

Funtin AC/DC Power Cycle Control Box

User Manual v3.0



| | PCB-100 | PCB-100 Pro |
|-------------------------|---|---|
| Size (mm) | 160 x 105 x 55 | |
| Interface | USB | |
| Power button control | Support | |
| OS Support | Windows/Linux 32/64bit | |
| Operating Temperature | 0 – 50 °C | |
| Reliability | MTBF: 200,000 Hours Operating cycles: 10,000,000 mechanical. 100,000 at Max Load | |
| Status display | 1602 LCD | LED + 7 Segment Displays |
| User data customization | – | Support |
| Input Power | AC 100-240V, C14 | AC 100-240V, C20 |
| Output Power | AC Socket (Max 10A) | C19 (Max 16A) |
| Attachment Cable | 1. USB cable 2. 2pin power button cable 3. AC power cord (C13) | 1. USB cable 2. 2pin power button cable 3. AC power cord (C19) 4. C20 to C13*2 Y cable |

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1 Windows Tools Instruction

1.1 Download test tools

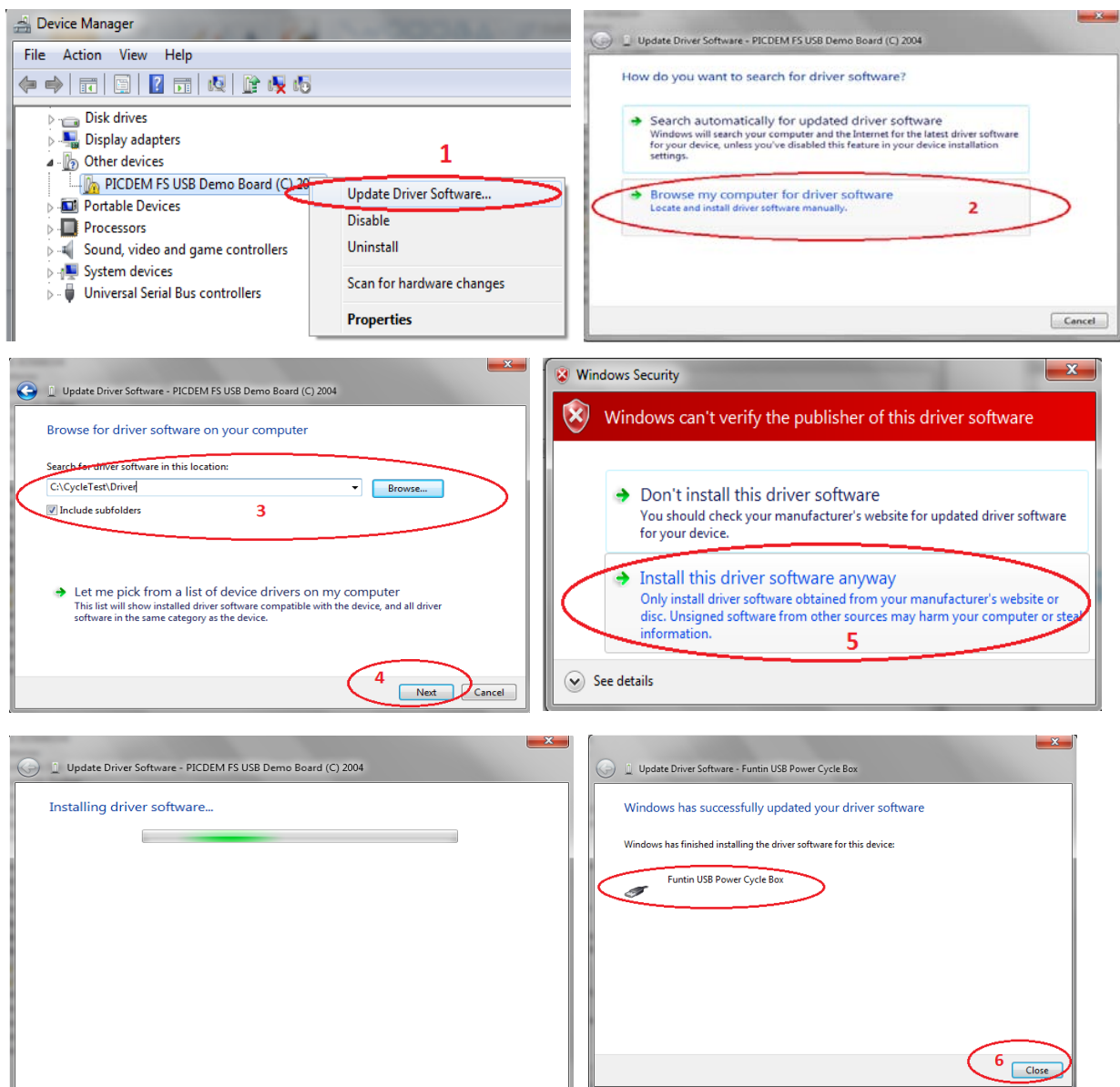
Download CycleTest Tools from <http://www.funtintech.com>

1.2 Unzip CycleTest tools

Copy the folder "CycleTest" into system disk C:\ root directory.

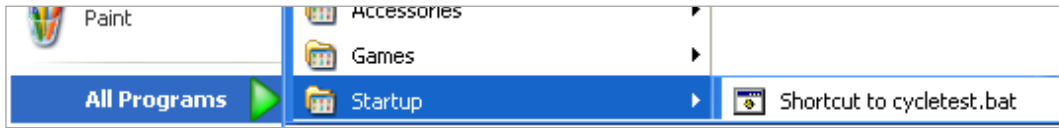
1.3 Install USB Driver:

If the OS is Windows server 2012 or up, you need press "**F8**" key before OS boot up, and then choose "**Disable Driver Signature Enforcement**" into OS to install USB driver.



1.4 Set test tool auto-run when system boot into OS:

To copy C:\CycleTest\Shortcut to cycletest.bat to Start menu\all programs\startup



1.5 Cycle time setting:

Here is test batch file example, and user can change the batch file to meet your test requirement.

Example: verify HDD cycle test, or system PCIE adapter present cycle test, etc...

 A screenshot of a Notepad window titled 'run_cycle_test.bat - Notepad'. The window contains the following batch script:


```

@echo off

rem c:\cycletest\userid.exe -w xxxxxx
rem c:\cycletest\userid.exe -r

c:\cycletest\cycletest.exe 0 30 10
if errorlevel 2 goto pause
if errorlevel 1 goto continue

:continue
date /t >>time.txt
time /t >>time.txt
ECHO.
ECHO.

ECHO.The current power cycle loop is:
type c:\cycletest\BOOTLOOP.txt
ECHO.
ECHO.

ECHO. Waiting for 10 seconds to shutdown...
rem //if timeout.exe delay is not available, the ping command below can used for 10s delay also//
ping /n 10 127.0.0.1 >nul
rem c:\cycletest\timeout.exe 10
c:\windows\system32\shutdown -s -t 0
goto end

:pause
ECHO.
ECHO.The current power cycle loop is:
type c:\cycletest\BOOTLOOP.txt

ECHO.
ECHO.
ECHO.USB communication fail.
pause
goto end
  
```

cycletest.exe <Parameter1> <Parameter2> <Parameter3>

The range of time parameter is 0 – 255 seconds, and the default value is “0 30 10”.

● Parameter1:

0: Power Box will wait USB P5V drop(system shutdown), then to turn AC off, so if DUT USB P5V is standby power rail, you need set this parameter to 1-255.

1-255: Box will not monitor USB P5V power. Box will turn AC off when this parameter time out. You

need set this parameter value more than OS shutdown time.

● Parameter2:

1-255: Box will turn AC on when this parameter time out.

● Parameter3:

1-255: Box power button relay will short for 1 second when this parameter time out. The default value is 10s when Box first power on.

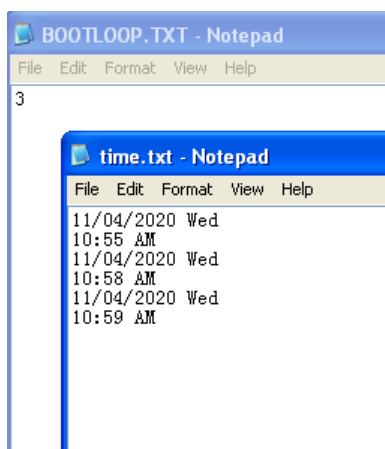
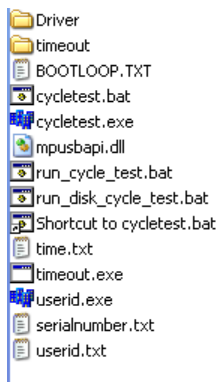
If the system power on policy set as “Always on”, then user can be ignore Parameter 3. And also no need to plug the 2pin power button cable.

1.6 Test event log file:

BOOTLOOP.txt : Record cycle count.

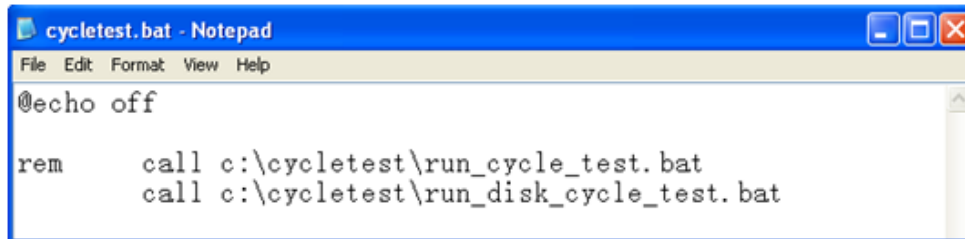
time.txt : Record cycle time.

If you want to clear test log, just to delete these two log file before you do a new cycle test.



1.7 Example to add disk device cycle test:

Change file "C:\CycleTest\cycletest.bat" as below to run the disk device cycle test:



```
cycletest.bat - Notepad
File Edit Format View Help

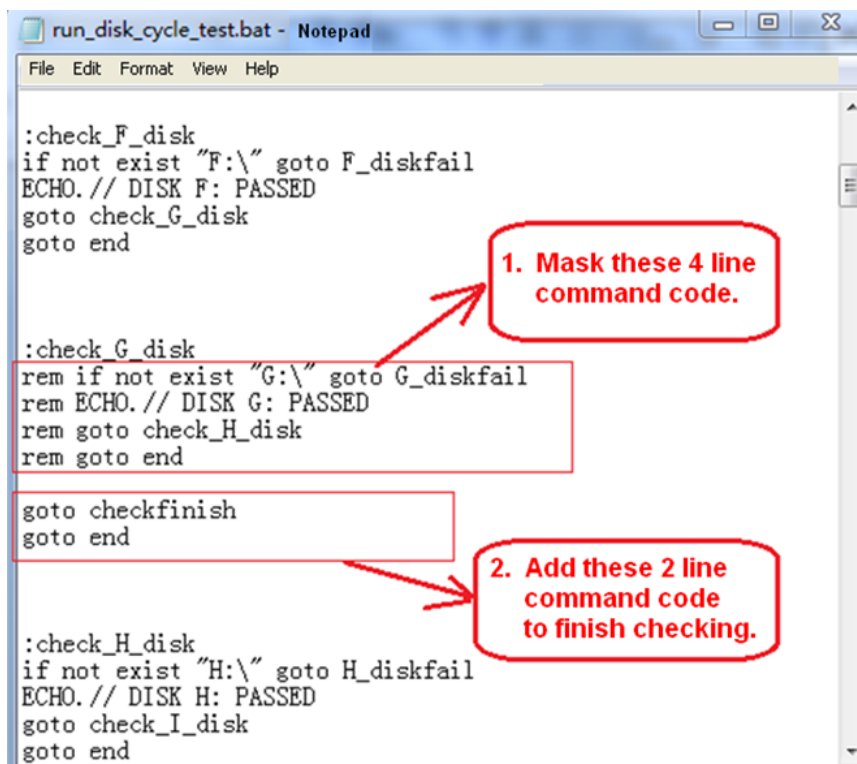
@echo off

rem      call c:\cycletest\run_cycle_test.bat
rem      call c:\cycletest\run_disk_cycle_test.bat
```

According to quantity of disk device to modify file "C:\CycleTest\run_disk_cycle_test.bat":

For example, system support four disk, and there are four driver(partition) under OS which are C, D, E, F.

We just need to change the command at "check_G_disk", refer to below picture for detail:



```
run_disk_cycle_test.bat - Notepad
File Edit Format View Help

:check_F_disk
if not exist "F:\" goto F_diskfail
ECHO.// DISK F: PASSED
goto check_G_disk
goto end

:check_G_disk
rem if not exist "G:\" goto G_diskfail
rem ECHO.// DISK G: PASSED
rem goto check_H_disk
rem goto end

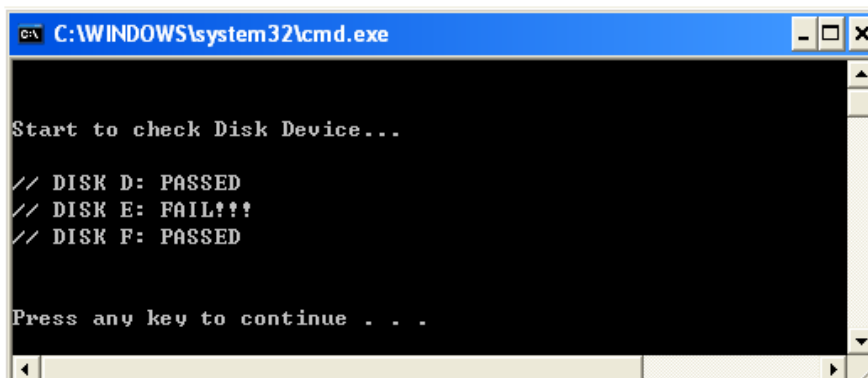
goto checkfinish
goto end

:check_H_disk
if not exist "H:\" goto H_diskfail
ECHO.// DISK H: PASSED
goto check_I_disk
goto end
```

1. Mask these 4 line command code.

2. Add these 2 line command code to finish checking.

If test tool detect system have any disk device lost, then the testing will be pause, and the command window will be show the failure disk, and also will generate log "diskfaillog.txt" into C:\cycletest\diskfaillog.txt



```
C:\WINDOWS\system32\cmd.exe

Start to check Disk Device...

// DISK D: PASSED
// DISK E: FAIL!!!
// DISK F: PASSED

Press any key to continue . . .
```

1.8 User ID Data Customization

User id data customization only supported on PCB100 Pro by “userid” tool:

userid.exe : User ID data write/read tool.
userid.txt : user id data, the default value is same as serial number.
serialnumber.txt : product serial number, read only.

USAGE:



userid [command] [data]

Commands:

-h Help screen.
-w Write user id (data is required, support up to 32 bytes).
-r Read user id data and serial number.

1.9 Front Panel LED Status Definition

Front panel LED only support at PCB100 Pro, the definition as below:

| | Status Description |
|---|--|
| Status LED  | Blinking 1Hz : Box work normally |
| | Blinking 4Hz : USB cable not connect or USB driver not install |
| | On or Off : Box not work |
| AC out LED  | On : AC ON |
| | Blinking 1Hz : Waiting for system shutdown |
| | Off : AC OFF |

1.10 Front Panel Clear Button

The Clear Button can be clear the cycle numbers of front panel to “0001”, but will NOT clear the data of BOOTLOOP.txt

2 Linux Tools Instruction

2.1 File Description:

| | |
|-----------------------|---|
| cycletest/cycletest64 | : test tool for 32/64bit OS |
| run_cycletest.sh | : script example for power cycle test |
| run_cycletest_disk.sh | : script example for disk power cycle test |
| BOOTLOOP.log | : boot loop log, Please delete this log before a new cycle test. |
| time.log | : boot time log, Please delete this log before a new cycle test. |
| disk.log | : disk information log |
| userid/userid64 | : user id write/read for 32/64bit OS, only support on PCB100 Pro |
| userid.txt | : user id data, only support on PCB100 Pro |
| serialnumber.txt | : product serial number, read by userid tool, only support PCB100 Pro |

2.2 Set cycle timer in .sh script:

The parameter definition is same as Windows tool, the default value is: **0, 30, 10**

Before run test tool, please make sure power box USB have ready, else test tool will can't find USB device.

- PCB100 usb ready : Run in the status: "3. waiting talk with HOST..."
- PCB100 Pro usb ready : After 4 7-segment displays do not count and display the number of cycles.

2.3 HDD or SSD quantity set(if choose disk script):

Default value: hdd_num=1

2.4 Make sure the script and tool can be executed manually in a single run.

Note: the test tools need run as root.

2.5 Set auto-run script after Linux boot finish, take RedHat7.4 for example:

Open /etc/rc.d/rc.local, add below two command scripts:

```
cd /home/username/Desktop/x64           //change path to the location of tool.  
./run_cycletest.sh                     //run script.
```

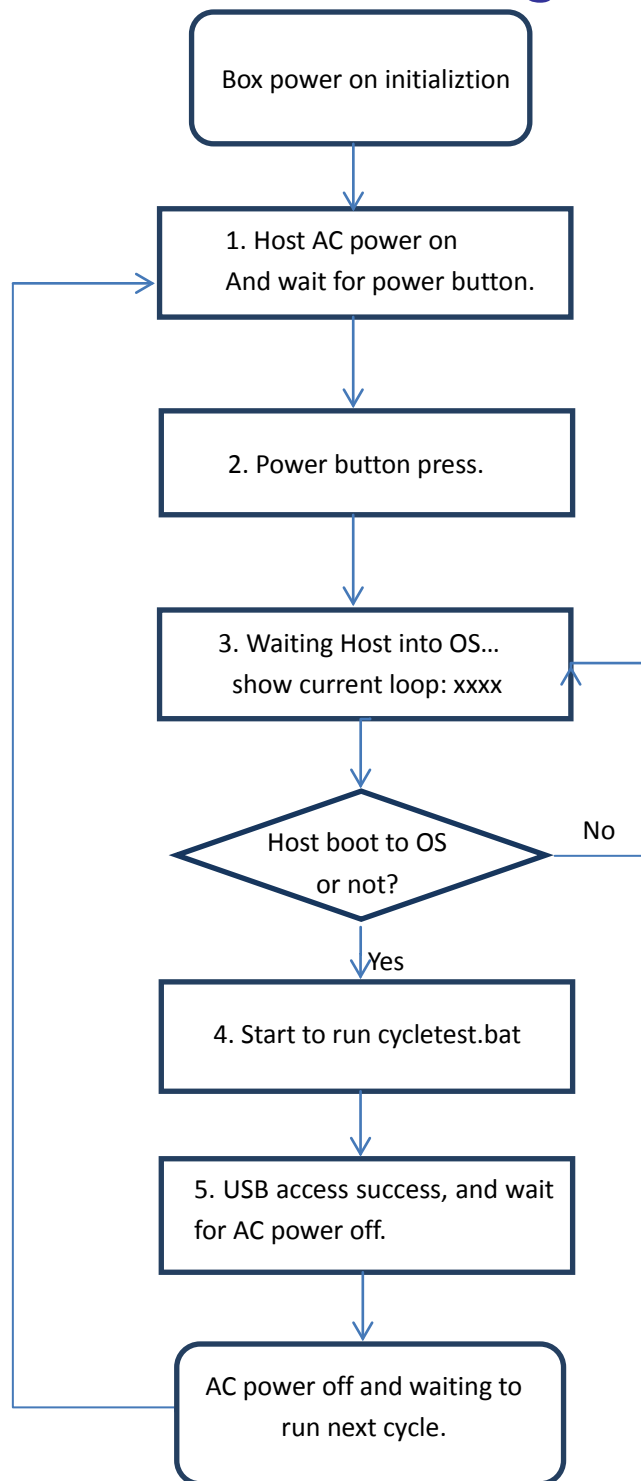
If you want to do HDD/SSD quantity check, please choose "run_cycletest_disk.sh".

After modify finish, then execute "chmod +x /etc/rc.d/rc.local" to make the change available.

2.6 Others Linux notice

- User can change the script to meet your Linux system or test requirement.
- If run test tool on some special Linux OS, example run on ARM platform, you may need to rebuild the test tool, and then please contact us for support.

3 Cycle Control Flow Diagram:



4 Appendix:

4.1 Windows Server 2012 R2 OS to set auto login:

Open registry editor (Start → run → run regedit):

Windows Registry Editor Version 5.00

[HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Winlogon]

Add below three parameter:

| | |
|-----------------------------------|--|
| "AutoAdminLogon"="1" | //Value: "1" |
| "DefaultUserName"="Administrator" | //current management account name(user name) |
| "DefaultPassword"="password" | //current password |

4.2 Windows Server 2012 R2 OS to set auto run application program when into OS:

Just copy the shortcut of "cycletest.bat" to below folder:

C:\Users\Administrator\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Startup

4.3 About Win10

1. Press "Shift" key to reset OS can boot to safe mode to install USB driver.
2. Test tool need run as Administrator on Win10, else will report USB can't connect.