

Modify CPDU Configuration
File: H_CRP_AOC_2CPD.xls
Author: dsalt-hp



Procedure Summary

Objectives

The procedure allows the use to modify the selection of the CPDU used by the ASW. This selection determines which CPDU will be used to execute CPDU pulse received directly from ground through TC(2,3) as well as those commanded autonomously onboard.

USAGE

The procedure should be used whenever a failure of the CPDU itself or its interface with the PM prevents one of the units from executing correctly the requested pulses. The following failure symptoms may be present:

1. The BSW has declared the RT interface of one of the RM's unhealthy and the cause has been established to be a genuine hardware failure.
2. The BSW has detected a RAM error trapped by the memory manager on one of the RM's. Whether or not this will require a CPDU reconfiguration will depend on the analysis of the location where the error occurred (the RM RAM contains the buffer used for transferring CPDU packets, however this specific area of the RAM may not be affected by the error).
3. Relay driving commands requested directly or indirectly from ground, for instance during unit power switching, fail.

The CPDU configuration is written in the SGM and not in the RM context register. As a consequence, it is not necessary to disable the RM before executing the TC which modifies the configuration

Summary of Constraints

Spacecraft Configuration

Start of Procedure

End of Procedure

Reference File(s)

Input Command Sequences

Output Command Sequences

HRA2CPD1
HRA2CPD2

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Referenced Displays

ANDs GRDs SLDs
 ZAA01999

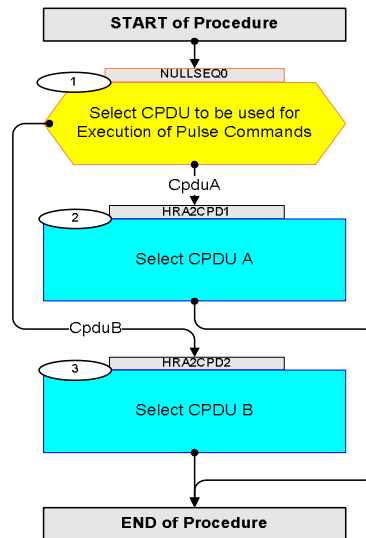
Configuration Control Information

| DATE | FOP ISSUE | VERSION | MODIFICATION DESCRIPTION | AUTHOR | SPR REF |
|----------|-----------|---------|--------------------------|----------|---------|
| 24/03/09 | | 1 | Created | dsalt-hp | |
| 24/03/09 | 2.2 | 2 | Sequence name correction | dsalt-hp | |

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Procedure Flowchart Overview

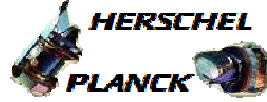


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| Step No. | Time | Activity/Remarks | TC/TLM | Display/ Branch |
|---|------|---|---------------------------------------|----------------------------------|
| Beginning of Procedure | | | | |
| TC Seq. Name :NULLSEQ0 () TimeTag Type: Sub Schedule ID: <input type="checkbox"/> | | | | |
| 1 | | Select CPDU to be used for Execution of Pulse Commands | | Next Step: CpduA 2 CpduB 3 |
| 1.1 | | Verify current CPDU selection | | <input type="checkbox"/> |
| | | Verify Telemetry Curr CPDU use AEZ01002 | <to be read> | AND=ZAA01999 |
| 1.2 | | Select CPDU | | <input type="checkbox"/> |
| | | CPDU A -> GO TO STEP 2 CPDU B -> GO TO STEP 3 | | |
| TC Seq. Name :HRA2CPD1 (SelectCpduA) TimeTag Type: N Sub Schedule ID: <input type="checkbox"/> | | | | |
| 2 | | Select CPDU A | | Next Step: END |
| 2.1 | | Load sequence HRA2CPD1 on the Manual Stack | | <input type="checkbox"/> |
| 2.2 | | Uplink 1st command | | <input type="checkbox"/> |
| | | Execute Telecommand Use CPDU-A RM-A TC Control Flags : Subsch. ID : 20 Det. descr. : TC(8,1) - SELECT ACC - Use CPDU-A RM-A | ACYLT109 GBM IL DSE ---Y--- | |

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| Step No. | Time | Activity/Remarks | TC/TLM | Display/ Branch |
|--|------|---|----------|--------------------------|
| 2.3 | | Verify update | | <input type="checkbox"/> |
| | | Verify Telemetry Curr CPDU use AEZ01002 | = CPDU A | AND=ZAA01999 |
| 2.4 | | Uplink Next Command | | <input type="checkbox"/> |
| | | Execute Telecommand Use CPDU-A RM-B ACLYL109 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,1) - SELECT ACC - Use CPDU-A RM-B | | |
| 2.5 | | Verify update | | <input type="checkbox"/> |
| | | Verify Telemetry Curr CPDU use AEZ01002 | = CPDU A | AND=ZAA01999 |
| <p>TC Seq. Name :HRA2CPD2 (SelectCpduB)</p> <p>TimeTag Type: N Sub Schedule ID: <input type="checkbox"/></p> | | | | |
| 3 | | Select CPDU B | | Next Step: END |
| 3.1 | | Load sequence HRA2CPD2 on the Manual Stack | | <input type="checkbox"/> |
| 3.2 | | Uplink 1st command | | <input type="checkbox"/> |
| | | Execute Telecommand Use CPDU-B RM-A ACYLU109 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 20 Det. descr. : TC(8,1) - SELECT ACC - Use CPDU-B RM-A | | |
| 3.3 | | Verify update | | <input type="checkbox"/> |

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| Step No. | Time | Activity/Remarks | TC/TLM | Display/ Branch |
|-------------------------|------|--|--|--------------------------|
| | | Verify Telemetry Curr CPDU use AEZ01002 | = CPDU B | AND=ZAA01999 |
| 3.4 | | Uplink Next Command | | <input type="checkbox"/> |
| | | Execute Telecommand TC Control Flags : Subsch. ID : 20 Det. descr. : TC(8,1) - SELECT ACC - Use CPDU-B RM-B | Use CPDU-B RM-B ACYLZ109 GBM IL DSE --Y -- -- | |
| 3.5 | | Verify update | | <input type="checkbox"/> |
| | | Verify Telemetry Curr CPDU use AEZ01002 | = CPDU B | AND=ZAA01999 |
| End of Procedure | | | | |