

Laptop Setup Procedure for Rapidscan 2/3D

- Gang Bi, latest updates on 22/12/2011

1. Configuring Windows

- 1) Register using rapidscan@sonatest.com email if required.
- 2) Set computer name to RS2-XXX, the number XXX depends on the number of new laptops been setup, i.e. the first laptop setup could be like RS2-001, etc.
- 3) Set one user account name as Operator, and account type as administration without password.
- 4) Set the other account name as NDTs, set password to usual password (i.e. ad9500) and account type as administration.
- 5) Leave the administration account without password.
- 6) Write down the Windows license key and service tag, and record them for future service purpose.
- 7) If the operating system is Windows XP and the service pack is version 2, then upgrade it to the latest version 3.
- 8) Restart laptop and login as Operator.
- 9) Disable (or uninstall if possible) all manufacturer's applications (i.e. Bluetooth, wireless manager, and ones which could pop-up to the screen automatically). The purpose of this operation is to minimise the interference during Rapidscan program running.
- 10) Check the system graphic card setting and upgrade its driver to latest one if possible.
- 11) Set Windows appearance to classic style. Go to display properties, under Appearance tab, choose 'Windows and buttons' to 'Windows classic style'. (See Figure 1, the example image from Windows XP)

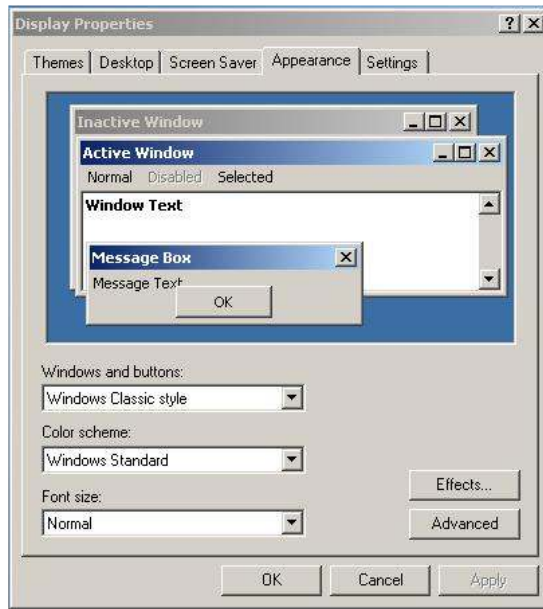


Figure 1, Set Windows appearance

12) Set explorer option. In tools menu, go to folder option. And in view tab, enable show hidden files and folders, turn off hide extension for known files types. (See Figure 2, the example image from Windows XP)

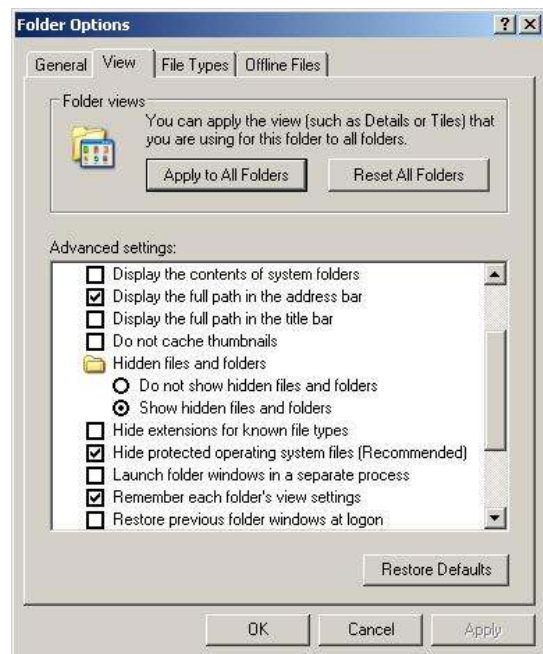


Figure 2, Set explorer option

13) Set power management. Go to power options properties, make changes to ensure all power scheme settings are set to Never. For Windows 7, change setting to high

performance instead. (See Figure 3, the example image from Windows XP)

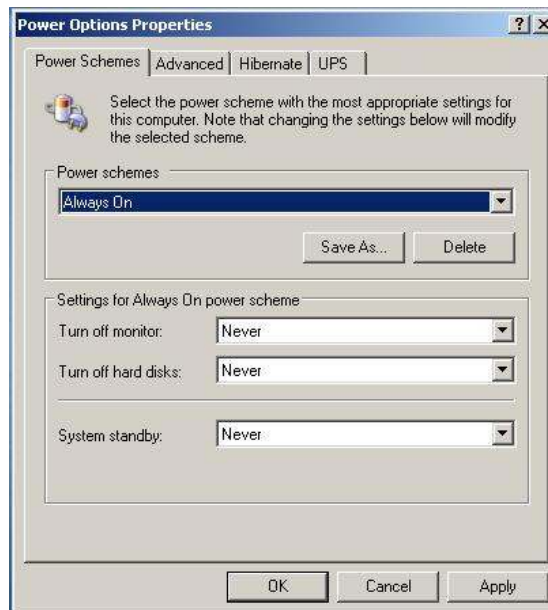


Figure 3, Set power management

- 14) Install all possible updates for the Windows OS.
- 15) Make sure the laptop resolution setting is larger than 1024 x 768, and try to use the recommended resolution if possible.
- 16) Enabling 3GB switch for system memory extension for large scan.
 - To enable 3GB switch on Win XP
 - a) Right click My Computer, click Properties.
 - b) In the System Properties dialog box, click the Advanced tab. Then under Startup and Recovery, click Settings.
 - c) Under System Startup, click Edit. The Windows boot.ini file will be opened in Notepad.
 - d) Add /3GB after
multi(0)disk(0)rdisk(0)partition(1)\WINDOWS="Microsoft Windows XP Professional" /noexecute=optin /fastdetect
which like

```
multi(0)disk(0)rdisk(0)partition(1)\WINDOWS="Microsoft  
Windows XP Professional" /noexecute=optin /fastdetect  
/3GB
```

There is a space between /fastdetect and /3GB.

e) Save and close the boot.ini file, click OK to close each dialog box and then restart the computer.

Note: for some earlier laptop models, if their XP systems appear graphic display problem after set /3GB (i.e. system can not find graphic card after restart, drag windows and reaction become very slow, etc), then please remove /3GB setting in order to keep their XP systems reliable.

- To enable 3GB switch on Win 7
- a) Right click Command Prompt in the Accessories program group of the Start Menu, and then click Run as Administrator.
- b) At the command prompt, input "bcdedit /set IncreaseUserVa 3072" and then press enter, and make sure the system reports execute successfully.
- c) Restart the computer.

2. Configuring RapidScan drivers & software

1) Go to RapidScan Laptop Setup CD (if applicable) root directory and click rs2_distribute_CD.bat (for RapidScan 2) or rs3d_distribute_CD.bat (for RapidScan 3D) file. When command window prompts to input software version number, please input the numbers and dots exactly match x.y.z order, i.e. 5.2.8 and then press enter to download the package to laptop. (Ignore this step if RapidScan software package has been downloaded to C:\ndts)

2) If the laptop is set to RapidScan 3D, then please install DirectX 9.0c package. Go to C:\ndts\drivers\graphics\DirectX9.0c\, and run DXSETUP.exe to install.

3) Install Faro arm driver (for RapidScan 3D only). Go to C:\ndts\drivers\faro_arm\ and run FaroArmUsbDriverXXXX.exe to install faro arm driver.

4) Install PCIe/PCMCIA driver (optional, not required for Win XP SP3 or Win 7).

4a) Option1: install PCIe driver. Go to C:\ndts\drivers\cad_adapter\new\Magma PCIe\ and run setup.exe to install Magma PCIe driver.

4b) Option 2: install PCMCIA driver. Go to C:\ndts\drivers\cad_adapter\new\Magma PCMCIA\ and run setup.exe to install Magma PCMCIA driver.

5) Turn off laptop, connect RapidScan machine with the laptop using PCIe/PCIMCIA card. Connect faro arm USB to laptop (for RapidScan 3D only, for the latest laptop models i.e. HP 8540p, DELL Precision M4600, please connect Faro arm USB to USB 3.0 interface on the laptop) and also its sync cable to both arm and RapidScan machine, and ensure Faro arm is turned on. Switch on RapidScan machine first, then laptop at second. (See Figure 4)



Figure 4, Switch on RS machine and connect it with laptop before turn on laptop

6) Install RapiDAQ card driver. Login as Operator, system prompts to find a new hardware and ask for location. If it is for Faro arm (for RapidScan 3D) then let system automatically search and setup. If it is for RapiDAQ card, then select 'specify location' and locate the driver file under C:\ndts\drivers\data_capture\RapiDAQ_v522. If windows ask for reboot, then reboot laptop.

7) Go to device manager and check FaroUsb device (for RapidScan 3D only) and Ultrasonic devices -> NDT Solutions

RapiDAQ/RapiDAQe are available in the list. If not, you need to repeat above steps to reinstall the drivers. (See Figure 5, the example image from Windows XP)

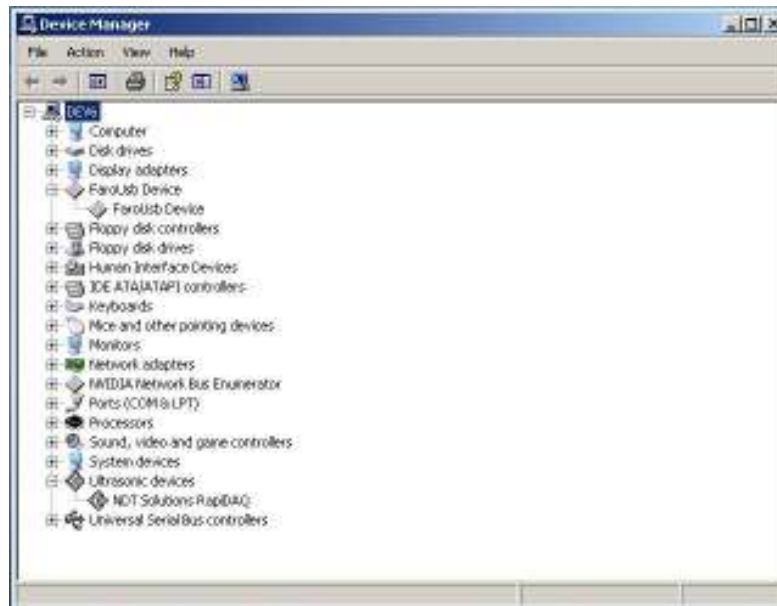


Figure 5, Check if Faro arm and RapiDAQ devices are list in Devices Manager

8) Set Windows background. Go to C:\ndts\misc\ and set the RapidScan logo picture as background.

9) Install Adobe Reader. Go to C:\ndts\apps\ and install Adobe Reader software.

10) Install RapidScan 2/3D software. Go to C:\ndts\apps\ and install setup_vX.X.X.exe (for RapidScan 2) or setup3D_vX.X.X.exe (for RapidScan 3D). During the installation, if system asks to install Visual 2008 C++ Redistributable Package, please allow it to be installed.

11) Open RapidScan software at first time, input the license key if required. Ensure the 'New C' button is available and not grey out. Press 'New C' to start the program, and ensure all system health checks are passed ok and system successfully loads into A-B-C screen.

12) Close the program, go to C:\Documents and Settings\All Users\Application Data\NDT Solutions\ and set 'RapidScan 2' folder to desktop shortcut and rename its shortcut name as 'RapidScan Setting Files'.

13) Test the program with doing some scans, and if you feel the scan reaction little slow, then please try to reduce Windows resolution and try again until you happy with it.

14) Make a delivery CD. Copy all files under C:\ndts\ to CDROM driver and make a CD with name 'RS2 vX.X.X' for RapidScan 2 or 'RS3D vX.X.X' for RapidScan 3D. Remember to stick a license key in the CD case for the customer.

3. Make customer software setup CD-ROM (optional)

Prepare a blank CD-ROM (i.e. 700MB), and copy all files under C:\ndts into CD driver to burn a CD-ROM. Stick customer license label on the CD case, and a RapidScan software version label on the CD-ROM.

Note:

For some latest laptop i.e. HP 8540p, DELL Precision M4600, in order to run 3D scan smoothly, operator must connect Faro arm USB to USB 3.0 interface on the laptop, and also need to make sure the system USB 3.0 host controller and root hub drivers are properly installed.

If you have any question regarding to this setup procedure please contact Sonatest R&D department, Tel: +44-01908-316345 ext. 222, or send email to Gang.Bi@sonatest.com