

EthaSample!

By Nick Johnson

The purpose of this documentation is to get you started in EthaSample as quickly as possible. Each menu will be outlined and explained with a minimum of technodrive.

Upon typing RUN"BOOT" EthaSample will determine everything it needs to know about your system and load the drivers and the main program.

FILES

New

The *new* option will delete the current sample (if any). Options are set in the **options** menu (see below).

Load

The *load* option will show you the list of EthaSample files on the disk and prompt you for a filename. Type the filename and hit enter. You don't have to type the extension .ES.

Save

The *save* option will save your EthaSample to disk. In version 1.00, disk saves are limited to the amount of space on your disk. On a floppy system, that limits you to 180k. Future versions of EthaSample will allow samples to be saved to multiple disks.

About

Selecting *about* will spew a silly message from me about how relieved I am that EthaSample is finally complete enough for a release.

Quit

Duh.

EDIT

Delete

Delete will delete all the sound between the left and right markers. Be very sure you want to do this, because there is no undoing this operation.

Play Block

This will play whatever is between the left and right markers.

Cut to buffer

This actually performs a copy and then a delete to the sound between markers.

Copy to buffer

This will copy selected sound to a buffer. If there isn't sufficient memory to create a large enough buffer, it will do absolutely nothing.

Overcopy

This command copies out of your buffer into your sample. Exactly how this is done is determined by the copy logic, which is selected from the **options** menu (see below). You will have to select a position to begin overcopying the sample into/onto. This is done by moving through the sample with the arrow keys and the control/alt/f1/f2 keys. More information is provided by the program as to how to do this.

Paste

This command doesn't work yet. I need to write some more code in order to implement sample inserting.

Volume

This will let you increase or decrease the volume in the block. Be careful here- you can cause nasty distortion by over increasing the volume.

Mark Left/Right

Here is where you select your left and right block markers using arrow keys.

SAMPLE

Begin Sampling

This option will delete the sample in memory (if any) and start sampling at the rate set in the **options** menu. You can stop the sampling by pressing any white or red key.

Continue Sampling

This lets you keep sampling past the end of the current sample in memory without deleting it.

Sample Rate

Here is where you set the speed the program will use to sample sound. The higher the sample rate the higher the quality of your sample. Note that the program actually samples twice as many times as the sample rate because it has to sample two channels. Not all sample rates are usable, so EthaSample will find the closest usable sample rate to the one you enter. I recommend sampling at the maximum rate unless memory becomes a problem.

Playback Sample

This plays the entire sample back.

Test Inputs

Here is where you can set the volume according to a nice graph and program analysis. Ideally you want your volume to go from about 7 to about 14. If volume exceeds 15, you will get distortion. The Test Input menu will tell you if the volume is too low, too high or good.

Volume Cue Sample

This option comes in very handy. It will monitor the status of your channels and when one of them changes the amount you specify, recording will begin.

Real-time play

This option will engage the real-time sample/play routine. Samples are made and immediately dumped to output. This lets you hear how your samples will sound before you make them. I recommend this option for setting equalizers. This option is also useful for setting volume (in addition to Test Inputs) because you can hear the distortion if there is going to be any.

OPTIONS

Pointer Options

This option lets you change how the block marking selection works in the **edit** menu. You can set how many bytes will be played for each press of an arrow key, and how many bytes will be skipped to the beginning of the next keypress. I recommend keeping these values high, because once you get in the vicinity of the location you want, you can hold the ctrl key to move one byte at a time for fine tuning.

Sample Info

This gives you info about how long your sample is, where your markers are, etc.

Copy Logic

Here is where you determine how *overcopy* will behave in the **edit** menu. Each option behaves differently. Try them all and see which you like best.

Future Versions of EthaSample

In the next few revisions, I want to clean up some of the menu options and add support for multiple disk saves, and of course add the paste option in the edit menu. In the future I may also add support for 6 bit stereo and 6 bit mono samples.

I can be reached at nickjohnson@delphi.com for comments, questions, etc. If you have a complaint, direct it to your NULL device.

Building an Interface

Parts needed:

4: 47k ohm resistors

2: 10uf capacitors

2: 5 pin DIN connectors (6 pin also works)

Some cable and connectors to your sound device. Do NOT connect your interface to high-powered outputs!!

You are really building two cables, each of which is constructed as follows:

Connect pin 3 of the connector to the ground side of the audio source.

Connect pin 5 to one side of a 47k resistor.

Connect the other side of this resistor to pin 1 and the negative side of a 10uf capacitor.

Connect this also to one end of another 47k resistor, and connect the other side of that resistor to the negative side of the audio source. (which is also connected to pin 3 from above).

Connect the positive side of the capacitor to the positive side of the audio source.

The resistors serve to balance the waveform with its center at around 2.5 volts. The capacitor filters the incoming signal to reject higher frequencies (the maximum frequency that can be correctly sampled is equal to 1/2 the sample frequency) or at least it is supposed to.

Testing the interface

Key in the following program to check the interface:

```
5 WIDTH 32
10 A=JOYSTK(0):B=JOYSTK(2)
20 PRINT@0,A;B
30 GOTO 10
```

Both numbers should be close to 31 if the interface is working correctly. Correct construction of the interface is essential to the proper operation of EthaSample.

Addendum:

A few things you should know about EthaSample 1.00:

It will not be the final version. The whole idea about releasing 1.00 was to get **something** out on the market, even if it wasn't what the final version was to be. Because the version isn't complete, it is being made shareware. All purchased copies will be registered versions. Updates will be made available on Delphi and other online services, and on the The Cellar BBS (904-689-4339, 8-n-1, up to 14.4kbps).

The overcopy logic portion of the program works logically, but the results are almost never pleasing to the ear. This will be the first thing fixed, and an update will be released to Delphi that will fix the problem. Only the affected modules will be updated, so you won't have to download the entire program.

2 meg support doesn't work yet. It will be implemented soon after the copy logic problem is worked out.

If you find any bugs, please let me know.

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