

# Post Insertion

## STS-120

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**Mission Operations Directorate  
Operations Division**

**Final, Rev A  
September 5, 2007**

National Aeronautics and  
Space Administration

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



***United Space Alliance***

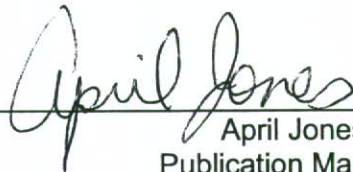


MISSION OPERATIONS DIRECTORATE

**POST INSERTION  
STS-120**

FINAL, REV A  
September 5, 2007

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POST INSERTION  
STS-120

**LIST OF EFFECTIVE PAGES**

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REV A 09/05/07

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POST INSERTION CUE CARDS

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AFT FLIGHT DECK RECONFIGURATION (Front).....	CC 3-3	PI-1a/120/O/C
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\* – Omit from flight book

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NOTE

The STS-120 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-120 flight phases are conducted using the Ascent Checklist, Flight Plan, Deorbit Prep Book, Entry Checklist, EVA Checklist, and Rendezvous Book.



# POST INSERTION PROCEDURES



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

00:35

00:40

00:45

00:50

00:55

A1(B1)  
AUTO  
PRI  
RT 0.2  
DB 5.0

01:00

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 0 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

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

MS **SPECIALIST SEAT EGRESS**

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

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

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

MS **AFT STATION CONFIG** (AFT 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

C3 √UPLK - ENA  
SM 1 DPS UTILITY  
UL CNTL AUTO - ITEM 35 EXEC

C3 7. SECURE BFS  
BFS, GNC, OPS 000 PRO  
3: BFS, BFS MEMORY

CRT3 BFS, GNC, OPS 000 PRO  
C3 BFS, GNC, OPS 000 PRO  
BFS, GNC, OPS 000 PRO  
√All IDPs deassigned from BFS

O6 GPC MODE 5 - STBY (tb-RUN)

C2 8. RECONFIG MEDs  
GPC/CRT 0/3 EXEC  
IDP/CRT 3 PWR - OFF  
√4 PWR - ON

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

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

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

PI LOCKER

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

C2  
 CRTX

CRT



**STAR TRKR ACTIVATION/DOOR OPEN** 12

C 06 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

**SUPPLY WATER CONFIG** 14

NOTE

Do not perform until blocks 5 and 6 are performed

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

**ELBOW CAMR PICTURE** 20

Document Elbow Camr position via DSC760 photo from W10 per the following:  
Lens, 28-70 mm set at 70 mm (stowed in Vol 3B)  
Exp Mode – P  
√Meter – Matrix  
Sun(Earth)shine reqd  
Video from Camr A acceptable as backup

<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 ANT ACTIVATION</b> (ORB OPS, COMM/INST)	
	C,P	<b>SEAT EGRESS</b>	
01:40	C,P	<b>CLOTHING CONFIG</b> 9	
	<b>MS</b>	<b>CLOTHING CONFIG</b> (MID,AFT Cue Cards) 10, 1-14, 1-15	
01:45	ALL	<b>QUICKDON MASKS SETUP</b> 19	
		If time permits: <b>OCAC SETUP</b> (ORB OPS, CREW.SYS)	
01:50	C	<b>POST PLBD OPS RAD CONFIG</b> 11	
	<b>MS</b>	<b>SPECIALIST SEAT REMOVAL/STOWAGE</b>	
01:55	C	<b>STAR TRKR ACTIVATION/DOOR OPEN</b> 12, 1-6	
	<b>MS</b>	<b>ESCAPE POLE STOWAGE</b> (MID Cue Card) 13, 1-16	
	P	<b>SUPPLY WATER CONFIG</b> 14, 1-6	
02:00			

**CLOTHING CONFIG** 9

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)

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

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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 DR 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					
													2	1	1	2	2
P DOOR	3/MID4	CA3/CA2	PL2	2	2/MID2	BC3/BC1	PL1	1					1	1	1	2	1





## 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 ARLK HTR LINE ZN1,2 (two) – cl  
STRUC Z1/2/3 – cl  
:E cb MNA FC PCM – op

Unstow VW Bags

MET	MS AFT ACTIONS
00:53	<u>SPECIALIST SEAT EGRESS</u>
00:57	<u>PRELIM MIDDECK CONFIG</u> <span style="border: 1px solid black; padding: 2px;">2</span>
01:07	<u>WCS CONFIG/ACT</u> <span style="border: 1px solid black; padding: 2px;">5</span>
01:08	<u>SWITCH CONFIG/GALLEY ACT</u> <span style="border: 1px solid black; padding: 2px;">6</span>
01:41	<u>CLOTHING CONFIG</u> <span style="border: 1px solid black; padding: 2px;">10</span>
01:45	<u>QUICKDON MASKS SETUP</u> <span style="border: 1px solid black; padding: 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: 2px;">13</span>
02:01	<u>AIRLOCK SETUP FOR INGRESS</u> <span style="border: 1px solid black; padding: 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





## 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

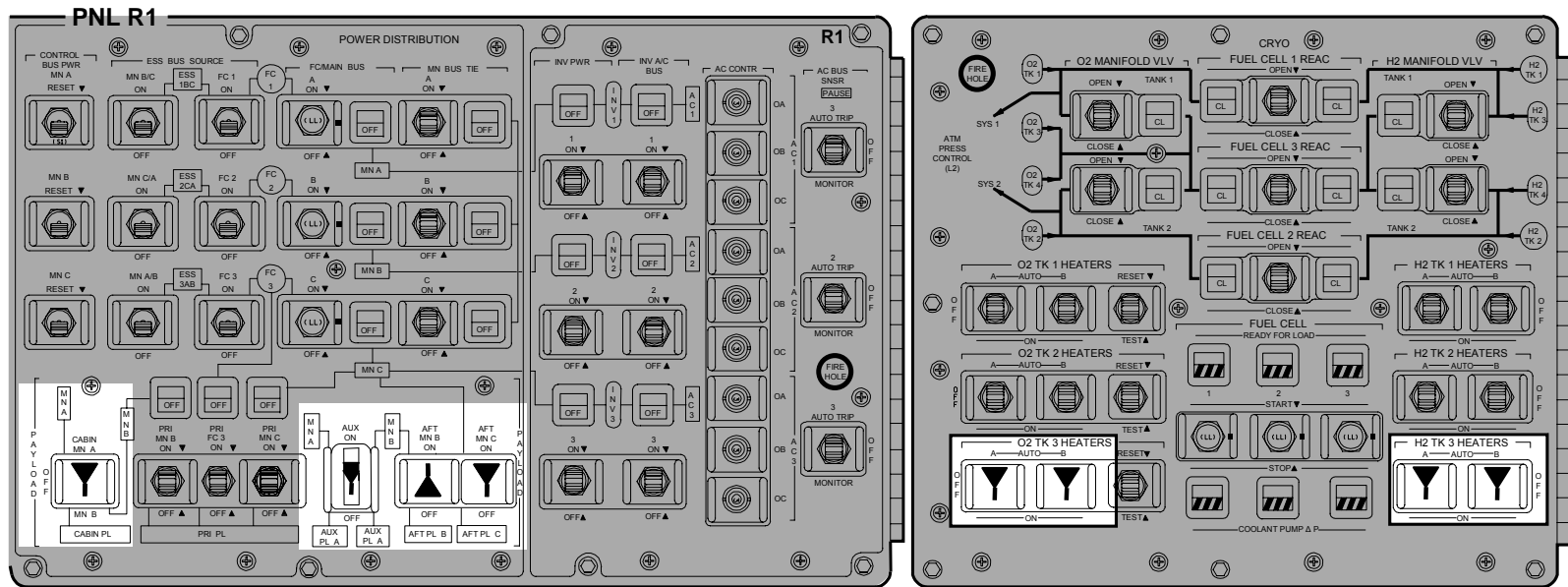
### MIDDECK-AFT

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

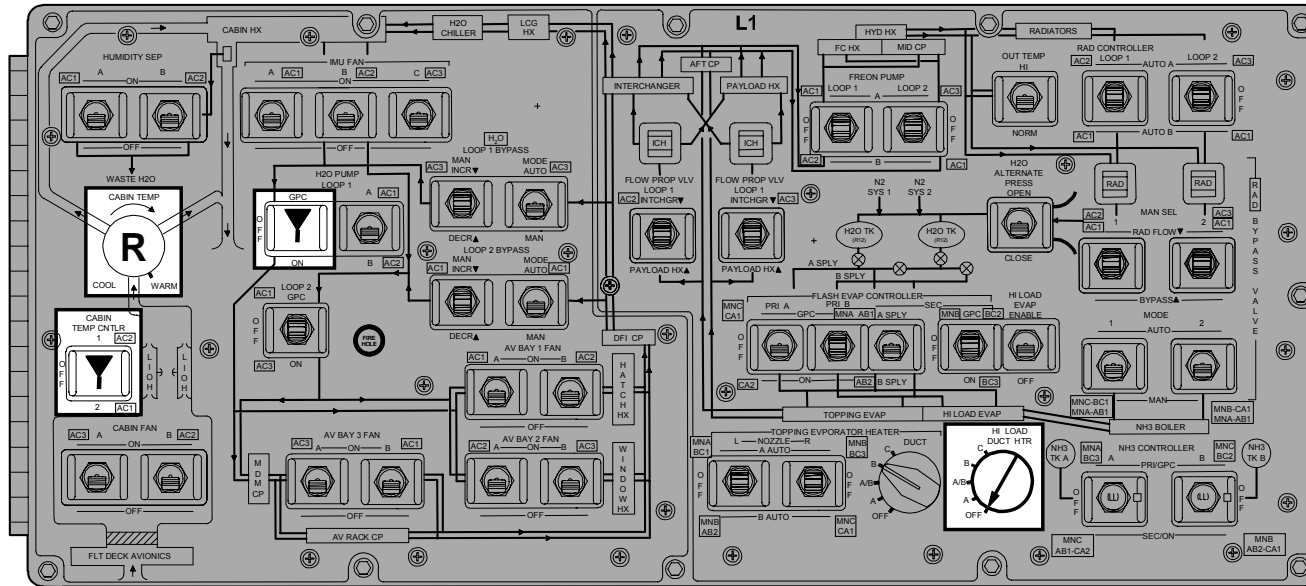
 - Up	<b>R</b> - As reqd	 - Indicates switch/display not checked during ON-ORBIT SWITCH/VERIF
 - Center	 - cb close	Switch/display pictorials are generic representations and are not intended to depict actual switch position. Check MCC if clarification reqd
 - Down	 - cb open	
 - Boxed items indicate switch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

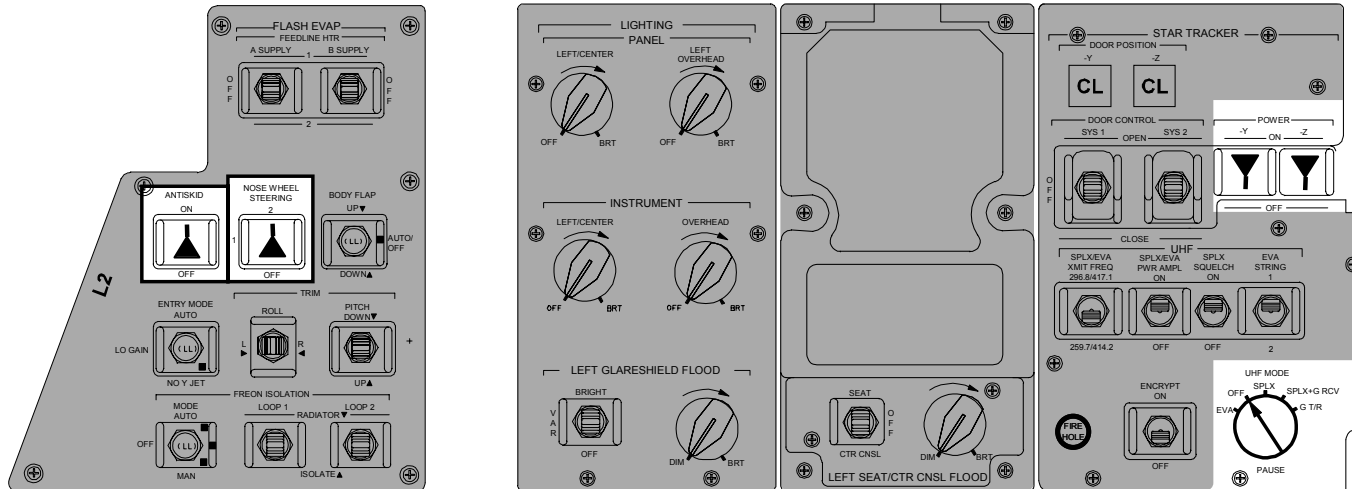
# ALL VEH



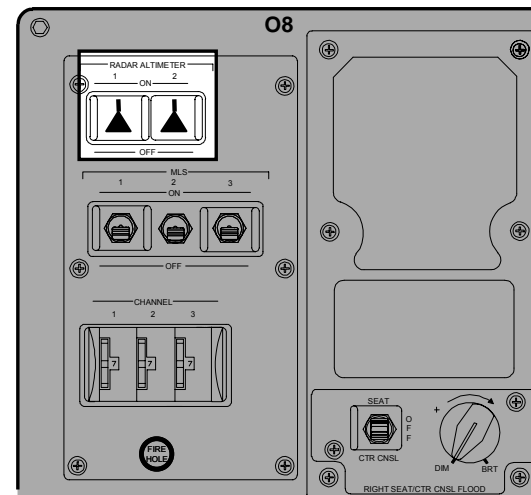
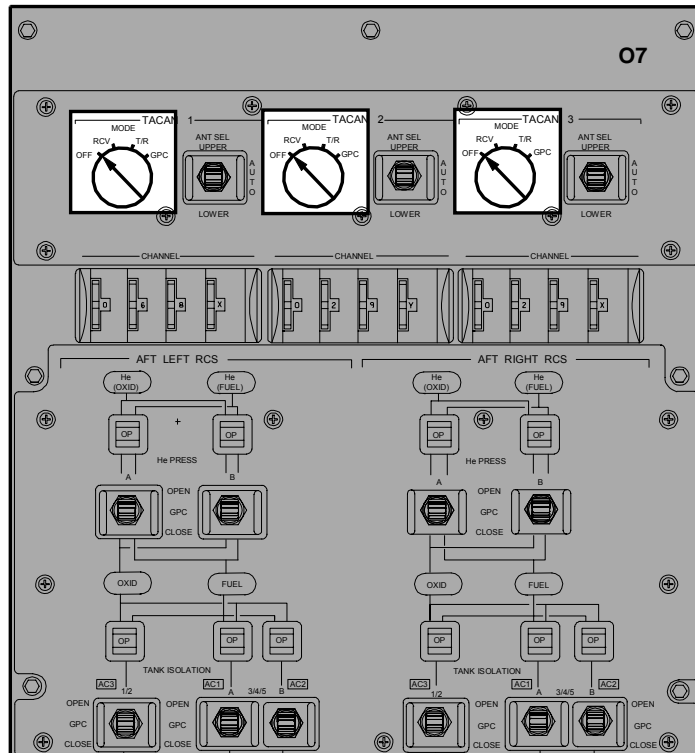
# ALL VEH



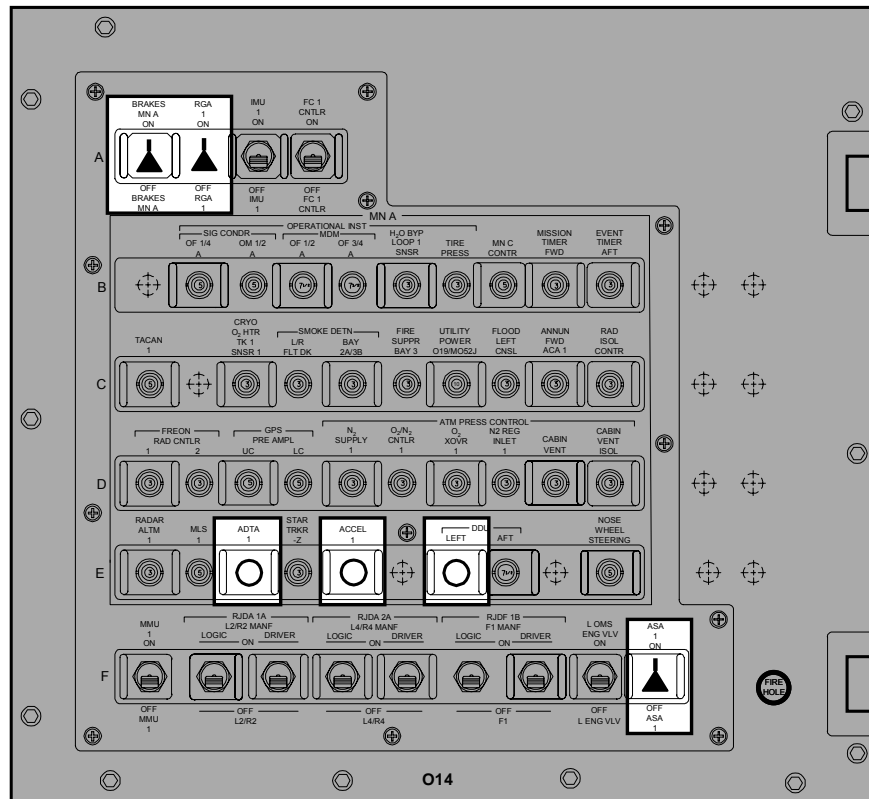
## PNL O6



# OV103, OV104

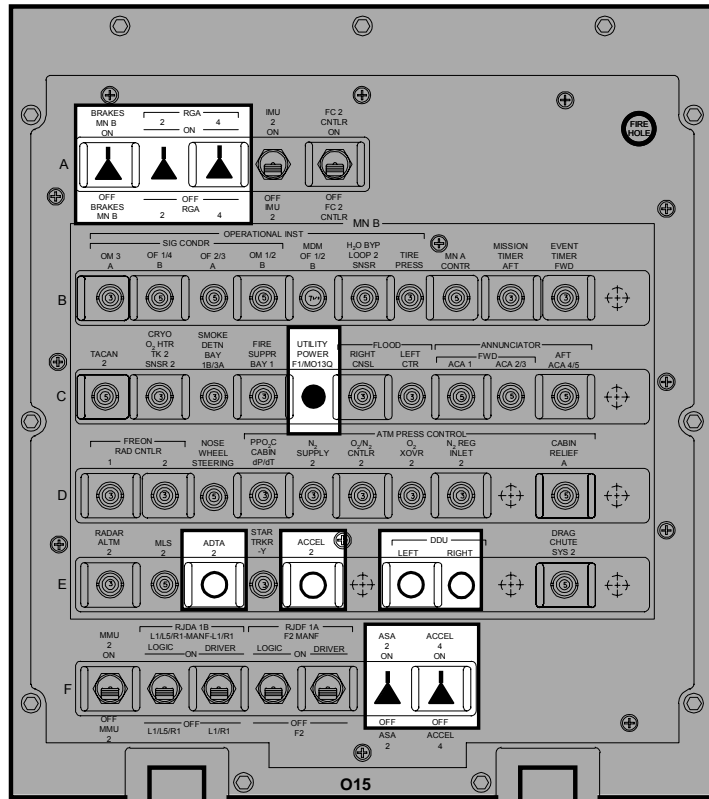


PNL O14

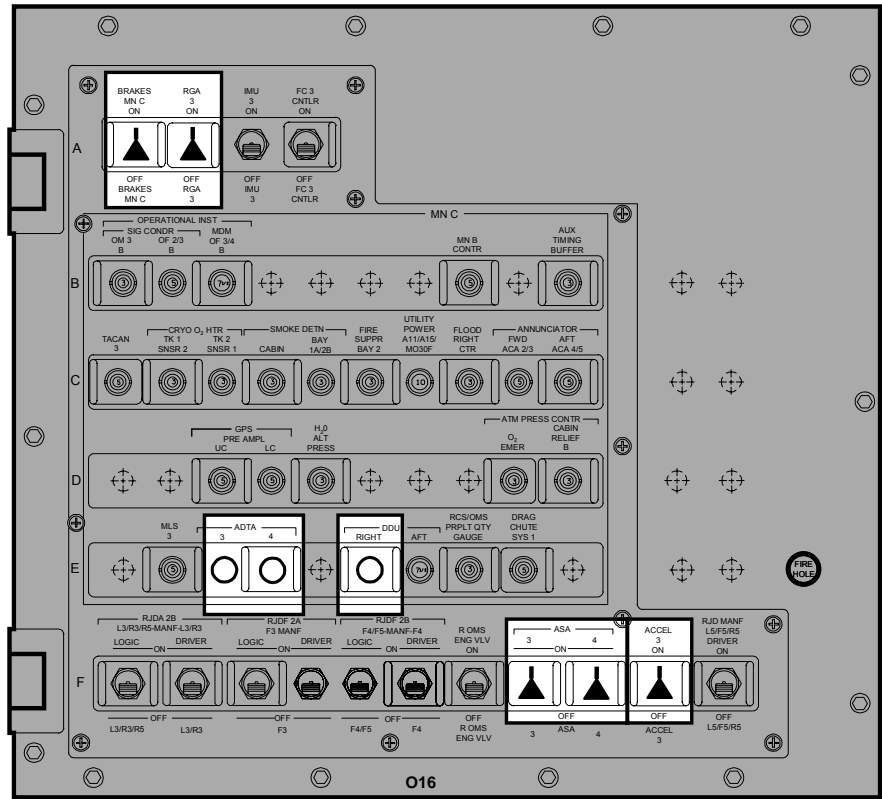


# OV103

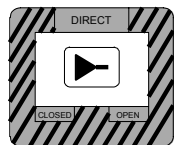
## PNL O15



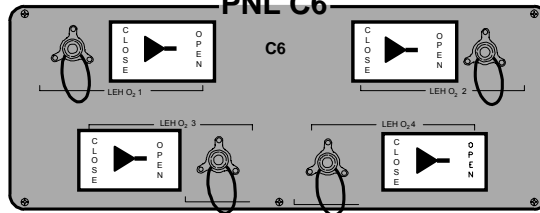
## PNL O16



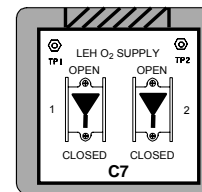
## PNL C5

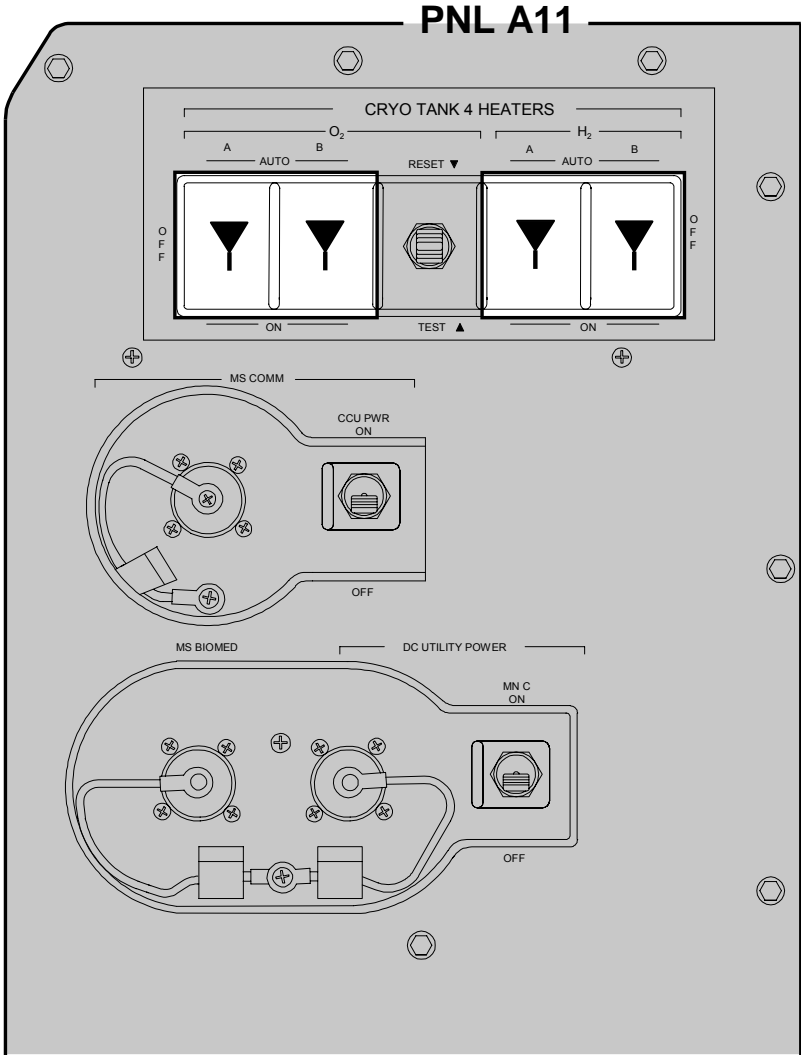


## PNL C6



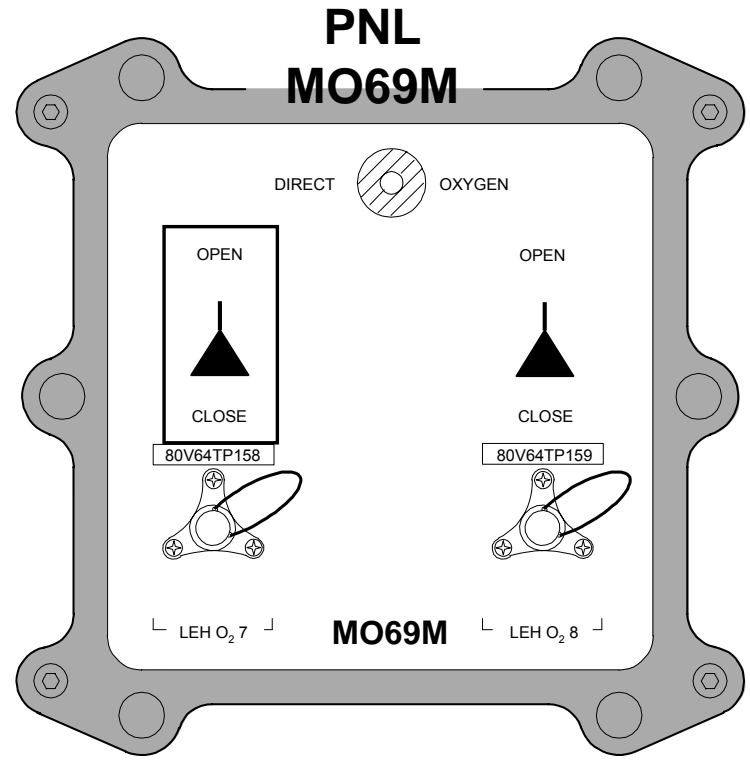
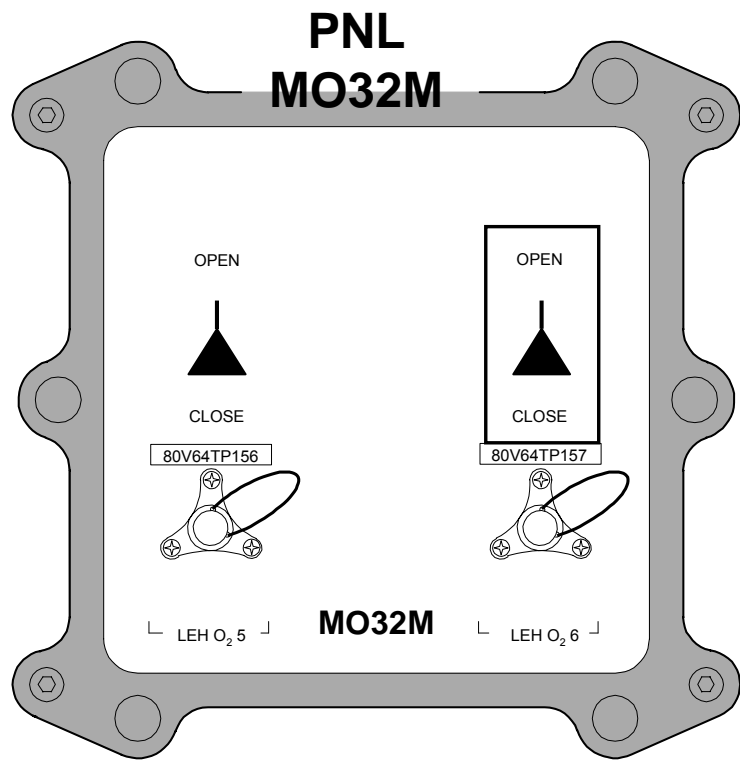
## PNL C7





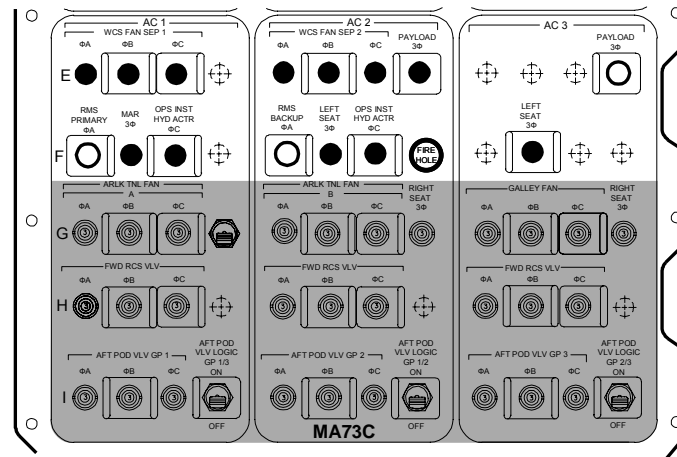
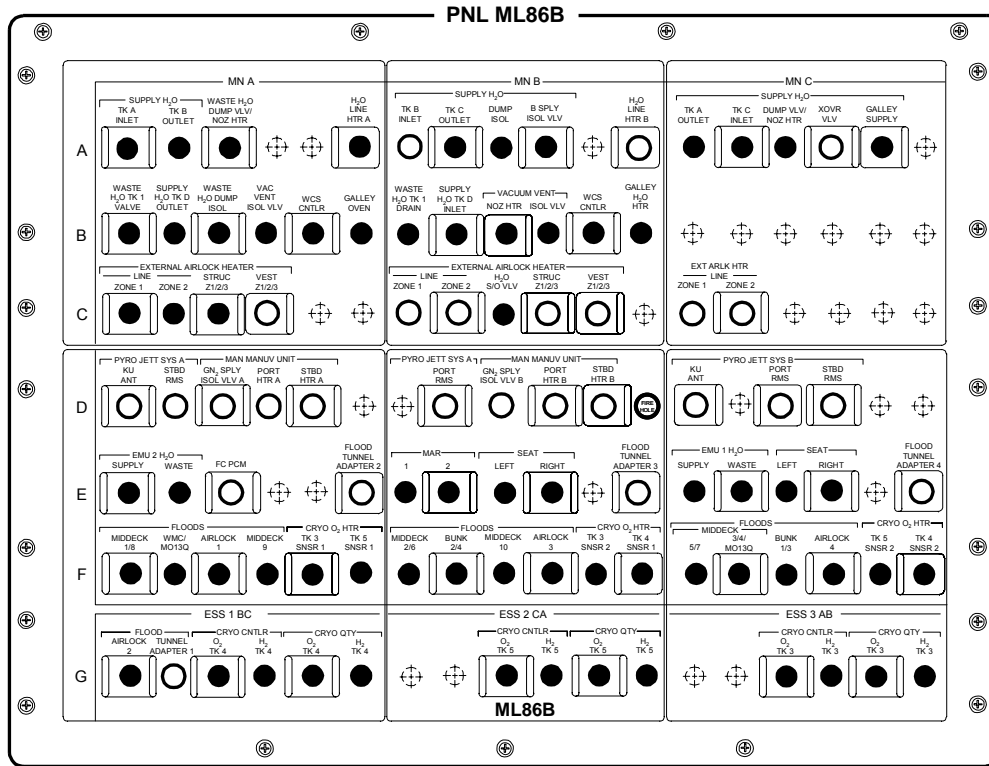
# OV103,OV105

I





# OV103



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# 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 ORBIT 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	CONFIG FOR PLBD CLOSING <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

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)  
Perform PLBD VTR RECORDING (Cue Card)  
Config Minicam for PLBD Rec: install new Tape, fresh Batt

**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)

PI-1b/120/O/C

(reduced copy)

CC 3-4

PI/120/FIN A

HOOK  
VELCRO

HOOK  
VELCRO

HOOK  
VELCRO

HOOK  
VELCRO

HOOK  
VELCRO

HOOK  
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 viv - PRESS
A SPLY viv - 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

FDI 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 ARLK HTR LINE ZN1,2 (two) - cl
STRUC Z1/2/3 - cl
:E
cb MNA FC PCM - op

Unstow VW Bags

Table with 2 columns: MET, MS AFT ACTIONS. Rows include: 00:53 SPECIALIST SEAT EGRESS, 00:57 PRELIM MIDDECK CONFIG 2, 01:07 WCS CONFIG/ACT 5, 01:08 SWITCH CONFIG/GALLEY ACT 6, 01:41 CLOTHING CONFIG 10, 01:45 QUICKDON MASKS SETUP 19, 01:54 SPECIALIST SEAT REMOVAL/STOWAGE, 01:59 ESCAPE POLE STOWAGE 13, 02:01 AIRLOCK SETUP FOR INGRESS 15

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

PI-2a/120/O/A

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TOP

MIDDECK RECONFIGURATION

WCS CONFIG/ACT 5

WCS SWITCH CONFIGURATION

ML86B:A      cb MNA H2O LINE 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            WCS ACTIVATION

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 LINE HTR B - op  
 :B            All cbs closed  
 :E            All cbs closed except: FLOOD TUNNEL ADAPTER (three) - op  
               FC PCM - op  
 :F            All cbs closed  
 :G            All cbs closed except: ESS1BC FLOOD TUNNEL ADAPTER 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

- Inner Hatch    1. Equal vlv caps (two) - remove
- 2. Open hatch per decal
- 3. Equal vlv (two) - OFF, install caps
- MDDK           4. Remove diffuser from aft middeck floor fitting and temp stow
- EXT A/L        5. Unstow bypass duct from Tunnel extension wall
- 6. Attach free end to aft middeck floor fitting
- MO13Q          7. AIRLK 2 - ON/OFF
- AW18A          8. LTG FLOOD 1(3,4) - ON (as reqd)
- 9. √Airflow at top of external airlock halo
- 10. √NEG CAB PRESS RELIEF vlv cover (two) - CL (pushed in)

PI-2b/120/O/C

HOOK  
VELCRO

HOOK  
VELCRO

HOOK  
VELCRO

HOOK  
VELCRO

HOOK  
VELCRO

HOOK  
VELCRO

(reduced copy)



**POST INSERTION**

**STS  
120**