

PISCES RUN SHEET PROGRAM

Using Pisces - Some Important Aspects (& tips)

The details below outline SOME important aspects which may not be obvious when first using Pisces. These aspects are mostly extracts from the Pisces 'Helps'.

Read in conjunction with the comprehensive program 'Helps' which can be viewed (and printed) throughout Pisces. More useful information can be gleaned from the 'Helps'. A complete Users Guide (ie. the 'Helps' combined) can be printed using the start-up Window's <Help> <USERS GUIDE> menu options.

A) GPS and Traditional (Predicted Log) Events Provisions

*NOTE:- For both types of events and associated methods, the **Pisces Run Sheet 'Timer'** can be used (whilst progressing along the course), which counts down the time to the next Turning Point (T/Pnt) or Way Point (W'Pnt). This replaces the task usually done by a crew member. [See section G\) 'The Run Sheet Timer' below for further details.](#)*

GPS Events - Time to Next (TTN) or Distance to Next (DTN) Methods

1) The Adding of extra W'Pnts as Lat/Longs between existing T/Pnts (suited to the TTN Method).

Note:- If using the GPS 'Distance to Next' DTN method, see item 3) below.

Note that the GPS speed is used to calculate the time to next. To accurately calculate times, the GPS speed must be set equal to the nominated speed using the throttle, which can be difficult. If not done, greater inaccuracy will exist for far distances to the next T/Pnt, hence the reason for breaking up original long course legs into smaller ones by adding intermediate Lat/Longs as W'pnts.

NOTE:- The option is best used in conjunction with the <EVENT> <Build a GPS Route Import .gpx File> option (see under), as the manual typing in of the new W'Pts to a GPS device can be overwhelming.

To access, select the start-up option <EVENT> <Add extra Lat/Longs between T/Pnts for the Active Event>

A new Course file is created emanating from the original Course (all builds should emanate from the original).

2) Build a Course GPS Route Import .gpx File (for both the TTN & DTN Methods - see above & below).

To access, select the start-up option <EVENT> <Build a & GPS Route Import .gpx File for the Active Event>

This option creates Route (Course) .gpx files to import into a GPS device, which eliminates the normal laborious manual typing. Most modern devices will support such file imports.

The .gpx file is saved to a external storage device to transfer to the GPS - USB memory stick or a SD card.

3) Build a GPS Segmented Run Sheet (Suited to the DTN Method).

Note:- If using the GPS 'Time to Next' TTN method, see items 1) & 2) above.

This option segments the course legs into distances that equate to a preferred time interval, say 10 seconds. Some speeds give exact decimal distance values for given seconds eg. at 7.2k, 10secs exactly equals 0.02NM etc. Two methods exist depending the number of decimal points in the DTN displayed by the GPS device:-

- i) Two dec pnts – The GPS DTG is monitored and compared with the Run sheet to give early/lates.
 - ii) Three dec pnts – The CLOCK is monitored. The R/Sht vs DTG is used to manually calculate early/lates
- See the Pisces 'Helps' for further details.

To access, select the start-up option <Run Sheet> <Auto Build a GPS 'DTG/DTN' Segmented R/Sht>

Traditional Events

Traditional Events do not allow the use of GPS or any other electronic navigation devices.

The original course legs are broken up into segments coincident with beacon and landmark locations. The segment distances are manually measured from charts or plots.

See Section F) for further details.

B) DATA FILES (outlining the affects of upgrades)

*NOTE re Upgrades: Files flagged '**' below may be overwritten with upgrades. Run Sheet (R/Sht) files are never overwritten with upgrades. To avoid losing USER data for certain files, see **Notes 1 & 2** below.*

Data Files Names - Event Designation Codes:

Committee supplied Event courses are given a code. This becomes the base name for the course data files eg. (note the two dashes).

SO-A-0

- ^ Revision number (changed to 1,2 etc if the course is modified).
- ^ Series (mainly A, B or C - series are rotated each season).
- ^^ Event name acronym or abbreviation (in this example, SO = Southport Open).

If the revision number is raised by the Committee (ie. from 0 to 1 etc.), on upgrading the old data files are archived, but the old Run Sheet file is copied and renamed to be part of the new revised set. Thus the previous R/Sht is kept but will need to be modified in the R/Sht Editor to suit the revisions.

Master Files: Stored in the Pisces program folder.

PISCE1.DAT	- Control Parameters and Season/Event data.	**
PISCE2.DAT	- Vessel name, speed and offset times data.	**
PISCE3.DAT	- Current logged on Event code(s).	**
PISCE4.DAT	- Current season Event codes.	**

Table Files: Stored in the Pisces program folder.

PisceS.TBL	- Pisces W/pnt Table. (See Note 1 below)	**
PisceU.TBL	- User W/pnt Table. (ditto)	**
PisceL.TBL	- Landmark Table.	**

Event Files: Stored in a Pisces program sub-folder 'DATA' eg.

SO-A-0.DAT	- Coded instructions. (See Note 2 below)	**
SO-A-0C.DAT	- The course lat/longs.	**
SO-A-0RS.DAT	- Standard R/Sht. (See Note 3 below)	**
SO-A-0AS.DAT	- Auxiliary R/Sht. (ditto)	**
SO-A-0???.???	- Temporary files.	**

Notes:

1. The *PisceS.TBL* (waypoint landmark/beacons) file is usually overwritten with upgrades. User waypoints should be added to the USER w/pnt file *PisceU.TBL* which is not overwritten - use the main form <TABLES/UTILS> <Show/Edit Pisces Landmark/Beacon Table> <User> menu options to edit and add your own w/pnts.
2. If a user wants to modify the Event instructions for their own purpose, it should be 'duplicated' first - see the 'DUPLICATING INSTRUCTIONS' section under.
3. Pisces supports two R/Shts for each Event (code). One can be used as a standard Traditional (Predicted Log) R/Sht and the other for a GPS R/Sht (say). See the 'RUN SHEETS' section below for details.

**** These files may be overwritten with upgrades – see Notes 1 & 2 above.**

C) PLOTS & Manipulation

When a plot is displayed, if not already done so, click the <Help> caption then {Print} and study. Many operations which may not be obvious will be explained.

Note the <VIEW> caption which allows the displayed information to altered – varies for each type of plot.

D) DUPLICATING Instructions (and modifying for own use)

Committee Event files (with the 6 alphanumeric designation code ??-?-? - note the two(2) dashes) may be overwritten with upgrades. Before modifying instructions for your own use, ALWAYS make a duplicate to work on which will remain intact. It is best to create a 'child' set of files with a code designation emanating from the 'parent' eg. for say SO-A-1, use say SO-Aa1 (the second dash is changed to any letter of the alphabet).

Duplication of Events is made easy within PISCES. First, log onto the course you wish to duplicate with the [Events] button. Click the [Instr'ns] button, then the <File><Duplicate Instructions/Run Sheet> menu options and 'Yes' (twice) to the prompts. The say SO-A-1 is duplicated as SO-Aa1 and applied. If the letter 'a' is already used, 'b' will be chosen, and so on.

Note: To delete unwanted duplications, click the [Events] button, select the Event and then click {Delete}. Committee Events (ie. with the two dashes in the Event code) cannot be deleted using this option.

E) CONVERTING ARCS in the Instructions to STRAIGHT LINE Segments

For practical purposes, large arcs in open water events are normally converted to a series of straight lines as it difficult to navigate a curve. This conversion can be laborious if done manually.

The conversion of large arcs to straight lines (as a duplication of the Event Instructions with extra T/Pnts along the arc) can be easily done from PISCES. Click the [Instr'ns] button, then the <File> <Duplicate Instructions with Arcs as Straight Lines> menu options, and 'Yes' to the prompt. The new separate Event is assigned a 'child' code emanating from the original Event code as explained in the '*DUPLICATING INSTRUCTIONS*' section above.

The default straight line segments length is around 400m and the number of segments is the nearest integer value when the arc length is divided by 400m. However, the number of segments can be changed by specifying a different value to the default 400m as detailed below:-

1. Arcs in the PISCES Instructions are specified in coded form eg.
120A.4/180
2. In the ORIGINAL Committee Instructions (access with the [Instr'ns] button), place a SEMICOLON at the very end of the ARC coding(s), followed by a segment length value eg.
120A.4/180 ;300 OR 120A.4/180 ;.162 (the spaces before the semicolon are optional)
Note: A value >=10 is treated as metres, <10 as NM. Calculated straight line lengths will be near the value specified, and will be only the same if the entered value divides exactly into the arc length.
3. Now click the <File><Duplicate Instructions with Arcs as Straight Lines> menu options and 'Yes' to the prompt (to APPLY the new duplicate Event).
4. To show the lat/longs for the new intermediate arc T/Pnts, click the [Instr'ns] button, then click the <File> <Show/Print/Plot Instructions> menu options. This is required for GPS Events so the T/Pnt lat/longs can be plugged into the GPS. Note that the intermediate T/Pnts are slightly bulged out radially so that the sum of the straight line segment lengths equals the original arc length.

Note: To delete unwanted duplications, click the [Events] button, select the Event and then click {Delete}. Committee Events (ie. with the two dashes in the Event code) cannot be deleted using this option.

F) TRADITIONAL Run Sheets (R/Shts)

Note:- See Section A) for details relating to applicable *GPS Run Sheets*.

The Turning Point (T/Pnt) R/Sht

Pisces initially generates a T/Pnt R/Sht to which the user adds w/pnts to build up their own working R/Sht. This R/Sht will remain intact and can be reused later when the course is repeated. However if you wish to rebuild the T/Pnt R/Sht (not normal), use the <RUN SHEET> <Re-build the T/Pnt Run Sheet from the Course> menu options.

Standard and Auxiliary R/Shts

Each event has a 'Standard' or a 'Auxiliary' R/Sht. Press Ctrl+R (hold down 'Ctrl' and tap 'R') from the main form to flip from one to the other. If the Auxiliary R/Sht is selected, it shows up in red on the screen. Editing and printing R/Shts are done separately for each of the two R/Shts.

Use the Standard R/Sht for Traditional Events and the Auxiliary R/Sht for the GPS 'DTG' Events (not mandatory).

Pisces Plots for Route Maps & Measuring Waypoint Distances

Event course waypoint (w/pnt) distances can be measured from the Pisces course plots which negates plotting the course on the maritime charts. The Pisces plots use the Pisces Landmark/Beacon Table which is relatively up to date. Pisces plots are also used for the route maps (which are embellished by the user with aiming points etc.).

To print a plot for measuring, follow these steps:-

1. Click the [Instr'ns] button and then {PlotCrse} to display the course. The plot from here (only) shows rulers at the borders - lat/long at the left and bottom respectively and metres at the right (1NM = 1852m).
2. Click {Fine} to show a fine lined course and w/pnts as x-hairs (click {Standard} to flip back).
3. Click {HIGHRes} and then {Enlarged..}. The plot may still fit to the screen width in this mode especially for wide squat monitors, however when printing to A4 paper, multiple pages (tiling) should occur horizontally giving a larger plot than the 'Fit Screen..' option. For squatter courses, landscaping of the paper may occur automatically.
4. Click {PRINT} then {Fit Plot to Multiple Pages - With Overlap}. Enter the recommended maximum overlap value when prompted, and click 'OK'.
5. To MEASURE distances between w/pnts, see the document 'Traditional (Predicted Log) Events – Measuring Plots'.

To print a plot for the Route Map, follow these steps:-

1. Click the [PlotCrse] button to display the course.
2. Click {Standard} to show the thick lined course (ie. *if {Fine} displayed*).
3. Click {HIGHRes} and then {Fit Screen Width or Height}. The printout will fit to the paper width (or height).
4. Click {PRINT} then {Fit Plot to Multiple Pages - With Overlap}. Enter a overlap value if prompted, and click 'OK'.

Copying R/Shts (the method similarly applies to copying the Instructions)

To copy R/Shts from one event to another within Pisces, follow these steps:-

1. Click [Event] and select the event you wish to copy **from**. (the event may be in the 'Archived Data' folder).
2. Click [EditRsh] then <Edit> {Copy (all data)}.
3. Click [Event] and select the event you wish to copy **to**.
4. Click [EditRsh] then <Edit> {Paste (all data)} – an 'overwrite' prompt will appear – click yes.

Backing Up R/Shts

Building Event R/Shts entails a lot of work and backing up R/Shts is a must in case your hard disk crashes. Also if a new computer is purchased, previous Event R/Shts will need to be restored to it. Pisces supports BACKING UP R/Shts (and also the Master data files, Active Event files and Table files). Follow these steps:-

1. Click <File><Set Default Backup/Restore Drive> if not already set. Select the drive from the list - selection is remembered. Ensure an external memory device is inserted before running Pisces if applic. - click {Refresh} if not. Pisces does NOT support burning CD's (but this can be done easily from Windows).
2. Click <File><BACK UP Data to Drive ?:\>{All Run Sheets (Standard or Aux)} and follow the instructions. Only backup the 'Aux' R/Shts if one has been used for an Event ie. with manually inserted w/pnts. GPS R/Shts (normally 'Aux' as detailed above) don't need to be backed up as they can be regenerated at any time.

G) The Run Sheet TIMER

For GPS or Traditional events, the **Pisces 'Timer'** can be used (whilst progressing along the course), which counts down the time to the next Turning Point (T/Pnt) or Way Point (W'Pnt). This replaces, or makes easier, the task usually done by a crew member. A Windows Laptop/Notepad with Pisces installed is required, and with enough space on the dashboard if wanting to place in front of the skipper.

Requires a onboard Windows Laptop/Notepad with Pisces loaded.

Not linked to the net - purely runs using the set Computer Time vs Run Sheet Times.

Note:- The Timer can be accessed OR exited at will during an Event.

The TIMER uses the computer clock (CT) for the 'official' time. Make sure this clock is set as accurately as possible well before the start.

Hint re Setting the Computer Clock:-

Rather than setting the computer clock using the Windows 'Adjust Date/Time' method (which can be difficult to set accurately), and then fine tuning within the Pisces Timer, do the following:-

1. Turn off 'Set time automatically' using Windows 'Adjust Date/Time'.
2. Click Windows [Start]<Windows System>.
3. RIGHT click <Command Prompt> then LEFT click <More>Run as administrator.
4. The 'Administrator - MSDOS Prompt' Window will present.
Type in 'Time 10:20:30' where eg. 10:20:30 is the approaching time to set.
Press 'Enter' when the required time is reached (in anticipation).
5. Minimise the DOS Window to the Task Bar for future session use.

**NOTE:- The minimised DOS Window in 5. can be accessed whilst the Pisces Timer is running
ie. no need to shut down Pisces - newly set times are absorbed.**

Also access Control Panel\Hardware and Sound\Power Options\Edit Plans Settings and temporarily change both 'On battery' settings to 'Never' so that the computer screen doesn't switch off during the Event.

See also 'Power and sleep buttons and lid settings' for enhanced use. Make sure the computer battery is charged enough for the duration.

Before using the Timer, firstly set up the Pisces Run Sheet.

Note the use of the flags in front of a R/Sht way point 'Description' which determines if used by the Timer, namely:-

- 1.If a full stop '.' then DON'T USE
- 2.If a asterisk '*' then USE.
- 3.

For more details, see the [EditRSht]<Help> 'Special Charactors/Symbols' and [PrRSh/Tmr]<TIMERUtils><Timer Options>.

Note that separately created Spreadsheet Run Sheets saved as a .csv file can be 'Imported' into Pisces using the relevant [EditRsh]<File> option.

To Start the Timer:-

A) Click the Start-Up Window [PrRSh/Tmr] Button.

B) Click the Form <RunTIMER> Menu Caption.

See also the Captions:-

<TIMERUtils> for setup parameters.

<RunTmrTest> for Runs at various speeds for quick testing/evaluation.

Example Timer Display (Simple T/Pnt Runsheet).

*Time to the next waypoint or turning point, and the details, are shown in red.
The 3:09 is the time which counts down each second.*

SO-D-2 - SYNC Open BWS#3 - Runsheet Times to Next
— □ ×

<p><i>Start</i> 8:30:00 <i>10.0k 5.1m/s</i></p>	<p><small>Timer Run</small> Computer Time (CT) 8:54:53</p>	<p><small>RShT Skin T</small> <i>Finish</i> 9:32:11 <i>CTAdjust 0.0</i></p>
	- +	
	3:09	5:48
Previous	.6241/.525nm 972m	Following
<p>#12.1 @ 8:54:17 TPnt#13</p>	<p>To #13.1 @ 8:58:02 TPnt#14</p>	<p>#14.1 @ 9:00:41 TPnt#15</p>

12.1	.3563	08:54:17	*T/Pnt#13				[33.5]
13.1	.6241	08:58:02	*T/Pnt#14				[.5]
14.1	.4424	09:00:41	*T/Pnt#15				[7]
15.1	.0884	09:01:13	*T/Pnt#16				[270]
16.1	1.0321	09:07:25	*T/Pnt#17				[181]
17.1	.3363	09:09:26	*T/Pnt#18				[216]

Tab = Plot
Spacebar = Log
KR
SpdVsRPM
CT
8:54:53

H) USING MWSnap

MWSnap is a freely available program downloaded from the Internet. It is used to select a part of a Pisces plot and blow it up to a much larger size.

Note:- Instead of downloading from the Internet, the downloaded MWSnap.exe install zip file is included on the Pisces CD. To install, run (double click) the zip file and follow the instructions. MWSnap will finally appear as a desktop icon.

To use MWSnap with Pisces, follow these steps:-

1. Run the MWSnap desktop icon and MINIMISE with the [_] button - do NOT close with the [X] button - it must remain resident. Another small MWSnap icon will then appear in the Task Bar at the bottom right of the screen.
2. Run Pisces as normal and access the desired plot. The default plot size is <HIGHRes><Fit Screen Width or Height> - change to <Enlarged> if desired (may not make a difference for wide screens). Now Click <Fine> to show the course as fine lines & beacons etc with X-hairs (click <Standard> to flip back).

3. Navigate the Pisces plot to show the desired area to blow up.
4. Click the MWSnap icon in the Task Bar at the bottom. Click <Any rect. area> and <Snap fixed rectangle> & finally MINIMISE with the [_] button to revert back to the plot (DON'T CLOSE with [X]), **OR**
NOTE: Alternatively (as a SHORTCUT for the above), from the Pisces plot use the hot keys Ctrl+Shift+A (ie. hold down the Ctrl & Shift keys together and tap A once).
5. A small MWSnap preview window (ignore) and a navigable X-Hair will appear. Move the X-Hair with the mouse to the TOP LEFT of the desired area to blow up (snap) and CLICK (optionally release the mouse button). Then move the X-Hair to the BOTTOM RIGHT of the desired snap (shown within rectangular dotted lines) and again CLICK. MWSnap will open with the snap displayed.
NOTE: It is best (but not necessary) to snap a rectangle with the similar aspect ratio to a A4 sheet of paper (either vertically or horizontally) as the {Fit to Page} option is used when printing (see the next step).
6. Click the <Print> icon at the top, select {Fit to Page} if not already set, change {Portrait/Landscape} if applic. & {Print}. Finally MINIMISE with the [_] button - DON'T CLOSE with [X] - keep MWSnap resident. If MWSnap is inadvertently closed, repeat Step 1.
7. Repeats steps 3 to 6 for further blow ups.

See the MWSnap Help for further details.