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TEST REPORT

MODEL NO. : ME-747AP

Portable Media / USB Storage Enclosure

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1. Overall Test Summary



2. Test Environment

- Chipset Version & Firmware Version : **ESS 6425 (V 3.1.0.5a)** 、 **ITE 8903DX (V 106)**
- Test USB Host Driver Version :
Win XP : **Win XP SP2 5.1.2600.2180**
Win 2000 : **Win 2000 SP4 5.0.2195.2709**
Win Me 、 Win 98 : **Motherboard factory provide driver**

3. Test Hard Disk Drive List

Detail HD	Brand	Model Name	Size	Interface	Capacity	Speed
HD1	Seagate Barracuda 7200.8	ST3400832A	3.5 inch	ATA-6 、 IDE	400GB	7200 rpm
HD2	Seagate Barracuda 7200.7	ST3120022A	3.5 inch	ATA-6 、 IDE	120GB	7200 rpm
HD3	Seagate Barracuda 7200.7	ST340014A	3.5 inch	ATA-6 、 IDE	40GB	7200 rpm
HD4	SAMSUNG	SP1203N	3.5 inch	ATA-6 、 IDE	120GB	7200 rpm
HD5	SAMSUNG	SP1614N	3.5 inch	ATA-6 、 IDE	160GB	7200 rpm
HD6	WD	WD3200JB-00KFA0	3.5 inch	ATA-6 、 IDE	320GB	7200 rpm
HD7	WD	WD2500JB-00GVA0	3.5 inch	ATA-6 、 IDE	250GB	7200 rpm
HD8	WD	WD800BB-00JHC0	3.5 inch	ATA-6 、 IDE	80GB	7200 rpm
HD9	HITACHI	HDS724040KLAT80	3.5 inch	ATA-6 、 IDE	400GB	7200 rpm
HD10	HITACHI	HDS722525VLAT80	3.5 inch	ATA-6 、 IDE	250GB	7200 rpm
HD11	HITACHI	IC35L120AVV207-0	3.5 inch	ATA-6 、 IDE	120GB	7200 rpm
HD12	HITACHI	IC35L180AVV207-1	3.5 inch	ATA-6 、 IDE	180GB	7200 rpm
HD13	Maxtor	6B300R0	3.5 inch	ATA-6 、 IDE	300GB	7200 rpm
HD14	ExcelStor	J880	3.5 inch	ATA-6 、 IDE	80GB	7200 rpm

4. PME Mode User Interface Function Test

4.1 Test Summary



4.2 Test Items & Description

No.	Test Items	Test Step Description
1	HDD Compatibility Test	Check hard disk can be detected or not.
2	Photo Library Function Test	<ol style="list-style-type: none"> 1. Review function test 2. Slideshow function test. 3. Rotate function test. 4. Zoom function test. 5. Show signal picture function test. 6. Support file format (jpg) 7. File information check. 8. Check MP4 LED is flashing or not.
3	Music Library Function Test	<ol style="list-style-type: none"> 1. Multi Language display. 2. FF 、 FB 、 Play 、 Stop 、 Next 、 Vov+ 、 Vov- 、 Lastpage 、 Nextpage. 3. EQ function. 4. Repeat function. 5. Support file format (mp3) 6. File information check. 7. Slideshow function test. 8. Check MP4 LED is flashing or not.
4	Video Library Function Test	<ol style="list-style-type: none"> 1. FF 、 FB 、 Play 、 Stop 、 Next 、 Vov+ 、 Vov- 、 Lastpage 、 Nextpage. 2. Support file format (Mpeg1,2,4 、 mpeg 、 dat 、 avi 、 vob) 3. File information check. 4. Check Dolby (AC3) audio can be played or not. 5. Check MP4 LED is flashing or not.
5	Multi Language & Subtitle File Test	<ol style="list-style-type: none"> 1. Check UI language is correct. 2. Check multi language subtitle file is can be display and correct. (French 、 German 、 Italian 、 Swedish 、 Danish 、 Portugal 、 Spanish 、 Korea 、 Chinese 、 Taiwan 、 Japanese) 3. Subtitle format : ass 、 psb 、 smi 、 ssa 、 srt 、 sub_txt(micro dvd)
6	File Library Function Test	<ol style="list-style-type: none"> 1. File edit (Delete 、 Rename 、 New Folder 、 Cancel) 2. Source change (if you have one more partition) 3. File information check. 4. Check Lastpage 、 Nextpage are correct. 5. Check MP4 LED is flashing or not.
7	Setup Menu Function Test	<ol style="list-style-type: none"> 1. Photo Setup. 2. Music Setup. 3. Movie Setup. 4. Slideshow Setup. 5. Preferences Setup.
8	Video Quality Test	<ol style="list-style-type: none"> 1. TV type (N2N 、 N2P 、 P2N 、 P2P 、 N2 Auto 、 P2 Auto) . 2. TV display (16 : 9 、 4 : 3 Letter Box 、 4 : 3 Pan Scan) . 3. RGB 4. S-Video

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9	Audio Quality Test	<ol style="list-style-type: none"> 1. DTS 2. Dolby 2.0 channel (Center、R channel、L channel) . 3. Dolby 5.1 channel(Center、Subwoofer、R & L channel、RR & RLchannel) 4. DownMix
10	TV Lock Function Test	<ol style="list-style-type: none"> 1. Check the second partition is lucked. 2. Enter the default password then into the disk. 3. Change the password and enter the new password into the disk.
11	Over Night Test	<ol style="list-style-type: none"> 1. Play photo continuous over 48 hours. 2. Play music continuous over 48 hours. 3. Play video continuous over 48 hours. 4. Play slideshow continuous over 48 hours.
12	Firmware Update Function Test	<ol style="list-style-type: none"> 1. Execute firmware update, then check function is correct or not. 2. Check firmware is really updated.
13	Front Panel Function Test	<ol style="list-style-type: none"> 1. Check Power button function is correct or not. 2. Check Power LED is bright while power on. 3. Check Up、Down、Left and Right button function are correct. 4. Check Menu button function is correct or not. 5. Check OK button function is correct or not. 6. Check system fan is working while power on.

5. Storage Mode Compatibility and Function Test

5.1 Test Summary



5.2 Test Host Driver and USB Driver Version

- Win XP SP2 : Microsoft 5.1.2600 (Microsoft Windows XP Professional SP2)
- Win 2000 SP4 : Microsoft 5.0.2195 (Microsoft Windows 2000 Professional SP4)
- Win 98SE : Motherboard brand provide
- Win 98SE USB 2.0 Driver : ITE Win 98SE USB 2.0 Driver 5.11.29.5

5.3 USB 2.0 & USB 1.1 Test System List

- ✓ : Test
- * : No test

Detail PC	Motherboard	CPU	Bus Speed	South Bridge	RAM
PC1	ASUS-P4P800SE	Intel P4 3EG	800 MHz	ICH5	Transcend DDR400 512MB
PC2	ASUS P4S800D-X	Intel P4 3EG	800 MHz	SIS964	Transcend DDR400 512MB
PC3	MSI-915P Neo2-FISR (MS-7028)	Intel P4 2.8G LGA775	800 MHz	ICH6	Transcend DDR II 533 512MB

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Test Host	USB 2.0				USB 1.1			
PC \ OS	Win98SE	WinME	Win 2000	Win XP	Win98SE	WinME	Win 2000	Win XP
PC1	✓	✓	✓	✓	✗	✗	✓	✓
PC2	✗	✗	✓	✓	✗	✗	✗	✗
PC3	✓	✓	✓	✓	✗	✗	✓	✓

5.4 Test Items & Description

No.	Test Items	Test Step Description
1	Hot Detach & Reattach Test	1. Hot Detach and Reattach. 2. Check icon is displayed or not.
2	Read and Write Test	1. Copy files to Local disk (over 1GB). 2. Copy Local disk files to this device (over 1GB). 3. Use Media Player to play video files.
3	Safely Remove Test	Use Safely Remove function to detach the device and then reattach the cable, check function is normal or not.
4	Partition & Format Function Test	1. Create partition (primary and logical) 2. Format disk FAT,FAT32 and NTFS (quick and non-quick)
5	Suspend Function Test	1. Inactive S1, after resume check function is normal or not. 2. Inactive S3, after resume check function is normal or not. 3. Active S1, after resume check function is normal or not. 4. Active S3, after resume check function is normal or not.
6	Reboot Test	1. Warm Reboot, check function is normal or not. 2. Cold Reboot, check function is normal or not.
7	Compatibility with other USB Device Test	1. Plug both devices on USB1.1 or USB 2.0 port. 2. Plug one device on USB1.1 and another on USB2.0.
8	Over Night Test	Run burning tool to make sure that data transfer is corrected over 12 hours.

6. ITE Application Program Function Test

6.1 Test Summary



6.2 Test Items & Description

No.	Test Items	Test Step Description
1	GPIO Test (1.0.3.8)	1. Install application program and check it is setup or not. 2. Check function is correct or not. 3. Uninstall application program and check it is remove or not.

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2	Change Icon Test (1.1.2.59)	<ol style="list-style-type: none"> 1. Install application program and check it is setup or not. 2. Check icon is change to the ITE default icon or not. 3. Change another icon and check the disk icon is change or not. 4. Hot Detach and Reattach disk then check icon is still display or not. 5. Close change icon function and check icon is return to Microsoft default icon. 6. Uninstall application program and check it is remove or not.
3	One Touch Backup Test (1.7.10.17)	<ol style="list-style-type: none"> 1. Install application program and check it is setup or not. 2. Execute backup function and use data compare window to check the backup data is correct or not. 3. Execute Periodic backup and use data compare window to check the backup function is executed or not, the backup data is correct or not. 4. Execute all function from disk and check all result is correct or not. 5. Uninstall application program and check it is remove or not.
4	Notice Indicator Test (1.1.0.35)	<ol style="list-style-type: none"> 1. Install application program and check it is setup or not. 2. Execute this function then check the message is correct when you reattach the disk. 3. Uninstall application program and check it is remove or not.
5	Tray Icon Test (Win 98SE : 5.11.29.5) (Tray Icon : 1.0.1.4)	<ol style="list-style-type: none"> 1. Install application program and check it is setup or not. 2. Execute this function to do safely remove and check remove message is correct or not. 3. Uninstall application program and check it is remove or not.
6	Screen Lock Test (1.0.1.2)	<ol style="list-style-type: none"> 1. Install application program and check it is setup or not. 2. Execute screen lock function then detach disk, check keyboard and mouse is locked or not, check desktop is display the ITE default picture or not. 3. Reattach disk check keyboard and mouse is unlocked or not, check desktop is display the picture that you setup on your own or not. 4. Execute the device list menu to setup the key device, then detach disk and reattach the other disk, system is can not unlocked. 5. Choose screen lock reboot and set delay time, check when you detach disk the system is reboot or not. 6. Uninstall application program and check it is remove or not.

7. Performance Test

7.1 Test OS and Host Driver List

- Test OS : Win XP SP2 Pro
- Test Host Driver : Microsoft 5.1.2600

7.2 Test System and Hard Disk List

Detail PC	Motherboard	CPU	Bus Speed	South Bridge	RAM
PC2	ASUS P4S800D-X	Intel P4 3EG	800 MHz	SIS964	Transcend DDR400 512MB
PC3	MSI-915P Neo2-FISR (MS-7028)	Intel P4 2.8G LGA775	800 MHz	ICH6	Transcend DDR II 533 512MB

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Detail HD	Brand	Model Name	Size	Interface	Capacity	Speed
HD1	Seagate Barracuda 7200.8	ST3400832A	3.5 inch	ATA-6、IDE	400GB	7200 rpm
HD6	WD3200	WD3200JB-00KFA0	3.5 inch	ATA-6、IDE	320GB	7200 rpm

7.3 Test Result

- Unit : KByte/Sec

HDD	System	Disk Format	Read	Write	Random Read	Random Write
HD1	PC2	FAT32	31498	25296	20285	12950
		NTFS	31801	25897	21135	12924
	PC3	FAT32	28001	26317	18934	13211
		NTFS	28001	26743	19914	13211
HD6	PC2	FAT32	28124	22908	14337	11743
		NTFS	31801	25390	14691	11893
	PC3	FAT32	28124	23230	14559	12023
		NTFS	28240	26102	13882	12066

8. Apple System Test

8.1 Test Summary



8.2 Test System Environment & Host Driver Version

- OS 9.2.1 USB 2.0 Host Controller : **Orange Micro 1.0.7**
- OS 10.1.2 USB 2.0 Host Controller : **Orange Micro 3.1.2**

System	Power Mac G4		Power Mac G4		Power Mac G5
Process	733MHz Power PC		733MHz Power PC		600MHz Power PC
OS	OS 9.2.1		OS 10.1.2		OS 10.3.2
RAM	256MB SD-RAM		256MB SD-RAM		256MB DDR-RAM
USB Controller	onboard 1.1	NEC 2.0	onboard 1.1	NEC 2.0	onboard 2.0

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System	Power Mac G5
Process	600MHz Power PC
OS	OS 10.4
RAM	256MB DDR-RAM
USB Controller	onboard 2.0

8.3 Test Items & Description

No.	Test Items	Test Step Description
1	Hot Detach & Reattach Test	1. Hot Detach and Reattach. 2. Check the disk is displayed or not.
2	Read and Write Test	1. Copy files to Local disk (over 100MB). 2. Copy Local disk files to this device (over 100MB). 3. Use Quick Time to play video files.
3	Eject Function Test	Check the function is normal or not.
4	Safely Remove Test	Check the function and icon is normal or not.
5	Partition and Erase Function Test	1. Use Disk Utility to partition several disk. 2. Use Disk Utility to erase disk of Extended and Standard.
6	Reboot Test	1. Warm Reboot. 2. Cold Reboot.
7	Compatibility with other USB Device Test	1. Plug both devices on USB1.1 or USB 2.0 port. 2. Plug one device on USB1.1 and another on USB2.0.

Remark : The disk tool in Mac 9.2.1 (Iomega) is no support USB device.

9. High Speed Signal Quality Test

9.1 Test Summary



9.2 Required Tests

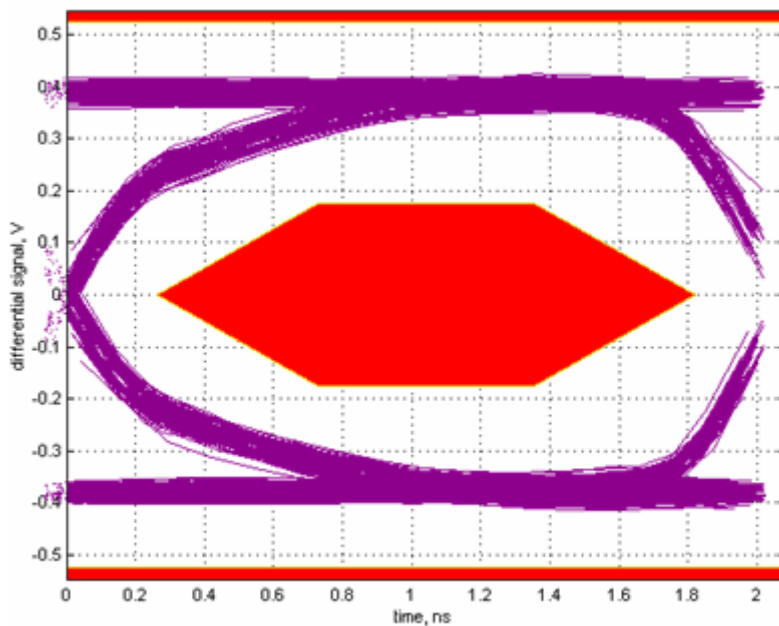
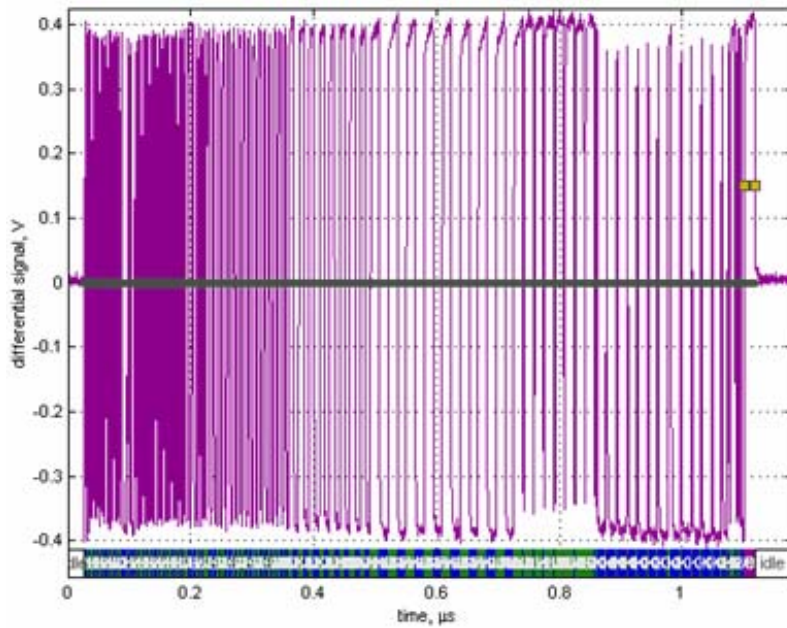
- Signal eye : **Eye passes**
- EOP width : **7.95 bits**
- Receivers : **Reliable operation on tier 6**
- Measured signaling rate : **479.9688MHz**

9.3 Additional Information

- Consecutive jitter range : **-52.5ps to 45.2ps, RMS jitter 20.0ps**
- Paired JK jitter range : **-40.2ps to 32.8ps, RMS jitter 13.6ps**
- Paired KJ jitter range : **-31.3ps to 36.0ps, RMS jitter 12.8ps**

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9.4 Signal Data and Eye



9.5 Tracking Information

- Voltage probes : **default**, gain accuracy : **1.5%**
- Oscilloscope : **default**, A/D linearity : **1.0%**
- Analysis call : **Usbsigcheck('c:\scope\data\IT8903.tsv', 'hsfe', 6)**
- Testing script version : **1.30**