

USB-IF MacOS Interoperability Test Results

(Non-Hub Devices)

Company _____ USB D _____ Test Suite _____ Date _____
Product _____ OS v _____ Platform _____

The devices to be used in the MacOS interoperability bundle are:

Device	Part Number /ID	Quantity
Mac Mouse		1
Mac Keyboard		1
Labtec USB Speakers	LCS-1040	1
Imation SuperDisk™ Drive	SD USB U3 1	1
4-Port Entrega Hub (Self-powered)	MacHub4U	1
7-Port Entrega Hub (Self-powered)	MacHub7U	2
Philips 690K USB Camera	PCVC 690K	1
KC Tech 1.1 Hub	v1.0	1
5m cable		5

The devices should be connected to the Root Ports / Hub Ports as described below. Connect in the specified ports except where otherwise instructed in this document.

Root Onboard OHCI Controller

- Port #1 Labtec USB Speakers
- Port #2 Hub #1 - Mac Keyboard Hub #1
 - Port #1 Mac Mouse
 - Port #2 Hub # 2 - Entrega Hub MacHub4U (Self-Powered)
 - Port # 1 Empty
 - Port # 2 Empty
 - Port # 3 Empty
 - Port # 4 Hub #3 - Entrega Hub MacHub7U (Self-Powered)
 - Port #1 Empty
 - Port #2 Empty
 - Port #3 Empty
 - Port #4 Hub #4 – KC Tech 1.1 Hub (Bus-Powered)
 - Port #1 Empty
 - Port #2 Empty
 - Port #3 Empty
 - Port #4 Hub #5 – Entrega Hub MacHub7U (Self-Powered)
 - Port #1 Philips USB Camera
 - Port #2 Imation SmartDisk™ Drive
 - Port #3 Empty
 - Port #4 Empty

USB-IF MacOS Interoperability Test Results

(Non-Hub Devices)

1. Install software for device under test below hub #5 with the 5-meter cable if untethered with the Gold Tree connected to the onboard OHCI controller.

Note: The 5-meter cable stresses the device's signal quality

Pass

Pass Criteria:

1. Device enumerates **with the 5 meter cable** (if untethered) AND

Fail

2. Device enumerates below hub #5

Failure Criteria:

1. Device under test does not enumerate below hub #5 OR

2. Software crashed

3. (Untethered only) Device cannot enumerate with 5 meter cable

Record which hub the device under test successfully enumerated below:

Hub # 5 Hub # 4 Hub # 3 Hub # 2 Hub # 1 Root

Comments: _____

2. Device Under Test Demonstrates Operation Connected To Hub #5 With 5 Meter Cable (If untethered) as used by consumer.

Note: The 5-meter cable stresses the device's signal quality

Pass

Pass Criteria:

1. Device under test operates as **used by the consumer** connected to hub #5 (**with 5 meter cable** if untethered)

Fail

Failure Criteria:

1. Device under test fails to operate **used by the consumer** OR

2. Device under test / application crash system OR

3. Device under test operates as **used by the consumer**, but not below hub #5

Record which hub the device under test successfully operated below:

Hub # 5 Hub # 4 Hub # 3 Hub # 2 Hub # 1 Root

Comments: _____

USB-IF MacOS Interoperability Test Results

(Non-Hub Devices)

3. Active Suspend – Device is transmitting data when a system sleep request occurs. (i.e., device is in active use by the consumer)

Note: Run this test ONLY if the device uses vendor supplied software. If not, go to test #4

While device under test is in operation/use, suspend system selecting *Special* → *Sleep*.

- Pass** **Pass Criteria:**
1. System suspends OR
- Fail** **Failure Criteria:**
2. Device uses only OS provided software OR
 3. System notifies user that the system cannot go into suspend. Go to test 4.
- N/A** **Failure Criteria:**
1. System crashes / locks up
- N/A Criteria**
1. No vendor supplied software

Comments: _____

4. Inactive Suspend – Device is idle (i.e., not in active use by the consumer)

NOTE: Only run this test if during Test #3 the system did not go sleep OR if device does not use any vendor supplied software.

- Pass** **Pass Criteria:**
1. System Suspends.
- Fail** **Failure Criteria:**
1. System blue screens / locks up.
- N/A** **Failure Criteria:**
2. System fails to enter standby.
- N/A Criteria**
1. System entered suspend in test 3

Comments: _____

5. Wakeup system by remote wakeup device. **If not a wakeup device, click on mouse/keyboard to wake system.**

- Pass** **Pass Criteria:**
1. Device under test wakes up system AND
- Fail** **Failure Criteria:**
2. System wakes up
- Failure Criteria:**
1. Device fails to wake up system OR
 2. System locks up

USB-IF MacOS Interoperability Test Results

(Non-Hub Devices)

N/A Criteria

1. Not a remote wakeup device.

Comments: _____

6. Device Under Test Demonstrates Operation Connected To Hub #5 after systemwakes up (with 5 meter cable, if untethered)

Note: The 5-meter cable stresses the device's signal quality

Pass

Pass Criteria:

1. Device under test operates as used by the consumer connected to hub #5

Fail

(with 5 meter cable if untethered)

Failure Criteria:

1. Device under test fails to operate used by the consumer OR
2. Device under test / application crash system OR
3. Device under test operates as used by the consumer, but not below hub #5

Record which hub the device under test successfully operated below:

Hub # 5 Hub # 4 Hub # 3 Hub # 2 Hub # 1 Root

Comments: _____

7. Interoperability

Run each individual device in Gold Tree. Check that device under test functions while other devices are operating.

Pass

Pass Criteria:

1. Device under test operates as in test #2 AND
2. Gold tree devices all operate

Fail

Failure Criteria:

1. Device under test fails to operate as in test #2 OR
2. Gold tree devices fail to operate.

Comments: _____

8. Interoperability – Mouse Enumeration Test

While all devices are operating:

USB-IF MacOS Interoperability Test Results

(Non-Hub Devices)

- 1) Disconnect and reconnect USB mouse in same port in the Macintosh Keyboard/hub
- 2) Check that device under test functions while the gold tree devices are operating.

Pass

Pass Criteria:

1. Device under test operates as in test #2 AND
2. Gold tree devices all operate

Fail

Failure Criteria:

1. Device under test fails to operate as in test #2 OR
2. Gold tree devices fail to operate.

Comments: _____

Stop device operation before going to the next test! None of the gold suite devices are to be run in the following tests. Only the device under test will be run!

9. Hot Detach & Reattach While Idle

➔ Detach and reattach device under test to same hub port. Test functionality of device under test only.

Pass

Pass Criteria:

1. Device under test operates as in test #2

Fail

Failure Criteria:

1. Device under test fails to operate as in test #2

Comments: _____

Stop device operation before going to the next test!

10. Topology Change

➔ Detach and reattach device under test to open port on hub # 3. Test functionality of device under test only.

Pass

Pass Criteria:

1. Device under test operates as in test #2

Fail

Failure Criteria:

1. Device under test fails to operate as in test #2

Comments: _____

11. Warm Boot.

USB-IF MacOS Interoperability Test Results

(Non-Hub Devices)

→ Restart system through by selecting *Special*→*Restart*. Test functionality of device under test after system boots.

Pass **Pass Criteria:**

1. Device under test operates as in test #2

Fail **Failure Criteria:**

1. Device under test fails to operate as in test #2

Comments: _____

12. Cold Boot.

→ Shutdown system through by selecting *Special*→*Shutdown*.

→ Turn system back on.

→ Test functionality after system boots.

Pass **Pass Criteria:**

1. Device under test operates as in test #2

Fail **Failure Criteria:**

1. Device under test fails to operate as in test #2

Comments: _____

13. Cold Boot with device connected to root.

→ Shutdown system through by selecting *Special*→*Shutdown*.

→ Disconnect speakers (if applicable).

→ Connect device under test to root port.

→ Turn system back on.

→ Test functionality after system boots.

Pass **Pass Criteria:**

1. Device under test operates as in test #2

Fail **Failure Criteria:**

USB-IF MacOS Interoperability Test Results

(Non-Hub Devices)

1. Device under test fails to operate as in test #2

N/A

N/A Criteria

1. Device is bus-powered

Comments: _____
