

# TRACKSTAR

The Apple II clone  
inside an IBM PC

a feature of Diskman presents  
[www.diskman.com](http://www.diskman.com)

In the 1980s, Diamond Computer Systems produced the Trackstar series of Apple II compatibles. What sets these clones apart from the rest of the pack, however, is the fact that each Trackstar is a complete Apple II computer shrunk down to fit on a single 8-bit ISA card for use with IBM PCs and compatibles.

That's right! Just install the Trackstar into a free slot, and your IBM PC instantly becomes two computers in one. You can even switch back and forth between Apple II and PC modes at any time! It's pretty wild. And since the Trackstar essentially is, for all intents and purposes, a "real" Apple II, there is a very high degree of software compatibility.

In its heyday, the Trackstar was a big deal: it increased the number of software packages available to PC owners, from business applications to games, by the thousands. Since the advent of software-based Apple II emulators, the Trackstar has become more of a novelty — but *what* a novelty! — and collector's item.

As a "collect to use" kind of guy, I get a lot of mileage out of my Trackstars. With the help of this website, you'll have a head start on following suit.

This website focuses primarily on the Trackstar E, which is the most advanced of the Trackstar line. A clone of the Apple IIe, the Trackstar E boasts 128 kB of RAM, and support for all Apple IIe graphic modes. It can either be connected directly to a composite monitor or, by means of a special, included cable, "intercept" the PC's graphic card signal and switch between the Apple II and PC display as needed. Though the PC's own floppy disk drives can be used to read and write real Apple II disks, connecting an authentic Apple II floppy drive directly to the Trackstar card increases compatibility, especially with copy-protected software. Custom ProDOS hard drive images are also supported.

But the most desirable feature of the Trackstar E, in my opinion, is its ability to read the full contents of real Apple II disks into memory, then store them as individual files on the PC's hard drive. This allows the user to enjoy whatever Apple II software he or she desires without ever having to insert a floppy disk! It's wonderful. And it's the primary reason why I created this website: to share the hundreds of disk images I've created myself, using my beloved Trackstar E with the Floppy Emu connected to it.

The Trackstar works best in an older machine, 386-class or lower, as these were the machines it was originally designed to be compatible with. 486-class or higher machines will need to have their cache disabled in order for the Trackstar to work properly. This can usually be accomplished via the computer's BIOS settings, or by using the ICD utility. The fastest machine I've successfully used my Trackstar E in is a Pentium II running at 133 MHz, with its cache disabled. Newer, faster machines may or may not be fully compatible.

Are you tired of reading yet? Great. Let's get to the goodies.

## ... Trackstar E software & documentation ...

In order to use the Trackstar E, you'll need a copy of its software. You'll probably want the manual too because, while not a thrilling read, it provides some useful information about the device, such as how to install and operate it.

Download the [Trackstar E software](#)

View / download PDFs of the:



- [Trackstar E manual](#)
- [Addendum to the Trackstar Manual - January 1, 1989](#)
- [Trackstar E - New Product Release flyer - August 1, 1988](#)
- [Trackstar brochure](#)
- [Trackstar - Support for AppleWorks Users](#)

## ... Apple II floppy disk images for use with the Trackstar E ...

I've whiled away many an hour creating hundreds of floppy disk images so you don't have to. The lion's share of them are based on the respectful and respectable "clean" deprotection efforts of [4am](#) and [san inc](#): archivists extraordinaire.

Download Trackstore disk images:



- [pack #01 \( contents \)](#)

View / download the [Trackstar E joystick compatibility list](#)

The Trackstar E uses its own proprietary disk image format called Trackstore. Trackstore floppy disk images are denoted by the APP file extension. They must be stored in the same directory as the Trackstar software if they are to be used from a hard drive, or from the main directory of a floppy disk. Subdirectories are not supported.

Don't let the 8.3 character file names fool you! Each Trackstore file can hold a description of its contents, up to 46 characters in length, making it easy to understand which software programs you have available. These helpful descriptions will be displayed on the screen whenever you access the Trackstore disk image selection menu.

It is possible to create Trackstar-compatible disk images using CiderPress. However, such disk images will load far slower than those created using the Trackstar's own software. Thus it is always recommended to use the Trackstar itself to create disk images.

## ... Apple II hard drive images for use with the Trackstar E ...

In addition to Apple II floppy disks and disk images, the Trackstar E may also make use of up to two ProDOS hard drive images at once. The maximum image size is ten megabytes. For the Trackstar to find and use the images as virtual hard drives, their filenames must be PRODOS.HD1 and PRODOS.HD2. Use the TSUTILIT.COM program to configure all your drives.

Download ProDOS hard drive images:



- [GEOS v2.1 with applications and utilities \( info \)](#)

View / download the [Trackstar E joystick compatibility list](#)

It is possible to create Trackstar-compatible hard drive images using CiderPress; the correct file format is ProDOS "Unadorned raw data," which ordinarily has the .PO extension ( i.e. GAMES.PO ). Be sure to rename your custom images to either PRODOS.HD1 or PRODOS.HD2 before attempting to use them with the Trackstar.

## ... But... what about the Trackstar 128? ...

Oh yeah, almost forgot about that one. When they engineered the Trackstar 128, the brilliant minds at Diamond Computer Systems thought it would be a keen idea to copy protect the Utility Program disk that is required to operate the device. This didn't make a whole heck of a lot of sense, considering the software is completely useless without the hardware. Trackstar 128 owners, of course, would want to create backups of the original disk just in case it got damaged or suffered data corruption. But... nope! Too bad.

This pointless copy protection nonsense causes a dilemma for those who purchase the Trackstar 128 nowadays, especially as very few of the units for sale come with an original copy of the Utility Program disk. The situation seemed hopeless until 2016, when a generous chap named Morley Krete successfully archived the Utility Program disk using the KryoFlux. Hooray!!

Download the [Trackstar 128 Utility Program disk \(KryoFlux disk image\)](#)



View / download the [Trackstar 128 manual \(PDF\)](#)

Download the [Trackstar 128 EPROMs \(EPROM data for burning replacement chips, research, etc.\)](#)

Note that you'll need to own a KryoFlux in order to write the disk image to a 350 kB 5 1/4" floppy disk. You'll also need to

Note that you'll need to own a Kryofox in order to write the disk image to a 500 kB 5 1/4" floppy disk. You'll also need to own the floppy disk adapter cable that came bundled with the Trackstar 128, and have it properly installed in your machine. Why? Because unlike with the Trackstar E, the Trackstar 128 software will not allow you to operate the device unless it detects the floppy drive connection. Pretty lame, huh?

The Trackstar 128 cannot make use of Trackstore disk images nor ProDOS hard drive images. You're limited to real, physical Apple II floppy disks. The PC's own drives can be used to read and write real Apple II disks, and / or you can connect an authentic Apple II floppy drive directly to the Trackstar 128 for maximum compatibility.

Protip: The Trackstar 128 was a popular add-on for the Tandy 1000 line of PC compatibles. So if you're having trouble finding a Trackstar 128 for sale, sniff around Tandy 1000 sales listings to see if you can spot a Trackstar in one of the machines.

### ... And now for something completely different: The Quadram Quadlink ...

The Quadlink, from Quadram Corporation, was an earlier attempt at producing a complete Apple II on a PC ISA card. This device, however, is quite limited compared to the Trackstar line in that it can only access Apple II disks via the PC's own floppy drives, only sports 64 kB of RAM, does not support the Double Hi-Res graphics mode, et cetera.

However as the Quadlink seems to make use of an authentic Apple II ROM rather than a reverse-engineered one, compatibility is higher than that of the Trackstar. The Quadlink also does a much better job than the Trackstar in its output of certain Apple II sound; specifically, digital audio and tricks like "multiple voice music" sound great on the Quadlink but spotty at best on the Trackstar.

**BUT!!** Much like Diamond Computer Systems did with their Trackstar 128, Quadram decided to be paranoid by copy protecting the program disk needed to operate the Quadlink. What a bunch of maroons. First thing, the Quadlink program asks the user to insert the FILER disk. This is an Apple II disk with a few basic utilities on it. Whoop-de-doo. The Quadlink program must verify this disk's copy protection scheme before the user can access Apple II mode.

Luckily, a working disk image of the FILER disk is readily available, so if the Quadlink you bought came without the disk, like mine did, you'll still be able to use it! You'll just need to find a way to write the disk image to a real 5 1/4" floppy disk. For this task I used ADTPro.

I've provided the Quadlink software + FILER disk image here. I've also made available a scanned copy of the MASSIVE tome-sized Quadlink documentation that, while a bit preachy and pandering, puts the Trackstar's to shame!



Download the Quadlink software with FILER disk image  
[View / download the Quadlink manual \(PDF\)](#)

Download the Quadlink ROMs (ROM data for burning replacement chips, research, etc.)

Fun fact: A Quadlink and a Trackstar can peacefully coexist in the same machine, for double the Apple II enjoyment.

Warning: Unlike the Trackstar, the Quadlink only works in machines with an 8088 processor running at 4.77 MHz! I personally recommend the IBM 5160 because it's a full-featured, versatile tank of a machine. To add some pep, you can follow my lead by installing a 286 "booster" card in your 8088-based machine. Just make sure to choose a card that has a switch to select between 8088 and 286 mode. One such card is the Orchid Tiny Turbo. Always flip the switch to 8088 mode before using the Quadlink, as the Quadlink software will hang on 286+ processors.