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(D)RAW (T)IMER (R)ESULTS (I)NTERFACE (S)YSTEM

DTRIS INSTALLATION AND USER GUIDE

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Release : 0.2

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Version History

Version	Who	Release Date	Changes Description
0.1	GB	March 20th, 2011	Initial release for Review
0.2	GB	March 28th, 2011	Modification paragraph for Add-on Tools Insert paragraph for Dual/Parallel

1 Company Philosophy

M.E.C. Consulting Ltd. believes that the functions in ski racing should be kept and managed through separate software packages in the same way as the race is managed through its functions. This philosophy produces a number of software packages namely:

Measures which generates the draw for National and FIS races and then generates the Results once the Racers times have been entered. It then creates the files necessary that can be loaded to the FIS and National points websites.

dTris which interfaces with most hardware timers, allows the operator to easily collect the times for each racer. These times can then be presented in a simple report from dTris or can be passed on to a results system such as Measures.

ACASki which interfaces with dTris, allows the Racers times to be passed on to the internet, when they are deemed to be correct, and then be presented to the viewing public.

www.CANSKILIVE.com which is the internet software that talks to dTris through ACASki and then presents the Racers results to the viewing public.

2 Hardware and Software Requirements

2.1 Hardware Requirements

In order to install dTris, 300MB of free space are needed on the user computer hard drive.

dTris is Licensed by the use of a licensing dongo. This is a hardware device that plugs into a USB port. This means that the dTris software can be installed as many pc's as the user wishes but will only run when it detects the dongo.

2.2 Software Requirement

Operating System

dTris runs on most windows 32 bits operating systems. However, due to the number of versions available currently, not all configurations have been tested.

Please note that it is important the most up to date service pack be applied to the Windows operation systems.

Licensing Dongo

In order for the Dongo to be detected by dTris, the Dongo driver will need to be installed. This driver is provided as part of dTris software package (See installation chapter for more details).

3 dTris Software Installation

3.1 Software download

3.1.1 Software ftp site

The dTris software is located on a FTP Site. This FTP site can be accessed using any FTP software.

M.E.C recommends CoffeeCup FTP for its simplicity in functionality, but any other FTP client software would work.

Use of MS-DOS ftp is described in Appendix 1: Using MS-DOS ftp

Use of CoffeeCup Free ftp is described in

3.1.2 FTP site information

To obtain dTris, use the following FTP server and credentials:

ftp Site: `ftp.portcredit.net`

User Id: `timing@portcredit.net`

Password: `sunshine`

3.1.3 dTris Download

When logged on to FTP site, a list of folder are displayed, including dTris, Measures, and much more.

dTris software is listed under the name : "**$ dTris VERSION MMM DD YYYY**"

where

VERSION : represents the latest version available

MMM DD YYYY : represents the date when dTris version has been released

Make sure to check the FTP site on a regular basis in case new versions of the software are released.

Download dTris folder and its content on to your desktop.

dTris folder ($ dTris 2.0.9 Feb 22 2011) contains 2 files :

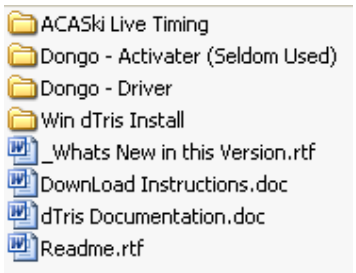
`_Whats New in this Version.rtf`

`dTris 2.0.9.exe`

Once downloaded, double Click on `dTris 2.0.9.exe` to extract installation files for dTris. This will open a Winzip application, click on 'Unzip' and direct all files to be extracted into a folder on your desktop named '`dTris Setup`'. When the extraction is completed, the Winzip window can be closed.

3.2 dTris Installation

In '`dTris Setup`' folder you should find all files and directories listed below:



If you have not installed the Dongo Driver before or you wish to upgrade the driver then execute procedure described in paragraph 3.2.1, otherwise, start installation from paragraph 3.2.2

3.2.1 Dongo Driver Install

To install or upgrade the Dongo Driver, open the folder 'Dongo – Driver' in 'dTris Setup', then double click on the file named 'Sentinel Protection Installer x.x.x.exe'

Click on the Upgrade and/or Install Buttons

Request Complete if asked

Answer "Yes" to the security question if asked.

"Sentinel Protection Installer x.x.x.exe" requires windows 'Administrator' privileges to be installed on the computer.

3.2.2 dTris Install

If previous version of dTris is installed, uninstall it prior to install the latest one (refer to Appendix 3: Uninstall dTris)

To install Win dTris, open the folder 'Win dTris Install' from 'dTris Setup' and double click on the file named setup.exe.

Please make certain to select all default settings including the location of the software or dTris may not operate correctly.

Once dTris is installed please restart your computer. Failing to do so will cause some dTris functions not to work properly until a restart has been done.

Insert your Dongo into a USB port then start dTris by Click on dTris located

Start > All Programs > MEC Apps > dTris

In order to create a dTris Icon that will reside on the desktop please follow these simple steps.

1. Click on Start
2. Click on ALL Programs
3. Click on MEC Apps
4. Right Click on the dTris Icon
5. Click on Copy
6. Now, simply click anywhere on the Desktop
7. Right Click
8. Click on Paste

4 dTris Usage – Race Setup

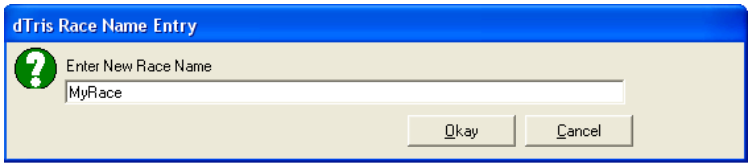
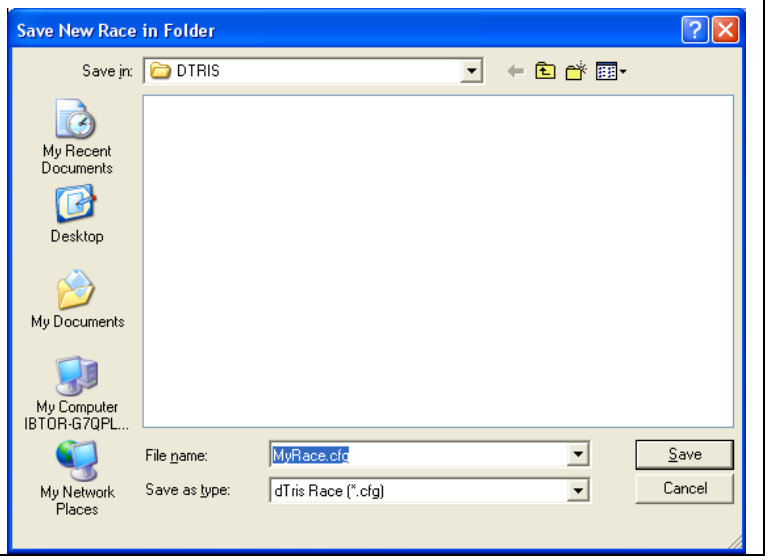
4.1 Race Setup (F1)

Different options can be used to setup a race. When opening dTris, it is possible to select menu 'File' and choose between 'New Race' or 'Open Race'

Pressing keyboard key 'F1' or clicking on the button 'F1' on the screen will propose the same options

4.1.1 Create a New Race

Press 'F1' or select menu 'File' > 'New Race'

Actions	Screenshots
Press 'F1' or select menu 'File' > 'New Race' Type the name of the race and click 'Okay'	
Select the folder to save the race and click 'Save' button	

4.1.2 Open a race

Choosing option "Open Race" will open a dialog box to choose a dTris "cfg" file in the directory tree.

This allow dTris to open races which have been previously saved or prepared in advance.

4.2 Configure a race

After saving a new race, dTris displays a list of parameter to be set.The same list can be seen/modified when opening an existing race file, from dTris menu Configure Race > Edit Race Paramters.

4.2.1 Race Parameters

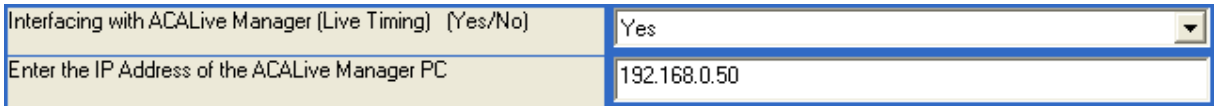
Race Parameters	Comments / Default values
Start Method	Choose between 2 start types : - Individual - Parallel [1]
Intermediate Times / Speed Traps	If the race has speed traps or intermediate times setup, click 'Yes' otherwise select 'No' – Default : 'No'
Discipline	Select the discipline of the race
Number of runs	Choose between 1 or 2 runs for the race
Para Event	Click 'Yes' for para event, 'No' for non specialised event
Race Start Interval	Count down counter to cycle between each racer, displayed on the timing screen.
Maximum time for a racer on course	Maximum time a racer is suppose to stay on course, will trigger an alert sound and switch the racer in 'Red' on the timing screen when this time is passed. (help to detect DNFs) Default : 1:10.00
Minimum time a racer should be on course	Minimum time a racer should be on course, will trigger an alert sound and switch the racer in 'Red' on timing screen if the time of the racer is less than what is defined here. (helps to detect False Finishes). Default : 0:45.00
Start Pulse Acceptance	Number of sec between 2 start pulses for the second to be counted as a start. (help to limit # false start when starter close the wand). dTris will ignore all start pulses which occurs during this allowance immediately after the start valid start pulse Default : 5.00
Finish Pulse Acceptance	Time between Finish pulses for the next one to be counted as a finish. (helps to limit false finish when a racer close finish line – body + equipment). dTris will ignore pulses from the finish once a finish pulse has been received. Default: .3
Interfacing with ACALive Manager (Live Timing)	 Allow the use of Live Timing thru ACALive. See paragraph "SOME PARAMETERS like "Racers Start Method", "Para Event" and if a race is a dual "Dual Type" are not modifiable after clicking on Okay on the "Parameter" screen. If any changes are required on those, a new race will need to be created. Live Timing Setup" for further information.
Number of Categories	Set the number of categories. See paragraph "CATEGORIES SETUP" for further information.

[1] When creating a Parallel Race, refers to Dual/Parallel Race specificities section

Some parameters like “Racers Start Method”, “Para Event” and if a race is a dual “Dual Type” are not modifiable after clicking on Okay on the “Parameter” screen. If any changes are required on those, a new race will need to be created.

4.2.2 Live Timing Setup

If live timing is required, during the setting of race parameters, you will be expected to feel-up the IP address of the computer where ACALive Manager in installed



As well as the CODEX of the race.

If LiveTiming is due to be use for a race, the codex and set of information need to be sent to rbeare@shaw.ca in order for the race to be prepared on www.canskilive.com. This operation has to be done at least a week prior to the race. Check ACASki Live Timing documentation.

4.2.3 Categories Setup

dTris allows 999 bib recorded per race. Races are often run with forerunners as well as racers. Forerunners should not appear in results and therefore cannot be timed in the same bib sets as racers.

Having multi categories will allow the timer to produce a set of results for each category.

In order to explain the category setup, lets take an example:

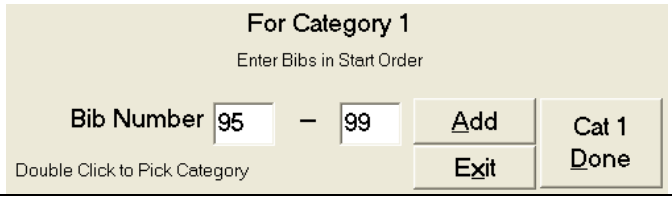
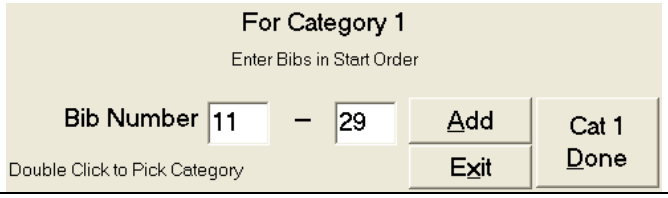
The race will have 98 racers

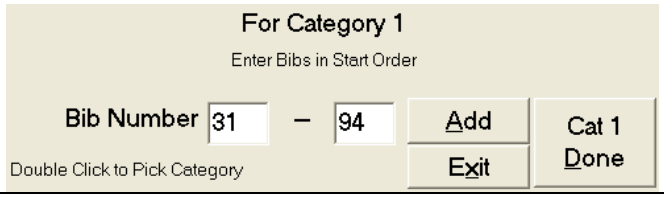
The bib #30 is missing in the bib set provided by the race organization.

During the race meeting, it has been defined that bibs will run in the following orders :

1 to 10, 95 to 99, 11 to 29 and 31 to 94

On the Category setup, enter :

Enter the first set of bib: 1 to 10 Click on Add	
Enter the second set of bib: 95 to 99 Click on Add	
Enter the third set of bibs: 11 to 29 Click on Add	

Enter the fourth set of bibs:31 to 94	
Click on Cat 1 Done when all bibs are in	

When the category is set, setting needs to be done for padding and forerunners.

4.2.3.1 Category padding

dTris is working on unique bib#. In other words, only one bib#2 can exist in the same race. In case there are 2 categories (one for racers, one for forerunners and bib#1 to #5 appears in both categories, the forerunners category needs to be padded).

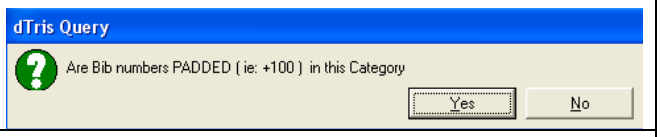
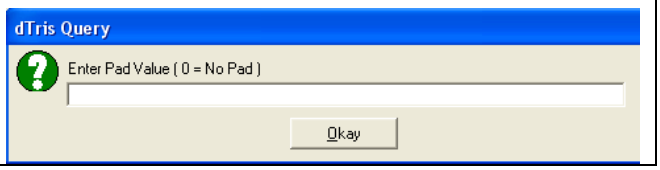
dTris allows a pad to be subtracted from the bib# to obtain the second set of bibs where numbers are in the same range as the other set.

For one category, the pad will be set to 0 (bib#1 minus Pad = Bib#1)

For the other category, the pad can be set to 400 (bib#401 minus Pad = Bib#1)

The entire category is padded; it is not possible to pad only one bib# among all in a single category.

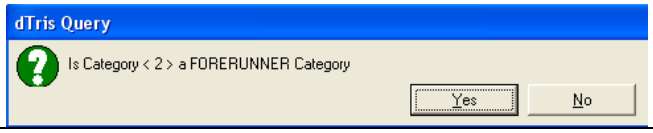
The PAD is setup after the category is set, when dTris operator click on "Cat X Done"

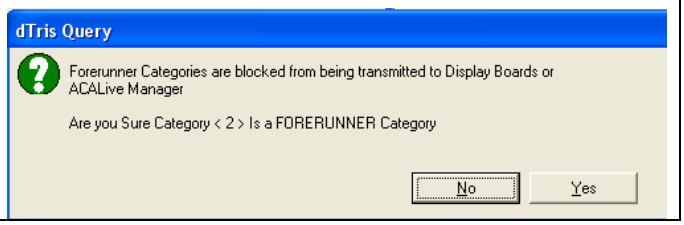
Is the category padded ? Click on "Yes"	
Enter the pad# (ex. 400)	

4.2.3.2 Forerunner category

After clicking on "Cat X Done", and after choosing the PAD#, the category need to be defined as Forerunner category or not.

When a category is set as Forerunners, bibs raced under this category will not appear on the display device.

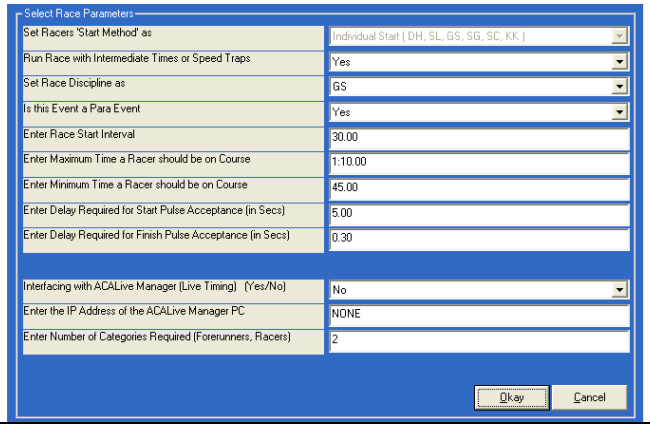
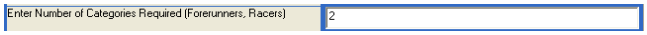
If the category is to be the forerunner set of racers Click "Yes"	

Confirm the Forerunner category Click "Yes" to confirm Click "No" to return to the previous question	

Note : When a category is listed as "forerunner" any results from this category will not be visible neither on the display board, neither on Live Timing if Live Timing is setup for the race.

4.2.3.3 Reset a category

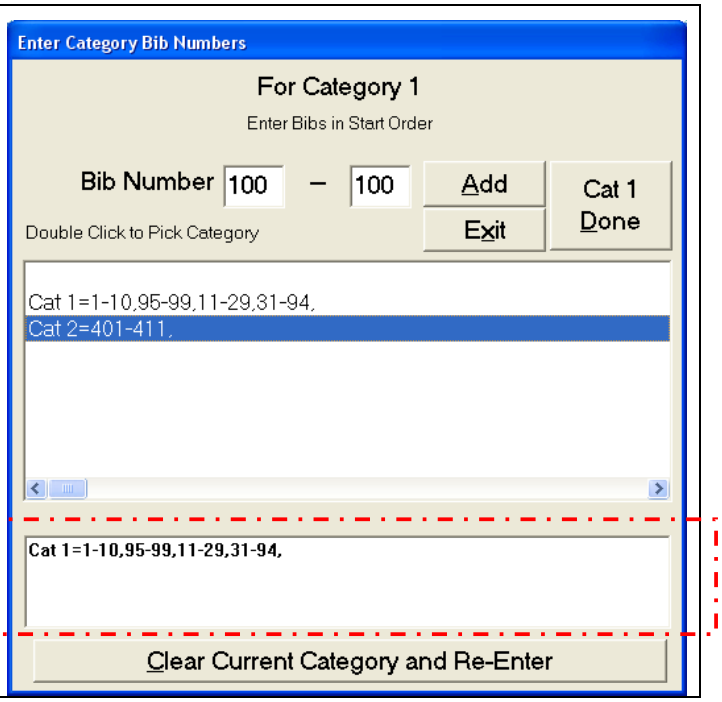
If a mistake was done in setting-up a category, the category can be cleared and reset from the Configuration screen :

Select Menu Configure Race > Edit Race Parameters	
Select the field "Enter Number of Categories Required (Forerunners, Racers)" Click "Okay" This will bring category setup screen back	

Double click on the category to reset

Click on "Clear Current Category and Re-Enter"

Note : the category to clear is the one listed in the field highlighted in red in this screen shot (in our example : Cat 1)



4.3 Device setup (F2)

In order for dTris to time the race and display results on display board, each device need to be set and tested, this would ensure the timer and the display board are well plugged into the computer and accordingly set according to their specification into dTris.

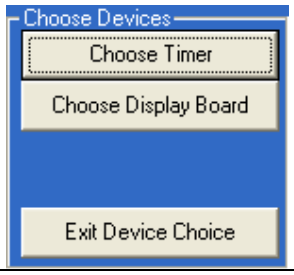
This menu can be access using either :

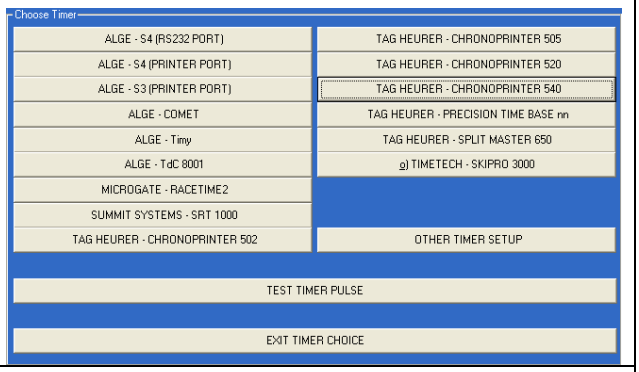
- Depressing "F2" key on the keyboard
- Clicking on "F2" button on dTrain main screen
- Using menu "Configure Race > Choose Devices"

4.3.1 Choose Timer

From the dTris main screen, depress F2 key or click on 'F2' button.

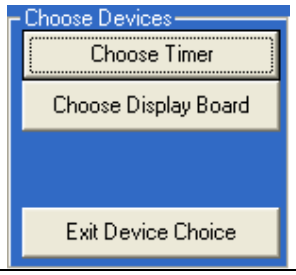
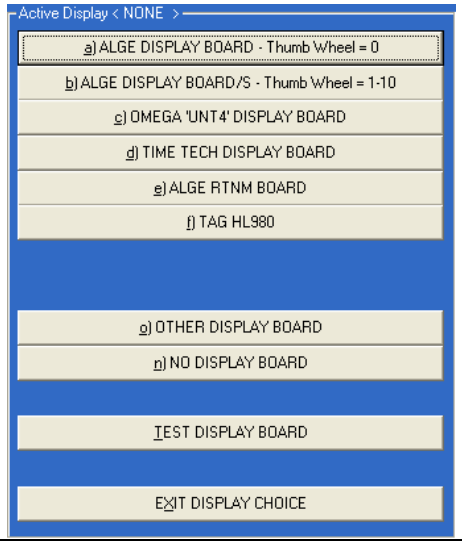
This will display "Choose Devices"

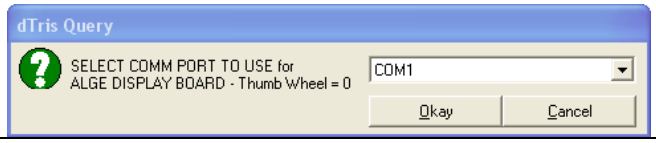
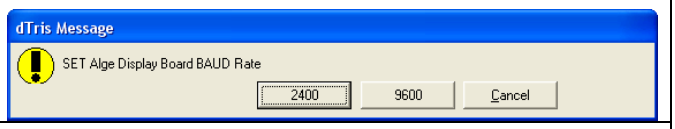
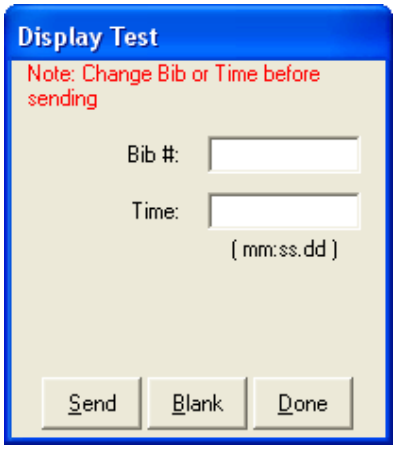


Click on "Choose Timer" Click on the name/connection port of your device	
Choosing the device will lead to a question asking which port is used for this device	
Click on "EXIT TIMER CHOICE" when all pulses have been tested thru "TEST TIMER PULSE"	

It is important to test the timer using the TEST TIMER IMPULSE button and test ALL impulses: Start, Speed, Intervals and Finish. This will also helps finding which Channel each impulse is connected to (this information is used to configure the timer (F3)

4.3.2 Choose Display Board

From the dTris main screen, depress F2 key or click on 'F2' button. This will display "Choose Devices"	
Click on "Choose Display Board" Select the display board according to what is used for the race	

Choosing the device will lead to a question asking which port is used for this device	
If required for the device, a request will be done for the BAUD rate set on the device	
Check the display board is working as expecting by clicking on "TEST DISPLAY BOARD" Insert a number in field BIB# Insert a dummy time such as 00:36.10 in Time field Click on "Send" to display on the board Click on "Blank" to clear fields Click on "Done" when you have confirmed the display is working as expected	

4.4 Timer configuration (F3)

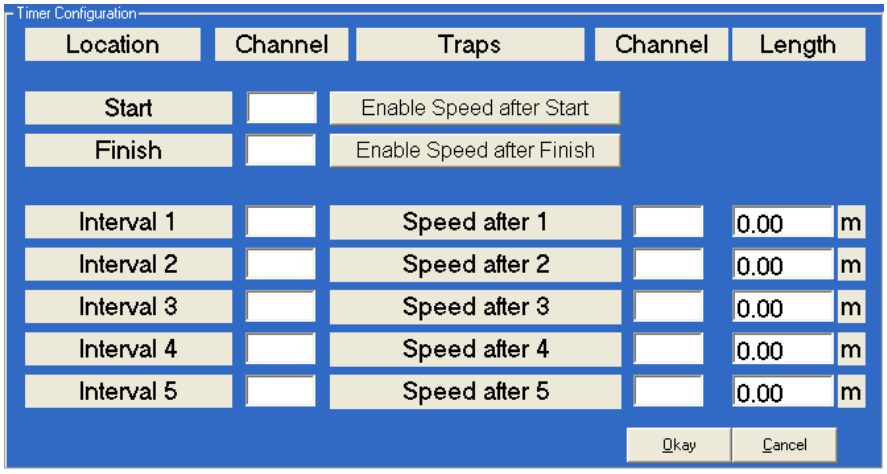
When a timer is selected in dTris (refer to "`Choose Timer`" on previous paragraph), "`Config Timer`" button becomes available.

"`Config Timer`" is accessible using the following options :

- Depressing "`F3`" key from dTris main screen
- Clicking on menu "`Config Timer F3`" on the dTris main screen
- Using menu "`Configure Race > Config Timer`"

4.4.1 Channels configuration

The configuration of each impulse channels is done in this screen



For each timing device on the hill, dTris requires the channel identification. This will allow dTris to assign each pulse to the correct location on the hill for each racer.

When the race includes speed traps, make sure to fill-up the speed channel for each speed location as well as the distance between the initial location and the speed trap location.

Channel to be used for each timing location can be seen from the Timer Testing screen, refer to paragraph "4.3.1" page "12" using "`Test Timer Pulse`" button

Note : When channel fields are left empty, it means no timing location is set for this point.

4.4.2 Push Start

When a push start is set, it means you have a timing location few meters below the start wand.

After setting the channel for the start wand, click on "`Enable Speed after Start`" and type the channel used for the speed timing location as well as the distance between this timing location and the start wand.

4.5 Load Racers file (F4)

This function allow Racers Names to be loaded from 3 file format : Measures, Special Olympics and GMS and Other Ascii files.

Whichever option is chosen, the category to whom the file need to be loaded need to be specified.

Bibs setup in the Racer Name file should match bibs set for the category

Each file should contain bib for one and only one category.

4.5.1 Measures File Format

4.5.2 Special Olympics GMS File Format

4.5.3 Other Ascii File Formats

In this option, you will have 2 choices :

- Fix length fields

  The file should have BIB#, Racer Name and Club columns, you must know positions and length of each field

- Comma Separated

  The file should have 3 columns (Bib#, Racer Name and Club), you must know in which column each field is located

4.6 Synchronizing dTris Time (F5)

To allow dTris to enter in race mode, another action need to be executed : Sync Time

Sync Time simply reads a record from the timer and sets the programs clock to the value received.

This synchronization can be accessed using 3 different methods :

- Depress keyboard key "F5"
- Click on button "F5 Sync Timer" on dTris main screen
- Select menu "Configure Race > Sync Timer"

Note : it is recommended to sync all timing devices used on the hill prior to sync dTris.

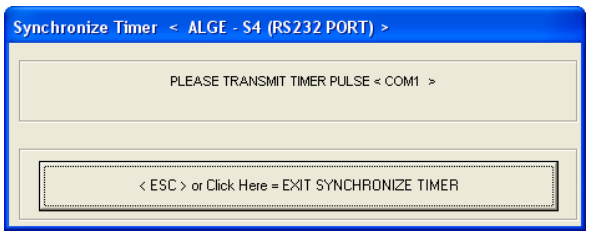
To synchronize, a set of questions will need to be completed

Questions	Possible Answers	Information
Is TIMER Connected and running in TIME OF DAY	Yes / No	**No** - return to dTris main screen without doing any synchronization **Yes** – Allow dTris to pursue with synchronization process

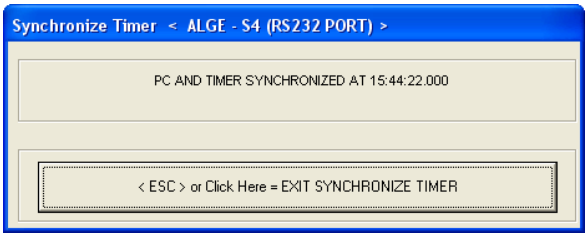
Questions	Possible Answers	Information
Print Synchronizer Pulse to a Printer	Yes / No / Cancel	**Yes** – will print the sync pulse when it appears on the selected printer **No** – Display Synchronizer window **Cancel** - return to dTris main screen without doing any synchronization
Indicate which Printer to use	Select printer listed	Displays only if previous question was answered with "YES"
Please transmit Timer Pulse < Port#>	ESC	It is a good practice to ask the starter to open the wand to get this pulse
Place this Synchronization into another file	Yes / No	This is used if the same sync time is to be used in 2 different race files. **Yes** – to copy the sync time to another dTris Race file. **No** – return to dTris main screen

It is always possible to comeback to this menu and resync if necessary, the restriction in such case is it has to be done outside of the Timing race screen which means you will have to pause the race to do a re-sync.

When pulse is received from the timer, dTris will turned from :



to



And the time will start running on top of dTris screen :

4.6.1.1 Exit Sync Time

To exit the "Sync Time" window, depress key "ESC" on the keyboard or click on "<ESC> or Click Here = EXIT SYNCHRONIZE TIMER" button.

Synchronisation time can be saved in another dTris file if required to be used for a second race.

Synchronizing dTris and TIMER enable button "Time Race F9".

4.7 Show Cats (F6)

Show category menu is only presented to ensure categories are set according to race plan. Check them before entering in Race Mode. If it is not accurate, return to Race Parameters and reset categories according to Race requirements.

To modify categories, refer to paragraph “CATEGORIES SETUP” page 9.

5 Timing a race

When the race is set in dTris (F1, F2, F3, F4 are completed), and the synchronization between dTris and Timer is done (F5), it is possible to enter in Timing mode

To open the timing screen, either depress key "F9" on the keyboard or click on button "Time Race F9" on dTris main screen.

5.1 Setup Runs

5.1.1 Setup Run #1

The first time the timing screen is opened on a race file, dTris will trigger the creation of a New Run#1.

Questions	Button available	Descriptions
Start a New Run #1	No/Yes/Cancel	**No** – Try to open previous run, as in this case (Run1) previous run is not existant, it will return to dTris main screen. **Yes** – Pursue the setup of Run#1 **Cancel** – Return to dTris main screen
Invert entire 'RUN #' race start order	Yes/No	**Yes** - This will set the racer starting list in reverse order for all categories. If the category #1 was set from bib#1 to bib#55, the first racer displayed to leave the start get will be bib#55 followed by bib#54 … until bib#1 **No** – Will list the racers in the start gate in the order defined during the creation of the category
Activity to log File output	Both / Log Only / Cancel	**Both** – All pulses and calculation are sent to the printer as well as to the log file **Log Only** – Will create a log for each timing pulse and time calculation, but nothing is printed – mostly used when no printer can be attached to the computer **Cancel** – Return to dTris main screen

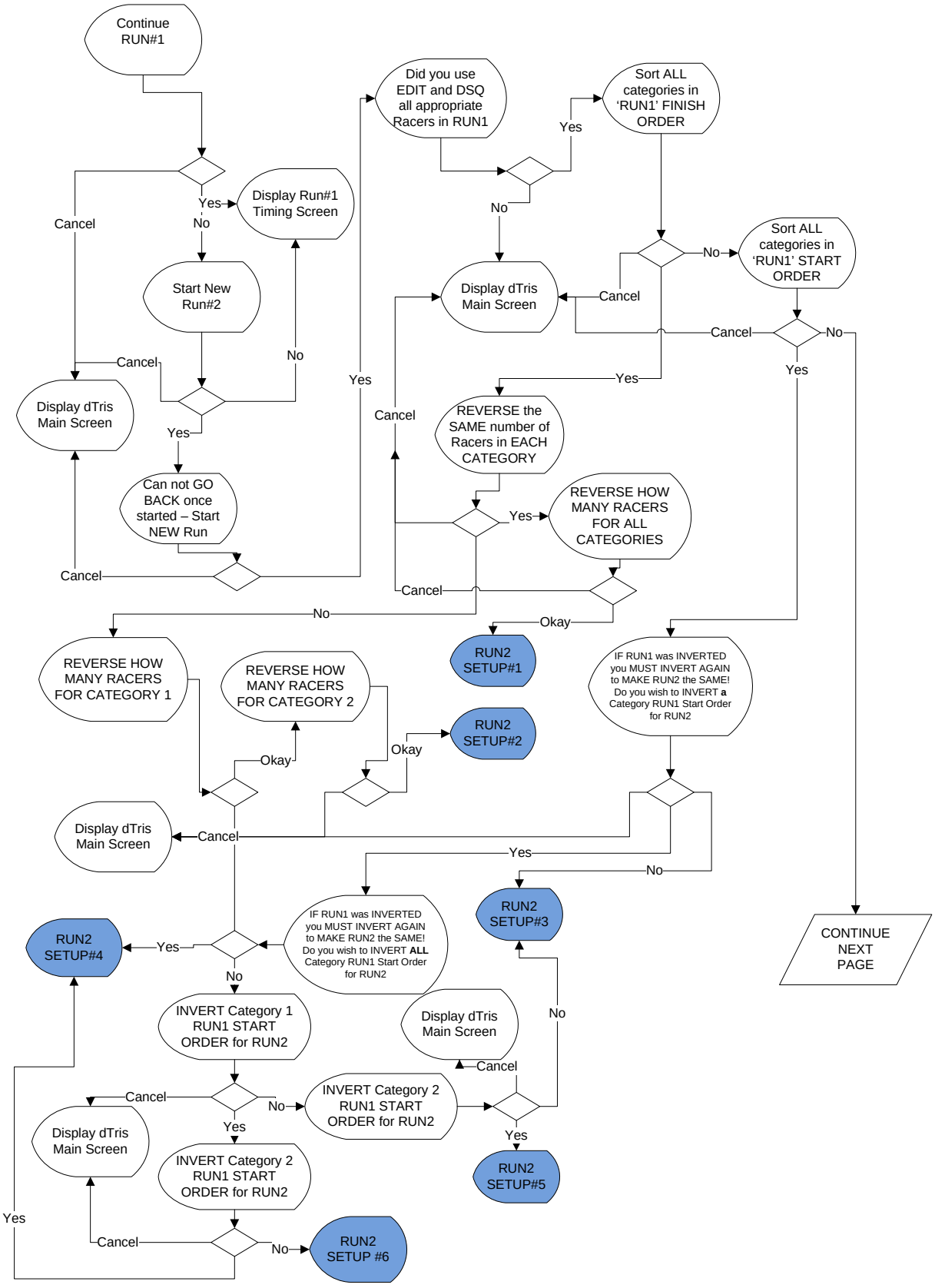
5.1.2 Setup Run#2

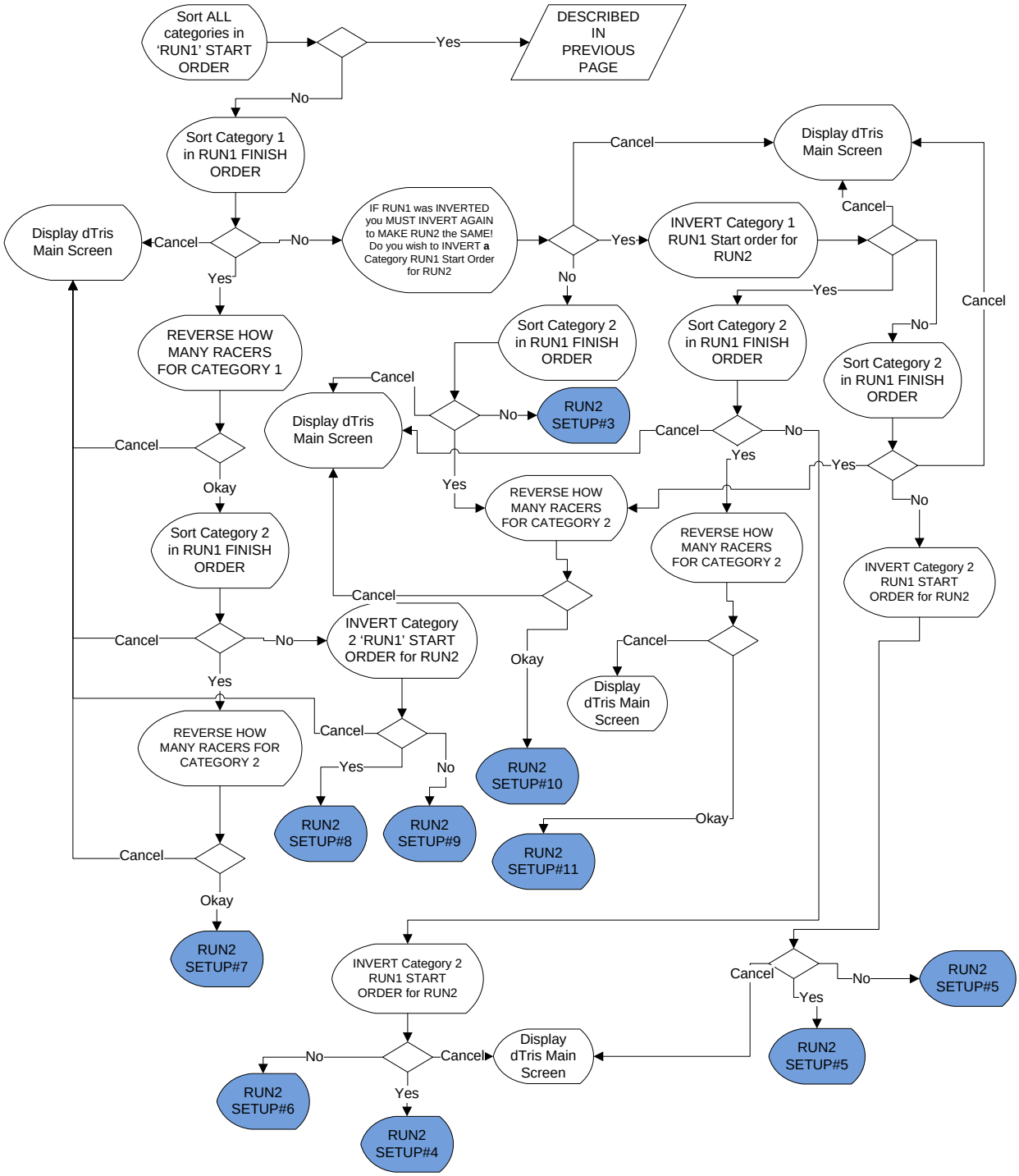
To setup a new run when Run#1 has been completed and DSQs registered, dTris operator needs to setup the RUN#2 start list according to what the race requirement are. The tab and Schemas below will help to define which answers need to be provided in dTris to obtain the right RUN2 start list :

Run2 Start List :

RUN2 Setup #	Description
1	CATEGORY 1 'RUN 2' has 'RUN 1' FINISH ORDER with X RACERS REVERSED CATEGORY 2 'RUN 2' has 'RUN 1' FINISH ORDER with X RACERS REVERSED
2	CATEGORY 1 'RUN 2' has 'RUN 1' FINISH ORDER with X RACERS REVERSED CATEGORY 2 'RUN 2' has 'RUN 1' FINISH ORDER with Y RACERS REVERSED
3	CATEGORY 1 'RUN 2' has 'RUN 1' START ORDER CATEGORY 2 'RUN 2' has 'RUN 1' START ORDER
4	CATEGORY 1 'RUN 2' has 'RUN 1' START ORDER INVERTED CATEGORY 2 'RUN 2' has 'RUN 1' START ORDER INVERTED
5	CATEGORY 1 'RUN 2' has 'RUN 1' START ORDER CATEGORY 2 'RUN 2' has 'RUN 1' START ORDER INVERTED
6	CATEGORY 1 'RUN 2' has 'RUN 1' START ORDER INVERTED CATEGORY 2 'RUN 2' has 'RUN 1' START ORDER
7	CATEGORY 1 'RUN 2' has 'RUN 1' FINISH ORDER with X RACERS REVERSED CATEGORY 2 'RUN 2' has 'RUN 1' FINISH ORDER with X RACERS REVERSED
8	CATEGORY 1 'RUN 2' has 'RUN 1' FINISH ORDER with X RACERS REVERSED CATEGORY 2 'RUN 2' has 'RUN 1' START ORDER INVERTED
9	CATEGORY 1 'RUN 2' has 'RUN 1' FINISH ORDER with X RACERS REVERSED CATEGORY 2 'RUN 2' has 'RUN 1' START ORDER
10	CATEGORY 1 'RUN 2' has 'RUN 1' START ORDER CATEGORY 2 'RUN 2' has 'RUN 1' FINISH ORDER with X RACERS REVERSED
11	CATEGORY 1 'RUN 2' has 'RUN 1' START ORDER INVERTED CATEGORY 2 'RUN 2' has 'RUN 1' FINISH ORDER with X RACERS REVERSED

To setup RUN2, from dTris Main screen, press “F9” to get into the Timing Screen. Find how to obtain the RUN2 setup# according to your choice, look for it in the next 2 schemas and find out how to answer questions.

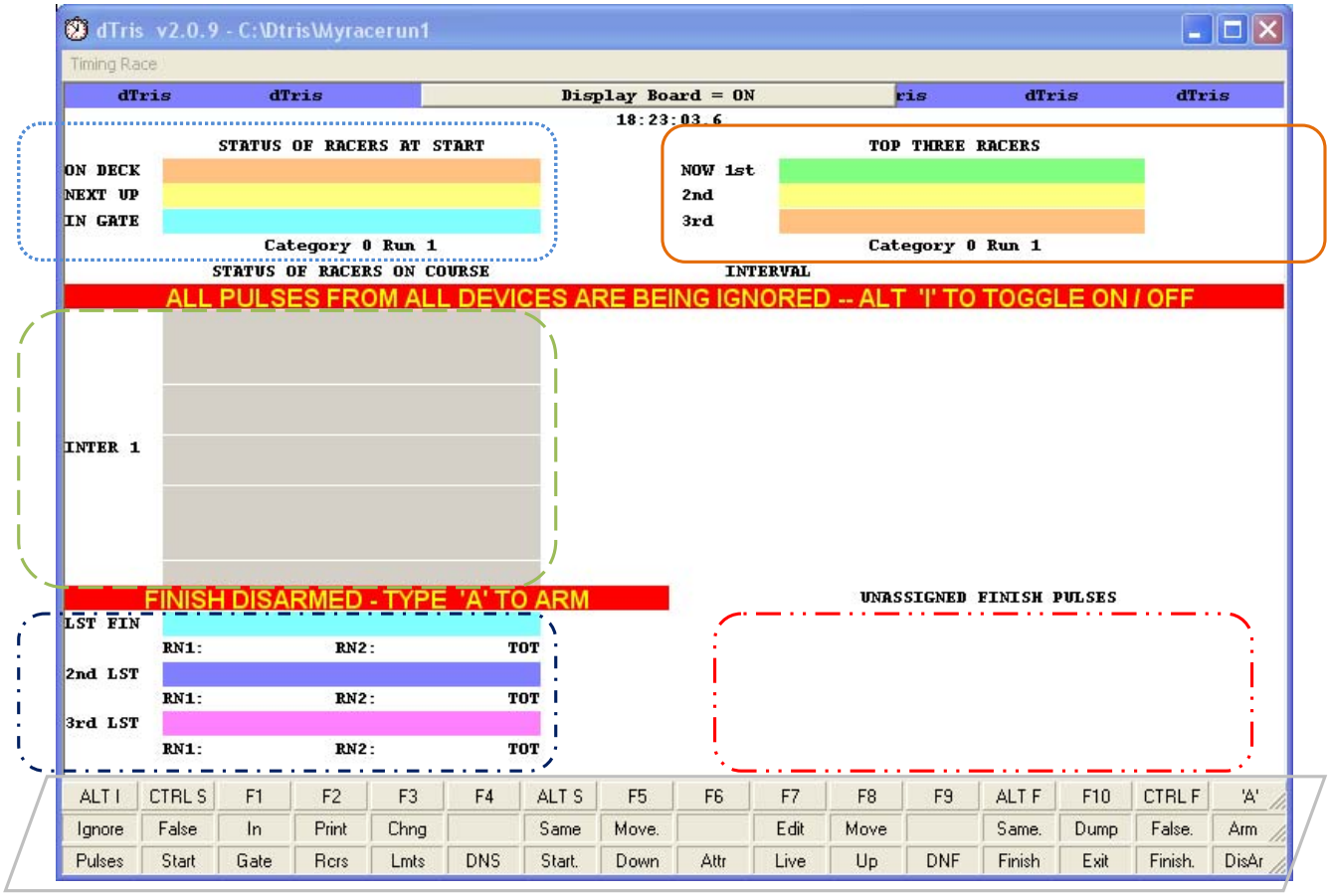

Continue RUN#1
Yes
No
Cancel
Display Run#1 Timing Screen
Start New Run#2
Cancel
No
Yes
Display dTris Main Screen
Can not GO BACK once started – Start NEW Run
Cancel
Did you use EDIT and DSQ all appropriate Racers in RUN1
Yes
No
Sort ALL categories in 'RUN1' FINISH ORDER
Display dTris Main Screen
Cancel
No
Sort ALL categories in 'RUN1' START ORDER
Cancel
No
Yes
Yes
Yes
Cancel
REVERSE the SAME number of Racers in EACH CATEGORY
Yes
REVERSE HOW MANY RACERS FOR ALL CATEGORIES
Cancel
No
Okay
REVERSE HOW MANY RACERS FOR CATEGORY 1
REVERSE HOW MANY RACERS FOR CATEGORY 2
RUN2 SETUP#1
RUN2 SETUP#2
Okay
Okay
IF RUN1 was INVERTED you MUST INVERT AGAIN to MAKE RUN2 the SAME! Do you wish to INVERT a Category RUN1 Start Order for RUN2
Display dTris Main Screen
Cancel
Yes
No
RUN2 SETUP#3
IF RUN1 was INVERTED you MUST INVERT AGAIN to MAKE RUN2 the SAME! Do you wish to INVERT ALL Category RUN1 Start Order for RUN2
RUN2 SETUP#4
Yes
No
INVERT Category 1 RUN1 START ORDER for RUN2
Display dTris Main Screen
Cancel
No
Cancel
Display dTris Main Screen
No
Yes
INVERT Category 2 RUN1 START ORDER for RUN2
Yes
RUN2 SETUP#5
INVERT Category 2 RUN1 START ORDER for RUN2
Yes
Cancel
No
RUN2 SETUP #6
CONTINUE NEXT PAGE


Sort ALL categories in 'RUN1' START ORDER
Yes
DESCRIBED IN PREVIOUS PAGE
No
Sort Category 1 in RUN1 FINISH ORDER
Display dTris Main Screen
Cancel
No
IF RUN1 was INVERTED you MUST INVERT AGAIN to MAKE RUN2 the SAME! Do you wish to INVERT a Category RUN1 Start Order for RUN2
Yes
Cancel
Display dTris Main Screen
INVERT Category 1 RUN1 Start order for RUN2
Cancel
Yes
Cancel
No
REVERSE HOW MANY RACERS FOR CATEGORY 1
Sort Category 2 in RUN1 FINISH ORDER
Sort Category 2 in RUN1 FINISH ORDER
Sort Category 2 in RUN1 FINISH ORDER
Cancel
Display dTris Main Screen
No
RUN2 SETUP#3
Cancel
No
Yes
Yes
Yes
Cancel
Okay
REVERSE HOW MANY RACERS FOR CATEGORY 2
REVERSE HOW MANY RACERS FOR CATEGORY 2
No
Sort Category 2 in RUN1 FINISH ORDER
INVERT Category 2 RUN1 START ORDER for RUN2
Cancel
Cancel
No
INVERT Category 2 'RUN1' START ORDER for RUN2
Okay
Cancel
Display dTris Main Screen
Yes
REVERSE HOW MANY RACERS FOR CATEGORY 2
Cancel
Yes
No
RUN2 SETUP#10
RUN2 SETUP#8
RUN2 SETUP#9
Okay
RUN2 SETUP#11
Cancel
Okay
RUN2 SETUP#7
INVERT Category 2 RUN1 START ORDER for RUN2
Cancel
No
RUN2 SETUP#5
Yes
RUN2 SETUP#5
No
Cancel
Display dTris Main Screen
RUN2 SETUP#6
Yes
RUN2 SETUP#4

5.2 Timing Screen (F9)

Depressing keyboard key “F9” from dTris main screen will switch dTris to Timing Mode.

Below is a screenshot sample of the Timing Screen :



The timing screen is split in 5 sections which are highlighted in the screenshots:

Highlight	Area Name	Description
	Status of racers at start	List the next 3 racers in the start. When a start pulse is received, the racer marked on the line ‘In Gate’ will be sent on course
	Status of racers on course	This area list all racers currently on course, you will see each passage to each Interval listed here. In this area, the racer will get down one level every time he cross a timing point (interval). The next racer on course will appears on top of the list. The racer listed the most down in the list should be the racer closest to the finish line. The color of the racer on course will change to RED if he is bypassing the time set for ‘longest time on course’ while setting up the race parameters

Highlight	Area Name	Description
	Status of racer at finish	List the last 3 finishers. The color of the racer will change to RED if the racer is DNF or if the racer is bypassing the time set for 'longest time on course' while setting up the race parameters.
	Top 3 racers	List the top 3 racers from the category currently racing
	Unassigned finish pulses	List all finish pulses which are not associated to any racer. Those pulse can be re-assigned to the correct racer or ignored. The list can keep up to 20 unassigned finish pulses before overwriting the oldest one.
	Function keys	Buttons and description of keys available during race timing

5.2.1 Timing Keys

Lots of actions can be done via shortcut key combinations on the timing screen :

Key / Key Combination	Actions
F1	Bring category / Racer to the gate
F2	Print racer information to the default printer
F3	Change limits set in Race Parameter screen
F4	Mark a racer as Did Not Start (DNS)
F5	Move a racer down in list – the racer can still be at the start line or already racing,
F6	Assign a time from the time stack to a racer
F7	Edit Racer info
F8	Move Racer up in the list – the racer can still be at the start gate or already racing
F9	Mark a racer as Did Not Finish (DNF)
F10	Dump run information and exit the timing screen
Ctrl S	Used to declare a false start
Ctrl F	Used to declare a false finish
Alt I	Unlock/Lock all pulses (no pulse will be logged by dTris from any devices)
Alt S	Exchange start pulse between a racer already on course and a racer 'In Gate'
Alt F	Exchange finish pulse between a last racer who have been given the previous finish pulse and the racer on course due to finish next.
A	Arm/Disarm Finish eyes – Pulse continue to registered and will be stored into 'Unassigned bcket'.

5.2.2 Managing the Start

5.2.2.1 Racer In Gate / Change Category (F1)

To bring a racer to the Gate in dTris or to switch category, you can use:

- Depress key 'F1' and enter bib#
- Double click on the start area
- Click on the button "F1 In Gate"

All those actions will issue the "Bib Query" screen

Three scenario can appears :

a. *Change category*

Type 0 and enter the category# in the next screen

This would display in the start gate the next racer registered to start in the new category called

b. *Call Bib in the same category*

Simply type the Bib# that have been called by your starter

c. *Call Bib in different category*

Type the Bib that need to be set in the gate. If it is not registered in the same category, a confirmation is requested to change category

When confirmed, the BIB# listed in the "In Gate" position will be the one called and the following BIBs are the next ones to start in the same category as the current "In Gate" Bib#.

Racers which have already finished or have been DNF or DNS can be recalled in Start Gate if needed, dTris operator will have to confirm the recall thru a series of questions.

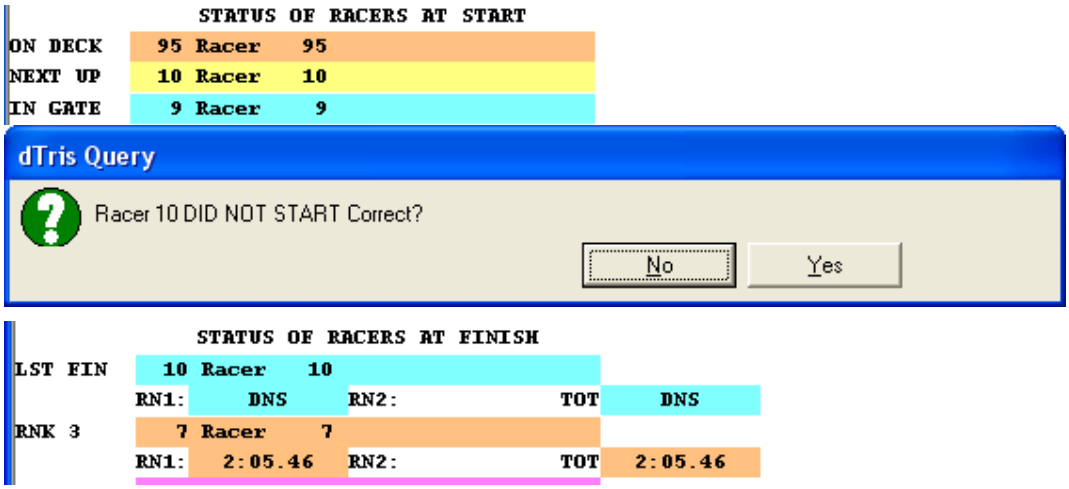
5.2.2.2 DNS (F4)

When a Bib# is listed in the start list but the racer doesn't show up, the BIB# should be marked as DNS. This is done in dTris by

- Depress keyboard key "F4" and enter the Bib#
- Click on button "F4 DNS" and enter the Bib#
- Click on the Bib# in the start area with the right button of the mouse and select "DNS"

When Bib# is declared “DNS”, it will be moved from the Start area on the screen to the Finish area on the screen.

In the example below, BIB#10 is DNS :



If a BIB# is DNSed or DNFed on Run #1, it will not be listed automatically on Run #2. For those who run races where both runs can be ran, a bib # can be put in the gate even if it was DNS/DNF on previous run by simply pressing F1 when this bib should be in position ‘In Gate’ and insert the Bib#. A question will request a confirmation to bring the BIB# into race.

5.2.2.3 Add a racer in the category currently racing

When categories are done and dTris is in Timing Mode, to add a Bib# in a category, you can either Exit the timing screen and go back to the Race parameters, or

Press “F1” key, and put the new Bib# in the gate, a serie of questions will allow dTris operator to confirm this add-on for the category :

Question	Answers	Explanation
Bib Not in any category – Add to category #x	Yes/No	**Yes** – Will show the Category setup screen (refer to paragraph “Reset a category” **No** – It will request for the creation of New Category
Create a new category	Yes / No	**No –** dTris come back to Timing screen without adding the new bib# **Yes** – Category setup screen will displays

When the bib# is added, it will show in the start area of the timing screen in position “In Gate”

5.2.2.4 False Start (Ctrl+S)

When a wand send a start pulse, but the racer still in gate (can appen when the racer take position and touch the wand with his poles). The starter advise for a False start, but in dTris, the racer is already "On Course".

Bib# can be reset back to "In Gate" position using either :

- Key combination Ctrl + S
- Click on Button "Ctrl S – False Start"
- Click and drag the Bib# from "On course" part of the timing screen back to "In Gate" position

5.2.2.5 Exchange Last Bib started (Alt+S)

This is used when a start pulse was assigned to a Bib# but you realise that was the wrong bib# in the position "In Gate". For example, Bib# 17 trigger the start, and you realise that should have been bib#10 (for a re-run), the following steps would need to be executed :

Bring Bib# 10 in the Gate (F1)

Exchange the start pulse between Bib# 17 and Bib# 10 using either

- Key comnbination "Alt + S"
- Click on button "Alt + S Same Start"

Answering YES will replace Bib#17 on Course with Bib#10 on course and replace Bib# 17 in the line for his start.

5.2.3 Managing on course racers

5.2.3.1 Over take (F5)

When a racer over take another racer on the hill, dTris needs to be notified, otherwise all timing pulses at each location will be assigned to the wrong racer.

As soon as dTris operator is aware of the overtake, he should mark it in dTris by either :

- Depressing keyboard key "F5"
- Clicking on button "F5 Overtake"
- Clicking and dragging the last starting racer over the previous racer (sliding the racer down in the "On course" part of the screen

When using "F5", dTris opens a dialog box :

The Bib# which is overtaking (faster racer) need to be entered in this box.

5.2.3.2 DNF (F9)

A racer who will not cross the finish line should be marked as “DNF”, otherwise it will stay displaying in the “On course” part of the screen.

DNFs are marked in dTris using either :

- Depressing keyboard key “F9”
- Clicking on button “F9 DNF”
- Click with right mouse button on the racer and selecting “DNF”

5.2.3.3 Colours

“Aqua” or “Light Blue” : Racer is currently at location (Start, On Course, At Interval or at Finish)

“Dark Blue” : Previous at location (Start, On Course, At Interval or at Finish)

“Red” : Racer early or late at finish (passing the line before or after limits defined in race parameters. Also used for Finish Pulses unassigned.

“Green” : Racer currently winner

“White” : Racer currently in second position

“Brown” : Racer in third position.

5.2.4 Managing the Finish

5.2.4.1 Arm/Disarm Finish Line (A)

dTris allows a quick lock/unlock of the finish eyes. When Finish eyes are locked (red bar appearing on the “Status of Race Finish” area of dTris Timing screen

When Finish is disarmed, , all finish pulses are stacked into “unassigned finish pulse”

To Arm and Disarm the finish:

- Depress key “A” on the keyboard
- Double click on “Status of racers at finish” title

5.2.4.2 False Finish (Ctrl+F)

Unexpected events triggering the finish line is not unusual. When this appears, dTris associates the pulse to the racer which was the closest to the finish line. In the situation where the racer is still on course and the finish pulse was triggered by another circumstance, dTris would have the wrong time

for the racer. To overcome this issue, as soon as dTris operator realised the pulse was a false finish, he can trigger a "False Finish" by using either of the following options:

- Depress keyboard key combination "Ctrl+F"
- Click on button "Ctrl+F False Finish"

When False Finish is triggered, the racer is pulled back to the "On course" area of dTris screen until the next Finish pulse is detected.

5.2.4.3 Unassigned Finish Pulses (F6)

Finish pulses in the "unassigned finish pulse stack" the pulse can be re-assigned to racers, by either

- sliding the time to racer it should be assigned to in the "On Course" or "Finish" area of dTris Timing screen or to racer in the "Finish" area of dTris Timing screen.
- Press key "F6", double click on the time that needs to be re-assigned. In the dialog box appearing, insert the bib# to which this time should be allocated to.
- Click on button "F6 Attr", double click on the time that needs to be re-assigned. In the dialog box appearing, insert the bib# to which this time should be allocated to.

5.2.5 Other commands

Other options are available from dTris timing screens

5.2.5.1 Enable / Disable timing pulses reception (Alt+I)

dTris has an option to enable/disable the reception of any timing pulses received from any timing location.

Using key combination Alt+I or clicking on the Red/Yellow message "All pulses from all devices are being ignored", all pulses coming from any devices will be received and assigned accordingly.

Depressing key combination "Alt+I" is the only possibility to re-lock all timing devices again.

Pulses received while devices are ignored are not are not re-assignable.

5.2.5.2 Print Racer (F2)

To print racer information (Bib#. Name, Status and Time for each run) :

- Press "F2"
- Click on button "F2 Print Rcrs"

5.2.5.3 Change Limits (F3)

Certain limits which were set during the setup of the race can be modified

Limits	Description
Interval at start	Count down counter to cycle between each racer, displayed on the timing screen.

Limits	Description
Maximum time on course	Maximum time a racer is suppose to stay on course, will trigger an alert sound and switch the racer in 'Red' on the timing screen when this time is passed. (help to detect DNFs)
Minimum time on course	Minimum time a racer should be on course, will trigger an alert sound and switch the racer in 'Red' on timing screen if the time of the racer is less than what is defined here. (helps to detect False Finishes).
Delay at start	Number of sec between 2 start pulses for the second to be counted as a start. (help to limit # false start when starter close the wand). dTris will ignore all start pulses which occurs during this allowance immediately after the start valid start pulse
Delay at finish	Time between Finish pulses for the next one to be counted as a finish. (helps to limit false finish when a racer close finish line – body + equipment). dTris will ignore pulses from the finish once a finish pulse has been received.
Printing is turned Off	To enable/disable printing
Category #1 is a forerunner	Switch category to Forerunner

While Change limits screen is open (F3), timing pulses received from each timing devices are still registered and will be assigned sequentially as soon as Change Limits screen is closed.

5.2.5.4 Edit Racer (F7)

Edit racer can be used to modify the status of a racer, his start time or finish time.

However, no DSQ can be done from here, it will have to be done from outside the timing screen (using "F7" in dTris main screen).

5.2.5.5 Dump Results (F10)

Results can be dumped from the timing screen in 3 different ways :

- Measures ascii format

  Set of file readable by Measures
- Directly to Measures

  Set of file directly loadable into Measures
- Other ascii files

  Ascii file where dTris operator will define which field should be exported.

Key or button "F10" is also used to exit the run.

If a race is run allowing racer to race run#2 even if they were DNS/DNF on Run#1, the total time is penalised by 3600 secs.

5.2.5.6 Display on/off (F11)

Pressing F11 key will enable/disable display board

Note that when running a Forerunner category, nothing displays on the display board even if display is switched on.

5.2.5.7 Move Racer up (F8)

Using key stroke “F8” will move the racer up one level. If the racer is finished, it will act as a False finish for the racer. The difference in such case with False Finish is that dTris operator can decide which bib# should go back on race (while False Finish Ctrl+F assign automatically the false pulse to the latest finisher).

When “F8” is used for a racer which still on course in a race where multi intervals are set, the racer can be brought back up to the first interval. He can not brought back to start without using the False start (Ctrl+S)

5.2.5.8 Exchange Start Pulse (Alt+S)

If the start pulse was assigned to the wrong bib# due to the wrong bib# being displayed in “In Gate” position on dTris Timing Screen.

Pressing key combination Alt+S will allow to assign the latest start pulse to the bib# currently in the gate, and move the Bib# which did receive the start pulse earlier back into start.

5.2.5.9 Exit a run

To exit a run, dTris offers 2 options :

Use “F10” key or “Esc” key. Both will refer to “Dump Results” functionality refers in 5.2.5.5

dTris refuses exiting from a run if racer are still “on course”. dTris operator will have to ensure racers are either DNF or put back to the start by declaring false starts.

5.3 Add-on Tools

On dTris main screen, 2 buttons only appears after the first run has been started : “F7” and “F8”

5.3.1 Edit Racers (F7)

After each Run, dTris operator should ensure that all registered racers have either been timed, or marked with a status (DNS/DNF/DSQ)

DNS and DNF can be done from dTris Timing Screen, but DSQs can only be marked after the RUN is completed and dTris is back into the main screen. The button “F7 edit Racers” also available by pressing key “F7” allow dTris operator to enter in edit mode to each BIB# that need to be DSQs, or for those for whom the time needs to be adjust.

5.3.2 Utilities Menu (F10)

From dTris main screen, a number of tools is available such as Output results of a RUN / Race for measures or into an other ascii file format, create report analysis for all competitors, send the results

to the printer in Finish Time Order or Calculate Equivalent Electronic Time based on manual timing information.

5.3.2.1 Analysis of the Competitors

This option is used to print a timing reports for all racers of one or more categories. The report displays for each racer his time of start, his time registered when crossing each timing location and speed calculated/position between each timing location as well as overall time for a run and position at the end or run.

5.3.2.2 Calculate Equivalent Electronic Times (EET)

An EET is the time used when an electronic time is missed. This time is calculated by comparing the manual/hand times with the respective electronic times of the 10 competitors' times closest to the missed time and dividing the sum of the differences by 10 to give an average difference or correction, which is then applied to the manual/hand time of the competitor without an electronic time. This method is used when primary electronic timing fails and it becomes necessary to calculate a replacement/equivalent time by comparing secondary electronic times to primary electronic times, or hand timing times and primary electronic times.

5.3.2.3 Output Race Results to a Results System

Official races are managed by Result Management tools. dTris allow the extraction of Run results into a format readable by Measures or to ascii files where dTris operator can define which field should be extracted.

5.3.2.4 Print Racers in Finish Time Order

It will print the results of one or 2 run for all racers in Finish Order. The reports will look like something like the following :

Racer's Finish Order Report for Run < 1 >

POS	CAT	BIB	RACERS NAME	NAT /CLUB	RUN 1	RUN 2	TOTAL
1	1	7	Rick Ochet		0:27.12		0:27.12
2	1	4	Mar Vin		0:27.45		0:27.45
3	1	9	Kris Tofer		0:29.29		0:29.29
4	1	3	Mac Kenzy		0:29.33		0:29.33
5	1	10	Eli Ott		0:29.37		0:29.37
6	1	5	Pete Terre		0:29.41		0:29.41
7	1	8	Ray Mound		0:30.98		0:30.98
8	1	6	Dy Mond		0:32.86		0:32.86
9	1	1	Jeff Erson		0:33.39		0:33.39
10	1	2	Ty Lor		0:48.42		0:48.42

6 Dual / Parallel Races

A Dual/Parallel race can be timed using dTris.

3 types of duals are available and the type has to be set during the setup of the race parameters.

Most functionalities act the same as when the race is set in "Individual" mode. Some specificities are listed in this chapter.

6.1 Parameter screen (F2)

6.1.1 Parameters

Two parameters define the dual/parallel race :

Race Parameter	Values
Set Racers 'Start Method' as	`Dual Start (Parallel Race)`
Select Type of Dual (Parallel) Race to Run	Choose between : - `Two Racers side by side` - `Round Robin – Many 2 run rounds` - `Qualification Race then Round Robin`

6.1.2 Categories/Races

When setting-up a dual race, what was used to setup categories in "Individual" races becomes a setting for number of races.

The races represente for instance "Men's", "Women's" or "ForeRunners". For each race, dTris will create 2 categories. Bib# which are assigned to the race are distributed among each category of the race.

Bib# and category allocation changes depending on which "`Type of Dual`" has been selected.

- Type of Dual set to "`Two Racers side by side`" or "`Qualification Race then Round Robin`":

dTris will accept a list of BIB# defined by dTris operator. This list will be split in 2 sequentially assigned.

If a race is assigned with a Bib# serie as follow 1 to 10, and 12 to 15 (BIB#11 was missing in the bibs available), the assignation by category is done as follow :

```
Cat 1: 2,4,6,8,10,13
Cat 2: 1,3,5,7,9,14,15
```

- Type of Dual set to "Round Robin – Many 2 run rounds"

In this type of race, dTris requires the number of racers, not the bib#. The number of racers being a power of 2.

dTris will then create 2 category for the race with the same number of Bibs in each category, but and the max bib# represent the max # of racers

For instance when setting up # or racers to 16, here are 2 categories created :

```
Cat 1: 16, 9, 12, 13, 14, 11, 10, 15
Cat 2: 1,  8,  5,  4,  3,  6,  7,  2
```

6.1.3 Penalty

In a "Round Robin – Many 2 run rounds" race, a penalty can be allocated to all DNFs/DSQs from the first Run. Setting for this penalty is done at the end of the creation for the Race/Category.

6.2 Config Timer (F3)

When setting a Dual/Parallel race type, timer setup is lightly different compare to individual race to accommodate dual start/finishes.

Depending on Dual type race selected, options for Timer configuration changes.

- Dual type set to "Two Racers side by side" or "Qualification Race then Round Robin":

4 timing channels need to be available to support separate set of start/finish pulses per course.

Duplicate channels are not allowed in this situation meaning it is not acceptable to have the same start wand.

- Dual type set to "Round Robin – Many 2 run rounds":

2 options for the start is available :

- Start Both course with single wand
- Trigger Start for both course by typing "T" on dTris computer keyboard

In all Dual Types, one channel for each finish line has to be defined.

6.3 Timing Screen (F9)

Timing screen in Dual Race is split in 2 vertically with left side being the BLUE COURSE and right side being the RED COURSE.

Keys from the 'Function Keys area' are available to both course, but act for the course which is highlighted with :

□□□

7 Appendix

7.1 Appendix 1: Using MS-DOS ftp

In case no FTP client tools are installed on your computer, you can always use the standard Windows FTP tool. Below stesp described all syntax to be used :

Information	Commands
1. Open MS-DOS ftp	Select Menu : `Start > Run` Type : `cmd` Press key : `Enter`
2. Create the folder to receive the download	Type : `cd desktop` Press key : `Enter` Type : `mkdir dTris_Download` Press key : `Enter`
3. Connect to FTP server	Type : `ftp ftp.portcredit.net` Press key : `Enter` Type user : `timing@portcredit.net` Press key : `Enter` Type Pwd : `sunshine` Press key : `Enter`
4. Go into the latest dTris directory	Type : `ls` to find the latest dTris directory name Press key : `Enter` Type : `cd "ABCDE"` where ABCDE represent dTris directory name Press key : `Enter`
5. Download both files	Type : `mget *` Press key : `Enter` Press "Y" for each file required to be downloaded
6. Exit MS-DOS ftp	When the prompt come back, you can exit FTP and ms-dos Type : `Exit` Press key : `Enter`

7.2 Appendix 2: Using CoffeeCup ftp

Appendix 3: Uninstall dTris

To uninstall dTris, simply use windows tool "`Add or Remove Programs`" from windows control panel :

Using XP : `Start > Settings > Control Panel > Add or Remove Programs`

Select "`dTris <version#>`" and click on "`Remove`"

When removed, it is recommended to restart the computer.