Z88 Quick Guide

Upgrading Flash Cards

Every now and then, we upgrade and improve the applications that are supplied with the card.

Whenever I notify users that a 'new' version is out I am greeted with words like

I am not yet confident with burning app's to (flash) ROM's

so last night and most of today I thought I would show you how easy it is!

Minimum Requirements

Z88

The more RAM you have in your Z88 the better! If you have another RAM pack, use that in Slot 2.

128K RAM in Slot 1

The files that are used are 16K, so with a 128K RAM you will only be able to have 3 of them at any one time before having to download some more.

Z88 Link

Z88 Computer Link, to download the new image files. It can be any type i.e. Mac Link Eazylink as long as you have the software for the Z88 end separately.

Getting Ready

✅1 - Backup Z88

As I am assuming that you are using the minimum requirements, space is at a premium. Save all your
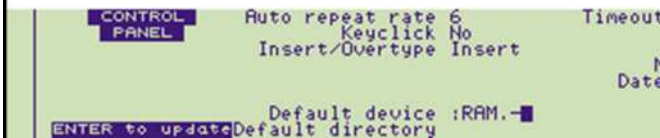
important files off the Z88. (This is not so important if you have that 1M RAM!).

✅2 - Mains Adapter

The last thing we want when we do this is to run out of battery power, so plug in that mains adapter (or make sure you have a new set of batteries handy).

✅3 - Hard Reset

This is an important task, lets both start at the same place and get rid of any potential memory issues, lets give the Z88 a HARD RESET.

✅4 - Default Device

We are going to use the Z88's temporary RAM. This is not normally used but has the advantage of using all the available RAM in the Z88 (RAM.0 + RAM.1). We will perform another Hard Reset when we finish so it should be safe!

Select the Panel []S, move the cursor down to the Default Device, move to the right (<> right-arrow) DELete and change to to - so that RAM.- is shown.

Make sure you **press the ENTER key** otherwise these changes will not take place.

To ensure that the Filer is also pointing to RAM.-, select the Filer, []F, then Select Device, <>SV, then you can change the 0 to - as above.

Programs, Image Files & an Example

Programs

There are two you can use. These are

ROMCOMBINER which allows you to blow the full image onto your Flash Card.

ROMupdate is easier to use but just updates a

Filename.63 is at the top and Filename.0 is at the bottom.

ROMupdate image file is just a 16K file that gets replaced in your existing Flash card.

Example

I am going to use ROMCOMBINER and the 64K block that is

specific Z88 Application you already have.

Image Files

ROMCOMBINER image files are in blocks of 16K and have a number at the end to indicate what position they are in the Flash Card.

supplied with the Flash card. Larger images can be blown using the same technique. All that changes is the number of 16K files that need to be downloaded and blown.

Fetch and Unzip Files
✅5 - Fetch Files

The files you need are

- romcombiner.zip and
- FLZIP.ZIP

which are fetched via the internet using your computer.

✅6 - Unzip Files

As we are running a minimum setup here, you can just extract the files we need to replace the applications on you main computer first.

In romcombiner.zip the files we need are

- romcombiner.bas
- romcombiner.bin
- romutil.bas

In FLZIP files we need are

- FLZIP.60
- FLZIP.61
- FLZIP.62
- FLZIP.63

Put all these files into a directory ready to transfer to the Z88.

Transfer Files
✅7 - Transfer Files to the Z88 - 1

There is only one problem with those files and that is that there are too many of them to fit on our Z88.

So lets just get what we can onto the RAM.

- romcombiner.bas

- romcombiner.bin
- romutil.bas
- FLZIP.60
- FLZIP.61
- FLZIP.62

Well that is all but the last one.

Final Checklist before running ROMCOMBINER

☑ **Backup Z88**
☑ **Mains Adapter**
☑ **Hard Reset**
☑ **Default Device**
☑ **Fetch Files**
☑ **Unzip Files**
☑ **Transfer Files**

Using ROMCOMBINER

```
RomCombiner v2.09 (c) Garry Lancaster, 2000-2011
Read ROM card to image files
Combine image files of cards
Verify EPROM banks properly erased
Blow image files to blank EPROM
Flash EPROM block erase
Emulator file conversion
Wait mode                              Quit█
```

☑ 1 - Start ROMCOMBINER.

```
BBC BASIC (Z80) Version 3
(C) Copyright R.T.Russell
>RUN "ROMCOMBINER.BAS"
```

[]B Start BBC BASIC
RUN "ROMCOMBINER.BAS"

☑ 2 - Flash EPROM block erase

Put the Flash card that you want to change the Application into Slot 3.

We are only going to change the top 64K sector of the Flash card, so there is no need to erase the whole card.

Press F to select the command.

We need to erase block 16 so type 16 followed by the return key.

After seeing **Successful!,** wait until the menu appears and then select 0 to end.

Start Loop

☑ 3 - Blow image files - 1

Press **B** to select the command.

First bank (0-63) **60**
Last bank (0-63) **62**

What EPROM type is in slot 3 FLASH
Card name? FLZIP

Full ROM or Range of banks?

As we haven't got the full ROM image in RAM we have to go for the Range of banks option.

```
First bank (0-63)? 60
Last bank (0-63)? 62
Blowing bank 60
Blowing bank 61
Blowing bank 62
Banks successfully blown!
Press any key to continue
```

Press the space bar to leave this.

✅4 - Erase used files

Select the Filer []F
<>ER ERASE

Name : FLZIP.*
Confirm each file ? No

✅5 - Transferring file(s) to the Z88 - 2

Now we can get the last file

Press -ESC- to get back to ROMCOMBINER.

- FLZIP.63

End Loop

✅6 - Blow image files - 2

Follow the instructions as before but the banks are now

First bank (0-63) **63**
Last bank (0-63) **63**

✅7 - Hard Reset

Well thats it, just do a Hard Reset so that the temporary RAM is cleared out.

Blowing Larger Images

The only difference between doing the example above and Blowing larger images is that you need to go round **the loop** more often.

✅Transferring files to the Z88
✅Blow image files to blank EPROM
✅Erase used files
✅Transferring files to the Z88 . . .

The next section discusses the relationship between how many files you can save at any time v RAM packs and the order you should

blow the files to the Flash Card.