

DISTRIBUTION SHEET  
EO-1 LEVEL II CCB

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**NEW MILLENNIUM PROJECT CONFIGURATION CHANGE REQUEST**

<b>PROGRAM</b> <u>EO-1</u>	<b>TITLE</b> CHANGES TO EO-1 WARP TO AC ICD-57		
<b>CCR NO.</b> 0038	<b>ORIGINATOR</b> George Jackson		
<b>DATE INITIATED</b> 09/03/99	<b>ORIGINATOR'S CHG. NO.</b>		
	<b>SPONSOR/CODE</b> George Jackson	<b>PHONE</b>	x3255

<b>EFFECTIVITY</b> <b>ITEM:</b> <u>EO-1</u> <b>S / N</b> _____  <b>ITEM:</b> _____ <b>S / N</b> _____  <b>ITEM:</b> _____ <b>S / N</b> _____	<b>CHANGE CLASS</b> I II PRELIMINARY <input type="checkbox"/> <input type="checkbox"/> FORMAL <input type="checkbox"/> <input type="checkbox"/>	<b>TYPE OF CHANGE</b> MILESTONE <input type="checkbox"/> INTERFACE <input type="checkbox"/> SOFTWARE <input type="checkbox"/> DOCUMENT <input checked="" type="checkbox"/> POWER <input type="checkbox"/> OTHER <input type="checkbox"/> COST <input type="checkbox"/> WEIGHT <input type="checkbox"/>
	<b>DOCUMENTS OR SOFTWARE AFFECTED</b> EO-1 WARP TO AC ICD-057	

**PROBLEM**

The EO-1 Wideband Advanced Recorder Processor (WARP) to Atmospheric Corrector (AC) ICD-057 has changes that must be incorporated into the baselined ICD. The changes are detailed in the enclosed Preliminary Interface Revision Notice (PIRN).

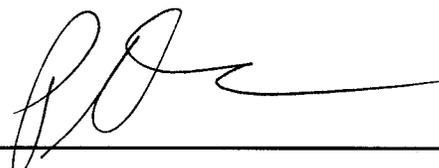
**PROPOSED SOLUTION**

Approve the attached PIRN 001 to ICD-57, EO-1 WARP to AC Interface Control Document (ICD) by the EO-1 Level II Configuration Control Board (CCB). The signed CCR/PIRN will officially approve the changes by EO-1 Project Management. Future changes will be initiated by submittal of Configuration Change Requests (CCRs) and PIRNs. This document is maintained by EO-1 Configuration Management Office.

BOARD ACTION	APPROVAL LEVEL REQUIRED	CRITICALITY LEVEL	PROCUREMENT CHANGE ORDER CLASSIFICATION		
APPROVE <input checked="" type="checkbox"/>	LEVEL I HQS <input type="checkbox"/>	EMERGENCY <input type="checkbox"/>	ROUTINE	URGENT	EMERGENCY <input type="checkbox"/>
APPROVE WITH CHANGE <input type="checkbox"/>	LEVEL II GSFC <input checked="" type="checkbox"/>	URGENT <input type="checkbox"/>	OPTION 1 <input type="checkbox"/>	OPTION 1 <input type="checkbox"/>	
DISAPPROVE <input type="checkbox"/>	LEVEL III <input type="checkbox"/>	ROUTINE <input checked="" type="checkbox"/>	OPTION 2 <input type="checkbox"/>	OPTION 2 <input type="checkbox"/>	
WITHDRAW <input type="checkbox"/>					

**COMMENTS**

APPROVE TO INCORPORATE PIRN 001  
into ICD-57

CHAIRPERSON  DATE 22 Nov 99

<b>GODDARD SPACE FLIGHT CENTER</b>		<b>GODDARD SPACE</b>	
PRELIMINARY SPECIFICATION CHANGE NOTICE (PSCN) No. _____		PAGE 1 OF 2	2. INIT. DATE: 9/2/99
or PRELIMINARY INTERFACE REVISION NOTICE (PIRN) No. 001		3. CONTRACT NUMBER	
4. ASSOCIATED CONTROL NUMBERS: <b>EO-1CCR 0038</b>	5. CI'S AFFECTED: WARP TO AC ICD-057	6. DOCUMENT NUMBER: REVISION:	

7. DESCRIPTION OF CHANGE:

1. Add: The following at the end of Section 2.2.1 Envelope:  
**P/N 311407-5P-B-12**

2. Change Section 2.3.1 Maximum Cable Length:  
From: The interface of the WARP is through an intermediate assembly that converts the RS-422 differential signals to fiber optic signals. The maximum cable length is 12 feet.  
~~To: The interface of the WARP is through an intermediate assembly that converts the RS-422 differential signals to fiber optic signals. The maximum cable length is 12 feet.~~

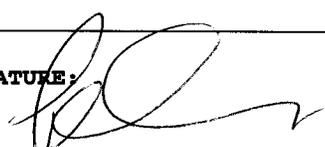
3. Change Section 2.3.2 Wire Gauge:  
From: The wires of the WARP/AC harness are 22 gauge.  
To: The wires of the WARP/AC harness are ~~22~~ **26** gauge.

4. Change Section 2.5.1 Rise Time:  
From: The rise time of the AC data lines is 1 ns minimum and TBD ns maximum.  
To: The rise time of the AC data lines is 1 ns minimum and ~~TBD~~ **10** ns maximum.

5. Change Section 2.5.2 Fall Time:  
From: The fall time of the AC data lines is 1 ns minimum and TBD ns maximum.  
To: The fall time of the AC data lines is 1 ns minimum and ~~TBD~~ **10** ns maximum.

6. Change Section 2.5.3 Clock Frequency:  
From:

The data clock has two speeds: 6.0 MHz and 3.0 MHz. The data clock is set to the 6.0-MHz rate only during periods that the Advanced Land Imager (ALI) is not on and the AC is set for a 60-Hz frame rate. The data clock is set for 3.0 MHz for all other frame rates. For the slower frame rates (e.g., 2 Hz, 7.5 Hz, and 15 Hz), the data buffers may empty giving intraframe gaps in the data coming over the RS-422 link. During these gaps, the data-valid bit will remain low.

PREPARED BY: S.Schneider/442	ORIGINATING ORGANIZATION APPROVAL:	ORGANIZATION:	DATE:
HST CCB ACTION	SIGNATURE: 	DATE: 22 Nov 99	MINUTES No:
APPROVED: <input checked="" type="checkbox"/> DISAPPROVED: <input type="checkbox"/>			

S.Schneider/442		
<b>HST CCB ACTION</b>	<b>SIGNATURE:</b>	<b>DATE:</b>
<b>APPROVED:</b>	<b>DISAPPROVED:</b>	<b>MINUTES No:</b>

EO-1 CR-0038  
ICD-57 PIRN 001  
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To: The data clock has two speeds: 6.0 MHz and 3.0 MHz. The data clock is set to the 6.0-MHz rate only during periods that the Advanced Land Imager (ALI) **and Hyperion are** is not on and the AC is set for a 60-Hz frame rate. The data clock is set for 3.0 MHz for all other frame rates. ~~For the slower frame rates (e.g., 2 Hz, 7.5 Hz, and 15 Hz), the data buffers may empty giving intraframe gaps in the data coming over the RS-422 link. During these gaps, the data valid bit will remain low.~~

7. Change Section 2.5.4 Timing Diagrams:

From: Figures 2-2 and 2-3 show the bit level timing for data transfers with respect to the data transfer clock and the data-valid signals. The data-valid bit is a gated clock, which is active only when data are on the bus. The data-valid bit will transition.

8. To: 2.5.5-4 Timing Diagrams:

Figures 2-2 and 2-3 show the bit level timing for data transfers with respect to the data transfer clock and the data-valid signals. **These timing diagrams refer to the output of the AC harness.** ~~The data valid bit is a gated clock, which is active only when data are on the bus. The data valid bit will transition.~~

9. Add: The following section 2.5.4 **Data Valid:**

**The Data Valid (DV) bit will transition from high to low when 32 bit valid data word is on the bus. Will remain low when data is not valid.**

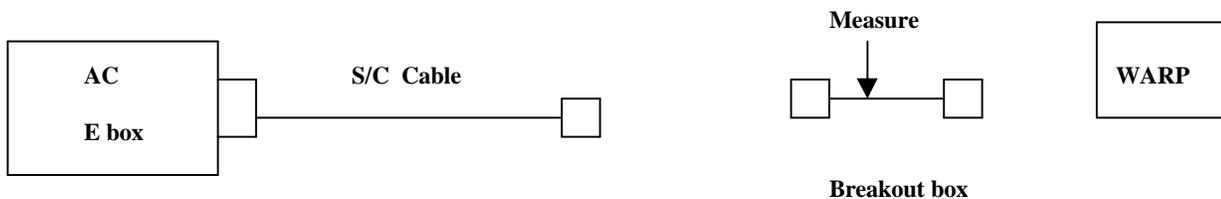
10. Add: The following section 2.5.4.1 **Setup Time:**

**The minimum set up time at room temperature for the 3 MHz frame rate shall be 50ns. The minimum setup time at room temperature for the 6 MHz frame rate shall be 25ns. All measurements shall be taken at the breakout box as shown in figure 2.4.**

11. Add: The following section 2.5.4.2 **Hold Time:**

**The minimum hold time at room temperature for the 3 MHz frame rate shall be 50ns. The minimum hold time at room temperature for the 6 MHz frame rate shall be 40ns. All measurements shall be taken at the breakout box as shown in Fig. 2.4**

12. Add: The following Diagram 2.4



13. Change Section 2.6.1 Transmit Levels:

From: The low level output voltage of transmitted signals is 0.5 V maximum. The high level output voltage of transmitted signals is 2.5. V minimum.

~~To: The low level output voltage of transmitted signals is 0.5 V maximum.~~ The high level output voltage of transmitted signals **shall be greater than is 2.5 V minimum.** **The low level output voltage measured across differential pairs shall be less than -2.5 volts measurements will be taken at breakout box where shown in Fig 2.4**

14. ~~Delete:~~ Section 2.6.2 Receive Levels

15. ~~Delete:~~ Entire Section 3. Data Link Layer

Date: Fri, 17 Sep 1999 11:48:56 -0400 (Eastern Daylight Time)  
From: Administrator <administrator@hst-nic.hst.nasa.gov>  
Reply-to: (George L. Jackson/561.0)  
Subject: CCR:0038 - DUE: 09/24/99 ROUTINE  
Level-2  
George L. Jackson/561. WWW-COMMENTS

USER : (George L. Jackson/561.0) sent the following comments on :

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Date: 9-17-99  
CCR Number: 0038  
Sponsor: George Jackson  
Due Date: 09/24/99  
-----

CCR Title: CHANGES TO EO-1 WARP TO AC ICD-57  
-----

Remote host: 128.183.220.161 Email Address:  
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APPROVAL STATUS: APPROVED

Note:  
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COMMENTS: