

NAME

rgbfix — Game Boy checksum fixer

SYNOPSIS

```
rgbfix [ -Ccjsv] [ -i game_id] [ -k licensee_str] [ -l licensee_id]
      [ -m mbc_type] [ -n rom_version] [ -p pad_value] [ -r ram_size]
      [ -t title_str] file
```

DESCRIPTION

The **rgbfix** program changes headers of Game Boy ROM images. It also performs other filetype operations, such as truncation. The arguments are as follows:

- C** Set the Game Boy Color-only flag: *0x143* = *0xC0*. If both this and the **-c** flag are set, this takes precedence.
- c** Set the Game Boy Color-compatible flag: *0x143* = *0x80*. If both this and the **-C** flag are set, **-C** takes precedence.
- i** *game_id*
 Set the game ID string (*0x13F–0x142*) to a given string of exactly 4 characters. If both this and the title are set, the game ID will overwrite the overlapping portion of the title.
- j** Set the non-Japanese region flag: *0x14A* = 1.
- k** *licensee_str*
 Set the new licensee string (*0x144–0x145*) to a given string, truncated to at most two characters.
- l** *licensee_id*
 Set the old licensee code, *0x14B*, to a given value from 0 to 0xFF. This value is deprecated and should be set to 0x33 in all new software.
- m** *mbc_type*
 Set the MBC type, *0x147*, to a given value from 0 to 0xFF.
- n** *rom_version*
 Set the ROM version, *0x14C*, to a given value from 0 to 0xFF.
- p** *pad_value*
 Pad the image to a valid size with a given pad value from 0 to 0xFF. **rgbfix** will automatically pick a size from 32KiB, 64KiB, 128KiB, ..., 8192KiB and give a warning thereafter. The cartridge size byte (*0x148*) will be changed to reflect this new size.
- r** *ram_size*
 Set the RAM size, *0x149*, to a given value from 0 to 0xFF.
- s** Set the SGB flag: *0x146* = 3.
- t** *title*
 Set the title string (*0x134–0x143*) to a given string, truncated to at most 16 characters. It is recommended to use 15 characters instead, to avoid clashing with the CGB flag (**-c** or **-C**). If both this and the game ID are set, the game ID will overwrite the overlapping portion of the title.
- v** Validate the header and fix checksums: the Nintendo character area (*0x104–0x133*), the header checksum (*0x14D*), and the global checksum (*0x14E–0x14F*).

EXAMPLES

Most values in the ROM header are only cosmetic. The bare minimum requirements for a workable image are checksums, the Nintendo logo, and (if needed) the CGB/SGB flags. It is a good idea to pad the image to

a valid size as well (“valid” meaning a multiple of 32KiB).

The following will make a plain, no-color Game Boy game without checking for a valid size:

```
$ rgbfix -v foo.gb
```

The following will make a SGB-enabled, color-enabled game with a title of “foobar”, and pad it to a multiple of 32KiB. (The Game Boy itself does not use the title, but some emulators or ROM managers might.)

```
$ rgbfix -vcs -l 0x33 -p 0 -t foobar baz.gb
```

The following will duplicate the header (sans global checksum) of the game “Survival Kids”:

```
$ rgbfix -cjsv -k A4 -l 0x33 -m 0x1B -p 0xFF -r 3 -t SURVIVALKIDAVKE SurvivalKids.gbc
```

SEE ALSO

`rgbasm(1)`, `rgblink(1)`, `rgbds(7)`

HISTORY

rgbfix was originally released by Carsten Sørensen as a standalone program called `gbfix`, and was later packaged in RGBDS by Justin Lloyd. It is now maintained by a number of contributors at <https://github.com/rednex/rgbds>.