

FIGHTING THE INTERNAL BATTLE



A FOST BEST PRACTICE GUIDE TO INTERNAL BATTLE C2

FOREWORD

This document, which aims to improve Internal Battle Command and Control, Incident Management and Battle Damage Repair (BDR) including Weapon Repair, is based on the experience of many Sea Riders, past and present, and the best practices observed during State 3 and State 1 CBRNDC serials as well as real incidents. Although getting Command and Control right is essential to the Internal Battle, this must be combined with thorough system, equipment, and drill knowledge amongst the whole of your ship's company. The advice laid out here should provide Internal Battle C2 teams with a reference for developing your ship's ability to recover from damage, whether it be hostile or self-inflicted. If properly studied and implemented, it should lead to a marked improvement in the standard of Internal Battle C2 and ultimately your ability to recover from peacetime emergencies and/or enemy action as may be suffered by your ship.

Where it is no longer provided as a printed volume, the opportunity has been taken to expand some sections, to provide hints and tips, as well as discussion around the different elements of internal Battle C2.



CONTENTS

FOREWORD	2
Introduction	4
Aim	4
CHAPTER 1 – GENERAL CONCEPTS	6
The Higher-Level Command Process	6
4. The Command Aim	6
The Combat Cycle	7
The Command Team	9
17. Command Advisor (WEO/Snr WE).....	9
20. Internal Battle Controller (MEO/Snr ME)	10
21. Directors.....	10
22. I/C WSB	11
23. Propulsion Manager.....	11
24. DCO(L).....	12
25. DCO	12
26. Command Rovers.....	12
28. Action Logistics.....	13
BDR Techniques	14
29. Communication procedures.....	14
31. Incident Reports.....	14
35. Flash Procedure	16
37. Command Discussions	16
39. Command Node relocation	17
Establishing the extent of damage	17
40. Picture, Priority, Action, Review	17
41. Standard Operating Procedures.....	18
43. CA and IBC link	18
44. Command Huddles	19
Internal Battle C2 Timeline.....	21
CHAPTER 2 - FURTHER GUIDANCE FOR IBC & HQ1.....	24
Gaining capacity	24
Command Huddles Continued	24
Red, Amber, Green Status	25
Crit/Sig/Minor and Capability Based Reporting	26
Grouping Command Priorities	26
Inter-Desk Liaison.....	27
Winning/Holding/Losing	27
Smoke clearance	28
Upper deck access	28
Employment of DMEO(S)/(P)	28

State boards	29
CHAPTER 3 - WEAPON SECTION BASE	30
CHAPTER 4 - COMMAND ROVERS	34
CHAPTER 5 – THE MARINE ENGINEERING DEPARTMENT	36
MMS Action Crews and Mobile Repair Party (MRP).....	36
Switchboards	36
SCC/HQ1.....	37
6. Action MEOOW and SCC/MCR Personnel	37
7. MESM	37
CHAPTER 6 - THE BRIDGE	39
CHAPTER 7 - COMMAND HUDDLE AIDES MEMOIRE	40

Introduction

1. Of the various disciplines that make up State 1 and State 3 posture, the Command and Control of Incident Management and BDR with the overlay of a dynamic warfare or aviation environment is probably the most testing. There are several reasons for this:
 - a. Historically, the sophistication of equipment for Internal Battle C2 has fallen far behind the Command Systems now used in the external battle (warfare/aviation ops) environments. However, recent classes of ship such as QEC and the RFA's Tide Class have made significant gains in this area, with similar progression expected for T26 and T31.
 - b. Internal communication methods can be unreliable, adding to the confusion.
 - c. The BDR environment will be difficult one to operate in, as the damage not only affects the ship structure and systems but also almost certainly impedes C2 efforts.
 - d. It is difficult to fully exercise these skills outside of OST periods, as sufficient staff are rarely available to generate an intensive damage scenario and the personnel in a ship that could run a training serial are usually those that have key C2 responsibilities.

Aim

2. For this guide, Internal Battle/BDR is defined as the range of activities undertaken by Ship's Staff that aim to restore maximum fighting capability after a ship sustains damage at Action. This includes actions to fight fires and floods, deal with casualties and effect repairs to machinery, systems, and weapons. Some of these activities also occur in peacetime and indeed some of the techniques herein can be applied to both State 1 and State 3 scenarios. It is mainly based on DD/FF practice but is not ship-type specific and includes more recent additions considering QEC practices but does not cover lower-level drills and procedures, which are extensively documented elsewhere, most notably in BRd

2170. Instead, the focus is on the Internal Battle C2 team, and their avenues to success at the various command nodes.

3. Chapter 1 is recommended as essential reading for all members of the command team, as success in the BDR environment is more likely if all team members have a good knowledge of the challenges facing their colleagues. While the more detailed instructions contained in the later chapters are aimed at specific elements of the command structure, they are also of value to others involved at the higher level of the Internal Battle C2.

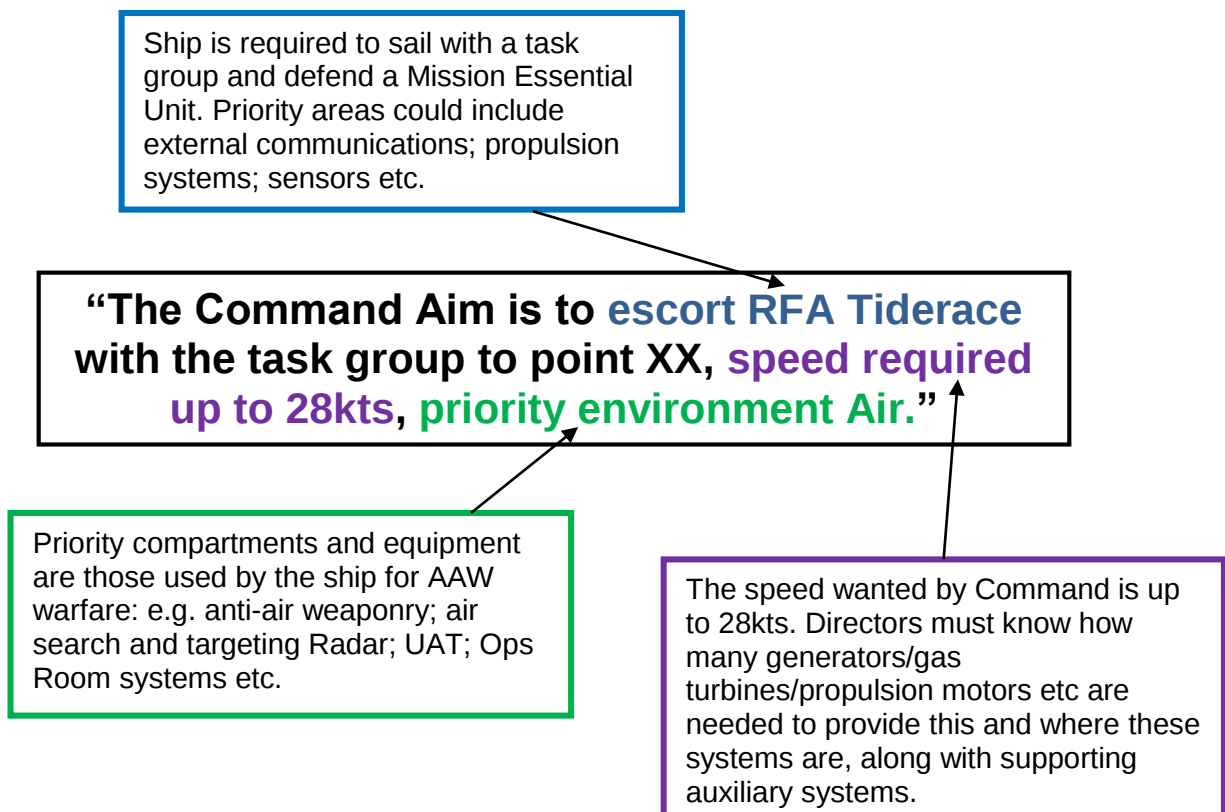
CHAPTER 1 – GENERAL CONCEPTS

The Higher-Level Command Process

4. **The Command Aim.** The Command Aim is derived from the pre-eminent principle of war as expressed in United Kingdom Defence Doctrine¹, 'selection and maintenance of the aim'. Generally speaking, for a ship engaged in fighting action, there are two categories a Command Aim can fall into: "Fight"; or "Survive" (as in SHEFFIELD, COVENTRY, or ARDENT in their latter stages). The CO should set the Command Aim to bind together the efforts in all environments, be they external (ASW, AAW, ASuW, Air Ops etc) or internal (Incident response / BDR).

5. The CO must endeavour to encapsulate their aim in a single clearly focused sentence; an example is shown in the diagram below. This should then be transmitted through the C2 chain in two ways: direct to Command Advisor (CA) in the CO-CA discussions, for onward transmission to IBC; and by the CO, or PWO, via main broadcast during SITREPs to the Ship's Company. Although only one sentence, the Command Aim should contain enough information to make incident and equipment priorities readily apparent to members of the Ship's Company. The widespread knowledge of the Command Aim will allow a greater use of "command by veto", improving leadership efficiency, reduce instances of overload and leads command nodes and troops on the ground to independent capability-based decisions in accordance with the Command Aim whenever it is mandatory.

6. Of course, the Command Aim should change as the situation dictates. In typical peacetime situations, it will tend to define a more medium-term aim, and could persist (unchanged) for a considerable period; but State 1, Action or Emergency situations may bring about a Command Aim liable to dynamically change, within timeframes measured only in minutes.



¹ JDP 0-01 UK Defence Doctrine 6th Edition, Section 3

7. **Command Priorities.** Coherent with the Command Aim, Command Priorities (typically a 'top 3') should be set and dynamically manipulated, specifically to drive achievement of the most urgent activities within the ship. As such, Command Priorities most often relate to dealing with incidents (e.g. fires, floods) and/or rectification of defects (to ME and WE equipment) relating to key ship capabilities; but they may also be framed around broader considerations, especially as may be applicable at State 3 (e.g. 'Casualty Management', or 'Account for Personnel'). Furthermore, the taxonomy chosen for Command Priorities typically depends on the operational tempo and extent of concurrent incidents / defects being handled in the ship at the time:

- a. **Single Incidents.** Akin to how priorities are expressed during an incident responded to alongside by the HFEP, single State 3 incidents at sea may be broken down into distinct phases of the incident response, with Command Priorities such as 'Continuous Aggressive Attack'; 'Containment'; 'Rig for Re-Entry'.
- b. **Multiple Incidents / Defects.** If dealing with several incidents and/or defects concurrently, Command Priorities are typically expressed on an individual incident / defect basis, such as: '2E Fire'; '4C Flood'; 'UHF Tac Comms'.
- c. **Complex Damage.** Where the impact of many multiple incidents and defects (for example, due to enemy action) gives rise to a complex picture with significant interdependencies, Command Priorities can be better expressed as broader capability areas, such as: 'Regain 28kts speed' (implying, for example, the need to extinguish a fire, then repair a prime mover); 'AAW Hardkill' (e.g. repair target indication radar, and the missile system, and also requiring an impending fire to be extinguished).

8. Working down the command chain, the CA has the key role of developing proposed Command Priorities for the CO's approval, in keeping with the Command Aim and their knowledge of the ship's internal situation. To do this the CA must understand precisely what the CO is trying to achieve (i.e. the reasoning behind the Command Aim) alongside an understanding of the IBC's perspective on incidents and ME defects, and the WSB's prioritised WE defect picture. In addition, the Command Aim allows the CA to focus and contextualise their internal battle briefs to the CO each time a key capability is lost or becomes degraded – inserting pertinent additional detail on operational implications / restrictions, reversionary modes and any impact on ship posture, priority environment and so on.

9. In the SCC, the Internal Battle Controller (IBC) should use the Command Aim to focus their HQ1 Command Huddles. The outstations, especially the FRPPs / ZCPs and the Weapon Section Base (WSB) / Weapon Management Centre (WMC), should use it for pre-briefing and initial incident management. It is vitally important that Internal Battle command team members know and understand the aim. If they do, then in the event of a breakdown of Internal Battle C2 comms in the early stages of battle damage, there is a good chance that an outstation or individual will nevertheless correctly prioritise initial efforts, in accordance with the Command Aim.

The Combat Cycle

10. During battle, the ship needs to be thought of as a system, in which processes occur to allow the Commanding Officer to operate and fight the ship. Different processes occur in the warfare and Internal Battle C2 areas, but there is a common thread running through

them which can be described as the Combat Cycle. This starts with the gathering and transmission of information from sources outside the ship, and from outstations within the ship. This information is then co-ordinated and fused, usually into a picture. The picture is validated and then used to make assessments and, ultimately, command decisions made on the basis of the Command Aim.

11. These decisions are promulgated, through effective communication lines (e.g. external radio circuits, Command Open Line, CBRNDC Bleep phones or Main Broadcast) to leaders at the relevant outstations, at or close to the Scene of the Incident (SOTI) - be it a Fire, Flood, Weapon Repair etc - and implemented by teams or individuals. Success at the SOTI will be a function of the strength of leadership and teamwork, which in turn relies heavily upon good individual knowledge of drills, procedures, and systems (including reversionary modes of operation).

12. Many well-worn warfare lessons are equally relevant to the execution of the Internal Battle and those charged with providing action information are involved in an important combat activity. Just as with the CO and PWO, the IBC and CA cannot properly fight the Internal Battle without a valid damage picture. When C2 communications break down, a good leader, using their initiative based on knowledge of the Command Aim, will often save the day. Good drill and system knowledge are critical and need to be developed and honed before action commences. Also, when seen in this context, the purpose of Mini-SOCs and Blanket Searches becomes even clearer, i.e. to assist in the building of the damage picture for the Internal Battle C2 teams, and thus allow them to effectively direct the Internal Battle effort.

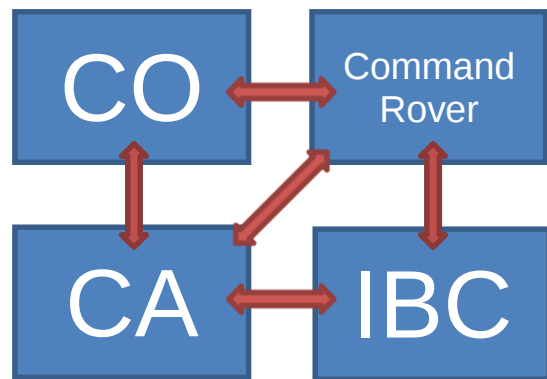
13. Of course, the reality of the combat cycle is more complex: for instance, the cycle is continually running and even as decisions are being made, more information will be flowing into the command teams. The cycle also runs to a different timescale in each environment: passive anti-submarine warfare in hours, anti-ship missile defence in seconds, small fires in minutes and full flood repairs in days. Furthermore, the ship's tasking may change at any time. A key command task is therefore to review aims, priorities and progress on a regular basis. The Command Aim and Command Priorities must continually be tested against the task (is it the best way to achieve it?) and the ship's state (can we achieve it?). Priorities set in individual areas must also be reviewed against the changing picture to ensure the best progress towards the Command Aim and coherence with overall Command Priorities as set by the CO.

14. As well as the variation in tempo of spheres of action within the ship, there is an overall ship tempo which must also be considered. Peaks are fairly easy to identify, usually occurring when attacks and BDR are in progress concurrently. In contrast, troughs or lulls must also be recognised and exploited fully. A common ailment is the observed tendency for Ships' Companies to relax. This is quite natural, but also quite wrong. When the command assess that the raid is over, or the submarine destroyed, it is up to the command teams, be they warfare or BDR, to set a different course. The aim should be to achieve a fast re-group, cleaning up the material state and the command team pictures, and getting the ship "Stood To" again. The post-action adrenaline loss, and likelihood of a degree of shock, is such that check off lists including mini-SOCs, covering the main aspects of warfare and BDR, will undoubtedly assist this reconfiguration. The lull is also the natural time to replenish the ship with fuel or stores and the crew with snacks or a meal; but it is important to consider both internal and external warfare pictures before planning these functions. All too often the pipe is made for "Action Messing" with the ship full of smoke and no power available to galley equipment, or the call to RAS stations

removes key personnel from BDR tasks.

The Command Team

15. At the top of the Internal Battle C2 Team is, of course, the CO whose principal input into the Internal Battle effort is a concise and up-to-date Command Aim and their setting / endorsement of a corresponding set of (typically up to three) Command Priorities. Supporting them are the two Engineering HODs, WEO and MEO, analogous in the fighting of the internal battle to Warfare Officers fighting the external battle. They fulfil the roles of Command Advisor (CA) on the Bridge or in the Ops Room and Internal Battle Controller (IBC) in HQ1 respectively. Their mutual functions are to:



- a. Continuously monitor the damage picture and assess the implications.
- b. Maintain a close liaison with each other, keeping each other respectively aware of the internal and external picture.
- c. Provide a concise and continuous update and assessment to the CO (filtering out the irrelevant and unnecessary).
- d. Propose (for CO approval) and review agreed Internal Battle Command Priorities for BDR teams which will maximise achievement of the Command Aim.
- e. Disseminate these priorities fully to the lowest level (usually through main broadcast pipes by the DCO).
- f. Discuss and agree requests for workforce re-allocation, seeking command approval as required.

16. Their liaison is achieved using a “Hot Line” and both IBC and CA have multiple communication systems available to them, dependant on the ship type, but they will include Interphone, Intercom, Group Lines and Emergency Links. The CA/IBC link is the IBC’s only link to the Command, so they must be familiar with all systems in the event of Battle Damage as this link is vital to the success of the management of the battle damage repair effort. Techniques applicable to this link and SOPs are discussed later in this guide.

17. **Command Advisor (WEO/Snr WE).** The CA’s position, in the Ops Room in State 1 or the Bridge in State 3, is a node on the Internal Battle information network; not only to receive information from the IBC, but also for the input of update information which may be fed in from other areas such as the Bridge team, flight deck (FLYCO) or weapon crews. CA typically uses the Command Open Line to monitor the external battle and the tactical situation, and to pass high priority information quickly to the CO and the warfare team through environmental sitreps (if State 1).

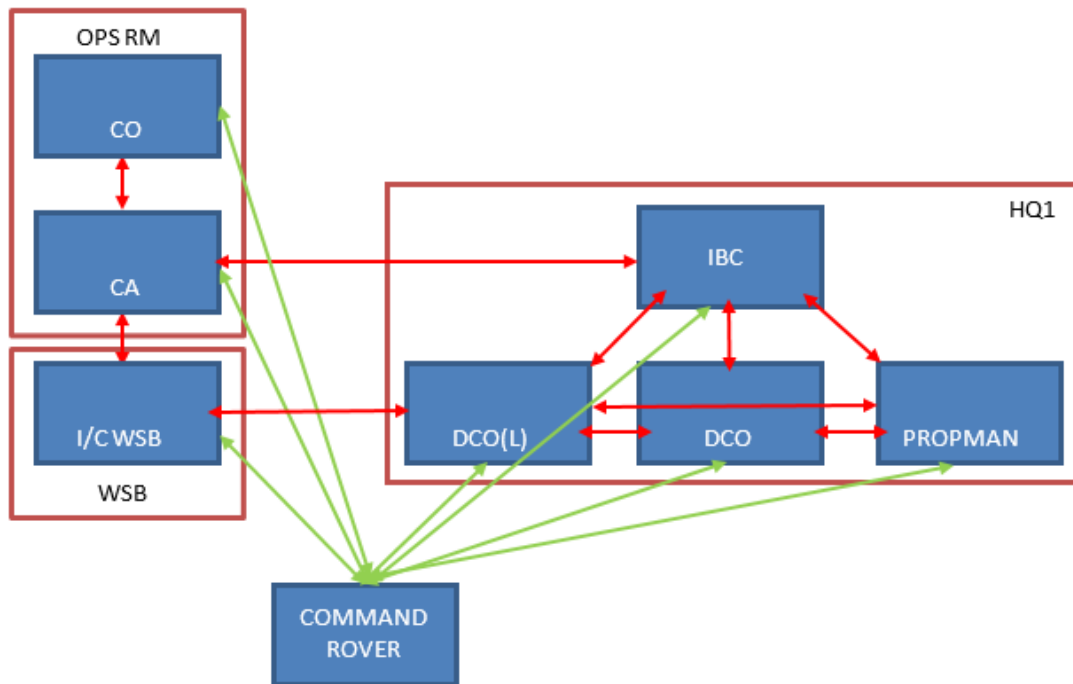
18. Particularly if at State 1, CA’s briefings to the CO must be appropriately timed within the tactical situation, and the format of the brief should be agreed beforehand with the CO. Items should be briefed in overall ship priority order using a portable briefing board and must cover all areas of weapon systems, DC and FF, propulsion systems, loss of critical

services and electrical damage. Briefings should include fall back or reversionary modes of operation of damaged key equipment. The CA will advise on courses of action, any recommended change to the Command Aim and the setting of agreed overall Command Priorities. The CA should also be empowered to make appropriate Command decisions under delegated authority from the CO for elements of the internal battle, such as granting access to the Upper Deck in between external raids. The extent of this delegation should be discussed and agreed in advance with the CO.

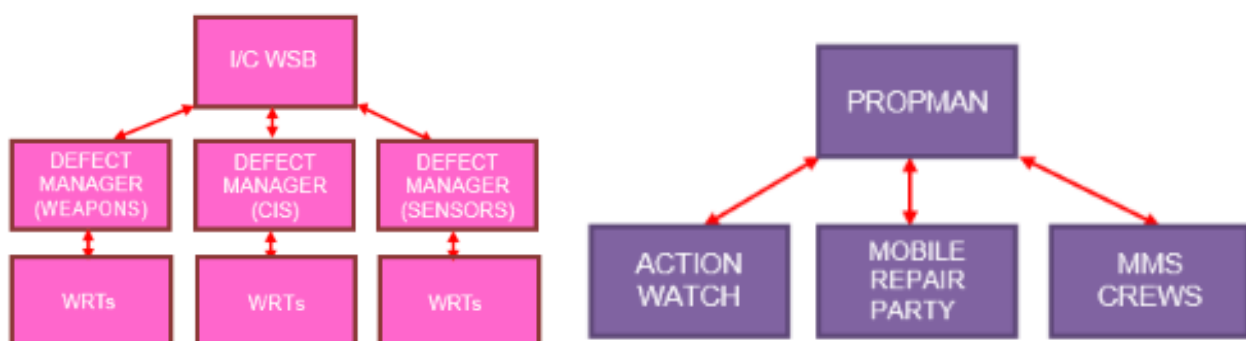
19. The CA is supported by an assistant, a junior engineer Officer or a Senior Rating, who must have good knowledge of whole ship's mechanical and electrical systems in addition to weapon and sensors. The assistant will manage the battle picture and maintain the Command State board (or electronic equivalent), also providing direction to the WSB in accordance with CA's aims and policy.

20. **Internal Battle Controller (MEO/Snr ME).** The IBC coordinates the effort in HQ1 to achieve cohesive progress towards the Command Aim and in keeping with the current Command Priorities and maintains awareness in the HQ1 team of priority weapon incidents. They use the 'Command Huddle' as a technique for assessing the overall BDR priorities and focussing their team of Directors. With the Damage Control Officer (DCO), they also direct the Command Rovers (e.g., XO/EWO within FF/DD or HoDs in Capital Ships) towards the most urgent incidents; normally those of highest overall ship priority (WE, ME, Medical or DC&FF) but also sometimes those where the most confusion lies.

21. **Directors.** The next element of the command team are those who will actually direct and co-ordinate the BDR activity. The "Directors" of internal warfare are the DWEO (or WE Section Officers) in the WSB and the Propulsion Manager, Damage Control Officer (Electrical) (DCO(L)) and DCO, all in HQ1. There may be additional Directors (such as Assault Systems Engineer Officer, Aviation Systems Officer, Plant Manager, Stability Manager) in larger ships. Their aim is to achieve an effective recovery from the damage by acting in accordance with the priorities and instructions from the CA and IBC, ensuring that these priorities are the focus of activity at the SOTI. The tasks of these Directors overlap in several areas and therefore it is essential that they communicate with each other. This is achieved by effective inter-desk liaison within HQ1, often using a 'chit' system, and the 'green line' between the WSB and HQ1 L desk.



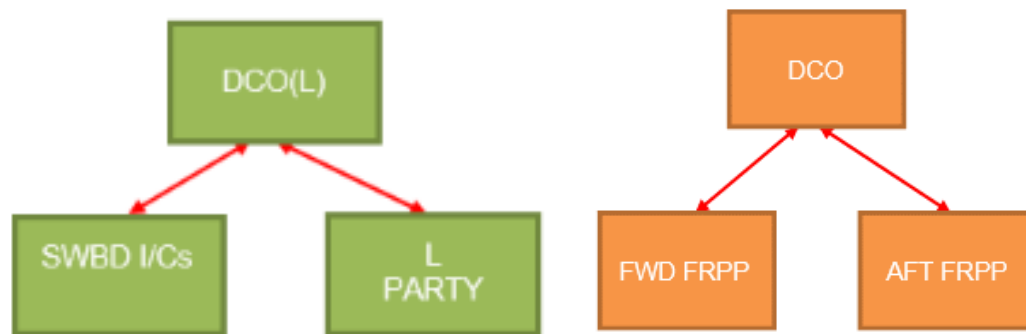
22. **I/C WSB.** The I/C of the WSB is usually the DWEO (or WE Section Officer). They coordinate and direct the weapon repair teams, dispersed at strategic locations throughout the ship. To assist them, they will have a small team in the WSB, normally including the WO(WE) and similarly experienced Senior Rates who act as Defect Managers (DM), either split into equipment areas (Weapons, Sensors, CIS) or by Major/Minor defect types. The WSB task is to build and validate the weapon and sensor damage picture and pass it to the CA in the Ops Room, with appropriate assessments. The WSB is on the DC communications path to monitor fires and floods and allow it to organize efforts to assist establishment of fire and flood boundaries. It also continuously monitors the “Command Open Line” by speaker to keep abreast of the tactical situation. DWEO has a “Hot Line” to the Command Advisor position in the Ops Room. On ships where the WSB is co-located with HQ1, such as T45 or QEC, best practice is for I/C WSB to attend the HQ1 Command Huddle to represent WE incidents. Detailed advice for the WSB is at Chapter 3.



23. **Propulsion Manager.** The Propulsion Manager (PM) is located in HQ1 and must maximize propulsion to the Command by overseeing the actions of watchkeepers and machinery space crews and directing the actions of the Mobile Repair Party. They have broadcast comms with the machinery spaces and a dedicated line to the Mobile Repair Party, which is deployed as required by the PM to assist in machinery space incidents and any other incidents where their specialist skills can be brought to bear. They must ensure machinery space fire and flood information is plotted on the main incident board in HQ1 (or

DSAC / EDCMS) as this information needs to reach all command nodes. Detailed advice for ME action crews is at Chapter 5.

24. **DCO(L).** The DCO(L) is responsible for the integrity of the Power Generation and Distribution System and converted supplies (similar to ME Services Manager (MESM) on T45 and Platform Manager (PlatMan) on QEC). Their team must quickly build an accurate picture of damage to electrical services and the effect on key systems. DCO(L) then directs the electrical and switchboard teams in their repair efforts using the dedicated communications net to the switchboards and the electrical repair teams. They are also responsible for conducting compartment isolations, predominantly at State 3 but also for State 1 incidents to protect equipment. DCO(L) has a key liaison function, both to the WSB via the 'green line' and inter-desk within HQ1. Liaison with the PM and DCO regarding steering gear is especially important and often a weak area.



25. **DCO.** The DCO provides an assessment for IBC of the overall damage picture in the ship and coordinate the efforts of the FRPPs/ZCPs. The damage picture is maintained using the main incident board and its associated operator (IBO), who is linked to the incident boards at all the command nodes (Both FRPPs, Ops Room, WSB and AHQ). This information can also be passed via DSAC (or equivalent systems) on newer platforms such as QEC, providing a single incident picture to all outstations. DCO is also directly responsible for the management of essential services in support of the DC effort (HPSW and use of eductors etc.) and they will need to liaise with DCO(L) and PM to achieve this. DCO directs the actions of the FRPPs in a management and coordination task, identifying and prioritising incidents and maximizing the use of their personnel and material resources, or identifying when resources must be re-allocated. Their priorities may lie in dealing with incidents, or in incident boundary management, or in containing incidents to allow other BDR tasks to be carried out. Detailed advice for FRPPs/ZCPs is provided in separate FOST documentation².

26. **Command Rovers.** The final members of the Internal Battle C2 team are the Command Rovers. XO and EWO typically fulfil the Command Roving function on FF/DD, supplemented by HODs on Capital Ships, providing essential support to CA, HQ1, FRPPs and WSB in providing an audit of the overall BDR picture and a command level physical link between the command nodes and the SOTI. They provide high level leadership and decision making at the SOTI which can overcome communication difficulties or differences in interpretation. Detailed advice for command rovers is at Chapter 4, however their tasks include:

- a. Roving as directed by key members of the Internal Battle C2 team to act as their 'eyesand ears'.
- b. Extracting the maximum information from each damage scene.

² [Guidance to Officers and Senior Rates in Charge Of FRPP/ZCP](#)

- c. Assessing whether a damage scene is under control and inform the responsible command nodes if action is required.
- d. Checking the quality of information flow between all Command Nodes (Ops Room, Bridge, WSB, HQ1, FRPPs, MHQ) and eliminating confusion.
- e. Keeping abreast of the tactical picture and the Command Aim and disseminating this information, maintaining impetus and morale about the ship.
- f. Contributing to the Command Huddle in HQ1 when possible.

27. **Bridge.** Although not members of the Internal Battle C2 team or Directors, the Bridge personnel have a key function in the BDR effort. Detailed advice for the Bridge team is at Chapter 6.



28. **Action Logistics.** Although not represented in HQ1 by a specific Director, the Action Logistics Cell is critical in providing repair capability within the State 1 environment and both HQ1 and WSB teams must establish clear lines of communication to this node. The Action Logistics Cell must be able to efficiently locate and deliver high priority stores held on board, to either HQ1, MRP or WSB to enable equipment repairs to be conducted. It is incumbent upon PropMan and I/C WSB to drive the delivery of these stores, so that they can be incorporated into the formulation of an accurate ETBOL for the associated equipment repair.

BDR Techniques

29. **Communication procedures.** Much confusion in BDR is created through the misinterpretation of common terms, and the failure to recognise that busy internal communications circuits and lines require the same kind of voice discipline as used on radio circuits. The flow of information often relies on a junior rating, of limited experience and possibly in a state of shock, finding multiple defects or incidents and then reporting them accurately to the appropriate outstation. It is not difficult to see that the scope for error is immense during this fast-moving initial phase.

30. A mistaken incident or incomplete report can cause incidents to be incorrectly prioritised with potentially catastrophic effects on the fighting efficiency of the ship. The process is further complicated by the sheer volume of information, which needs to be assimilated amidst the chaotic environment following a weapon hit. Fires, floods, smoke, savage manoeuvring, high pressure system leaks and noise all combine to add confusion and provide a breeding ground for poor communication and flawed decisions. This is often seen as a weak area and requires considerable forethought, practice, and critical self-analysis by Internal Battle C2 team members. The important principle is to encourage your people to treat internal circuits as radio circuits, and to follow the KITE mnemonic when fighting the BDR war - Keep It To Essentials.



31. **Incident Reports.** After a Loud Vocal Alarm is raised, the first leader at the scene must make an Initial Contact Report (ICR)³ back to the Command Node (FRPP/ZCP/Weapon Repair node), to include what is the incident, where is it, what is being done, what is needed, and whether they are winning, holding or losing. If possible, it should be noted if there will be an impact upon capability/system performance, even if it is the most basic assessment. This will save time prioritising further up the Internal Battle C2 chain. This reporting principle also applies to equipment defects, which may appear to be less important than fires and floods but can have a similar significant impact on the Command Aim and Command Priorities. A recommended format for the 5 Point Brief is described below for CBRNDC and MEWE type reports:

³ [BRd 2170\(1\) Art 0804](#)

a. CBRNDC Fire/Flood

Point	Title	Notes
1	Location	Clearly state the location marking and compartment name.
2	Type	State whether a carbonaceous, oil based or electrical fire. <u>Or</u> State whether a slow, contaminated, free surface or free flood. Include water depth.
3	Status	To contain (as applicable) the progress of CAA, door status, rigging of hoses or pumping arrangements. Include Win/Hold/Loose.
4	Incident Boundaries	Give both positive and negative report of established smoke/flood boundaries to the incident. Include the state of doors and hatches.
5	Impact on OC	State what impact the incident has on access, actions or battle repairs to adjacent compartments.

b. WE/ME

Point	Title	Notes
1	Equipment	Clearly state the equipment which is affected.
2	Nature of defect	Briefly describe the nature of the defect, e.g. 440v power supply loss to EDC or loss of SW cooling to Plummer Block.
3	What needs to be done?	Describe actions required to rectify or investigate the defect. If more personnel/stores/tools are required, ensure this is reported.
4	Capability statement	Provide clear statement of what, if any, capability remains, or brief fallback or reversionary modes/configurations where applicable.
5	ETBOL/NTTR	Estimated Time Back Online or Next Time To Report must be provided in 4 figure format.

32. Placing a simple aide memoire with this information on it at each communications point (phones, TC2V, VUU, RICE, Smoke Zone comms etc) can improve the chances of an effective ICR being passed.

33. The second important principle is that Internal Battle C2 language needs to be clearly defined and understood. The status of an incident should be qualified as follows:

- a. **Minor** - relatively small-scale incident, whose solution is containable within local BDR resources. **Doesn't affect Command Aim or any Command Priority.**
- b. **Significant** - larger scale incident, which has the potential to affect key ship's fighting and survival systems, but which is presently containable within local BDR resources. **May affect Command Aim or any Command Priority.**
- c. **Critical** - major incident which already prejudices the survival of the ship or key fighting systems. **Affects Command Aim or any Command Priority.**

34. The status of an incident is initially reported by the local BDR team leader, who should make this report bearing in mind the Command Aim. For instance, if the Command Aim is to provide urgent air defence to an HVU, then an incident (fire, flood, smoke, power loss, equipment damage) which affects Sea Ceptor could be “Significant” or “Critical”. The status will allow those higher up the Command chain, notably DCO and IBC, to prioritise resource allocation. When reported from FRPP level to HQ1, these reports may be qualified with an indication of whether extra assistance will be required. If none is requested, then it will be assumed that the incident is containable within local resources.

35. **Flash Procedure.** Flash reports are designed to gain urgent attention of the Command Team and as such they must be used sparingly. They must be positively acknowledged by each HQ1 Director, and it is recommended that these acknowledgements follow a set order so that IBC can ensure that all Directors have acknowledged the report. The following occasions are usually those where a Flash report would be appropriate:

- a. ICR of a “Critical” or “Significant” incident.
- b. Sitrep of a “Critical” or “Significant” incident, especially when the situation is deteriorating.
- c. Change in the Command Aim, or Command Priorities.
- d. Key system or equipment restored or brought back online.

36. Getting this right is difficult and requires practice. Is it better to err towards too many, so as not to discourage those individuals with critical information to broadcast it? Or does that risk critical information being lost in the noise of excessive and incorrect Flash reports? If information is critical to one individual rather than the whole Command Team, a hand on their shoulder and words into their ear might be better, enabling them to receive the information, process, and action it.

37. **Command Discussions.** Discussions between higher and lower nodes of the Internal Battle C2 team, whether face-to-face or one-to-one need to remain structured and utilise a shared language. Useful terminology within the Internal Battle C2 construct includes:

- a. “Assess” (or “Assessment”)- actual and potential impact of incidents on Command Aim and overall ship survivability.
- b. “Red/Amber/Green (R/A/G) statement” – used for such items as Speed/Steering/Stability, so long as the associated R/A/G levels have been agreed with Command in advance.
- c. “Question” – seeking clarification from a higher or lower node.
- d. “Order” – direct order to lower node to conduct an action.
- e. “Intention” - OIC’s plan, with reasoning and likelihood of success, allowing for higher level veto of the briefed plan.
- f. “Requests” - call for further assistance, if necessary, usually internal manpower but other examples might be ship manoeuvre, ship speed reduction, external

equipment assistance.

38. A chit system can be used to improve inter desk liaison in HQ1. The "5 Point Brief" format recommended for ICRs is also ideal to use as a chit record incoming messages and pass information between Directors. Chits may be made up as a tailored form, but the standard blank 'Post-It' can be just as effectively and has the advantage of being self-adhesive. Multiple colours can also help differentiate between Directors. This procedure is useful for passing information when noise/interruptions are to be kept to a minimum (i.e. Command Huddles) and can also serve as reminders to HQ1 Directors when awaiting permission from a higher node. These can be used for smoke clearance, upper deck access and reduction in speed requests as a few examples.

39. **Command Node relocation.** All critical Command nodes need an SOP for evacuation and relocation if driven out by smoke or other damage. This includes HQ1 and SCC, FRPPs, First Aid Posts and WSB/WRT. Due consideration must be given to the alternate location of the node that is to be evacuated, what facilities are there, what needs to be taken, is it portable and the procedures for re-establishing the picture when relocated.

Establishing the extent of damage

40. **Picture, Priority, Action, Review.** To add value to the Internal Battle, using a structured thought process and communication system such as the "Picture, Priority, Action, Review" (PPAR) should be used.

a. **Picture** - Build a picture of the incidents and what is being done. Without an understanding of what is going on and the effects on OC, Directors cannot control the situation correctly. The use of Structured Looks, Incident and State Boards, fire/flood alarms, machinery warnings/alarms, equipment status panels, ICRs, 5-point briefs, Mini-SOCs reports, and Command Rovers will help Directors build an understanding of what is happening in and around the ship.

b. **Priority** - Correctly deciding which order to prioritise incidents and actions comes with practice and experience but is based on having a good understanding of the ship and the picture. The key to effective prioritisation is understanding the Command Aim, and what capabilities are needed to support the Aim. This will help assess an incident's severity (Critical/Significant/Minor, as defined above), which allows for easier prioritisation, in that a Critical should generally take precedent over a Significant, which takes precedent over a Minor incident. It is useful to understand what equipment supports what operating environment and agree this as a Command team in advance (e.g. restoration of Sea Ceptor may not be a Command Priority if the priority environment is Navigation but will be a Command priority if it is AAW).

c. **Action** - With priorities generated, actions on the ground can be requested and ordered, as well as resources released in line with the Director's plan. Actions must be owned by a Command Node and prosecuted to completion to ensure that they are completed in a timely and effective manner.

d. **Review** - As the Internal Battle continues, Directors must constantly review what has occurred and what is going on, to ensure their Picture, Priorities, and Actions are correct and happening in a timely manner. The Command Huddle is one part of this review process and Directors must strive to maintain accuracy of their

information and change their Priorities and Actions as new information (Picture) becomes apparent.

41. **Standard Operating Procedures.** Although some BDR tasks have Standard Operating Procedures (SOPs) (for example firefighting and machinery breakdown drills), few SOPs are laid down for Internal Battle C2. SOPs are used widely in the external warfare environment as they allow regular practice to develop instinctive reactions which are less likely to become degraded by the confusion of battle. Although success in BDR still depends heavily on the key players having a high level of skill, experience, system and ship knowledge, SOPs can make a significant improvement and can be used by anyone.

42. SOPs can be employed in a number of BDR areas; pre and post hit routines (Brace, crash stop vent), communications and message handling, briefings and initial actions at the SOTI. SOPs should be laid down as 'aides memoire' to allow effective training and to help overcome battle shock. Mini-SOCs, structured looks and blanket searches are the SOPs used to ensure that the extent of damage is accurately established. Coupled with the incident reporting formats discussed earlier, these should lead to an improved standard of picture compilation. There are 3 key areas, which must be included in this process:

a. **Incident Boundary.** Precise determination of incident boundaries is vital to the follow-on C2 process. For a fire or flood, high value compartment boundaries should be established first. For an equipment defect, the exact boundaries of the damage are required, or the report will be almost worthless. This must include whether the equipment is repairable, which power supplies are unavailable, whether faults are in cables or breakers, what functionality remains and what reversionary modes are available. If the exact nature of the defect is not known then a report of "investigating, sitrep at minute xx" is much more useful than no report.

b. **Implications.** Once the incident boundary has been established, the task of assessing the implications is straight forward, using the Command Aim and an awareness of the threat state. From these, the significance of the incident should be readily apparent.

c. **ETTR, ETBOL and NTTR.** Estimated Times to Repair (ETTRs) are always given as a first estimate by those conducting repairs, but the ETTR does not include the time to bring the equipment online after the repair is complete. This must be factored in by the appropriate Director, whether that is the Defect Manager within the WSB or the MEOOW1 in the SCC, thereby converting the ETTR into an ETBOL. C2 nodes should therefore be given an absolute timing in the form of ETBOL, and these must always be used on Command State boards. ETBOLs always expressed as an absolute time, i.e. 1145, or minute 45, never as the repair duration. If it is difficult to provide an ETBOL then either a best (educated) guess should be given or, if still investigating, then a time to next sitrep in the form of a NTTR. ETBOLs can also be used for CBRNDC incidents but must be linked to a specific stage of action rather than the incident overall, such as "ETBOL for re-entry to the fire in the Galley is XXXX" or "ETBOL for secondary shoring to be completed is XXXX".

43. **CA and IBC link.** The CA/IBC link is the conduit for the principal Internal Battle C2 discussion. The first part of the assessment section must be whether the Command Aim is still tenable, and Command Priorities should flow from this. Discussions on the link clearly need to be timed to dovetail with the cycle for command huddles in HQ1 and CO-CA

briefs. IBC's report should therefore include "Intend next huddle in x minutes", which should prevent CA 'bleeping' IBC mid-huddle. The approximate timings in the table are suggested, but are no means guaranteed for all eventualities.

44. **Command Huddles.** The Command Huddle is an assessment tool used in HQ1 by IBC and their Directors. Its purpose is to determine whether the Command Aim can be sustained and confirm Command Priorities, to assign Director-level incident priorities in support of it and focus the management of these priorities.

45. The Huddle should begin with a statement by the IBC of the Command Aim and any critical Command Priorities which may require an urgent change in focus (e.g. Restoration of 18kts is critical to CO's actions within the next 10 minutes). Following this there are a couple of optional elements which may provide value:

- a. DCO to give a very quick high-level precis of the incidents onboard, running forward to aft, to provide situational awareness for all Directors and ensure accuracy of the picture.
- b. XO, as a Command Rover, providing a very short tactical update, i.e., how long until the next raid.

46. The following table shows the recommended order for Directors to brief at a State 1 Command Huddle:

FF	DD	QEC
<i>WE IBC to brief</i>	IC WSB	DCO
DCO	DCO	Propman
Propman	Propman	Platman
DCO (L)	MSM	Stabman
Command Rover	Command Rover	WE (I/C WSB)
		Bombs
		Med Adv
		Command Rover

47. The WE priorities are usually briefed first, as they often form the top of the capability hierarchy, i.e., restoration of hard kill requires restoration of Sea Ceptor, which requires restoration of a power supply, which in turn requires a fire to be extinguished to enable access, and briefing them first allows the other Directors to better assess the criticality of their incidents.

48. In QEC, the delivery of aviation capability is usually the priority, (through the Aviation Services Manager into Platman) and WE is a supporting element, rather than the supported element, so it fits better later in the brief. IBC can change the order as they see fit, and a particular incident may well lend itself to a different running order, but this can cause confusion.

49. In State 3, dealing with a single incident, it may be beneficial to have I/C Containment present, or represented by IC WSB. In addition, the presence of IC Main Group can add clarity to the picture. These aren't essential as they both have direct communication links to Directors.

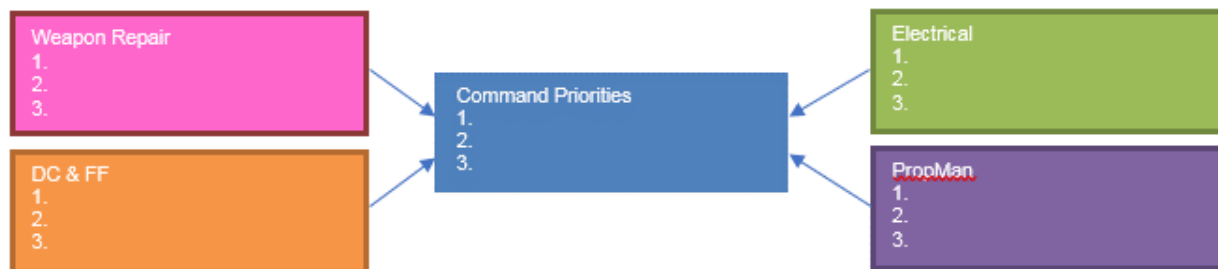
50. Each Director is then to provide their Top 3 priorities. This should follow a standardised format, with the Directors briefing in a set order each time. The following order is advised, with some example aides memoire at Chapter 7:

- a. 'I can/cannot meet the Command Aim'
- b. 'Blanket Search is 25/50/75/100% complete'
- c. 'Priority 1 is Critical / Significant / Minor'
- d. Incident e.g. Fire in 2F Galley
- e. 'in order to...' a capability statement e.g. 'to protect the Fwd SWBD'
- f. 'Win/Hold/Lose'
- g. Director interdependencies (what is needed from another Director to win) e.g., 'requires restoration of 2 of 5 HPSW pumps'.
- h. ETBOL/NTTR

51. IBC should then agree with or realign each Director's priorities with a simple statement of "agree" or "disagree, No2 is your top priority, in order to restore XXX", before moving onto the next Director. These Director statements are then followed by picture validation by the Command Rovers and a statement of the external threat by the XO (or equivalent Command Rover) when operating at State 1 or Command intent when operating at State 3 for a complex damage incident (e.g. collision or grounding). This statement is critical to understanding the potential for further incidents and the drive to restore equipment and capability. This is then followed by a summary from IBC stating the overall top 3 Command Priorities (which will be presented to CA for final approval) and a reminder of the Command Aim.

52.

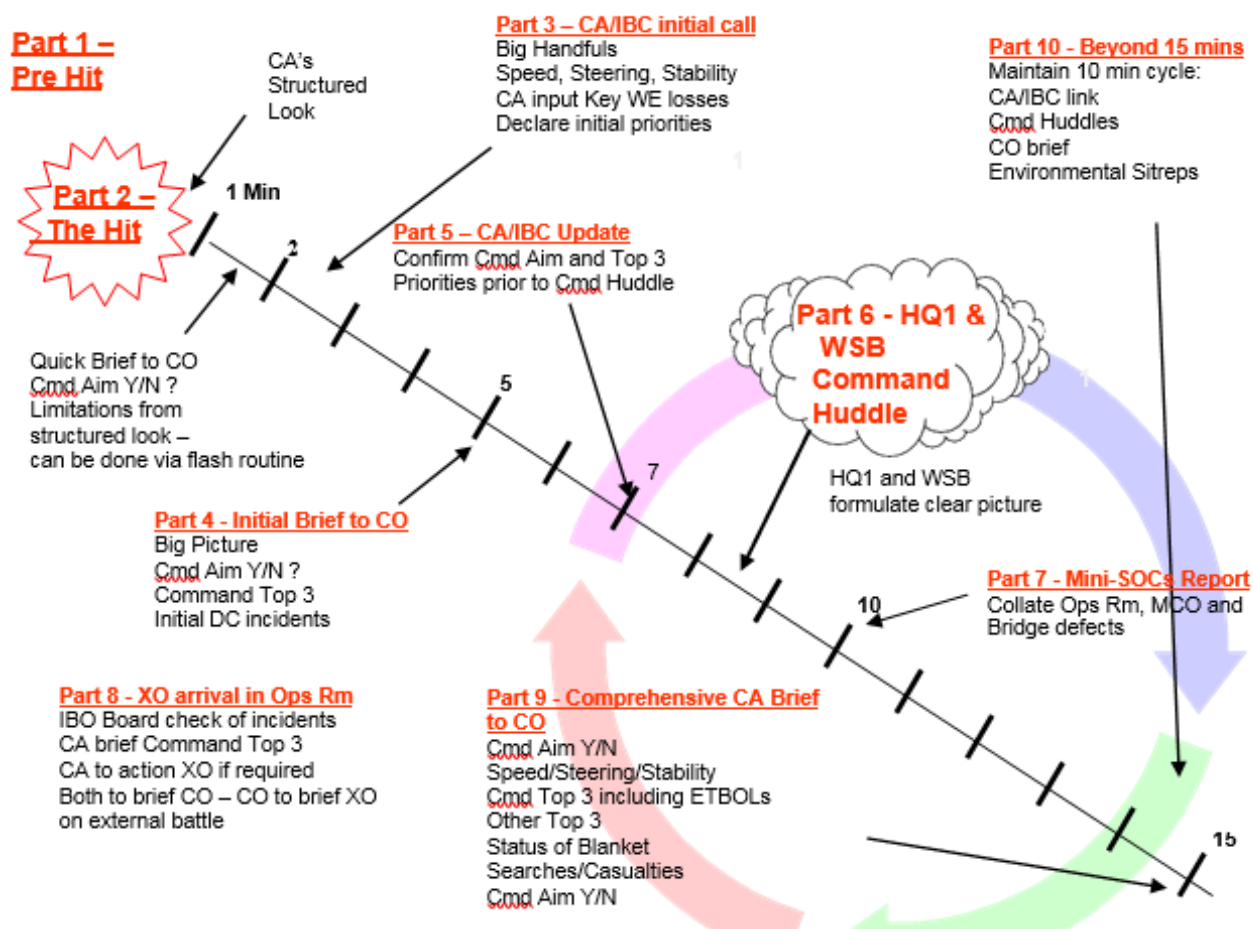
Simple Example Command Huddle Aides-Memoir	
Who	What
IBC	Re-iterate Command Aim. State current Command Priorities.
IBC/WSB I/C	WE top 3 priorities in capability format: Critical/significant/minor, Incident, In order to, Win/Hold/Lose, Requires, ETBOL/ NTTR.
DCO	Can/can't meet Command Aim. Blanket search status. Top 3 DC incidents in capability format: Critical/significant/minor, Incident, In order to, Win/Hold/Lose, Requires, ETBOL/ NTTR.
IBC	Agree/Change DCO's priorities.
Prop-Man	Can/can't meet Command Aim. Max speed available. Top 3 Propulsion defects/issues in capability format: Critical/significant/minor, Incident, In order to, Win/Hold/Lose, Requires, ETBOL/ NTTR.
IBC	Agree/Change PropMan's priorities.
DCO(L)	Top 3 'L' incidents in capability format: Critical/significant/minor, Incident, In order to, Win/Hold/Lose, Requires, ETBOL/ NTTR.
IBC	Agree/Change DCO(L)'s priorities.
Command Rovers.	Confirm DC picture correct (Fwd/Aft). XO (or equivalent) provide Command perspective/tactical picture.
IBC	State the intended overall Command Priorities. Reiterate the Command Aim.



53. The target time for the huddle is 2-3 minutes: 30 seconds for each Director (and Command Rovers if present) and 30 seconds for IBC to introduce and conclude. When using the Command Huddle process at State 3 the target time does not need to be as short but should still be kept to 3-5 minutes to avoid a loss of battle rhythm. IBC should give a 2-minute warning for the Huddle, allowing their Directors to chase updates and assess their priorities. To preserve this timeline, the Command Huddle should only be disturbed by 'Flash' messages. Immediately following the Command Huddle, IBC & CA update each other and discuss and agree any proposed revision to the overall Ship Command Priorities. These are then promulgated to all outstations, including a main broadcast pipe by the DCO.

Internal Battle C2 Timeline

54. The following section describes the basic C2 procedure to build a validated picture of the internal battle within 15 min of an incident (hit or other causes). The timeline is divided into parts and is designed primarily for State 1 environments, but in the case of a significant State 3 incident the procedure can easily be adopted and implemented into such scenarios.



Part	Description
1	Pre-Hit: • Agreeing and check status of stateboards at the outset. • Setting of the Command Aim and priority environment. • Passing of tactical picture (OpIntel) to CA and on to IBC. • Threat and key equipment. • Management of defects once at State 1. • Drive outstations to adopt State 1 posture and techniques, Command Stateboards etc.
2	The Hit: • Test Communications with IBC. • CA 'Structured Look' – CA observes key indicators for any capability loss. • Use of Flash routines for loss of critical equipment. • CA can inform CO via brief or flash routine, key capability losses within two minutes. • Ensure CA exchanges information from structured look with CA Assistant (CAA) and CAA passes WE losses from WSB to CA. • IBO runs through DC incidents and records on CA briefing board.
3	CA/IBC Initial Call – Big Handfuls: • Using Minimum Effective Comms (MECs) with a format to cover Speed, Steering and Stability and major DC incidents. • CA Feedback to IBC from Structured Look. • Opportunity for CA to provide early direction. Notes: Speed, Steering and Stability reported using agreed traffic light system. If Command Aim is not achievable then this needs a supporting statement, for example: "Command Aim not achievable based on Speed, maximum speed available 18 knots, awaiting ETBOL. Steering and Stability 'Green'.
4	Initial Brief to CO – Big Handfuls: • Presentation of the information is through the CA briefing board placed in view for CO and, if possible, PWOs. • Format (agreed beforehand): Can or cannot meet Command Aim/Ship's Top 3 defects/other defects within Top 3s (maybe) – finish with confirmation of ability to meet Command Aim.
5	Pre-Command Huddle: • Ahead of the first Command Huddle, CA/IBC must once again talk, agreeing and confirming the Command Aim and ship's Top 3 issues plus any ETBOLs if now available, based on CO's intent. • Discussion should then relate to other Top 3 issues within DC, ME, L and WE beyond the Command Top 3, with the aim of building up the information on the CA briefing board.
6	Command Huddle: • Conducted in HQ1 and in WSB to formulate a clear picture and establish key priorities. • This gives time for CA to stand back and gather further information and inform CO on any Top 3 developments.
7	Mini-SOCs (Standard Operator Checks): • Mini-SOCs conducted in Ops Rm, MCO and Bridge. • Reports collated by the Ops Rm Manager (ORM) and presented to CAA who should have received all reports by the 10 minute point with the

	recording forms themselves making it to the WSB by no later than 20 minutes after the initial hit. • Rigorous assessment of defects by operators/Command Advisors Assistant is key to success. • This applies equally to the SCC, with MEOOW1/2 conducting SOCs of their respective equipment and reporting defects to PropMan.
8	XO's Arrival in Ops Room: Format of discussion between XO and CA: • Run down the IBO board – CA lead with XO agreeing/updating as required using MECs. • Top 3 issues in the ship from CA. • CAs actions for XO on departure. • If tempo allows, both to brief CO. CO to cover whether they believe the Command Aim or priority environment will change in the near future.
9	Post Command Huddle: • (@15 mins post hit) – Comprehensive brief to CO. • CA should deliver a comprehensive brief to the CO with the critical elements below. It is also at this point that CA is best placed to contribute to the Environmental SITREP. CA's contribution must be capability focused with ETBOLs if available. Critical Elements: • Command Aim Achievable –Yes/No. • Speed/Stability/Steering. • Recommend Command Top 3 (with supporting capability information and ETBOLs). • Other incidents of note (allows Command to change Top 3 if necessary). • Status of Blanket Searches /Status of Mini-SOCs. • Status of Casualties (4-digit number relating to T1 / T2 / T3 e.g. 2110 and including Battle Stress). If Casualty Form has arrived in Ops Rm this can be given to CO to confirm actualnames. • Command Aim Achievable– Yes/No
10	Beyond the 15 minute point: • Maintain the cycle of Command CA/IBC interaction, Command Huddles and Environmental SITREPs (CA to input internal issues affecting the external battle). CA to increase their understanding of resilience within the platform: • Casualties. • Broader WE defects and impacts. • Broader ME defects and implications. Shafts in local, loss of HPSW pumps. • At some point give CO this brief, possibly at Incident Board. • Movement of personnel. • Smoke clearance, considering visual signature and helo ops. • Release of personnel (Deep Mag, Gunbay, AW Mag, COT, Action Messing Team). • CA to have understanding of Directors' use of delegations, in particular their ability to release equipment in the face of defects. For example, 2050/ UAT crashes, which both lead to a complete loss of capability. In the case of the MD, can they release the system to clear P2 faults?

CHAPTER 2 - FURTHER GUIDANCE FOR IBC & HQ1

Gaining capacity

1. C2 teams which struggle are often characterised as chaotic and overwhelmed. There is so much going on that they cannot gain situational awareness, prioritise effectively, or direct their subordinate teams. Conversely, those that succeed have the capacity to think and to act. This capacity is primarily governed by the scale of incidents, the volume of information generated and the time available to process and respond to it.
2. As IBC, there is much that can be done to create capacity for your team and yourself. Much of it is around the management of information flows, and being efficient in doing this, smoothing the passage of information from one node to another. Building order and structure into your HQ1 processes is a good way of doing this, and Command Huddles are a prime example of a process that is highly valuable but can be efficient and add capacity or bloated and draining capacity.
3. Most of the sections below address how to improve your processes, do things a bit smarter and gain the capacity that your team need to think and do the activities critical to success.

Command Huddles Continued

4. Command Huddles require practice to become efficient and effective, benefitting from repetition. This includes the basics of who speaks and when, as well as what they say. The Huddle needs to be delivered in the same format every time, to be an effective framework. The format needs to be the same on every Director's state board, in the same order. This means that information is passed and written down in the same order every time, a-b-c-d, rather than chasing column to column, d-b-a-c. This provides the Directors with greater capacity to think about the information presented, rather than where to record it. In addition, missing information is much easier to spot, as the standard format has a more obvious gap within it.
5. The format needs to meet the needs of the IBC, and they are free to pick whatever works for them as an individual. However, the format suggested in this document has been widely used and tested, and it works. It is used throughout the Fleet, and consistency across platforms will enable new team members to slot in more effectively.
6. Practice and self-discipline also apply to what is being said, not just when. It is possible to be very brief whilst maintaining accuracy and clarity. During practices, listen carefully to what is being said, and see how many words can be removed. Each word on its own may be small, but cumulatively it can be a substantial amount of time which could be spent 'doing' rather than 'talking'. For example, 'My number one priority is to restore the starboard gas turbine in order to recover speed' against 'One, restore the starboard GT for speed'. This level of brevity takes time to practice and a conscious effort in delivery but can be achieved.
7. There is no need for a separate State 3 Command Huddle structure. Even though you may have additional personnel (e.g., IC Containment) present, each time that a Command Huddle is used, it should be as an opportunity to practise the State 1 structure and build the routine muscle memory required to make it effective. Developing and training an additional or alternative structure just uses up limited training time and means

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personnel will be less familiar with it when the moment comes. State 3, whether exercise or real, is your opportunity to train your C2 team for war.

8. The Internal Battle C2 timeline provides a good drum beat of when to conduct a Huddle at State 1. However, it does not map well to State 3. At State 3, Huddles are better carried out at key milestones or triggers. Retaining self-discipline and calling them at these points is highly beneficial – they often seem superfluous at that moment, but waiting longer often puts the IBC and their team into the position of wishing they had conducted one earlier. Some key triggers are:

- a. The door to the compartment being closed,
- b. Operation of fixed systems,
- c. A second incident.

9. These are all events that will change the Command Priorities and may require a re-focussing of the Command Team. They also all tend to have a slight lull in activity around them, enabling a Huddle to take place without excessive interruption from Flash reports.

10. The other key trigger is a loss of situational awareness. IBC may find that they have a lot of unanswered questions building up, across all Directors, or just in a single area. They may notice repeated briefings at the incident board to Directors and other key players, trying to update them on, and clarify the picture. All of these are good indicators that a Command Huddle is needed, to clarify information and provide direction.

11. With all of this together, an effective Command Huddle will ensure that all Directors regularly have up to date information and that they have the capacity to think and solve problems, rather than being consumed chasing information that should be readily available to them. Regular practice, even when it might seem unnecessary, helps keeps the skills and discipline of effective delivery sharp and ready for use.

Red, Amber, Green Status

12. RAG status for capabilities provokes debate. There are two main schools of thought:

- a. Absolute: e.g., Green = 25kts+, Amber = 10-25kt, Red = 0-10kts
- b. Relative: e.g., Green = Speed meets Command Aim, Amber = Speed for Command Aim at risk, Red = Speed cannot meet the Command Aim

13. There's a lot of variation in those two schools, and speed provides useful vehicle for discussion: if you've lost a shaft, but can meet the Command Aim, is that Green or Amber? Should Red be 0kts, or below steerage way? Discussion with the CO around this is vital, and a recognition that debate will primarily occur at the boundaries. Zero and full capability are easy, but operating in a reversionary mode at the Amber-Green threshold is more complex. It is really to provide a handrail for discussion, and the more critical the capability is to the Command Aim, the more clarity will be needed. A good understanding of your platform's capabilities is valuable, i.e., why you need a given speed for ASMD, or the effect a reduced windspeed over deck has on the helo's endurance.

Crit/Sig/Minor and Capability Based Reporting

14. Take time to ensure all your Directors have an agreed understanding of 'Critical', 'Significant' and 'Minor'. BRd 2170⁴ in discussing ICRs uses the following definitions:

- a. *Minor. Relatively small-scale incident, whose solution is containable within local damage control and firefighting resources.*
- b. *Significant. Larger scale incident, which has the potential to affect key ships fighting and survival systems, but which is presently containable within local damage control and firefighting resources.*
- c. *Critical. Major incident, which already prejudices the survival of the ship or her key fighting systems.*

15. Increasingly, this is being interpreted with a Command Aim focus, i.e., that 'key fighting systems' refers to those in support of the current Command Aim. S2087 is a key fighting system in a T23, but not key when the priority environment is 'Air' and there is no ASW threat. Exploring and discussing why Directors have qualified their incident during training as 'C/S/M' is valuable, particularly how an incident can be very important to them, but not in the larger scheme of things.

16. Capability Based Reporting is the key to unlock this effectively. Articulating why an incident is important because of its impact of capability will enable effective categorisation as C/S/M, which in turn will aid effective prioritisation. '1, Critical, Restoration of C-A EDC for Sea Ceptor and AAW', clearly links the incident to a capability. If AAW is the priority environment, then 'Critical' is correct. If the priority environment is ASW, then it is not.

17. Like 'RAG' statuses, this requires good knowledge of your platform and its capabilities from all the Directors. It remains important for ICs of FRPPs to understand the equipment within their sections so that they can pass effective ICRs to the DCO, with the associated capability impact. It is also important to be clear who the capability is important to, particularly where a Director is supporting another. For example, the DCO being clear that their fire is critical to provide an access route for a cable run for DCO(L) is vital. It might mean that IBC prioritises them additional resource, or it might be that the DCO(L) realises that they've used an alternative access, no longer need that route, and DCO can prioritise their firefighting team elsewhere.

Grouping Command Priorities

18. As mentioned in the main body above, it may be valuable to express Command Priorities as a broader capability are, e.g. 'AAW Hardkill' (e.g. repair target indication radar, and the missile system, and also requiring an impeding fire to be extinguished). This is usually referred to as 'grouping' or 'blobbing up'. The critical element is that the subordinate Directors and ICs understand how their priorities support that overall Priority. Capability based reporting should go most of the way to resolving this, e.g. DCO(L) briefing '1, Critical, Restoration of C-A EDC for Sea Ceptor and AAW' means they should understand how they link to an overall priority of 'AAW Hardkill'. It can be beneficial though for the IBC to provide clarity in what supports the priority and how, particularly where it involves multiple Directors. That might be a statement on the end of the priority such as:

⁴ [BRd 2170 Vol 1](#) 0804

OFFICIAL

- a. '1, AAW Hardkill'
- b. 'DCO – 2D fire to enable access'
- c. 'DCO (L) – restore C-A EDC'
- d. 'WE – Fwd PDLT'
- e. Then onto '2, Recover 28kts, 3...' etc

19. These are short, sharp statements repeating their priorities back to them so they can clearly see how they relate to them. There is a trade off to be had between ensuring brevity in the Command Huddle and ensuring clarity in instructions and priorities. A more challenging incident may need a longer breakdown, a simpler one none. The level of knowledge and understanding of the Directors will influence this, as will the amount of 'Inter-Desk Liaison' that is already occurring. If the team understand the linkages between their incidents, less will be needed, it could be as little as just pointing after a grouped priority and saying 'Pusser, Chief, DWEO' and getting nods in acknowledgement.

Inter-Desk Liaison

20. This term is used a lot at FOST in relation to HQ1 C2. It is a reasonably broad term, referring to the links between Directors. Effective 'IDL' results in understanding how incidents are linked and how actions on one will affect another. This can enable sequencing of actions between Directors, to unlock solutions and achieve a common aim, as alluded to above with the grouped Command Priorities.

21. There are different ways of achieving this. The most simplistic is for the IBC to identify and direct the linkages, e.g. 'DCO, extinguish the fire in 01E to enable access for 997 repairs in the Combined Radar Office'. However, this consumes IBC's capacity. As with all C2, the more that can be achieved at a lower level, the better. In this example, if the I/C of WSB can identify to DCO that they need access to the CRO and that this is the No1 WE priority, that will help DCO understand the importance of that incident. Likewise, DCO identifying to MESM that they require additional HPSW pumps to deal with this critical fire allows MESM to prioritise better.

22. This can be achieved at the Command Huddle, with a clear point of the command hand from IC WSB, stating: '997 repairs require access to 01E, Action DCO', and that still retains value for 'holding to account' purposes. However, it is better served with a short discussion prior to the Command Huddle, ensuring key details are passed and effective planning carried out prior to being presented at the Huddle. 'Post-it' notes can re-enforce this, or instant messages in DSAC ships, and keep noise to a minimum in HQ1.

Wining/Holding/Losing

23. These are a useful modifier in a brief. Again, like 'Crit/Sig/Minor', Directors and I/Cs need to be using a common set of definitions, such as:

- a. Winning – The situation is improving, no assistance required.
- b. Holding – the situation is steady, assistance may be required.

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- c. Losing – the situation is deteriorating, assistance is required.

24. These will allow the Directors to understand what else needs to be done and where their attention should be focussed. 'Critical, Winning', might end up prioritised below 'Significant, Losing' as former needs no further assistance, and is no longer threatening the Command Aim, whilst the latter requires further resource and now does pose a threat to the Command Aim.

25. There remains some subtlety and art to describing an incident. Flood water levels are relatively easy to describe as 'Winning' or 'Losing', but a cable run to restore electrical supplies is somewhat harder. Remaining capability focussed, considering access, stores required and ETBOL in particular are useful ways of determining success. An ETBOL that keeps slipping for unclear reasons suggests that the defect is more challenging to resolve, and might be 'Losing', whilst one that is awaiting a stores delivery might be 'Holding'. One where the ETBOL remains on track is likely to be 'Winning'.

Smoke clearance

26. Individually requesting smoke clearance at State 1 through the CA for each incident is time consuming and delays recovery. Requests can often get lost or forgotten. It has been found to be highly effective for the CA (or PWO) to pass a blanket authorisation when suitable after a hit, usually: 'smoke clearance is green', or 'green until minute XY'. They have the situational awareness and engagement with the CO to understand the broader picture, e.g., the recovery of aircraft or use of soft kill, which smoke may affect, or the time of another raid where smoke could act as a beacon. They may also see how much smoke is being emitted through the point of impact and understand whether additional smoke is going to be noticeable.

27. In addition, 'hold smoke until minute 15, then you may clear until minute 45' is another useful way of approaching the situation. This can be useful when coupled with an understanding of the particular smoke clearance plan ETTR, i.e., 'it will take 20 minutes to set up, then 30 minutes to clear', which provides some useful break points and options, rather than a simplistic '50 minutes'.

Upper deck access

28. Like smoke clearance, requesting upper deck access for individual tasks is a time consuming, capacity sapping activity. Also, like Smoke clearance, it can be well managed by the PWO. They understand the risks (e.g., another raid), and if the Stand-To pipe is accompanied by 'The Upper Deck is Red/Green', a significant volume of additional communication can be reduced.

Employment of DMEO(S)/(P)

29. Most ships now have an additional DMEO, and these are not accounted for in the State 1 construct, leaving their employment up to the MEO. Best practice so far is to place the most junior DMEO as IC Fwd FRPP. This provides them the opportunity to learn and means that the senior DMEO is available to mentor and train them, so corporate experience and knowledge is not lost, almost as an extended handover. This also applies to Section Base Officers in Capital Ships.

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30. Employment of the senior DMEO is more varied, and they have been successfully used as IC Mobile, an ME Specialist Command Rover, and providing an opportunity to shadow and stand in for the MEO for their professional development.

State boards

31. The IBC's state board or crib is a very personal thing (this holds true for those of the other Directors as well). There are two main types in use:

- a. A dedicated board, usually landscape, A3 or A4, with boxes for the different Directors' priorities, some kind of machinery diagram, and a box for marking up the threat environments. Often it is on string to hang around the IBC's neck.
- b. A page within the MEOs pack, again with boxes for the Directors' priorities, but machinery diagrams usually on a separate page for size reasons.

32. There is no 'right answer' to what it should look like, but there are some good characteristics to them:

- a. Size – it needs to be big enough to get all the detail needed onto it, but not so large that it is unwieldy.
- b. Layout – along with the Command Huddle guidance above, making sure the Directors' boxes are in the order they brief and in the correct format enables quicker note taking. It also stops information being inadvertently wiped off when using non-permanent pens.
- c. Function over form – ship's badges and names as headers make the board look good but occupy valuable space. When there is a size trade-off to be made between portability and writing space, adding unusable decorative areas to it is not required.
- d. Personalisation and currency – make it work for you as the IBC today, not your predecessor yesterday. Everybody has the thing they forget, or the thing that is particularly important to them. Creating space for that is valuable. You may not need the threat environments on your board as you are content with just using the main incident board. You may not want the propulsion plant layout (most MEOs carry an instinctive, immediate knowledge of the state of their plant in their head), but you may want a simplistic CW diagram as that is your ship's Achilles' heel. Just using what was handed over without some scrutiny means you are using a tool that you haven't tailored to your needs, and it may not fit them.
- e. Consider paper – laminate and foam boards have their advantages, but so does paper. You can amend your template easily, and a stack of 'boards' that you can write on at each Huddle means you can have a record of what has happened, rather than wiping it off and starting fresh each time. You also avoid the smudging of dry wipes that often occurs, and your anti-flash becoming a mix of black and blue stains. Paper can of course get wet, and that has its own disadvantages.

OFFICIAL

CHAPTER 3 - WEAPON SECTION BASE⁵

1. **Leadership.** The Weapon Repair Organisation is led by the DWEO (or similar WE Section Officer), normally located in the designated Weapon Section Base (WSB). Their main roles are to:
 - a. Present CA with an accurate and continuously updated picture of the Weapon and Sensor damage within the ship either via the CA's Assistant, or for urgent information, directly to CA.
 - b. Direct and co-ordinate the weapon repair effort in line with Priorities set for them by CA and in support of the Command Aim.
 - c. Provide continuous advice to CA with respect to ETBOLs for equipment defects and reversionary modes of operation or post damage options which may be available either via the CA's Assistant or, for urgent information, directly to CA.
 - d. Undertake the duties of CBRN Protection Officer if CBRN hazards are more important than weapon repair activities.
 2. If the repair organisation is to be effective an accurate defect picture must be established immediately. There are two facets to this: Operators must conduct accurate Mini-SOCs as quickly as possible with the results reported to CA and DWEO on paper. Weapon Repair Team (WRT) personnel at outstations must also provide clear and accurate details of all defects, performance degradation and loss of supplies or essential services. This is achieved through comprehensive Blanket Searches and 5 Point Briefs. Furthermore, there needs to be effective liaison between operators and maintainers and WRTs must appreciate the urgency of repairing each piece of equipment.
 3. In order to run the Weapon Repair organisation effectively the material items and routines listed below should be established⁶, validated and their use practiced:
 - a. **Weapon Repair "Bible".** The bible should contain as much information on weapons and sensors as is practical. Recommended contents are contained in FOST Form WE A- 3-30:
 - b. **State 1 Preparations Check Off List.** The list should contain all actions that need to be taken by the WE department before State 1 is achieved and can actually form one of the sections in the 'bible'. Items for consideration in the State 1 preparations list are detailed at the References. When closing up at State 1 one of the WSB Senior Rates should check through the list and ensure all actions are complete before reporting that the WE department is at State 1.
 - c. **Manpower Control Board.** This should have sufficient information for the manpower controller to muster all WRT personnel, record contact details, track the regular reporting of whereabouts, track the status of Blanket Searches and monitor the location of personnel effecting weapon repair.
- (1) Reports to manpower controller should be made by outstations on the following

⁵ References: BRd2170 / BR300 / JSP 862 / FOST WE Form N-3-31 / FOST WE FORM A-3-30.

⁶ More detailed information regarding the layout, equipment and routines to be employed within a Weapon Section Base is available in FOST Information Sheet WE N-3-31.

OFFICIAL

occasions:

- (a) On closing up.
 - (b) At regular intervals when closed up, normally every 20 minutes.
 - (c) When leaving the normal State 1 position.
 - (d) When Blanket Search is completed.
 - (e) When undertaking Battle Damage Repair, stating when you are going and report when you have arrived.
- d. **WSB Equipment State Board.** The WE Equipment Board is to be used by the Command Advisor's Assistant to collate the WE BDR picture with the WSB and present that picture, with the intended repair priorities to the Command Advisor. They may then direct or amend the priorities in line with Command intentions⁷. It is to be regularly maintained by the WSB Operator and Command Advisor Assistant focusing on the Whole Ship Top 3 Priorities.
- e. **Weapons and Sensors State Board.** The board(s) should be run by the WOVE and used in conjunction with the Command State Board to keep an accurate picture of the material state of the department at action.
- f. **Incident Board.** This board is to be permanently staffed by an IBO. They should adopt the 'Flash' procedure to alert WSB personnel of all fires and floods within the ship. DWEO and WOVE should constantly monitor the board so that they are aware of possible dangers to WE equipment/compartments/magazines and personnel. The board should also be consulted prior to sending any personnel away from their action station so that a safe route can be planned.
4. **Electrical Desk Liaison.** Good 'L' desk liaison is vital for a successful Weapon Repair Organisation. An established communications line must be available between the 'L' desk and the WSB. Communications must be a two way operation with both parties informing each other of known power supply losses as soon as practically possible after damage has been sustained.
5. WSB personnel should be aware that the Command Aim will invariably be focused on the 'Fight' function and therefore emergency cable runs to weapon equipment should be given priority over everything else. Consideration must be given to dressing cable runners in BA where appropriate. In the event of loss of EDCs, consideration should be given to prioritisation of breakers, bearing in mind the current carrying capacity of emergency cable runs.
6. **Railex Card Holders.** Railex card holders (MOD form 607) and cards are recommended to monitor defect repair. It is suggested that at least 3 cardholders are used and are marked up as "Top 3", "Weapons" and "Sensors". Additional holders may be used if found necessary, e.g. for electrical defects. Cards should be marked such that they contain relevant information and may be plasticised so that they can be re-used.
7. Within each priority, cards should be individually prioritised i.e. the highest priority

⁷ An example WE Equipment Board is shown at BR300, Fig 2-4

OFFICIAL

defect placed in the top slot of the Railex card holder. ETBOLs must be used and closely monitored by WOs to ensure they do not slip and are updated accordingly. SITREP times should only be used where a repair time is genuinely not known or able to be predicted. Pre-printed cards can be made up to show the effects of losing a switchboard or EDC.

8. The Railex system should be run and updated by the Defect Managers (WOs) and DWEO should position themselves so that they can monitor all WSB boards including the Railex cards. They should ensure Command priority and threat warning changes are implemented and that the Railex system agrees with the Command Stateboard (CSB).

9. **Alternative WSB.** At least one alternative Weapon Section Base should be available. It should be large enough to accommodate all WSB personnel and the necessary state boards. It should have communications to WRT and CA and adequate emergency lighting. Moving the WSB to an alternative location should be an organised evolution rather than a mad rush to get out of a smoke filled compartment. DWEO and WOVE should ensure all personnel (each with an EEED) are safely evacuated from the compartment, and as much portable equipment as possible is taken with them. Upon arrival at the alternative location, the team should quickly settle down, establish comms and consolidate their position.

10. **Weapon Repair Team.** All maintainers should have a sound system knowledge of their own sections including where services and supplies are fed from. Any practical repairs carried out should be robust enough for the task and be able to withstand pressures/ voltages/currents etc.

11. WRTs should ensure they carry adequate tools and carry or have access to a supply of fuses/spare cable. Cross training of key personnel should be considered to ensure all equipment can be run up and first line fault finding can be carried out in the event of loss of the maintainer.

12. **The WSB Command Huddle.** The WSB Command Huddle is a key element in the control and management of the WE BDR effort within the WSB. It must be structured and timely. I/C must call for them with a 2 minutes notice FLASH call in the WSB; run a clock so that people are aware of when it is to happen. Let outstations know when it is taking place and that FLASH reports only are to be made into the WSB; ensure you have established the means by which FLASH reports can be recognised i.e. 1 long bleep from CA, a buzzer procedure on Interphones.

13. The WBS Command Huddle must always follow the same procedure with personnel briefing in a routine order. Briefs must be focused on how the defects/incidents they are reporting affect the Command Aim. An example is detailed below.

OFFICIAL

Command Huddle Aides-Memoir	
Who	What
I/C	Reiterate the Command Aim
IBO	DC incidents in priority order and how they affect WE equipment or compartments
Manpower	State/whereabouts of manpower, Blanket search progress, who has not reported in
Logistics	Sustainability/Stores issues
L-Desk	In priority order, electrical losses effecting WE equipment and how they are being progressed
Weapons	Top 3 Weapon defects – 5 point brief format (if you have capacity to brief more than Top 3 do so).
Sensors	Top 3 sensor defects – 5 point brief format (if you have capacity to brief more than Top 3 do so).
I/C	Summary, focus and DIRECTION. Re-iterate the Command Aim and if it can be met.
All	Re-establish comms.
Command State Board Operator	Align picture with Ops Room
I/C	Confirm Top 3 with Command Advisor

CHAPTER 4 - COMMAND ROVERS⁸

1. Command Rovers provide essential support to the CA, IBC and DCO in providing validation of the overall damage picture in both State 1 and 3. They are a Command level physical link between the Command Team, the scenes of all incidents and the FRPP/ZCP/Section Bases that control them. They will be aware of the overall state of damage around the ship, the tactical picture and the most current thoughts of the Command. They bring to bear a high level of leadership and direction at the scenes of incidents to overcome communication difficulties or differences in interpretation based on the Command Priorities.
2. There is a lot of information to take in so good use of pocket size deck plans and an aide memoire is essential. As well as the detail below, additional information such as the % of Blanket Search complete, the state of general lighting and water levels (especially high up and in compartments athwart ships) should be reported.

COMMAND ROVER PRIMARY TASKS
Roving as directed by key members of the BDR Command Team to act as their 'eyes and ears', clarifying critical information at priority incidents.
Extracting the maximum information from each damage scene.
Assessing whether a damage scene is under control and informing the responsible Command Node if action is required such as more resources.
Checking the quality of information flow between all Command Nodes (HQ1, Ops Room, Bridge, WSB, Section Bases, FRPPs, ZCPs, MHQ) clarifying the picture and eliminating confusion.
Keeping abreast of the tactical picture and the Command Aim and disseminating this information to all Command Nodes and Incident Managers.
Maintaining impetus and morale throughout the ship.
Contributing to the Command Huddle in HQ1 when possible.
Supervising State 1 preparations, maintaining constant monitoring of the WT integrity Condition and sustaining readiness when incidents are under control/complete, in ensuring that the impetus is maintained throughout the re-grouping and if required, re-stowing phase.

⁸ Reference: BRd2170(1) 0313.

OFFICIAL

AT THE INCIDENT SCENE	
FIRES	FLOODS
Where is the seat?	Where is the damage? (Ship's side, deck head or deck)
What type of fire? (Oil based/carbonaceous)	What is the damage? (Splinter holes, fractured pipes etc)
Who is attacking it (SSEP/FRPP) and with what?	What is the level of water? Is it rising/falling/steady?
How long before re-entry? (if applicable)	Is the flood contaminated?
Is the door/hatch open and maintaining a CAA?	Has initial leak stopping taken place?
What hazards are in the vicinity?	Are pumping requirements in place?
What is the status of fire/smoke/flood boundaries? And are they correct and using sentries?	
Is there an incident manager?	
Which boundaries are priorities?	
Is the incident under control?	
Are there casualties? Are they being dealt with?	

3. Periodically Rovers must go to the OPS Room to speak to the CA, check their incident board is correct and get an update on the threat warnings, the external battle picture, Command Priorities and Command Aim. On arrival in HQ1 the Rover must make themselves known, calling, for example, 'XO in HQ1', and go straight to the incident board to brief the IBC/DCO, ensuring that the IBO plots the information. If the arrival in HQ1 coincides with a Command Huddle, Rovers should listen in and input their relevant information at the end, including a validation of whether or not the IBO board (or DSAC picture) is correct. Before departing HQ1 the Rover should inform the DCO/IBC where they are going if they aren't ordered to a specific task/location.

4. When visiting the WSB the Rovers should ensure that the DC picture is accurate to ensure they know what impact it will have on their repair plan and the Ship's warfighting equipment. In many cases WE equipment will be within the Top 3 Command Priorities; therefore the Rovers need to take away from the WSB where its activity is focused and ensure that the DC effort is co-ordinated in support of this.

CHAPTER 5 – THE MARINE ENGINEERING DEPARTMENT

MMS Action Crews and Mobile Repair Party (MRP)

1. Action crews are responsible to the Action MEOOW. Each MMS should have a minimum of 2 personnel, ideally a Senior Rate plus 1. The Controlling MMS should be run by a MEOOW1 qualified person and the GTR/FER by an MEOOW2 qualified person (or as applicable for key MMS by platform type). Action crews must be capable of operating all systems (also in reversionary modes where applicable) and ideally have a good knowledge of the other spaces. On closing up they will conduct State 1 preparations and when ordered to, they will conduct blanket searches. The information they pass to the SCC/MCR is fundamental to correct follow-on actions being taken in the SCC/MCR, provision of correct level of support (personnel and material) and the prioritisation of incidents by PM and IBC. Quality information is essential if the MEOOW is not to have to ask too many extra questions. Action crews will benefit from on-site 'Table Top' discussions on how they will conduct their business and what the Prop Man needs.
2. The MRP will vary in strength depending on the ship class – generally a minimum of 2 CPOs (e.g. CMEM and Hull Group/Section Head), plus 2 can be achieved for FF/DD sized units and proportionally larger teams for Capital Ships. However, MRP size will be balanced by the number of personnel that are allocated to the MMS action crews. The MRP must function under the control of the Propulsion Manager and a good line of communication is essential, be it by dedicated 'bleep' phone or similar. Whilst the MRP will generally be used to aid the MMS Action Crews, there will be appropriate tasks outside the MMS that will call on their expertise; be it hull/structure repair, system reconfiguration etc, or even calling for stores. The MRP needs to be effectively equipped at Action, from available sets of multi-fab suits, to EDBA, DIVEX and tool bags. They have a wide remit in terms of what they could be required to tackle, a good level of ship and system knowledge are essential along with being well versed in DC&FF (include GTCU module/DG Enclosure re-entry techniques) and a variety of hull and system repair techniques.
3. There is some debate around MMS crews following the re-discovery of LFE from OP CORPORATE. This states that: 'machinery spaces of Gas Turbine ships need not be manned at action. Manning a machinery space only serves to increase the number of casualties when it is damaged. Engineers should enter it to repair damage after it occurs'⁹. This is assumed to be in comparison to steam powered ships which were all locally controlled and had no choice around retaining personnel in the space, and modern GT powered ships, which were remotely controlled in the SCC/MCR. Intuitively this makes sense. Keeping personnel in a compartment with fuel, oil, and rotating machinery, often at or below the waterline that may then take damage is going to generate more casualties than keeping them dispersed in the flat or access above.
4. T45 have already moved away from the crewed MMS at Action model, driven by a recognition of the hazards from HV, and QEC has followed suit. In T45, the personnel conduct a blanket search and then return to MRP, whilst in QEC dispersed personnel return to MRP to be directed as part of a Smart Blanket Search directed by the greater sensor outfit. A significant advantage of this approach is the 'concentration of force' achieved by bringing all the ME expertise together, to then be better used where it is required.

Switchboards

⁹ CINCFLEETS 210/1/44.W Annex B Para 12
Version 2.0 - Reviewed Mar 24

5. The main distribution system can be operated from the secondary switchboards, however in modern platforms with electrical propulsion systems they are normally operated from the SCC/MCR. The SWBDs and SECPs are generally staffed though, to ensure swift control and operation of the system locally should a fault condition occur. T23s in particular should consider using their senior 'L' rating in the SWBD to act in a roving role, after the initial blanket searches, to drive priority repairs/cable runs on the ground for DCO L. HV ships should also consider how emergency isolations for affected equipment will be conducted and what situations warrant the APC closing up in HQ1.

SCC/HQ1

6. **Action MEOOW and SCC/MCR Personnel.** The prime objective of the Action MEOOW is to maintain/maximise propulsion power to the Command, they should also support and advise the PropMan as necessary. They should use the MMS Action crews to augment the information from within the SCC/MCR, sustain maximum power to Command (equipment should not be shut down prematurely), provide innovative means of restoring power, and try and provide the PropMan with accurate and appropriate information. They may often be the first to hear of machinery damage and must collate all information and demand a full picture before briefing PropMan or liaising with DCO(L). The SCC/MCR Action crew have the following tasks:

- a. Take overall control of MMS Action crews in their State 1 preparations, retaining control of system reconfigurations.
- b. Operate propulsion machinery to maximise power to the Command. Advise OOW, by means of appropriate Emergency Telegraph Order, of machinery failure or imminent failure. They must not over-react but allow Command time to veto requests prior to taking appropriate breakdown reactions.
- c. Monitor all available instrumentation to ensure any alarms/warnings are investigated promptly. In platforms with platform management systems, there is a real risk that in the event of damage, the number of alarms will be overwhelming, analogous to during a TLF. Panel operators need to have a disciplined routine for checking their equipment's pages and assessing equipment availability, as they may not see the alarm for it tripping etc. They should routinely 'sweep' their pages, and not assume that there has been no change in status. Alarm blindness can become a problem if this is not done.
- d. Operate auxiliary machinery from the SCC/MCR panel or instruct personnel in machinery spaces to start/stop equipment as necessary.
- e. MEOOW2 to support the MEOOW by acknowledging incoming messages over Machinery Broadcast and passing them to the relevant part of HQ1/SCC. Post-it notes remain a really effective way of communicating information between the MEOOW1 and 2, even in IPMS based platforms. Some ships have created pre-formatted laminated chits, with a ICR type layout, and these can be effective, but they can limit free form note making. As always, this is a trade-off that will be different with different individuals.

7. **MESM.** The Marine Engineering Services Manger in T45 is not just a new name for the DCO(L) in other platforms. The role is similar, but has important additional

OFFICIAL

responsibilities, and those who just deliver the DCO(L) function will not succeed. The key difference is that they are also responsible for the provision of other key ME services including HPSW, CW and HVAC, previously delivered by PROPMAN. These are essential to the operation of mission systems, and need just as much awareness, management, and support as the traditional 'greenie' side of the role. MESM does have a significant benefit in that they are seated almost back-to-back with their WE opposite number, which can enable much more effective delivery of services and clarification over the causes of loss of capability and prioritisation of repairs. Post-it notes again can be highly valuable for passing discrete items of information between them, as is having an agreed briefing format for loss of services and supplies.

CHAPTER 6 - THE BRIDGE

1. **Damage.** The Bridge is often in a unique position in being able to supply vital information on the type of damage (e.g. bomb, missile, collision etc.) and area of impact. This information should be obtained and then broadcast as soon as possible after 'Stand To', preferably on main broadcast if available and backed up on the IBO comms line.
2. Following any damage, initial Bridge reactions must concentrate on ship safety. This will invariably mean dealing with any propulsion and steering defects first. The OOW must instinctively know the initial actions for Emergency Slow/Stop, steering failures, and if necessary, the override drill.
3. At State 1, If a propulsion defect and steering failure are indicated simultaneously, then the NO should be ready to assist by dealing with one of the breakdowns on the OOW's behalf or detail an appropriate person to help. The level of involvement from the NO in these reactions will depend heavily on the navigational situation; in open water the NO will be available immediately to take an active role, whereas if navigating in constrained waters such as a swept channel, the needs of navigational safety will have to be considered and may prevent NO from direct involvement. Whatever the case, rapid restoration of propulsion and steering in the highest control state available is essential, particularly when in confined waters, to achieve the Command Aim.
4. **Next steps.** After any immediate actions, Mini-SOCs must be initiated if not already in progress. All items must be investigated thoroughly; QYF, wind indicators and log repeats are often checked inadequately. On completion of checks Mini-SOCs reports must be passed on the Ops Room Manager.
5. **Follow up actions.** Engineering defects should be monitored closely. After the immediate actions have been conducted, a concise brief on the problem and Estimated Time Back On Line (ETBOL) is to be obtained; for steering defects, a report on the status of power supplies to each motor and control system should be given. A running tally of relevant defects should be kept on the OOW stateboard, including ETBOL, to allow the OOW to maintain the drive to restore machinery. There must be frequent liaison between Bridge and SCC/MCR to ensure momentum is not lost.
6. **Bridge fire reactions.** A Bridge fire will test the ships' ability to coordinate CBRNDC actions with the sustainability of navigational safety. At State 1 the driving factor must be to regain access to the Bridge, for damage assessment and restoration of the primary steering and navigational position. At State 3 this must be balanced against the sustainability of operating from the ECP and the longer-term risk to personnel once the fire has been extinguished and smoke clearance effected.
8. The importance of the Bridge to wholship C2 is vital during heightened risk environments and if possible, a CAA must be maintained on the fire to allow recovery of the Bridge at the earliest point. The LVA and Initial Actions will set the tone of the incident to encourage a rapid and aggressive response, supported by the OOW's leadership to coordinate Bridge actions. If the reactions are slow in dealing with the incident, the CAA may be at lost and the door to the compartment closed. If this is the case, a full re-entry is to be conducted to extinguish the fire, deal with the incident, and reclaim the Bridge.

CHAPTER 7 - COMMAND HUDDLE AIDES MEMOIRE

1. Below are links to the FOST sharepoint where there are some aides memoire in a readily printable format for use in HQ1, including:

- a. [Directors' Command Huddle Aide Memoire](#)
- b. [IBC Command Huddle Aide Memoire](#)
- c. [IBC Command Huddle Aide Memoire \(QEC Variant\)](#)