

# Post Insertion

## STS-131

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**Mission Operations Directorate  
Operations Division**

**Final  
November 06, 2009**

National Aeronautics and  
Space Administration

**Lyndon B. Johnson Space Center**  
Houston, Texas





STS-131 POST INSERTION

FINAL (Nov 6, 2009)

## PCN-1 (Feb 5, 2010) Sheet 1 of 1

List of Implemented Change Requests (482s):

PI-00877

PI-00880

Incorporate the following:

1. Replace iii and iv
2. Replace 1-9 and 1-10, 1-13 and 1-14
3. Replace CC 3-3 and CC 3-4

Prepared by:

Cynthia Simon 2/10/10  
Book Manager

Approved by:

Concetta Pasqueri  
Manager, Flight Procedures

Accepted by:

Michael Talt  
FDF Manager

Encl: 8 pages

**File this PCN immediately behind the front cover as a permanent record**




MISSION OPERATIONS DIRECTORATE

**POST INSERTION  
STS-131**

FINAL  
November 06, 2009

PREPARED BY:

  
\_\_\_\_\_  
Cindy A. Simon  
Publication Manager

APPROVED BY:

  
\_\_\_\_\_  
Carolyn Pasqueci  
Manager, Flight Procedures

  
\_\_\_\_\_  
Michael T. Hurt  
Flight Data File Manager

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Incorporates the following:	
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POST INSERTION  
STS-131

**LIST OF EFFECTIVE PAGES**

FINAL 11/06/09  
PCN-1 02/05/10

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iii.....	*	131/FIN 1	1-19 .....	131/FIN
iv.....	*	131/FIN	1-20 .....	131/FIN
v .....		131/FIN	1-21 .....	131/FIN
vi.....		131/FIN	1-22 .....	131/FIN
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1-15.....		131/FIN		
1-16.....		131/FIN		

POST INSERTION CUE CARDS

<u>Title</u>	<u>Ref. Page</u>	<u>Card No.</u>
AFT FLIGHT DECK RECONFIGURATION (Front).....	CC 3-3	PI-1a/131/O/B
(Back).....	CC 3-4	PI-1b/131/O/A
MIDDECK RECONFIGURATION (Front).....	CC 3-5	PI-2a/131/O/A
(Back).....	CC 3-6	PI-2b/131/O/A

\* – Omit from flight book

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POST INSERTION PROCEDURES .....	1-1
ON-ORBIT SWITCH LIST .....	1-17
ORBIT 5/6 DEORBIT .....	2-1
CUE CARD CONFIG .....	3-1

NOTE

The STS-131 Post Insertion contains the nominal procedures from:

MET (DAY/HR:MIN)  
000/00:51 TO 000/02:30 – POST INSERTION (Section 1)

The remaining STS-131 flight phases are conducted using the Ascent Checklist, Flight Plan, Deorbit Prep Book, Entry Checklist, EVA Checklist, and Rendezvous Book.

# POST INSERTION PROCEDURES

**CONFIG GPCs FOR OPS 2** 1

\* For single PASS GPC failure, build PASS set as follows: \*

FAILED GPC	GPC			
	1	2	3	4
1	X	G2	FD	SM
2	G2	X	FD	SM
3	G2	FD	X	SM
4	G2	SM	FD	X

\* In step 1:  
\* Assign strings 1,3 to one GPC and  
\* strings 2,4 to other GPC  
\*

**NOTE**

No keyboard entries or sw throws 10 sec:  
Before and after moding PASS GPCs to RUN  
Before OPS transition or set expansion/contraction  
requests until new OPS base page is displayed

C,P 1. REASSIGN G2FD STRING TO ANOTHER GPC IN MC 1

GNC 0 GPC MEMORY

CONFIG – ITEM 1 +1 EXEC

Modify MC 1 per table

BFC CRT DISP – OFF

GNC, OPS 106 PRO

GNC 0 GPC MEMORY

**CAUTION**

If BFS is standalone (BFC It flash):

BFC CRT DISP – ON

BFS, GNC I/O RESET

BFC CRT DISP – OFF

CONFIG GPC	1	12340
STR 1	1	
2	2	
3	2	
4	4	
PL 1/2	1	
CRT 1	1	
2	2	
3	2	
4	0	
L 1	1	
2	2	
MM 1	1	
2	2	

C3

O6

CRTX

2. MODE G2FD GPC TO OPS 0  
GPC MODE G2FD – STBY (tb-bp)  
– RUN (tb-RUN)

3. LOAD MC 2 INTO G2FD GPC  
PL, GPC/CRT G2FD GPC/X EXEC  
X: PL GPC MEMORY  
CONFIG – ITEM 45 +2 EXEC  
GPC – ITEM 46 +(G2FD) EXEC  
STORE – ITEM 47 EXEC  
Store complete when MC = 02

- \* If no MC = 02 after 30 sec: \*
- \* a. On MCC GO, cycle pwr on MMU 1,2 \*
- \* \*
- \* b. Retry GPC FREEZE DRY (step 3) \*
- \* \*
- \* c. If FD successful, continue with step 4 \*
- \* If not successful and: \*
- \* NO GPCs FAILED: go to step 1, delete GPC 3 \*
- \* from TGT SET, restring 1,3 to GPC 1, and \*
- \* restring 2,4 to GPC 4, try to FD GPC 2 with \*
- \* steps 2,3; then go to step d \*
- \* \*
- \* ONE GPC FAILED: go to step 1, delete \*
- \* attempted FD GPC from TGT SET, restring all \*
- \* strings to lowest ID GPC, try to FD other GPC \*
- \* with steps 2,3; then go to step d \*
- \* \*
- \* d. If FD successful, continue with step 4 \*
- \* If not successful: consider both MMUs failed; \*
- \* on MCC GO, perform transition to OPS 3 \*
- \* \*

4. TRANSITION TO GNC OPS 2

GNC 0 GPC MEMORY

CONFIG – ITEM 1 +2 EXEC

Modify MC 2 per table

GNC, OPS 201 PRO

GNC UNIV PTG

CONFIG GPC		DUAL G2	SINGLE G2
		2	2
STR	1	1	1
	2	2	1
	3	1	1
	4	2	1
PL	1/2	0	0
CRT	1	1	1
	2	2	1
	3	0	0
	4	2	1
L	1	0	0
	2	0	0
MM	1	1	1
	2	2	1

C3  
C2  
F2,F4  
C3

5. TURN OFF BFC LT  
BFC CRT DISP – ON  
BFS, MSG RESET  
√BFC It – off  
CRT DISP – OFF

MET  
DAY 000  
00:30  
TRANS  
DAP  
AUTO  
RT 0.5  
DB 3.5

00:35

Ref ASC for activities from 00:00-00:50 MET

MEMORY CONFIGURATION TABLE				
CONFIG	1	2	3	4(5)
OPS	G1, G6	G2	G3	SM
GPC SEL	1,2,3,4	1,2	1,2,3,4	4
STR	1 1 2 2 3 3 4 4	1 1 2 2 1 1 2 2	1 1 2 2 3 3 4 4	0 0 0 0
P/L	1/2 1	0	1	4
CRT	1 1 2 2 3 3 4 0	1 1 2 2 0 0 2 0	1 1 2 2 3 3 4 0	4 4 0 4
L	1 1 2 2	0 0	0 0	4 0
MM	1 1 2 2	1 1 2 2	1 1 2 2	4 4

1: GNC OMS 2 MNVR COAST | 2: GNC OMS 2 MNVR COAST  
3: BFS, SYS SUMM 2

00:40

00:45

00:50

00:55

01:00

C L4:B,Q,R All cbs closed  
L4:D,E All cbs open  
L4:J cb AC3 φA SIG CONDR HUM SEP - cl  
φB SIG CONDR IMU FAN - cl

**SPECIALIST SEAT EGRESS**

P **PL BUS ACTIVATION**  
R1 PL CAB - MNA  
AUX - ON  
AFT MNB - ON

C,P **CONFIG GPCs FOR OPS 2** [1], 1-2  
(USE DUAL G2 CONFIG)  
If two PASS GPCs failed, √MCC  
If BFS engaged: Go to MAL, DPS, GPC FRP-4

MS **PRELIM MIDDECK CONFIG** (MIDDECK RECONFIGURATION  
Cue Card) [2], 1-15

MS **AFT STATION CONFIG** (AFT FLIGHT DECK  
RECONFIGURATION Cue Card) [3], 1-13

CRTX 6. TRANSITION TO SM OPS 201(401)  
SM, GPC/CRT SM GPC/X EXEC  
[X: SM GPC MEMORY]  
CONFIG - ITEM 1 +4(5) EXEC  
Modify MC 4(5) per table →

CONFIG	4(5)
GPC	00040
STR	1 0 2 0 3 0 4 0
PL	1/2 4
CRT	1 4 2 4 3 0 4 4
L	1 4 2 0
MM	1 4 2 4

NOTE  
Expect multiple msgs, Master  
Alarm, SM Alert

SM, OPS 201(401) PRO  
[SM ANTENNA]

C3

√UPLK - ENA  
[SM 1 DPS UTILITY]  
UL CNTL AUTO - ITEM 35 EXEC

C3

7. SECURE BFS  
BFC CRT DISP - ON  
BFS, GNC, OPS 000 PRO  
[3: BFS, BFS MEMORY]

CRT3

C3

BFC CRT DISP - OFF  
√All IDPs deassigned from BFS

O6

GPC MODE 5 - STBY (tb-RUN)

8. RECONFIG MEDs  
GPC/CRT 0/3 EXEC  
IDP/CRT 3 PWR - OFF  
√4 PWR - ON

C2

F6,F7,F8

GPC/CRT SM GPC/4 EXEC  
Power off MDUs as desired

C3

9. LOAD ORBIT TFLs  
√OI PCMMU FORMAT - GPC  
[SM 62 PCMMU/PL COMM]

CRT

FORMAT:  
FXD - ITEM 1 EXEC (\*)  
SEL ID - ITEM 3 +1 8 8 EXEC  
LOAD - ITEM 4 EXEC  
- √RUN,CPLT  
SEL ID - ITEM 3 +1 0 3 EXEC  
LOAD - ITEM 4 EXEC  
- √RUN,CPLT  
PGM - ITEM 2 EXEC  
[SM ANTENNA]

10. RECONFIG GPCs

O6 GPC MODE 5 – HALT (tb-bp)  
 OUTPUT 5 – NORM (tb-bp)  
 OUTPUT (SM GPC) – TERM (tb-bp)

If no failed GPC:

√All IDPs deassigned from FD GPC  
 GPC MODE (FD GPC) – STBY (tb-bp)  
 – HALT (tb-bp)  
 – STBY (tb-RUN)  
 – HALT (tb-bp)

If single G2 reqd:

IDP/CRTX MAJ FUNC – PL  
 GPC/CRT 2/X EXEC

X: PL GPC MEMORY

CONFIG – ITEM 45 +2 EXEC  
 GPC – ITEM 46 +2 EXEC  
 STORE – ITEM 47 EXEC  
 Store complete when MC = 2 (~30 sec)

√All IDPs deassigned from FD GPC  
 GPC MODE 2 – STBY (tb-bp)  
 – HALT (tb-bp)  
 – STBY (tb-RUN)  
 – HALT (tb-bp)

Perform ERR LOG RESET

GNC 0 GPC MEMORY

ITEM 48 EXEC

SM 0 GPC MEMORY

ITEM 48 EXEC

If PASS GPC failed from ASCENT and dual  
 G2 reqd, use G2FD to form G2 RS:

GNC 0 GPC MEMORY

CONFIG – ITEM 1 +2 EXEC

Modify MC 2 per table →

GNC, OPS 201 PRO

GNC UNIV PTG

If PASS GPC failed from ASCENT and single  
 G2 reqd:

√All IDPs deassigned from FD GPC  
 GPC MODE (FD GPC) – STBY (tb-bp)  
 – HALT (tb-bp)  
 – STBY (tb-RUN)  
 – HALT (tb-bp)

If GPC failed from ASCENT,  
 perform MAL, DPS, GPC FRP-1 as time permits

CONFIG	2
GPC	XY
STR 1	X
2	Y
3	X
4	Y
PL 1/2	0
CRT 1	X
2	Y
3	0
4	Y
L 1	0
2	0
MM 1	X
2	Y

C2  
 CRTX

CRT

PI LOCKER

When all GPC switch configuration complete,  
 unstow, install GPC MODE switchguard

**MET**  
 DAY 000  
**01:00**  
 A1(B1)  
 AUTO  
 PRI  
 RT 0.2  
 DB 5.0  
**01:05**  
**01:10**  
 A5(B1)  
 AUTO  
 PRI  
 RT 0.2  
 DB 5.0  
**01:15**  
 A5(B1)  
 AUTO  
 ALT  
 RT 0.2  
 DB 5.0  
**01:20**  
**01:25**  
 UPLINK  
 VAR  
 PARAM  
 TMBU  
 (IF  
 REQD)  
**01:30**

1: GNC UNIV PTG      2: SM ANTENNA

**MS**      **CONFIG FOR PLBD OPERATIONS** (AFT FLIGHT DECK RECONFIGURATION Cue Card) **4**, 1-14

**MS**      **WCS CONFIG/ACT** (MIDDECK RECONFIGURATION Cue Card) **5**, 1-16

**MS**      **SWITCH CONFIG/GALLEY ACT** (MIDDECK RECONFIGURATION Cue Card) **6**, 1-16

**P**      **LOAD DAP A5**

**01:10**      **MNVR TO PLBD OPENING ATT** (-ZLV, -XVV)

CRT1      √TGT ID      +2  
                  BODY VECT      +3  
                  √P                      +90  
                  √Y                      +0.0  
                  OM                        +0  
                  DAP: A/AUTO/ALT  
                  Initiate TRK

**C**      **RAD ACT** **7**

RAD/PLBD OPS NO-GO FOR FOLLOWING FAILURES			
OMS/RCS	GNC	ECLS/EPS	MECH
2 OMS Engs	2 IMUs	1 H2O or Freon Lp	2 LG DPY METHODS
1 OMS Eng & 1 +X RCS jet	3 RGAs	Both RFCAs	PRES or REDNT
1 OMS Inlet line	3 AAs	Both Cab Fans	WINDOW PANE FAILURE
OMS Prop Tk Leak	3 ADTAs	3 of 6 Av Bay Fans	
Aft RCS He or Prop Leak	3 Elevon or BF Pos Fdbks (same surface)	2 FCs	<b>DPS</b>
<b>COMM</b>	2 FCS Ch (same surface)	Any MN or 3Φ AC Bus	3 GPCs
No Voice and No CMD		Any CNTL or MPC Bus	2 PL MDMs
		3 IMU Fans	2 FF or FA MDMs
			<b>APU/HYD</b>
			2 APU/HYD/WSB

If NO-GO for RAD/PLBD OPS, go to **ORB 3 DEORBIT** **8**

**MS**      **AUTO PLBD OPENING PROCEDURE**, **18**, 1-11

**NOTE:** CAUTION BLOCK on 1-11

**RAD ACT** **7**

**NOTE**  
 If RAD flow has been initiated manually, delay RAD ACT until MCC call or until RAD OUT T low

L1      RAD BYP VLV MODE (two) – AUTO  
                  CNTLR LOOP (two) – AUTO A  
                  Wait 90 sec  
                  √RAD BYP VLV tb (two) – RAD

\* If RAD BYP VLV 1(2) tb – BYP:      \*

\* RAD CNTLR LOOP 1(2) – AUTO B      \*

\* Wait 90 sec      \*

\* √RAD BYP VLV 1(2) tb – RAD      \*

\*      \*

\* If RAD BYP VLV 1(2) tb still BYP or bp:      \*

\* RAD BYP VLV MODE 1(2) – MAN      \*

\* MAN SEL 1(2) – RAD FLOW      \*

\* Hold 3 sec or until tb – RAD      \*

\* If RAD BYP VLV 1(2) tb – bp:      \*

\* RAD BYP VLV MODE 1(2) – MAN      \*

\* CNTLR LOOP 1(2) – AUTO B      \*

\* After 10 sec, RAD BYP VLV MODE 1(2) – AUTO      \*

\* Wait 90 sec      \*

\* √RAD BYP VLV 1(2) tb – RAD      \*

\* If RAD BYP VLV 1(2) tb – bp:      \*

\* RAD BYP VLV MODE 1(2) – MAN      \*

\* MAN SEL 1(2) – RAD FLOW      \*

\* Hold 3 sec or until tb – RAD      \*

\* If RAD BYP VLV 1(2) tb – bp: √MCC      \*

L2      FREON ISOL MODE – AUTO

**ORB 3 DEORBIT** **8**

If NO-GO for RAD/PLB OPS due to 2 FCs failed:  
 Go to CONT DEORB, **LOSS OF 2 FC ORB 2 OR 3**, at TIG-1:30

If NO-GO due to any other failure:  
 Go to CONT DEORB, **LAUNCH DAY ORBIT 3**, at TIG-2:00

**STAR TRKR ACTIVATION/DOOR OPEN** 12

**C** O6 S TRK PWR (two) – ON  
GNC I/O RESET

S TRK DR CNTL SYS (two) – OP (start timer)  
√POS tb (two) – bp

When both tb – OP (8-24 sec), or either tb – bp for > 24 sec,  
CNTL SYS (two) – OFF

\* If tb – bp > 8 sec, notify MCC \*

1: GNC 22S TRK/COAS CNTL

STAR TRK – ITEM 3,4 EXEC

1: GNC 21 IMU ALIGN

RESUME



<b>MET</b>		1: GNC UNIV PTG	2: SM PL BAY DOORS
DAY 000		4: SM PL BAY DOORS	
01:30			
A5(B1)			
AUTO			
ALT			
RT 0.2			
DB 5.0			
01:35	<b>MCC &amp; CREW:</b>	GO for orbit ops	
	C O6	UHF MODE sel – OFF	
	<b>MS</b>	<b>KU-BD ANT DEPLOY</b> (ORB OPS, COMM/INST)	
		<b>KU-BD ACTIVATION</b> (ORB OPS, COMM/INST)	
	<b>C,P</b>	<b>SEAT EGRESS</b>	
	SEATS	CDR,PLT SEAT PWR BUS SEL – OFF (ctr)	
01:40	<b>C,P</b>	<b>CLOTHING CONFIG</b> 9	
	<b>MS</b>	<b>CLOTHING CONFIG</b> (MIDDECK, AFT FLIGHT DECK RECONFIGURATION Cue Cards) 10, 1-14, 1-15	
01:45	<b>ALL</b>	<b>QUICKDON MASKS SETUP</b> 19	
		If time permits: <b>OCAC SETUP</b> (ORB OPS, CREW SYS)	
01:50	<b>C</b>	<b>POST PLBD OPS RAD CONFIG</b> 11	
	<b>MS</b>	<b>SPECIALIST SEAT REMOVAL/STOWAGE</b>	
01:55	<b>C</b>	<b>STAR TRKR ACTIVATION/DOOR OPEN</b> 12, 1-6	
	<b>MS</b>	<b>ESCAPE POLE STOWAGE</b> (MIDDECK RECONFIGURATION Cue Card) 13, 1-16	
02:00			

**CLOTHING CONFIG** 9

Off, stow:  
 Harness, Boots, LES  
 Stow gloves in Helmet  
 Remove radiation dosimeter from LES and insert in inflight garments

Off, stow in Wet Trash:  
 UCD (clamp if used)  
 Emesis Bag, if used (unstow new bag)

**POST PLBD OPS RAD CONFIG** 11

**C** 1: SM 88 APU/ENVIRON THERM

**NOTE**  
 FREON LOOP RAD OUT temps will not drop to normal operating range (< 60 deg) until ~15 min after doors are opened

L1 NH3 CNTLR B(A) – OFF  
 √RAD BYP VLV tb (two) – RAD  
 H2O LOOP 2 BYP MODE – AUTO

CRT1 When FREON LOOP RAD OUT T < 60 deg:  
 L1 HI LOAD EVAP – OFF

1: GNC UNIV PTG

**QUICKDON MASKS SETUP** 19

Connect QDM COMM to HIU  
 Connect QDM O2 to LEH hose  
 Verify operation  
 Temp stow QDM/HIU assembly

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MET		1: GNC UNIV PTG	2: SM ANTENNA
DAY 000		4: SM ANTENNA	
02:00			
A5 (B1)	MS	<b>AIRLOCK SETUP FOR INGRESS</b> (MIDDECK RECONFIGURATION Cue Card) <b>15</b> , 1-16	
AUTO	P	<b>W/B STEAM VENT HTR ACT</b>	
ALT			
RT 0.2	R2	√BLR CNTLR/HTR (three – A	
DB 5.0		PWR (three) – ON	
02:05	C	<b>CONFIG VERNIER CONTROL</b>	
A5 (B1)		√MCC GO for vernier control	
AUTO	O16:F	RJD MANF L5/F5/R5 DRIVER – ON, wait 5 sec	
VERN		DAP: A/AUTO/VERN	
RT 0.05			
DB 1.0			
02:10			
	ALL	<b>CONFIG CONTROLS FOR ON-ORBIT</b>	
		Perform actions on 1-17 thru 1-26	
		Unstow, install HUD covers (two)	
02:15	L2	Remove, stow (on panel L2/FDF FD locker)	
		NWS sw flex extension	
	P	<b>HYD THERMAL CONDITIONING-ENABLE</b>	
	R2	HYD CIRC PUMP (three) – GPC	
02:20	MS	<b>RESET C/W</b> (AFT FLIGHT DECK RECONFIGURATION Cue Card) <b>16</b> , 1-14	
02:25	P	<b>SUPPLY WATER CONFIG</b> <b>14</b>	
	MS	<b>FUEL CELL VI PERFORMANCE PLOT</b> (ORB OPS, <u>EPS</u> )	
02:30		Stow POST INSERTION, go to FLIGHT PLAN, <u>FLT DAY 1</u>	

**SUPPLY WATER CONFIG** **14**

NOTE  
Do not perform until blocks 5 and 6 are performed

L1 FLASH EVAP CNTLR PRI A – OFF  
R11L SPLY H2O DUMP ISOL VLV – OP (tb-OP)  
√XOVR VLV – CL (tb-CL)  
TKB INLET – CL (tb-CL)  
TKA OUTLET – OP (tb-OP)

ML86B:A cb MNB SPLY H2O TKB INLET – op  
MNC SPLY H2O XOVR VLV – op

**SM SYS SUMM 2**

CRT If FREON EVAP OUT TEMP > 41 and ≤ 47 degF:  
L1 RAD CNTLR OUT TEMP – HI  
CRT When FREON EVAP OUT TEMP > 50 degF,  
L1 RAD CNTLR OUT TEMP – NORM, then immediately:  
FLASH EVAP CNTLR PRI B – ON

CRT If FREON EVAP OUT TEMP ≤ 41 or > 47 degF:  
L1 FLASH EVAP CNTLR PRI B – ON

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**DETAILED PLBD OPENING PROCEDURES** 18

- R13L \* If no motion determined visually or 'OP/CL' not blank within 10 sec \*
- \* after cmd, \*
- \* PL BAY DR – STOP, perform MAL, MECH, 9.1a \*
- \* If latch not 'OP' in single mtr time, \*
- \* PL BAY DR – STOP, perform MAL, MECH, 9.1d \*
- \* If door motion stops and not 'OP', \*
- \* PL BAY DR – STOP, perform MAL, MECH, 9.1f \*
- \* If SM GPC fails during this operation, \*
- \* PL BAY DR SYS (two) – DSBL \*
- \* – STOP \*
- \* Perform PASS SM GPC FAIL (ORB PKT, DPS) \*

**CAUTION**

Use MANUAL mode for subsequent BFS PLBD ops if BFS AUTO sequence has been interrupted by reversing latch/door drive direction or if MANUAL mode has already been used during mission

**NOTE**

Note any single mtr operations (continue ops)  
 (single mtr times = 2X listed dual motor times).  
 If one mtr in each of two separate latch gangs fails:  
 PL BAY DR – STOP  
 √MCC

**AUTO PLBD OPENING PROCEDURE**

- |    |      |     |  |
|----|------|-----|--|
| MS | CRT4 | 1.  | SM, OPS 202 PRO or <span style="border: 1px solid black; padding: 2px;">BFS, SM 63 PL BAY DOORS</span> |
|    |      |     | <span style="border: 1px solid black; padding: 2px;">4: SM PL BAY DOORS</span>                         |
|    | R13L |     | √PL BAY DR – STOP  |
|    | CRT4 |     | √PBD SW – STOP   |
|    |      |     | √MAN SEL (ten) – (no *)  |
|    |      |     | √PBD SW BYPASS – (no *)  |
|    |      | 2.  | AC POWER ON – ITEM 1 EXEC (*)  |
|    |      | 3.  | AUTO MODE SEL – ITEM 3 EXEC (*)  |
|    | R13L | 4.  | PL BAY DR SYS (two) – ENA  |
|    | CRT4 |     | √OP/CL STATUS (ten) – CL   |
|    | R13L | 5.  | PL BAY DR – OP   |
|    | CRT4 |     | √CENTER LATCHES 5-8,9-12 (two) – blank,OP (~20 sec)  |
|    |      |     | √1-4,13-16 (two) – blank,OP (~20 sec)  |
|    |      |     | √STBD FWD,AFT LATCHES (two) – blank,OP (~30 sec)   |
|    |      |     | √DOOR – RDY,blank,OP (~63 sec)   |
|    |      |     | √PORT FWD,AFT LATCHES (two) – blank,OP (~30 sec)   |
|    |      |     | √DOOR – RDY,blank,OP (~63 sec)   |
|    | R13L | 6.  | PL BAY DR – STOP   |
|    |      |     | <b>POST-PLBD OPENING CLEANUP</b>   |
|    | CRT4 | 7.  | PL BAY DOOR SYS (two) – DSBL   |
|    |      |     | √OP/CL STATUS (ten) – OP   |
|    |      | 8.  | AC POWER OFF – ITEM 2 EXEC (*)   |
|    |      | 9.  | SM, OPS 201 PRO (if PASS SM)   |
|    |      |     | <span style="border: 1px solid black; padding: 2px;">4: SM ANTENNA</span>                              |
|    | A7U  | 10. | After floodlights ON > 10 min:<br>PL BAY FLOOD (all) – OFF   |

**MANUAL PLBD OPENING PROCEDURE**

- |    |      |     |  |
|----|------|-----|--|
| MS | CRT4 | 1.  | SM, OPS 202 PRO or <span style="border: 1px solid black; padding: 2px;">BFS, SM 63 PL BAY DOORS</span> |
|    |      |     | <span style="border: 1px solid black; padding: 2px;">4: SM PL BAY DOORS</span>                         |
|    | R13L |     | √PL BAY DR – STOP  |
|    | CRT4 |     | √PBD SW – STOP   |
|    |      |     | √MAN SEL (ten) – (no *)  |
|    |      |     | √PBD SW BYPASS – (no *)  |
|    |      | 2.  | AC POWER ON – ITEM 1 EXEC (*)  |
|    |      |     | √AUTO MODE SEL – (no *)  |
|    | R13L | 3.  | PL BAY DR SYS (two) – ENA  |
|    | CRT4 |     | √OP/CL STATUS (ten) – CL   |
|    |      |     | <b>OPEN C/L LATCHES</b>  |
|    |      | 4.  | Select CENTER LATCHES 5-8,9-12 – ITEM 4,5 EXEC (*)   |
|    | R13L | 5.  | PL BAY DR – OP   |
|    | CRT4 |     | √CENTER LATCHES 5-8,9-12 (two) – blank,OP (~20 sec)  |
|    | R13L | 6.  | PL BAY DR – STOP   |
|    | CRT4 | 7.  | Deselect CENTER LATCHES 5-8,9-12 – ITEM 4,5 EXEC (no *)  |
|    |      | 8.  | Select CENTER LATCHES 1-4,13-16 – ITEM 6,7 EXEC (*)  |
|    | R13L | 9.  | PL BAY DR – OP   |
|    | CRT4 |     | √CENTER LATCHES 1-4,13-16 (two) – blank,OP (~20 sec)   |
|    | R13L | 10. | PL BAY DR – STOP   |
|    | CRT4 | 11. | Deselect CENTER LATCHES 1-4,13-16 – ITEM 6,7 EXEC (no *)   |
|    |      |     | <b>OPEN STBD FWD,AFT LATCHES &amp; DOOR</b>  |
|    |      | 12. | Select STBD FWD,AFT LATCHES – ITEM 8,9 EXEC (*)  |
|    | R13L | 13. | PL BAY DR – OP   |
|    | CRT4 |     | √STBD FWD,AFT LATCHES (two) – blank,OP (~30 sec)   |
|    | R13L | 14. | PL BAY DR – STOP   |
|    | CRT4 | 15. | Deselect STBD FWD,AFT LATCHES – ITEM 8,9 EXEC (no *)   |
|    |      | 16. | Select STBD DOOR – ITEM 10 EXEC (*)  |
|    | R13L | 17. | PL BAY DR – OP   |
|    | CRT4 |     | √STBD DOOR – RDY,blank,OP (~63 sec)  |
|    | R13L | 18. | PL BAY DR – STOP   |
|    | CRT4 | 19. | Deselect STBD DOOR – ITEM 10 EXEC (no *)   |
|    |      |     | <b>OPEN PORT FWD,AFT LATCHES &amp; DOOR</b>  |
|    |      | 20. | Select PORT FWD,AFT LATCHES – ITEM 11,12 EXEC (*)  |
|    | R13L | 21. | PL BAY DR – OP   |
|    | CRT4 |     | √PORT FWD,AFT LATCHES (two) – blank,OP (~30 sec)   |
|    | R13L | 22. | PL BAY DR – STOP   |
|    | CRT4 | 23. | Deselect PORT FWD,AFT LATCHES – ITEM 11,12 EXEC (no *)   |
|    |      | 24. | Select PORT DOOR – ITEM 13 EXEC (*)  |
|    | R13L | 25. | PL BAY DR – OP   |
|    | CRT4 |     | √PORT DOOR – RDY,blank,OP (~63 sec)  |
|    | R13L | 26. | PL BAY DR – STOP   |
|    | CRT4 | 27. | Deselect PORT DOOR – ITEM 13 EXEC (no *)   |
|    |      |     | <b>POST-PLBD OPENING CLEANUP</b>   |
|    | R13L | 28. | PL BAY DR SYS (two) – DSBL   |
|    | CRT4 |     | √OP/CL STATUS (ten) – OP   |
|    |      | 29. | AC POWER OFF – ITEM 2 EXEC (*)   |
|    |      | 30. | SM, OPS 201 PRO (if PASS SM)   |
|    |      |     | <span style="border: 1px solid black; padding: 2px;">4: SM ANTENNA</span>                              |
|    | A7U  | 31. | After floodlights ON > 10 min:<br>PL BAY FLOOD (all) – OFF   |

FUNCTION	PLBD CONTROL								PLBD DISPLAY MDM								
	Ref: MA73C:C&D for MCA cbs																
	MTR 1				MTR 2				C	C	O	O	C	R	R	R	O
	AC/ MCA	CNTL	MDM	SYS	AC/ MCA	CNTL	MDM	SYS	A	B	A	B	A	B	C		
LATCH																	
5-8	1/MID3	AB3/AB2	PL1	2	3/MID2	CA3/CA1	PL2	1	1	2	1	2					
9-12	1/MID1	AB3/AB1	PL1	1	3/MID4	CA3/CA2	PL2	2	1	2	1	2					
1-4	1/MID3	AB3/AB2	PL1	2	3/MID2	CA3/CA1	PL2	1	1	2	1	2					
13-16	3/MID4	CA3/CA2	PL2	2	2/MID2	BC3/BC1	PL1	1	2	1	2	1					
S FWD	1/MID1	AB3/AB1	PL1	1	2/MID4	BC3/BC2	PL2	2	1	2	1	2					
S AFT	3/MID4	CA3/CA2	PL2	2	2/MID2	BC3/BC1	PL1	1	2	1	2	1					
S DOOR	1/MID1	AB3/AB1	PL1	1	2/MID4	BC3/BC2	PL2	2									
													1	1	2	2	1
													2	1	2	2	2
P FWD	1/MID1	AB3/AB1	PL1	1	2/MID4	BC3/BC2	PL2	2	1	2	1	2					
P AFT	1/MID3	AB3/AB2	PL1	2	3/MID2	CA3/CA1	PL2	1	1	2	1	2					
P DOOR	3/MID4	CA3/CA2	PL2	2	2/MID2	BC3/BC1	PL1	1									
													2	1	1	2	2
													1	1	1	2	1

**AFT FLIGHT DECK RECONFIGURATION**

**AFT STATION CONFIG 3**

POST SEAT EGRESS  
 O14:D        cb MNA CAB VENT        - op  
   ISOL - op

A14            RCS/OMS HTR FWD RCS        - A AUTO  
   L POD (two)                - A AUTO, B OFF  
   R POD (two)                - A AUTO, B OFF  
   OMS CRSFD LINES (two) - A AUTO, B OFF  
   √FWD,AFT RCS JET (ten) - AUTO

PDIP 1        KU BAND RATE                - LO

A12            APU HTR LUBE OIL LN (three) - A AUTO

ON-ORBIT CONFIG  
 Don headset (if reqd)  
 If WCCS flown, perform STD WCCS CONFIG (ORB OPS,  
COMM/INST)  
 If flight deck handheld mic/speaker operation:

R10            MS AUD PWR                 - AUD/TONE  
   A/G1                        - T/R, tw - 2  
   A/G2                        - RCV, tw - 2  
   A/A                          - RCV, tw - 2  
   ICOM A                     - T/R, tw - 2  
   B                             - RCV, tw - 2  
   XMIT/ICOM MODE sel - PTT/PTT

A11            MS COMM CCU PWR           - OFF  
   Connect HHMIC to MHA  
   MS COMM CCU PWR        - ON

R6, L5        CCU PWR                     - OFF  
 A13            OS AUD SPKR PWR sel       - SPKR  
   MSTR SPKR VOL sel      - as reqd

R6, L5        HIU VOL (two)              - minimum, full ccw

A1L            S-BD PM MODE              - TDRS DATA  
   NSP DATA RATE RCV - HI  
   XMIT - HI  
   CODING (two)             - ON

A1R            S-BD FM DATA SOURCE sel - MMU 2 (rot)  
   AUD CTR VOICE RCD SEL CH 1 sel - OFF  
   2 sel - OFF

R14:C        cb MNB KU ANT HTR - cl  
   UHF EVA (two)          - cl  
           :D        Close left to right all cbs  
           :E        Close left to right all cbs

R11L        IDP/CRT 4 PWR - ON  
 R12        VPU PWR - ON (LED on)  
           AFD 1        - ON (if desired)

L10         Remove, stow VIP, VTR covers

A15         cb CNTL PWR PTU 1,2 (two) - cl  
           PTU/MAIN BUS A,B (two) - ON (tb-ON)  
           OPCU 1,2 V-ADJ (two)    - CMD

O17:A        ATVC (four) - OFF  
           :B        EIU (three) - OFF  
           :D        MEC 1        - OFF, wait 2 sec, then  
   2             - OFF

√PL BUS ACTIVATION complete

L12         SSP1        cb PDIP 1 PWR 2 KuBAND RLY - cl  
   PDIP 1 PWR 1             - cl  
   SW PWR 1                 - cl

SSP2        cb PDIP 2 PWR 2 MPLM RLY    - cl  
   PDIP 2 PWR 1             - cl  
   MPLM KEEL CAM HTR/ILLUM PWR - ON

R12 (OPP)   cb OBSS SW PWR - cl  
           (OBSS)   OBSS SW PWR    - ON  
   RSC PWR         - ON

Unstow, deploy reqd FDF

MET	MS AFT ACTIONS
00:51	<u>SPECIALIST SEAT EGRESS</u>
00:59	<u>AFT STATION CONFIG <span style="border: 1px solid black; padding: 0 2px;">3</span></u>
01:03	<u>CONFIG FOR PLBD OPERATIONS <span style="border: 1px solid black; padding: 0 2px;">4</span></u>
01:41	<u>CLOTHING CONFIG <span style="border: 1px solid black; padding: 0 2px;">10</span></u>
01:54	<u>SPECIALIST SEAT REMOVAL/STOWAGE</u>
02:01	<u>AIRLOCK SETUP FOR INGRESS <span style="border: 1px solid black; padding: 0 2px;">15</span></u>
02:21	<u>RESET C/W <span style="border: 1px solid black; padding: 0 2px;">16</span></u>

## AFT FLIGHT DECK RECONFIGURATION

### CONFIG FOR PLBD OPERATIONS 4

A6U            SET UP LIGHTS  
 ANNUN BUS SEL – MNC

NOTE

Minimum operating time for PLB Floodlights is 10 min.  
 Light must be OFF for minimum of 10 min UNBLOCKED,  
 16 min BLOCKED prior to reuse. ~3 min to full bright

A7U            PL BAY FLOOD AFT (two) – OFF  
    MID (two) – ON  
    FWD (two) – ON  
    BHD – N/A

Record MET: \_\_\_\_/\_\_\_\_:\_\_\_\_:\_\_\_\_

\* If PLB Floodlight not ON to full bright within 5 min: \*  
 \* (Aff) PL BAY FLOOD – OFF \*

SET UP P/TV  
 Perform ACTIVATION, OPERATION (Cue Card, TV), AUTO  
 OPS only for camera A(D)  
 Perform PLBD VTR RECORDING (Cue Card)

### RESET C/W 16

R13U		
PARAMETER NAME	C/W CH	UPPER LIMIT
FREON LOOP EVAP OUT T1	107	1.90V/64.8 deg
T2	117	1.90V/64.8 deg
CABIN O2 FLOW 2	24	4.65V/4.65 LBM/HR

R13U		
PARAMETER NAME	C/W CH	ENA/INH
MPS He TK P C	9	INH
L	19	INH
R	29	INH
MPS He REG P C	39	INH
L	49	INH
R	59	INH
HYD P 1	99	INH
2	109	INH
3	119	INH

### CLOTHING CONFIG 10

Doff, stow:  
 Harness, Boots, LES  
 Stow gloves in Helmet  
 Remove radiation dosimeter from LES and insert in inflight garments

Doff, stow in Wet Trash:  
 UCD (clamp if used)  
 Emesis Bag, if used (unstow new bag)



## MIDDECK RECONFIGURATION

### PRELIM MIDDECK CONFIG 2

**WARNING**  
Eye and skin damage can occur in  
as little as 10 sec

#### INSTALL FILTERS

Don Sunglasses  
Unstow,install: Side Hatch UV Filter and Locking Device, and Pyro  
Box Safing Pin

#### PRESS H2O TKA

ML26C SPLY H2O GN2 TK VENT vlv – PRESS  
A SPLY vlv – OP

#### NOTE

Disregard possible 'S66 WASTE H2O PRES' fault msg

#### COMM CONFIG

Unstow: headsets, handheld mic, and/or wireless comm.  
(see WCCS Cue Card), if flown  
If WCCS flown, perform STD WCCS CONFIG (ORB OPS,  
COMM/INST)

MO42F If middeck handheld mic/speaker ops:  
MIDDECK SPKR AUD A/G 1 – T/R, tw-2  
A/G 2 – RCV, tw-2  
A/A – RCV, tw-2  
ICOM A – T/R, tw-2  
B – RCV, tw-2  
XMIT/ICOM MODE – PTT/PTT  
SPKR PWR – SPKR  
MSTR SPKR VOL – 8

MO39M MIDDECK COMM CCU PWR – OFF  
Connect HHMIC to CCU  
MIDDECK COMM CCU PWR – ON

#### FDF CONFIG

Stow in Helmet Bag: ASCENT Cue Cards, ASC, ASC PKT, SYS AOA  
Unstow Jettison Stowage Bag, mark "Return to Houston"  
Place Helmet Bag in Return to Houston Bag

ML86B:C cb MNA EXT AIRLK HTR LN ZN1,2 (two) – cl  
STRUC Z1/2/3 – cl  
:E cb MNA FC PCM – op

Unstow VW Bags

MET	MS AFT ACTIONS
00:51	<u>SPECIALIST SEAT EGRESS</u>
00:58	<u>PRELIM MIDDECK CONFIG</u> <span style="border: 1px solid black; padding: 0 2px;">2</span>
01:06	<u>WCS CONFIG/ACT</u> <span style="border: 1px solid black; padding: 0 2px;">5</span>
01:07	<u>SWITCH CONFIG/GALLEY ACT</u> <span style="border: 1px solid black; padding: 0 2px;">6</span>
01:41	<u>CLOTHING CONFIG</u> <span style="border: 1px solid black; padding: 0 2px;">10</span>
01:45	<u>QUICKDON MASKS SETUP</u> <span style="border: 1px solid black; padding: 0 2px;">19</span>
01:54	<u>SPECIALIST SEAT REMOVAL/STOWAGE</u>
01:59	<u>ESCAPE POLE STOWAGE</u> <span style="border: 1px solid black; padding: 0 2px;">13</span>
02:01	<u>AIRLOCK SETUP FOR INGRESS</u> <span style="border: 1px solid black; padding: 0 2px;">15</span>

### CLOTHING CONFIG 10

DoFF, stow:  
Harness, Boots, LES  
Stow gloves in Helmet  
Remove radiation dosimeter from LES and insert in  
inflight garments

DoFF, stow in Wet Trash:  
UCD (clamp if used)  
Emesis Bag, if used (unstow new bag)

### QUICKDON MASKS SETUP 19

Connect QDM COMM to HIU  
Connect QDM O2 to LEH hose  
Verify operation  
Temp stow QDM/HIU assembly

## MIDDECK RECONFIGURATION

### **WCS CONFIG/ACT** 5

#### WCS SWITCH CONFIGURATION

ML86B:A      cb MNA H2O LN HTR A            – cl  
           :B                    WASTE H2O DUMP ISOL            – cl  
                                 MNA,MNB VAC VENT ISOL VLV (two) – cl  
                                 WCS CNTLR (two)                – cl  
                                 MNB VAC VENT NOZ HTR            – cl  
           :F                    MNA FLOODS WMC/MO13Q        – cl

MA73C:E      All cbs closed except:  
                                 cb AC3 PL 3Φ – op

ML31C            WASTE H2O DUMP ISOL VLV – OP (tb-OP)  
                                 √VAC VENT ISOL VLV BUS SEL – MNA  
   NOZ HTR                                – ON  
   ISOL VLV CNTL                        – OP (tb-OP)

\* If VAC VENT ISOL VLV CNTL tb – CL or bp:    \*  
 \* VAC VENT ISOL VLV BUS SEL – MNB           \*  
 \* CNTL    – OP (tb-OP) \*  
 \* If VAC VENT ISOL VLV CNTL tb still CL or bp: \*  
 \* √MCC for further actions                     \*

#### WCS ACTIVATION

WCS             Foot/Toe Restraints – down,locked  
                                 VAC VLV – OP  
                                 Unstow urinal hose from Velcro strap, install hose in cradle  
                                 √CRADLE – AUTO  
                                 √MODE – AUTO  
                                 FAN SEP SEL sw – 1  
                                 Unstow hose from cradle (√Airflow)  
                                 √WCS ON It – on  
                                 Stow hose in cradle  
                                 √WCS ON It – off  
                                 Unstow,install WCS Container, Bag & Hose, Mirror, Elbow Bag  
   Dispenser, First Day Clothing  
                                 √Ventline mated in aux Wet Trash  
                                 Perform URINE PRETREAT SETUP  
   (Cue Card, URINE PRETREAT CHANGEOUT)

### **SWITCH CONFIG/GALLEY ACT** 6

MA73C:F      cb AC1 MAR 3Φ                        – cl  
           :G                    cb AC3 GALLEY FAN (three) – cl

ML86B:A      All cbs closed except: MNB H2O LN HTR B – op  
           :B                    All cbs closed  
           :E                    All cbs closed except: FLOOD TNL ADAPT (three) – op  
   FC PCM                                 – op

          :F                    All cbs closed  
           :G                    All cbs closed except: ESS1BC FLOOD TNL ADAPT 1 – op

R11L:G            SPLY H2O GALLEY SPLY VLV – OP (tb-OP)

GALLEY            H2O HTRS (two) – ON  
                                 OVEN/RHS                             – ON

Unstow,install Personal Hygiene Hose

### **ESCAPE POLE STOWAGE** 13

Remove large Port Pin  
           Slide back – Safing Latch  
           Retract,hold Locking Pin (Ring)  
           Remove Large Pin  
           Release Locking Pin (Ring)  
 Remove Stbd PIP Pin  
 Stow Pole  
 Reinstall Large Pin

### **AIRLOCK SETUP FOR INGRESS** 15

MA73C:G	1.	cb AC 1,2 ARLK TNL FAN A,B (six) – cl
MO13Q	2.	AIRLK 2 – ON/OFF
Inner Hatch	3.	Equal vlv cap (two) – remove
	4.	Open hatch per decal
	5.	Equal vlv (two) – OFF, install caps
Tunnel Ext	6.	Unstow Airlock Fan Inlet duct from Tunnel Extension wall
MDDK	7.	Remove diffuser cap from Aft Middeck floor fitting and temp stow
	8.	Attach one end of Airlock Fan Inlet duct to Airlock Fan muffler inlet, attach free end to Aft Middeck floor fitting
AW18A	9.	LTG FLOOD 1(3,4) – ON (as reqd)
MO13Q	10.	AIRLK FAN A – ON
EXT A/L	11.	√Airflow at top of external airlock halo
	12.	√NEG CAB PRESS RELIEF vlv cover (two) – CL (pushed in)

## ON-ORBIT SWITCH LIST

### LEFT SEAT

L1..... 1-19  
 L2..... 1-19

O6..... 1-19  
 O7 ..... 1-20  
 O8..... 1-20

O14..... 1-21  
 O15..... 1-22

### RIGHT SEAT

O16..... 1-22  
 O8 ..... 1-20

R1 ..... 1-18

### AFT

C5 ..... 1-22  
 C6 ..... 1-22  
 C7 ..... 1-22









A11..... 1-23

### MIDDECK-FWD

ML86B..... 1-25

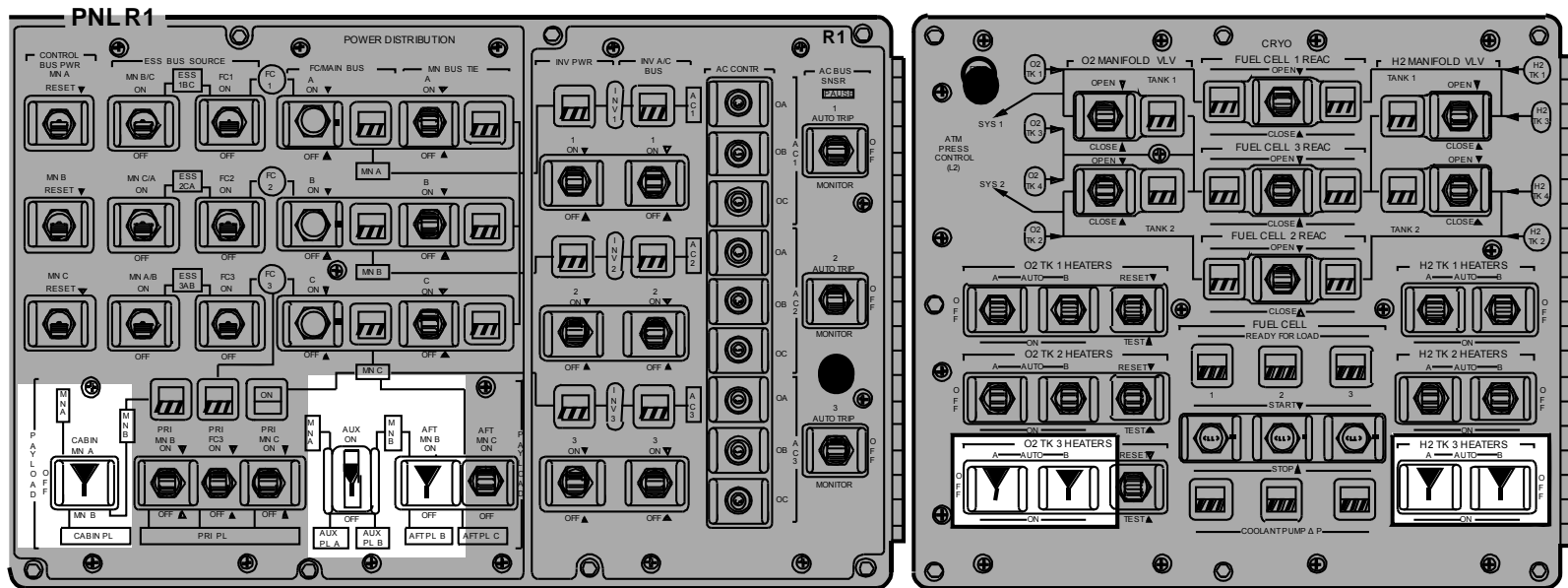
### MIDDECK-AFT

MA73C ..... 1-25  
 MO32M ..... 1-24  
 MO69M ..... 1-24  
 MO63P ..... 1-26

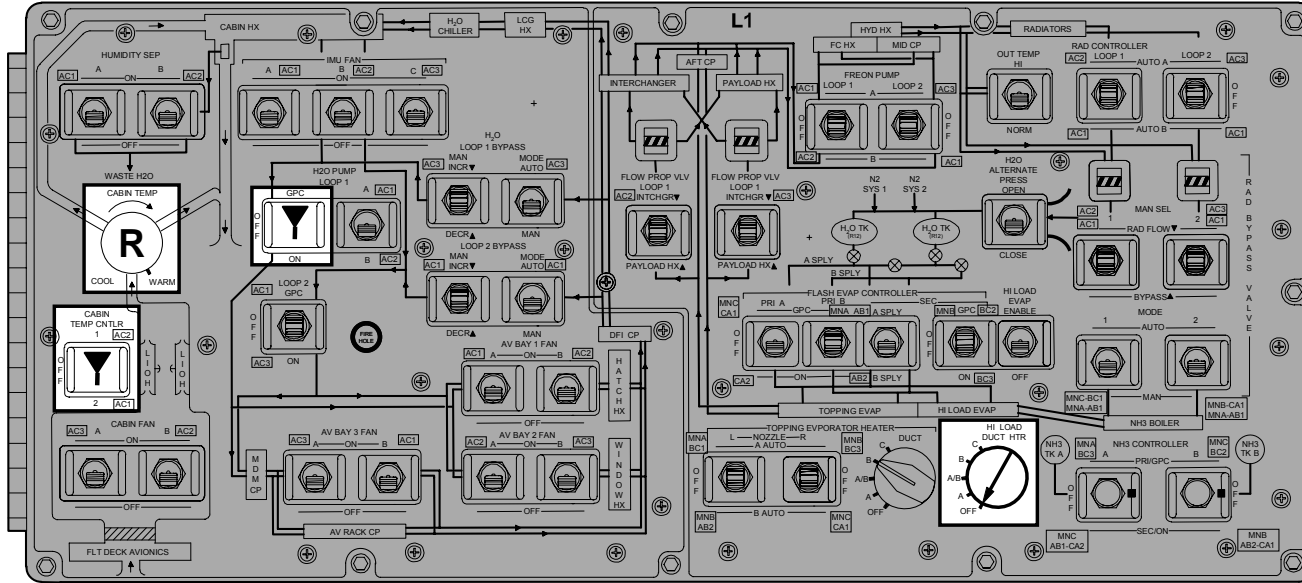
 - Up	<b>R</b> - As reqd	 - Indicates switch/display not checked during ON-ORBIT SWITCH/VERIF
 - Center	 - cb close	Switch/display pictorials are generic representations and are not intended to depict actual switch position. Check MCC if clarification reqd
 - Down	 - cb open	
 - Boxed items indicate switch configured during ON-ORBIT CONFIGURATION	 - White area indicates switch verified during ON-ORBIT SWITCH CONFIGURATION	

<u>CIRCUIT BREAKER SNAP RING COLOR CODES</u>	
<u>COLOR</u>	<u>CONFIGURATION</u>
Red	Open at all times
Green	Open on-orbit only
Yellow	Open ascent, close per procedure
Orange	Open orbit through entry
Blank (no ring)	Always closed or as required

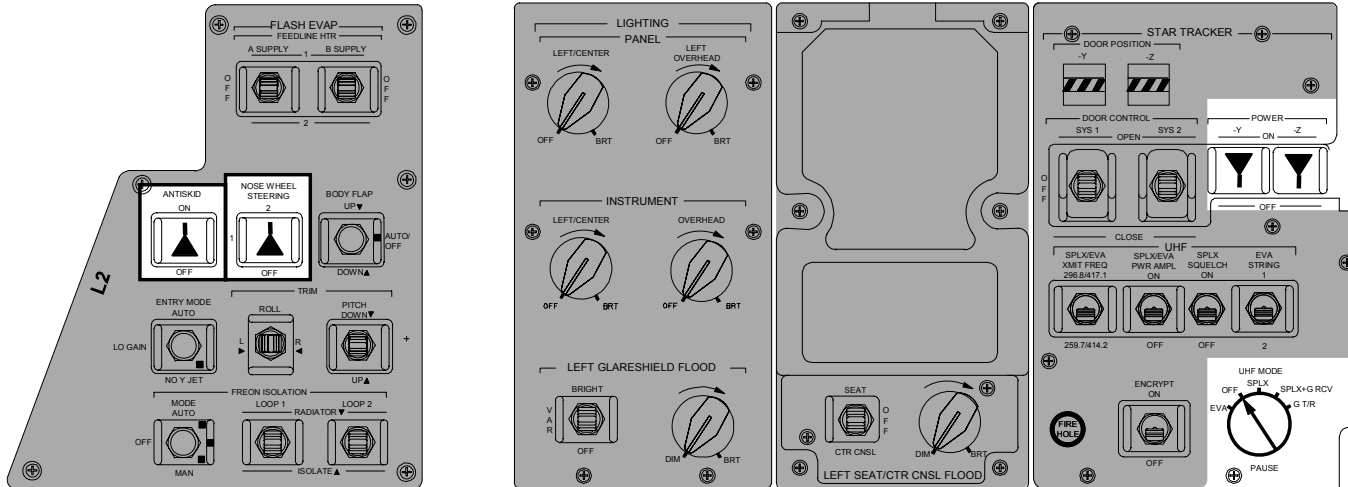
# ALL VEH



# ALL VEH

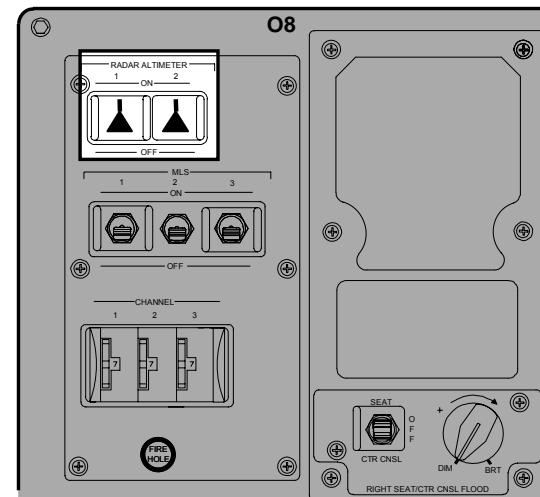
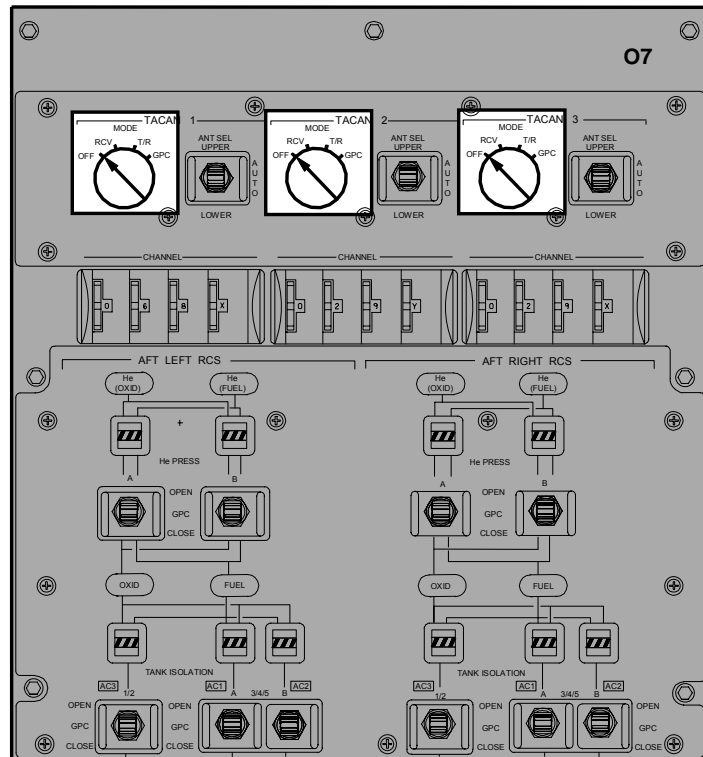


## PNL O6



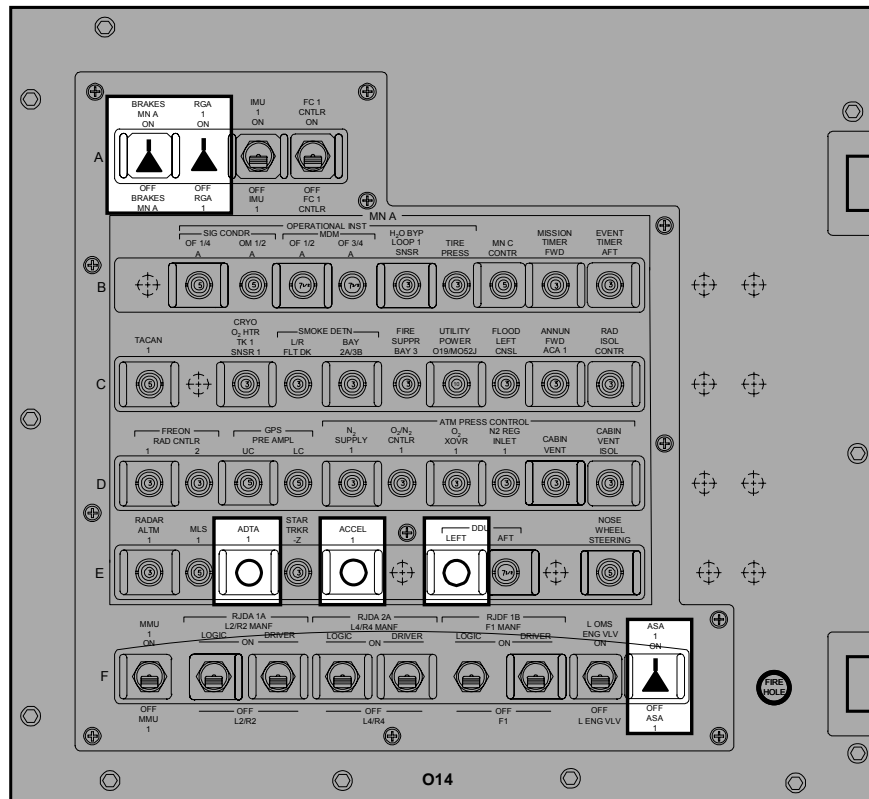
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# OV103, OV104



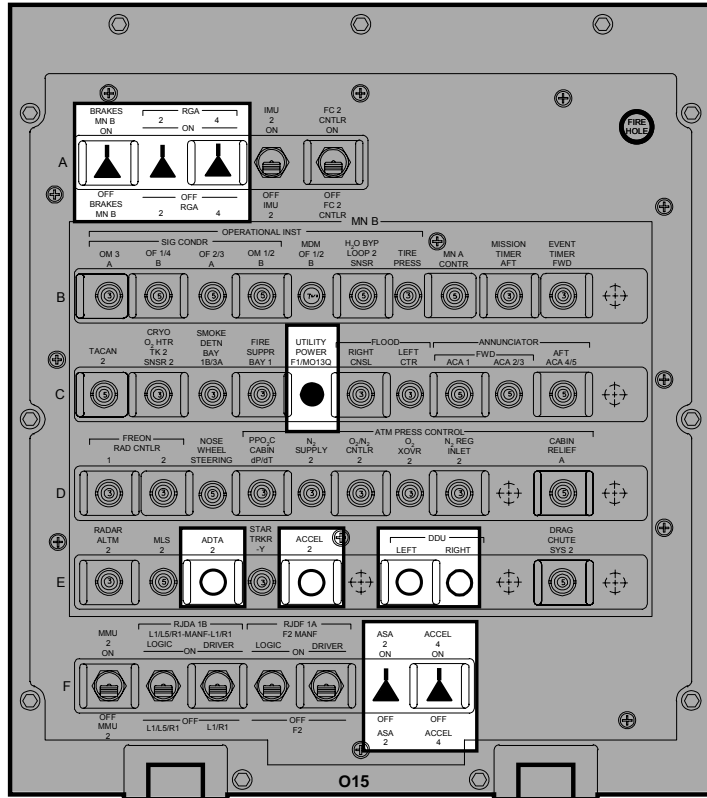
# OV103

## PNL O14

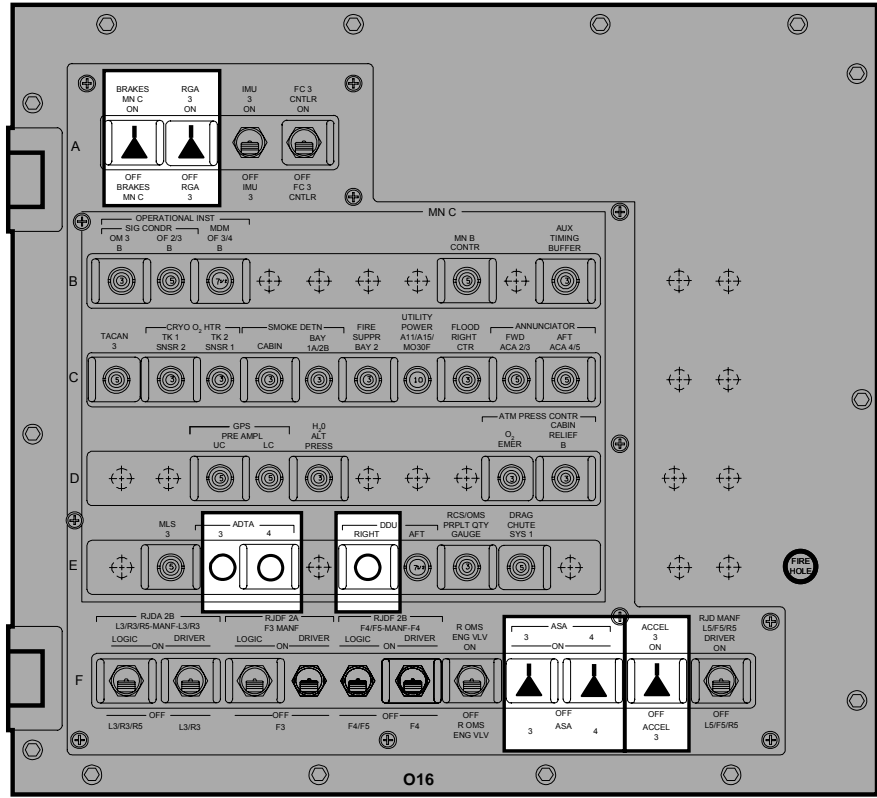


# OV103

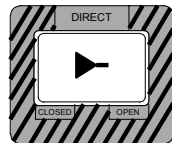
## PNL O15



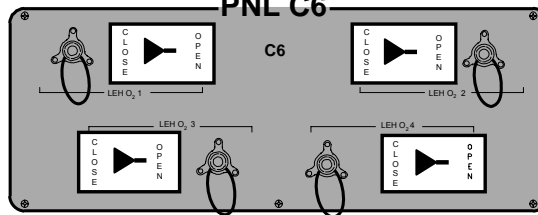
## PNL O16



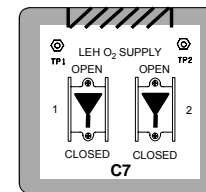
### PNL C5



### PNL C6



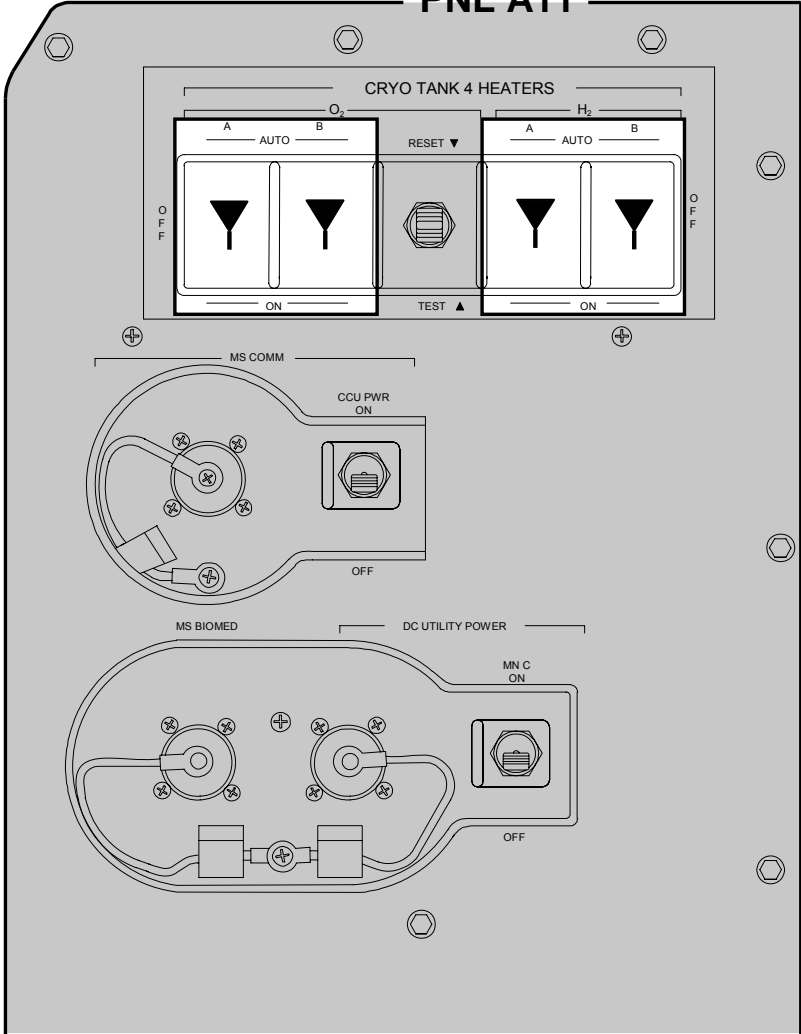
### PNL C7



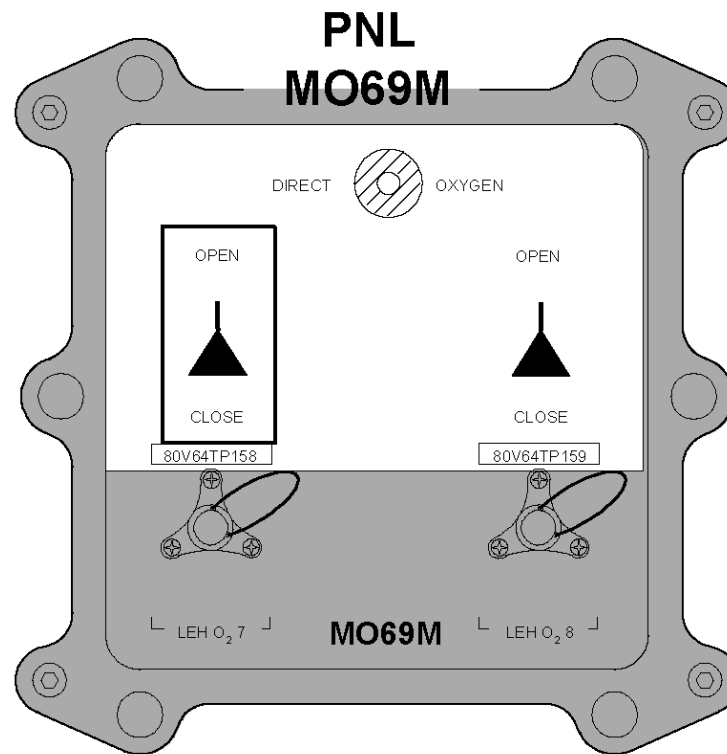
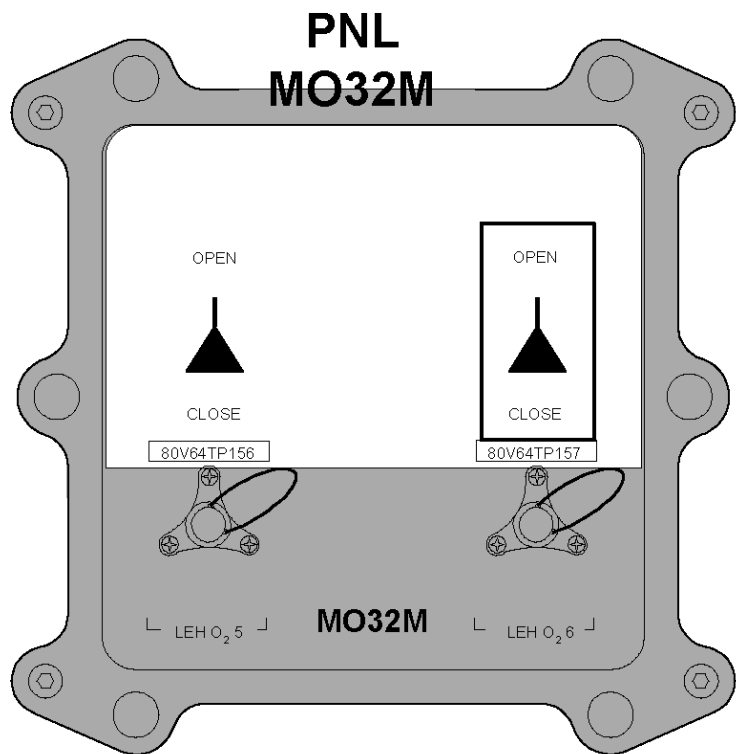


OV103

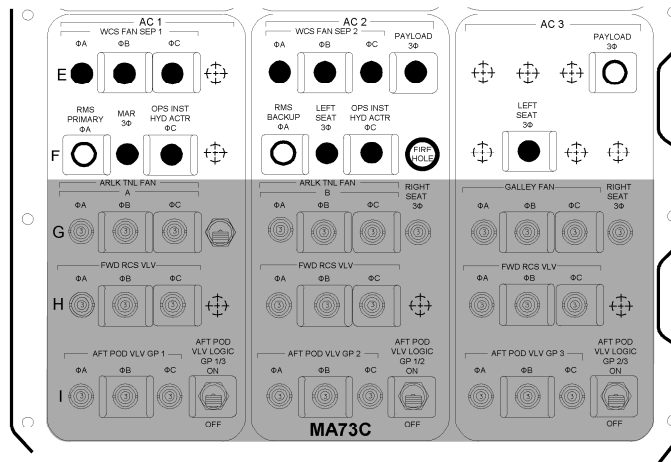
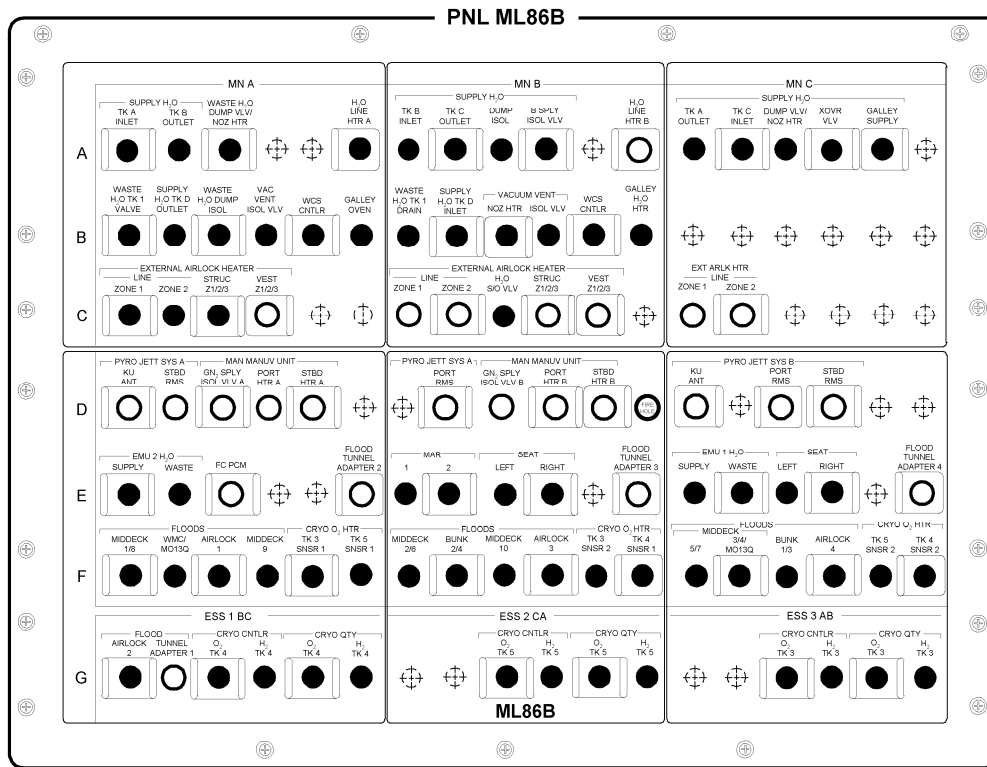
PNL A11



# OV103, OV105

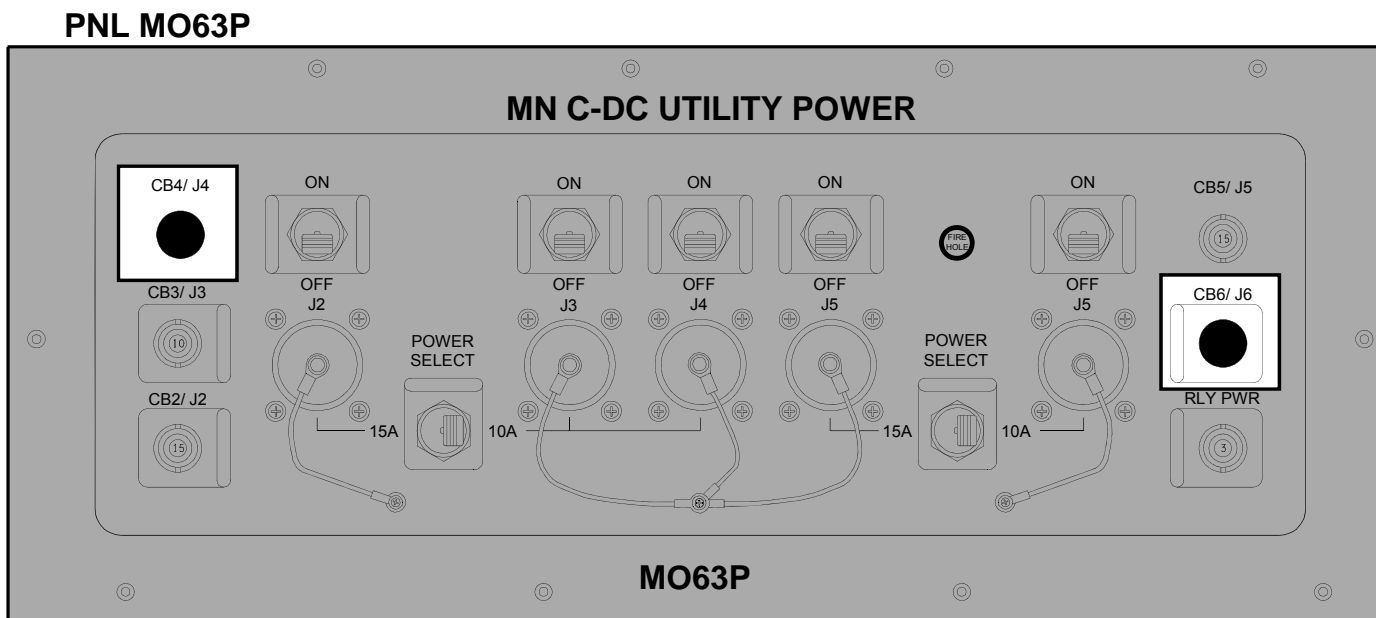


# OV103



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OV103,OV104



# ORBIT 5/6 DEORBIT

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**PEN AND INKS TO NOMINAL POST  
INSERTION FOR ORBIT 5/6 DEORBIT**

WARNING

If AV BAY FIRE (ASC PKT, PWRDN or ORB PKT, PWRDN) has been completed and the associated AC BUS, FF MDM, or FMCA is not recovered, √MCC for Vent Door config. Certain failure combinations will cause multiple vent doors to remain open during entry

<b>MET</b>	<b>ACTIVITY</b>
ASAP	<p>Perform PRIORITY PWRDN GROUPS A &amp; B (ORB PKT, <u>PRIOR PWRDN</u>) with following deltas:</p> <p style="padding-left: 40px;">DELETE: HI LOAD DUCT HTR OFF in Group A Pwrdn PRI RJDs DRIVER &amp; LOGIC OFF in Group B Pwrdn</p> <p>When PRIORITY PWRDN is complete, return to Nominal Post Insertion, 1-5, completing all activities except the following:</p> <p style="padding-left: 40px;">MET 1:28 OPEN PLBDs MET 1:36 KU-BD ANT DEPLOY KU-BD ANT ACTIVATION MET 1:52 POST PLBD OPS RAD CONFIG MET 1:54 SPECIALIST SEAT REMOVAL/STOWAGE MET 1:57 ESCAPE POLE STOWAGE MET 2:01 AIRLOCK SETUP FOR INGRESS MET 2:05 CONFIG VERNIER DRIVERS</p>
1:00	<p><u>If Both Voice and Command Unavailable:</u> Perform GPS INCORPORATION (ORB OPS, <u>GNC</u>)</p>
2:12	<p><u>CONFIG CONTROLS FOR ON-ORBIT</u>, 1-17 thru 1-26 (SWITCH PICTORIALS) <u>NOTE:</u> Some of these switch throws will have been done during PRIORITY POWERDOWNS</p> <p>DELETE: HI LOAD DUCT HTR – OFF, on 1-19</p>
2:30	<p>Add following MNVR: <u>MNVR (TRK) –ZLV, +YVV</u> TG = 2 BV = 3 OM = 270</p>

**PEN AND INKS TO NOMINAL D/O  
PREP FOR ORBIT 5/6 DEORBIT**

<b>TIG-</b>	<b>ACTION</b>	<b>PROCEDURES</b>
3:57	Delete	<u>COLDSOAK INITIATE</u> <b>2</b>
3:35	Delete	<u>SPECIALIST SEAT INSTALLATION</u>
3:30	Move to TIG-2:30	<u>DPS CONFIG FOR D/O PREP</u> <b>4a</b>
3:15	Move to TIG-2:20	<u>DED DISP ENT CONFIG</u> <b>6</b>
3:00	Add	<u>GNC FRP-3</u> (MAL, <u>GNC FRPs</u> ) to recover IMU 2
2:56	Delete	<u>RAD BYPASS/FES C/O</u> (ORB OPS, <u>ECLS</u> )
2:55	Delete	<u>CONFIG FOR PLBD CLOSING</u> <b>7</b>
2:40	Delete	<u>PLBD CLOSING</u> <b>9</b>
2:40	Add	<u>PWRDN BACKOUT</u> (Group A & B) (ORB PKT, <u>PRIOR PWRDN</u> ) (Delete IMU 2 recovery step)
2:26	Delete	<u>POST CLOSING CONFIG</u> <b>10</b>



# CUE CARD CONFIG

**CUE CARD  
CONFIG**

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TOP

### AFT FLIGHT DECK RECONFIGURATION

#### CONFIG FOR PLBD OPERATIONS 4

A6U **SET UP LIGHTS**  
ANNUN BUS SEL – MNC

**NOTE**  
Minimum operating time for PLB Floodlights is 10 min.  
Light must be OFF for minimum of 10 min UNBLOCKED,  
16 min BLOCKED prior to reuse. ~3 min to full bright

A7U PL BAY FLOOD AFT (two) – OFF  
MID (two) – ON  
FWD (two) – ON  
BHD – N/A

Record MET: \_\_\_\_/\_\_\_\_:\_\_\_\_:\_\_\_\_

- \* If PLB Floodlight not ON to full bright within 5 min: \*
- \* (Aff) PL BAY FLOOD – OFF \*

**SET UP P/TV**  
Perform ACTIVATION, OPERATION (Cue Card, TV), AUTO  
OPS only for camera A(D)  
Perform PLBD VTR RECORDING (Cue Card)

#### RESET C/W 16

R13U		
PARAMETER NAME	C/W CH	UPPER LIMIT
FREON LOOP EVAP OUT T1	107	1.90V/64.8 deg
T2	117	1.90V/64.8 deg
CABIN O2 FLOW 2	24	4.65V/4.65 LBM/HR

R13U		
PARAMETER NAME	C/W CH	ENA/INH
MPS He TK P C	9	INH
L	19	INH
R	29	INH
MPS He REG P C	39	INH
L	49	INH
R	59	INH
HYD P 1	99	INH
2	109	INH
3	119	INH

#### CLOTHING CONFIG 10

Doff, stow:  
Harness, Boots, LES  
Stow gloves in Helmet  
Remove radiation dosimeter from LES and insert in inflight garments

Doff, stow in Wet Trash:  
UCD (clamp if used)  
Emesis Bag, if used (unstow new bag)

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CC 3-4

PI/131/FIN

HOOK  
VELCRO

HOOK  
VELCRO

HOOK  
VELCRO

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VELCRO

TOP

### MIDDECK RECONFIGURATION

#### PRELIM MIDDECK CONFIG 2

**WARNING**

Eye and skin damage can occur in  
as little as 10 sec

**INSTALL FILTERS**

Don Sunglasses

Unstow, install: Side Hatch UV Filter and Locking Device, and Pyro  
Box Safing Pin

**PRESS H2O TKA**

ML26C

SPLY H2O GN2 TK VENT vlv - PRESS  
A SPLY vlv - OP

**NOTE**

Disregard possible 'S66 WASTE H2O PRES' fault msg

**COMM CONFIG**

Unstow: headsets, handheld mic, and/or wireless comm.  
(see WCCS Cue Card), if flown

If WCCS flown, perform STD WCCS CONFIG (ORB OPS,  
COMM/INST)

MO42F

If middeck handheld mic/speaker ops:

- MIDDECK SPKR AUD A/G 1 - T/R, tw-2
- A/G 2 - RCV, tw-2
- A/A - RCV, tw-2
- ICOM A - T/R, tw-2
- B - RCV, tw-2
- XMIT/ICOM MODE - PTT/PTT
- SPKR PWR - SPKR
- MSTR SPKR VOL - 8

MO39M

MIDDECK COMM CCU PWR - OFF  
Connect HHMIC to CCU  
MIDDECK COMM CCU PWR - ON

**PDF CONFIG**

Stow in Helmet Bag: ASCENT Cue Cards, ASC, ASC PKT,  
SYS AOA

Unstow Jettison Stowage Bag, mark "Return to Houston"

Place Helmet Bag in Return to Houston Bag

ML86B:C

cb MNA EXT AIRLK HTR LN ZN1,2 (two) - cl  
STRUC Z1/2/3 - cl

:E

cb MNA FC PCM - op

Unstow VW Bags

MET	MS AFT ACTIONS
00:51	<b>SPECIALIST SEAT EGRESS</b>
00:58	<b>PRELIM MIDDECK CONFIG <span style="border: 1px solid black; padding: 0 2px;">2</span></b>
01:06	<b>WCS CONFIG/ACT <span style="border: 1px solid black; padding: 0 2px;">5</span></b>
01:07	<b>SWITCH CONFIG/GALLEY ACT <span style="border: 1px solid black; padding: 0 2px;">6</span></b>
01:41	<b>CLOTHING CONFIG <span style="border: 1px solid black; padding: 0 2px;">10</span></b>
01:45	<b>QUICKDON MASKS SETUP <span style="border: 1px solid black; padding: 0 2px;">19</span></b>
01:54	<b>SPECIALIST SEAT REMOVAL/STOWAGE</b>
01:59	<b>ESCAPE POLE STOWAGE <span style="border: 1px solid black; padding: 0 2px;">13</span></b>
02:01	<b>AIRLOCK SETUP FOR INGRESS <span style="border: 1px solid black; padding: 0 2px;">15</span></b>

#### CLOTHING CONFIG 10

DoFF, stow:

Harness, Boots, LES  
Stow gloves in Helmet  
Remove radiation dosimeter from LES and insert in  
inflight garments

DoFF, stow in Wet Trash:

UCD (clamp if used)  
Emesis Bag, if used (unstow new bag)

#### QUICKDON MASKS SETUP 19

Connect QDM COMM to HIU  
Connect QDM O2 to LEH hose  
Verify operation  
Temp stow QDM/HIU assembly

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CC 3-5

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TOP

MIDDECK RECONFIGURATION

WCS CONFIG/ACT 5

WCS SWITCH CONFIGURATION

ML86B:A      cb MNA H2O LN HTR A                    - cl  
 :B              WASTE H2O DUMP ISOL                    - cl  
                  MNA,MNB VAC VENT ISOL VLV (two) - cl  
                  WCS CNTLR (two)                    - cl  
 :F              MNB VAC VENT NOZ HTR                    - cl  
                  MNA FLOODS WMC/MO13Q               - cl

MA73C:E      All cbs closed except:  
                  cb AC3 PL 3Φ - op

ML31C        WASTE H2O DUMP ISOL VLV - OP (tb-OP)  
 √VAC VENT ISOL VLV BUS SEL - MNA  
                  NOZ HTR                                    - ON  
                  ISOL VLV CNTL                           - OP (tb-OP)

\* If VAC VENT ISOL VLV CNTL tb - CL or bp: \*  
 \*                    VAC VENT ISOL VLV BUS SEL - MNB       \*  
 \*                    CNTL                                    - OP (tb-OP) \*  
 \*                    If VAC VENT ISOL VLV CNTL tb still CL or bp: \*  
 \*                    √MCC for further actions                    \*

WCS ACTIVATION

WCS          Foot/Toe Restraints - down,locked  
                  VAC VLV - OP  
                  Unstow urinal hose from Velcro strap, install hose in cradle  
 √CRADLE - AUTO  
 √MODE - AUTO  
                  FAN SEP SEL sw - 1  
                  Unstow hose from cradle (√Airflow)  
 √WCS ON It - on  
                  Stow hose in cradle  
 √WCS ON It - off  
                  Unstow,install WCS Container, Bag & Hose, Mirror, Elbow Bag  
                  Dispenser, First Day Clothing  
 √Ventline mated in aux Wet Trash  
                  Perform URINE PRETREAT SETUP  
                  (Cue Card, URINE PRETREAT CHANGEOUT)

SWITCH CONFIG/GALLEY ACT 6

MA73C:F      cb AC1 MAR 3Φ                                - cl  
 :G              cb AC3 GALLEY FAN (three) - cl

ML86B:A      All cbs closed except: MNB H2O LN HTR B - op  
 :B              All cbs closed  
 :E              All cbs closed except: FLOOD TNL ADAPT (three) - op  
                  FC PCM                                        - op  
 :F              All cbs closed  
 :G              All cbs closed except: ESS1BC FLOOD TNL ADAPT 1 - op

R11L:G        SPLY H2O GALLEY SPLY VLV - OP (tb-OP)

GALLEY        H2O HTRS (two) - ON  
                  OVEN/RHS                                    - ON

Unstow,install Personal Hygiene Hose

ESCAPE POLE STOWAGE 13

Remove large Port Pin  
 Slide back - Safing Latch  
 Retract,hold Locking Pin (Ring)  
 Remove Large Pin  
 Release Locking Pin (Ring)  
 Remove Stbd PIP Pin  
 Stow Pole  
 Reinstall Large Pin

AIRLOCK SETUP FOR INGRESS 15

MA73C:G      1.    cb AC 1,2 ARLK TNL FAN A,B (six) - cl  
 MO13Q        2.    AIRLK 2 - ON/OFF  
 Inner Hatch 3.    Equal vlv cap (two) - remove  
                  4.    Open hatch per decal  
                  5.    Equal vlv (two) - OFF, install caps  
 Tunnel Ext 6.    Unstow Airlock Fan Inlet duct from Tunnel Extension wall  
 MDDK        7.    Remove diffuser cap from Aft Middeck floor fitting and temp stow  
                  8.    Attach one end of Airlock Fan Inlet duct to Airlock Fan muffler inlet,  
                             attach free end to Aft Middeck floor fitting  
 AW18A        9.    LTG FLOOD 1(3,4) - ON (as reqd)  
 MO13Q        10.   AIRLK FAN A - ON  
 EXT A/L      11.   √Airflow at top of external airlock halo  
                  12.   √NEG CAB PRESS RELIEF vlv cover (two) - CL (pushed in)

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CC 3-6

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**POST INSERTION**

**STS  
131**