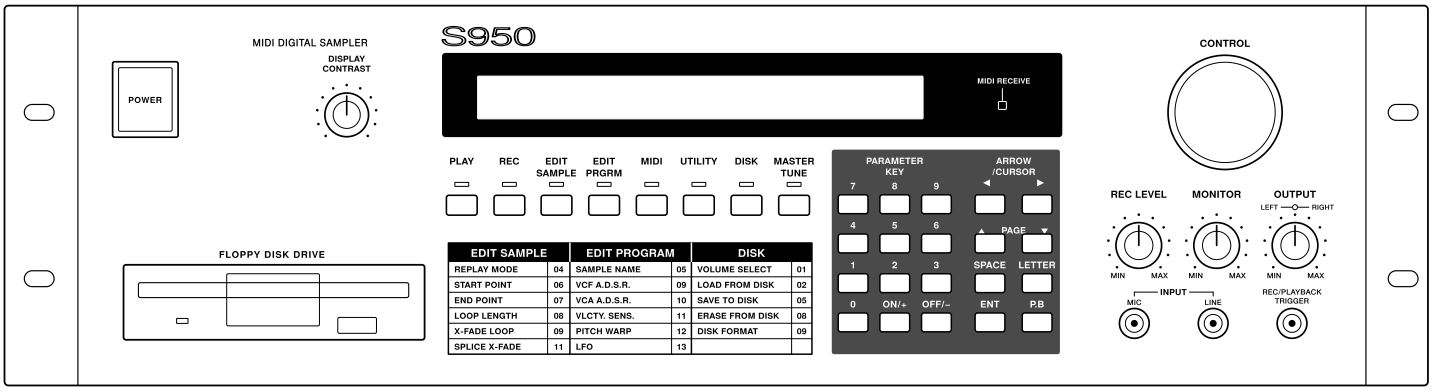
SuperOS-950

SHORTCUT GUIDE

VERSION 5.0.1 · CUSTOM FIRMWARE FOR THE S950

SUPEROS303.COM

Every SuperOS function on one drawing each: the panel, the keys involved, the order to press them, and the screen the S950 shows while you do it. The screenshots are real frames of the released operating system, not redrawings. Find the function, look at the picture, follow the numbered steps. The sheet is meant to sit next to the instrument.



SUPEROS EDITION SUPEROS303.COM

READING THE DRAWINGS

○ Black ring: press this control.
● Red ring and red label: hold it while you do the rest.
- - - Blue dashed box: any key in that group.

PAGES AND FIELDS

A page is a section key plus a number: EDIT PROGRAM *04 is the EDIT PRGRM key, then 0 and 4. The arrow on the display is the cursor. Numbered labels give the order; the header says which page and when.

WHAT IS SUPEROS

The S950 operating system with 14-bit start and end points, per-keygroup portamento and AA cap, live filter and full MIDI control, a SCSI drop-box with a browser editor over Wi-Fi, and safer disk handling added. Anything not described here works exactly as the factory manual says.

CONTENTS

GETTING STARTED

1 Boot SuperOS 3
2 Get Around the Pages 3
3 Load a Sound Disk 4
4 Boot From a SCSI Disk 4

THE SUPEROS PAGES

5 Assign the Controllers 5
6 Sweep the Loop Window 6
7 Transwave: Walk the Loop 7
8 Record Knob Moves as MIDI 7
9 Anti-Alias Cap Over MIDI 8

KEYGROUP PAGE *04

10 Set the Start Point 9
11 Set the End Point 10
12 Portamento Per Keygroup 10
13 Anti-Alias Cap Per Keygroup 11

MIDI PERFORMANCE

14 Live Filter on CC 74 11
15 Envelopes and LFO Over MIDI 12
16 Lock the LFO to MIDI Clock 12
17 Set Key Ranges From the Keyboard 13

EDITING AND DISK

18 Instant Attack 13
19 Zero-Crossing Snap 14
20 Chop a Sample 15
21 Save With Verify 16
22 Format a Disk 16
23 The SCSI Drop-Box 17

WEB EDITOR

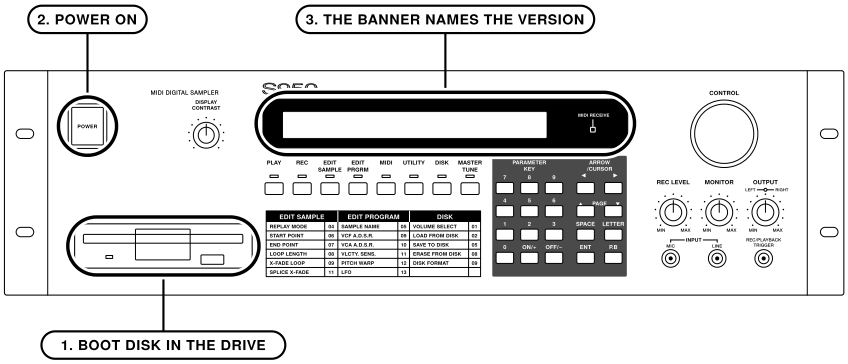
24 Connect the Editor 18
25 Check Drop-Box Mode 18
26 Start the Web Editor 19
27 Send a Sample 19
28 Load Into RAM, Unload 20
29 Build a Program 21
30 Read the Sampler's Memory 22
31 Audition, Export, Empty the Drop-Box 22

REFERENCE

Controller tables, page *04, what changed, back to stock 23

1 BOOT SUPEROS

POWER-ON | FLOPPY OR FLOPPY EMULATOR




```
SUPEROS EDITION SUPEROS303.COM
```

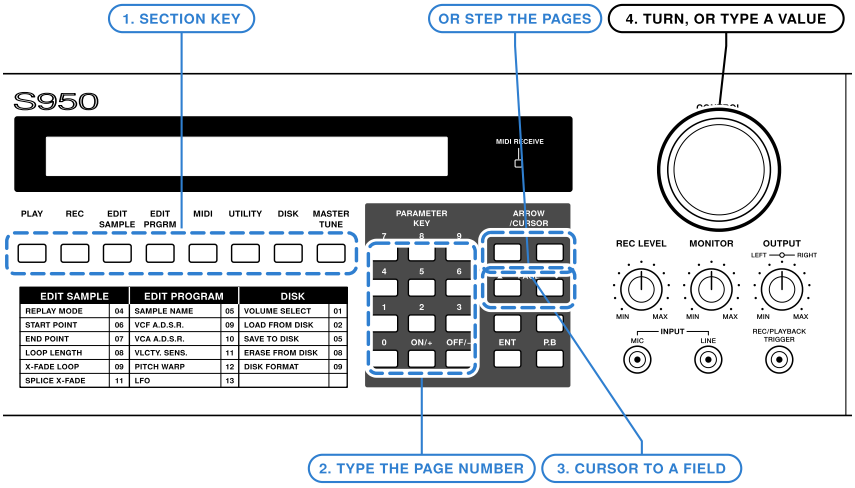
The second line of the start-up display: SuperOS is running. The first line shows the version, 5.0.1, and the memory size.

1. Copy AUTOBOOT.HFE to the USB stick as slot 0, or any .hfe under its own name. Use the DD image unless your emulator is set up for HD. For a real floppy, write the -DD.img with a flux-level floppy writer.
2. Select the image on the floppy emulator, or insert the floppy.
3. Power on. The S950 finds the OS file on the disk, loads it and restarts into it.
4. Read the start-up display: version 5.0.1 and the memory size, over SUPEROS EDITION SUPEROS303.COM.

> **NOTE**
> The OS lives in RAM: a power cycle without the disk returns the machine to its EPROM system, and nothing inside the sampler is changed. With SuperOS EPROMs fitted it starts straight into SuperOS with no disk at all.

2 GET AROUND THE PAGES

ANY SECTION | ANY TIME




```
*01      >Select, Copy      TONE
  SAMPLE *Rename, delete(-) TONE
```

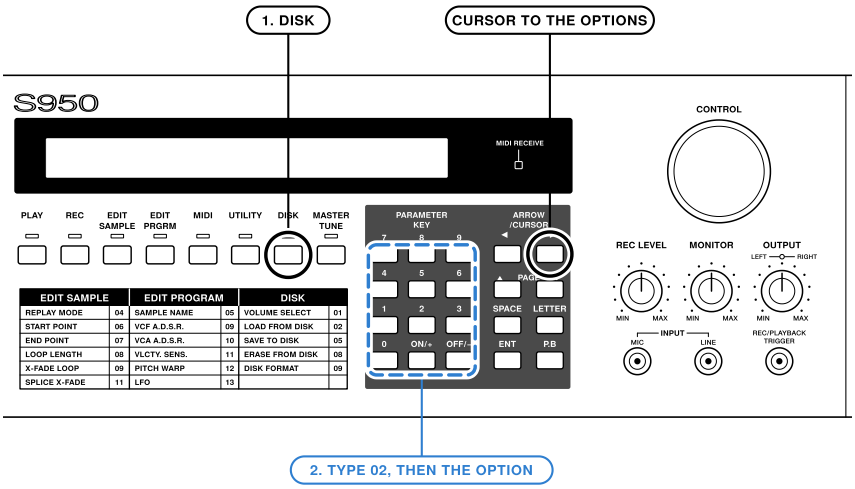
EDIT SAMPLE *01. The arrow is the cursor, here on Select, where the knob scrolls through the samples in memory.

1. Press a section key: PLAY, REC, EDIT SAMPLE, EDIT PRGRM, MIDI, UTILITY, DISK or MASTER TUNE.
2. With the cursor on the page number (far left), type both digits, 0 then 4 for *04, or step with the PAGE keys.
3. Move the cursor to a field with the ARROW/CURSOR keys. The field's star turns into the arrow.
4. Turn the CONTROL knob, or type the value on the digit keys. Switches take ON/+ and OFF/-. Fields marked (ENT) run when you press ENT on them.

> **NOTE**
> Every page in this guide is named by section and page number, like EDIT PROGRAM *04. The UTILITY key opens the two SUPEROS pages; MASTER TUNE keeps its own key and page.

3 LOAD A SOUND DISK

DISK *02 | **STOPPED**




```
      PRESS  AGAIN  TO  CONFIRM
Load disk (2), Clear prev (3)   Vol   5%
```

Option 1 clears memory, so it asks first. Type 1 again to load; moving the cursor cancels.

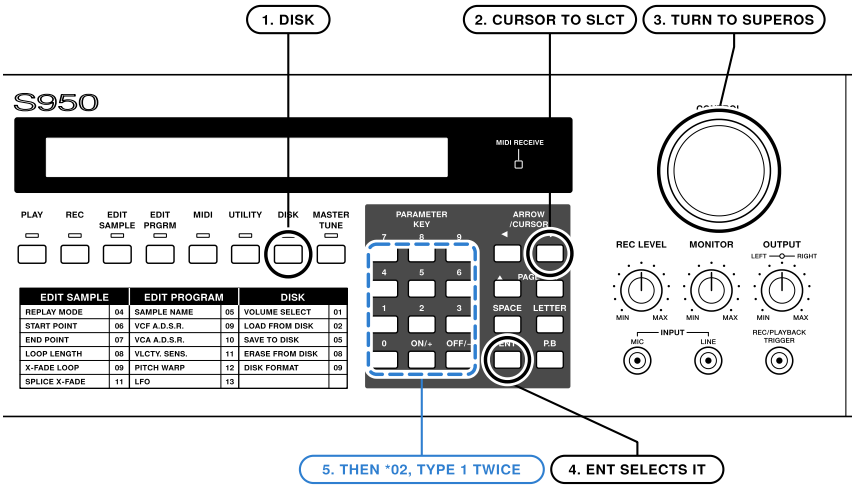
1. Press DISK and type 0 2. Page *02 is the load page.
2. Move the cursor right to the option field.
3. Type 2 to load the disk into memory alongside what is already there, or 3 for Clear prev.
4. Type 1 to clear memory and load. The top line reads PRESS AGAIN TO CONFIRM: type 1 again to go ahead.

NOTE

The same gate guards DISK *09 Format floppy and the Format it (1) answer when a save asks for a new floppy. Format hard disk and Wipe hard disk act at once, with no confirm. Moving the cursor off the field disarms the gate. Disks written on the factory OS load on SuperOS and the other way round.

4 BOOT FROM A SCSI DISK

DISK *01 | **SCSI BOARD FITTED**




```
*01 VOLUME ▶Slct,create SUPEROS    V   1
*SCSI #0 *Hdrive1 *Rename SUPEROS     0%
```

SUPEROS selected: Rename on line 2 now names the hard-disk volume the other DISK pages use.

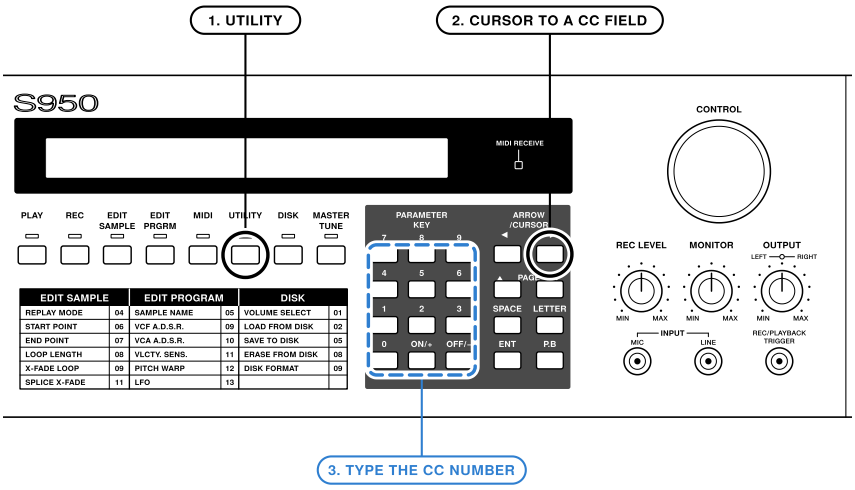
1. Copy HD00_512.hda to the root of the SD card of an SD-card SCSI emulator and keep the name: it sets SCSI ID 0. It holds a SUPEROS volume and a DROPBOX volume.
2. Press DISK, move the cursor to Slct,create, turn the knob one detent per volume (Floppy, SUPEROS, DROPBOX) to SUPEROS and press ENT.
3. Go to page *02 and type 1, then 1 again at PRESS AGAIN TO CONFIRM.
4. The machine restarts into SuperOS. OS updates are now a file copy.

NOTE

Switch the SCSI device on before the sampler. ID 0 is the only SCSI ID the S950 uses. Keep a boot floppy to hand the first time.

5 ASSIGN THE CONTROLLERS

UTILITY *01 | ANY TIME




```
*01 SUPEROS  ▶StartCC  13 *PortaCC   5
 *LoudnessCC  11 *PitchCC  12 *EndCC   0
```

UTILITY *01 with the defaults. The cursor is on StartCC.

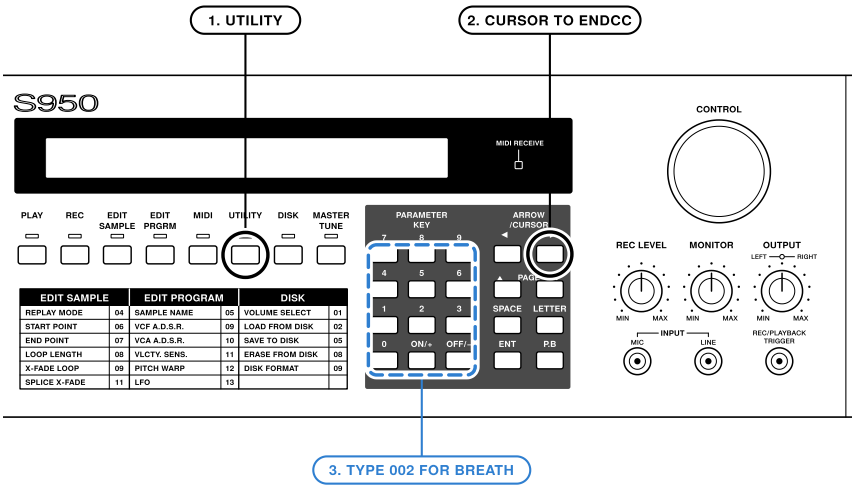
1. Press UTILITY. Page *01 opens with the five assignable controllers.
2. StartCC (13): sample start point, coarse. Its fine partner is always StartCC + 32, so CC 45 by default.
3. PortaCC (5): portamento time. LoudnessCC (11): keygroup loudness, 0 to 100 = -50 to +50. PitchCC (12): transpose, 64 = centre, plus or minus 50 semitones.
4. EndCC (0 = off): sample end point in 128 steps, the loop-window sweep. Type three digits for any number.

NOTE

Assignments reset to these defaults at every boot; they are not saved to disk. CC 1, 7, 64 and 123 are taken by the factory OS first and never reach these features. All controllers honour omni and the keygroup channel offsets on EDIT PROGRAM *16. EndCC and AAcapCC at 0 are off; the other fields at 0 answer CC 0.

6 SWEEP THE LOOP WINDOW

UTILITY *01 | **LOOPED SAMPLE**




```
*01 SUPEROS  *StartCC  13 *PortaCC   5
 *LoudnessCC  11 *PitchCC  12 *EndCC   2
```

EndCC set to 2. The breath controller now moves the sample end of every matching keygroup.

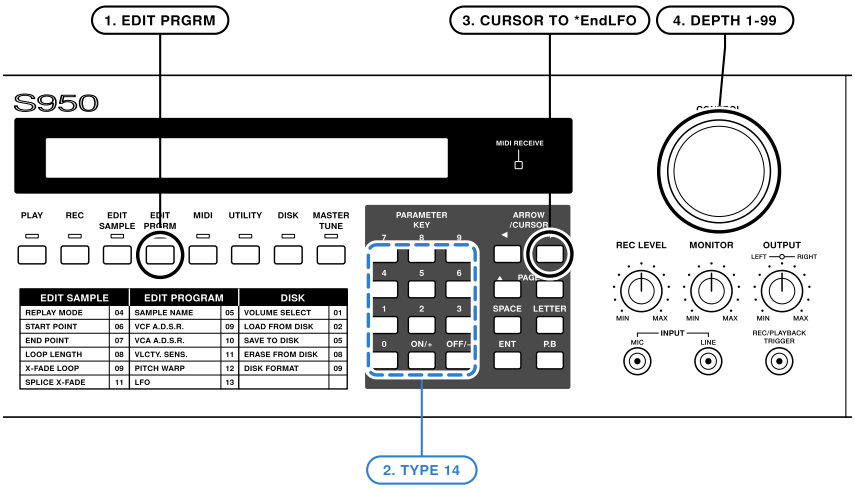
1. Load a sample and set it to a looped replay mode (EDIT SAMPLE *04).
2. Set the loop length you want to sweep with on EDIT SAMPLE *08: short for a transwave scan, long for a slower move.
3. Press UTILITY, move the cursor to EndCC and type 0 0 2 (or any controller except 1, 7, 64 and 123).
4. Move the controller, then play. Each new note takes the end where the controller left it; the loop keeps its length and sits at a different place in the sample. 127 is the full sample to the word.

NOTE

The S950 hangs the loop off the end point, so moving the end moves the whole loop window. The value only stores a number: a note already sounding keeps its window, the next note plays the new one, and the sample's own end never changes. The sweep is absolute, velocity-switched keygroups move together, and a start point above the new end is pulled down with it. The last value is stored per keygroup.

7 TRANSWAVE: WALK THE LOOP

EDIT PROGRAM *14 | LOOPED AT ONE CYCLE




```
*14 LFO DEPTH   *Aft.tch *Mod.whl ➤EndLFO
 *KG1                0        50        0
```

EDIT PROGRAM *14 LFO DEPTH: *EndLFO is the transwave depth, swinging the same number of cycles each way from the loop; 0 is off. CC 87 writes the same field.

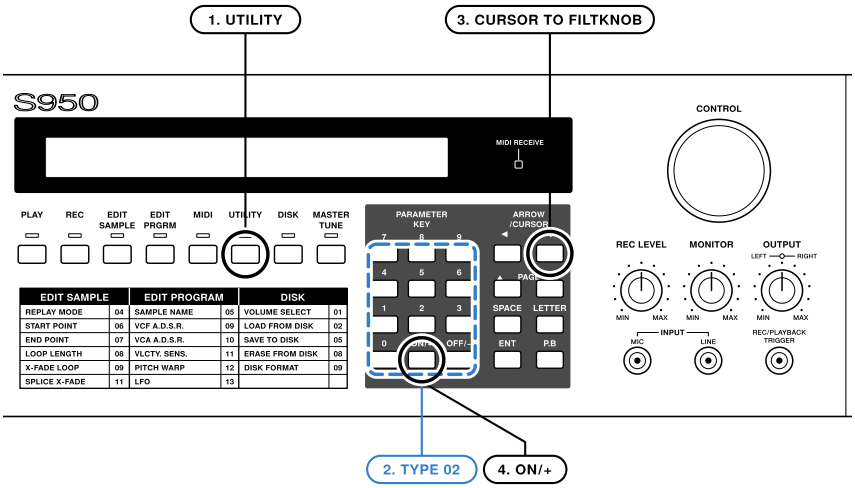
1. Use a wavetable-type sample or a sustained tone. EDIT SAMPLE *04: Looping (or Alternating for a forward-and-back window). *08: loop length EXACTLY one cycle, 32 words or more. *07: put the loop mid-table so the walk can go both ways.
2. EDIT PROGRAM *14, select the keygroup, cursor to *EndLFO and set the depth.
3. Set the LFO rate on *13. Hold a note: the loop moves to other cycles at the LFO's rate, whole cycles at a time, and comes back.
4. Try depth 20 for a gentle wobble. 99 reaches the first cycle of the sample; the other way stops at the sample's end.

NOTE

Every move lands at the loop wrap on a whole cycle, so a periodic sample never clicks. A drum break has no cycles: a loop moved through it clicks, whatever the machine. One-shots never morph, so chops of a break stay chops. Saves with the program.

8 RECORD KNOB MOVES AS MIDI

UTILITY *02 | SEQUENCER RECORDING




```
*02 SUPEROS ➤FiltKnob ON  *AAcapCC   0
```

FiltKnob ON: panel edits of Filter and Loudness now go out the MIDI port as controllers.

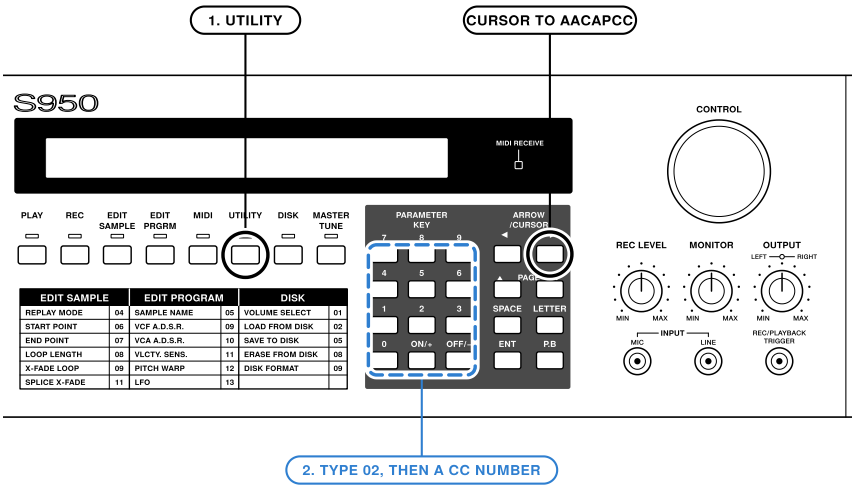
1. Press UTILITY and type 0 2.
2. Move the cursor to FiltKnob and press ON/+. OFF/- switches it off again.
3. Edit a keygroup's Filter or Loudness on EDIT PROGRAM *06 (or *08 for the loud sample) with the knob.
4. Each changed value is sent as CC 74 (Filter) or LoudnessCC on the basic channel. Record them into a sequencer and play them back into the same features.

NOTE

Only changed values are sent, so a knob held still does not flood the port. FiltKnob is OFF at every power-on.

9 ANTI-ALIAS CAP OVER MIDI

UTILITY *02 | **ANY TIME**




```
*02 SUPEROS *FiltKnob OFF ▶AAcapCC   0
```

UTILITY *02. AAcapCC 0 is off; any other number becomes the anti-alias cap controller.

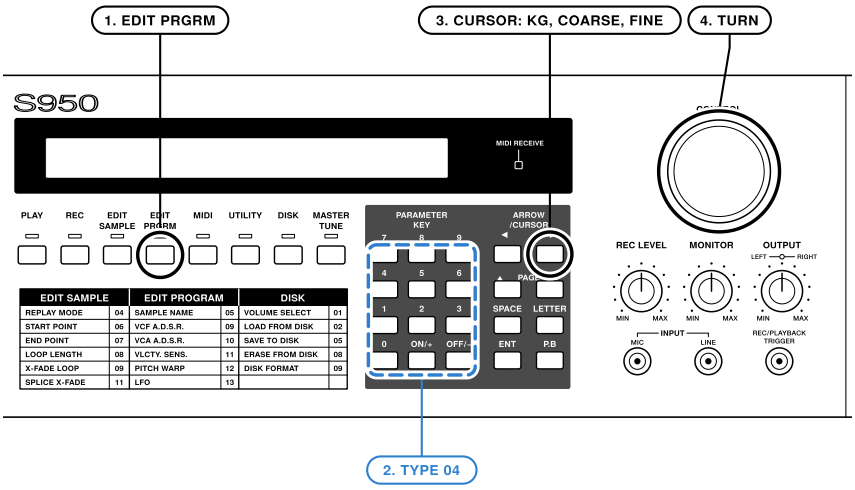
1. Press UTILITY and type 0 2.
2. Move the cursor to AAcapCC.
3. Type the controller number, three digits.
4. Send the controller: 0-31 selects cap 0, 32-63 cap 1, 64-95 cap 2, 96-127 cap 3, on every keygroup of the receiving channel.

NOTE

The cap itself is a per-keygroup field on EDIT PROGRAM *04; this controller writes the same byte. Function 13 explains the four settings.

10 SET THE START POINT

EDIT PROGRAM *04 | WHILE PLAYING




```
*04 *KG1  ▶Start  3,005 *End  0,000
 *Porta   0 *Vel sw thresh 128 *AAcap 0
```

Start at 3,005 on the 16384-step scale: 3 on Coarse, 5 on Fine.

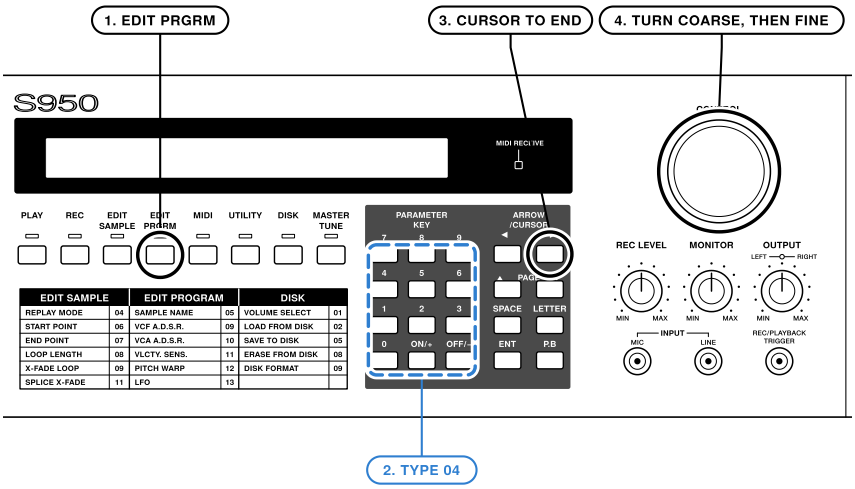
1. Press EDIT PRGRM and type 0 4. The cursor walks KG, Start, End, Porta, Vel sw thresh, AAcap.
2. Choose the keygroup in KG. 00 edits every keygroup of the program at once.
3. Cursor right to Start. The first stop is Coarse: one knob click is 1000 steps, about a sixteenth of the sample.
4. Cursor right again for Fine: one click is one step. The next note plays from the new point; a note already sounding keeps the start it began with. Typing works too: 1 6 on Coarse and 3 8 3 on Fine is the far end, 16,383.

NOTE

Start never changes the sample: it is stored in the keygroup, saved with the program, and each note is built with the keygroup's points when it starts, so two keygroups on one sample play their own windows at once. 0,000 is off: the sample's own start plays, and EDIT SAMPLE keeps showing the sample's own points. Over MIDI the same 16384 steps are StartCC plus StartCC + 32 as a 14-bit pair; StartCC alone gives 128 steps.

11 SET THE END POINT

EDIT PROGRAM *04 | WHILE PLAYING




```
*04 *KG1  *Start  0,000 >End 12,000
 *Porta   0 *Vel sw thresh 128 *AAcap 0
```

End at 12,000. 0,000 means off: the sample end stays where the sample has it.

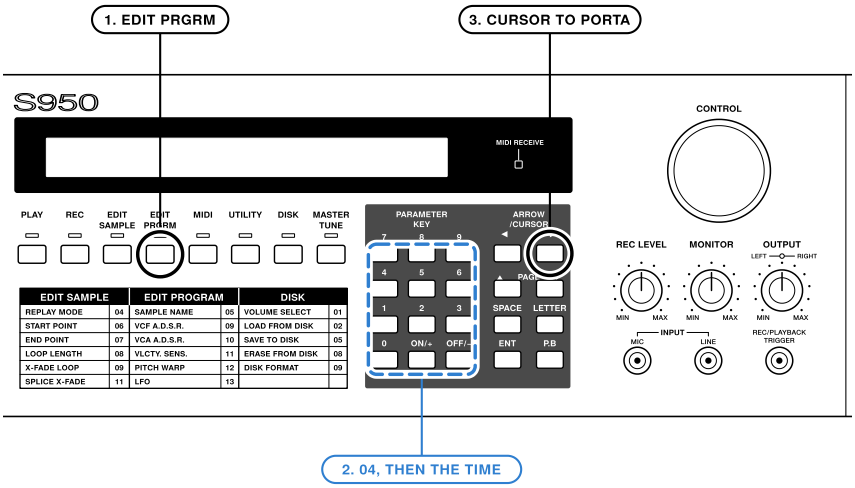
1. On EDIT PROGRAM *04, choose the keygroup in KG.
2. Cursor right past Start to End Coarse and turn the knob.
3. Cursor right once more for End Fine.
4. Scroll back to 0,000 to hand the end point back to the sample. Values past the sample's length clamp to it.

NOTE

The End field is the panel twin of EndCC: both write the same keygroup value, which saves with the program and reads back when you select the keygroup. The sample itself is untouched. An edit or a CC move applies from the next note on; a sounding note keeps the window it started with.

12 PORTAMENTO PER KEYGROUP

EDIT PROGRAM *04 | WHILE PLAYING




```
*04 *KG1  *Start  0,000 *End  0,000
 >Porta  40 *Vel sw thresh 128 *AAcap 0
```

Porta 40 on keygroup 1. 0 is off, 127 is the slowest glide.

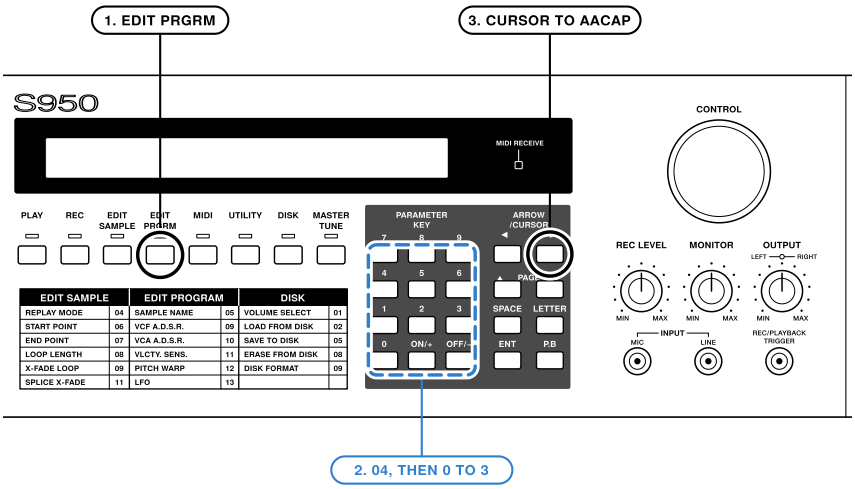
1. On EDIT PROGRAM *04, choose the keygroup in KG (00 for all).
2. Cursor right to Porta on the second line.
3. Type the time as three digits (0 4 0) or turn the knob.
4. Play legato. Each note glides from the previous one, monosynth style.

NOTE

The glide is logarithmic and latched at note-on. Different keygroups can glide at different speeds at the same time. PortaCC (CC 5 by default) writes the same byte.

13 ANTI-ALIAS CAP PER KEYGROUP

EDIT PROGRAM *04 | WHILE PLAYING




```
*04 *KG1  *Start  0,000 *End  0,000
 *Porta   0 *Vel sw thresh 128 ➤AAcap 2
```

AAcap 2: the anti-alias filter may open two octaves past pitch.

1. On EDIT PROGRAM *04, choose the keygroup in KG (00 for all).
2. Cursor right to AAcap, the last field.
3. Type 0 to track pitch as stock, 1 or 2 to allow one or two octaves brighter, 3 to switch the anti-alias filter off.
4. Play high transposed notes to hear the difference: brighter and dirtier.

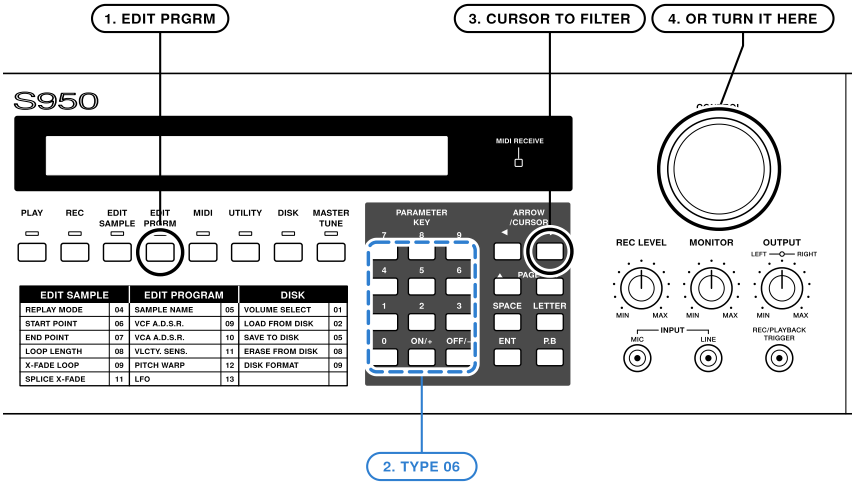
NOTE

Saved with the program. AAcapCC on UTILITY *02 sets the same value over MIDI.

MIDI PERFORMANCE

14 LIVE FILTER ON CC 74

EDIT PROGRAM *06 | WHILE PLAYING




```
*06 S *Loudness ➤Filter *Transpose *fine
 *KG1     +00       78       +00      +00
```

The keygroup Filter value CC 74 writes. Here it has been turned down to 78.

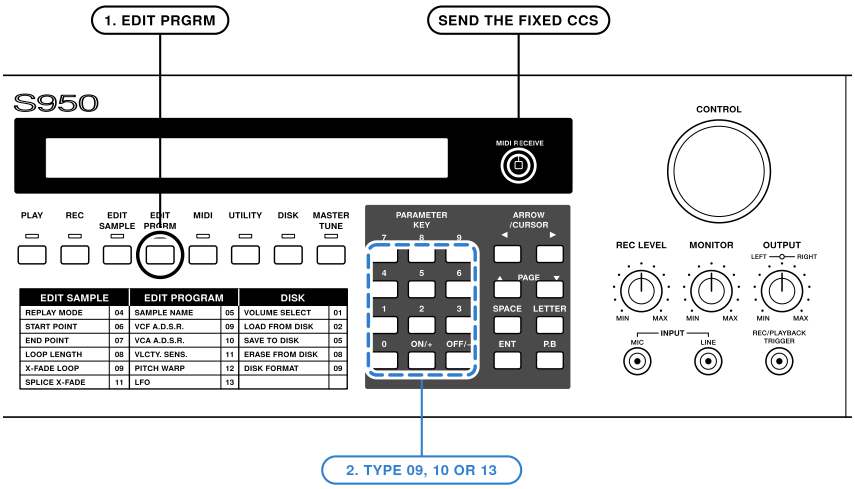
1. Send CC 74 on the sampler's channel. Nothing to assign: the number is fixed.
2. Every matching keygroup takes the new filter value, 0 to 99, and notes already sounding follow the sweep mid-note.
3. To see or set it on the panel, go to EDIT PROGRAM *06 and move the cursor to Filter.
4. Loudness on the same page answers LoudnessCC in the same live way.

NOTE

The machine powers up with omni OFF on channel 1. Change it on MIDI *01; settings loaded from disk bring their own. MIDI *03 RECEIVE MONITOR shows what is arriving.

15 ENVELOPES AND LFO OVER MIDI

EDIT PROGRAM *10 | **WHILE PLAYING**




```
*10 ENV ▶Attack *Decay *Sustain *Release
 *KG1        0      80       99        30
```

EDIT PROGRAM *10, the amplitude envelope CC 73, 75, 79 and 72 write.

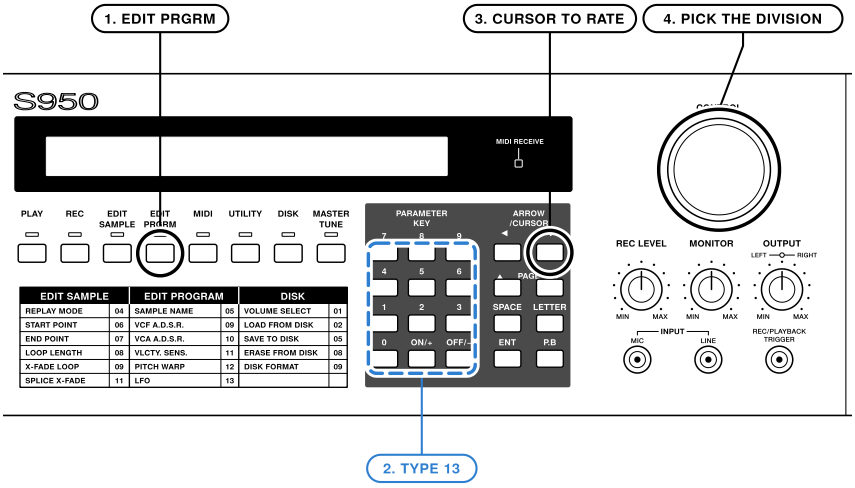
1. Amplitude envelope: CC 73 attack, 75 decay, 79 sustain, 72 release.
2. Filter envelope (*09): CC 80 attack, 81 decay, 82 sustain, 83 release, 85 amount (0-100 = -50 to +50).
3. LFO (*13): CC 76 rate, 77 depth, 78 delay, 86 desync (64 and up = ON).
4. Values write every keygroup on the receiving channel at once. The pages show the new values the next time they are drawn.

NOTE

These thirteen numbers are fixed and always listening. They follow the MIDI specification where one exists, so GM-aware controllers label them correctly.

16 LOCK THE LFO TO MIDI CLOCK

EDIT PROGRAM *13 | **CLOCK ARRIVING**




```
*13   LFO.  *Depth ▶Rate *Delay *Desync.
 *KG1          0     42     64       ON
```

EDIT PROGRAM *13. While clock arrives, Rate picks a division of the beat instead of a speed.

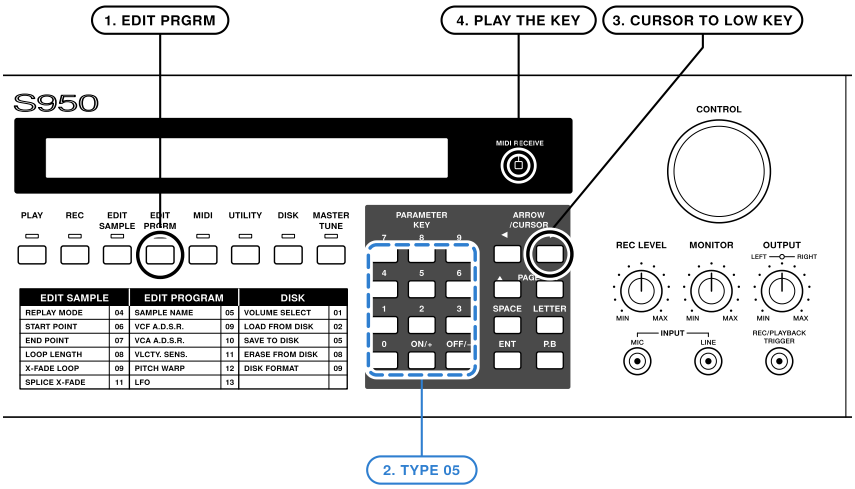
1. Send MIDI clock. Every LFO locks to it; there is nothing to switch on.
2. On EDIT PROGRAM *13 set Rate per keygroup, in bands of twelve: 0-11 1/1, 12-23 1/2, 24-35 1/4, 36-47 1/4 triplet.
3. 48-59 1/8, 60-71 1/8 triplet, 72-83 1/16, 84-99 1/16 triplet. CC 76 sets it too.
4. MIDI Start aligns every LFO to the downbeat. Stop the clock and after about a second the LFOs free-run and Rate means speed again.

NOTE

The lock does not drift: triplet rounding is corrected every third clock. Keygroups on the same division share a phase, so Desync only applies while free-running.

17 SET KEY RANGES FROM THE KEYBOARD

EDIT PROGRAM *05 | MIDI KEYBOARD CONNECTED




```
*05 *Soft sample TONE          at  C3   60
 *KG1    ❱Low key C0   24 *Hi key G8  127
```

EDIT PROGRAM *05 with the cursor on Low key, ready to learn.

1. Go to EDIT PROGRAM *05 and choose the keygroup in KG.
2. Move the cursor to Low key and play the lowest note of the range on the keyboard.
3. Play the highest note: the cursor has already stepped on to Hi key.
4. The range is set; no knob or digits needed.

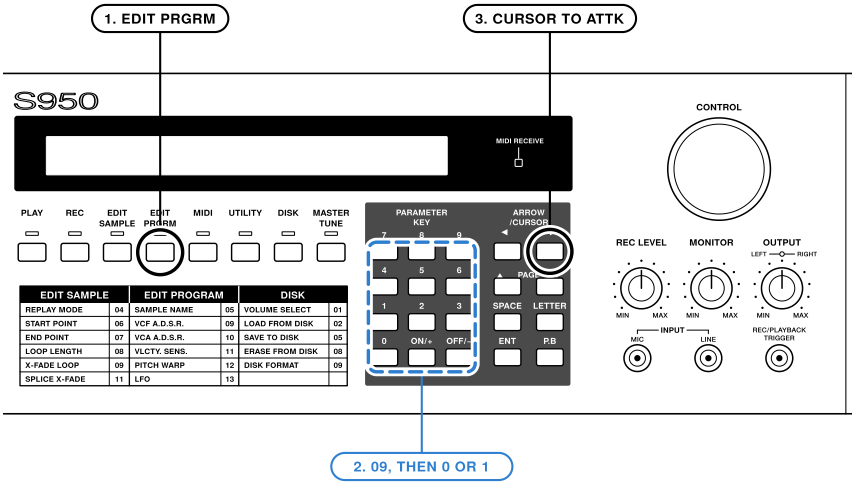
NOTE

The note sounds as you play it. A high key below the low key sets both fields to that note.

EDITING AND DISK

18 INSTANT ATTACK

EDIT PROGRAM *09 | ANY TIME




```
*09 VCF ❱Attk *Dcay *Sstain *Rlse *Amnt
 *KG1     20    20     20     20   +00
```

EDIT PROGRAM *09 VCF envelope, cursor on Attk.

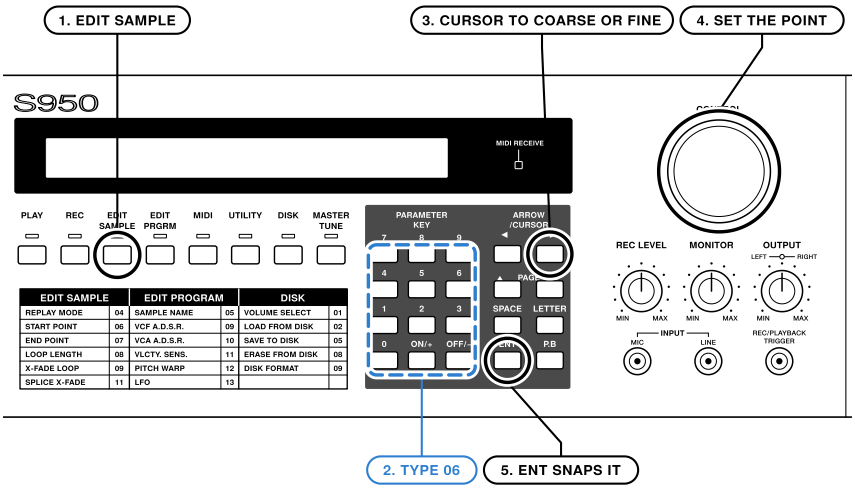
1. Go to EDIT PROGRAM *09 and choose the keygroup.
2. Move the cursor to Attk.
3. Type 0: the filter snaps fully open on the first tick, so the transient keeps its edge.
4. Type 1 for the factory behaviour, a short ramp. Flip between 0 and 1 to compare.

NOTE

The factory OS gave attack 0 and 1 the same softened start. Audible when Amnt is not zero; attack 2 and up are unchanged. ENV attack 0 on *10 likewise starts at full level.

19 ZERO-CROSSING SNAP

EDIT SAMPLE *06 **STOPPED**




```
*06  START POINT   *Coarse ▶Fine   *AUTO
     (0 -     1,700)     0,017      01
```

EDIT SAMPLE *06 START POINT, cursor on Fine. ENT moves the point to the nearest zero crossing.

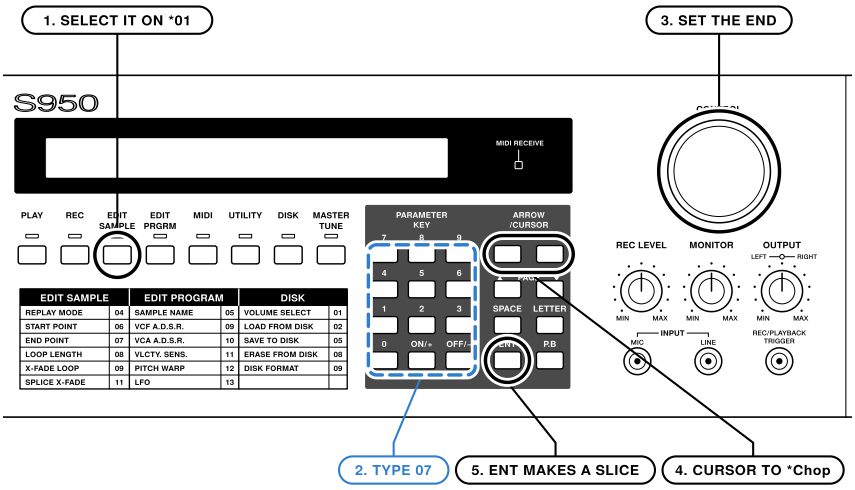
1. Select the sample on EDIT SAMPLE *01, then type 0 6.
2. Move the cursor to Coarse or Fine and set the start roughly with the knob.
3. Press ENT. The point snaps to the nearest zero crossing within 64 words.
4. The same works on *07 END POINT and *08 LOOP LENGTH (it snaps the loop's low edge).

NOTE

Knob and digit edits behave exactly as before; only ENT snaps. Clickless edit points without hunting.

20 CHOP A SAMPLE

EDIT SAMPLE *07 | **STOPPED**




```
*07 END POINT *Coarse *Fine  >Chop(ENT)_
(0000,100-     1,800)      1,800 **TONE01
```

A new sample that SHARES the audio of the one it came from. Costs a directory slot and no sample memory at all. The name is ready before you press anything.

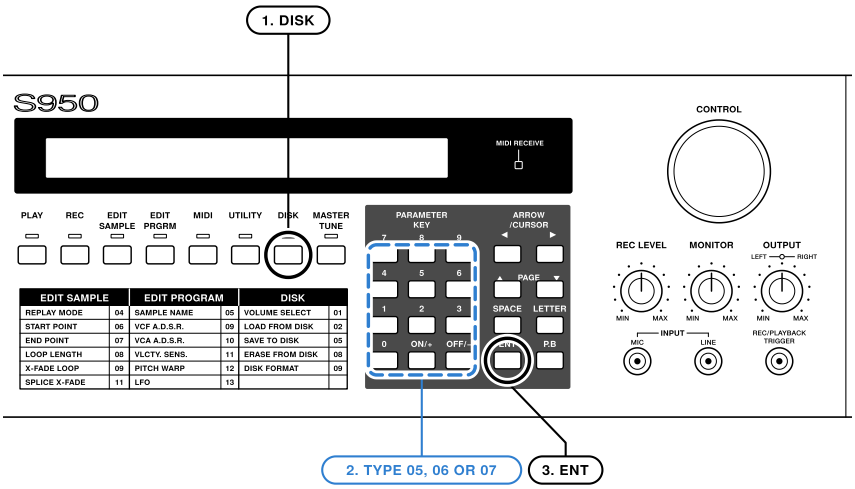
1. Select the sample on EDIT SAMPLE *01 - the chop copies whatever is current.
2. Type 0 7. The name field already reads #NAME01. Set the end point with Coarse and Fine (and a start on *06 if you want one).
3. Cursor to *Chop (the third field) and press ENT. The slice appears at once with ITS OWN range: select it and its *07 page runs 0 to its end, not the master's.
4. The number steps for the next slice and is counted from memory, so a deleted number is never reused. Set the next end point and ENT again to walk a break into slices.
5. Chop a slice the same way: select it on *01, set its end, ENT. It is named ##NAM01. To name a slice yourself, change the six characters after the # before ENT.

NOTE

The # cannot be edited away, so a shared sample always identifies itself. The source is never changed - a chop copies the header, not the audio - and slices in different keygroups play together without touching each other. Slices are memory-only: saving one writes an independent copy of its range. Avoid *10 resample and discard and *05 reverse on a chopped sample or a slice.

21 SAVE WITH VERIFY

DISK *05 TO *07 **STOPPED**




```
▶05  Clear volume and save      Mem   0%
     entire memory (ENT)        Vol   5%
```

DISK *05 saves all of memory to the selected volume. *06 saves a program, *07 a sample.

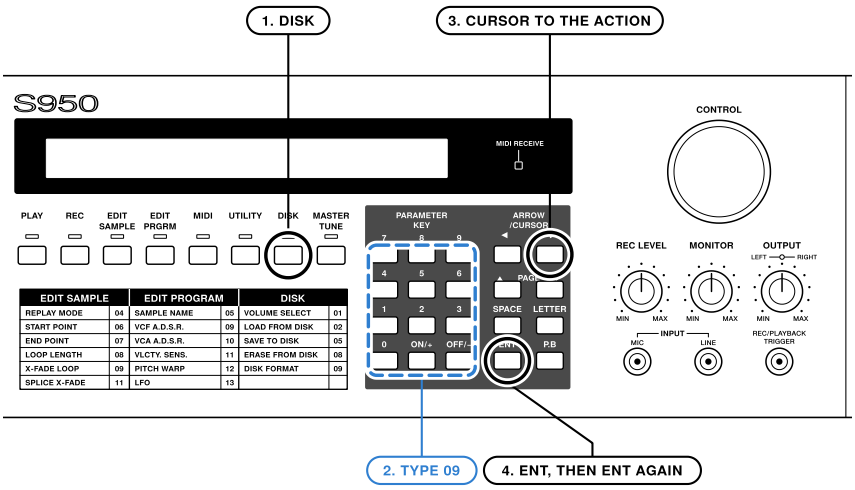
1. Press DISK and choose the volume on *01 if needed.
2. Type 0 5 to clear the volume and save everything, 0 6 for one program, 0 7 for one sample.
3. Name what to save where the page asks, then press ENT.
4. Every floppy write is read back under CRC. A bad sector is rewritten once before any error shows.

NOTE

The classic OOPS! BAD DATA found at load time is caught at save time instead. DISK *05 always saves your sounds.

22 FORMAT A DISK

DISK *09 **STOPPED**




```
     PRESS  AGAIN  TO  CONFIRM
*Wipe hard disk _    Total free:   109%
```

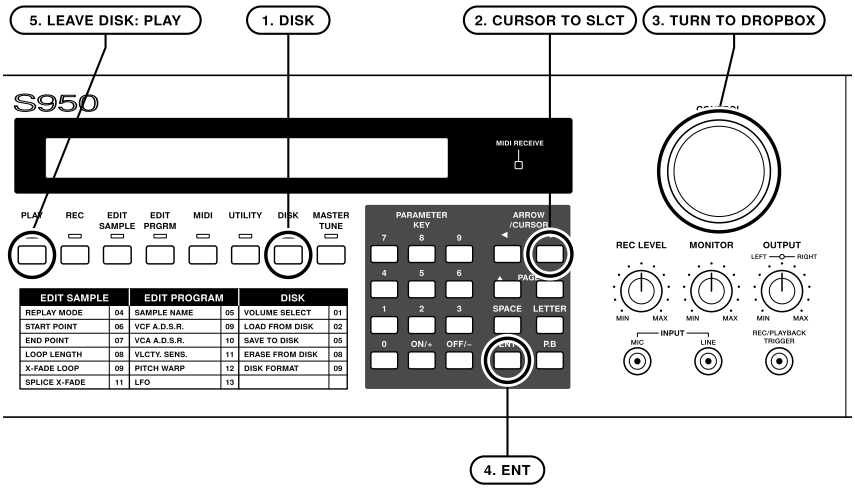
The first ENT only arms the format. The second formats; moving the cursor cancels.

1. Press DISK and type 0 9.
2. Move the cursor to Format floppy.
3. Press ENT. The top line reads PRESS AGAIN TO CONFIRM.
4. Press ENT again to go ahead, or move the cursor to cancel.

NOTE

Format hard disk and Wipe hard disk act on the first ENT, with no confirm. Total free on this page shows the space left on the selected volume.

DISK *01 | **SCSI BOARD AND CARD**



EDIT SAMPLE		EDIT PROGRAM		DISK	
REPLAY MODE	04	SAMPLE NAME	05	VOLUME SELECT	01
START POINT	06	VCF A.D.S.R.	09	LOAD FROM DISK	02
END POINT	07	VCA A.D.S.R.	10	SAVE TO DISK	05
LOOP LENGTH	08	VLCTY. SENS.	11	ERASE FROM DISK	08
X-FADE LOOP	09	PITCH WARP	12	DISK FORMAT	09
SPLICE X-FADE	11	LFO	13		

```
*01       >Select, Copy      KICK
  SAMPLE *Rename, delete(-) KICK
```

EDIT SAMPLE *01 seconds after a deposit: KICK is in memory. The receive itself shows nothing.

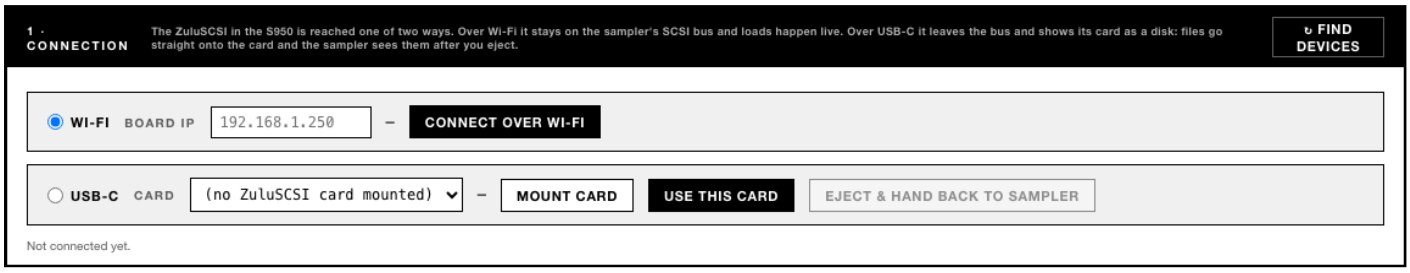
1. Copy HD00_512.hda to the SD card, or add a drop-box to your own image with s950dropbox.py addvol IMAGE.
2. Boot, press DISK, cursor to Slct,create, turn to a hard-disk volume (DROPBOX works) and press ENT, so the machine is on the SCSI disk.
3. On the computer: s950dropbox.py put IMAGE kick.wav, or s950dropbox.py watch IMAGE FOLDER for every new WAV. Files are converted to 40 kHz S950 samples.
4. Press PLAY to leave the DISK section and stop playing. Within a few seconds the sample is in memory under its own name: select it on EDIT SAMPLE *01.

NOTE

The sampler checks only while idle: never in DISK or REC, never while a voice sounds. Over Wi-Fi the same drop-box needs no card swap at all: see the Web Editor chapter.

24 CONNECT THE EDITOR

1 · CONNECTION WI-FI OR USB-C



Step 1 of the page: Wi-Fi to a board on the network, or USB-C with the board's card mounted as a disk. FIND DEVICES lists both.

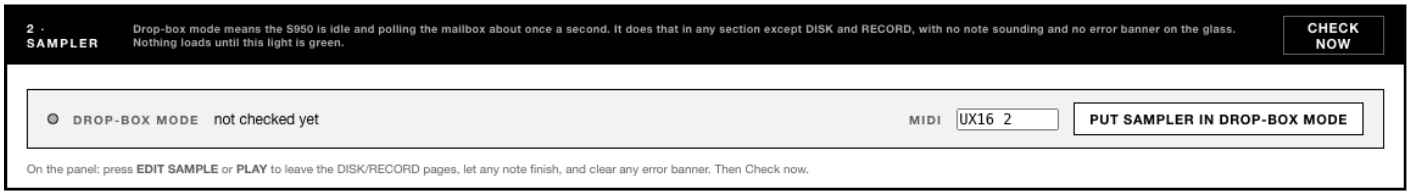
1. On the computer, in the web editor folder (from the editor page on superos303.com, not in the firmware download): python3 web/server.py. It opens http://localhost:8150.
2. Wi-Fi: type the board's fixed address (LoaderIP on its card) and CONNECT OVER WI-FI. The board stays on the sampler's SCSI bus; loads happen live.
3. USB-C: plug the board into the computer, MOUNT CARD (the board shows its card as a disk and leaves the bus), USE THIS CARD. Files go straight onto the card; EJECT & HAND BACK returns the board to the sampler, which then loads what was announced.
4. With the card mounted, pick the network the board should join, type its password and SAVE TO CARD. It takes effect after Eject.

NOTE

The step strip at the top turns each step green or red with a one-line reason, so you always know what is holding a load off.

25 CHECK DROP-BOX MODE

2 · SAMPLER BEFORE EVERY LOAD



Step 2: CHECK NOW asks the sampler over the mailbox. Green means it answered and is polling; red says why not.

1. Drop-box mode is the sampler idle, on a SCSI volume, not on the DISK or RECORD page, no note sounding, no error banner. Only an answer proves it.
2. Press CHECK NOW. Up to 4 seconds later the light is green with the answer time, or red with the reason.
3. Red? On the panel press EDIT SAMPLE or PLAY, let notes finish, clear any banner. With a MIDI cable, PUT SAMPLER IN DROP-BOX MODE presses EDIT SAMPLE for you.
4. Booted from a floppy? Press DISK, select the hard-disk volume once, leave the page.

NOTE

Send all, Load selected and Create program (with Load) are held off while the light is red, and the server refuses a load with the reason. Over USB-C the sampler cannot poll at all until Eject: files are stored on the card instead.

26 START THE WEB EDITOR

BROWSER | SAMPLER IN DROP-BOX MODE



The status strip: the board and its ping, the image it serves, the last mailbox announcement and any bytes still pending.

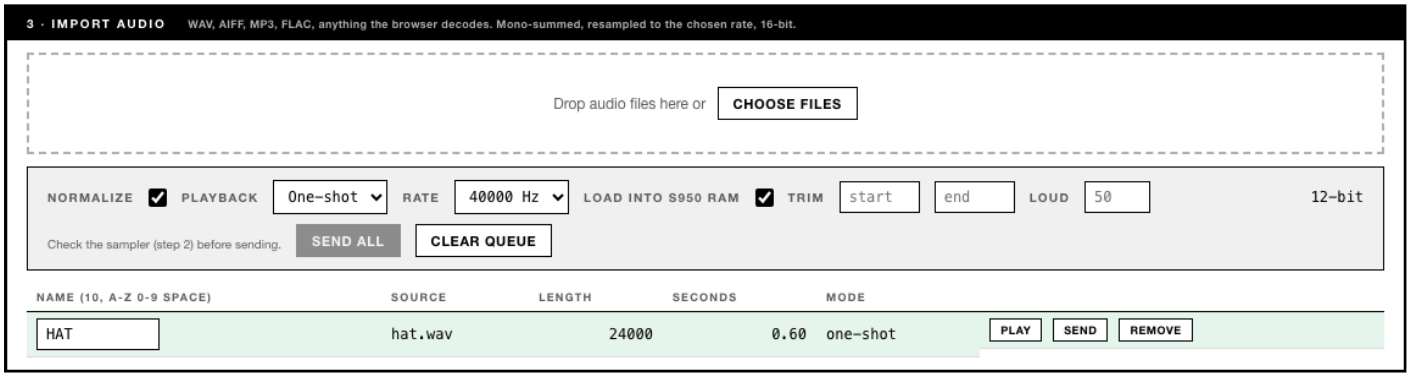
1. You need SuperOS 5.0 or later on the sampler and a Wi-Fi SCSI board running the loader firmware, reached over Wi-Fi or USB-C (function above).
2. The strip goes green when the board answers. Image names the file the board is serving; Mailbox is the last file announced to the sampler.
3. Push pending sends any bytes a failed transfer left behind; Verify card reads the whole card back and compares it with the computer's copy (Wi-Fi only).
4. The transfer log at the bottom says what happened to every file, in words.

NOTE

The page keeps a local mirror of the card image (build/S950_HD0.img) and only sends the bytes that change; over USB-C the card itself is the mirror. Other software can drive the same server through its HTTP API, documented in docs/API.md. To read and write the running sampler itself over a MIDI cable, see Owner's Manual section 20.

27 SEND A SAMPLE

IMPORT AUDIO | ANY TIME



hat.wav queued: 24000 points, 0.60 s, one-shot, named HAT. Play hears it before it goes; Send writes it to the card.

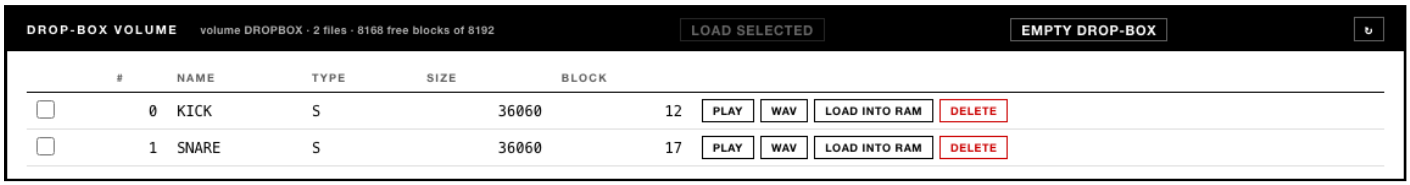
1. Drop audio files on the page, or choose them. WAV, AIFF, MP3, FLAC, anything the browser decodes: each is summed to mono and resampled to the chosen rate.
2. Set the options before sending: Normalize to full scale, Playback one-shot or looped, Rate 40000 Hz down to 12000 (a lower rate takes proportionally less memory and still plays in tune), Trim start and end in points (blank = whole sample), Loud 0-99.
3. Name each file in its row (10 characters, A-Z, 0-9 and space). Play auditions the queued file at its rate.
4. Press Send on a row or Send all. With Load into S950 RAM ticked the sampler pulls the file into memory at its next idle poll, named; unticked, it stays on the card as library.

NOTE

Samples are stored in the S950's own 12-bit format, as the DISK page would save them. Trimming does not save memory: the whole sample loads, the trim is what it plays.

28 LOAD INTO RAM, UNLOAD

DROP-BOX VOLUME | SAMPLER IDLE



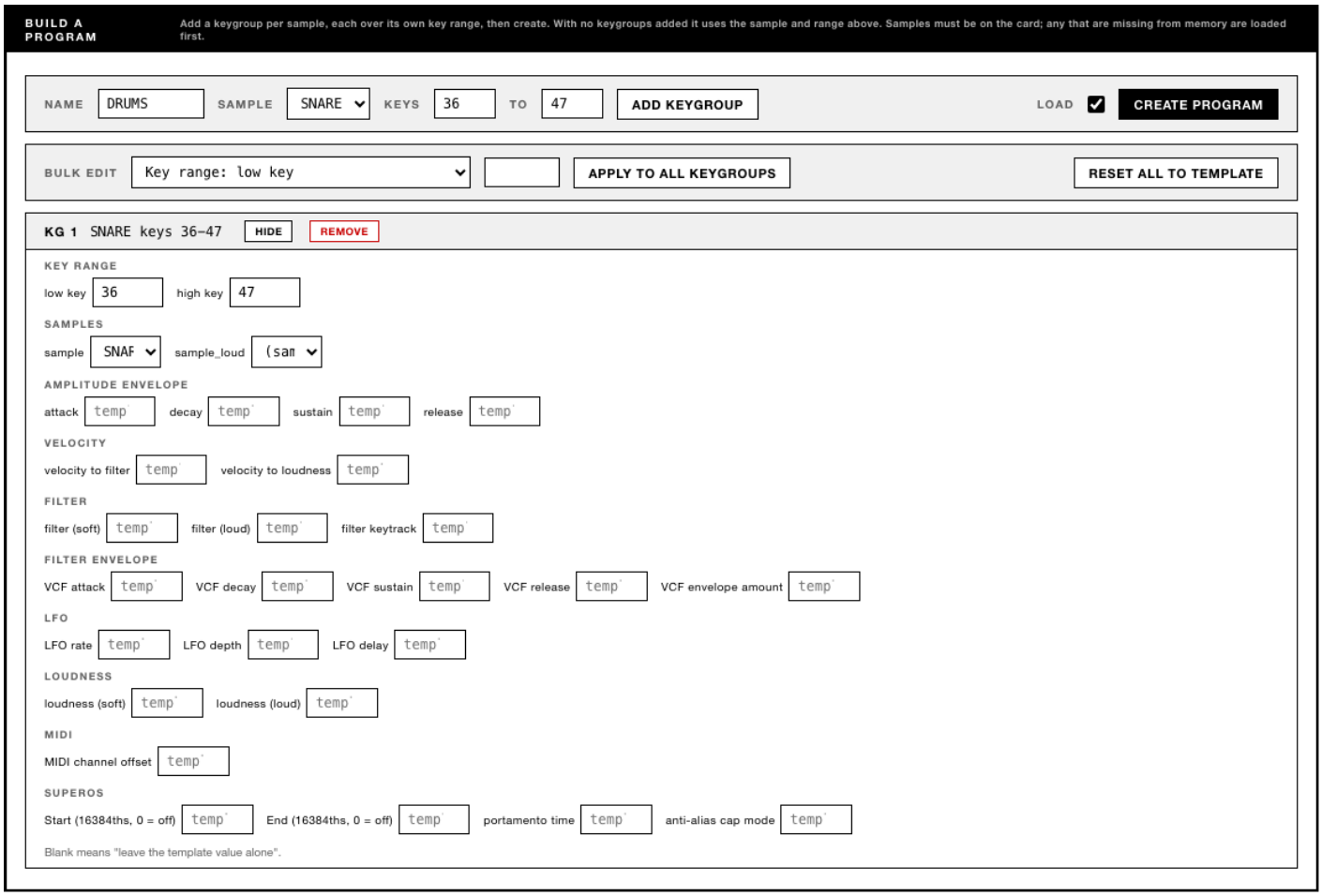
The drop-box volume on the card: KICK and SNARE, each with Play, WAV, Load into RAM and Delete.

1. The Drop-box volume panel lists every file on the card's DROPBOX volume, with its type (S sample, P program), size and block.
2. Load into RAM on a row announces that file to the sampler; it lands in memory within about a second of the sampler going idle. Tick several and press Load selected to load them one after another.
3. To take something out of the sampler, use the Sampler memory panel: Unload on a row, or tick rows and press Unload selected. The copy on the card is not touched.
4. Delete removes a file from the card (and frees its blocks); what is already in sampler memory stays there.

NOTE

The sampler loads only while idle: never in DISK or REC, never while a voice sounds. Leave the DISK section with PLAY and let the keys rest.

BUILD A PROGRAM | SAMPLES ON THE CARD



DRUMS with one keygroup: SNARE over keys 36 to 47, opened for editing. The SuperOS row carries Start, End, portamento and the anti-alias cap.

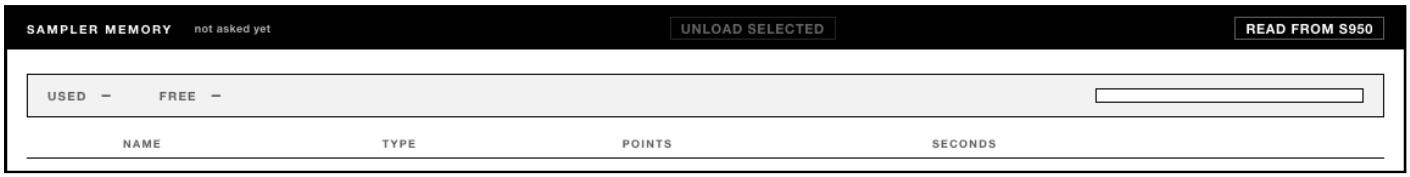
1. Name the program, pick a sample, set its key range in MIDI note numbers (60 is middle C) and press Add keygroup. Repeat for every sample. With no keygroup added it uses the sample and range in the top row.
2. Edit opens a keygroup: key range, sample and velocity-switch sample, envelopes, filter, LFO, loudness and MIDI channel offset. Blank fields keep the template value; Bulk edit sets one field on every keygroup at once.
3. SuperOS fields: Start and End in 16384ths of the sample, 0 = off (the sample's own point), the same values as EDIT PROGRAM *04; portamento time 0-127; anti-alias cap 0-3.
4. Press Create program. With Load ticked it goes into the sampler at once; any sample it needs that is not yet in memory is loaded first.

NOTE

Edit on a program in the Drop-box list reads it back into this panel with every field as stored; change it and Create program to write it back.

30 READ THE SAMPLER'S MEMORY

SAMPLER MEMORY | BOARD ANSWERING



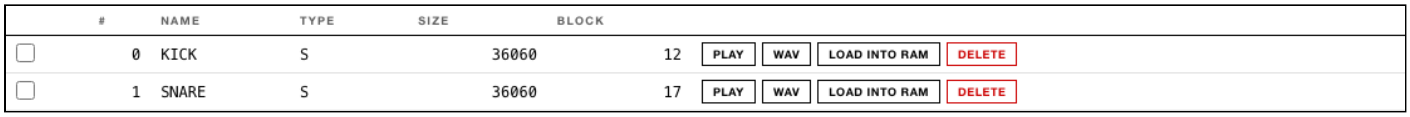
The Sampler memory panel before its first read. Read from S950 fills the table with what the machine holds and how much of its memory is used.

1. Press Read from S950. The sampler answers over the mailbox with every sample and program in memory and its used and free words.
2. The DISK page can load and clear memory without the page seeing it, so read again after using the panel.
3. Each row shows the name, type, points and seconds; Unload removes it from the sampler.
4. The bar shows how full the machine is, so you know what fits before you send.

> **NOTE**
> Reading needs the board and an idle sampler; the answer takes about a second.

31 AUDITION, EXPORT, EMPTY THE DROP-BOX

DROP-BOX VOLUME | ANY TIME



Play hears the file as the card stores it; WAV saves it to the computer.

1. Play on a drop-box row plays the sample straight off the card, so you hear what is stored (12-bit, at the sample's rate), not the audio that was sent.
2. WAV exports the stored sample as a 16-bit WAV file to your computer.
3. Empty drop-box, at the top of the panel, deletes every file on the DROPBOX volume after a confirm. Sampler memory is not touched.
4. The refresh arrow re-reads the card's directory.

> **NOTE**
> The SUPEROS volume, and the OS file that boots from it, are never touched by the page.

SUPEROS CONTROLLER DEFAULTS

FIELD	DEFAULT	WHAT IT MOVES
StartCC (UTILITY *01)	13, fine 45	Start point, 16,384 steps
PortaCC	5	Keygroup portamento, 0 = off
LoudnessCC	11	Loudness, 0-100 = -50..+50, live
PitchCC	12	Transpose, 64 = centre
EndCC	0 (off)	End point, the loop-window sweep
FiltKnob (UTILITY *02)	OFF	Send panel Filter/Loudness
AAcapCC	0 (off)	Keygroup AA cap 0 to 3
Filter	74, fixed	Filter, live on sounding notes

These reset at every power-on. CC 1, 7, 64 and 123 are the factory OS's and never reach them.

ENVELOPE AND LFO CONTROLLERS

CC	PARAMETER	CC	PARAMETER
73	ENV attack	80	VCF attack
75	ENV decay	81	VCF decay
79	ENV sustain	82	VCF sustain
72	ENV release	83	VCF release
76	LFO rate / division	85	VCF amount
77	LFO depth	86	LFO desync
78	LFO delay	87	EndLFO, transwave depth
Clock	Locks every LFO		

EDIT PROGRAM *04 AT A GLANCE

FIELD	RANGE	NOTES
KG	keygroup	00 edits every keygroup
Start	0,000-16,383	0,000 = the sample's own start
End	0,000-16,383	0,000 = the sample's own end
Porta	0-127	0 = off
Vel sw thresh	stock	Velocity switch point
AAcap	0-3	0 stock, 3 = AA filter off

All of them save with the program. Start and End never change the sample; each note takes the keygroup's points when it starts, so an edit is heard from the next note.

REMOVED

The audio-trigger pages (the UTILITY key now opens the SUPEROS pages), RS232 remote control, the MIDI Sample Dump Standard (the sampler's own SysEx dump still works, so editors do), the service screen behind system faults, and the OS save from DISK *05. The looped-sample ceiling (99) and the sampling pre-trigger buffer are the factory ones.

ALWAYS ON, NOTHING TO PRESS

Every floppy save is read back and CRC-checked; filter and volume attack 0 are instant; clear-and-load and Format floppy ask first (Format hard disk and Wipe hard disk do not); past the sample ceiling extra samples play truncated instead of corrupting playback. A CPU fault shows SYSTEM ERROR instead of freezing: power off and on.

BACK TO THE STOCK OS

Power on without the boot disk, or refit the factory EPROMs. SuperOS changes nothing inside the instrument, and sound disks load both ways.

ABOUT THESE PAGES

The screens are real frames of the 5.0.1 operating system, captured in an emulator with a one-sample test disk loaded. The Web Editor pictures are the page itself in a browser, against a card image with two samples and no board on the network. The panel drawing is traced from a photograph of a production S950.