

# RTool

<http://www.blackbag.org>

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## **What's New**

### **Version 2.0.7**

- Send and Receive support Added for CD64 Unit (requires ProComm Link).
- Properties screen redesign.

### **Version 2.0.6 (BB Internal Release Only)**

- Screen size re-definable.
- Transparent Toolbars fixed.
- Various bug fixes. (NT Drivers on hold for the time being)

### **Version 2.0.5**

- Bug with Backups fixed.

### **Version 2.0.4**

- Sync bug found/squashed.
- EPP send mode added (as found in TPC 2).
- Romlist function added.

### **Version 2.0.2**

- Bios colour tuning and screen position now changeable from within rtool2.  
**Important** – read the notes regarding bios tuning.
- New code for tree structure. (Now uses background thread to refresh dir.info)
- Text files added to known file types (right click to view).
- Reset file associations via Rtool2.
- Bughunt version 1.0 completed.
- Added 'Refresh' to menus.

### **Version 2.0.0**

- SCP64/Wildcard Support.(Based on loader 1.1 protocols)
- MemPak transfer to and from PC (requires Surgeon64 hardware)
- Image type conversion (Doc64 <-> SP/Wc/Z64).
- Send IPS files (DV64 Bios 1.60 or above required) – IPS 1 and IPS2 supported.
- Auto Ident for IPS/Bios/Sram/Rom file formats.
- Associates \*.v64, \*.pal, \*.usa, \*.jap, \*.z64 with Rtool. Just double click to upload.
- Revamped user interface.
- Various bugs removed.

## **Overview**

Rtool is a multi-usage tool designed for manipulation of images produced by development platforms for consoles using a Intel based platform (preferably a Pentium Class machine).

For some features Rtool has a minimum requirement:-

Failure to meet these minimum requirements may result in Rtool behaving erratically.

| <b>Feature</b>          | <b>Requirement</b>       |
|-------------------------|--------------------------|
| Image Backup (Doctor64) | DV64 Bios 1.60 or higher |
| IPS Sending to Doctor64 | DV64 Bios 1.60 or higher |
| MemPak Backup/Restore   | Surgeon64 Hardware       |
| Send & receive (CD64)   | Pro Comms Link           |

Please note that SP64/Wildcard image backup is **not** supported – neither of the us have a SP/WC which makes development of software for it a little...difficult... it may be supported at a later date, but don't hold your breath.

## **Installation**

To install Rtool, unzip the archive into a directory and run.

## **Use**

### **Generic Use**

Once Rtool is run you will be presented with a window which has a tree or 'explorer' style display of the directories to the left of the screen and a list of files to the right.

The selection box above the directories selects which drive is currently being used.

To change directories, simply double click on the directory name – the tree will expand to display any sub directories held beneath.

Highlighting files in the right-hand window and right clicking the mouse button will present you with a menu giving applicable options for that particular file type.

One of the first things you will need to do after installing Rtool is to configure it for your needs. To do this, click on **view** then **properties**.

This configuration screen allows you to select which unit you are using and which port the unit is connected to (or in the case of the CD64, the base address of the comms board.)

It also allows modification of the following parameters:-

### **Compression**

Varying this value determines how well a image will be compressed. Values range from '0' (fast, but no compression) to '9' (slow, but good compression). Default value is '6'.

### **Preview Directory**

This switch (once enabled) will pre-scan the directories to find valid (recognised) file types such as Roms/Srams/IPS etc. Disabling this switch will only identify a file once it has been highlighted.

### **Preview CDROM**

Same as above option, but operates on CDROMs instead of directories.

### **Create Backups**

Any file manipulation tasks will be performed on the file **after** a backup is made. Disabling this will reduce the amount of disk space used in file manipulation tasks but obviously is not as safe.

### **Surgeon64**

Enable this if you have purchased a **Surgeon64** hardware add-on. This will enable the MemPak<->PC options in the menus. Note: If you enable this **without** having a Surgeon64 attached – the menus will still be available, but obviously won't work as expected.

**Show hidden files**

This switch defines whether hidden files are displayed or hidden (easy eh?).

**Show Splash screen**

Enables or disables the splash screen at startup.

**Surgeon Port**

If the Surgeon64 is enabled, this will allow you to define the base address of the Surgeon in hexadecimal.

**Default Directory**

This is the directory that Rtool will open when it runs.

**Default Viewers: -**

**ASCII**

This is the program that will be used to view ascii files. (defaults to Windows Notepad)

**Binary**

The program that is launched to view binary files (default NIEW - a Binary Rom viewer by Titanik/CZN)

## **Specific useage.**

### **Doctor64 Bios Tuning: \*\* READ THIS BEFORE USE \*\***

Bios 1.60 and above allows you to modify the colour of the bios background and the position of the screen.

Rtool2 will allow modification of these features within the bios but they are used **at your own risk.**

**\*\*DO NOT\*\*** modify a pre-1.60 Doctor 64 bios and send it.

**\*\*DO NOT\*\*** modify a non Doctor64 bios.

You have been warned.

- 1) Highlight the bios file in the file window
- 2) Choose BIOS from the menu and choose the 'Tune Bios' options.
- 3) Use the sliders to select which colour you wish the background to be
- 4) Select the X,Y offsets for the screen.
- 5) Send the bios.
- 6) Wait for it to finish re-writing itself and then press PLAY on the Doctor64 to restart.

### **Bios Enabling (Doctor64)**

Note that Bios enabling is no-longer a viable option for bios versions 1.60 or above - Backup enabled bios' are available elsewhere on the 'net.

### **Sending Images.**

Highlight the required file and click the 1<sup>st</sup> icon (send). This will upload the image to the specified unit.

Please note that the easier way to send to the CD64 unit is to send the image as above but make sure the unit is **off**. Once the requester appears switch on the unit and sending will commence. The alternative way is to choose CD64 Tools/Pro Comms Link from the menu and then send from Rtool.

### **Receiving Images (Doc64 only).**

- 1) Press '**Menu**' then '**Next**' on the Doctor64 to bring up the backup menu.
- 2) There are 2 choices – Backup Card to Dram or Backup Card to PC – Choose 'Backup Card to PC' with the applicable size for the image.
- 3) Click on the **Receive** Icon (2<sup>nd</sup> from left) and enter a filename.

### **Receiving Images (CD64 only).**

#### **From DRAM.**

- 1) Check that Rtool is set to download from CD64 DRAM (Rtool/CD64 menu).
- 2) From CD64 choose **download card**. (CD64 main menu).
- 3) Click on the receive icon in Rtool.
- 4) Enter a filename and choose a file size.
- 5) Choose **Pro Comms Link** from CD64. (CD64/CD64 Tools).

#### **Directly from Cartridge.**

- 1) Check that Rtool is set to download from CD64 Cartridge (Rtool/CD64 Menu)
- 2) Click on the receive icon in Rtool.
- 3) Enter a filename and filesize for the image.
- 4) Choose **Pro Comms Link** from CD64. (CD64/CD64 Tools).

### **Resizing Images.**

Highlight the required file and click on the resize icon ('Scissors', 3<sup>rd</sup> from left). This will ask for the new image size and a choice of 4 presets.

**Note:** If you have backup's enabled you will require free space equal or greater than that of the file being modified.

### **Converting between Unit formats.**

Images are usually stored as either a 'standard' byte format or a 'byte flipped' format. The Doctor64 and CD64 use the 'Byte Flipped' format whereas the SP64, Wildcard and Z64 use the standard byte format.

To convert between image formats, simply highlight the file and choose the 'Change image format' icon (the light switch, 4<sup>th</sup> icon from left). This will convert a doc64/cd64 format to SP/Wc/Z64 and vice versa.

The file format of the image will be reported in the status panel at the bottom of the info screen.

### **Applying IPS patches to files.**

To apply an IPS patch to a file, highlight the file to receive the patch and click the IPS icon (the wand, 5<sup>th</sup> icon from left). A requester will appear asking for the ips file. Choose the IPS file and click 'ok' – the ips file will then be **permanently** patched into the file.

The doctor64 is also capable of directly receiving IPS files (see bios requisite) - to directly send an ips file to the doctor64, simply double click the ips file **after** the image has been loaded. Once 'ok' has appeared the image will have been patched.

### **Checking Image CRC's.**

Occasionally (i.e. after modification) the image checksum will become invalid – this will stop the unit from loading and executing the image. To check and/or repair a checksum highlight the image and click on the CRC icon (the calculator, 6<sup>th</sup> from the left). A valid checksum will be reported if found, otherwise a requester offering you the choice of recalculating the checksum will appear.

### **Compressing Images.**

Rtool supports compression and decompression of images to reduce the overhead on required disk space. Rtool will also directly send compressed images to a unit without the need to decompress it first.

To compress an image, highlight the image and click the compression icon (7<sup>th</sup> from left) and the image will be imploded.

### **De-Compressing Images.**

This is the opposite of the above option and allows a imploded image to be exploded and restored to its original state.

### **Using Filters.**

The file window can be filtered to show all files, valid files (every file type that rtool knows about), roms (all sorts) or roms for the individual territories.

To choose a filter, click on the selection box (currently saying '**all files**') and choose a new filter.

### **Romlist.**

This little feature produces a list of Cart details showing such data as Cart title, format, file size and other such details that you probably wont find useful ;P Please note that the file produced is affected by the currently active filter.

I.e - the file list produced will only reflect which files where displayed in the main file window. This allows you to create separate files for images from different territories.

### **Exiting to Windows.**

If you need an explanation of this icon perhaps you should first purchase our accompanying book 'What to do with mommy's computer' (1<sup>st</sup> edition).

### **Misc**

Greetings to the other guys in BlackBag – Datawiz, Nagra, Jovis, Breakpoint, Ste Shroomz, McBain and Stumble, and a big thanks to the guys that offered their services as beta testers :- Twinsen, Placebo, Ego\_UK, Netfucker, Rainman, Actraiser, Hartec, Titanik.

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Extra big thanks to the guys at Bung and UFO.

Last (but not least) all the other coders in #n64dev :)

### **Email Contact.**

If you wish to contact the authors of this program for any reason, we can be contacted via the following email address: **Silo@blackbag.org** or **Fractal@blackbag.org**

### **Web Addresses.**

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