

Alien Flash Tools

VERSION 0.0 07/05/2011

INTRODUCTION

The Alien Flash cartridge comes with the Alien Flash Tools installed in ROM SLOT 0, the user is free to remove or overwrite the Alien Flash Tools (even replace with their own, or third party set of tools) if they wish to, however, it must be realised that if the Alien Flash Tools is removed or overwritten, the user will not be able to use the "SELECT 1MB SLOT" tool to access the other ROM SLOTS.

Alien Flash Tools contains the following tools:

"SELECT 1MB SLOT"
"LAUNCH AR MODE"
"D64 TRANSFER"
"ALIEN LOAD"
"PROG AF VIA USB"
"EASYPROG"

ROM SLOT 0

By defualt, ROM SLOT 0 contains the Alien Flash Tools, however, the user may overwrite this if they wish.

	LOW ROM	HIGH ROM
\$70000	SCRATCHPAD (D64 transfer location)	Default AR mode 64k ROM location
\$60000	SCRATCHPAD (D64 transfer location)	SCRATCHPAD (reserved for future use)
\$50000	SCRATCHPAD (D64 transfer location)	SCRATCHPAD (reserved for future use)
\$40000	SCRATCHPAD (D64 transfer location)	SCRATCHPAD (reserved for future use)
\$30000	SCRATCHPAD (PRG transfer location)	SCRATCHPAD (reserved for future use)
\$20000	SCRATCHPAD (PRG transfer location)	SCRATCHPAD (reserved for future use)
\$10000	SCRATCHPAD (PRG transfer location)	SCRATCHPAD (reserved for future use)
\$00000	Alien Flash Tools	Alien Flash Tools

DESCRIPTION OF TOOLS

SELECT 1MB SLOT

This program allows the user to launch any of the sixteen 1MB ROM SLOTS off the Alien Flash.

Additionally pressing "X" will enter Expert mode, here the user manually sets all values for the Alien Flash control register (\$DE00 - \$DE03), after which the Alien Flash will soft reset.

LAUNCH AR MODE

This tool will check to see if there is a ROM image at the default location for the AR MODE compatible ROM image. The Alien Flash does not come with an AR MODE compatible ROM image pre-installed. If the user has installed an AR MODE compatible ROM image at the default location for the AR MODE compatible ROM image, this program will launch it.

AR MODE compatible ROM images can be placed and will work from any location in the Alien Flash (theoretically, the Alien Flash could store 512 different 32K ROM images), however, Alien Flash Tools does have a set default location that it attempts to launch from. This default location for the AR MODE compatible ROM image is at \$70000 in the High ROM of ROM SLOT 0 (this is at ROM location \$870000 if programming via USB).

D64 TRANSFER

This tool is for transferring D64 files between the USB host and a 1541 connected to the C64. D64 TRANSFER is a nibbler and uses the standard Kernal routines. When transfering D64 images via USB, Alien Tools uses a SCRATCHPAD area to store the D64 data, this is 1 for 1, the D64 file with a \$100 (256) byte header at the start. The area in the SCRATCHPAD set aside for this is at \$40000 in the Low ROM of ROM SLOT 0 (this is at ROM location \$040000 if programming via USB).

In actual fact, the D64 file proper is stored at \$40100 (\$040100 if programming via USB) with the header located at \$40000 (\$040000 if programming via USB).

Any application running on the USB host would be expected to program the Alien Flash ROM starting at \$040000 with the header followed by the D64 file at \$040100.

The D64 file header is filled with #\$FF's except the following locations:

\$00 - \$07: Alien Flash File signature (RRBY64AF in ASCII)

\$08: File type (\$7F = D64 file)

\$18 - \$1B: File size (Stored as least significant byte first)

\$20 - \$2F: Description (in ASCII)

Following is an example of the start of a D64 file with the \$100 byte header. In this example the file size is \$2AB00 bytes (standard D64 file size), the description is "BRUTAL COMEBACK".

EXAMPLE OF \$100 BYTE HEADER AT START OF D64 FILE

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60	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿį	ÿÿ
70	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿŚ	ÿÿ
80	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿj	ÿÿ
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DO	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿŚ	ÿ̈
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150	01	57	37	1A	03	вз	C8	2B	64	C5	A8	15	3D	52	06	9F		W	7	+	L 3	È	+	d	Å		1	=	R -	Ÿ
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ALIEN LOAD

This tool is for transferring PRG files via USB directly into the C64's RAM to be RUN. The PRG files can exceed 202 Blocks. When transferring PRG files via USB, Alien Tools uses a SCRATCHPAD area to store the PRG data, this is 1 for 1, the PRG file with a \$100 (256) byte header at the start. The area in the SCRATCHPAD set aside for this is at \$10000 in the Low ROM of ROM SLOT 0 (this is at ROM location \$010000 if programming via USB).

In actual fact, the PRG file proper is stored at \$10100 (\$010100 if programming via USB) with the header located at \$10000 (\$010000 if programming via USB).

Any application running on the USB host would be expected to program the Alien Flash ROM starting at \$010000 with the header followed by the PRG file at \$010100.

The PRG file is filled with #\$FF's except the following locations:

\$00 - \$07: Alien Flash File signature (RRBY64AF in ASCII)

08: File type (0E = PRG file)

\$18 - \$1B: File size (Stored as least significant byte first)

\$20 - \$2F: Description (in ASCII)

Following is an example of the start of a PRG file with the \$100 byte header. In this example the file size is \$2FA5 bytes, the description is "MIDNIGHT RESURG".

EXAMPLE OF \$100 BYTE HEADER AT START OF PRG FILE

0	52	52	42	59	36	34	41	46	0E	FF	FF	FF	FF	FF	FF	FF	R	R	В	Y	6	1 A	F	fì	ÿ	ÿ	ÿ	ÿ	ÿ	ÿÿ
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30	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿÿ
40	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	ÿ	ÿ	ÿ	ÿ	ÿ	ÿý	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿÿ
50	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿÿ
60	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	ÿ	ÿ	ÿ	ÿ	ÿ	ÿý	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿÿ
70	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	ÿ	ÿ	ÿ	ÿ	ÿ	ÿý	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿÿ
80	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	ÿ	ÿ	ÿ	ÿ	ÿ	ÿý	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿÿ
90	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	ÿ	ÿ	ÿ	ÿ	ÿ	ÿý	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿÿ
AO	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	ÿ	ÿ	ÿ	ÿ	ÿ	ÿÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿÿ
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CO	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	ÿ	ÿ	ÿ	ÿ	ÿ	ÿÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿÿ
DO	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	ÿ	ÿ	ÿ	ÿ	ÿ	ÿÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿÿ
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140	FO	A5	32	FO	7A	18	В1	31	4A	4A	AA	В1	31	20	9E	05	a	¥	2	а	z	t ±	1	J	J	a	±	1		ž
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PROG AF VIA USB

This tool simply enables the USB for the Alien Flash, allowing the USB host to program or read the Alien Flash ROMs.

EASYPROG

This will launch EasyProg V1.2 (by Skoe) in any ROM SLOT. EasyProg V1.2 will work fine with the Am29F032B ROMs, but it will warn that it is the wrong type of flash chip.

Alien Flash ROM MAP and ROM SLOT 0

