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:

- `l` 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.

`-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` 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 -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.