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DOCUMENTATION FOR HAPPYXL VERSION/1C:  
\* by TIM PATRICK - the Happy Hacker \*  
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Yup!

Here it is, the official version of HappyXL from the ol' Hacker himself!

After a few weeks of discussing it with HAPPY (and a few months of some serious procrastination) I have permission to give this away! (Thank you Richard Adams of HAPPY COMPUTERS!)

SO WHAT IS HAPPYXL?  
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HappyXL is a software patch for the ATARI XL/XE Operating System (O/S) that allows high-speed Serial I/O data transfers between your computer and the HAPPY enhanced disk drives.

HappyXL makes a non-permanent change to the SIO code in your computers O/S that is compatible with most DOS and DOS-based programs.

WHAT DOES IT WORK WITH?  
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I have used HappyXL with these:

ATARI DOS 2.0S  
ATARI DOS 2.5 (2.5+)  
ATARI DOS 3.0 (big deal!)  
Q-DOS 4.0 (ATARI DOS 4.0?)  
OSS DOSXL 2.30 (should work w' OS/A+)  
SMART-DOS 8.2D  
TOP-DOS 1.5a/+ (better than theirs!)  
MYDOS 3.08A/4.2C

With DOSXL name it DOSXL.SYS

With DOS 2.5 name it RAMDISK.COM (Append RAMDISK.COM to HappyXL)

With other DOS make sure HappyXL is the FIRST autorun on the disk! Other files may be appended to HappyXL, and should run normally (try DISKIO!).

GENERAL INFORMATION  
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HappyXL uses NO AVAILABLE MEMORY.

You will have about 1K more memory at LOMEM with HappyXL than with a HAPPY type DOS (WARP-DOSXL, TOP-DOS with HAPPY module, or HAPPY WARP-DOS 2.0)!

Use HappyXL instead of the TOP-DOS module, it has no bugs (less bugs?).

Also, HappyXL does NOT affect the FORMAT or WRITE-DOS commands (unlike HAPPY's WARP-DOS).

COPYRIGHT NOTICE

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HappyXL, it's utilities and related software, including the SUPER-  
BOOTER, DOS 2.5+ and it's enhancements, and all source code for the  
above, are Copyright (C) 1986/1987, TIM PATRICK Subject to the  
following: (\*)

- \* These programs may be freely used,  
copied, and distributed, as long  
as the Copyright notices, credits,  
and/or titles are intact!
- \* The documentation MUST accompany  
all related software!
- \* These programs may NOT be sold  
without my written permission!
- \* The High-Speed I/O driver is (C)  
1986 HAPPY Computers, Inc. It is  
used by permission, and is only for  
use by registered HAPPY enhancement  
owners! For more information on  
the HAPPY 810 and 1050 enhancements  
contact: HAPPY COMPUTERS, INC.  
P O BOX 1268  
MORGAN HILL, CA 95037

I am not affiliated in any way with  
HAPPY Computers, Inc. If you enjoy  
HappyXL you might want to write to  
Richard Adams of HAPPY and thank him  
for allowing me to use his high-speed  
I/O driver in programs intended for  
the public domain!

FOR MORE INFORMATION

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If you really like HappyXL, I am not offended by monetary  
donations!

I have a disk FULL of documentation about HappyXL and how it works!  
There is also info on special features like how to turn HappyXL on and  
off, using HappyXL to load custom character sets and how to get HIGH-  
SPEED DISK BOOTS!

This disk will contain utilities to enhance HappyXL and DOS 2.5+, and  
it  
will also have the NEW version of my ULTRA-TRANSLATOR (2.0) that is the  
most compatible translator available!

Most of the utilities on this disk will come with SOURCE-CODE! If you  
are learning assembler, you might find some useful stuff here!

THE INFORMATION DISK  
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So how do you get this disk? You mean you haven't guessed!? Send a donation of \$10 (or more!) to:

TIM PATRICK  
544-C WAILEPO ST.  
KAILUA, HI 96734

CompuServe ID#[73167,2611]

All of the programs on this disk will be public domain or (C) free-ware!

WHAT IS SMARTRAM (VERSION 1D)?  
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SMARTRAM is a RAMDISK handler for use with memory expanded ATARI XL/XE type computers of 192 to 320K. SMARTRAM will set up the extra memory in your computer to simulate a lightning fast disk drive.

The 'drive' is DOUBLE-DENSITY and has a device number of 4 (D4:). You may use it as you would any other drive with a few limitations.

1. A RAMDISK will lose it's contents whenever the power is turned off, so copy important data to a real disk before you power down!!
2. This one was designed primarily for use with SMARTDOS 8.2D or OSS' DOSXL (normal version). It will work with ATARI DOS 2.0S, but DUP.SYS does not allow enough buffer space for a true double-density drive. So SMARTRAM will work with most programs running under 2.0S, but not with the ATARI DUP.SYS!
3. Since this HappyXL version of SMARTRAM is patched directly into the operating system and is called through SIO, it should function correctly with many programs that will not normally work with a RAMDISK.

SMARTRAM is designed to detect and configure itself for all XE type memory upgrades from 192K to 320K including BOTH the NEWELL & RAMBOXL upgrades, as well as those using bits 1 or 7 instead of bit-5! The RAMDISK size will vary depending on your memory configuration, as follows:

- \* 192K/XE = 500 free sectors
- \* 256K/XL = 756 free sectors
- \* 320K/XE = 1012 free sectors

\* DOUBLE DENSITY!

NOTE: The 320K/XE will show :12 free this is a problem with DOS FMS-2, not SMARTRAM, and it will not cause any problems. (Ever wonder why DOS 2.5 says 999+ free, same trouble.) The sector count will be correct as soon as you use more than 12 sectors.

HOW TO USE SMARTRAM

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SMARTRAM loads automatically with HappyXL. It checks to see if there is enough memory, then it prints a message and 'formats' the RAMDISK. The message indicates the size of the RAMDISK only (not the total memory).

This version does not disable the write-DOS function, but it does add 1 drive bit and buffer to DOS.

SMARTRAM checks for valid a RAMDISK before formatting, and provided the original SMARTRAM format has not been altered (...the original free sector count), it will preserve the RAMDISK on a software COLDSTART (RUN E477). Using DOS to format SMARTRAM will alter the format (707 free...) and cause a reformat during boot! (Hold down OPTION while SMARTRAM loads to prevent this!)

You can use DOS to duplicate a disk to SMARTRAM, but it will throw off the free sector count (707) so it is best to copy with wildcards instead.

#### RECONFIGURING SMARTRAM

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SMARTRAM can be reconfigured as a single-density drive using standard Percom protocol! This simulated drive will transmit and receive the full 12 byte Percom drive table, but it only configures to SINGLE or true DOUBLE density.

In single-density SMARTRAM will only be using half of the extra RAM. This feature was added so that you would have a convenient way to duplicate disks (\*). You can use DOS to copy a disk to SMARTRAM, and then make fast duplicates from RAM. Please realize that a 192K machine only has sectors 1 through 512, so any access above that will cause an error 144.

\* NOTE TO USERS OF VERSIONS PRIOR TO 2.17: The buffer conflict with DUPDSK has been solved with v2.17, so SD use will no longer cause a problem. This required a major recoding the RAMDISK handler, but you can use it freely in single-density mode now!

#### HAPPYXL+SMARTRAM VERSIONS

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There are 2 versions:

HAPPYXL.V1D: Is the full Percom drive simulation described above.

HAPPYXL.V1A: This is the SMARTRAM D4: 1050 emulator for ATARI DOS 2.5 only! (This one requires 256K to operate.) Most of the above also applies to the 1050 emulator version, except that you reconfigure the density from the DUP.SYS menu by formatting ("I" for 1050, "P" for SINGLE). NOTE: This RAMDISK does NOT use any of the 130XE memory, so you can use 130XE memory for other things! If you want the DOS 2.5 D8:RAMDISK as well, use my special RAMDISK.COM file for both (see

RAMDISK.DOC). If you have a favorite character set (font), just name it FONT.SYS and include it on your boot-disk and it will load into the operating system and become the default character set!

You will be pleased to find that DUP.SYS option "J" (duplicate disk) will work with the 1050 emulator! This allows you a fast way to make mutiple disk copies!

THE END  
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THE HAPPYXL "SUPER-BOOTER" VERSION-3B

HAPPYXL.V3B is the SUPER-BOOTER patch for the HappyXL operating system.

BOOT a disk with DOS and HappyXL.v1c, then load version-3B and the special SUPER-BOOTER screen will appear!

The SUPER-BOOTER will allow you to boot a disk at HAPPY speed! Try it with INFOCOM games!

Programs that are "protected" and/or require 64K or more will probably not work with the SUPER-BOOTER, but a lot of software will. Use it to boot DOS disks that don't already have HappyXL on them. Also works with many disk sector-editor programs. The SUPER- BOOTER, however, will not recover from RESET like the file version.

If you load version-3B over either of the RAMDISK versions of HappyXL, you will still have the RAMDISK with any software booted!

Enjoy!

RAMDISK.COM is a special file for use with ATARI DOS 2.5 and a 130XE only!

In a standard 130XE you will get the D8:RAMDISK as well as HAPPY I/O speed and the use of a FONT.SYS file.

In a 256K (or more) XE type machine you will also get the D4:SMARTRAM 1050 emulator.

See V1DV1A.DOC for more information on FONT.SYS and the SMARTRAM RAMDISK.

You may direct any questions, compliments, or large monetary donations to:

TIM PATRICK  
544-C WAILEPO ST.  
KAILUA, HI 96734

CompuServe ID #[73167,2611]

Aloha, from the Happy Hacker!...(TIM)

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