

REVISIONS

Letter	ECO No.	Description	Checked	Approved	Date
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NAME	DATE	MASSACHUSETTS INSTITUTE OF TECHNOLOGY CENTER FOR SPACE RESEARCH			
Drawn: <i>JSV</i>		DEA, TEST PROCEDURE, XRAY IMAGE			
Checked: <i>[Signature]</i>	1/4/97				
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DEA XRAY IMAGE TEST PROCEDURE

The following MIT/CSR procedures must be followed in conjunction with this test procedure:

- | | |
|----------|---|
| 99-01003 | Handling for Static Sensitive Electronics |
| 99-03002 | Connector Mating and Demating Procedures |

gse> 1 sek/dacs-240 (measure voltages, fill out column)

7.) To view square waveforms;
gse> 1 sek/dea-6

DATA (HL means same value should result from dea-4 and dea-5)

Signal (pin)	80	120	160	200	240
Serial (15)	H_____L_____	H_____L_____	H_____L_____	H_____L_____	H_____L_____
Reset (6)	H_____L_____	H_____L_____	H_____L_____	H_____L_____	H_____L_____
Vdd-A (16)	HL_____	HL_____	HL_____	HL_____	HL_____
Vdd-B (12)	HL_____	HL_____	HL_____	HL_____	HL_____
Vdd-C (25)	HL_____	HL_____	HL_____	HL_____	HL_____
Vdd-C (5)	HL_____	HL_____	HL_____	HL_____	HL_____
RG (4)	HL_____	HL_____	HL_____	HL_____	HL_____
Scp (11)	HL_____	HL_____	HL_____	HL_____	HL_____
RD (7)	HL_____	HL_____	HL_____	HL_____	HL_____

8.) Check Parallel Clocks. CCD must be connected to breakoutbox for this test.
gse> 1 sek/dea-1 (load standard readout pram)
gse> 1 sek/dacs-80 (record level which persists, not transient)
gse> 1 sek/dacs-120 (record level which persists, not transient)
gse> 1 sek/dacs-160 (record level which persists, not transient)
gse> 1 sek/dacs-200 (record level which persists, not transient)
gse> 1 sek/dacs-240 (record level which persists, not transient)

Signal (pin)	80	120	160	200	240
Image High(3)	_____	_____	_____	_____	_____
Image Low(20)	_____	_____	_____	_____	_____
Frame High(9)	_____	_____	_____	_____	_____
Frame Low(10)	_____	_____	_____	_____	_____

9.) Check of back junction:

Pin35 Voltage = _____

gse> write 65539 26 (sets back junction high)

Pin35 Voltage = _____

gse> write 65539 24 (sets back junction low)

Pin35 Voltage = _____

Board II _____ Date _____

DAC Test and x-ray data can be done in either order.

- 1.) Check that room exists on /gideon/d1. e.g.
df /gideon/d1 shows no more than 70% full.
- 2.) Make directory for board being tested. e.g. for board SN011;
cd /gideon/d1/capture
mkdir SN011
chmod 777 SN011
- 3.) Copy fits template into new directory. e.g.
cd /gideon/d1/capture
cp check-fits SN011/fits (note name changed!)

To Collect CCD Data: All cables connected...

- 4.) Start ctue as usual. (or ctue can be already running)
Go into newly created directory and start gse from there. e.g.
cd /gideon/d1/capture/SN011
gse gideon # gideon # b (disable housekeeping!)

gse> acis (acis clocking)
gse> load sek/dea-1 (load standard clocks)
(Assuming that the ram load went properly!)
- 5.) Capture data (with or without source) and set analog bias levels.
write 65619 ___ chan. A -
write 65620 ___ chan. B -
write 65621 ___ chan. C -
write 65622 ___ chan. D -
- 6.) Set command clocks off.
gse> clocks off
- 7.) Remove x-ray source. Capture 5 frames called "bias"
Replace x-ray source. Capture 200 frames called "fe55"
Send notification that data is ready for analysis.

To Measure DAC Levels: No CCD connected, use breakout box.
Parallel (Image and Frame) clocks handled differently!

- 4.) Start ctue as usual. (or ctue can be already running)
Go into newly created directory and start gse from there. e.g.
cd /gideon/d1/capture/SN011
gse gideon # gideon # b (disable housekeeping!)
(Do not try to capture data!)
- 5.) Load clock low sequence, cycle through dacs and fill out form
for clock low (L) values. e.g.
gse> l sek/dea-4
gse> l sek/dacs-80 (measure voltages, fill out column)
gse> l sek/dacs-120 (measure voltages, fill out column)
gse> l sek/dacs-160 (measure voltages, fill out column)
gse> l sek/dacs-200 (measure voltages, fill out column)
gse> l sek/dacs-240 (measure voltages, fill out column)
- 6.) Load clock high sequence, cycle through dacs and fill out form
for clock high (H) values. e.g.
gse> l sek/dea-5
gse> l sek/dacs-80 (measure voltages, fill out column)
gse> l sek/dacs-120 (measure voltages, fill out column)
gse> l sek/dacs-160 (measure voltages, fill out column)
gse> l sek/dacs-200 (measure voltages, fill out column)