# 1.0 PRE GAME

1.1	Determine Order of Battle for opposing forces	
1.2	Print a SHIP LOG SHEET for each ship	Use index on Ship Log CD-ROM to select log for each ship according to date of battle.
1.3	Determine special limitations (if any) that are to be applied to individual ships	As determined according to scenario or by random method using CHART A8.
1.4	Designate ships that will serve as flagships	As determined according to scenario
1.5	Determine Flag Command ratings for each ship and note on Ship Log	Roll or assign using CHART B1
1.6	Determine Bridge Command ratings for each ship and note on Ship Log	Roll or assign using CHART B1
1.7	Determine Crew ratings for each ship/air crew and note on Ship Log (as part of Battle Rating).	Roll or assign using CHART B2
1.8	Establish Unit Identifiers for all ships and other tactical units (used in Flag Commands).	Use printed copy of Flag Command Card
1.9	Formulate Battle Orders (1 thru 5) for each flagship and record on Flag Command Card.	Use printed copy of Flag Command Card
1.10	Determine weather conditions, wind direction and speed, overall visibility and light conditions.	As determined according to scenario using CHARTS A7, C1, Z1, Z2, Z5
1.11	Note reduction of operations and gunnery due to effects of sea state on Ship Log.	CHART C4
1.12	Determine ammunition loadouts for each battery and record on Ship Log.	Use CHART A12 and A13 to select appropriate loadouts or roll for random selection. Loadouts can also be assigned as desired by the player.
1.13	Adjust DCR value on Ship Log according to period and nationality,	CHART B3

# 2.0 COMMAND PHASE

2.1	Flag Commands selected and noted for all ships as required. Admiral informs all commanders of signals.	Note orders on Flag Command Card to represent flag signals for the upcoming movement phase.
2.2	Check for visibility of signals.	CHART C3
2.3	Perform rolls required for command checks against Flag Commands.	Rolls are performed when flag commands issued exceed rating or when receiving ship is beyond visibility of signal.
2.4	Bridge Commands selected and noted for all ships as required.	Check appropriate boxes on back of Ship Log in order to represent bridge orders for the upcoming movement phase.
2.5	Perform rolls required for command checks against Bridge Commands.	Rolls are performed when bridge commands issued exceed rating.
2.6	Select primary target(s) for surface gunfire according to visibility conditions. Record selection of target (ship name) on back of Ship Log.	CHARTS D1, D2, D3
2.7	Perform rolls required by any Damage Effects that specify a roll is to be made at the end of the COMMAND PHASE.	CHART M1
2.8	Place (and/or remove) markers for smoke on the game table.	CHART C2

# 3.0 MOVEMENT PHASE

3.1 Smoke and smokescreens are moved according to weather conditions  CHART C2  3.2 Perform rolls required by any Damage Effects that specify a roll is made at the start of the MOVEMENT PHASE.  3.3 Place torpedo fire markers for all ships having ordered torpedo fire (order TL[X] given during COMMAND PHASE of this turn).  3.4 At the discretion of the commander of the firing ship, torpedo track marker is placed on the playing area if any ship is in danger of crossing the track marker during this MOVEMENT PHASE.		Smoke and smokescreens are moved according to weather conditions	CHART C2
		is placed on the playing area if any ship is in danger of crossing the track	
	3.5	Ships are moved according to orders noted during COMMAND PHASE. Ships in danger of crossing torpedo track markers perform movement in half-moves.	CHARTS E1, E2
	3.6	In the event ship movement may result in possible collisions, use impulse movement for ships in question.	CHARTS E3, E4, X1 through X5

### 4.0 COMBAT PHASE - GUNFIRE

		MITICE	
4.1	4.1 TARGET SELECTION		
4.1.1	Check for detection of possible new target ships.	Rules for reaction fire, CHARTS D1, D2, D4	
4.1.2	Select alternate target(s) for surface gunfire if multiple FCS is available for the battery and not to be used in a back-up role.		
4.1.3	Identify gun batteries and shell types being used for fire on each target.	Record data on side 2 of Ship Log	
4.1.4	Plot starshell fire as ordered in COMMAND PHASE		
4.1.5	Plot searchlight illumination arcs as ordered in COMMAND PHASE		
4.1.6	Measure ranges to target ships (announce in yards) and record on Ship Log		
4.1.7	Check for visibility of target and obstructions to line of sight.	CHARTS D1, D2, D3	
4.1.8	Check firing arcs for gun batteries being fired	CHART G1	
4.1.9	Identify all target ships where over-concentration penalties should be applied		
4.2	GUNFIRE		
	For each ship, perform the following steps before moving on to the next ship		
4.2.1	Calculate to-hit probability for the firing ship	CHART H1 and Ship Log	
4.2.1	Calculate to-hit probability for the firing ship  Adjust Fire Control for close-range gunnery (4,500 yards or less) as necessary.	CHART H1 and Ship Log CHART J6	
4.2.1	Adjust Fire Control for close-range gunnery (4,500 yards or less) as		
	Adjust Fire Control for close-range gunnery (4,500 yards or less) as necessary.  Calculate number of shells fired at each target (ROF at current range	, ,	
4.2.2	Adjust Fire Control for close-range gunnery (4,500 yards or less) as necessary.  Calculate number of shells fired at each target (ROF at current range multiplied by number of guns able to bear/fire.	CHART J6	
4.2.2	Adjust Fire Control for close-range gunnery (4,500 yards or less) as necessary.  Calculate number of shells fired at each target (ROF at current range multiplied by number of guns able to bear/fire.  Roll to determine number of hits	CHART J6	
4.2.2 4.2.3 4.2.4	Adjust Fire Control for close-range gunnery (4,500 yards or less) as necessary.  Calculate number of shells fired at each target (ROF at current range multiplied by number of guns able to bear/fire.  Roll to determine number of hits  Determine hit location for each hit scored	CHART J6  CHART I1  CHART J1. Use CHART J2 for merchant vessels.	
4.2.2 4.2.3 4.2.4 4.2.5	Adjust Fire Control for close-range gunnery (4,500 yards or less) as necessary.  Calculate number of shells fired at each target (ROF at current range multiplied by number of guns able to bear/fire.  Roll to determine number of hits  Determine hit location for each hit scored  Check for penetration and pass-through	CHART J6  CHART I1  CHART J1. Use CHART J2 for merchant vessels.  Ship Log, CHART K1, K2, K3	

# 5.0 COMBAT PHASE - TORPEDOES

5.1	Determine ships in danger of possible hit	CHART T6
5.2	Calculate hit probability.	CHARTS T1, T2 (Optional CHART T7)
5.3	Roll for torpedo hits.	CHART T3 (Optional CHART T8)
5.4	Check for dud torpedoes	CHART T4
5.5	Calculate DP and apply	CHART T5
5.6	Check for Damage Effects caused by torpedo hit.	CHARTS L, M1, M2
5.7	Process any rolls required by DE (severity, special rolls, etc) for this hit and note DE# on ship log	CHART M1

## 6.0 DAMAGE PHASE

6.1	Determine allocation of available damage control to fight shipboard fires and Damage Effects.	Ship Log
6.2	Damage Status Check. Perform rolls against SEVERITY LEVELs to determine if any Damage Effects <b>from previous game turns</b> are ended this turn.	CHART M3
6.3	If required, perform other rolls for Damage Effects not repaired in step 6.2 above.	CHART M1
6.4	Add DP caused by fires and perform rolls to reduce any shipboard fires from previous game turn.	CHART N1
6.5	Perform rolls to determine if a burning shipboard fire causes any additional Damage Effects.	CHARTS N2, L
6.6	Compute total damage points received and roll for Damage Effects for each Damage Tier attained during this game turn.	Ship Log, CHARTS L, M1
6.7	Apply all Damage Effects caused during step 6.6	Ship Log, CHART M1
6.8	Check ammunition expenditure and reduce available ammunition by type as appropriate.	Ship Log
6.9	Perform morale check as needed.	CHART M4

#### **GENERAL ORDERS**

AF	Obey signals from Flagship	While in effect, this order allows the ship to conform to the movements and actions of the flagship without having to enter commands for COURSE or SPEED on the ship log.  U: Order is not successful if being issued for the first time this turn.
AI	Independent action	Counters the AF command and places the ship in independent action mode. All orders for this ship must be given during the COMMAND PHASE of each turn, beginning with the turn during which AI was ordered. Once this order is given, it cannot be countered by an AF command during an engagement.  U: Order is not successful if being issued for the first time this turn.
АХ	Battle Stations!	This order MUST be given at least two game turns prior to any orders for offensive action (i.e. the ship cannot engage in any offensive or defensive operations until the third game turn) and remains in effect for the entire engagement.  U: Order is not successful if being issued for the first time this turn.
AA	Abandon ship!	This order halts any and all action (offensive or defensive) for a particular ship. There is no counter order for this command and all gunfire, damage control and other operations cease. In deference to the remaining crew, an SS order should also be given during the same game turn.  U: Order is not successful if being issued for the first time this turn.
AZ	Strike Colors	Surrender. This order halts any and all offensive action (although damage control operations may continue) for a particular ship.  U: Order is not successful if being issued for the first time this turn.

## COURSE AND SPEED

CA	Midships, steady	Places rudder amidships and steadies ship on its current heading. This order must be issued during the COMMAND PHASE of every game turn during which it is intended for the ship to remain on a straight course. This order is necessary for a ship to resume a straight course after having made a course change during the previous game turn. If this order is not successful, the ship will duplicate the movement performed the previous game turn.  U: Order successful if CA was ordered during the previous turn. If ship is attempting to steady on course from a CP or CS order during the previous game turn, then ship will continue to perform half of the turn ordered previously (i.e. perform a 45 degree turn if a 90-degree turn had been ordered previously).
CP#	Alter course to PORT	Orders a ship to turn a ship to port (#) degrees during this game turn. CA order is required during the game turn if the intent is for the ship to steady on the new course. It is not possible to issue a command for a turn greater than that capable of the ship (standard or emergency turn) during a single game turn. A CP or CS order is required every game turn during which it is intended for the ship to turn more than one degree.  U: Ship performs half of the turn ordered (i.e. performs a 45-degree turn if a 90-degree turn had been ordered).
CS#	Alter course to STARBOARD	Orders a ship to turn a ship to starboard (#) degrees during this game turn. CA order is required during the game turn if the intent is for the ship to steady on the new course. It is not possible to issue a command for a turn greater than that capable of the ship (standard or emergency turn) during a single game turn. A CP or CS order is required every game turn during which it is intended for the ship to turn more than one degree.  U: Ship performs half of the turn ordered (i.e. performs a 45-degree turn if a 90-degree turn had been ordered).
SF	Ahead full	Orders engine room to supply maximum capable speed for the ship, regardless of damage sustained. This order (or SR) must be specified every game turn.  U: Ship continues movement as per speed ordered on the previous game turn.
SR#	Revolutions for (#) knots	Orders engine room to supply revolutions to maintain a speed of (#) knots. Orders cannot be given for a speed increase or decrease that is greater than that possible for the ship to complete in a single game turn (see rules for acceleration and deceleration). This order must be issued during the COMMAND PHASE of every game turn during which it is intended for the ship to maintain the ordered speed.  U: Ship continues movement as per speed ordered on the previous game turn.
SA	Full Astern	Orders engine room to supply maximum capable speed astern. Momentum rules apply. This order must be issued during the COMMAND PHASE of every game turn during which it is intended for the ship to reverse engines.  U: Ship continues movement as per speed ordered on the previous game turn.
ss	All Stop	Orders engine room to stop engines. Momentum rules apply and once ordered, this order will remain in effect until SF, SA or SR is ordered.  U: Ship continues movement as per speed ordered on the previous game turn.

### **ILLUMINATION AND EVASION**

EX		Evasive action	This order places the ship in Evasive Action mode (see rules for full description and conditions). This order must be issued during the COMMAND PHASE of every game turn during which it is intended for the ship to perform evasive maneuvers.  U: Order is not successful and ship does not commence evasive action this turn.
			This order allows the ship to begin laying smokescreen (see rules for full description and conditions). This order must be
кх	KX	Lay smoke	issued during the COMMAND PHASE of every game turn during which it is intended for the ship to lay a smokescreen.
			U: Order is not successful and ship does not begin laying smoke this turn.
ı	S#/#	Illuminate using starshells (# - bearing in degrees / # - range in yards).	Allows a single mount (4" to 6" in caliber) to fire a spread of starshells during the game turn. Relative bearing in degrees and range in yards must be specified. This order must be issued during the COMMAND PHASE of every game turn during which it is intended for the ship to fire a starshell pattern. Each additional mount employed for firing patterns at other ranges and bearings constitutes an additional bridge command.  U: Order is not successful and no starshell pattern is fired.
	IL#	Illuminate using searchlight (# - bearing in degrees)	Allows illumination by searchlight of a particular sector during a game turn. Relative bearing in degrees must be specified. This order must be issued during the COMMAND PHASE of every game turn during which it is intended for the ship to illuminate a sector with a searchlight battery. Each additional searchlight battery employed for illumination of other sectors constitutes an additional bridge command.  U: Order is not successful and sector is not illuminated by searchlight.

### **TORPEDOES AND AIRCRAFT**

TR(X)	Prepare to launch torpedoes to (X)	Must be issued during the COMMAND PHASE of the game turn immediately prior to the game turn during which it is intended for the ship to launch torpedoes (order TL(X)). A separate order is required if the intent is to launch torpedoes in multiple directions (i.e. two or more of the four directions – P, S, B, N) during the following game turn. If torpedoes are not fired during the game turn immediately following, another TR command must be issued.  U: Order is not successful and torpedoes may not be fired next turn.
TL(X)	Launch torpedoes to (X)	Orders a launch from torpedo tubes capable of firing in direction (X). The number of tubes to be fired in each direction (if multiple directions were specified) must be specified on the Ship Log Sheet. A TR(X) order must have been issued during the COMMAND PHASE of the previous game turn in order for torpedoes to be fired this turn.  U: Order is not successful and torpedoes may not be fired.
VR	Prepare to launch aircraft	This order MUST be given at least four game turns prior to the VL order (i.e. the VL order cannot be given until the fifth game turn. In addition, these must be four consecutive game turns, the last of which must be issued during the COMMAND PHASE of the game turn immediately prior to the turn during which it is intended for the ship to launch the aircraft. A separate order is required each turn for each catapult if the intent is to launch more than one aircraft. See rules for shipboard aircraft operations.  U: Order is not successful and consecutive series of VR commands is broken.
VL	Launch aircraft	Orders a launch of a single shipboard aircraft from a single catapult during a game turn. A VR order must have been issued during the COMMAND PHASE of the previous game turn in order to launch aircraft this game turn.  U: Order is not successful and aircraft cannot be launched this turn.

### **GUN BATTERIES**

B1D B2D B3D	Directed Fire (FCS) as range permits	This order allows guns of this battery to be controlled using the battery's fire control system rating (FCS) and to open fire as soon as the range permits. See rules regarding fire control systems. This order must be issued during the COMMAND PHASE of every game turn during which it is intended for the ship to use all or a portion of this battery's FCS to fire at a target.  U: Half of the battery (or the portion considered to be using FCS) does not fire this turn.
B1L B2L B3L	Local Control (LCS) as range permits	This order allows guns of this battery to be controlled using the battery's local control system rating (LCS) and to open fire as soon as the range permits. See rules regarding fire control systems. This order must be issued during the COMMAND PHASE of every game turn during which it is intended for the ship to use all or a portion of this battery's LCS to fire at a target.  U: Battery (or the portion considered to be using LCS) does not fire this turn.
B1V	Coordinated Fire	This is the same as B1D and used in place of it when it is desired that the primary battery guns coordinate fire with the primary battery of another ship firing at the same target. This cannot be used when either ship is using LCS to fire on the target. This order must be issued during the COMMAND PHASE of every game turn during which it is intended for the ship to coordinate its primary battery gunfire with that of another ship against the same target.  U: Cannot perform coordinated fire this turn and order B1D is assumed.
B1P B2P B3P	Split fire	This order allows the guns of this battery to split fire (as designated on Ship Log Sheet) between two different ships. See rules regarding fire control and firing at multiple targets. The change target order, B[X]C is assumed for one of the battery groups but is required if it is intended for the ship to split fire between two new targets this turn. This order must be issued during the COMMAND PHASE of every game turn during which it is intended for the ship to split this battery's gunfire between two different targets.  U: Cannot split fire this turn.
B1C B2C B3C	Change target	Allows all or a portion of the battery to switch to a different target. This order must be issued during the COMMAND PHASE if the battery is to begin firing on a different ship during this game turn. This order is required only during the turn in which a change of target is desired and does not need to be repeated during successive game turns after the initial switch to that target. This order applies only when a <i>change</i> of target is made (i.e. the battery was firing on ship A and must now fire on ship B) and therefore does not apply to the initial turn of fire.  U: Cannot change target this turn.
B1B B2B B3B	Barrage Fire	Orders all guns in this battery capable of firing on the target to commence barrage fire at a single target. See rules for barrage fire. This order must be issued during the COMMAND PHASE of every game turn during which it is intended for the battery to remain in barrage fire mode.  U: Battery cannot commence barrage fire this turn if order is being issued for the first time. If order was issued on previous turn, then current rate of fire is reduced by one-half.
R5B R6B R7B	Barrage Fire (Rapid- Fire Battery)	Orders all guns of this battery capable of firing on the target to commence barrage fire at a single or multiple targets. See rules for barrage fire. This order must be issued during the COMMAND PHASE of every game turn during which it is intended for the battery to remain in barrage fire mode.  U: Half of the battery does not fire this turn.



**NAVAL WARFARE 1880-1945**