SPECTRUM ARCHIVE FILE FORMATS

Ok, so you looked at the long lists of titles to download, perhaps even downloaded some games, and are now stuck with files you don't understand...

If this description fits you, read on!

This archive has software stored in 4 formats

Z80

This one's easy. It's one of the famous 'snapshot' formats, which means it is a complete copy of the state of the computer (entire memory area, all registers, etc) at the time that the snapshot was taken. So, if you go the opposite way, the computer would simply go on exactly where it left off. Of all snapshot formats, Z80 (which was defined for the (PC) Spectrum emulator of the same name) is the most useful one, as it has the following key advantages

- The memory image is compressed,
- It can be used for 128K software.

Naturally, there also are some restrictions to snapshots:

- Multi-load games must be 'multi-snapped'. So if the game loads more data as it runs (such as extra levels), each part has to be snapped as well.
- If a 128K game was loaded in 48K mode, only the 48K mode part is saved. So you lose data in this case

Any other snapshot type can easily be converted to Z80, although the other way around is not always possible.

SLT

The SLT format was meant to be an improvement of the classic snapshot. Each extra block that is to be loaded is stored inside the SLT file. Therefore, the multi-load problem is negated. This format even goes a bit further. With the aid of extension blocks, you can also insert things like pokes, information, scanned inlays etc. into a single file. Unfortunately only a very small number of emulators support the SLT format:

- X128 (PC/DOS)
- Z80 (PC/DOS)
- Warajevo Spectrum Emulator (PC/DOS)
- Z80Em (Acorn RISC OS)

TAP

The TAP format was also developped for the emulator Z80. A TAP file is a so-called 'tape file' format. It behaves like an actual tape, in that each block is nicely stored after the other. To work with it, you simply use the well-known tape commands in your emulator.
The main advantage of this format is that all blocks from the original tape can be kept (such as the loading screen). The disadvantage is that this format only understands 'normal speed' (i.e. saved with the normal tape commands) saved blocks. So, custom loaders will produce problems.
I still get lots of questions about TAP files, so I'll try to explain the most common ones here.

How to load TAP files?
First of all, this is different for each emulator (so *RTFM*), but you can generally give the filename of the TAP file on the command line, such as

```
X128 file.TAP
```

Your emulator will start and you will see the standard copyright message. Wait! How's that?
Well, before people got carried away with emulators, there was this golden age of the Spectrum. Perhaps you remember that after inserting a tape in your tape-deck, you had to type

```
LOAD ""
```

on your Spectrum to start loading. So here's another reason why the format is called a 'tape format'...

This doesn't work in X128!
Yes it does, if you have version 0.7 or up. The previous versions had this funny bug that prevented X128 from remembering that you provided a tape.

The TAP file stops loading and nothing happens!
This means that the game uses a custom loader (does not use the ROM). Due to the way TAP files are read, custom loaders cannot be used. What you can do is convert the TAP file to a VOC or TZX file (with utilities such as TAPER) and use this VOC file instead. Most TAP files in the archive have been hacked to overcome this problem.

How do I convert a TAP file to a snapshot file?
This one is probably the most often heard question! In fact, it has been in the FAQ since day 1.
Here's an extract from the FAQ:

You can't convert them directly. A TAP file is a *tape*, and totally different to a snapshot, which is a frozen copy of the Spectrum's memory contents, registers and so on. To make a snapshot from a TAP file you simply load the TAP file into your emulator (see the documentation with the particular emulator) then LOAD the program as you would on a real Spectrum. When the program has loaded you can make a snapshot at that point (again see the documentation of the particular emulator). Bear in mind, though, that many TAP files include further files for later levels etc. so the snapshot may still need the TAP file; some snapshots you may download are like this, because of people doing this without thinking.

TZX
This is a brandnew tape file format where all data is stored in *exactly* the same way as on the original tape. So a played TZX file is exactly the same as a sound sample file of the game, except the size is only about 25kB for an average game.
The following emulators can handle the TZX format now:

- X128 (PC/DOS, v0.7 and up)
- Warajevo Spectrum Emulator (PC/DOS, v2.0 and up)
- ZX-32 (PC/Windows, v1.03 and up)
- Multi-Machine (PC/Windows)
- XZX (Unix, v2.3.0 and up)
- Spectemu (Unix, v0.94 and up)

Expect more emulators to follow!
If you need more info on the format, look at the specifications.