NAME

rgbfix — Game Boy checksum fixer

SYNOPSIS

```
rgbfix[-CcjsVv][-f fix_spec][-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.

-f fix_spec

Fix certain header values that the Game Boy checks for correctness. Alternatively, intentionally trash these values by writing their binary inverse instead. fix_spec is a string containing any combination of the following characters:

- 1 Fix the Nintendo logo (0x104-0x133).
- **L** Trash the Nintendo logo.
- **h** Fix the header checksum (0x14D).
- **H** Trash the header checksum.
- g Fix the global checksum (0x14E-0x14F).
- **G** Trash the global checksum.

-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.

-1 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** Print the version of the program and exit.
- -v Equivalent to -f lhg.

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 -1 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 -1 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**