**MASSACHUSETTS INSTITUTE OF TECHNOLOGY**
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5 February 2007

To:      Mark 5 Development Group

From:    Dan L. Smythe

Subject: Bench Testing the CIB

Test equipment required:

Serial Link Test Fixture with a 32-MHz DirectTx and a DualRx.
A 32-MHz DirectRx and a DualTx
VSI Test Vector Generator
MDR14 connector with 2 LEDs and a 100-ohm resistor
10-pin IDT connector with 3 LEDs and a jumper
Voltmeter
Oscilloscope
+/-5-Volt Power Supply

See Mark 5 Memo #050 for CIB and Serial Link jumper settings.
Do not install the jumper on J13 on the CIB at this time.

Test setup:

Connect the Test Vector Generator to the CIB.
Insert a PROM with C855 checksum in U1.
Populate CIB with all jumpers except J13.
Put the 10-pin IDT LED assembly in J13.
Put the MDR14 LED assembly in J2.
Put the DualTx in J5 and J6 and connect it to a DualRx on the Serial Link Test Fixture.
Put the DirectRx in J8 and J9 and connect it to a DirectTx on the Serial Link Test Fixture.
Connect the power supply.

Test Procedure:

Check that LEDs D9, D10, D11, D12 and D13 are OFF.
If D13 is glowing, press DAV on the Serial Link Test Fixture.
Check that the other 7 LEDs on the board are ON.
Pressing DAV on the Serial Link Test Fixture should turn D2 (DAV) OFF.
Check for 1.2 volts at TP8.
Check for 32-MHz signal at J2 pins 5 and 6.
(J2 pins 7-14 and J12 pin 2 are GND.)
With M4, M5, M6 and M7 LO, all 3 LEDs on J13 and 2 LEDS on J2 should be OFF.
With M5 LO, setting M4, M6 or M7 HI should turn on the LED on J13 pins 1, 5 and 7.
With M5 HI, 2 LEDS on J2 should be ON.

On the Serial Link Test Fixture:
Both ERROR LEDs should be OFF.
Both DAV LEDs should be ON.
Both READY LEDs should be ON.
        If both READY LEDs are not ON,
        cycle power on the Test Vector Generator, to re-sync the DualRx links.
All S, M, and V LEDs should be half ON.
Both BOCF LEDs should be dimmer than the S, M and V LEDs.

Turn off power.
Move the DualTx to J4 and J7.
Restore power.
Recheck all LEDs on the Serial Link Test Fixture.
Remove power.
Remove LED assemblies.
Put a jumper on J13 pins 3 and 4.