MEGACOPY REDUX

Thank you for your purchase of the MEGACOPY REDUX. Address questions or concerns to us on the ADAM Facebook group at https://www.facebook.com/groups/115531017844.

Lundy Electronics designed the MEGACOPY REDUX for fellow ADAM hobbyist who wouldn't otherwise be able to procure the original MEGACOPY III by TRISYD Video Games from 1987. This is our variant on the original design. It incorporates newer surface mount technology, as well as improved circuitry design while still maintaining backward compatibility with the original MEGACOPY III software. Unlike the original unit that was an external device, the REDUX is designed to be internally mounted to stay hidden for a clean, professional look.

As with many hobbyist projects, it comes with no guarantee for 100% functionality. Every effort has been made to ensure the best compatibility possible through many hours of design and testing. Use this device at your own risk. *Lundy Electronics cannot be held responsible for any damage to the device or your ADAM or the loss of data that my occur if the device is not installed and used correctly.*

Thank you.

Lundy Electronics

What is in the box

- MEGACOPY REDUX PCB
- DDP-2 drive cable set
- Installation and operational instructions

Design features

- Newer surface mount technology for a small 1-7/8"x1-7/8" PCB footprint allowing the device to be mounted internally
- Improved circuitry using a microcontroller to handle device logic, indicator LED control, and a simple momentary push button in place of the more expensive original SPST push button switch
- Full backwards compatibility with the original MEGACOPY III and software

Summary of features

The MEGACOPY REDUX consists of a hardware interface and software written specifically for it. The interface configures the second DDP drive to accept format code sent to it from the first DDP drive. Physical media does not come supplied with this device, and you can find the accompanying software "MegaCopy V6.4-4 (1988) (Trisyd Video Games).dsk" disk image on the ADAM Archive at www.adamarchive.org. This software controls the interface and DDP drives so that they work together

to produce perfect digital formatted center or right directory tapes. The interface is also capable of making direct copies of tapes.

Typical formatting time takes about six minutes depending on the type of tape being created. There are 12 different format options available that include various center and right directory tape creation options needed for your specific application.

Installation of interface PCB

1. Remove the console top lid to expose the DDP-2 drive connections and for mounting the MEGACOPY REDUX interface PCB and cables.
2. Disconnect both 9-pin and 8-pin DDP-2 drive cables from the console 2A and 2B board connectors. Note the area to the right of the console DDP drive connections where the interface will be mounted.
3. Install the included 9-pin and 8-pin DDP-2 drive short cables where the original 2A and 2B cables were inserted to the console board connectors. **Double-check that the cables are installed properly and NOT inserted a pin off. Damage to your ADAM or device could occur**. *See Figure 1.*
4. Connect the other ends of the 9-pin and 8-pin connectors to the J10 and J11 (CON) connections located just under the momentary button of the interface PCB.
5. Install the original 9-pin and 8-pin DDP-2 drive cables to the J10 and J11 (DDP) connections located just under the red ACTIVE LED. All connections are now complete. *See Figure 2.*
6. Test fit how the interface board will fit in the mounted position. **Do not peel off the adhesive covering and officially mount the interface PCB to the side wall until you have used the device successfully.** You may even opt for not mounting the interface with adhesive tape at all. At this point, route the cables for the best possible fit and be sure the area of the ENABLE/DISABLE button of the interface is clear and free of cables from touching it. *See Figure 3.*
7. The interface is now ready for use.

Figure 1

Figure 2

Figure 3

Software startup

Launch the "MegaCopy V6.4-4 (1988) (Trisyd Video Games)" software you downloaded from the ADAM Archive. When asked the first time if you require inspecting the tape drives, select (Y)es. This action only needs to be performed once and can be ignored for any subsequent use of the software unless a drive hardware change has been made.

First time drive synchronization/calibration

Both DDP drive speeds must be set to run at the same speed for the interface to operate correctly. There is a small potentiometer speed adjustment screw located on each DDP drive to do this. Depending on DDP drive model, this adjustment screw may be easily found on the top right of the drive through the vent hole farthest to the right, or it may be located in a more difficult location on the bottom of the drive under the head wiring harness. If you don't see the adjustment screw on the top right, your drive mounting screws will need to be removed and the drive pulled out while still connected to access the adjustment screw at the bottom. *See Figure 4a and 4b for adjustment locations.*

Figure 4a (Top Adjustment)

Once you have located the speed adjustment screws, you can perform the synchronization procedure. Read the onscreen instructions and press Y to begin. It is important to use the same tape for both drives during this process. **It is important to stop the current drive before making any keyboard changes.** Keyboard selections during this process must be held for five seconds to allow ADAM to register the command. While the tape is running at normal speed, the speed adjustment screw needs to be adjusted to 0 on the error percentage meter. A clockwise turn will increase speed, and a counter-clockwise turn will decrease speed. Make

Figure 4b (Bottom Adjustment)

small 1/10 turn increments and allow the percentage to settle for five seconds before making more adjustments. If at any point the tape starts to rewind or fast forward, wait for the tape to start running at normal speed again before making any adjustments. When both drives have been synchronized, resume to MEGACOPY.

Using MEGACOPY

Tape Creation Selection: Select the appropriate tape style you're going to create. Option #0 will be the most common option when making your own C-60 tapes.

Data Impression Selection: Here you are asked if your newly created tape will contain format code (F) or will be a copy (C) of your source tape. The actual process will copy as it formats, yet your end blocks will have invalid data. Format is the faster of the two options. If you're making a backup that

you know has program data on the end blocks, then select the copy option. If you format a tape by using the format option, then do not expect to be able to read any data from the end blocks until you actually write some data to them. Both scenarios hold true when verifying them with some type of verification program.

Determine Sync Requirements (C-60 tapes only): If you're using a C-60 tape, MEGACOPY will ask if you're using a half long (H), long (L), or short (S) tape. In most cases you would want to select long (L) tape. However, if your source and destination tapes are the same type (exact replica), you will need to select the short (S) tape selection instead.

Starting the Format/Copy Procedure: Your selections are now accepted, and the process is ready to begin. Insert the master tape in DDP drive 1 and the destination in DDP drive 2. Enable the interface by pressing ENABLE/DISABLE and verify the red LED is illuminated, showing the device is ready. Once the device is ready, press the MOVE/COPY key on the keyboard to start the process. During the tape creation process you will see the green FORMAT LED turn on and off at various times in the formatting process.

Initialization Screen: When the Format/Copy is complete, you will be asked if you want to initialize the tape. This step can be skipped if you wish. If you selected the copy option earlier, then it is best to skip this option as it would destroy your copy's initialization. Another reason to not initialize is if you wish to put a super game onto your tape. If you have selected an odd type of format such as a single-sided tape, then you should initialize your tape to keep the ADAM from getting confused when using it.

Your newly created tape is now complete. You can keep the device ENABLED and continue to make more tapes. **If you are finished, you must DISABLE the device before using the ADAM as normal.** Failure to do so may result in your tape getting corrupt when using the DDP drive.

Powering off the ADAM at any time will disable the interface and default back to normal operation.

Tips and Troubleshooting

Creating good quality ADAM tapes requires that you select a known good tape as your source and always be sure your tape heads are clean. Don't use cheap bargain quality tapes and expect perfect results.

Drives are getting older and more susceptible to issues and it is recommend that you allow the drives to cool for five minutes between formats to reduce stress from heat.

Formatting can be more reliable than doing full copies when it comes to creating new tapes. If you experience issues making copies, try just formatting the tape and doing a copy with a regular program like File Manager v3.0 afterwards. Copies work more reliably when using the same brand/style tape as the source and destination.

Have Fun!