

DARKHELM OPERATIONS MANUAL

Ship Operating Manual — Volume I (SOM)

TERRAN NAVY · EARTH FEDERATION — Bureau of Ships Applicable to: all crewable classes (generic).
Reference fit: **PC-class Corvette** *Darkhelm* (PC-1187).

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Foreword — How to use this manual

This manual describes the ship's systems and the procedures to operate them. It is **generic**: the body applies to every crewable class because all ships share one power, thermal, flight, sensor, combat and **ESMS** model. Class-specific values (limits, equipment fit, whether Flight Ops is installed) live in the **Ship Data Sheets** (Volume V, TEC). Where a system is fitted only to some ships, an **applicability banner** says so.

The companion **Quick Reference Handbook (QRH)** carries the condensed checklists for use at the console. This SOM carries the expanded procedures and the *why*.

Conventions

WARNING — A procedure or condition that, if not observed, may lead to loss of the ship or crew.

CAUTION — A procedure or condition that, if not observed, may lead to damage to equipment.

NOTE — Information that aids understanding or eases a task.

ESMS alert-colour philosophy (Volume I, DSC-31). The ship monitors itself and annunciates faults on the ESMS, exactly as it does in flight:

Colour	Level	Meaning	Crew response
RED	Warning (L3)	Immediate threat to ship/crew	MASTER WARN — act now, run the drill
AMBER	Caution (L2)	Significant fault, time available	MASTER CAUT — run the drill
CYAN	Advisory / Memo (L1)	Status / reminder	Monitor

Colour	Level	Meaning	Crew response
GREEN/WHITE	Normal	System nominal	—

NOTE The ship **monitors itself**: when a fault occurs the ESMS **annunciates the alert and presents the drill**, and the crew works the actions to completion (to – STATUS –, then reviews the inoperative systems). Memory (recall) items are kept to a minimum and are boxed where they exist.

(List of Effective Pages and Revision Record at front of binder.)

PART LIM — LIMITATIONS

NOTE Flight and electrical limits are **per-class** — the figures for every class are tabulated in the Ship Data Sheets (Volume V). The example values below are for a PC-class Patrol Corvette.

LIM-01 Flight envelope (example — PC-class)

Limit	Value
Max impulse speed	200 km/s
Max acceleration	0.4 (rated)
Max heading (yaw) rate	20 °/s
Max pitch rate	15 °/s
Max roll rate	30 °/s

NOTE Sub-light speed is shown in **km/s** (the cockpit reads **m/s** below 1 km/s, e.g. on the final docking approach). Attitude rates are in degrees per second.

LIM-02 Hyperdrive

Hyperspace speed is set by the hyperdrive **power factor**. Engaging the drive requires Main-bus supply (see DSC-24 / DSC-33). The factor→speed schedule is published in DSC-33.

LIM-24 Electrical

Limit	Value / rule
Power tiering	MAIN >> A/B >> EMERGENCY (orders of magnitude)

Limit	Value / rule
Source output ceiling	Rated output × integrity (a damaged source delivers less)
Reverse ties EMER→A / EMER→B	Battery-drain path; start/blackout use only , then open
Critical loads (life support, consoles)	Never breaker-tripped; on EMERGENCY bus
Battery recharge	Resumes only below 98 % (hysteresis)

LIM-21 Life Support

Atmosphere fails after about 180 s of sustained crisis O₂/CO₂. Keep a scrubber powered.

Alert conditions

Condition	Label	Meaning / posture
GREEN	CONDITION GREEN	Normal operations
YELLOW	LEVEL 2 BATTLE STATIONS	Potential / unidentified threat — shields up
RED	LEVEL 1 BATTLE STATIONS	Hostile contact confirmed — weapons up and shields up

PART DSC — SYSTEMS DESCRIPTION

NOTE Systems are described generically; the equipment *fit* (numbers, marks) differs by class — see the Ship Data Sheets (Volume V) and the Catalog (Volume V, TEC).

DSC-21 LIFE SUPPORT

The life-support plant maintains the crew atmosphere — oxygen, pressure and CO₂ — throughout the ship. Oxygen is drawn from reserve and regenerated; CO₂ is removed by scrubbers whose capacity scales with the power and integrity allocated to them. A hull breach vents the affected compartment; the system seals automatically at a pressure threshold and the atmosphere is then rebuilt from reserve. Life support is a **critical** load on the emergency bus and is never load-shed. Sustained crisis oxygen or CO₂ becomes life-threatening in about three minutes — keep a scrubber powered and seal breaches promptly. Monitored on the Life Support display and by the ESMS (O₂ RESERVE LOW, CO₂ SCRUBBER, DECOMPRESSION, LIFE SUPPORT FAILURE).

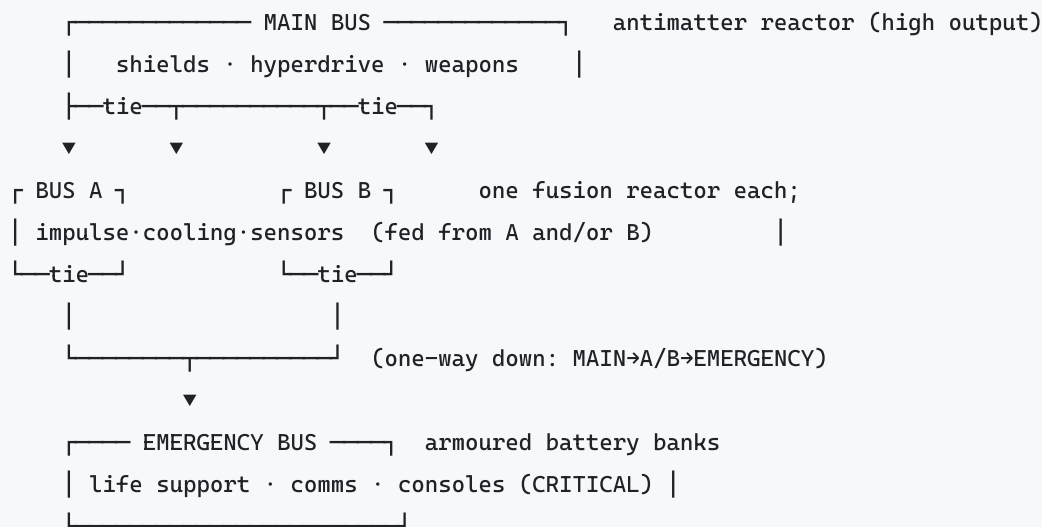
DSC-23 COMMUNICATIONS

Two means of communication: **in-system radio** — effectively instantaneous within a star system — and **subspace** — interstellar, with a light-delay. In-system radio carries hailing, channel traffic, station services while docked, and crew coordination. The **subspace transceiver** (a main-bus system, unallocated by default) carries delayed text and stored-voice traffic between star systems, limited by the transceiver's range. Every ship broadcasts a **transponder** (faction and identity); IFF interrogation and registry checks verify a contact's claimed identity. Comms is a critical load on the emergency bus.

DSC-24 ELECTRICAL POWER

24-00 General

The ship runs a **four-bus power grid** that every other station depends on — impulse engines, hyperdrive, shields, weapons and sensors are all power consumers. Power is tiered by orders of magnitude:



Reverse ties EMER→A / EMER→B (default OPEN): battery feeds A/B for cold-start cooling.

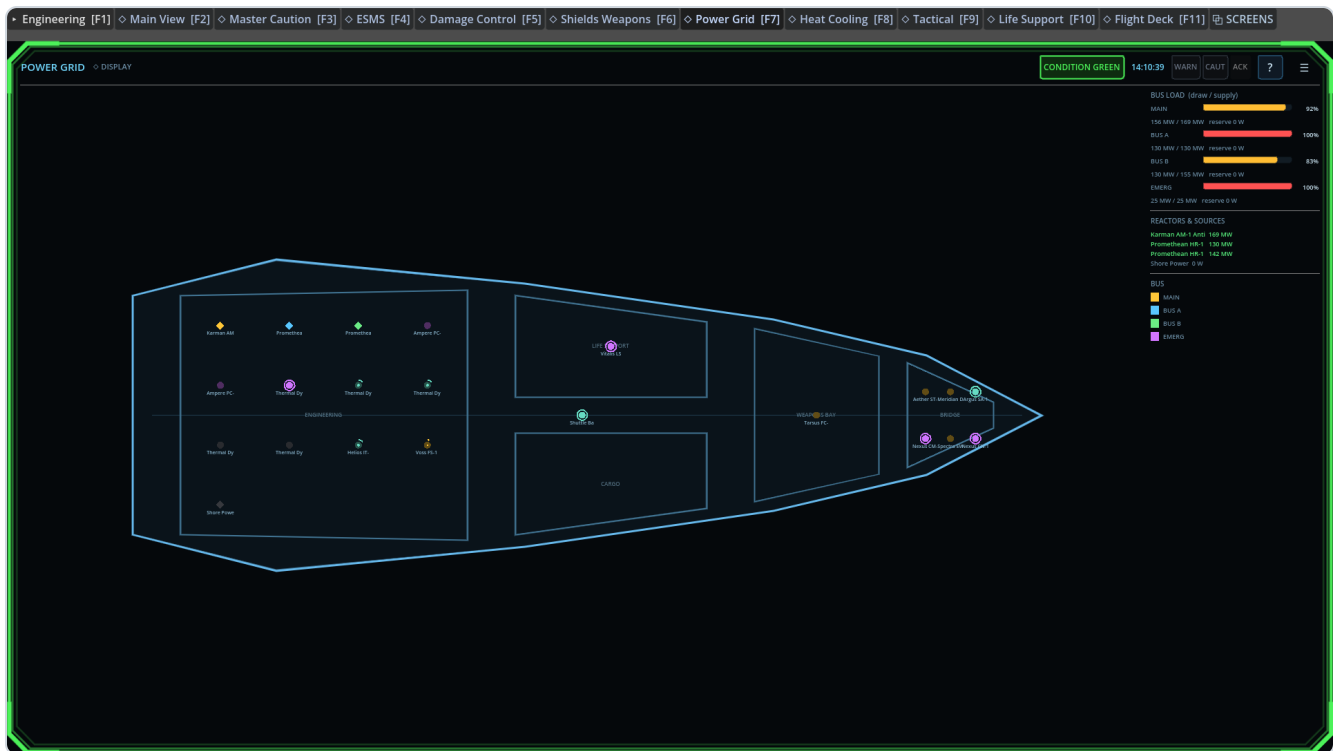


Figure 24-1 — Power Distribution panel (Engineering).

24-10 Power sources

Source	Bus	Role	Notes
Antimatter core(s)	MAIN	Primary, high output	Critical — never shed; consumes antimatter (long endurance); produces heat — requires loop cooling
Fusion reactors	A / B	Auxiliary	One or more per side, by class; burn deuterium; produce heat — require loop cooling
Battery banks	EMERGENCY	Reserve / start	Charge from the emergency bus; latch full at capacity
Shore power	A/B	Dockside	Energizes when docked AND maintenance power is requested (Comms → Station Services); feeds A/B only — never MAIN ; no heat; idles the reactors under AUTO BALANCE

NOTE The number of reactors, battery banks and coolant units **differs by class** (see the Ship Data Sheets, Volume V). The architecture is common to all: an antimatter core on MAIN, fusion reactors on A and B, battery banks on EMERGENCY.

Full equipment specifications: Volume V (TEC).

24-20 Buses & ties

Each source and consumer sits on a bus and may be reassigned to the buses available to it. **Bus ties** push a bus's surplus downstream: MAIN→A, MAIN→B, MAIN→EMERGENCY (and A→EMERGENCY /

B→EMERGENCY). Two **reverse** ties, EMER→A and EMER→B, are **normally OPEN** and exist to let the battery feed A/B during a battery (no-shore) start.

CAUTION Holding a reverse tie (EMER→A/B) drains the battery quickly and raises the ESMS **EMER BUS → A/B** caution. Open it once the fusion reactors carry their buses.

24-30 AUTO BALANCE

AUTO BALANCE trims each source's output to its bus demand, and when docked draws shore power first and idles the reactors. Run it **OFF** during a manual start (sources commanded by hand), then **ON** for normal operations.

24-40 Breakers & bus protection

- **Latched breakers** zero a consumer's draw and **reset only by hand at the panel**. A reset returns the element **OFF** (a source returns with its supply breaker open) so it cannot snap back and re-trip; critical consumers reset straight back on.
- **Bus overload**: sustained negative reserve trips every non-critical consumer, feeding source and tie on that bus. Critical loads (life support, consoles) are never tripped.

24-50 Controls & indications (Engineering)

The Engineering power panel provides, per source and consumer:

Control	Function
Source ON/OFF	Bring a reactor or battery on or off line
Source output	Set a reactor's commanded output
Bus selector	Assign a system to a bus
Bus-tie switches	Open/close each interlock
Battery charge	Enable / inhibit battery recharge
AUTO BALANCE	Automatic source-to-demand trim
Breaker reset	Re-close a tripped breaker
Power allocation	Budget power to each consumer
Presets (× 10)	Save / recall the whole power configuration

Indications: per-bus supply, draw and reserve; per-source output and on-line state; per-consumer power **used vs. assigned**. The **Power Distribution** and **Heat & Cooling** repeater displays mirror these for the whole bridge.

DSC-26 DAMAGE CONTROL

Hull, armour and every system carry an integrity rating. In combat, damage passes **armour** → **hull** → **systems** once a shield facing is down; overheating damages systems internally. The Damage Control panel assigns **repair crews** to the hull, armour or a system; repair takes time and consumes spare parts. A destroyed or overheated system must be **repaired and have its breaker reset** to return. Hull, armour and system integrity are shown on the Damage Control display and annunciated by the ESMS (HULL DAMAGE/BREACH, ARMOUR LOW, SUBSYSTEM DAMAGE).

DSC-27 FLIGHT CONTROLS — HELM

The ship manoeuvres in six degrees of freedom under the impulse engines. Helm commands **rates** — yaw, pitch and roll about the ship's own axes — together with longitudinal throttle and lateral/vertical thrust; the ship flies relative to its own attitude, so a banked turn pulls the nose round like an aircraft. Thrust and rotation are proportional to the power delivered to the engines: at idle the drive sips power, worked hard it draws its full allocation, and with effectively no engine power the ship is adrift — no thrust and no rotation. Sub-light speed is shown in km/s (m/s below 1 km/s, e.g. the final docking creep). Attitude is presented on the forward HUD and the attitude director.

DSC-28 FUEL

The ship carries two fuels: **antimatter** for the main core and **deuterium** for the fusion reactors (the hyperdrive also draws fuel in flight). Antimatter endurance is long — on the order of a week of running. Stores and burn rates are shown on the Fuel panel; a docked ship resupplies through station services. Low stores raise the ESMS FUEL LOW alert; at exhaustion the affected source or drive stops.

DSC-31 INDICATING / ESMS

The **Electronic Spaceship Monitoring System (ESMS)** continuously monitors every system and annunciates faults by priority. A **WARNING** (red) demands immediate action and lights the master warning; a **CAUTION** (amber) lights the master caution; advisories and status memos are shown for awareness. For each active fault the ESMS presents the **drill** — the action list the crew works to STATUS (Part PRO-ABN). Master warning/caution lights and an acknowledge control appear at every station; the full display is on the Comms and Command consoles and a dedicated read-out. Colour philosophy: red = warning, amber = caution, cyan = advisory, green/white = normal.

DSC-33 HYPERDRIVE / FTL

Faster-than-light travel is by the hyperdrive, which requires Main-bus supply. The **power factor** (1–9) sets transit speed: a higher factor is faster but draws more power and loads the drive's cooling loops. Engaging the drive spools a hyperspace field; the ship then transits and reverts at the destination. Holding the field adds heat to the drive loops that bleeds off over a short cool-down after dropout. A gravity well or interdiction field blocks engagement (ESMS FTL INTERDICTED). **Reverting inside a body is fatal** — confirm the course is clear. Normal jump procedure: Part PRO-NOR.

DSC-34 SENSORS & NAVIGATION

The sensor suite builds the tactical picture: a **passive** watch at shorter range and an **active** scan at longer range that also classifies contacts. Detection and classification range and rate scale with the power and integrity allocated to sensors. Contacts are tracked, classified by type and allegiance, and shared with friendly ships over the **datalink**; active illumination ("painting") supports weapon guidance.

Navigation reference

Position is given relative to the system's star as **Bearing / Mark / Range** — bearing and mark are angles about the star, range is distance (km close in, AU at system scale). Sci-fi cardinals orient the crew: **Coreward (COR)** toward the galactic core, **Spinward (SPI)** with galactic rotation, **Rimward (RIM)** toward the rim, **Trailing (TRA)** against rotation. Courses are set to bodies or waypoints and executed by Helm.

DSC-39 ELECTRONIC WARFARE

The electronic-warfare suite (ECM) is a main-bus system, unallocated by default. Powered, it offers several modes — jamming, deception/decoy and counter-measures — that degrade hostile locks and missile seekers at the cost of its own emissions and power draw. Against hostile jamming, counter-counter-measures restore the sensor picture. See also DSC-34 and the countermeasures catalog (Volume V).

DSC-44 WEAPONS / FIRE CONTROL

Three weapon families: **beam** weapons (cannons, pulse lasers, lances) that fire on a charge cycle; **missiles** launched from tubes, including dedicated **nuclear** tubes; and **point-defence** that engages inbound missiles. Engagement requires a **lock**; hit probability depends on accuracy against the target's aspect and range, and active illumination from Sensors improves missile guidance. Weapon output and charge time scale with the power allocated to weapons. Nuclear release follows a multi-station authorisation (Command). The defensive layers — shields, armour, hull — are described in DSC-56 and DSC-26.

DSC-45 SMALL CRAFT & FLIGHT OPERATIONS

Applicability: ships fitted with a strike-craft hangar (carriers and hangar-equipped classes).

Carriers and hangar-equipped ships operate small craft — fighters, bombers and shuttles — from a hangar deck through the **Flight Operations** station: launch and recovery, rearm and refuel, and the wing's orders are managed there. Flight operations are **power-gated** — the bay must be powered to cycle craft — and craft service (rearm/refuel) runs while a craft is docked in the bay, scaling with bay power. Non-carrier classes may still carry a utility shuttle from a small bay.

DSC-56 SHIELDS

Shields protect the ship over **six facings** — fore, aft, port, starboard, dorsal and ventral. Each facing absorbs fire until depleted, then regenerates when not under fire; a collapsed facing exposes armour and hull on that arc (ESMS SHIELD FACING DOWN). Shield strength and regeneration scale with the power allocated to shields — under-powered shields regenerate slowly and hold less (SHIELDS UNDER-POWERED). Absorbing fire heats the shield bubble; sustained heating reduces effectiveness and can damage the generator. Manage facings toward the threat and let them recover when fire slackens.

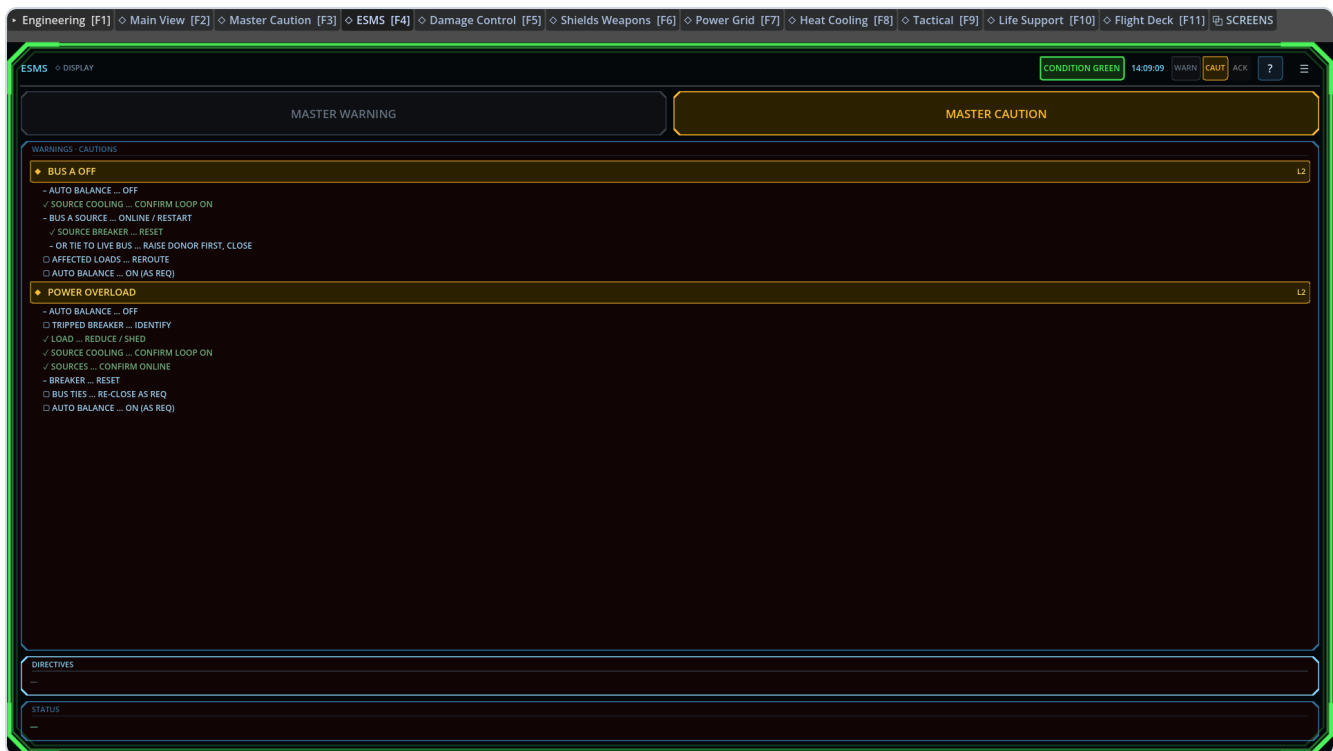
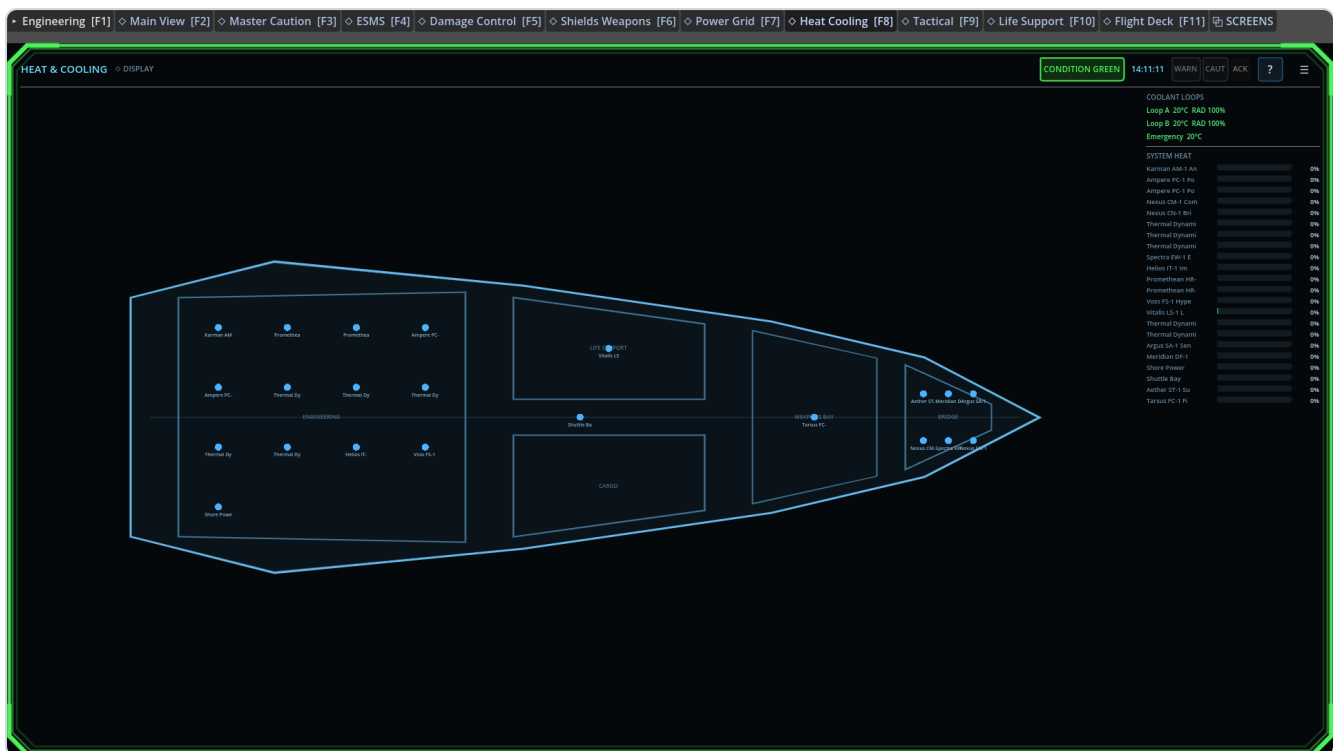
DSC-71 POWER PLANT — REACTORS & COOLING

Power is generated by an **antimatter core** on the main bus and **fusion reactors** on buses A and B (one or more per side, by class), with **battery banks** on the emergency bus. Sources spool to their commanded output and are capped by integrity. **All reactors — antimatter and fusion — produce heat and require loop cooling.**

Cooling runs in **two stages** over three loops (A, B, emergency): **coolant pumps** draw system heat into a loop's coolant, and **radiators** reject that heat to space — the hotter the coolant, the faster it radiates. Pumps run automatically to hold the coolant cold, or manually to a set throttle. Losing one loop is survivable (the other carries the load, running its coolant hot); losing both lets the systems overheat. Coolant temperature, pump and radiator state are shown on the Heat & Cooling display and annunciated by the ESMS (COOLANT HOT, COOLANT LOOP A/B OFF, RADIATOR DAMAGE, OVERHEAT, COOLING LOST).

DSC — Bridge Repeater Displays

The read-only repeater displays below mirror each system for the whole bridge.



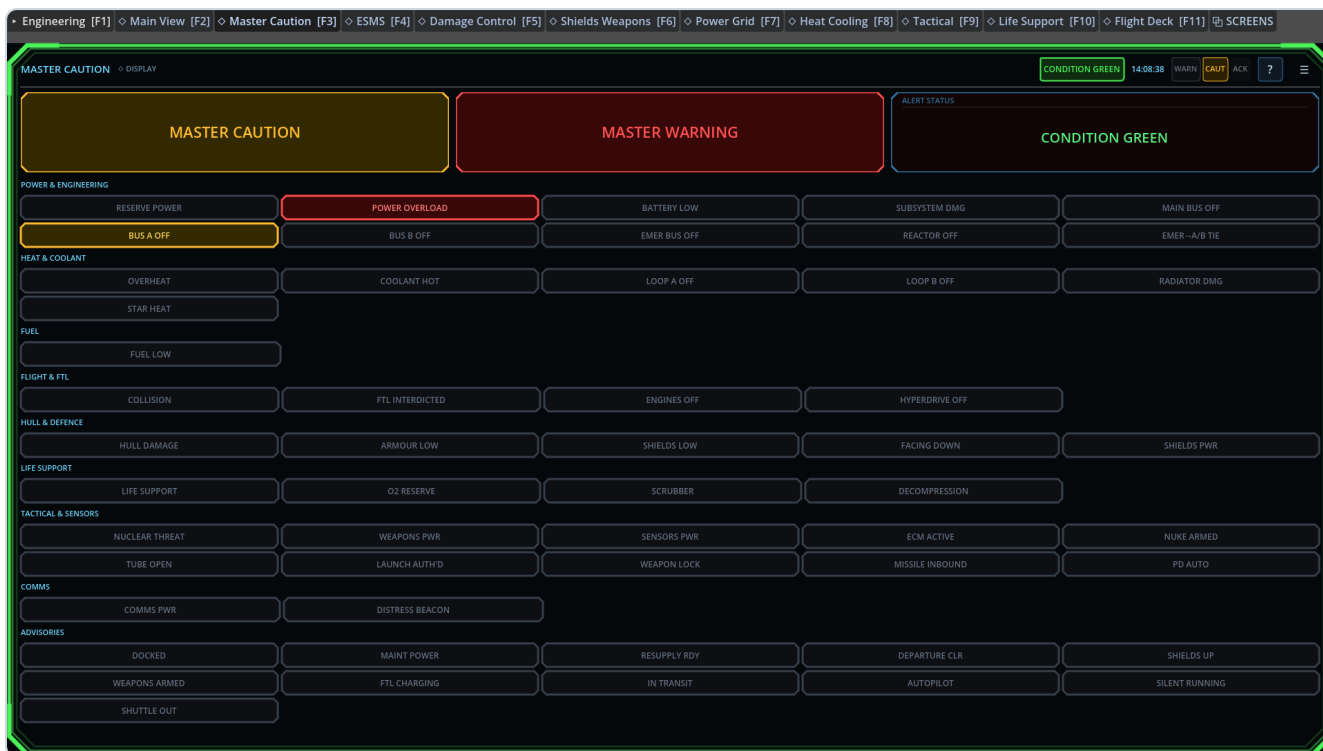


Figure 31-2 — Master Caution annunciator panel.

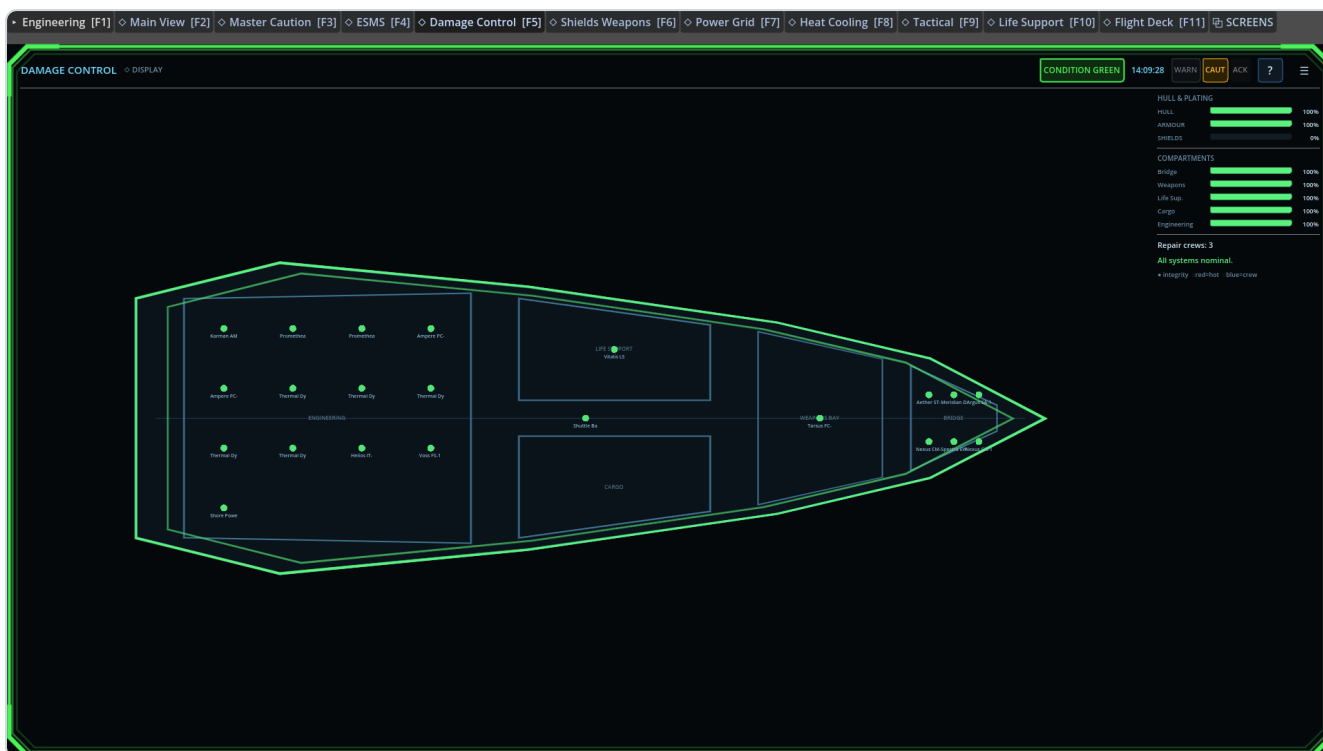


Figure 26-1 — Damage Control display (hull / armour / system integrity).

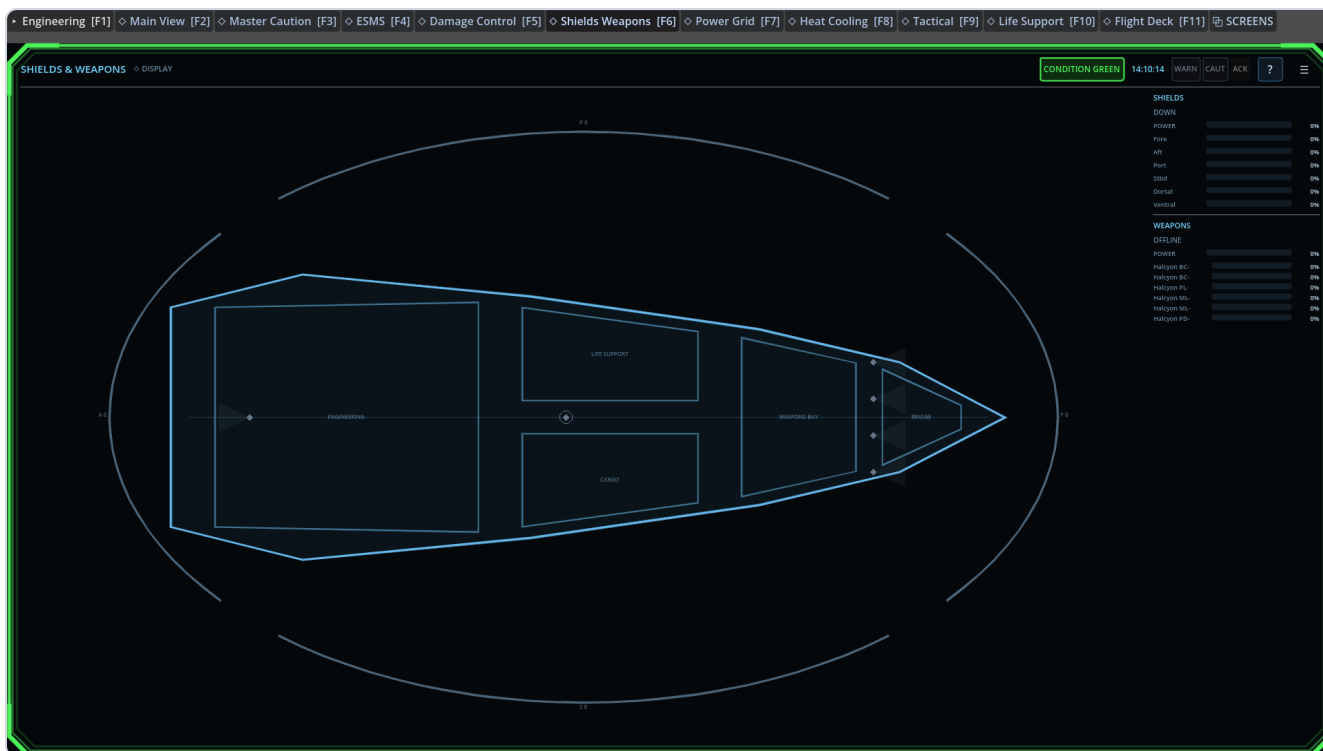


Figure 56-1 — Shields & Weapons status (six facings, mounts).

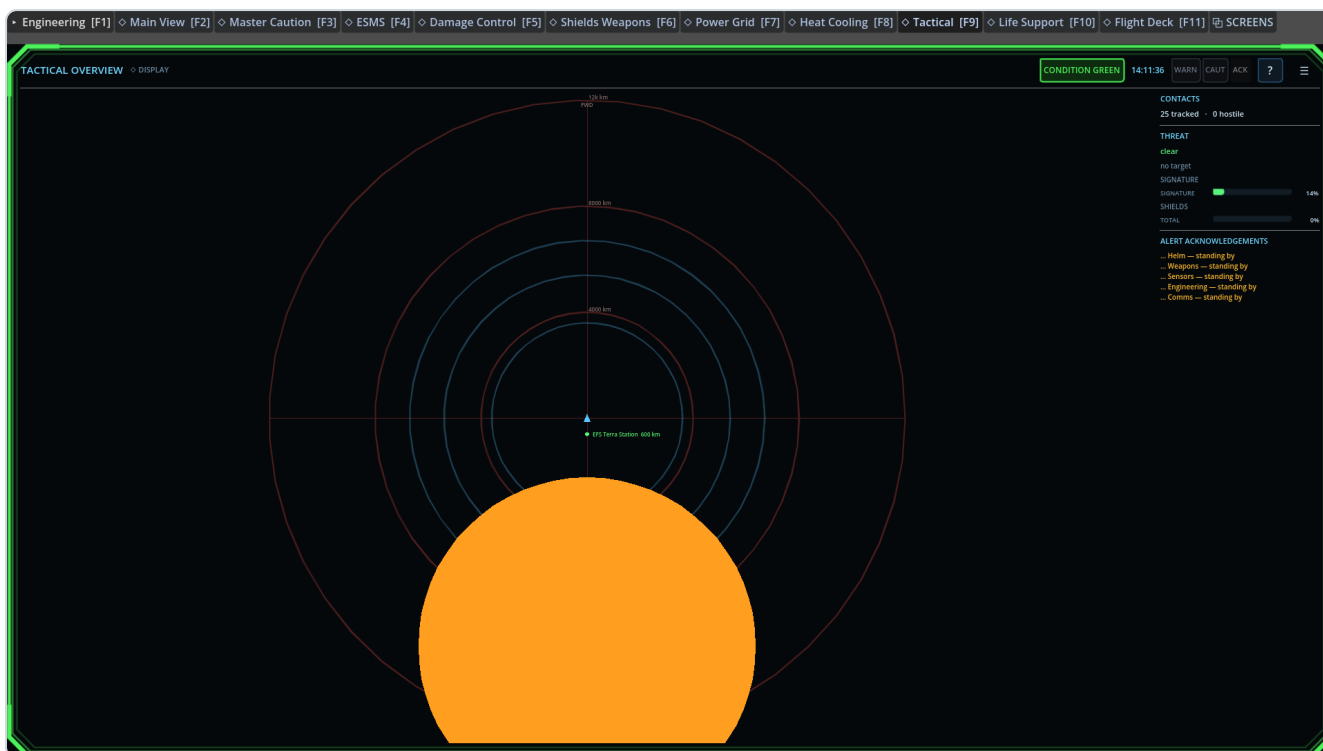


Figure 34-1 — Tactical plot (the sensor picture).

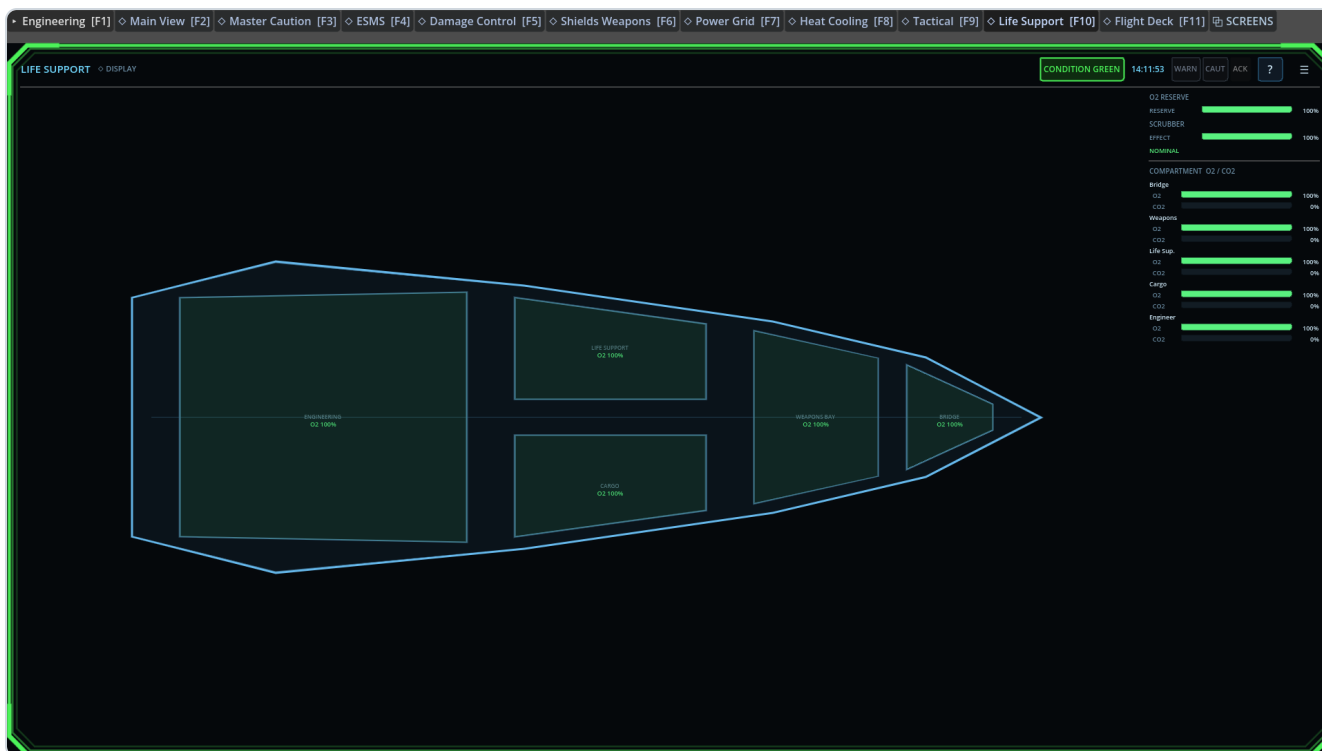


Figure 21-1 — Life Support display (atmosphere, scrubbers).

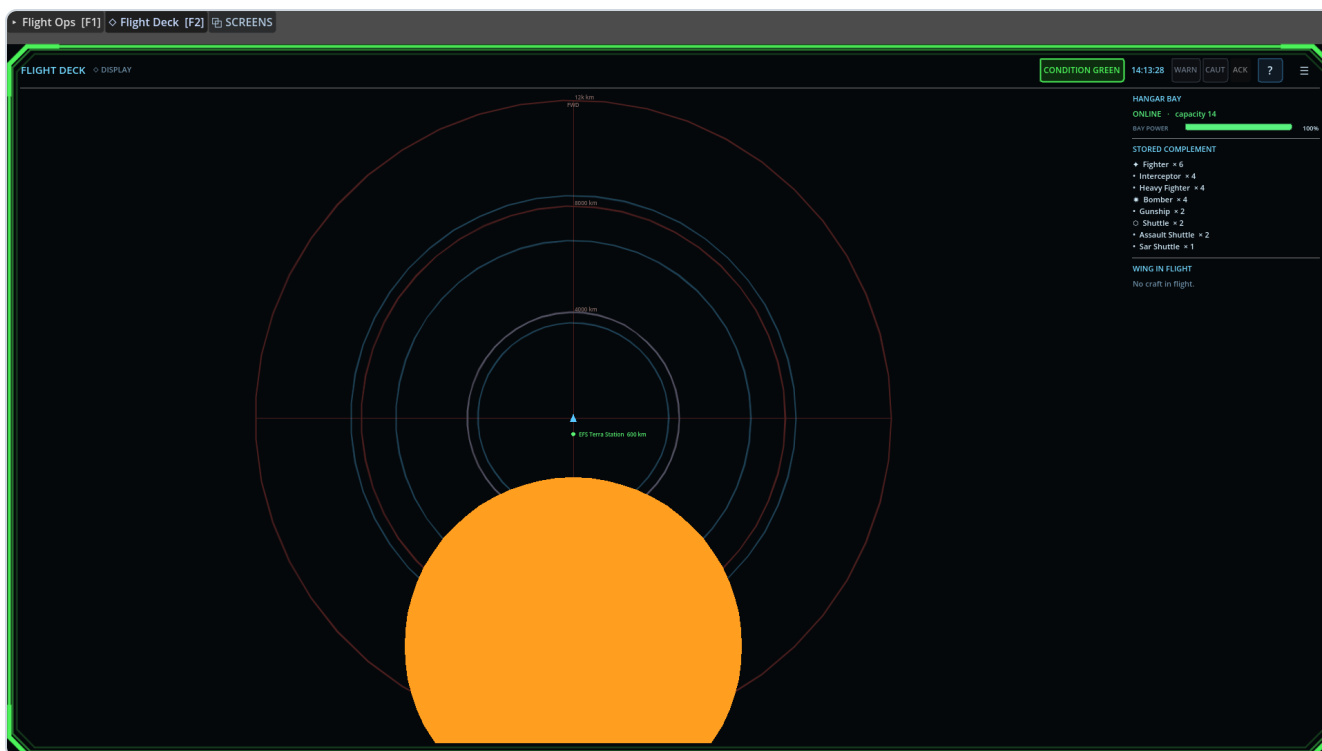


Figure 45-1 — Flight Deck display (carrier-fitted ships).

PART PRO-NOR — NORMAL PROCEDURES

NOTE The expanded procedures below carry the full flow and the *why*; the condensed challenge–response forms are in the **QRH**.

PRO-NOR COLD START — NORMAL (at the dock, on maintenance power)

The normal start is done **docked, with station maintenance (shore) power available**. Maintenance power energizes buses **A and B** while the reactors are still cold, so the start is unhurried.

Initial state: docked; reactors cold (offline); the **EMERGENCY bus is alive on battery** (consoles + life support powered).

CAUTION Maintenance/shore power feeds buses **A and B only — never MAIN**. Main-bus loads (shields, hyperdrive, weapons) stay unavailable until the **antimatter reactor** is online (step 3).

1 — MAINTENANCE POWER

Challenge	Response
Dock	CONFIRM SECURE
Maintenance power	REQUEST (<i>Comms → Station Services</i>) — shore energizes A/B
Buses A / B	CONFIRM UP (<i>shore; ≈ idle hotel load</i>)
Emergency bus	CONFIRM ALIVE (<i>battery</i>)

2 — COOLING

Challenge	Response
Cooling loops A / B	ON
Cooling	AUTO
Loop cooling	CONFIRM RUNNING

3 — REACTOR START

Challenge	Response
Fusion reactor A	ONLINE — allow to spool
Fusion reactor B	ONLINE — allow to spool
Antimatter reactor (MAIN)	ONLINE — allow to spool

Challenge	Response
Sources	CONFIRM ONLINE & SPOOLED (<i>output risen</i>)
Bus MAIN	CONFIRM UP (<i>antimatter on line</i>)

4 — AFTER START

Challenge	Response
AUTO BALANCE	ON (<i>docked: draws shore first, idles the reactors</i>)
Battery charge	ON
Cooling	AUTO — CONFIRM

5 — PRE-DEPARTURE

Challenge	Response
Power allocation	SET shields / impulse / sensors / weapons — or RECALL a preset
ESMS	NO WARNING / NO CAUTION

6 — DEPARTURE (transfer to ship power)

CAUTION Transfer each bus to its reactor **before** dropping shore power. Releasing maintenance power onto a reactor that is not yet tied to the bus with its output up to carry the load will trip the bus.

Challenge	Response
Reactors A / B (and MAIN)	CONFIRM TIED TO BUS (<i>each reactor on its bus</i>)
Reactor output	UP TO CARRY THE BUS (<i>supply $\geq$ bus load before transfer; AUTO BALANCE assists</i>)
Maintenance power	RELEASE — open the shore-power breaker (<i>only now that the reactors hold A/B</i>)
Buses A / B / MAIN	CONFIRM UP ON SHIP POWER (<i>no breaker trip</i>)
Undock	AS REQUIRED

☐ **COLD START COMPLETE** — ship operational on its own power.

NOTE — ABNORMAL (no maintenance power) cold start. Away from a dock, or with shore power unavailable, start on the **battery**: AUTO BALANCE **OFF**; close the reverse ties **EMER** → **A** and **EMER** → **B** to run the cooling pumps off the battery (expect the ESMS **EMER BUS** → **A/B** caution); light the fusion reactors, then the antimatter reactor; once A/B are carried, **OPEN** the reverse ties and bring AUTO BALANCE **ON**. This battery start is filed as an abnormal procedure (PRO-ABN).

PRO-NOR SECURING — FULL SHUTDOWN (at the dock)

The normal shutdown is the reverse of the start and is done **docked, on maintenance power**, so shore carries the hotel load while the reactors come down to cold.

Initial state: operational, returned to the dock.

1 — DOCK & MAINTENANCE POWER

Challenge	Response
Dock	CONFIRM SECURE
Maintenance power	REQUEST (<i>Comms → Station Services</i>)
AUTO BALANCE	ON (<i>shore-first — shore takes the A/B load</i>)

2 — STOP REACTORS

Challenge	Response
Main-bus loads (shields / weapons / hyperdrive)	OFF / DEALLOCATE
Antimatter reactor (MAIN)	OFFLINE
Fusion reactors A / B	OFFLINE (<i>shore now carries A/B</i>)
Sources	CONFIRM OFFLINE

3 — COLD & DARK

Challenge	Response
Cooling	OFF (<i>as required</i>)
Maintenance power	RELEASE (<i>buses A/B go cold</i>)
Emergency bus	CONFIRM ALIVE (<i>battery — consoles + life support retained</i>)

☐ **SHUTDOWN COMPLETE** — ship cold; emergency bus on battery.

PRO-NOR HYPERSPACE JUMP

NOTE Hyperspace speed is set by the drive **power factor** (1–9): a higher factor is faster but draws more Main-bus power and loads the drive's cooling loops. The hyperdrive requires Main-bus supply.

1 — PRE-JUMP

Challenge	Response
Course	SET & CONFIRM (<i>heading / waypoint to destination</i>)
Hyperdrive power	ALLOCATE (<i>Main bus — sufficient for the chosen factor</i>)
Hyperspace factor	SELECT (<i>1–9; higher = faster / hotter</i>)
Cooling	CONFIRM CAPACITY (<i>the jump adds heat to the drive loops</i>)

2 — CHARGE

Challenge	Response
Course	CONFIRM CLEAR (<i>of bodies and contacts</i>)
Hyperdrive	CHARGE (<i>field spools up</i>)
Drive heat / coolant	MONITOR

3 — JUMP

Challenge	Response
Hyperspace	ENGAGE
In transit	MONITOR (<i>drive heat, fuel</i>)

CAUTION Holding the field loads the drive's cooling loops — watch coolant temperature, especially at high factor. Reversion inside a gravity well is hazardous (see PRO-ABN, FTL INTERDICTED / COLLISION).

4 — ARRIVAL

Challenge	Response
Hyperspace	DISENGAGE at the destination
Sub-light flight	RESUME
Drive	COOL DOWN — MONITOR (<i>coils stay hot, bleed off over ~10 s</i>)

☐ **JUMP COMPLETE**

PRO-NOR BATTLE STATIONS

Alert state is set by Command. Two levels escalate the ship's posture:

Level	Label	Trigger	Posture
LEVEL 2	LEVEL 2 BATTLE STATIONS (amber)	Unidentified / potential threat	Shields up ; weapons to standby; all stations manned
LEVEL 1	LEVEL 1 BATTLE STATIONS (red)	Hostile contact confirmed	Weapons up AND shields up ; combat power; damage control manned

Set LEVEL 2 — potential threat

Challenge	Response
Alert	SET LEVEL 2 <i>(Command)</i>
All stations	MANNED / CLOSED UP
Shields	RAISE — ALL FACINGS
Weapons	STANDBY <i>(fire control up; held safe)</i>
Damage control	STANDBY

Set LEVEL 1 — hostile confirmed

Challenge	Response
Alert	SET LEVEL 1 <i>(Command)</i>
Shields	UP — CONFIRM ALL FACINGS
Weapons	ARM & POWER UP <i>(fire control; charge; lock as directed)</i>
Power	COMBAT ALLOCATION <i>(shields + weapons priority)</i>
Damage control	MANNED

Stand down — return to Condition Green

Challenge	Response
Threat	RESOLVED — CONFIRM
Weapons	SAFE / DISARM
Alert	SET GREEN <i>(Command)</i>
Shields	AS REQUIRED
Power	CRUISE ALLOCATION

☐ **STAND DOWN COMPLETE**

PART PRO-ABN — ABNORMAL & EMERGENCY

The abnormal & emergency procedures are the **ESMS drills** — one per fault, grouped by system, each an action list worked top to bottom to **- STATUS -**. They are bound separately as **Part PRO-ABN** (38 drills across POWER & ENGINEERING · HEAT & COOLANT · FUEL · FLIGHT & FTL · HULL & DEFENCE · LIFE SUPPORT · TACTICAL & SENSORS). The condensed forms are in the QRH.

COMPANION VOLUMES

This Operating Manual is issued with: - **Part PRO-ABN** — Abnormal & Emergency (the ESMS drills) - **Volume III — Crew Handling Manual (CHM)** — operating philosophy and the golden rules - **Volume IV — Minimum Equipment List (MEL)** — dispatch limits - **Volume V — Technical & Ordnance Catalog (TEC)** — equipment specifications, weapons, ordnance, hull-code reference, and the per-class Ship Data Sheets - **Quick Reference Handbook (QRH)** — the condensed checklists for use at the console

PART GLOSSARY — ABBREVIATIONS & TERMS

Term	Meaning
ESMS	Electronic Spaceship Monitoring System — the ship's fault-monitoring and alert system
WARNING / CAUTION	Red (immediate) / amber (significant) ESMS alert levels
MASTER WARN / CAUT	The shipwide warning/caution annunciator lights
STATUS	The end of a drill's sensed actions; review the inoperative systems
INOP SYS	Inoperative systems — what is lost while a fault stands
MAIN / A / B / EMERGENCY	The four power buses (high → low tier)
BUS TIE	An interlock that passes a bus's surplus to another bus
AUTO BALANCE	Automatic trim of source output to bus demand
SHORE / MAINTENANCE POWER	Station power fed to buses A/B while docked
CRITICAL LOAD	A load never shed or breaker-tripped (life support, consoles)
PRO-NOR / PRO-ABN	Normal / Abnormal & Emergency procedures
QRH	Quick Reference Handbook
MEL	Minimum Equipment List

Term	Meaning
DSC / LIM / STA	Systems Description / Limitations / system chapter number
HULL CODE	Terse class designation (e.g. PC, FFG, BB); G = guided-missile
IFF	Identification — Friend or Foe (transponder interrogation)
FTL / HYPERSPACE FACTOR	Faster-than-light travel / the drive's speed setting (1–9)
BEARING / MARK / RANGE	Heliocentric position: two angles about the star + distance
COR / SPI / RIM / TRA	Coreward / Spinward / Rimward / Trailing — galactic cardinals
FACING	One of the six shield arcs (fore, aft, port, stbd, dorsal, ventral)
PAINT	Active sensor illumination of a target to support missile guidance
km/s · MW / GW	Sub-light speed unit · power units (1 unit = 1 MW)