

SOP 62035

TITLE: Power Configure HRC to CEA B w/ Redundant Bus

PURPOSE: **Power configure HRC to use CEA B with Redundant Power Bus**

PARTICIPANTS: OC, CC, SOT

PROCEDURE: http://ipa.harvard.edu/int/HRC_procs/pcfg_b_rdnt.html rev 1.3

62035.1 OVERVIEW

This procedure uses high-level pulse commands to configure the HRC electronics power configuration to use the HRC Redundant Power Bus for the redundant central electronics assembly (CEA B) and all of the HV power supplies.

62035.2 SUPPORT SUMMARY**SUMMARY**

Verify Command Processing configuration for command loads
Uplink SCS load
Verify HRC primary and redundant power buses are off
Configure HRC power to use CEA B with the Redundant Power Bus

CONSTRAINTS

This sequence should be executed and the results verified before the HRC primary bus power is switched on. At least 1 major frame of data (32.8 sec) must have passed after the commands have executed for this verification to be performed.

INITIAL CONDITIONS

None

DISPLAYS

F_OPERATIONS_COMMAND
I_HRC_SOH

COMPS

None

COMMAND GROUPS

None

PIX MAPS

None

COMMAND LOADS

2A_G0034_184.CLD
2B_G0034_184.CLD

SCRIPTS

O_SCCTRL

62035.3 CONFIGURE COMMAND SYSTEM

A. Set the following command system configuration parameters:

Clear To Send Mechanism	= FSV
CAR Processing	= Enabled

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FSV Processing	= Enabled
CRR Processing	= Disabled
Output Format	= NRZM
Minimum Time Delay (sec)	= 3
CAR Time-out (sec)	= 40
FSV Time-out (sec)	= 45
Blocking Factor	= 90
Burst Factor	= 1

62035.4 UPLINK COMMAND LOAD

A. Depending on which OBC is online, uplink the appropriate command load.

OBC	Command Load	Checksum
A	2A_G0034_184	E81C0D4
B	2B_G0034_184	E81C0D4

62035.5 VERIFY HRC POWER BUS STATES

A. SOT verifies telemetry:

Description	MSID	Value	Script Verification
HRC Power On/Off Pri Status PSU-1 (A2K1)	EHRCPPWR	OFF	N
HRC Power On/Off Rdnt Status PSU-2 (A2K1)	EHRCRPWR	OFF	N

B. If telemetry does not verify:

1. If necessary, SOT authorizes OC to uplink command **EHRCPPWF** to turn HRC primary bus power off
2. If necessary, SOT authorizes OC to uplink command **EHRCRPWF** to turn HRC redundant bus power off.
3. Verify telemetry as in step A.

62035.6 CONFIGURE HRC

A. SOT authorizes OC to start script **O_SCCTRL**

Enter as follows:

SCS command: **ENABACTI**

SCS number: **184**

Script will buffer commands:

COENASX (with command field COENAS1 set to '184')
[enables SCS 184]

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COACTSX (with command field COACTS1 set to '184')
[activate SCS 184]

RTS will issue commands, with 1 second delays before each:

2FSMRDI
[Disable Failsafe Master Relay]
2FSCSDI
[Disable Failsafe Cal Source Relay]
2FSPYDI
[Disable Failsafe +Y Shutter]
2FSNYDI
[Disable Failsafe -Y Shutter]
205VAOF
[+5LV Power Supply A Off]
205VBOF
[+5LV Power Supply B Off]
2C1BASL
[Bus A Select, CEA A LVPS]
2C2BBSL
[Bus B Select, CEA B LVPS]
2IMBBSL
[Bus B Select, HRC-I HVPS]
2SPBBSL
[Bus B Select, HRC-S HVPS]
2S1BBSL
[Bus B Select, Shield PMT#1 HVPS]
2S2BBSL
[Bus B Select, Shield PMT#2 HVPS]

B. OC may resume script to uplink command buffer.

C. SOT verifies telemetry:

Description	MSID	Value	Script Verification
Failsafe Master Relay ENAB/DISA	2FSMRST	DISA	N
Failsafe Cal Source Relay ENAB/DISA	2FSCAST	DISA	N
Failsafe +Y Shutter ENAB/DISA	2FSPYST	DISA	N
Failsafe -Y Shutter ENAB/DISA	2FSNYST	DISA	N
+5V LV Power Supply A ON/OFF	2PS5AON	OFF	N
+5V LV power Supply B ON/OFF	2PS5BON	OFF	N
Bus Select, CEA A LVPS	2C1LVBS	BUSA	N
Bus Select, CEA B LVPS	2C2LVBS	BUSB	N
Bus Select, HRC-I HVPS	2IMHVBS	BUSB	N
Bus Select, HRC-S HVPS	2SPHVBS	BUSB	N
Bus Select, Shield PMT#1 HVPS	2S1HVBS	BUSB	N
Bus Select, Shield PMT#2 HVPS	2S2HVBS	BUSB	N

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D. SOT authorizes OC to restart script **O_SCSCTRL**

Enter as follows:

SCS Command: **CLEAR**

SCS Number: **184**

Script will buffer commands:

CODISASX (with command field CODISAS1 Set to '184')
[Disable SCS 184]

COCLRSX (with command field COCLRS1 Set to '184')
[Clear SCS 184]

E. OC may resume script – sending command buffer.

END OF PROCEDURE