FLIGHT DATA FILE

Prelaunch Cockpit Checklist

37-2431-D *FireArc*

Flight Design and Dynamics Division
Unofficial
13 July, 3300

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VEHICLE OPERATIONS DIRECTORATE

PRELAUNCH COCKPIT CHECKLIST
37-2431-D

DRAFT
13 July, 3300

PREPARED BY:

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John Dee
Book Manager
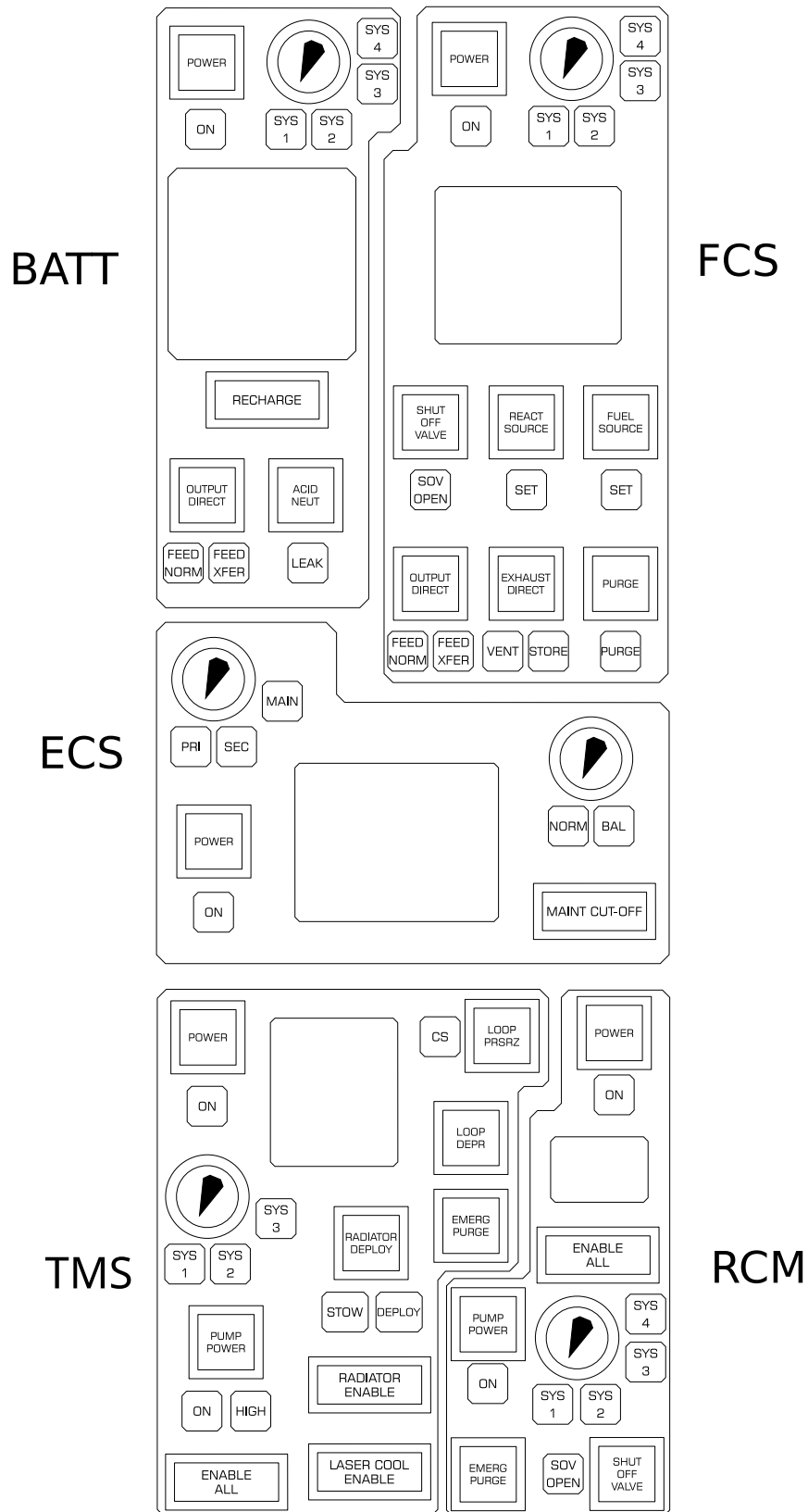
APPROVED BY:

_____

Michael Juliano
Project Director

Figure 0.1: Left-side instrument panel

MES

- ENG 4
- ENG 3
- ENG 1
- ENG 2
- FLUX ENABLE
- ACC LEFT LOCK
- ACC AUTO-BAL
- ACC RIGHT LOCK
- ACC CHARGE
- POWER
- ON
- LENR ENABLE
- PRE-HEAT
- THROT LOCK
- LOCK
- FUEL CUT-OFF
- FUSE ENABLE
- FIRE EXTINGUISHER
- OFF
- ON
- TEMP CO OVRD
- ENG EJECT
- SET
- FUEL SOURCE

COMMS

- POWER
- ON
- XMTR ENABLE
- XMIT MAX
- XMIT HIGH
- ON
- XMIT MIN
- XMIT NORM

NAS

- POWER
- ON
- A/P ALLOW
- SELF
- ORBIT
- ATT REF
- TGT
- PRO-GRD
- R-IN
- RTRO-GRD
- R-OUT
- NORM
- ANTI-NORM
- ATT ALIGN INITIATE
- YAW HOLD
- PITCH HOLD
- ROLL HOLD

MTS

- POWER
- ON
- FUEL SOURCE
- FUEL CUT-OFF
- INJCTR ENABLE
- HELICON COUPLER
- ICH COUPLER
- SUPER-CNDCTR
- BOOST DEFL ENABLE
- CBT MODE
- EBP ENBL
- COLD GAS OVRD
- RCS ONLY
- BSTR ENBL
- NOZZLES ALL ENABLE
- IGNITE/ PROVIDE
- ALL ON
- BURN

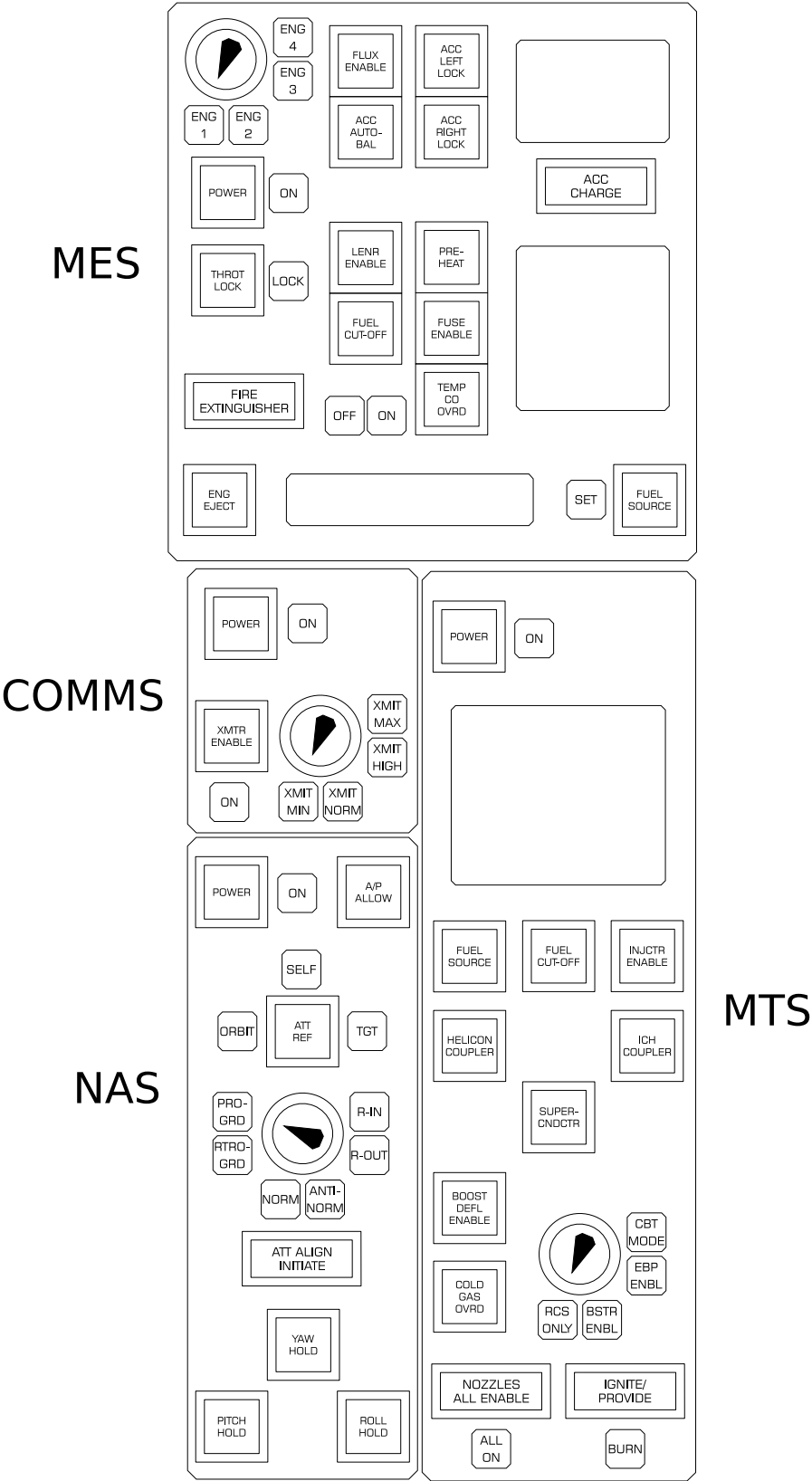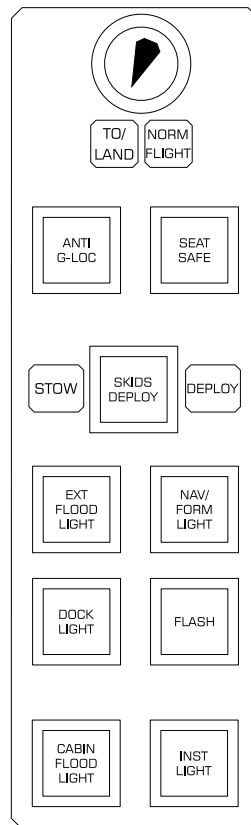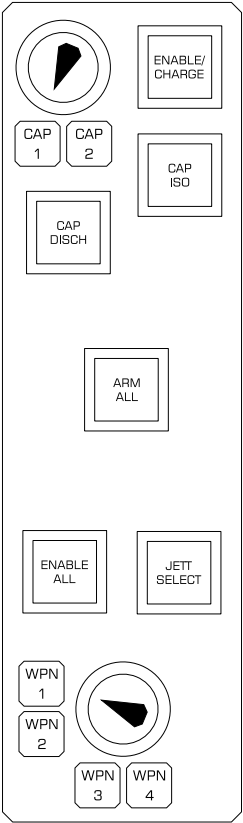Figure 0.2: Right-side instrument panel

CSSM

Figure 0.3: CSSM panel (left side)

WPN

Figure 0.4: Weapons panel (right side)

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9

PRESTART PROCEDURES

PRESTART PROCEDURES

SEAT SAFING

- ■ CSSM   SEAT SAFE — ON

LIGHTING

- ■ CSSM   CABIN FLOOD LIGHT — OFF
- ■ CSSM   INST LIGHT — ON

PRIMARY BUS POWER

- ◊ BATT   SELECT set to SYS1
- ■ BATT   POWER — ON
- ◊ ECS   BUS SELECT set to PRI
- ■ ECS   POWER — ON

...Wait 4 sec for fault alarm, then...

- ■ HMD   FAULT ACK — PRESS

BATTERY CHARGE

- ■ ECS   MAINT CUT-OFF — OFF
- ■ BATT   RECHARGE — ON
- ◊ BATT   SELECT set to SYS2
- ■ BATT   POWER — ON
- ■ BATT   RECHARGE — ON

SECONDARY BUS POWER

- ◊ ECS   BUS SELECT set to SEC
- ■ ECS   POWER — ON
- ◊ ECS   DISTRIBUTION MODE set to BAL

FUEL CELL CHARGE

- ◊ FCS   CELL SELECT set to SYS1
- ■ FCS   POWER — ON

...wait for CORE TEMP rise to start, then...

- ◊ FCS   CELL SELECT set to SYS2
- ■ FCS   POWER — ON

...wait for CORE TEMP rise to start

THERMAL MANAGEMENT

■ TMS   LOOP ENABLE — ON

◊ TMS   LOOP SELECT set to SYS1

■ TMS   LOOP PRESSURIZE — ON

♦ TMS   LOOP PUMP POWER set to ON

◊ TMS   LOOP SELECT set to SYS2

■ TMS   LOOP PRESSURIZE — ON

♦ TMS   LOOP PUMP POWER set to ON

STC DEPARTURE CLEARANCE

■ COMMS   SYSTEM ENABLE — ON

■ COMMS   TRANSMITTER ENABLE — ON

Check in with STC

...wait for STC check in acknowledge, then...

Request departure clearance from STC

...wait for STC departure clearance

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DEPARTURE PROCEDURES

DEPARTURE PROCEDURES

ENGINE INITIALISE

◊ MES   ENGINE SELECT set to ENG1
■ MES   SYSTEM ENABLE — ON
■ MES   LENR ENABLE — ON
■ MES   CHAMBER PRE-HEATER — ON
■ RCM   SYSTEM ENABLE — ON
■ RCM   ENABLE ALL TANKS — ON
■ MES   FUEL SOURCE SELECT — ON
◊ FCS   CELL SELECT set to SYS1
■ FCS   FUEL SOURCE SELECT — ON
■ FCS   REACTANT SOURCE SELECT — ON
◊ FCS   CELL SELECT set to SYS2
■ FCS   FUEL SOURCE SELECT — ON
■ FCS   REACTANT SOURCE SELECT — ON
Request LENR initiation from STC
...wait for STC LENR initiation clearance

MAIN BUS INITIALISE

■ MES   LENR FUEL CUT-OFF — ON
■ MES   LENR FUSE ENABLE - ON
◊ ECS   BUS SELECT set to MAIN
■ ECS   POWER — ON
■ ECS   MAINT CUT-OFF — ON

MTS COLD GAS INITIALISE

■ MTS   SYSTEM ENABLE — ON
■ MTS   FUEL SOURCE SELECT — ON
■ MTS   FUEL CUT-OFF VALVE — ON
■ MTS   FUEL INJECTOR ENABLE — ON
■ MTS   NOZZLE ALL ENABLE — ON

NAVIGATION INITIALISE

■ NAS   SYSTEM ENABLE — ON

SEAT SAFING

◊ CSSM   FLIGHT MODE SELECT set to NORM
FLIGHT

Announce to STC ready to depart