

# P80 MLB Board Functional Test Coverage

## APPLE - Need to Know only

Worldwide Diagnostic and Test, PCB Functional Test Development Group

Rev	Date	Comments	released by	RIFA#
R1	1/16/2002	first release for ramp	Patrick Lam	201224
R1.1	1/21/2002	update to accept 4.3.4f2 bootROM	Patrick Lam	202423
R1.3	3/7/2002	update MODs file and nVidia drivers	Patrick Lam	209095
R1.4	3/21/2002	update to accept 4.3.5f1 bootROM, changed back MODs file to 20011109, nVidia 2.5 drivers	Patrick Lam	211486
R2.0	4/16/2002	update to accept 4.4.0f1 bootROM, new OS Pacific 20 (1.0f5/GMc5), Diagnostics 2.3 release	Patrick Lam	215012

Build	Rom ver	System SW ver	Diag Release	MacOS ROM	PMU version (base)	PMU version (update)	raw test time
Ramp	4.3.3b3 or 4.4.0f1	Pacific 20 (1.0f5/GMc5)	2.3	9.1.1f3	78	85	570 seconds

TPS file version	R2.0
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### Others Applications/Tests

Application	Version
cleanup	3.0.0
GZController	1.19.26
GZUUT	1.19.26
LVServer	LVServer V1.47 4/9/02
Ichiban	3.0.5

• Test order below does not necessarily reflect launch order, look at TPS file.

### SATs

Block	Test	Description	Versions
AppleTalkSAT			1.0.2
Network Switcher			3.0.2
FireEchoOHC1			1.3
SndOutTest			1.0.1
MODS			V20020125

SndOutTest(InternalSpeaker, LeftRight, LeftRight, ContinuousSnd, DontMoveWindow, 255)

### Diag Apps

Block	Test	Description	Versions
		<b>DiagC99I2C</b>	✓ 1.1.3
744	1	I2C Register Test	✓
744	2	I2C UnIN Test	✓
744	5	I2C SDRAM Slot0 verify	
744	6	I2C SDRAM Slot0 verify	
		<b>DiagC99Post</b>	1.0.9
624	1	Check results of POST	
624	21	Check results of POST ROM Checksum Test	
624	22	Check results of POST SDRAM Test	
		<b>DiagCardSlot</b>	✓ 1.3.2
657	1	Wireless / ATA PC card Presence Test	✓
657	2	IO reg Test / ATA IO Write-Read Test	✓
		<b>DiagCD</b>	✓ 1.5.2
764	1	ATAPI Init	✓
764	2	CD/DVD/CD-R Device Identify	✓
764	4	Apple CD Test Disk 2 Check	✓
764	5	Short Random Multi Block - CD	
764	16	Cleanup after testing	✓
		<b>DiagEDID</b>	✓ 1.1.1
651	1	Dump EDID Info	✓
		<b>DiagEnetSpeedDuplex</b>	1.0.3
531	1	Get transceiver speed, duplex info	
531	2	Verify10 Mbits/sec speed	✓
531	3	Verify100 Mbits/sec speed	✓
531	4	Verify1000 Mbits/sec speed	
531	5	Verify Half Duplex mode	
531	6	Verify Full Duplex mode	
531	8	Force 10 Mbps - Half Duplex	✓
531	9	Force 10 Mbps - Full Duplex	
531	10	Force 100 Mbps - Half Duplex	
531	11	Force 100 Mbps - Full Duplex	
531	12	Force 1000 Mbps - Half Duplex	
531	13	Force 1000 Mbps - Full Duplex	
531	14	Enable Auto-Negotiation	✓
531	15	Verify 1000 Mbits/sec Capability	
		<b>DiagFireWireOHC1</b>	✓ 2.4.9
693	1	Device Presence Test	✓
693	2	Registers Test	✓
693	3	Set/Clear Registers Test	
693	4	Phy Register Test	✓
693	5	•PHY Port0 Connection	
693	6	•PHY Port1 Connection	
693	7	•PHY Port2 Connection	

693	8	•100 Quadlet write (8192x)	√	A
693	9	•100 Block write (512 bytes)		
693	10	•100 Quadlet read		
693	11	•100 Block read (512 bytes)		
693	12	•100 Isochronous Loopback (1KB)		
693	13	•200 Quadlet write (8192x)	√	A
693	14	•200 Block write (512 bytes)		
693	15	•200 Quadlet read		
693	16	•200 Block read (512 bytes)		
693	17	•200 Isochronous Loopback (1KB)		
693	18	•400 Quadlet write (8192x)	√	A, B
693	19	•400 Block write (512 bytes)	√	A, B
693	20	•400 Quadlet read	√	A, B
693	21	•400 Block read (512 bytes)	√	A, B
693	22	•400 Isochronous Loopback (1KB)	√	A, B
693	23	•ATP Test		
693	24	•ITP Test		
693	25	•GRF Test		
693	26	•Send restart cmd -> FireEchoOHCI	√	A
<b>DiagGZROM</b>				
			√	1.1.2
516	3	Core99_iMac BootROM checksum only test	√	
<b>DiagMax</b>				
			√	1.8.8
667	1	Check SnakeBite2 Results		
667	2	launch AltivecExamples - 5000000x	√	
667	3	vBigNumTest	√	
667	4	Launch VBasicOpsTest	√	
667	5	Launch vMathLibTest	√	
667	6	Launch maxVV	√	
667	7	Launch vectorOpsTest	√	
667	8	MaxSmoke	√	
667	9	CheckSnakeBite		
<b>DiagPMU</b>				
			√	1.4.0
615	1	Read Flash EEPROM Status Verify Test	√	
615	2	Check Specific MPGR Version		ver. 85
615	5	Read Parameter RAM		
615	9	Check PMGR Base Version	√	ver. 78
615	12	Perform sleep/wakeup test		
<b>DiagSoundLoopback_OS</b>				
			√	1.3.6
682	5	•Left channel separation	√	
682	6	•Right channel separation	√	
682	7	•THD+N	√	
<b>DiagUniENet</b>				
			√	3.0.0
635	1	Detect Ethernet Card		
635	2	Ethernet Cell Registers	√	
635	3	Internal Loopback within cell	√	
635	4	Loopback via Phy at 10 mbps speed	√	
635	5	Loopback via Phy at 100 mbps speed	√	
635	6	Loopback via Phy at 1000 mbps speed		
635	7	Check TxFIFO RAM	√	
635	8	Check RxFIFO RAM	√	
635	9	Wakeup Event for a Magic Packet		
635	10	Wakeup Event for a Broadcast Packet		
635	11	Wakeup Event for a Multicast Packet		
635	12	Wakeup Event for a Unicast Packet		
<b>DiagUSB</b>				
			√	1.4.0
607	1	Device Presence Test	√	
607	2	Register Test	√	
607	3	USB Keyboard Presence Test		
607	4	USB Mouse Presence Test		
<b>DiagVersionCheck</b>				
				1.1.3
569	1	Verify User Specified Device Tree string		check 4.3.3b3 or 4.4.0f1
<b>DiagVIA</b>				
			√	1.3.0
597	1	VIA Register		
<b>DiagVideoLauncher</b>				
			√	1.0.7
670	1	Launch Nvidia Test	√	
<b>DiagVideoMemory</b>				
				1.5.0
741	6	Quick Stress Test (EMMO)		
741	9	Copybits Test - 100 iterations		
<b>GZConfig</b>				
			√	1.0.4
1271	1	Check for G3 Processor		
1271	2	Check for G4 Processor		
1271	3	Check for bus frequency		99840000'
1271	4	Check for CPU clock-frequency	√	700000000' & '800000000'
1271	5	Check for i2-cache clock-frequency		
1271	6	Check for i2-cache size		
<b>GZEthernet</b>				
			√	1.0.2
1248	16	TCP/IP Test	√	
<b>GZFirewire</b>				
			√	1.0.6
1246	1	Connect Port 0	√	
1246	2	Connect Port 1	√	
1246	3	Connect Port 2		
1246	4	Disconnect Ports	√	
1246	5	Port 0 Test Bundle	√	
1246	6	Port 1 Test Bundle	√	
1246	7	Port 2 Test Bundle		
<b>GZGraphics</b>				
			√	1.0.13
1234	2	Set Main Monitor, default		
1234	3	Set Secondary Monitor		
1234	32	DAC Level Test (Three Screen)	√	

<b>GZPostTest</b>		√	1.0.2
1255	1 FCT test passed	√	
<b>GZPreTest</b>		√	1.0.8
1128	1 PreTest check		
1128	2 Mac Ethernet Address checksum test	√	
1128	3 Start FCT	√	
1128	4 Write Signature	√	
1128	5 Write Table revision	√	
1128	6 Write FCT RFA number		
<b>GZROM</b>		√	1.0.6
1167	1 BootROM version	√	"\$0004.33b3   \$0004.40f1"
1167	2 BootROM Model	√	"PowerMac4,2"
1167	4 Test Flash Lockout bit clear (Core99 machine)		
<b>GZTestData</b>		√	1.0.0
1211	1 Stamp 1st test Date and Time	√	
1211	2 Stamp End of Test Date and Time	√	
<b>GZUSB</b>		√	1.0.0
1163	1 Port 0 Interrupt IN	√	
1163	2 Port 0 Bulk IN	√	
1163	3 Port 0 Bulk OUT	√	
1163	4 Port 0 Isochronous IN		
1163	5 Port 0 Isochronous OUT		
1163	6 Port 0 Low Speed Int IN	√	
1163	7 Port 1 Interrupt IN		
1163	8 Port 1 Bulk IN		
1163	9 Port 1 Bulk OUT		
1163	10 Port 1 Isochronous IN		
1163	11 Port 1 Isochronous OUT		
1163	12 Port 1 Low Speed Int IN		
1163	13 Port 2 Interrupt IN		
1163	14 Port 2 Bulk IN		
1163	15 Port 2 Bulk OUT		
1163	16 Port 2 Isochronous IN		
1163	17 Port 2 Isochronous OUT		
1163	18 Port 2 Low Speed Int IN		

A : testing firewire Port 0

B : testing firewire Port 1