Flash Linker Advance
Flash Card Advance

Instruction Manual
Version 1.00

Thank you for purchasing the Flash Linker Advance and/or the Flash Card 64M Advance. With the Flash Advance series we are introducing the first mass produced and professional GBA Emulators and Development tools to the market.

The supplied software, AdvanceWriter, works flawless with Windows 95, Windows 98, Windows ME, Windows 2000 and also Windows NT (using additional software).

The Flash Card Advance

The Flash Card 64M Advance (and coming models with larger capacity) come with full multi game functions, which means in fact that storing more than just one single game in one cartridge is possible. A 64M card can save up to two 32M games, while the 128M card can hold up to four 32M games. Usually GBA games are only utilizing 32K of SRAM, while the Flash Advance Cards provide up to 64K to each game stored in the cartridge. The available SRAM memory cannot only be used to store savegame data, but furthermore can be used to extend the Flash ROM.

The Flash Card 64M Advance comes with 128K (1M) of SRAM, while the Flash Card 128M Advance has an 256K (2M) IC respectively. The used battery lasts for 5 years, there shouldn't be any data loss.

Downloading a 32M ROM file to the Flash Cards takes about 80 seconds.

The Flash Linker Advance

The Flash Linker Advance is connected to a standard PC printer port using a 25-pin parallel/printer extension cable, which should not exceed a certain length. The PCs printer port can be set to SPP, EPP or ECP mode, while the EPP mode is the fastest way to transfer data. The Flash Linker Advance does also have the necessary connector to plug in Flash Cards or original game cartridges.

Configuration

To use the Flash Linker Advance together with the Flash Cards the supplied software needs to be installed first and the proper PC printer port needs to be set. The speed selection (high/low) indicates if the data should be sent using the EPP mode (faster). Once the setup is done, the AdvanceWriter software will save your settings when clicking the EXIT icon. This steps needs to be taken at the first use only.

Sending single ROM files to the Flash Cards

When 'Write Flash'' is selected a dialog box to choose the ROM file will open. Once the file is selected, the software will check both, the file size and the header. Should both fail, a security check is carried out and the user can decide if the program should send the data to the Cards or cancel the process. If no header information is found, the software will add its own before sending the actual ROM File to the Flash Linker/Cards.

Sending multiple ROM files to the Flash Cards

For 'multi games' an additional pre-boot program named 'gbapack1.0' is required (supplied with the software). The program is stored by default in the FlashWriter software, changing the settings is not required. Using the 'Write Multi' function a file selection box is opening which lets the user choose the ROM files to send. Using the CTRL or Control key at the keyboard multiple files can be selected. With 'Open File' the pre-boot program (menu) is sent to the Flash Card, followed by the ROM files. Each ROM file needs to begin at a new 32M bank.

To gain unlimited energy or other special effects, or if another pre-boot program is required, the settings can be changed with 'Set pre-boot'.

Backup ROM files

Through the selection 'Backup Game' a filename can be entered. Once confirmed, the Flash Linker is carrying out an analysis and will suggest the estimated file size. A selection box to alter the file size, if necessary, will appear before saving. Files size can be 8M up to 256M. A saved game could then be altered on your PC or could be used for research purpose.

Savegame functions

Through the functions 'Backup Saver' and 'Write Saver' the savegames can be sent and received from/to the Flash Cards. Once the message window was opened, two different options are available: Locations (bank 1 – bank 4) on the left, memory sizes (32K, 64K, 128K, and 256K) on the right.

Bank 1 to bank 4 refer to the 4 different 64K banks in the Flash Cards. Please note the Flash Card Advance 64M only comes with 128K SRAM, therefore selection of bank 3 and 4 just mirrors bank 1 and 2. The Flash Card Advance 128M can be used with all four banks!

After entering the file name and clicking OK, the savegame will be stored on the PC harddrive.

Attention coders: Using the Flash Cards Advance the usually 32K SRAM size for each game will automatically expand to 64K without any extra programming or circuit needs. However, if you for example change an EEPROM game such as Mario to work with the SRAM, you need to utilize more than 64K and use two banks.

Information for GBA development & tools

Flash Linker Information
http://www.visoly.com

GBA Emulation
http://www.gbaemu.com

GBA Development
http://www.gbadev.org

GBA Dev'rs by Jeff Frohwein
http://www.devrs.com/gba