



MYC – MCC Nav Rally Explanation

Rev 3, 30-Nov-25, Bill Wilson

1 Introduction

This document explains in detail how to participate in Nav Rallies at Mornington Yacht Club – Martha Cove Chapter Nav Rally events. This document is an updated version of the MCYS Nav Rally Instructions Rev 5 to address differences in admin and procedures in MYC compared to MCYS, and some improvements in the instructions.

1.1 Official MYC Event Documents

See also the **official MYC event documents** posted on MYC website on [Power HQ](#) under which Nav Rally events are operated in MYC.

1. **Notice of Event** – Announces the overall Nav Rally Competition for the 2025-2026 season
2. **Nav Rally General Instructions** – identifies the competition details and nav rally rules applicable to all Nav Rally events (analogous to “Sailing Instructions”)
3. **Nav Rally Special Instructions** – identifies the Date and Time, Course number, and social activities afterwards for a specific Nav Rally event. (Analogous to Special Sailing Instructions.)

1.2 What is a Nav Rally?

A “Navigation Rally” (Nav Rally), also known as a “Time Trialling” or “Predicted Log” event, is a fun competitive event mainly for power boats but also available to sail boats motoring under power.

It is **not** a race. The objective is to accurately traverse a pre-defined course at a nominated constant speed over ground and pass each mark of the course as close to the theoretically predicted time as possible. Penalty points are assigned if you are early or late passing each mark. The winner is the boat with the least penalty points. It's easy, fun, competitive and will improve your navigation related skills.

1.2.1 Nav Rally & Time Trials in Other Clubs

Nav Rally events have a long history in many yacht clubs in Australia – over 50 years in most Perth yacht clubs, where they call it Time Trialling. Practices and rules have evolved differently over time around the country. See an introduction and video overview of Time Trialling at the South of Perth Yacht Club at [SOPYC Time Trialling YouTube Video](#).

2 MYC-MCC Nav Rally Approach

2.1 Simplified Approach

MYC has adapted the previous MCYS approach which is a simplified subset of the West Australian (WA) clubs “Time Trial” practice. Simplifications include: We don't require signal flags or number boards, we don't have checkpoint observers, we have much simpler rules, and each participant times his own boat in an honour system, recording actual times on a supplied “Boat Log Form”. MYC provides skippers with the pre-defined Nav Rally course as a .GPX route file to load into their GPS chart plotter or mobile

device, with a Course Description (map) file and a personalized predicted Boat Log Form to identify target ETA for each mark, and a means to record actual arrival times.

We use The Checkpoint software system to manage event times and scoring – the same software that all WA clubs use.

Compared to Port Phillip club practices, MYC Nav Rallies are simpler than Nav Rallys at RVMYC and are closer to what they call Time Trials. MYC has time & course checks at waypoint marks only, not at intermediate points along each leg. MYC does not use GPS Tracker devices at this time, although we may look to introduce them in future.

2.2 Competitive Aspects

The key challenges and skills involved in MYC Nav Rally events are:

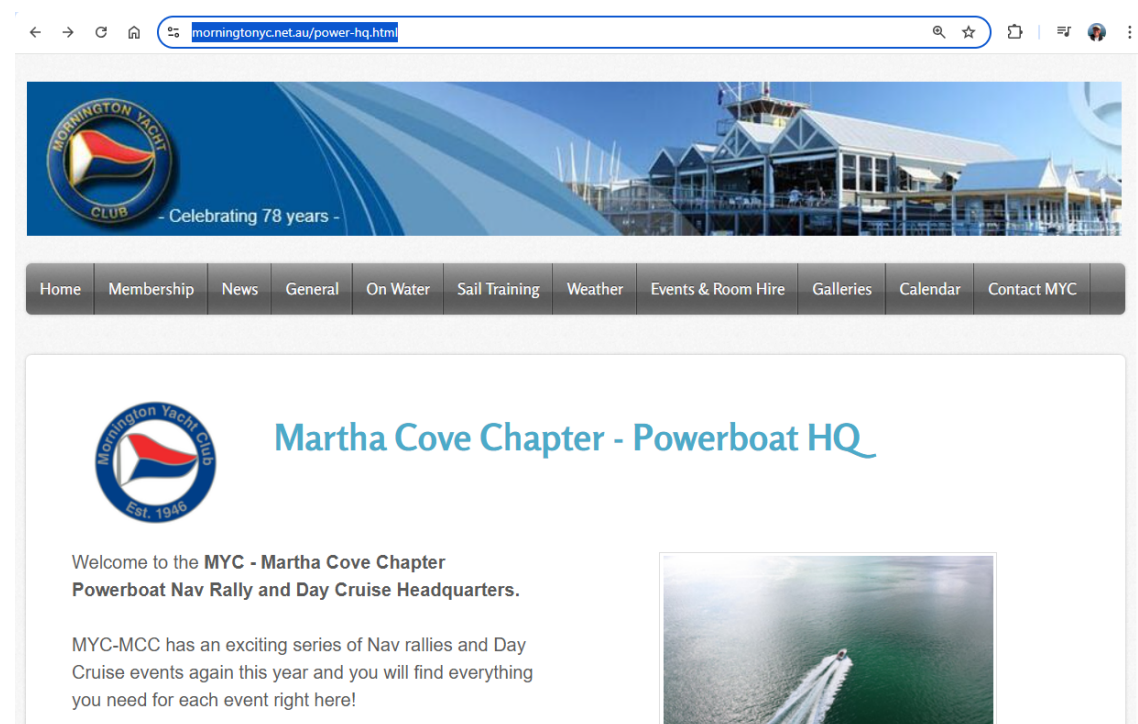
- To learn how to load a .GPX Route file into your chart plotter and use it for navigation
- To accurately navigate the course using your GPS chart plotter or mobile app
- To steer your boat to accurately follow the straight bearing line between marks,
- To maintain your boat Speed over Ground constant at your nominated speed
- To determine a Compensated Speed over Ground for each new leg to adjust for being late or early on the previous leg. e.g. speed up slightly to make up for late arrival, or slow down slightly if early at a mark
- To arrive at each mark as close to the ETA Estimated time of Arrival as possible to minimize penalty points, using your GPS device to inform you when you have arrived
- To record your Actual Time of Day Arrival at each mark to the second in hh:mm:ss format and submit results for scoring

all while following the Nav Rally rules and all Marine Navigation rules & regulations.

2.3 Learn about MYC Nav Rally Practices

2.3.1 On Water > Power > Power HQ

The [Power HQ webpage](http://morningtonyc.net.au/power-hq.html) contains links to all the various Nav Rally Documents and course information.



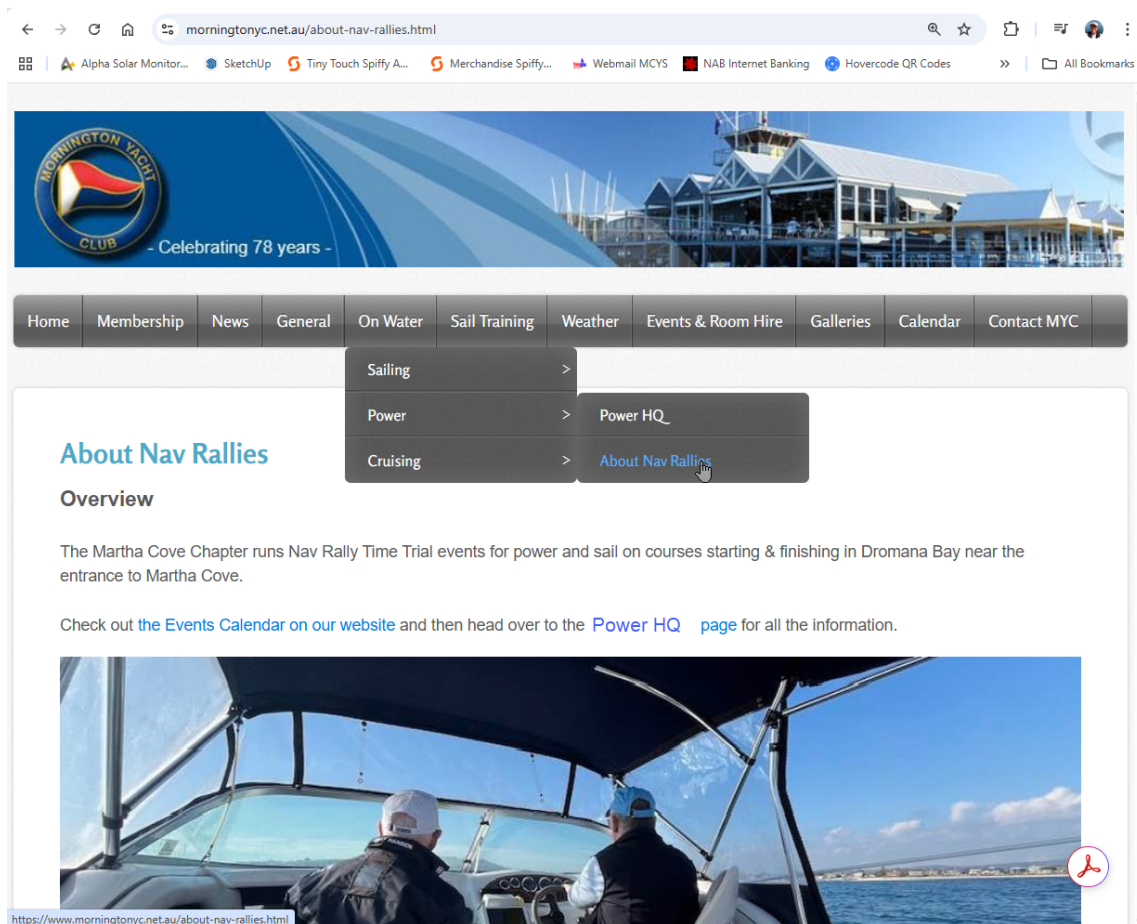
There are sections for :

- General Information
- Notices of Events
- Nav Rally Instructions
- Online Entry

2.3.2 On Water > Power > About Nav Rallies

Start at the MYC main website <https://www.morningtonyc.net.au/>, go to the **On Water** pull down menu and click on the **Power > About Nav Rallies** item which provides an overview explanation of Nav Rallies at MYC.

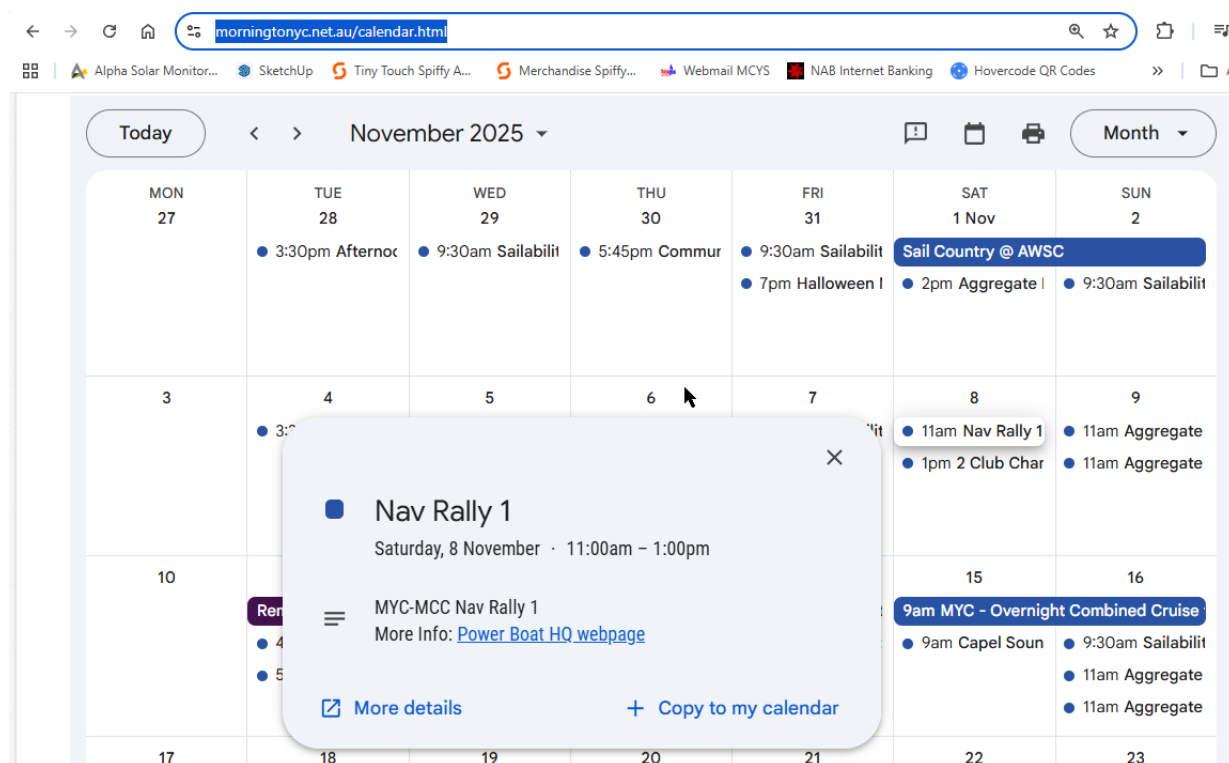
2.3.2.1 About Nav Rallies Overview on MYC Website



- Scroll down and read the explanation about what a Nav Rally is like.
- Download and Read the Files to Download for more detailed explanations in various documents

2.3.3 Nav Rally Event Dates are published in the official MYC Google Calendar

MYC - MCC Nav Rally EVENTS are published in the [MYC Google Calendar](#), named Nav Rally 1, Nav Rally 2, ... Nav Rally 6. They are scheduled once a month, on Saturdays, starting at 11:00 AM.



2.3.4 Nav Rally Events published on MYC Sportspage website and in SAILSYS

Nav Rally events are also listed on the [MYC - MCC Nav Rally Times & Results](#) Sportspage website used by The Checkpoint Software, as well as in the [MYC -MCC Sailsys](#) system.

MYC - MCC 2026 Nav Rally Times & Results

Fixtures for Power Yacht Time Trials

[Course Sheets](#)

Event Date	Event Title	Course	Start Times
8/11/2025	Nav Rally 1	116	11:00:00
13/12/2025	Nav Rally 2	116	11:00:00
10/01/2026	Nav Rally 3	108	11:00:00
14/02/2026	Nav Rally 4	108	11:00:00
14/03/2026	Nav Rally 5	112	11:00:00
11/04/2026	Nav Rally 6	112	11:00:00

Joint Version 3.13.0

2.3.5 Course Number for Each Event

The Course number for each event date is identified in its corresponding **Nav Rally “n” Special Sailing Instructions** document. Course numbers are also listed on the [MYC - MCC Nav Rally Times & Results](#) sportspage website.

There may be times when the course number is changed for a scheduled event – e.g. for weather reasons – in which case this will be published on the Sailsys [ONB – Rallies](#) Official Notice board for Nav Rallies.

2.3.6 Nav Rally COURSE Details are available in Several Locations

- Via [Courses](#) button on [Power HQ webpage](#)
- Via [Course Sheets](#) link on [MYC - MCC Nav Rally Times & Results](#) Sportspage website

2.3.6.1 Click the [Courses](#) button on [Power HQ webpage](#) to see all Courses

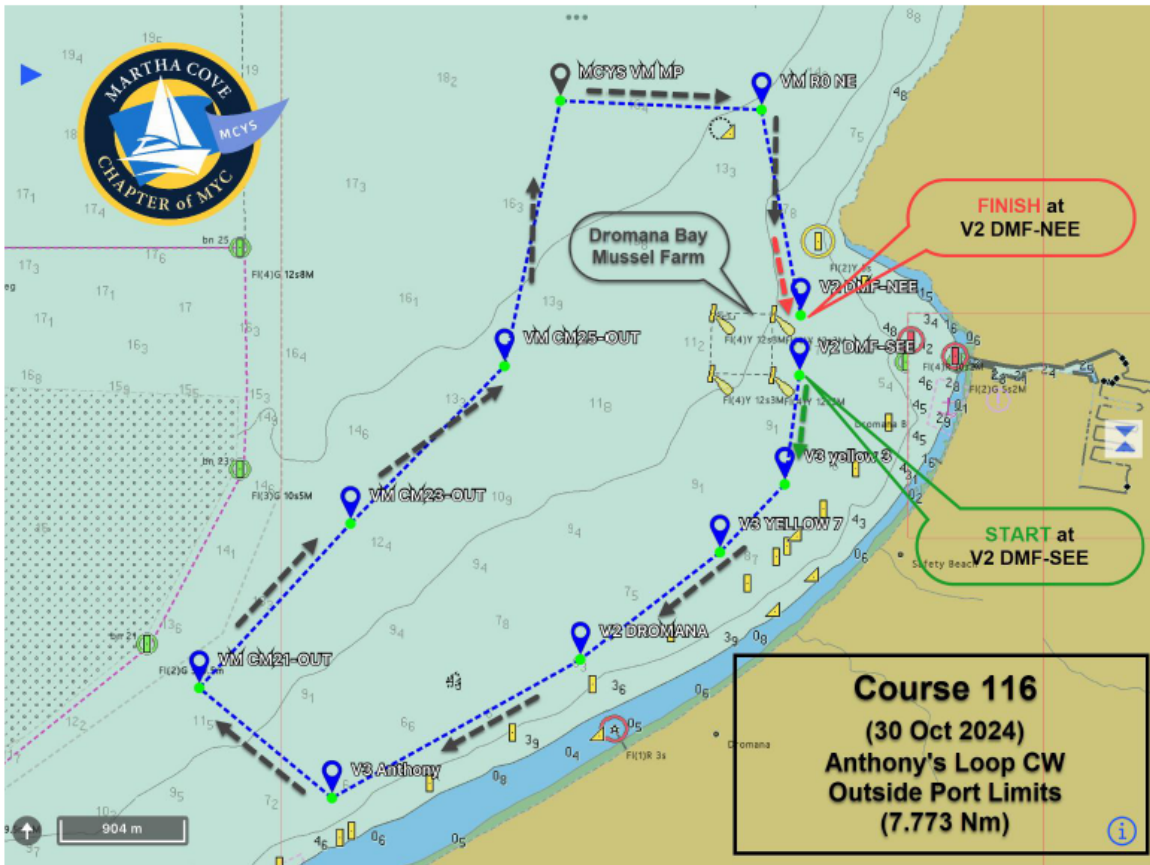
Course and Navigation Data Files for Nav Rallies

Course 102 ▶	Course 102 data.GPX ▶	Course 102 Log form ▶
Course 103 ▶	Course 103 data .GPX ▶	Course 103 Log form ▶
Course 104 ▶	Course 104 data .GPX ▶	Course 104 Log form ▶
Course 105 ▶	Course 105 data .GPX ▶	Course 105 Log form ▶
Course 106 ▶	Course 106 data .GPX ▶	Course 106 Log form ▶
Course 108 ▶	Course 108 data .GPX ▶	Course 108 Log form ▶
Course 112 ▶	Course 112 data .GPX ▶	Course 112 Log form ▶
Course 113 ▶	Course 113 data.GPX ▶	Course 113 Log form ▶
Course 114 ▶	Course 114 data .GPX ▶	Course 114 Log form ▶
Course 116 ▶	Course 116 data .GPX ▶	Course 116 Log form ▶
Course 120 ▶	Course 120 data .GPX ▶	Course 120 Log form ▶



Course 116 Map (30-Oct-24)

Anthony's Loop CW - Outside Port Limits - Overview



Course 116 Route Details

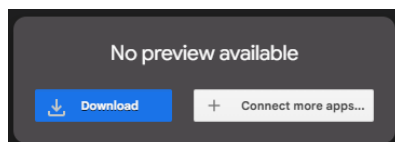
Leg	Mark Name	Leave To	Leg Length (Nm)	Bearing (True)
0	V2 DMF-SEE	Port		

The map file includes a graphical chart of the route, a list of marks defining the course route, and diagrams showing Start and Finish details, as well as diagrams of transit bearings for relevant Virtual Marks.

You can download the .PDF file to your computer and/or print it directly from here. It is recommended to **[PRINT IN COLOUR](#)** the course map file and take it on board for reference during the Nav Rally.

2.3.6.3 Download Course Route .GPX File

Click on the corresponding data.GPX button [Course 116 data .GPX](#) to download and save the relevant Course_nnn_Route.GPX file to your computer or mobile device.



You must later load this .GPX file into your chartplotter or mobile device for navigating the course on your boat. Each chartplotter has different means to load a .GPX file – check your equipment's user manual.

2.3.6.4 Sample Boat Log Form for Reference

MYC - MCC 2026 Nav Rally Times &					RegNo	SAMPLE		
Times Calculated:		Event Date		30/11/2025	Skipper		Skippers Name	
30/11/2025		Dummy Event			Navigator		Navigators Name	
14:35:24		Course No		116	Start Time		11:06:00	
		CW Anthonys Loop			Nom. Speed		10.0	Knots
					Boat Length		8.0	Metres
Leg	Mark Name	Leave To	Leg Length (Nm)	Bearing (True)	Leg Time	ETA	Actual Time	Speed Comp +/- 10 Seceonds Late Early
0	V2 DMF-SEE	Port				11:06:00		
1	V3 YELLOW3	Starboard	0.435	188	02:37	11:08:37		0.7 -0.6
2	V3 YELLOW 7	Starboard	0.372	224	02:14	11:10:51		0.8 -0.7
3	V2 DROMANA	Starboard	0.694	232	04:09	11:15:00		0.5 -0.4
4	V3 ANTHONY	Starboard	1.131	241	06:47	11:21:47		0.3 -0.2
5	VM CM21-OUT	Starboard	0.684	310	04:07	11:25:54		0.4 -0.4
6	VM CM23-OUT	Starboard	0.885	43	05:18	11:31:12		0.3 -0.3
7	VM CM25-OUT	Port	0.874	44	05:15	11:36:27		0.3 -0.3
8	MCYS VM MP	Starboard	1.073	12	06:26	11:42:53		0.3 -0.2
9	VM R0 NE	Starboard	0.797	93	04:47	11:47:40		0.4 -0.3
10	V2 DMF-NEE	Port	0.828	169	04:58	11:52:38		0.4 -0.3
Course Length (Nm)			7.773	00:46:38				
I, being the responsible SKIPPER, declare the times above to be true and correct and that I navigated the course according to the Nav Rally rules								
Signature			Date					

A sample Boat Log Form can be downloaded for familiarization using a sample start time and course speed. For example Click on the [Course 116 Log form](#) button.

For actual events that you register for, you will be emailed your **own Personalized Boat Log Form** to use on the day, complete with your boat and crew details, your allocated start time, and your nominated constant speed. It will then show your personalized ETA times for each mark /waypoint on the course. With space for you to record your ACTUAL arrival times for scoring.

2.3.6.5 [Course Sheets link on MYC - MCC Nav Rally Times & Results website](#)

The Course Map Description files are also viewable and downloadable on the Nav Rally Times & Results website needed for the Checkpoint Nav Rally Software.

sportspage.com.au/ttvictoria/myc/course_sheets.htm			
MYC- MCC Nav Rally Times & Results			
Course Sheets for Power Yacht Time Trials			
Course Number	Course Description	Speed Range 1	Speed Range 2
102	(6-Aug24) Rosebud CM23 Loop CW	5-12	13-20
103	CCW Rosebud CM23 Loop	5-12	13-20
104	CW Rosebud CM25 (17-Sep-24)	5-12	13-20
105	CM25 Rosebud CCW (17-Sep-24)	5-12	13-20
106	MMF CW (27-Aug-24)	5-12	13-20
108	MMF CW (7-OCT-24)	5-12	13-20
112	CW Rosebud Loop Outside Port	5-12	13-20
113	CCW Rosebud Loop Outside Port	5-12	13-20
114	CW McCRAE Loop	5-12	13-20
116	CW Anthonys Loop	5-12	13-20
120	Blairgowrie	5-12	13-20

This report was generated by The Checkpoint Version 3. 11. 14
last updated on 23/10/2025
By Bill Wilson

Click on the desired Course number link to see the same Course MAP file, which you can download or print via your web browser.

Additional useful information is the Table of Course Times vs Speeds, to assist you in deciding what speed to choose for the course. Leg Distances are shown in cumulative metres from the Start mark.

sportspage.com.au/ttvictoria/myc/courses/Course_116_13-20.htm											
MYC- MCC Nav Rally Times & Results											
Course No 116											
Mark	Round	Max Speed	Dist.	13 Knots	14 Knots	15 Knots	16 Knots	17 Knots	18 Knots	19 Knots	20 Knots
V2 DMF-SEE	Port		0.0	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00
V3 YELLOW3	Starboard		806.5	00:02:01	00:01:52	00:01:45	00:01:38	00:01:32	00:01:27	00:01:23	00:01:18
V3 YELLOW 7	Starboard		1495.3	00:03:44	00:03:28	00:03:14	00:03:02	00:02:51	00:02:41	00:02:33	00:02:25
V2 DROMANA	Starboard		2779.9	00:06:56	00:06:26	00:06:00	00:05:38	00:05:18	00:05:00	00:04:44	00:04:30
V3 ANTHONY	Starboard		4873.9	00:12:09	00:11:17	00:10:32	00:09:52	00:09:17	00:08:46	00:08:19	00:07:54
VM CM21-OUT	Starboard		6140.1	00:15:18	00:14:13	00:13:16	00:12:26	00:11:42	00:11:03	00:10:28	00:09:57
VM CM23-OUT	Starboard		7779.6	00:19:23	00:18:00	00:16:48	00:15:45	00:14:50	00:14:00	00:13:16	00:12:36
VM CM25-OUT	Port		9397.4	00:23:25	00:21:45	00:20:18	00:19:02	00:17:55	00:16:55	00:16:01	00:15:13
MCYS VM MP	Starboard		11385.1	00:28:22	00:26:21	00:24:35	00:23:03	00:21:42	00:20:29	00:19:25	00:18:27
VM R0 NE	Starboard		12861.6	00:32:03	00:29:46	00:27:47	00:26:03	00:24:31	00:23:09	00:21:56	00:20:50
V2 DMF-NEE	Port		14395.2	00:35:52	00:33:19	00:31:05	00:29:09	00:27:26	00:25:55	00:24:33	00:23:19
Course version 2											
This report was generated by The Checkpoint Version 3. 11. 14											
last updated on 23/10/2025											
By Bill Wilson											

You cannot download a .GPX file from the Nav Rally Times & Results website – use Power HQ instead.

2.3.7 Nav Rally Course Mark Coordinates

Each Nav Rally course is defined as a specific sequence of GPS marks/waypoints. You can download the marks to a .csv Spreadsheet file via the [Courses](#) area on [Power HQ webpage](#). Marks are required to be defined as GPS Coordinates in decimal degrees ddd.ddddd format for Checkpoint Software to be able to calculate leg distances. You can choose to display the coordinates in other formats if desired on

your GPS Chart Plotter via settings there. Text descriptions of all the marks used in all Nav Rally Courses are also provided below.

← → ↺ 🏠 🌐 morningtonyc.net.au/nav-rally-courses.html 🔍 ☆ 📁 📄 👤 ⋮

Nav Rally Mark Data - Reference Area

Data available for download in .CSV format - [Click here!](#)

Released: 18/1/2025

Latitude and Longitude data is displayed in D.D format (Decimal Degrees)

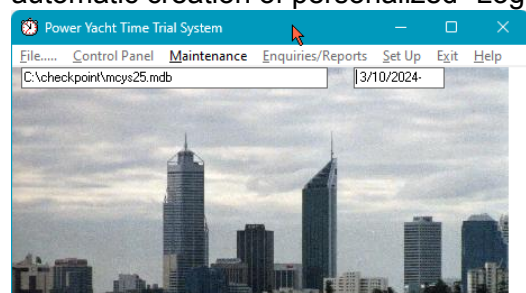
Mark	Lat	Long	Description
BYS 0	-38.35441 S	144.77608 E	Blairgowrie Yellow Buoy 0 off NE corner Marina
BYS 5	-38.36019 S	144.81877 E	Blairgowrie Yellow Buoy 5 NW from Rye Pier
BYS 6	-38.34382 S	144.82291 E	Blairgowrie Yellow Buoy 6 in Capel Sound
MCYS VM MP	-38.28912 S	144.95943 E	John's MCYS Virtual Mark well off Martha Point
R1 Mark	-38.27452 S	144.97266 E	R1 Recreational Mark Yellow Cone
SOR 10	-38.35558 S	144.78308 E	Sorrento Club Mark 10 east of Blairgowrie
V2 CM19-HV	-38.33681 S	144.90947 E	Virtual 200m SE CM 19 Transit Hovell Pile 319 T
V2 CM21-HV	-38.32444 S	144.92804 E	Virtual 250m E CM 21 Transit Hovell Pile 264 T
V2 CM23-24	-38.31437 S	144.93442 E	200m SE CM 23 Transit CM24 299 T
V2 CM25-24	-38.29856 S	144.93581 E	200m E of Channel Mark 25 Transit CM 24 270 T
V2 DMF-NEE	-38.30329 S	144.97958 E	200m E of Mussel Farm NE Transit NW Corner 271 T
V2 DMF-NEN	-38.30135 S	144.97723 E	200m N of Mussel Farm NE Transit SE Corner 181 T
V2 DMF-NWN	-38.30128 S	144.97231 E	Virtual 200m N DMF-NW Transit SW 181 T
V2 DMF-NWW	-38.30309 S	144.96983 E	Virtual 200m W of DMF-NW Transit NE 091 T
V2 DMF-SEE	-38.30725 S	144.97948 E	200m E of Mussel Farm SE Transit SW Corner 271 T
V2 DMF-SES	-38.30903 S	144.97711 E	200m S of Mussel Farm SE Transit NE Corner 001 T
V2 DMF-SWS	-38.30896 S	144.972 E	Virtual 200m S DMF-SW Transit NW 001 T
V2 DMF-SWW	-38.30714 S	144.96976 E	Virtual 200m W of DMF-SW Transit SE 091 T
V2 DROMANA	-38.32601 S	144.96117 E	200m off Yellow Pole Transit Dromana Pier 156 T
V2 MCCRAE	-38.34052 S	144.92796 E	200m N Yellow Pole Transit McCrae Tower 180 T
V2 MMF-NEE	-38.2322 S	145.02002 E	Virtual 200m E of MMF-NE Transit NW 271 True
V2 MMF-NWW	-38.23185 S	144.99648 E	Virtual 200m W of MMF-NW Transit NE 091 True
V2 MMF-SEE	-38.24039 S	145.01979 E	Virtual 200m E of MMF-SE Transit SW 271 True

3 Checkpoint Software System

3.1 Competition Scoring via Checkpoint Software

MYC has taken over MCYS's licence to use "The Checkpoint" software system which is used by all the West Australian clubs to manage Nav Rally events, courses, and competition scoring and handicaps.

The software author has adapted the software to suit MYC - MCC needs – most notably with the automatic creation of personalized "Log Forms" for each boat used to record their actual time of arrival at each mark in the course.



MYC Nav Rally Events, Courses, and results are defined in the Checkpoint system which posts relevant information on their associated "Sportspage" website – each club has its own page. with their list of events scheduled, their course details, and the competition scoring results for the event and for the club championship.

- MYC Click: [MYC Nav Rally Times & Results](#)
- Other Clubs Click: [WA Clubs Sportspage Time Trial Competitions](#)

Each club gets its own pages to show:

- List of [EVENTS](#), which course to use, Start times, and Results (when available)
- List of [COURSES](#), with a Course Description (map), and example course Times at various speeds

3.2 Checkpoint Points System & Handicap Values

We have setup custom values appropriate for Mornington yacht Yacht Nav Rally scoring in Checkpoint. These are explained in the Nav Rally General Instructions document. See details there. In short:

1. Variable Handicaps are calculated and used to determine the "Consistency" (handicap) Season Competition.
 - a. Initial handicap for new boats = 15
 - b. Maximum handicap is capped at 30.
 - c. Running handicap adjusted after each event = average of best 3 of 5 latest events
 - d. Handicap value represents a # time points per mark of the course – deducted from actual points lost for handicap results.
2. Non-Handicap "Scratch" "Championship" competition uses actual points lost as the basis.
3. Both Competitions rank the boats for position by the number of total points lost for the event. Competition "Position Points" are allocated based on #Starters + 3 – POSITION, so you gain more competition points in events with a larger number of competitors compared to events with a smaller number of competitors.

3.3 Nav Rally Results via Checkpoint

After a Nav Rally is run, each skipper must email or sms their completed Log Form with actual arrival times to the Nav Rally Coordinator (Bill Wilson) for scoring. After entering actual arrival times into Checkpoint, the system displays results for each competitor. We haven't completed any events at MYC at the time of this writing, but we can see [MCYS 2025 Nav Rally Times & Results](#) for example, which have been re-processed with the new MYC Handicap & Points system settings.

MCYS 2025 Nav Rally Times & Results

Fixtures for Power Yacht Time Trials

[Course Sheets](#)

[Championship Progressive Results](#)

[Consistency Progressive Results](#)

Event Date	Event Title	Course	Start Times		
3/10/2024	Nav Rally 25-0 Trial	108	14:00:00	Detailed Results	Summary Results
21/10/2024	Nav Rally Trial	112	16:05:00	Detailed Results	Summary Results
2/11/2024	Nav Rally 25-1	116	11:00:00	Detailed Results	Summary Results
14/12/2024	Nav Rally 25-2	116	11:00:00	Detailed Results	Summary Results
11/01/2025	Nav Rally 25-3	116	11:00:00	Detailed Results	Summary Results
1/02/2025	Nav Rally 25-4	108	11:00:00	Detailed Results	Summary Results
7/02/2025	Blairgowrie Nav Rally	120	11:30:00	Detailed Results	Summary Results
1/03/2025	Nav Rally 25-5	108	11:00:00	Detailed Results	Summary Results

There are many configuration options available in Checkpoint for calculating scoring and ranking competition results. We will be reviewing these and may make changes from these examples used at MCYS in 2025.

3.3.1 Example Detailed Results for an Event

https://www.sportspage.com.au/ttvictoria/mcys/results/DetailedResults_2024112-.htm

MCYS 2025 Nav Rally Times & Results

Final Results for 02/11/24

Comp No	Skipper	Total Pts	Finish Code	V2 DMF-SEE	V3 YELLOW3	V3 YELLOW 7	V2 DROMANA	V3 ANTHONY	VM CM21-OUT	VM CM23-OUT	VM CM25-OUT	MCYS VM MP	VM R0 NE	V2 DMF-NEE
LD858	Bill Wilson	136	FIN	12:14:00	12:15:27	12:16:41	12:19:00	12:22:46	12:25:03	12:28:00	12:30:55	12:34:29	12:37:09	12:39:55
				12:14:10	12:15:30	12:16:39	12:19:02	12:22:31	12:24:48	12:28:09	12:31:10	12:34:45	12:37:28	12:40:25
				10	3	2	2	15	15	9	15	16	19	30
MK708	Geoff Steele	2273	FIN	12:16:00	12:17:27	12:18:41	12:21:00	12:24:46	12:27:03	12:30:00	12:32:55	12:36:29	12:39:09	12:41:55
				12:17:00	12:19:00	12:22:00	12:24:55	12:28:35	12:31:00	12:33:00	12:35:00	12:40:53	12:43:45	12:47:50
				60	Estimated Time 93	199	235	229	237	180	125	264	276	355
MY035	Glenn Brien	185	FIN	11:00:00	11:05:14	11:09:41	11:18:01	11:31:35	11:39:47	11:50:24	12:00:53	12:13:46	12:23:20	12:33:16
				11:00:17	11:05:11	11:09:39	11:18:39	11:31:47	11:40:01	11:51:11	12:00:50	12:13:53	12:23:34	12:33:44
				17	3	2	38	12	14	47	3	7	14	28
UL826	Paul Wetherill	298	FIN	12:08:00	12:09:45	12:11:14	12:14:00	12:18:32	12:21:16	12:24:48	12:28:18	12:32:35	12:35:47	12:39:05
				12:08:00	12:09:45	12:11:13	12:14:14	12:18:39	12:21:27	12:25:11	12:28:15	12:33:15	12:37:09	12:40:52
				0	0	1	14	7	11	23	3	40	wrong side 82	107
XS930	Alan Adams	348	FIN	12:00:00	12:02:23	12:04:24	12:08:11	12:14:21	12:18:05	12:22:55	12:27:41	12:33:32	12:37:53	12:42:24
				11:59:00	12:01:23	12:03:54	12:07:30	12:14:02	12:18:03	12:23:01	12:27:33	12:33:41	12:37:29	12:42:15
				60	Estimated Timing 60	Estimated Timing 30	Estimated Timing 41	19	2	6	Wrong Side 8	9	Wrong Side 24	9

3.3.2 Example Summary Results for an Event

MCYS 2025 Nav Rally Times & Results

Final Results for 02/11/24

Fleet = Port

Position	Comp. No	Boat Name	Skipper/Navigator	Nom. Speed	Penalty	Total Points Lost	Day. H'cap	Day. Points	Season H'cap	Season Points	Comments.....
1	LD858	Sea Child	Bill Wilson/Marilyn Wilson	18	0	136	16.34	-43.75	16.34	-43.75	Least Points
2	MY035	Daisy	Glenn Brien/Michelle Brien	5	0	185	15	20.	15.	20.00	
3	UL826	Midnight Hours III	Paul Wetherill/Annette Wetherill	15	10	298	15	133.	15.	133.00	wrong side
4	XS930	Hugewind	Alan Adams/Isa Adams	12	80	348	15	183.	15.	183.00	Various
5	MK708	Merewether Too	Geoff Steele/Kathleen Steele	18	20	2273	15	2108.	15.	2108.00	Estimated Time

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3.3.3 Example Championship Results (Position) – Raw Scores

MCYS 2025 Nav Rally Times & Results

Final Result for Championship after 8 races with 4 races to count

Pos'n	Comp No	Boat Name	Skipper	Events	Total	Nett	03/10	21/10	02/11	14/12	11/01	01/02	07/02	01/03
1	LD858	Sea Child	Bill Wilson	7	32	23	[3.00]	[3.00]	7.00	6.00	[3.00]	4.00	[0.00](DNC)	6.00
2	XS930	Hugewind	Alan Adams	4	17	17	[0.00](DNC)	[0.00](DNC)	4.00	4.00	4.00	[0.00](DNC)	[0.00](DNC)	5.00
3	UL896	SHIMMER	Shaun McVicar	3	13	13	0.00(DNC)	[0.00](DNC)	[0.00](DNC)	5.00	5.00	[0.00](DNC)	3.00	[0.00](DNC)
4	UL826	Midnight Hours III	Paul Wetherill	2	9	9	0.00(DNC)	0.00(DNC)	5.00	[0.00](DNC)	[0.00](DNC)	[0.00](DNC)	[0.00](DNC)	4.00
5	MK708	Merewether Too	Geoff Steele	2	6	6	0.00(DNC)	0.00(DNC)	3.00	[0.00](DSQ)	[0.00](DNC)	[0.00](DNC)	[0.00](DNC)	3.00
6	MY035	Daisy	Glenn Brien	1	6	6	0.00(DNC)	0.00(DNC)	6.00	0.00(DNC)	[0.00](DNC)	[0.00](DNC)	[0.00](DNC)	[0.00](DNC)
7	MY12	Wingara III	John Hall	1	3	3	0.00(DNC)	0.00(DNC)	0.00(DNC)	[0.00](DNC)	[0.00](DNC)	3.00	[0.00](DNC)	[0.00](DNC)
8	RV888	Dreggen	Bruce Pickett	0	0	0	0.00(DNC)	0.00(DNC)	0.00(DNC)	0.00(DNC)	[0.00](DNC)	[0.00](DNC)	[0.00](DNC)	[0.00](DNC)

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3.3.4 Example Consistency Results (Position) – Handicap Corrected

MCYS 2025 Nav Rally Times & Results

Final Result for Consistency after 8 races with 4 races to count

Pos'n	Comp No	Boat Name	Skipper	Events	Total	Nett	03/10	21/10	02/11	14/12	11/01	01/02	07/02	01/03
1	LD858	Sea Child	Bill Wilson	7	31	22	[3.00]	[3.00]	7.00	6.00	[3.00]	4.00	[0.00](DNC)	5.00
2	XS930	Hugewind	Alan Adams	4	20	20	[0.00](DNC)	[0.00](DNC)	4.00	5.00	5.00	[0.00](DNC)	[0.00](DNC)	6.00
3	UL896	SHIMMER	Shaun McVicar	3	11	11	0.00(DNC)	[0.00](DNC)	[0.00](DNC)	4.00	4.00	[0.00](DNC)	3.00	[0.00](DNC)
4	UL826	Midnight Hours III	Paul Wetherill	2	9	9	0.00(DNC)	0.00(DNC)	5.00	[0.00](DNC)	[0.00](DNC)	[0.00](DNC)	[0.00](DNC)	4.00
5	MK708	Merewether Too	Geoff Steele	2	6	6	0.00(DNC)	0.00(DNC)	3.00	[0.00](DSQ)	[0.00](DNC)	[0.00](DNC)	[0.00](DNC)	3.00
6	MY035	Daisy	Glenn Brien	1	6	6	0.00(DNC)	0.00(DNC)	6.00	0.00(DNC)	[0.00](DNC)	[0.00](DNC)	[0.00](DNC)	[0.00](DNC)
7	MY12	Wingara III	John Hall	1	3	3	0.00(DNC)	0.00(DNC)	0.00(DNC)	[0.00](DNC)	[0.00](DNC)	3.00	[0.00](DNC)	[0.00](DNC)
8	RV888	Dreggen	Bruce Pickett	0	0	0	0.00(DNC)	0.00(DNC)	0.00(DNC)	0.00(DNC)	[0.00](DNC)	[0.00](DNC)	[0.00](DNC)	[0.00](DNC)

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4 MYC - MCC Nav Rally Main Rules

4.1 Marine Navigation & Safety Regulations Take Precedence

You must **always** abide by all applicable marine navigation, safety, and Collision Avoidance Regulations. They take precedence over all competition rules and practices, including staying out of the main shipping channels and giving way to commercial traffic always, including commercial fishing boats.

Remember that you must always give way to other boats as required by marine navigation laws, whether they are participating in the Nav Rally or not. You do not get special privileges because you are doing a Nav Rally! ***Do not risk safety for the sake of your competition scoring.***

4.2 Operational Rules

The main rules for an MYC Nav Rally / Time Trial are as follows.

4.2.1 GPS Chart plotters are expected to be used

- either built in on your boat or hand held mobile devices like phones or tablets
- to guide you along the planned route with distance and bearing to each mark/waypoint
- to track your actual boat speed over ground (**SOG**) and course over ground (**COG**)

4.2.2 AUTO-PILOT systems SHALL NOT be used

- You MUST manually steer the boat and manually control the speed.

4.2.3 MYC provides the course route and waypoint details in advance.

- With chart images, and waypoint details in the **Course Description document**
- As a **.GPX format Route file** to automatically load into your GPS chart plotter or mobile app

4.2.4 Steer a straight course towards each mark

- with no intentional course changes to compensate for running early on that leg.
- Extra Penalty points apply if you do

4.2.5 Choose a Course to Steer (CTS) to allow for Set & Drift and Leeway

- There are small tidal currents in our part of Port Phillip in the order of 0.1-0.3 knots
- Typically a “few degrees” +/- adjustment of CTS might be sufficient
- Steer so your GPS actual track and **Course over Ground (COG)** follow the **bearing line between waypoints / Marks** of the leg
- Adjust your Course to Steer as needed along the leg to navigate to the mark

4.2.6 Adjust engine RPM to maintain your Target Nominated Speed over Ground (NSOG)

- Use your GPS readout of actual Speed Over Ground (**SOG**) to guide you
- Adjust engine RPM to cater for changing effects of wind, waves, wash, current on your boat and try to keep your actual speed over ground constant at your target speed.

4.2.7 Important - Change to a “Compensated Speed over Ground” (CSOG) on each leg

- So early/late arrival on the *previous* leg doesn't prevent on time arrival on *this* leg.
- You may change to a Compensated Target speed, **shortly** after turning onto the **new** leg
 - then maintain boat speed over ground constant at this Compensated Target Speed for the rest of the leg

- if you want to you can check & re-adjust your compensated speed at the midpoint of the leg
- Increase SOG for LATE arrival, Decrease for EARLY arrival
- By doing so you can compensate for multiple conditions:
 - your early/late arrival time difference for the **previous leg**
 - additional time it may take to get round the previous mark (at the start of this leg)

4.2.7.1 Determine How Much Speed Compensation is needed

- Refer to Sample Boat Log Form in [section 2.3.6.4](#)
- Comp Time **in seconds** = Difference between Actual Arrival Time and Predicted Arrival Time
- If you're Late, you must Increase Speed to recover the lost time.
- If you're Early, you must Decrease Speed to compensate for early arrival
- See Boat Log Form for Speed Increment needed to compensate 10 seconds at your speed
- Multiply this speed increment value by the number of 10 second increments you need
- E.g. if you were 20 seconds late and speed increment was 0.3 knots x 2 = 0.6 knots
- New Speed = Nom Speed +/- Comp Speed e.g. 10 + 0.6 = 10.6 knots
- Or New Target SOG Knots = Leg Distance Nm / New Leg Time (seconds) * 60 * 60

4.2.8 Do not change target boat speed over ground more than twice each leg

- Especially not nearing the end of the leg to compensate for late or early arrival on this leg
- Extra Penalty points apply if you do 10 Points per occurrence

4.2.9 Record your actual Arrival Time of Day to the second.

- You record your own actual arrival time of Day – it is an **honour system**
 - E.g. using a clock app on your phone which shows **hours:minutes:seconds**
- You get a **1 penalty point for each second** you are either late or early at a mark.
- Early arrivals do not cancel out late arrivals – all penalty points accumulate.
- 10 Penalty points are assigned for fouls such as passing a mark on the wrong side or making speed changes approaching a mark

4.2.10 Record your Actual Arrival Times on your personalized Course Log Form

- Emailed to you by MYC-MCC as a PDF File from the Checkpoint software system
- Based on **your Nominated speed**, and **your Allocated Start Time**, with:
- Distance and Bearing to the each Waypoint / Mark
- Predicted travel time to each Waypoint / Mark
- Estimated Time of Arrival (ETA) at each Waypoint / Mark
- A place for you to manually record the Actual time of Arrival (ATA) you pass each mark
- Fill this out and email it to the Event Officer for recording and scoring

4.2.11 Example Boat Log Form to Record Nav Rally Times

The Event Officer will email you your own personalised Boat Log Form as a .PDF file. **PRINT IT out** and bring it on board to record your actual arrival times at each mark. Here is what it will look like.

MCYS Nav Rally Competitions				LD858	Sea Child	
Times Calculated:	Event Date	21/10/2024	Skipper	Bill Wilson		
23/10/2024	Nav Rally Trial		Navigator	Marilyn Wilson		
10:51:39	Course No	112	Start Time	16:05:00		
	(10-Oct-24) CW Rosebud Loop Outside Po		Nom. Speed	20.0	Knots	
			Boat Length	8.0	Metres	

Leg	Mark Name	Leave To	Leg Length (Nm)	Bearing (True)	Leg Time	ETA	Actual Time	Comments
0	V2 DMF-SEE	Port				16:05:00	16:05:00	
1	V3 YELLOW3	Starboard	.435	188	01:18	16:06:18	16:06:28	
2	V2 DROMANA	Starboard	1.063	229	03:12	16:09:30	16:09:38	
3	V2 MCCRAE	Starboard	1.793	241	05:22	16:14:52	16:15:53	
4	V2 ROSEBUD	Starboard	1.113	250	03:21	16:18:13	16:18:08	
5	VM ROSE-HV	Starboard	.407	343	01:13	16:19:26	16:19:36	
6	VM CM19-HV	Port	.386	70	01:09	16:20:35	16:20:30	
7	VM LIM McCrae	Port	.481	67	01:27	16:22:02	16:21:49	WRONG SIDE
8	VM CM21-OUT	Port	.591	44	01:46	16:23:48	16:23:47	
9	VM CM23-OUT	Port	.885	43	02:40	16:26:28	16:26:26	
10	VM CM25-OUT	Starboard	.874	44	02:37	16:29:05	16:29:07	
11	V3 YELLOW3	Port	1.205	113	03:37	16:32:42	16:32:47	
12	V2 DMF-SEE	Starboard	.435	8	01:18	16:34:00	16:34:20	WRONG SIDE
Course Length (Nm)			9.668			00:29:00		

I, being the responsible SKIPPER, declare the times above to be true and correct and that I navigated the course according to the Nav Rally rules

Signature

Date

I, being the responsible OBSERVER, declare the times above to be true and correct and that we navigated the course according to the Nav Rally rules

Signature

Date

** Email completed form to **bill.wilson.direct@outlook.com**
or photograph and SMS to **0402133255**

Record in the comments if you went on the wrong side of a Mark – 10 penalty points.

5 How to Prepare for a Nav Rally

To prepare for a Nav Rally you need to:

1. **Learn about how Nav Rallies work at MYC**
 - a. Nav Rally Overview on website,
 - b. This Explanations document
 - c. Familiarize with website On Water > Power > Power HQ
2. **Check dates** for Nav Rally events in the [MYC Calendar](#) and [MYC Nav Rally Times & Results](#)
3. **Register to ENTER the Nav Rallies** via the **MYC – MCC Sailsys** system
 - a. Register for the entire series of Nav Rallies or single events
 - b. Including submitting required Compliance documents via Sailsys
4. **Familiarise yourself** with information in the **MYC NAV Rally Event Documents on Power HQ**
 - a. **Nav Rally Notice of Event**,
 - b. **Nav Rally General Instructions**
 - c. **Nav Rally Special Instructions** for specific dates
 - d. **Check for any late changes in the Official Notice Board on Power HQ**
5. **Download and Familiarize** yourself with the Course Details
6. **Inform Nav Rally Coordinator of your Nominated Boat Speed**
7. **Prepare** your Equipment
8. **Train** your Crew – they should be familiar with the course details and Timing equipment

5.1 Check Dates for Nav Rally Events

- See Nav Rally event dates on the [MYC Calendar](#)
- See Course Number on [MYC Nav Rally Times & Results](#)
- Check Course number in Nav Rally “n” Special Sailing Instructions
- Check ONB Official Notice board for any messages about late changes
- [Download Course Details and timing](#).
 - [Check the Predicted Log Speed Tables](#) to help choose your speed.

5.2 ENTER for the Event via MYC – MCC Sailsys system

- [Register](#) **EACH PERSON** on board as crew for the event
 - Skipper, crew and any guests on board
 - See separate Sailsys instructions and training.
- [Lodge your Safety & Insurance Declaration](#) for 2024/25 season
- Pay the nominated fee(s)
- **Email your nominated boat speed** to the Nav Rally Coordinator (Bill Wilson)
<mailto:bill.wilson.direct@outlook.com>

5.3 Familiarize with the Course Details

- Download the applicable **Course MAP** Document from the website or event page
 - [Courses](#) button on [Power HQ webpage](#), and/or
 - [Course Sheets](#) link on [MYC - MCC Nav Rally Times & Results](#) Sportspage website
- **Study the course details** in the **Course MAP** document
 - Start / Finish Line details
 - Details of all course Marks / Waypoints
 - Details of relevant Virtual Transit Marks
- **Obtain the Course ROUTE.GPX** file for your GPS system
 - download the Route .GPX file from the [Power HQ webpage](#)
 - or get via email from Event Officer Bill Wilson
 - Load the GPX file into your GPS device and familiarize yourself with it

- **Print your Personalized Predicted Log Form** – it will be emailed from Bill Wilson one day before the event

5.4 Choose Your Nominated Boat Speed

You need to nominate the boat speed over ground that you will target to maintain constant for the event, and advise this to the Nav Rally Coordinator in advance, as it is required to prepare your personalized Boat Log Form. Remember it is not a race – choose a comfortable speed which is easy to maintain constant so you can achieve the predicted travel times consistently.

Choose a speed within the allowed speed range of 5-20 knots. Initially we followed WA practice of speeds 5 - 15 knots. But we increased it last year to 5 – 20 Knots because 15 knots was too uncomfortable (bow riding high) and too hard to keep constant on small planing power boats.

Skippers, you should test your boat at various speeds and choose a speed that suits your boat and your comfort level. The speed should be efficient and enjoyable, and be easy to maintain constant under different conditions. For planing hulls choose a speed where the boat is comfortably on the plane, but not so fast as to be uncomfortable in choppy conditions.

For displacement hulls, choose a speed a bit less than your maximum speed, so you have scope to increase or decrease speed to compensate for wind and waves or running late on a previous leg.

You can check the Time vs Speed tables for each course at various speeds in [Course Sheets](#) link on [MYC - MCC Nav Rally Times & Results](#) Sportspage website

5.4.1.1 Table of Speeds in Knots and Metres/Second

1 Nautical Mile = 1852 metres, 0.1 Nm = 185.2 metres

Knots	Knots	Knots	Knots	Knots	Knots	Knots	Knots	Knots	Knots	Knots
20	18	16	15	12	10	9	7.5	7	6	5

m/sec	m/sec	m/sec	m/sec	m/sec	m/sec	m/sec	m/sec	m/sec	m/sec	m/sec
10.3	9.3	8.2	7.7	6.2	5.1	4.6	3.9	3.6	3.1	2.6

5.5 Prepare Your Equipment

5.5.1 Setup/Configure your GPS Navigation Chart Plotter

- If you don't have a Chart plotter on your boat, you can use an app on a phone or tablet.
- Time Zero TZ iBoat is our recommended Apple phone/ipad boating nav app
- **Navionics Boating App** is an inexpensive app available for Apple and Android
- <https://www.navionics.com/aus/apps/navionics-boating>
- <https://www.navionics.com/aus/apps/navionics-boating/try-for-free>

5.5.2 Enter the Course ROUTE GPX file into Chart plotter or Mobile GPS

- Import the provided Course ROUTE.GPX into your GPS nav system
- Owners of Garmin Chartplotters can use the free Garmin "Active Captain" app on a mobile device to import the supplied ROUTE.GPX and then synchronize/download it to the Garmin plotter on their boat
- Or you can enter the route manually if needed using the waypoint GPS coordinates
- Familiarize with GPS Operation for the route and how to follow a route
 - both Skipper and Navigator / Observer

5.5.3 Choose an accurate timing device

- E.g. a mobile phone **Time of Day Clock app** which shows **Hours : Minutes: Seconds**
- Train your crew how to record your Actual **Time of Day** Arrival at each Mark
- Suggestion: **Capture a screenshot** as a record of the time as you pass a mark. Then write it in the Log Form.
- Do not use stop watches or other measures of elapsed time. We need the **Time of Day** recorded.

5.5.4 Example Clock Apps – You can pick any though

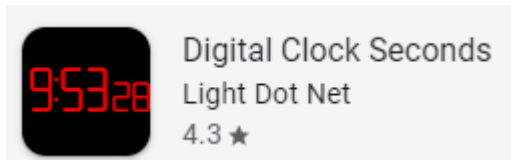
- **Apple:** E.g. **ClockZ** app – free on Apple App Store



ClockZ | Clock Display
Night Stand | Widget | Timer
Rage Box
Designed for iPad
★★★★★ 4.4 • 3.4K Ratings
Free · Offers In-App Purchases



- **Android:** E.g. **Digital Clock Seconds** app on Google Play



5.6 Train Your Crew on Nav Rally Event

Brief & Train your crew on all aspects of Nav Rally / Time Trial, especially the Observer

- Study Course Details – how to recognize Virtual Marks, and Transit Marks
- How to Determine accurately when you pass a Virtual Mark or physical mark
- You need a separate smart phone for timing – not the same device used for navigation.
- How to operate the timing device they will use, and practice for familiarity
- How to record the time on the Predicted Log Form

6 How to Navigate a Nav Rally Course

6.1 Familiarize & **PRINT** the Course Description Document in Colour

Download & PRINT the relevant Nav Rally Course MAP file in colour.

The course Overview and Details sections include:

- Diagram of the course on a chart,
- Table of Marks / Waypoints in sequence
 - Description of Mark and Transit Bearing for each
- Explanation about Virtual Transit (VT) Marks used in MYC Nav Rally courses
- Diagram for each Mark / Waypoint

NOTE: Mark/Waypoint coordinates are not listed in the Course Description. See separate section under Courses on the Power HQ Website which contains the GPS Coordinates and text description of all the marks used in Nav Rally Courses.

6.1.1 Print Your Personalized Predicted Log Form

You will be emailed your own personalized Predicted Log Form for your boat.

- Check your **Nominated Boat Speed** and your allocated **Start Time** of day.

Note the Table of Waypoints, which includes:

- The Leg number of the course. Start Mark is number 0.
- The name of the waypoint,
- The side of each Mark you must leave it to, (leave it to Starboard, or Leave it to Port),
- The Compass Bearing to each waypoint from the previous one
 - a. defines the perfect straight line course to the next waypoint,
- the distance to the waypoint, in Nautical Miles (to 3 decimal places)
- the Predicted Leg Time (elapsed number of minutes:seconds to get to the waypoint),
- Predicted Arrival Time (of day) = your Start Time (of day) + Predicted Leg Time
- Place to record your Actual Arrival Time of Day at the mark.

When you pass a mark, you record the actual **time of day** you pass a mark in the designated column, not your elapsed time since the last mark.

Note how many seconds early or late you are, and advise the skipper, so he can adjust target boat speed up or down on the next leg to compensate.

At the end of the competition sign the form, and submit it to the Nav Rally Coordinator by email or SMS.

6.2 Arrive at the Assembly Area before your start time

Be sure to allow enough time to reliably get from your berth to the assembly area near the start line 5-10 minutes before your allocated start time. Keep clear of starting line and 200m either side of it if is not your starting time.

Select and display the correct course route on your GPS system. Position yourself where and when you will begin your run up towards the start line. Switch your GPS to the "Navigate Route" mode, and ensure Track Recording is ON.

6.3 Start at Your Allocated Start Time

Boats start individually, one at a time, at their allocated Start Time. Subsequent boats will be assigned start times spaced a few minutes apart - slower boats first.

Proceed towards the starting line at Mark 0. You have started when your boat crosses the Start Line, which is illustrated in the course details in the Course Description as the line between the Virtual Start Mark and the reference physical mark along the designated transit line bearing.

You want to cross the start line exactly at your nominated start time, ideally travelling at your Nominated Constant Speed over Ground, heading on the Bearing towards Mark 1, to minimize penalty points at the start line, and to maximize your chance of arriving at the next mark on time.

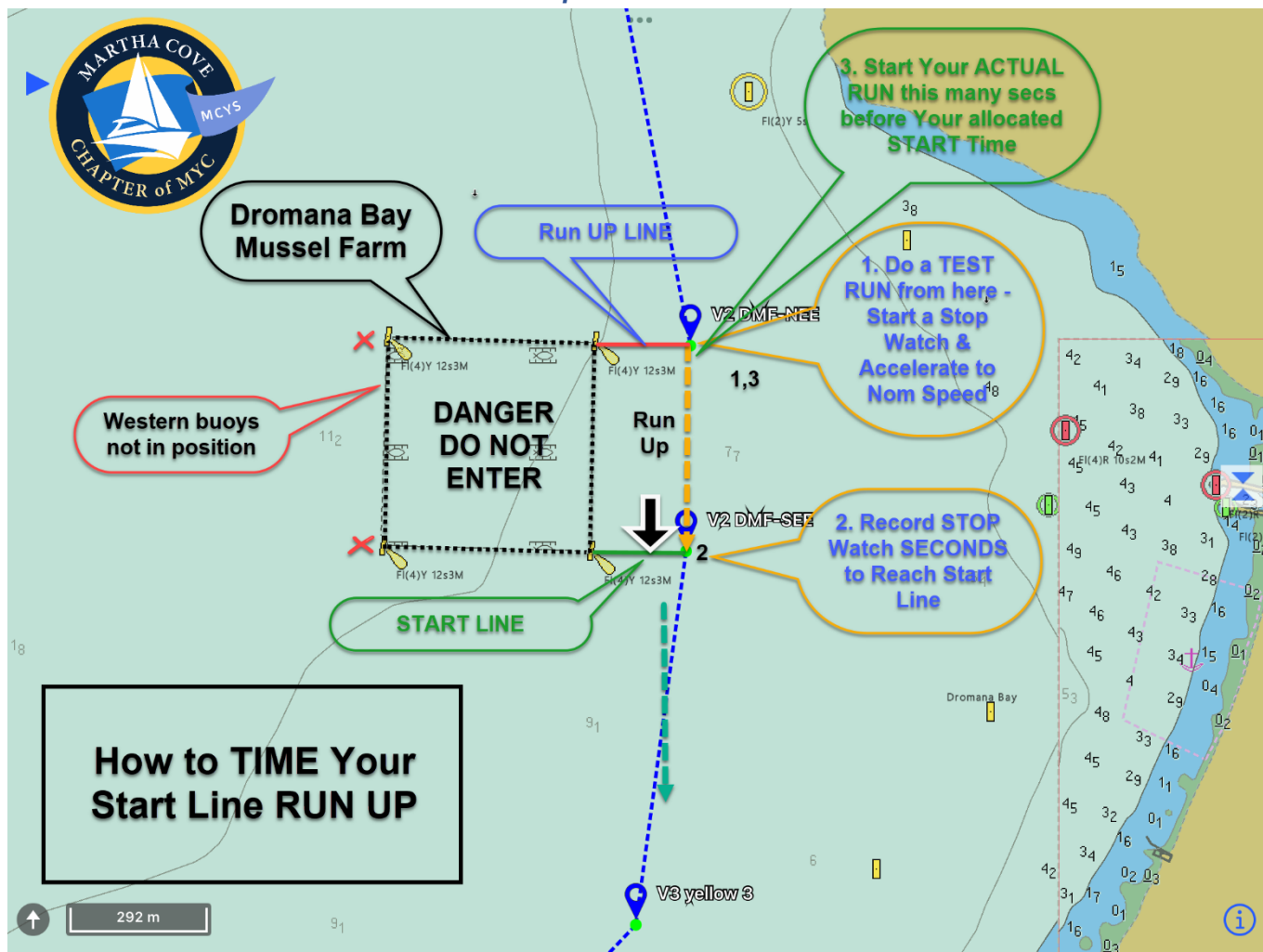
Your crew must accurately determine and record the time of day (to the second) when you cross the start line. You may cross the line early or late – but you are allocated 1 penalty points per second early or late.

6.3.1 How to Time Your Start Line Run Up in Advance

Some tips to achieve an ideal start include:

- Do tests in advance to measure how many seconds it takes you to travel a known distance from an easily recognizable Run up point (e.g. the opposite corner of the Mussel Farm from the start line), accelerate to your nominated speed, and then reach the start line.
- Then start your run up from this point this many seconds in advance of your allocated start time

6.3.1.1 How to Time Your Start Line Run Up



6.4 Steer to the Next Mark

After passing a Mark, steer your boat towards the next mark along the **Course Bearing Line** to the next mark. This straight line is your “Target” Course Over Ground.

To compensate for side drift due to cross winds or currents, steer a course (CTS) slightly into the wind or current to the opposite side of the course bearing line, pre-compensating for side drift in advance. Monitor your actual track on the GPS display of actual **Course Over Ground** (COG). If your track is drifting away from the Course Bearing Line, steer back towards the straight bearing line to correct it.

If you missed your ETA time, you may adjust your speed once to a Compensated Speed Over Ground for this leg – slightly slower or faster to compensate for being early/late, as described in section 4.2.7 above.

Arrive at the next mark and record the time of day you actually arrive at the mark. Turn to the Next Mark

As you reach/pass one mark, your GPS will switch to the subsequent mark on the next leg of the route and show the bearing line to the subsequent mark.. Turn the boat to the new direction.

If this continues in basically the same direction you don't need to make allowance for extra time to “get around” the mark. But if the bearing to the next mark requires a significant turn in direction – this will take additional time before the boat is heading in the correct new direction.

If you wish, you are allowed to set a new Compensated Speed Over Ground to allow for this extra time plus any early/late arrival time at the previous mark. Increase/decrease engine RPM to maintain this new constant boat speed over ground value for this leg, as explained in Section 4.2.7 and 4.2.8.

Repeat section 4.4 for as many marks are in the course.

6.5 How to Determine when you've Arrived at a Mark

The skipper and crew must decide how they are going to handle this, and each crew is assigned a specific task to perform to do so. Usually the skipper is concentrating on steering the boat following the GPS display and the Observer is physically watching for when the boat arrives at the mark. Or a combination of both.

6.5.1 Arrive at a Physical Mark

A boat is considered to have **arrived at a physical course mark** when:

- the **observer crew member of the boat** crosses the imaginary **perpendicular line** between the **Physical Mark** and the **course bearing line** from the previous mark.
- **close** to the Physical Mark – e.g. nominally 20 - 25 metres (Don't touch it!)
- on the **correct side** of the boat
 - a. e.g. Leave to Starboard – the mark is off the starboard side of the boat

You can know when you reach the mark in a couple of ways:

- a crew person could be assigned to watch carefully **ahead** for when your boat crosses the line, and calling **NOW** to signal the **Timer** crew to record the time of day.
- **Recommended to rely on the GPS device.** Assign a crew member or the skipper to watch the GPS chartplotter carefully, counting down the readout of DTW Distance to Waypoint.
 - a. Call out DTW distances to the crew as you approach the waypoint – eg. 200m, 100m, 50m so they are ready for it
 - b. when the GPS changes to the next waypoint, the WATCHER calls out **NOW** to signal the Timer crew to record the time of day. The change in GPS display is very obvious if you are watching the GPS screen.
 - c. The **DTW Distance to Waypoint** number will jump suddenly from a small number to a large number - the length of the next leg
 - d. The **CTS Course to Steer** graphic vector will change angle to point to the next waypoint. Very obvious at a sharp corner in the route – Not obvious at all if the route continues in same or similar direction.
- Note that you need to check the settings on your GPS Chartplotter or mobile app which chooses how the GPS decides it has arrived at a waypoint. The preferred setting is when the boat crosses a perpendicular line from the waypoint to the course leg bearing.
- Do **not** use the setting which changes to the next waypoint when the boat comes within a certain radius distance of the waypoint, as this is not as accurate.

We don't try to make allowance for the time difference between the bow crossing the line and when the human's position or GPS sensor farther back on the boat crosses the line.

6.5.2 Arrive at a Virtual Transit Mark

A boat is considered to have **arrived at a Virtual Transit course mark** when:

- the **observer crew member of the boat** crosses the imaginary **transit bearing line** between the nearby **Physical Mark**, and the associated **Transit Mark**.
- **close** to the **Virtual Mark** - e.g. nominally 20 - 25 metres
- on the correct side of the boat

- a. e.g. Leave to Starboard – the mark is off the starboard side of the boat
- Most Virtual Marks are typically 200 metres away from their corresponding physical marks. Some are 300 or more. Check the course description document for details.

A human can know when you reach a Virtual Mark in a couple of ways:

- Assign a crew or the skipper to Watch the GPS chart plotter display to see when it switches to the next waypoint – as described in the section above about Physical Marks. This is the most reliable, especially as many Virtual Marks do not have Transit bearings to physical features.
- Or, a crew member could be assigned to watch carefully **to the side** for when the Physical Mark lines up with the Transit Mark – this is the crossing of the transit line.
 - a. i.e. crew person watches the position of the Transit Mark relative to the Physical Mark. As the boat approaches the line, the relative angle between them will get smaller and smaller until they are in line. Note the time exactly.
 - b. Either the transit mark will NOT be visible, OR depending on how big it is, it might be visible directly BEHIND the physical mark

If you cannot see Transit Mark well, you can use a compass to help locate it.

- As the boat approaches the mark, keep pointing the compass to the physical Mark.
- The bearing reading displayed on the compass will change as the boat gets closer
- When the (True) compass reading display the **Transit Bearing Value** for this VT mark, you are at the line.

6.5.3 How to Record the Arrival Time at a Mark

Based on understanding the details of arriving at marks as outlined above, one crew member (Watcher) should call out NOW when the line is crossed. Either he or a different crew (Timer) must record the actual time of day the line is crossed.

It is recommended to use a smartphone CLOCK app which displays time of day in Hours:Minutes:Seconds, and have a person watching this closely, and remember/write down when the Observer calls out “NOW”.

A better way is for a crew member to take a screenshot of the phone screen when the line is crossed. This has the advantage that there makes a record for later crew use to check later.

Then write down the Actual Arrival Time of Day in the Predicted Log Form, - we don't bother making adjustments for the bow vs the observation point differences.

6.6 Finish the Course

When you complete the leg to the last mark in the course you will cross the finish line. Record the actual time of day you cross the line as normal. Slow down and proceed away from the Finish line area.

Record the actual time of arrival as per other marks.

6.6.1 Submit your Completed Log Form / Time Sheet

As soon as practicable review your recorded boat track and check that you passed each mark on the correct side. If not, write “wrong side” on your Log Form beside the relevant arrival time for that leg.

Sign the form and email or SMS your completed log form to the Nav Rally Coordinator, Bill Wilson.

6.6.2 Check Results on Sportspage Website

Later in the day the Nav Rally Coordinator will enter your actual arrival times into the Checkpoint Software system, after which the results of the event and the club championship competition will be calculated and displayed on the [MYC Nav Rally Times & Results](#) Sportspage website.

7 Social Get together After Nav Rally

We often meet socially after a Nav Rally – sometimes on water anchored off Pebble Beach near the entrance to Martha Cove, sometimes at Martha's Café for coffee & snacks or Martha's Table for drinks & lunch. Watch for notices in the ONB and Nav Rally Special Instructions for the specific event on MYC Power HQ website.