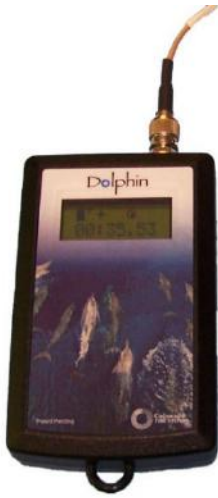
When using Dolphin with an electronic start system, such as the CTS Infinity series or Championship Start System, the Dolphin Starter is connected to the electronic start system with a cable. When the Starting Official starts the race with the electronic start system, the watches are started simultaneously. The Lane Timers stop them individually. See "Setting up the Stopwatches" below for details on disabling manual start on Dolphin stop watches.

1. To set up for this method, turn the Starter on (press and hold the Reset button).
2. Enter the menu (press and hold both buttons).
3. Once in the menu, the first setting is TRIG. Press Start/Stop to select the correct trigger style for your start system:
   - TRIG = CTS for use with CTS electronic start system
   - TRIG = NC for use with a normally-closed electronic start system
4. Press Reset to advance to the CHAN setting.
5. Press Start/Stop to change the channel to the same number as the Dolphin base.
6. Press Reset to exit the menu
7. Follow the instructions for your electronic start system:

CTS Infinity or Elite Start System
- Connect your Dolphin Starter to the Infinity or Elite Start System's **Start Output** jack with the Dolphin Starter to Infinity Kit (K-DSS-1). **DO NOT** plug the Dolphin Starter cable into any other jacks.
- The start impulse from the Infinity or Elite will start the lane watches automatically.

CTS Championship Start System
- Connect your Dolphin Starter to the Champ Start's **Timer Start** jack with the Dolphin Starter to Champ Start Kit (K-DSS-2). **DO NOT** plug the Dolphin Starter cable into any other jacks.
- The start impulse from the Champ Start will start the lane watches automatically.

Setting up the Stopwatches

1. Follow these steps for each watch to be used at a meet:
2. Turn the watch on (press and hold the Reset button).
3. Enter the menu (press and hold the Reset button and either of the side buttons).
4. Once in the menu, the first setting is LANE. Press a side button to change the lane for this watch, and then press Reset to advance to the next menu option.
5. Press a side button to select the TIMER for this lane (A, B or C), and then press Reset to advance to the next option.
6. Press a side button to select manual start "MAN" on or off and then press Reset to advance to the next option. Set to off to disable manual start on the watch.
7. Press a side button to select the channel number. This MUST match the channel on the starter (if being used) and the base.
8. Press Reset to exit the menu.
9. Watches will show up on the Dolphin "Signals" screen when set.

Regular Operation

This section describes the regular operation of the Dolphin system at a meet.

There are separate instructions for the Computer Operator, the Starting Official, and the Lane Timers, describing only what that individual needs to do. This way, each can refer to his or her specific section to know what to do. Many facilities find it useful to print extra copies of Starting Official and Lane Timer pages to use in training those individuals. These documents are available on the support section of our website (www.coloradotime.com).

Computer Operator Instructions

There are two ways Dolphin can be used as far as meet management software is concerned: standalone, or with a timer. Follow the instructions for the method your facility is using.
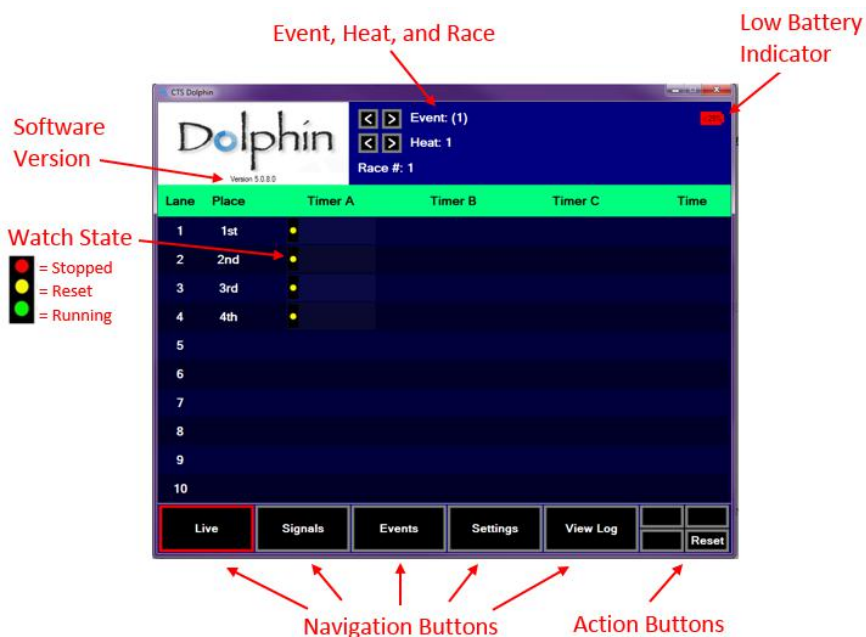
Dolphin Screen -- DO NOT CLOSE THIS WINDOW while using Dolphin. It's OK to minimize it.

Forced Reset

The Reset action button (shortcut r) located in in the bottom right corner of the screen is used to force a reset only if one or more lane timers, or the starting official if using the Dolphin Starter, have failed to press reset and the next race is about to begin. You can tell if a watch has been reset because it will have a yellow light showing in the watch state column on the Dolphin Live screen.

Before forcing a reset, make sure the race is actually finished. If you force a reset while a watch is still running, there will be no final time recorded in the results file for that watch. However, splits for any watches that were taken will be recorded as long as Dolphin thinks at least one watch finished the race.

Confirm Set Up

Look at the Live screen. There should be a yellow light showing for each lane that has a wireless watch assigned to it. Open the "Signals" screen to confirm the starter and all watches have adequate signal strength and battery levels for the event. If all watches and starter being used are not displayed correctly, review the Software Set Up (page 4) and Hardware Set Up (page 5) sections, and ensure that your system is set up properly.
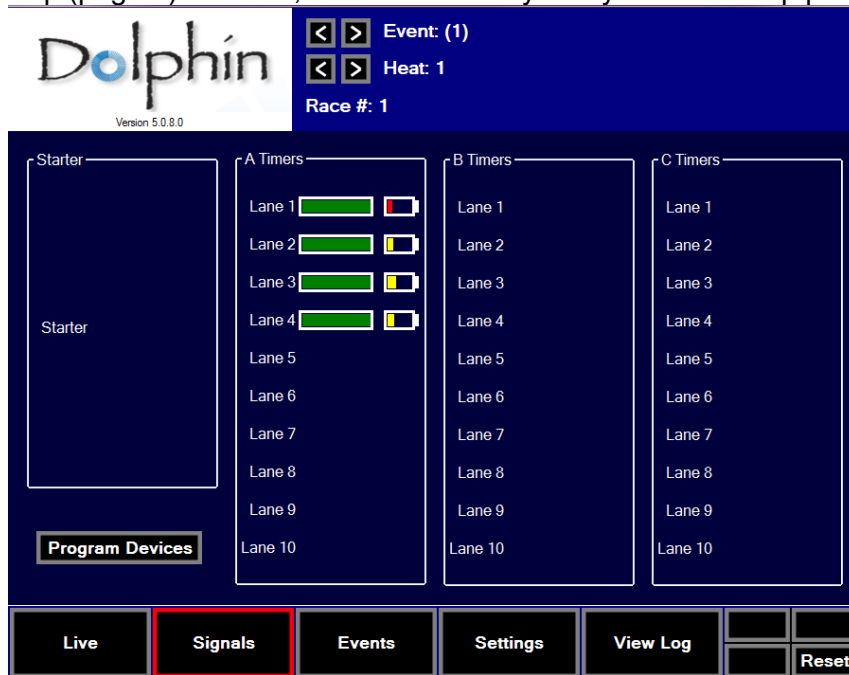
If using a scoreboard, click the **Settings** button in the lower part of the Dolphin screen and verify the settings for your scoreboard. See more details about scoreboard settings (page 21).

Lane numbering: The default format for lane numbering is 1 – 10. This can be changed to 0 – 9. To change the lane numbering format, click the **Settings** button in the lower part of the Dolphin screen, and then check the box "Start with lane zero" located in the "General" group When this box is checked, lane numbering will start with 0; when unchecked, lane numbering will start with 1.

Watches will be automatically updated to the lane numbering format that is selected. For example, a watch that is set to lane 4 when lane numbering is 1 - 10 will change itself to lane 3when lane numbering is changed to 0 - 9.
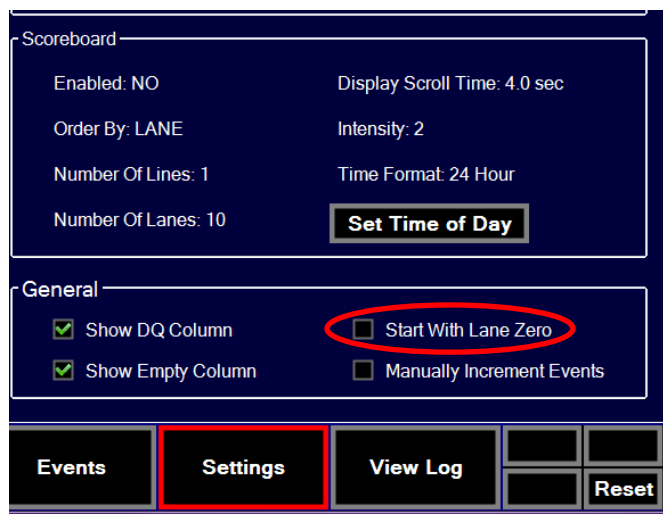
Dolphin as Primary Timing System

(Standalone Operation -- Timer not used)
In this mode, the Dolphin wireless watches are the primary times for results and a timer is not used.

Make sure your lane timers and starting official are trained.
When using the Dolphin Starter, the result file is written when the Starting Official presses Start/Stop and then Reset. If lane timers also press Reset, additional files will be written.

When not using the Dolphin Starter, the result file is written after ALL lane timers press Start/Stop and then Reset. Extra Reset presses could result in extra files; if a lane timer fails to press Reset, the result file won't be written unless you intervene with the Reset button (shortcut r) to force a reset and cause the Dolphin Software to write the result file.

Splits
Make sure your lane timers know whether to take splits. The lane timers should press Start/Stop one time for each split. Up to 10 splits can be recorded per race.

After the Race
  - **If Using Dolphin Starter**
    After the race, the Starting Official will press Start/Stop and then Reset on the Dolphin Starter. Reset causes the Dolphin software to write the result file to the C:\CTSDolphin folder on the computer and the next race can be started.

    If the Starting Official fails to press Reset after the race, the watches' state will not have a yellow light. Before the next race, use the Reset button (or shortcut r) to force a reset and cause the Dolphin software to write the result file.
  -
  - **If NOT Using Dolphin Starter**
    As each swimmer finishes the race, the Lane Timer(s) in that lane will press one of the side buttons (Start/Stop) and then Reset on the Watch(es) assigned to that lane. After all Lane Timers press Start/Stop at the end of the race and then Reset, the Dolphin software writes the result file to the C:\CTSDolphin folder on the computer and the next race can be started.

    If one or more of the lane timers fails to press Reset after the race, that watch's state will not have a yellow light. Before the next race, use the Reset Timers button (or shortcut r) to force a reset and cause the Dolphin software to write the result file.

Start/Stop

Reset
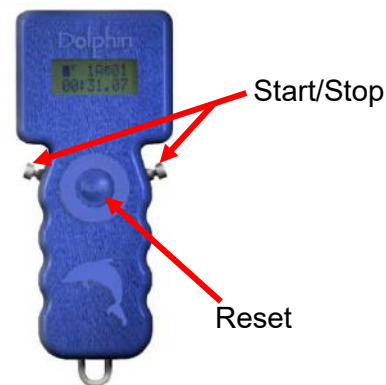
Getting the Race Results into your meet management software:
Hy-Tek's Meet Manager
  1. While on the Run screen in Meet Manager (MM), click on **Get Times** (F3) (a button on the bar two-thirds of the way down the screen).
  2. A list of Dolphin result files for the current **Data Set** (see page 11 for information about data sets) will be displayed with the most recent file at the top.
  3. Select the result file and click OK. MM will read the data into the proper lanes.
      - *If there is one watch per lane*, that time will also be placed in the result column.

- *If there are 3 watch times for a given lane*, the middle time will be placed in the result column.
- *If there are two watches for a given lane*, the average will be computed and placed in the result column. Please note that if there is .3 or more seconds difference between the two watch times, the average result time will NOT be computed and a yellow line will show for this lane. Decide whether to throw out one of the watch times if you determine one of them is way off. If you are OK with the two times, then click **Ctrl-K** to display the watch averaging menu and it will compute the average for you and place it in the result column. If one of the times is no good, delete it and use **Ctrl-K**, or simply type in the time of the one good watch.

If you are keeping track of races by **Race Number** (see discussion below), you can use the Race # button instead of the Get Times button. This button increments itself by 1 automatically and searches the data set of results for a matching race number. This is the quickest way to get results if you are keeping up with the race numbers. However, if you get erroneous times, you will have to use **Get Times** to find your race.

Meet Maestro, Splash, and other meet management software:
Follow the instructions in your specific meet management software.

Dolphin as Backup Timing System
Timer as Primary Timing System (Gen7, System 6, or 5)
If you are using a timer (CTS Gen7, System 6, or System 5, for example) in addition to Dolphin, you need to be using a backup mode in your meet management software. Contact your meet management software provider for details and compatibility.

In this mode, the Dolphin wireless watches are the backup watches, while the touchpads and buttons are the primary timing system. Dolphin runs completely separately from the timer and will not replace touchpads or buttons during competition.

Make sure your lane timers and starting official are trained
When using Dolphin for backup times, the result file is written after ALL lane timers press Start/Stop and then Reset. Extra Reset presses could result in extra files; if a lane timer fails to press Reset, the result file won't be written unless you intervene with the Reset button (shortcut r) to force a reset and cause the Dolphin Software to write the result file.

Splits
Make sure your lane timers know whether to take splits. The lane timers should press Start/Stop one time for each split. Up to 10 splits can be recorded per race.

After the Race
As each swimmer finishes the race, the Lane Timer(s) in that lane will press one of the side buttons (Start/Stop) and then Reset on the Watch(es) assigned to that lane. After all Lane Timers press Start/Stop at the end of the race and then Reset, the Dolphin software writes the result file to the C:\CTSDolphin folder on the computer and the next race can be started.

If one or more of the lane timers fails to press Reset after the race, that watch's state will not have a yellow light. Before the next race, use the Reset button (shortcut r) to force a reset and cause the Dolphin software to write the result file.

Getting the Race Results into your meet management software:
Hy-Tek's Meet Manager:
1. From the Run screen in Meet Manager, click on **Get Times** (F3).
2. A list of Dolphin result files for the current **Data Set** (see below for information about data sets) will be displayed with the most recent file at the top.
3. Select the result file and click OK. MM will extract the times and place them in a window so that you can see up to 3 wireless watch times per lane plus the computed average for each lane if there is more than one wireless watch per lane.
   - If there are 3 watches for a given lane, the middle time will be average time.
   - If there are 2 watches for a given lane, the average will be computed based on the rule choice selected in MM in **Preferences / Backup Times**. If you are OK with the times in the window, click Accept and these times will be stored in the database along with the pad and button times already stored. To see the pad times, the backup button times, and the backup watch times, press **Ctrl-K** or click the **Calc: Ctrl-K** button. When the time adjustment window is displayed, you can compare the backup wireless watch times to the pad time and the backup button average to help you decide what to do if there is a discrepancy between the pad time and then backup button time. See Hy-Tek MM help files for a sample time adjustment window with Dolphin Backup times.

If you are keeping track of races by **Race Number** (see discussion below), you can use the Race # to help you select the correct wireless watch file. If things go smoothly, this race number should be the same for the wireless watch file and the timing console data file.

Meet Maestro, Splash, and other meet management software:
Follow the instructions in your specific meet management software.

How to Select a Data Set for your Meet

A Data Set is a set of results for a given meet or session of a meet. When logging is activated in the Settings screen (page 19); the Dolphin system creates result files each time a race is completed in up to five selectable formats:

- Text – This is an easily readable Ascii text file.
- CSV – Comma separated values.
- XML – Common markup language.
- DO3 – Dolphin data file for use with Hytek Meet Manager.
- DO4 – Dolphin data files (including splits) for use with Hytek Meet Manager.

(**Note: a file format must be selected for race results to be saved**)

The first 3 characters of the file name are numbers from 001 to 999. These three character numbers define the Data Set number. So when you select a data set, you are selecting a data set of results based on the first three characters of the result files. Subsequent characters of each result file define other information, including race number.

From within Hy-Tek MM:
This is the latest information available from Hy-Tek for Meet Manager:

To select a Data Set, click on **Interfaces / Timer** and click on **Select Data Set stored from CTSS**. The MM screen will display a window with the date and time and the number of races that have been stored for the current data set that MM is pointing to. Remember, you could be running a three day meet and MM software must know what "data set of meet data" you want to access.

Click on the **Next Meet** or **Previous Meet** buttons to select the appropriate data set. Because there is a date and time shown for when the first file in the data set was created, you can usually figure out which data set to select.

If new Data Sets with new data set numbers have been added since starting MM, you can click **Update Data Set** and all data sets will be refreshed for selection.

From Meet Maestro, Splash, or another meet management program:
Follow the instructions in the software's help files.

Starting Official Instructions

Work with the Computer Operator to make sure that the Dolphin Starter and Watches have been properly set up for your meet, following the Hardware Set Up Instructions (p. 5).

There are two ways to start the Dolphin Watches using the Dolphin Starter. Follow the directions below for the one your facility is using for this meet.

Electronic Start System

*NOTE: The Dolphin Starter must be connected to the electronic start system's **Timer Start** or **Start Output** jack. Connection to any other jack **will** damage the Dolphin Starter.*

1. Use the electronic start system to start the race. The start time will be sent wirelessly from the Dolphin Starter to the Lane Watches, starting them.

2. After the race, press Start/Stop and then Reset on the Dolphin Starter to reset the system for the next race. (At Reset, the Dolphin software will write a result file on the computer for access by meet management software.)

Synchronized Start/Manual Stop

1. Press Start/Stop on the Dolphin Starter simultaneously with the start signal for the swimmers. The start signal will be sent wirelessly from the Dolphin Starter to the Lane Watches, starting them.

2. After the last swimmer touches the wall, press Start/Stop on the Starter, and then Reset. You are now ready for the next race. (At Reset, the Dolphin software will write a result file on the computer for access by meet management software.)

Lane Timer Instructions

You need to know if your facility is using a Synchronized Start or a Wireless Manual Start. Follow the directions below for the one your facility is using.
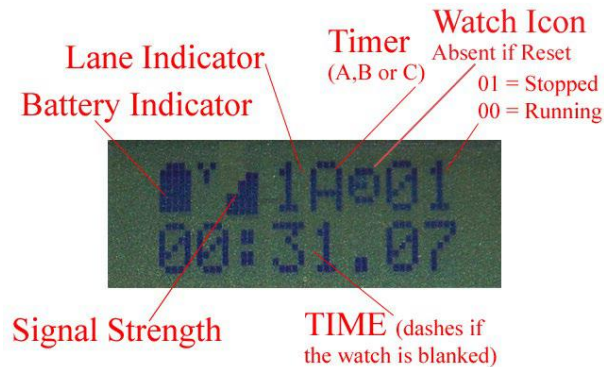
Synchronized Start (from Electronic Start System or Dolphin Starter)

Note: what you do with your watch is transmitted wirelessly to the meet management computer. Please follow these instructions so that the information received for your lane is correct.

1. The Starter will start all watches.
2. Press one of the side buttons to stop your watch (use whichever is most comfortable for you).
3. IF YOU HAVE BEEN ASKED TO TAKE SPLITS, press one of the side buttons one time for each split. Your watch will display the split time for about 2 seconds, and then show the running time again.
4. You should not press any other buttons, unless you are blanking your lane (see below).

Note: If you take too many splits (this includes taking one or more splits in a race or event which is not recording splits), your watch screen will display the split time and won't automatically display running time after 2 seconds. The watch is still recording running time, and will display it once you press one of the side buttons again, as long as the Starter has not pressed Reset.

When the Starter has reset all the watches in preparation for the next race, the bottom line on your watch will show "RESET," alternating with the time. Also, the watch icon on the top row will be displayed while time is running on the watch, and will disappear when the Starter has reset all the watches for the next race.

Wireless Manual Start/Stop

Note: what you do with your watch is transmitted wirelessly to the meet management computer. Please follow these instructions so that the information received for your lane is correct. It is important that you press Reset before the next race.

Watch Operation

1. Start your watch (by pressing either side Start/Stop button) with the start signal.
2. Stop your watch (by pressing either side Start/Stop button) when the swimmer in your lane touches the wall at the end of the race.
3. IF YOU HAVE BEEN ASKED TO TAKE SPLITS, press one of the side buttons one time for each split. Your watch will display the split time for about 2 seconds, and then show the running time again.
4. Press Reset to reset your watch for the next race. The watch will display RESET on the second line, alternating with the time. The watch icon will also disappear from the top row on the screen.

Note: If you take too many splits (this includes taking one or more splits in a race or event which is not recording splits), your watch screen will display the split time and won't automatically display running time after 2 seconds. The watch is still recording running time, and will display it once you press one of the side buttons again, as long as you have not pressed Reset.

Blanking your lane

If there is no swimmer in your lane for the current heat, after the start you can press reset. Your watch will display a line of dashes instead of the time, and this indicates to the computer operator that your lane is blanked. After the Starter has reset the watches, your watch will automatically accept the start signal for the next race.

If you accidentally set dashes (blanked the lane), push either Start/Stop button to resume timing. The watch is still accurate as long as you have not pressed Reset the second time.

If your watch is not functioning as described here, see the person in charge of the Dolphin system at this meet.

Dolphin Screen Reference

Main Screen

The main screen of the Dolphin Software is divided into three sections: Top, Middle, and Bottom.

Top

The current event and heat are displayed here and increment automatically as each race is run. This section also displays the running time of each race as it is being run. The upper left part of the screen displays the Dolphin logo along with the software version.

Middle

The middle section displays different screens based on the active navigation button. There are five different sub-screens in the Dolphin software; select them with the navigation buttons across the bottom of the window.
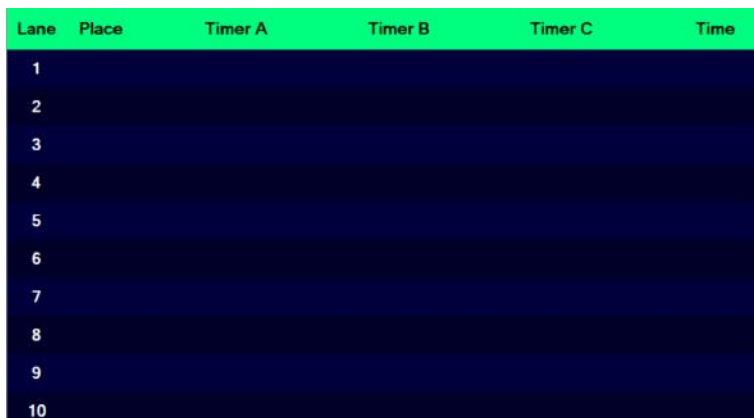
Bottom

The bottom section of the screen contains navigation and action buttons. To the right of the navigation buttons are smaller action buttons. The action buttons present depend on which sub-screen is active.

- The Reset button is always displayed here and can be used to manually reset the Dolphin system.
- The "Clear" button appears when the events screen is active and is used to set all event data back to its default.
- The "Load" and "Save" buttons are only shown when the Events screen is active and allow the user to import event data and save that data back to a file
- The "Print" button will be displayed when the View Log window is shown. This allows the user to print the currently displayed contents of this screen.

Live Screen

The Live screen shows each of the active timers along with their state and times.

🟢 Timer is running

🟡 Timer is in reset state

🔴 Timer is stopped

The final time for each lane will be shown after all the active timers for the lane have finished and are in the stopped state. The place for the lane will then be calculated and displayed.
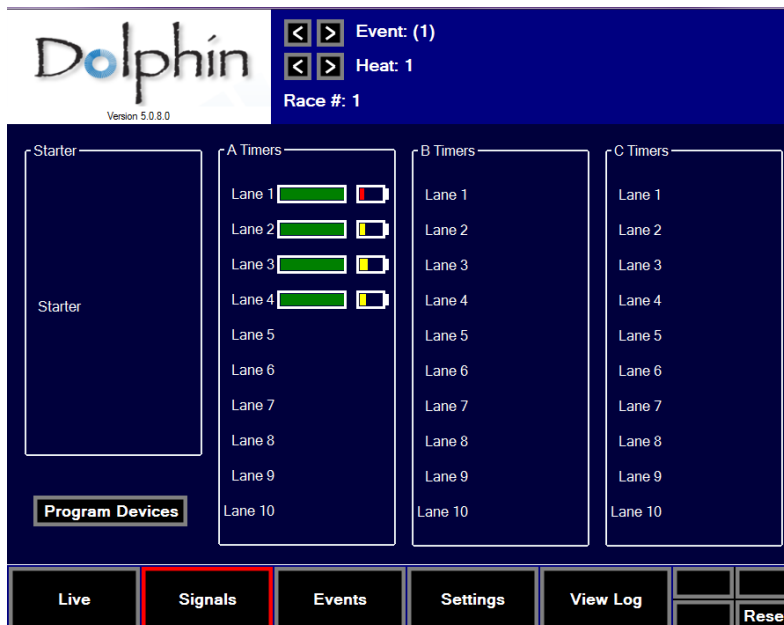

Final times are calculated differently depending how many active timers are in the lane. If there is a single timer in a lane, the final time is simply that time. If there are two timers per lane, the final time is an average of the two times. If a lane has three timers the slowest and fastest times are discarded and the final time is the remaining middle time.

Signals Screen

The "Signals" screen displays the signal strength and battery levels for each of the Dolphin systems units that are on the same channel as the base, turned on, and in range.

- It is recommended that batteries that are below 50% be replaced before starting a meet (page 22).

Events Screen

The Events screen is where users can view and manage event data. Events are ordered by event index. By default, there are always 999 events with event indexes 1-999. The user may assign an event number, event name, round, number of heats and number of splits to each event index. The acceptable values are as follows:

- Event Number – Up to 5 alpha-numeric characters. Example: 12B
- Event Name – Up to 25 alpha-numeric characters. Example: Men's 50 Meter Freestyle
- Round – "A" for all, "P" for prelim or "F" for final
- Number of Heats – (0-99) Number of expected heats for the given event
- Number of Splits – (1-10) Enter 1 to use the first time as the final time. A single length race would have only one split (i.e. the final time), and multi length races would have one split for every lap.
  - Example 1: A 25 yard race in a 25 yard pool would have a split count of 1 meaning only on one time is collected (i.e. the final time)
  - Example 2: A 100 meter race in a 50 meter pool would also have a split count of 1 (i.e: the final time of the single lap.)
  - Example 3: A 200 yard race in a 25 yard pool would have a split count of 4.

The Number, Name and Round are used for display purposes as well as in logging. The software uses the number of heats for auto incrementing the current race. The number of splits is transmitted to the watches before each race so that they know how many times the timing button must be pressed before the final lane time is determined.

Event data can be manually edited by clicking on any of the fields other than the event index. Click either the event number or the event name to bring up a text entry dialog for input. Click on any of the other fields to increment them through the possible values. Use the scrolling buttons to the right or use the scroll wheel on your mouse to view all 999 events.

There are three action buttons in the lower right corner of the Events screen. The Clear button allows the user to clear all event data and set everything back to the default values. The defaults for each event index is as follows:

- Event Number = ""
- Event Name = ""
- Round = "A"
- Heats = "1"
- Splits = "1"

The Load button lets the user load all event data from an event file. This is a CSV file and can be hand typed or generated by meet management software. Each line of this file should be formatted as follows:

Event Number,EventName,Number of Heats,Number of Splits,Round
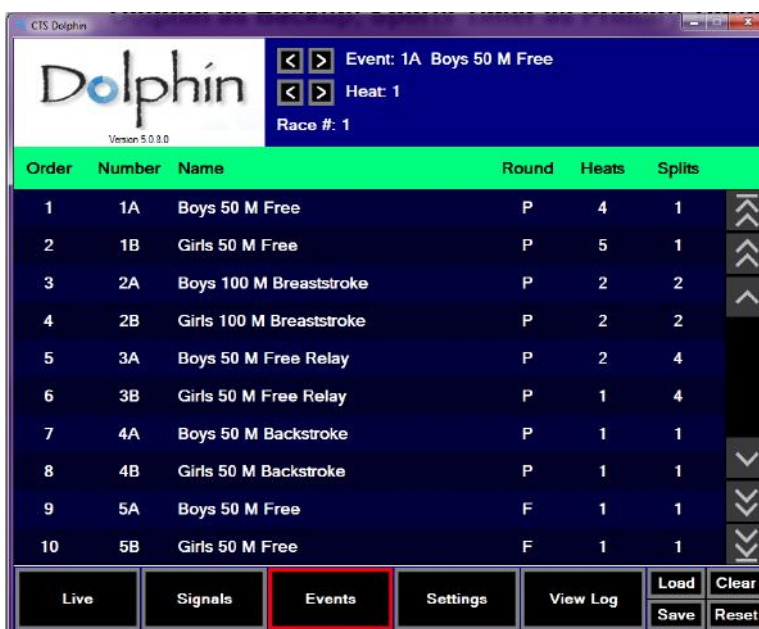
Example:
> 1A,Boys 50 M Free,4,1,P
> 1B,Girls 50 M Free,5,1,P
> 2A,Boys 100 M Breaststroke,2,2,P
> 2B,Girls 100 M Breaststroke,2,2,P   …

The first line will be event index 1, the second line will be event index 2 and so on. Events will always come up in event index order although this can be overridden and events and heats may be run in any order.

The "Save" button saves the current event data into a CSV file which can be loaded later or shared with another Dolphin user.

When the software is closed, all event information is saved in the settings file. This saved event information is restored when the software is launched again.

Settings Screen

There are several different options for the Dolphin system which can be customized using the Settings screen. These choices are saved in a settings file each time the software exits and are reloaded when the software is started again. Settings are divided into groups as indicated on the screen.

Printing

The Printing group box contains the Auto Print check box. When this is checked, the software will attempt to automatically print each race's results to the computer's default printer each time the race finishes and the system is put into Reset mode. Ensure your computer's default printer is set properly before checking this box.

Base

The Base group box displays the current version of firmware that is running in the base unit and the RF channel that the base is set to. This data is read from the base unit itself and is not stored in the settings file. To change the channel, click on the Channel number. Each click will increment the channel by one and will wrap back to zero after the max value of 15.

TCP/IP Streaming

The Dolphin software provides an easy way for other meet management applications to communicate with the Dolphin system in real time via a TCP/IP socket connection. To use this feature, click the TCP/IP label to manually turn it on. This service is available on one of five different ports. If the port number currently being displayed is being used by another application on your computer, you can select a different port number by clicking on the TCP/IP Port Label. The Connection label at the bottom of the group box indicates the number of applications currently connected via the TCP/IP server.

The TCP/IP server provides a comprehensive set of API commands which allows the connected meet management software to take complete control of the Dolphin system. Here is a list of available commands:

- autoSendUpdates,ON - Causes all race and event updates as well as the current event and heat to be sent automatically to each client.
- autoSendUpdates,OFF - Stops sending all updates to clients.
- includeSplitData,ON - Causes all split times to be included in race data messages.
- includeSplitData,OFF - Causes all split times to be excluded in race data messages.
- clearEvents - Clears all current event info in the Dolphin software and restores the defaults.
- setEventInfo,(eventIndex),(eventNumber),(eventName),(numberOfHeats), (numberOfSplits),(round(A,P or F)) - Sets the event info for a given event index.
- getCurrentEventAndHeat - Returns (Dolphin software version),(currentEventIndex), (currentEventNumber),(currentHeatNumber),(currentRaceNumber);
- getEventInfo - Returns event info for each of the 999 event indexes
- getRaceTimes,(eventIndex),(heatNumber),(showSplits(YES or NO)) - Returns the race data for the designated race.
- getAvailableRaces,(showSplits(YES or NO)) - Returns the race data for all available races.
- Reset - Causes a reset of the timers when the starter is not being used.
- setCurrentEventAndHeat,(eventIndex, heatNumber)

Logging

To activate logging, click on the **Browse** button in the Logging group and select the directory you would like the log files written to, then check each of the file formats you want the log information generated in. By default selected file formats will be written to C:\CTSDolphin if no other directory is specified. The following formats are available:

- Text – This is an easily readable Ascii text file.
- CSV – Comma separated values.
- XML – Common markup language.
- DO3 – Dolphin data files for use with Hytek Meet Manager.
- DO4 – Dolphin data files (including splits) for use with Hytek Meet Manager.

Note: a file format must be selected for race results to be saved

This section also shows the current meet number. This number is used for naming log files. By default, it is incremented each time the software is run. The user may override this value by clicking on "Meet #" label. Left click will increment this number by one and a right click will decrement the number.

Scoreboard

Dolphin supports Colorado Time Systems Otter Swimming scoreboards with built-in Dolphin scoreboard adapters and other Colorado Time Systems scoreboards using an external Dolphin scoreboard adapter.

There are seven different options that can be set. Each of the seven option values can be changed by clicking on them. The options and their possible values are:
- Enabled (Yes/No) Set to Yes if you are using a scoreboard.
- Order By (Lane/Place) Defines the order in which the results are displayed.
- Number of Scoreboard Lines (1-10) This is the number of physical lines your scoreboard has.
- Number of Lanes (1-10) This is the number of lanes in the pool.
- Display Scroll Time (0.5 sec – 4 sec) This indicates how quickly the scoreboard scrolls the results when there are more lanes in the pool than lines on the scoreboard.
- Intensity (0-7) Controls the brightness of scoreboards with intensity options.
    1 activates the ambient light sensor, setting the intensity to auto.
    0 and **2-7** are manually selected levels of intensity (**0** dimmest and **7** brightest).
- Time Format (12 Hour/24 Hour) This is used when displaying the time of day.

Click the Set Time of Day button to display the computer's time of day on scoreboards that show time of day. (Note: To restore time of day display after running an event, disable the scoreboard within the Settings screen or disconnect the Dolphin base unit after exiting the Dolphin software.)

General

This group of settings lets the user specify whether or not to show the Empty column or the DQ column on the Live and Race Data screens. It also allows the user to specify whether the pool lanes are numbered starting with zero or one. Finally, the Manually Increment Events checkbox lets the user specify if they prefer to change the current event manually versus having the software do it automatically based on the number of heats in each event.

Using the Keyboard

Highlight each of the different options by using the Tab key. Once the desired option is highlighted, change the value by pressing the spacebar.

View Log Screen

Results of previous races are in the View Log screen. Races are stored in the order that they were run. Use the Previous and Next buttons to move through the logged races. The Current button displays the most recent race and will automatically show the most recent race if a new race finishes. When active, the Current button will have a red border around it. The Print action button will print a copy of the currently displayed race.

Troubleshooting

Basic Operation

Do not close the Dolphin window while you are using the Dolphin system!
Wireless information from the Starter and Watches will NOT be saved to your computer if the Dolphin window is not open. It is fine to minimize the window.

How to turn on & off
Press and hold the Reset button to turn watches and starter on or off.

How to change settings on watches & starter
Press and hold Reset and immediately press the Start/Stop button (on the top of the starter, or either side button on a watch). Hold them both until unit enters the menu. Release the Reset button and then the Start/Stop button.

      - Press the Start/Stop button to change the setting for the current menu option.
      - Press Reset to advance to the next menu option.

Replacing Batteries

9V batteries are used to power both the Dolphin timers and the Dolphin starter.

Dolphin Starter Battery

Finger grip

Positive terminal

Dolphin Timer Battery

Securing screw

support@coloradotime.com
+1 970-667-1000

Frequently Asked Questions

Question	Solution
Dolphin software won't start. Displays error: "No base unit detected!"	Connect the base unit to the computer using the supplied USB cable (or any standard USB cable). Check to make sure both ends of the cable are firmly connected.
Dolphin software locks after opening *OR* Cannot change channel on Dolphin base	Check the firmware version of the Dolphin Base by clicking the Settings screen and looking at the firmware version in the Base group. Check the website coloradotime.com to see if you have the latest version and if not, follow the Dolphin Device Updates instructions (page 26). If you still have this problem after updating, contact CTS with your version numbers for assistance (support@coloradotime.com or at 800-287-0653 or +1 970-667-1000)
Trouble turning Watches and/or Starter on and off	1. Check that the user is pressing and holding Reset. 2. Replace the battery to see if that solves the problem.
Watches don't start with electronic start system	Make sure the Dolphin Starter is connected to the "Start Output" or "Timer Start" jack only. 1. Check the cable between the Dolphin Starter and the electronic start system. 2. Check the battery level of the electronic start system. 3. Check the battery level of the Dolphin Starter.
Watch will not start a race	Make sure the MAN setting on the watch is set to ON.
Watches turn themselves off	1. Make sure the base is still connected to the computer. 2. Plug the base into another USB power source if you're using the watches without transmitting to a computer.
Signal strength dips in software for Dolphin watches	1. Check battery level on watch, and change battery if it is low. 2. Minimize the obstructions between the Lane Timer and the location of the base unit (this may require to moving the base to a higher location).
Race Files are not available to meet management software OR Race Files are not being written	1. Make sure the Dolphin software is still running. DO NOT CLOSE THE SOFTWARE WHILE RACES ARE STILL BEING RUN. 2. Check the Settings screen, Logging group. Make sure the file type(s) you need are checked.
My data is not being saved, or the new race is overwriting the previous race	The data files are written at Reset; ensure that the right person/people are pressing Reset at the right time: 1. If using Dolphin Starter: the files are written after the Starting Official presses Start/Stop at the end of the race and then Reset. *Lane Timers should **not** press Reset if the Dolphin Starter is being used.* 2. If using the watches without the starter: the files are written after *every* Lane Timer presses Start/Stop

Question	Solution
Dolphin software won't start. Displays error: "No base unit detected!"	Connect the base unit to the computer using the supplied USB cable (or any standard USB cable). Check to make sure both ends of the cable are firmly connected.
Dolphin software locks after opening *OR* Cannot change channel on Dolphin base	Check the firmware version of the Dolphin Base by clicking the Settings screen and looking at the firmware version in the Base group. Check the website coloradotime.com to see if you have the latest version and if not, follow the Dolphin Device Updates instructions (page 26). If you still have this problem after updating, contact CTS with your version numbers for assistance (support@coloradotime.com or at 800-287-0653 or +1 970-667-1000)
Trouble turning Watches and/or Starter on and off	1. Check that the user is pressing and holding Reset. 2. Replace the battery to see if that solves the problem.
	at the end of the race and then Reset. If one or more lane timer fails to press reset, the file will not be written. You can overcome lane timers & starters failure to press Reset by forcing a reset with the Reset button (page 7)
Extra data files appear in meet management software OR Times do not correlate between Dolphin and meet management software list	1. Standalone: Make certain that the Lane Timers are not starting, stopping and resetting the watches unless it is to time an event. 2. Synchronized Start: Make a note of any false starts or mistimed events so that the Computer Operator knows when an event or a data set should be skipped.
I want the lanes to be numbered 0-9	Lane numbering can be 1-10 or 0-9. See Lane Numbering on page 8 for more details.
The lanes are numbered 0-9 and I want 1-10	Lane numbering can be 1-10 or 0-9. See Lane Numbering on page 8 for more details.
Dolphin device update did not succeed.	1. Make sure the base and all devices are set to the same channel. 2. Make sure all other device types are off while updating one type of device. 3. When updating watches, make sure all watches are set to separate Lane/Timer combinations (i.e., two watches are not both set as Lane 3, Timer A). 4. Follow the updating instructions step by step, and complete the steps in the order described.

support@coloradotime.com
+1 970-667-1000

| Meet Management	
Question	*Solution*
Dolphin.exe is not an option in Hy-Tek Meet Manager	Update Hy-Tek Meet Manager software to the latest version.
CTS Dolphin Backup Mode option is grayed out in Meet Manager software	This optional feature is only available when purchased from Hy-Tek. Shop online at www.hy-tekltd.com or call 866.456.5111.
I have a question about Hy-Tek's Meet Manager	*If you have questions about using Hy-Tek MEET MANAGER (MM), please see the help files within MM (from the Run screen, press F1 or select the Help Menu), or visit www.hy-tekltd.com and see the help files/user guide there. Hy-Tek has very useful, step-by-step help screens*
I have a question about Splash	*If you have questions about using Splash meet management software, please see the help files within Splash (press F1 or select the Help Menu), or visit Splash's website www.splash-software.ch.*
I have a question about Meet Maestro	*If you have questions about using Meet Maestro meet management software, please see the help files within Meet Maestro (press F1 or select the Help Menu, or visit Swimtopia's website www.swimtopia.com.*

Dolphin Device Updates

As system updates become available, any of the devices (base, starter, or timer) in the Dolphin system can be reprogrammed via the Dolphin software. The scoreboard adapter, which is an optional add-on to the Dolphin system, can also be reprogrammed via the Dolphin software. The files required to update your Dolphin system can be found at the Colorado Time Systems website coloradotime.com.

IMPORTANT NOTES:
1. **Firmware must be updated in accordance with "Dolphin Update v1.5" engineering bulletin prior to updating to the latest version. Bulletin available at www.coloradotime.com.**
2. *Each type of device* (base, starter and watch, as well as the scoreboard adapter) *must be programmed separately from the other device types*. All watches can be programmed at one time.
3. *On watches and the starter, check the battery's charge level before starting. If the battery is nearly dead, replace it before updating (page 22).*
4. *Follow the steps exactly as written. Having extra devices running, skipping steps or performing them in a different order is likely to cause the update(s) to fail.*

Base Programming Procedure (Do this first!)

1. Download the update files from the website coloradotime.com. Note the version number(s).
2. Make sure all Dolphin watches and the starter are turned off.
3. Plug your Dolphin base unit into your computer using the USB cable.
4. Open the Dolphin software.
5. Click on **Signals** at the bottom of the screen.
   a. Click **Program Devices**.
   b. Select **Base Unit**
   c. Click **Browse** then navigate to C:\CTSDolphin\Firmware.
      If you are updating v1.xx units, select "Dolphin Base V1 (*.DBC)" as the file type
      If you are updating v2.xx units, select "Dolphin Base V2 (*.DB2)" as the file type.
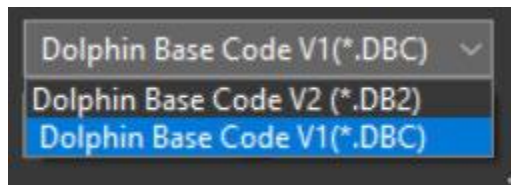
   d. Click **Start**.
6. During the update process, a progress bar is displayed in the Upload Code window. When the base device has successfully completed receiving the update, the yellow/green pair of LEDs will be on.
   a. If there is an error updating the base, only the yellow LED will blink. In case of an error, download the update from the website again, and try uploading it again. Make sure that the base is connected to a working USB port during the entire upload. If it doesn't work again, email CTS customer service at support@coloradotime.com or call 970-667-1000.

7. Once complete click **Quit**.
8. Dolphin will automatically exit.
9. Disconnect and reconnect the base.
10. Finally, restart Dolphin. The base unit is now updated.
11. Click on **Settings** and verify the base's firmware version listed in the "Base" group matches the version downloaded from CTS website.

Watches & Starter Programming Procedure

1. Update the Base before you update either the watches or the starter (see above).
2. Perform the following steps, unless you have already done them:
    a. Download the update files from the website coloradotime.com, and note the version number(s).
    b. Plug your Dolphin base unit into your computer using the USB cable.
    c. Open the Dolphin software.
3. The Watches must be programmed separately from the Starter. Make sure that the watches are off when you are programming the Starter, and that the Starter is off when you are programming the Watches.
4. When programming watches, make sure that all watches are set to separate Lane/Timer combinations (i.e., two watches are not both set as Lane 3, Timer A).
5. Make sure that the device(s) being updated are set to the same channel as the base.
6. Enter the menu on the device(s) being programmed: Press and hold Reset and immediately press the Start/Stop button (on the top of the starter, or either side button on a watch). Hold them both until unit enters the menu. Release the Reset button and then the Start/Stop button.
7. Click on **Signals** at the bottom of the screen.
    a. Click **Program Devices**.
    b. Select either **Timers** or **Starter Unit** depending on which is being updated.
    c. Click **Browse** then navigate to C:\CTSDolphin\Firmware.
        i. **Watches**
        If you are updating v1.xx units, select "Dolphin Timer V1 (*.DTC)" as the file type
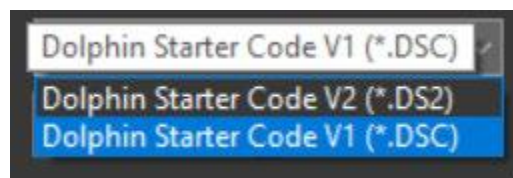   If you are updating v2.xx units, select "Dolphin Timer V2 (*.DT2)" as the file type.
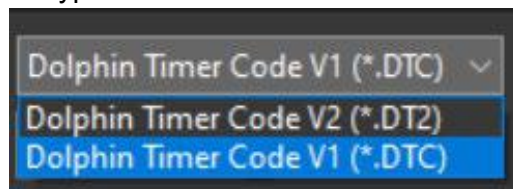
        ii. **Starters**
        If you are updating v1.xx units, select "Dolphin Starter V1 (*.DSC)" as the file type
        If you are updating v2.xx units, select "Dolphin Starter V2 (*.DS2)" as the file type.



        .
    d. Click **Start**.
8. During the update process, a progress bar is displayed in the Upload Code window on

the computer, and the LCD of the Starter or Watches will also display their progress and status. When a watch or starter is successfully updated, the unit will turn off in a few seconds after reaching 100%. The yellow LED on the base will blink. If the LCD on the device doesn't display a progress screen, the update didn't work; start the process again, making sure to follow all of the instructions in the order described.

9. Once complete click **Quit.**
10. Dolphin will automatically exit.
11. Disconnect and reconnect the base.
12. Finally, restart Dolphin.
13. Enter the menu on the device programmed and verify the version number, which is shown below the channel number.
14. The update is complete for the type of device (watches or starter) you programmed.
15. Repeat the Watches and Starter Programming Procedure if you need to update the other type of device.

Scoreboard Adapter Programming Procedure

1. Download the update files from coloradotime.com. Note the version number(s).
2. Update the Base Unit (see instructions page 26).
3. Update the Scoreboard Adapter:
    a. Make sure all Dolphin watches and the starter are turned off.
    b. Make sure that the scoreboard is turned off/unplugged
    c. Plug your Dolphin *Base* unit into your computer using the USB cable provided.
    d. Connect the scoreboard adapter to the scoreboard.
    e. Open the Dolphin software.
    f. Enable the Scoreboard:
        i. Click **Settings** at the bottom of the screen
        ii. Locate the "Scoreboards" group and click **Enabled** to enable the scoreboard.
        iii. Verify scoreboard and Dolphin are communicating.
    g. Click on **Signals** at the bottom of the screen.
    h. Click **Program Devices**.
    i. Select **Scoreboard** then click **Next**.
    j. Click **Browse** then navigate to C:\CTSDolphin\Firmware.
        If you are updating v1.xx or v2.xx units, select "Dolphin SCBD V1 (*.DDC)" as the file type.
        If you are updating v3.xx units, select "Dolphin SCBD V3 (*.DD3)" as the file type.
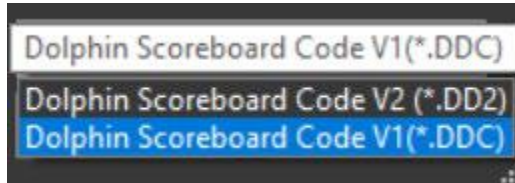
    k. Click Open, but DO NOT click Start yet

The next step needs to be done very quickly, as there is a short window of time during which it will work.

    l. Turn on/plug in the scoreboard
    m. Quickly click **Start**.
        i. Allow the upload to complete. Status will be present on both the Dolphin Screen and the scoreboard display.
    n. Once complete click **Quit**.
    o. Dolphin will automatically exit
    p. Turn off/unplug the scoreboard.
    q. Disconnect and reconnect the base.
    r. Turn on/plug in the scoreboard.
    s. Finally, restart Dolphin. The new revision of the scoreboard adapter will display on the scoreboard, along with the channel.

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