

Windows 7 Recovery Environment On A USB Stick

STEP 1: PREPARE THE USB STICK

- A 1 gigabyte USB stick will more than suffice.
- Use DISKPART to prepare the USB stick to be bootable

DISKPART

- Powerful
- Dangerous if misused
- Command-line program

RUN DISKPART

- Ctrl + Esc | type Powershell or Cmd in the "Search Box" | hit Enter|
- Type **DISKPART** | hit Enter

- Enter following DISKPART commands:

List disk	(optional to help you specify the correct "index" number)
select disk 1	(for the case of 1 hard drive, assigned index of 0, and 1 USB stick)
detail disk	(info will help verify that you've selected the desired USB stick)
clean	{Removes all partition or volume formatting from disk with focus}
create partition primary	{create a primary partition}
select partition 1	{select the partition you just created}
active	(mark the partition as Active, ie, a system bootable partition)
format quick fs=fat32	(format the partition as Fat32)
assign	(assign next available drive letter to the volume)
exit	(exit DISKPART and return to the command-shell prompt)

- Type EXIT | hit ENTER Exit from the command-shell.

REMOVE THE USB STICK

STEP 2: DOWNLOAD & INSTALL WIN 7 AUTOMATED INSTALLATION KIT (AIK)

The Win 7 AIK is a set of tools and documentation that support the configuration and deployment of Windows® operating systems

DOWNLOAD THE AIK

The Windows® Automated Installation Kit (AIK) for Windows® 7 RC download URL is:

<http://www.microsoft.com/downloadS/details.aspx?familyid=60A07E71-0ACB-453A-8035-D30EAD27EF72&displaylang=en>

You will be downloading a 1.40 GB (1,505,271,808 bytes) ISO file.

BURN THE AIK ISO FILE

Win 7 comes with a very primitive command-line ISO burner, named, ISOBURN.EXE which is located in your \windows directory. You can use ISOBURN.EXE, I did, to burn the ISO to a DVD.

Don't have a computer with Win 7 installed handy? Use the free Active@ ISOBURNER. The URL is: <http://software.isoftware.net/IsoBurner-Setup.exe>

Burn the ISO to a DVD.

INSTALL THE AIK

- Run the AutoRun.inf file on the DVD.

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- Take a short break while the Win 7 Automated Installation Kit (AIK) is installed.
- After installation, you will have:

\Program Files\Windows AIK folder (with sub-folders)
Entry for Windows AIK in your "All Programs" menu.

STEP 3: BUILD A PE (Pre-Execution Environment) DIRECTORY

- Use **COPYPE.CMD** to build the PE directory structure. **COPYPE.CMD** is located in C:\Program Files\Windows AIK\Tools\PETools.
- With Windows Explorer (Win + E) navigate to: C:\Program Files\Windows AIK\Tools\PETools
- Shift + right-click on C:\Program Files\Windows AIK\Tools\PETools
- Select "Open command windows here".
- Enter: **COPYPE.CMD x86 C:\winpe**

Use either x86 or amd64 as appropriate. The folder name winpe is not sacred. Use any name you desire.

- Hit Enter key and the copype.cmd will run.
- Close the command prompt window (after COPYPE.CMD finishes):
- Type EXIT and hit Enter

STEP 4: EXTRACT WINRE.WIM FROM THE PRODUCT DVD

- Make directories:

```
CD C:\
MD \OSimage
MD      \OSimage\mount
```

- Copy Install.Wim from your product DVD. M: represents your DVD drive.

```
COPY M:\Sources\install.wim C:\OSimage
```

- Change to the directory with DISM.EXE . Do NOT use \windows\system32\dism.exe.

```
CD c:"program files\windows aik\tools\servicing"
```

```
DISM /MOUNT-WIM /MOUNTDIR:C:\OSIMAGE\mount /WIMFILE:C:\OSIMAGE\INSTALL.WIM
/INDEX:1
```

- Copy the WinRE.WIM to C:\WinRe

```
copy C:\OSIMAGE\mount\windowssystem32\recovery\winre.wim C:\winre
```

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- Unmount the Install.Wim file.

```
DISM /UNMOUNT-WIM /MOUNTDIR:C:\OSIMAGE\mount /DISCARD
```

STEP 5: PREPARE THE WINDOWS BOOT IMAGE

- Mount the Window RE file

```
DISM /MOUNT-WIM /MOUNTDIR:C:\winre\mount /WIMFILE:C:\winre\winre.wim /INDEX:1
```

- Dismount the WinRE.Wim file

```
DISM /UNMOUNT-WIN /MOUNTDIR:C:\WINRE\mount /COMMIT
```

STEP 6: PUT THE WINDOWS RECOVERY ENVIRONMENT ON THE USB STICK

- Copy, WITH RENAME, the image file to the \iso\sources subfolder

```
COPY C:\WINRE\WINRE.WIM C:\WINRE\ISO\SOURCES\BOOT.WIM
```

- Copy the entire \winre\iso folder and its subfolders to the usb stick

```
Xcopy c:\winre\iso\*.* d:\ /e
```

Congratulations! You may now “Eject” your USB stick.

Shutdown your computer. Insert your RE (Recovery Environment) USB stick, start your computer, and you will end up at the System Recovery window.

This assumes that you’ve previously booted into the BIOS setup and moved “Boot from USB” to the top of the boot order.