

Supplement to

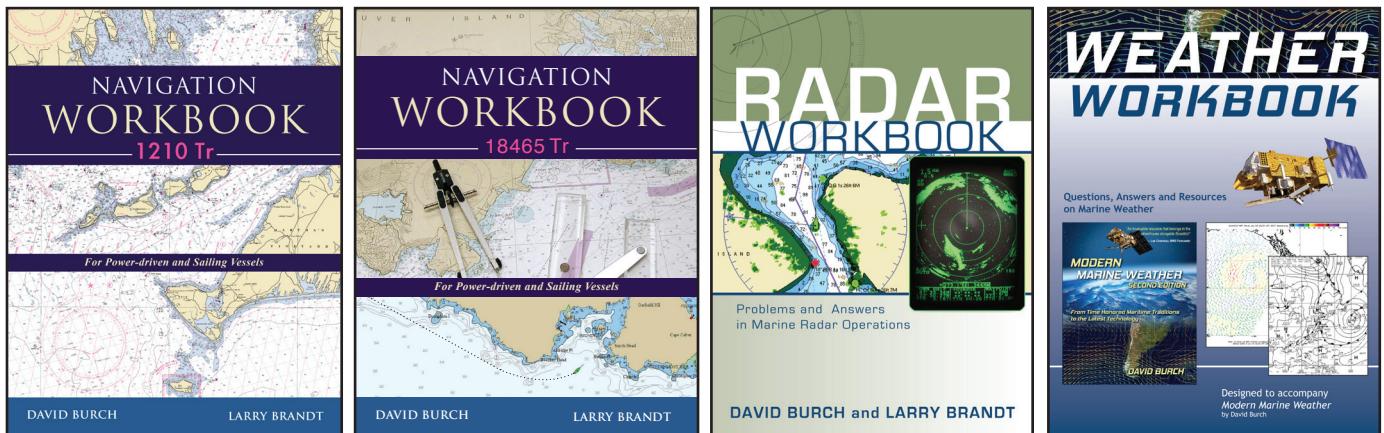
Navigation Workbook for Practice Underway.

This file contains duplicate printable workrooms, plotting sheets, and log-book pages to use with the workbook as needed.

They are the blank forms only. Refer to the text of the workbook itself for discussion of the use of the Workbook and full instructions on the individual exercises.

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STARPATH®
Seattle, WA

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Basic Chart Work

CW-1. Use of Chart Catalog

CW-2. Lat/Lon, Range and Bearings

#	Date	Chart No / scale	Point 1 Lat/Lon	Point 2 Lat/Lon	R	B (T)	Var
1							
2							
3							
4							
5							
6							
7							
8							

CW-3. Depths and Soundings

#	Date	Depth units	Depth at Point 1	Depth at Point 2	Deepest	Shallowest	MHW
1							
2							
3							
4							
5							
6							
7							
8							

CW-4. Buoys

CW-5. Lighthouses

CW-6. Coast Pilots and Sailing Directions

CW-7. Local Knowledge

Special Communications and AIS

COM-1. Securite', Pan Pan, and Mayday Communications

Class of Transmission	Description
Securite'	
Pan Pan	
Mayday	

COM-2. Broadcast Notice to Mariners

COM-3. Automated Identification System

COM-4. AIS Maximum Range

COM-5. AIS Communication

Date	Time	Own Ship Location	Target Vessel Name	Target Location	Range & Bearing to Vessel	Purpose of Communication

COM-6. Virtual & Synthetic Navaids

Date	Location	Navaid Name	Description	Light List Entry, if any

Date	Location	Navaid Name	Description	Light List Entry, if any

Tides and Currents

TC-1. Tides at Anchor

Date						
Time						
Lat						
Lon						
Description						
Measured depth						
Draft						
Sum 1						
Charted depth						
Tide height						
Sum 2						
Error						

TC-2. Currents Underway

Radar

R-1. Basic Radar Controls

R-2. Confirm GPS Position Using Radar Range and Bearing

R-3. Distinguish Buoys and Moving Vessels

R-4. Closest Point of Approach

R-5. Relative Motion Diagram (Rapid Radar Plotting)

R-6. Radar Piloting

#	Date	Time	H	S	Lat/Lon	Description of location
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
Description of piloting method used in the situation listed above						
#	Description of piloting method used in the situation listed above					
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

R-7. Position Fix with Radar

Navigation Rules

NR-1. Reading Assignments

Date	Assignment	Rules — Page count
	Part B, Sec I. Rules that apply all times, regardless of visibility	Rules 4 to 10 — 6 pages
	Part B, Sec II. Rules that apply when vessels can see each other	Rules 11 to 18 — 5 pages
	Part C, Lights and Shapes (power, fishing, and sailing)	Rules 23, 25, 26 — 12 pages
	Part C, Lights and Shapes (tow boat lights)	Rule 24 — 10 pages
	Part C, Lights and Shapes (anchored and aground)	Rule 30 — 3 pages
	Part D, Sound and Light Signals (maneuvering and warning)	Rule 34 — 2 pages
	Part D, Sound and Light Signals (“fog signals”)	Rule 35 — 2 pages
	Part D, Sound and Light Signals (distress and getting attention)	Rules 37 and 38 — 2 pages

NR-2. Sound Signals Underway

NR-3. Lights Underway

NR-4. Right of Way

NR-5. Rule 19d

Date	Assignment	Rules — Page count
	Part B, Sec III. Rules that apply when you cannot see each other	Rule 19 — 1 page

Date	Approach from	Your maneuver assuming target vessel is not in sight visually	Rules reference
	000 R		
	045 R		
	090 R		
	135 R		
	180 R		
	225 R		
	270 R		
	315 R		

Piloting

P-1. Bearing Fix

P-2. LOP by Natural Ranges

P-3. Fix by Soundings

P-4. COP from Vertical Sextant Angle

P-5. Three-body Fix by Sextant

Electronic Charting

EC-1. Basic Skills

Operation	Date	Time	Operation	Date	Time
Select charts and load chart of choice			R and B boat to point		
Scroll, center, zoom			R and B point to point		
Set scales, windows			Use of Cross Track Error XTE		
Read Lat/Lon of boat position			Use of Tides and Currents		
Set marks, properties, hide/show					
Set up a route, activate a waypoint					
Use of Plan Book					
Monitor GPS input signals					
Display multiple windows					
Split and join routes					
Set up projected boat position					
Use of range rings					

EC-2. Route Monitoring Underway

GPS Navigation

GPS-1. Basic Skills

Operation	Date	Time	Operation	Date	Time
Read and interpret Lat and Lon					
Entering a waypoint					
Entering a route					
Read R and B to waypoint					
Reading COG and SOG					
Read and understand XTE					
Display, zoom, and pan the plot screen					
Advance to next waypoint on a route					
Arrival alarms					
Interpret active satellite data					

GPS-2. Route Monitoring Underway

GPS-3. Confirm Position Accuracy

Dead Reckoning

DR-1. Basic Terms

Term	Time	Date	Term	Time	Date
Heading (H)			Knotmeter speed (S)		
Course (C)			Speed over ground (SOG)		
Course over ground			Velocity made good (VMG)		
Bearing to WP			Speed of Advance (SOA)		

DR-2. ETA to Waypoint

DR-3. Magnetic Variation

DR-4. Compass Check on Range

Weather

W-1. VHF Weather Sources

Time	Date	Lat/Lon	Description
VHF Chan	Call sign or station ID	Subjects	

Time	Date	Lat/Lon	Description
VHF Chan	Call sign or station ID	Subjects	

Time	Date	Lat/Lon	Description
VHF Chan	Call sign or station ID	Subjects	

Time	Date	Lat/Lon	Description
VHF Chan	Call sign or station ID	Subjects	

Time	Date	Lat/Lon	Description
VHF Chan	Call sign or station ID	Subjects	

Time	Date	Lat/Lon	Description
VHF Chan	Call sign or station ID	Subjects	

Time	Date	Lat/Lon	Description
VHF Chan	Call sign or station ID	Subjects	

W-2. VHF Weather Reports

Time	Date	Lat/Lon	Description
Nearest report locations		Time	Wind, seas, weather, barometer
Your own observations =			
Nearest forecast locations			Wind, seas, weather

Time	Date	Lat/Lon	Description
Nearest report locations		Time	Wind, seas, weather, barometer
Your own observations =			
Nearest forecast locations			Wind, seas, weather

Time	Date	Lat/Lon	Description
Nearest report locations		Time	Wind, seas, weather, barometer

Your own observations =		
Nearest forecast locations		Wind, seas, weather

Time	Date	Lat/Lon	Description
Nearest report locations		Time	Wind, seas, weather, barometer
Your own observations =			
Nearest forecast locations			Wind, seas, weather

Time	Date	Lat/Lon	Description
Nearest report locations		Time	Wind, seas, weather, barometer
Your own observations =			
Nearest forecast locations			Wind, seas, weather

Time	Date	Lat/Lon	Description
Nearest report locations		Time	Wind, seas, weather, barometer

Your own observations =		
Nearest forecast locations		Wind, seas, weather

Time	Date	Lat/Lon	Description
Nearest report locations		Time	Wind, seas, weather, barometer
Your own observations =			
Nearest forecast locations			Wind, seas, weather

Time	Date	Lat/Lon	Description
Nearest report locations		Time	Wind, seas, weather, barometer
Your own observations =			
Nearest forecast locations			Wind, seas, weather

W-3. Cloud Spotting

W-4. Apparent Wind to True Wind

W-5. Barometer Comparisons

Celestial Navigation

CN-1. Star Spotting

CN-2. Twilight Times

CN-3. Checking Watch Time

CN-4. Compass Checks from the Sun

Date	Time	GPS Lat/Lon	Var.	Heading	Sun Zn (M)	Sun Zn (C)	Deviation

CN-5. Sun line Running Fix

CN-6. Sun-Moon Fix

CN-7. Star-Planet Fix

Navigation Challenges

NC-1. Unforeseen Eventualities

Personal Logbook

Sheet 1

	Day #	Date	Description	Time	Log	Lat/Lon	Course	Speed	Baro
1			Depart						
2			Mid-morning						
3			Mid-day						
4			Mid-afternoon						
5			Anchorage						
6			Depart						
7			Mid-morning						
8			Mid-day						
9			Mid-afternoon						
10			Anchorage						
11			Depart						
12			Mid-morning						
13			Mid-day						
14			Mid-afternoon						
15			Anchorage						
16			Depart						
17			Mid-morning						
18			Mid-day						
19			Mid-afternoon						
20			Anchorage						
21			Depart						
22			Mid-morning						
23			Mid-day						
24			Mid-afternoon						
25			Anchorage						
26			Depart						
27			Mid-morning						
28			Mid-day						
29			Mid-afternoon						
30			Anchorage						
	1	2	3	4	5	6	7	8	9

	AWS	AWA	Location Description and Comments
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
	10	11	12

Sheet 2

	Day #	Date	Description	Time	Log	Lat/Lon	Course	Speed	Baro
1			Depart						
2			Mid-morning						
3			Mid-day						
4			Mid-afternoon						
5			Anchorage						
6			Depart						
7			Mid-morning						
8			Mid-day						
9			Mid-afternoon						
10			Anchorage						
11			Depart						
12			Mid-morning						
13			Mid-day						
14			Mid-afternoon						
15			Anchorage						
16			Depart						
17			Mid-morning						
18			Mid-day						
19			Mid-afternoon						
20			Anchorage						
21			Depart						
22			Mid-morning						
23			Mid-day						
24			Mid-afternoon						
25			Anchorage						
26			Depart						
27			Mid-morning						
28			Mid-day						
29			Mid-afternoon						
30			Anchorage						
	1	2	3	4	5	6	7	8	9

Sheet 2

	AWS	AWA	Location Description and Comments
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
	10	11	12

Plotting Sheets

