

# Toaster Handler<sup>TM</sup>

The Complete  
Audio Solution  
For Your Toaster

STUDIO 16  
E X T R A S

# Toaster Handler<sup>TM</sup>

The Complete  
Audio Solution  
For Your Toaster

## **Credits**

**Toaster Handler Software**  
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**Manual**  
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## Chapter 1

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# What You Need

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Toaster Handler here's what you need:

- An Amiga with a NewTek Video Toaster installed
- A SunRize AD516 or AD1012 digital audio hard disk recording system installed in the same Amiga





## Chapter 2

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# Toaster Handler Overview

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### What the Toaster Handler Does and Why

The SunRize AD1012 and AD516 hardware with the SunRize Studio 16 software are great tools for producing audio for video. The NewTek Video Toaster is a great tool for producing video transition effects. You can install a SunRize card in the same Amiga with a Toaster.

But what if you want to be playing back audio with your SunRize card during a Toaster transition?

You might want to do this if you were running a cable TV slide advertising channel with an Amiga, using the Toaster to transition between frames while using a SunRize card to play audio. Or you might have an Amiga based interactive kiosk using the Toaster to provide transition effects between screens while playing audio with a SunRize card.

The problem is that the Toaster takes nearly all your Amiga's resources during some transitions, making it impossible for Studio 16 to continue playing audio during the transition.

The Toaster Handler is one way around this dilemma. By replacing a special part of your Studio 16 software, called the Handler, with a Toaster Handler, you will give your AD1012 or AD516 digital audio hard disk recording system the ability to play back one or two audio tracks even when the NewTek Video Toaster is in the middle of a transition effect.

*Note: Some versions of the Toaster Handler can play back only one track, and some can play back only two tracks. If you install a Toaster Handler Studio 16 will NOT be able to play more than two tracks.*

Before a Toaster transition the Toaster Handler will keep loading part of the audio data into a special memory buffer on the SunRize card itself. Then, during the Toaster transition, it can continue to play the audio from that buffer.

After the transition the Toaster Handler will resume getting audio data from the hard disk, and it will keep loading data into the memory buffer to be ready for the next Toaster transition.

The Toaster Handler is are intended for situations like those in the previous examples where you are dedicating an Amiga, Toaster and SunRize card for a cable TV channel or interactive kiosk. In order to work during Toaster effects, the handler can only work with, at best, two channels of audio.

There are several different Toaster Handlers to choose from, including one channel and two channel versions for the AD1012 and AD516, and a version for the AD1012 which uses compression to double the amount of time the AD1012 can play from the onboard memory buffer.

## Chapter 3

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# Installation

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### Choosing the Correct Handler for Your System

If you have the AD1012 Toaster Handler for your AD1012 digital audio card there are three Handlers to choose from:

- AD1012 ToasterHandler1 (one channel)
- AD1012 Toaster Handler2 (two channel mono)
- AD1012 ToasterHandlerComp1 (one channel compressed)

If you have the AD516 Toaster Handler for your AD516 digital audio card there are two Handlers to choose from:

- AD516 ToasterHandler1 (one channel)
- AD516 Toaster Handler2 (two channel stereo)

At a sampling rate of 44.1Khz, the one channel handlers can cover up to a 3 second Toaster transition; the two channel handlers can cover a Toaster transition of about a second and a half; and the compressed AD1012 handler can cover a Toaster transition of just under 6 seconds. If you cut your sampling rate in half you can double those times.

*Note: If you use the compressed AD1012 Toaster Handler you will be sacrificing some audio quality to gain extra buffer time. Compression is not available on the AD516.*

Choose the Handler which best covers the types of Toaster transitions you'll be using.

## How to Install the Software

1. Put the Toaster Handler disk into any floppy disk drive.
2. Double click the Handler disk icon which will appear on your workbench.  
  
A window will appear with an icon for each Toaster Handler.
3. Open your Studio 16 Drawer (which should already be on one of your hard disk partitions). If Studio 16 has not been installed, do it before installing the Toaster Handler.
4. Open the drawer labeled "Dormant" in the Studio 16 drawer.
5. Drag the Toaster Handler icons into the Dormant drawer.
6. Open the drawer labeled "Drivers" in the Studio 16 drawer.
7. Select any AD1012 or AD516 Handlers you might have in the Drivers drawer and drag them into the Dormant drawer.
8. Choose the Toaster Handler you want to use and drag it from the Dormant drawer into the Drivers drawer.

Later, if you want to use your SunRize system for production work again, you can drag the Toaster Handler back into the Dormant drawer and drag the normal handler for your card back into the Drivers drawer.

**Warning:** *Make sure you never have both your normal handler and a Toaster Handler in the Drivers drawer at the same time.*

## How to Install the AD1012 RAM

If you have an AD1012 you will need to replace the RAM chips on your card with the included RAM upgrade chips.

*Note: If you have an AD516 you will NOT need to add more memory and you can skip this section of the manual.*

If you have any doubt about your ability to remove the old RAM chips from the sockets and install the new RAM chips, you can either:

- take it to the dealer where you bought it and have them install the upgrade, or
- send it back to SunRize and SunRize will install the new RAM chips free of charge.

If you decide to send your AD1012 to SunRize, make sure you

- pack it in its original static free packaging, and shipping box
- include your new RAM chips

- insure it for the value of the card
- include a letter requesting free installation of the new RAM chips
- include your return address and phone number

If you're ready to install your new RAM chips yourself you will need to do four basic things:

1. **Remove your AD1012 board from your Amiga**
2. **Remove the old RAM chips**
3. **Install the new RAM chips**
4. **Reinstall your AD1012 board in your Amiga**

## **Before you start**

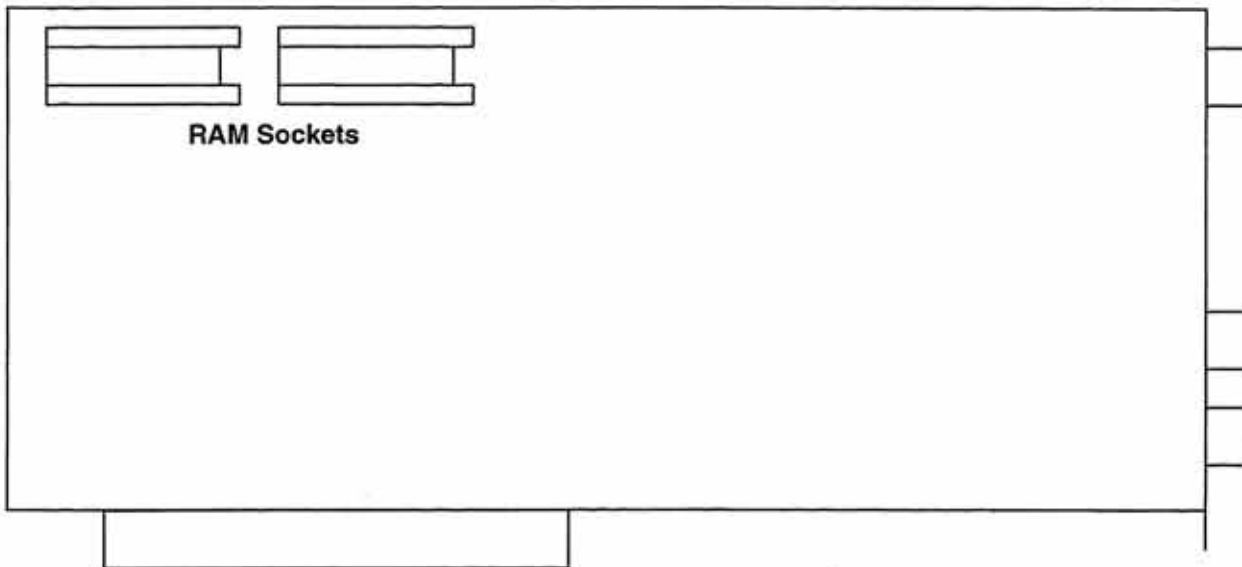
Your AD1012 card and the RAM chips can be damaged by static electricity. Discharge any static electricity you might have in your body by touching a grounded metal object like a water pipe or the metal chassis of a piece of equipment which is connected to a grounded electrical socket. If there are no grounded metal objects near by, touch the nearest large metal object, like a metal chair, a metal desk or the power supply of your Amiga.

Make sure as you work that you avoid building up static electricity. Don't rub your feet on the carpet and don't wear static inducing clothing like a wool sweater. Ground yourself often.

## **To Remove your AD1012 board:**

1. **Turn off your computer.**
2. **Unplug the mouse, keyboard, monitor and power cables. Disconnect all other cables from your Amiga, including those connected to your AD1012 card.**
3. **Remove the 5 screws securing the case. (2 on each side, 1 in the back, top-center)**
4. **Carefully slide the case off the computer. For more information on removing your Amiga's case, see your Amiga's Manual.**
5. **Unscrew the AD1012 card's bracket from the Amiga and save the screw.**
6. **Carefully remove your AD1012 card from the Zorro slot.**

If you orient the card so you're looking at the component side with the Zorro connector on the bottom and the audio and SMPTE jacks on your right, the RAM sockets are on the upper left corner of the board. You will be removing the old RAM chips from the sockets and inserting the new RAM chips into the sockets. Each socket has a notch on the right side. Your RAM chips are also notched. Make sure you orient the new RAM chips' notches toward the right (toward the audio and SMPTE jacks), matching with the notches on the sockets.



**Figure 3-1.** AD1012 card with RAM Socket Position

### To remove the old RAM chips:

1. Using an IC remover or a small screwdriver, gently pry the old RAM chips out of their sockets.
2. Put the old RAM chips aside. Make sure you don't get them mixed up with the new RAM chips.

### To install the new RAM chips:



**Figure 3-2.** Lining Up the Chip Notches With the Socket Notches

1. For each chip, make sure you orient the chip so the notch on the chip is on the same side as the notch on the socket.
2. Then line up the pins with the holes in the socket and gently push the chip into place.

If the chip's pins don't line up with the holes in the socket they may need to be bent so that they are at an exact right angle from the chip itself. To bend the pins,

- Put the chip on its side on a desktop with the chip body perpendicular to the desktop and one set of pins flat on the desktop.
- Then, keeping the sides of the pins on the desktop, gently rotate the chip case toward the ends of the pins to push the pins into more of a right angle with the chip case.
- Flip the chip over and do the same for the pins on the other side

*Warning: Don't attempt to bend the pins individually. You might break one and ruin the chip.*

## **To Reinstall the card**

1. **Ground yourself by touching your Amiga's metal power supply case. This will remove any static charge built up on your body.**
2. **Gently plug the AD1012 card back into the Zorro slot you removed it from earlier.**

*Note: When the card is installed properly, only a small amount of the gold connector will show. It may take a lot of effort to push the card in. A gentle rocking motion is usually best.*

3. **Screw the card's bracket into the Amiga with the screw you removed when you took the card out of your Amiga.**
4. **Replace the case and secure it with the five screws.**

## **Testing**

To see if your installation was successful:

1. **Run Studio 16.**
2. **From the Applications menu select Instance to open the Instance window.**
3. **From the Instance window's Instance menu, go to the Show submenu and select Utilities.**
4. **Then in the Instance window you should see "AD1012Handler". Double click it to open the status window for that card.**

If it says "memory : 128k words", the memory was correctly installed.





## Chapter 4

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# Using the Toaster Handler

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### Recording Sound Tracks

With a Toaster Handler installed, your Studio 16 software will work much like before, except you will be limited to one or two audio tracks depending on the Handler you installed.

To record tracks, use the Studio 16 Recorder module. If you need more than the one or two audio tracks supported by the Toaster Handler you chose, you can reinstall AD1012 Handler (for the AD1012 card) or the AD516 Handler (for the AD516 card), create your tracks, and combine them into one or two tracks with Transport. Then reinstall your Toaster Handler for playback.

### Triggering Playback

Playback will work like before, but during a Toaster transition Studio 16 will continue to play. If playback stops during a Toaster transition, try using a Handler which handles only one track, try a Handler which uses compression, or try using a lower sampling rate when you create your sample.

You can trigger playback:

- with the play sample commands available from several of the Studio 16 windows.
- by using the Cue List module synchronized to SMPTE time code from any source including a video tape or video disk.
- with Studio 16's StudioOpen and StudioPlay shell commands (see the StudioPlay reference sections of your Studio 16 manual).

- with Studio 16's AREXX commands (see the "S16example.rxexample" file in the AREXX drawer inside your Studio 16 drawer).

You can use any Authoring software or Toaster sequencing software which supports AmigaDOS commands or AREXX commands to control Studio 16. For an example of using authoring software take a look at the example CanDo deck in the AREXX drawer inside your Studio 16 drawer. The Toaster can also be controlled via AREXX, so you can use AREXX to create software to control a kiosk or cable TV presentation.

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## The Complete Audio Solution For Your Toaster

These new Toaster Handlers replace your existing Studio 16 software device drivers, allowing you to play one or two tracks of audio off your hard drive while simultaneously performing a Video Toaster effect.

While Studio 16 multi-tasks perfectly with the Video Toaster, the Toaster turns off multi-tasking when performing digital video effects. This causes Studio 16's audio to stop playing during a Toaster transition.

The Toaster Handler drivers, available for both the AD516 and AD1012, configure your card to buffer more data than the standard Studio 16 drivers. This allows the Toaster to disable multi-tasking for several seconds while Studio 16 audio continues to play.

The AD516 Toaster Handler includes:

- One channel software driver
- Two channel stereo software driver

The AD1012 Toaster Handler includes:

- Two 128K static RAM chips to enlarge the memory buffer on the AD1012
- One channel software driver
- Two channel mono software driver
- One channel compressed (for longer playback) software driver

