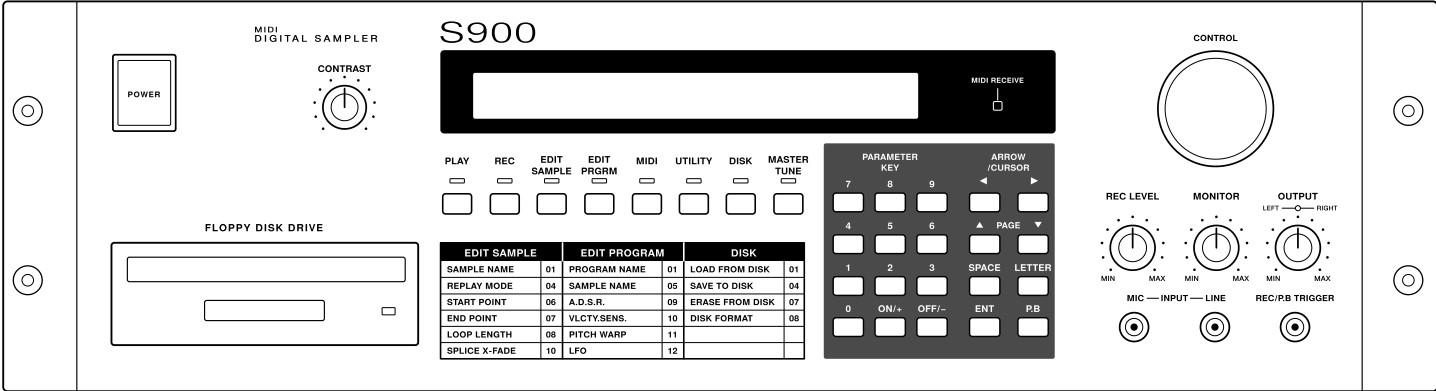


SuperOS-900

SHORTCUT GUIDE

VERSION 5.0.1 · CUSTOM FIRMWARE FOR THE S900
SUPEROS303.COM

Every superOS function on one drawing each: the panel, the keys involved, the order to press them, and the screen the S900 shows while you do it. The screenshots are real frames of this build, not redrawings. Find the function, look at the picture, follow the numbered steps. The sheet is meant to sit next to the instrument.



AKAI S900 SUPER 5.0.1
TIMESTRETCH 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 SAMPLE *14 is the EDIT SAMPLE key, then 1 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 S900 operating system with timestretch, chopping, per-keygroup start, end, portamento and AA, live filter and full MIDI control added. It boots from a floppy image; anything not described here works exactly as the original owner's manual says.

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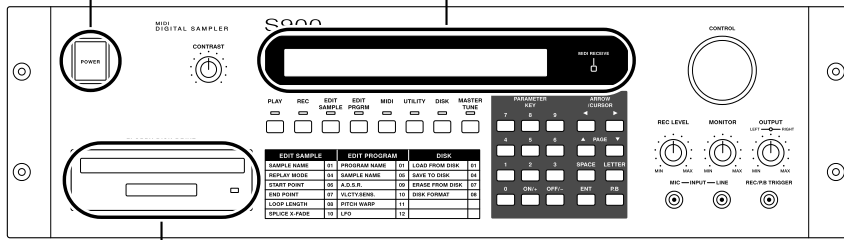
1 BOOT SUPEROS

POWER-ON

USB FLOPPY EMULATOR FITTED

2. POWER CYCLE

3. THE BANNER NAMES THE VERSION



AKAI S900 SUPER 5.0.1
TIMESTRETCH EDITION SUPEROS303.COM

The banner of a good boot.

1. SELECT THE SUPEROS IMAGE

1. Copy the superOS .hfe to the root of the USB stick, not into a folder. With AUTOBOOT.HFE there is nothing to select later.
2. Switch the S900 on and select the superOS image with the emulator's buttons.
3. Power cycle the S900 so it boots from that image. The load takes a few seconds.
4. Read the banner: the top line ends in SUPER 5.0.1 and the bottom line reads TIMESTRETCH EDITION SUPEROS303.COM.

NOTE

The S900 reads its operating system from disk only at power-up. MIDI omni starts off, on channel 1 (MIDI *01); a settings file loaded from disk restores whatever it carries. Your original boot disk still boots the stock OS.

2 GET AROUND THE PAGES

ANY SECTION

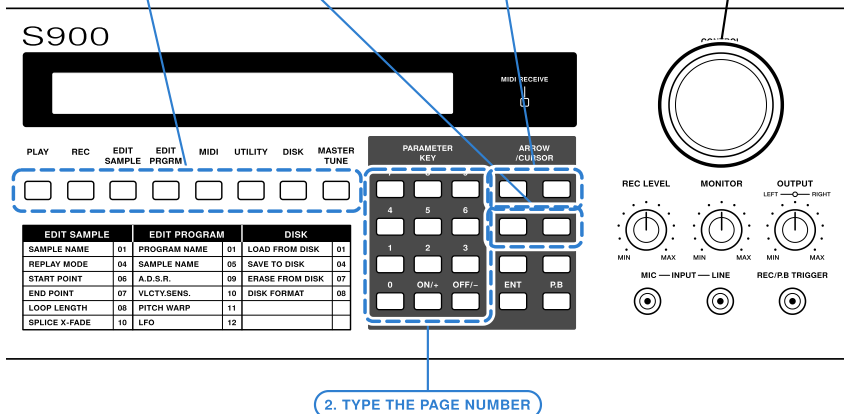
ANY TIME

1. SECTION KEY

OR STEP THE PAGES

3. CURSOR TO A FIELD

4. TURN, OR TYPE A VALUE



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

EDIT SAMPLE *01. The arrow is the cursor: on the Select field 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 the two digits of the page, for example 1 then 4 for *14, or step with PAGE up and down.
3. Move the cursor to a field with the ARROW/CURSOR keys.
4. Turn the CONTROL knob, or type the value on the digit keys. Switches take ON/+ and OFF/-. Fields marked (ENT), Do or Execute run when you press ENT on them.

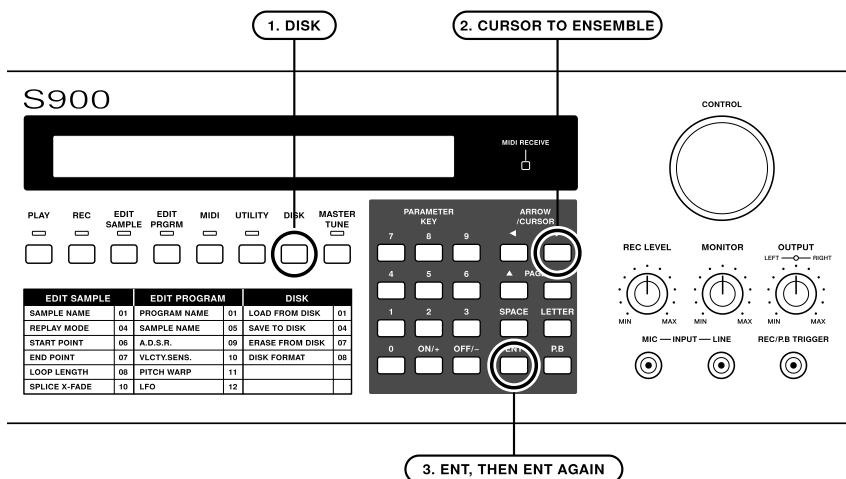
NOTE

Pages are named by section and number: EDIT SAMPLE *14 is the EDIT SAMPLE key, then 1 and 4. On EDIT PROGRAM pages the KG field picks the keygroup; KGall (00) edits every keygroup of the program at once.

3 LOAD A DISK

DISK *01

STOPPED



THIS CLEARS MEMORY! Press again to load
ensemble 1 33% (ENT) Disk- 16%

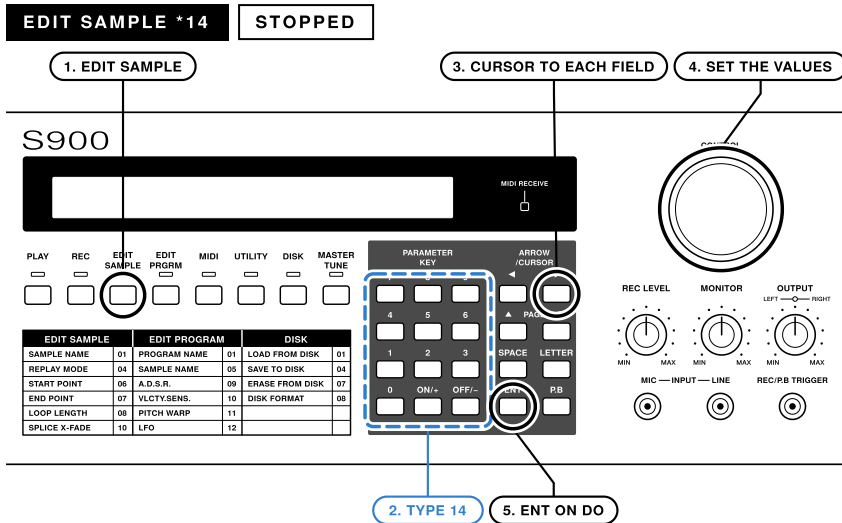
The first ENT only warns. The second loads; moving the cursor cancels.

1. Press DISK. Page *01 is Clear memory and load.
2. Move the cursor to the ensemble field.
3. Press ENT. The top line reads THIS CLEARS MEMORY! Press again to load.
4. Press ENT again to load, or move the cursor to cancel.

NOTE

DISK FORMAT and any stretch or crossfade that would overwrite a sample name ask the same way. Loads read whole cylinders per revolution, roughly 4 to 5 times faster than stock.

4 STRETCH A SAMPLE



*14 STRETCH *New name NEW SAMPLE ▶150%
*D-time 1000 *Auto D_ *Mon1/pol2 2 *Do_

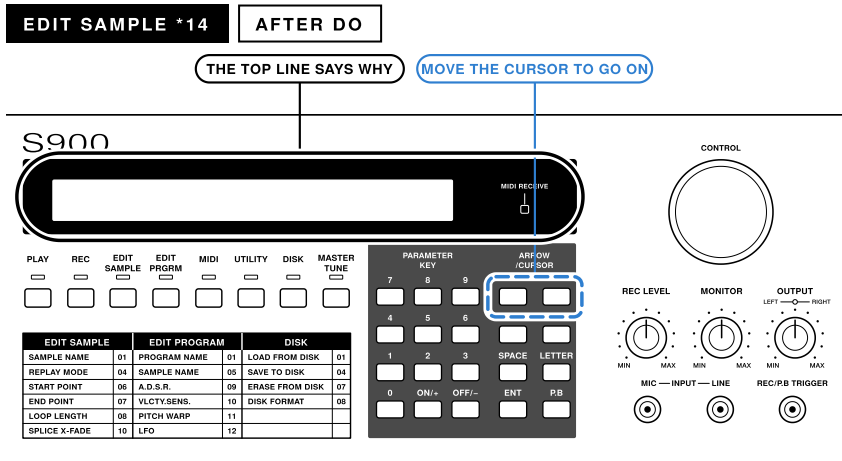
APACHE set to 150% before Do. The source sample is never changed.

1. In EDIT SAMPLE *01, turn the knob to the sample you want to stretch.
2. Go to page *14 STRETCH.
3. New name: the sample the stretch creates, up to ten characters.
4. %: 1 to 999. 100 keeps the length, 200 doubles it, 50 halves it. Pitch does not change.
5. D-time: grain and crossfade length in sample words, 5 to 9999. Short for drums, long for sustained tones. ENT on Auto D works one out from the sample and puts it in D-time.
6. Mon1/pol2: 1 is the linear window, 2 the equal-power window, usually smoother on tonal material.
7. Move to Do and press ENT. The section LED stays lit while it works.

NOTE

The stretch is page *14, in place of the two stock VX pages. A looped source keeps its loop, scaled by the same ratio. A stretch output can be stretched again.

5 WHEN THE STRETCH REFUSES



OOPS! Memory sample space is full.....

APACHE at 999%: the new sample would not fit in memory.

1. OOPS! Memory sample space is full: lower the %, or delete samples you do not need on EDIT SAMPLE *01 (Rename, delete(-)).
2. ENOUGH ALREADY!: the D-time is too short for the %; raise the D-time.
3. A stretch whose New name is already in use asks first: press ENT on Do again to replace that sample, or change New name.

6 SNAP A POINT TO A ZERO CROSSING

EDIT SAMPLE *06 *07 *08

STOPPED

S900

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

PARAMETER KEY		ARROW/CURSOR	
4	5	6	
1	2	3	
0	ON/OFF		

REC LEVEL MONITOR OUTPUT

MIN MAX MIN MAX MIN MAX

MIC INPUT LINE REC/PB TRIGGER

```
*06 START POINT *Coarse *Fine *AUTO
(0 - 39,900) 2,141 01
```

APACHE's start point: Fine was at 2,117 and ENT moved it to the crossing at 2,141.

1. TYPE 06, 07 OR 08

4. ENT SNAPS IT

1. Go to EDIT SAMPLE *06 START POINT or *07 END POINT.
2. Put the cursor on Coarse or Fine and set the point with the knob or the digits.
3. Press ENT. The point moves to the nearest zero crossing within 64 words.
4. On *08 LOOP LENGTH the same ENT snaps the loop's start (end point minus loop length), so the loop joins at a crossing.

7 CHOP A SAMPLE WITHOUT COPYING IT

EDIT SAMPLE *07

STOPPED

S900

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

PARAMETER KEY		ARROW/CURSOR	
4	5	6	
1	2	3	
0	ON/OFF		

REC LEVEL MONITOR OUTPUT

MIN MAX MIN MAX MIN MAX

MIC INPUT LINE REC/PB TRIGGER

```
*07 END POINT *Coarse *Fine *Chop<ENT>
(002,203-040,000) 40,000 *Name#APACHE02
```

APACHE chopped as #APACHE01. The chop plays APACHE's memory: it costs no sample RAM.

2. TYPE 07

4. ENT MAKES THE CHOP

1. On EDIT SAMPLE *01, turn the knob to the break you want to chop.
2. Go to *06 START POINT and set the start of the slice, then to *07 END POINT and set its end (ENT on Coarse or Fine snaps to a zero crossing).
3. On *07, move the cursor to *Chop(ENT) and press ENT. The chop is made under the name shown after the # on the second line.
4. The break stays selected and the name steps on by one, so the next slice is: move End, press ENT again.

NOTE

The name is offered for you: # plus the break's name, cut to six characters, plus the first free number (APACHE gives #APACHE01, #APACHE02, ...). To name a chop yourself, cursor to *Name (eight characters), type over it and press ENT to leave the character editor, then cursor back to *Chop. While the name is open the cursor keys walk its characters; LEFT on the first one steps back to *Chop. A name already in use is refused (Used).

8 WHAT A CHOP IS

EDIT SAMPLE *07

STOPPED

THE CHOP IS AN ORDINARY SAMPLE

ITS OWN START, END AND LOOP

SELECT IT ON *01 TO EDIT IT

S900

PLAY

REC

EDIT SAMPLE

EDIT PROGRAM

MIDI

UTILITY

DISK

MASTER TUNE

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

PARAMETER KEY

7

8

9

4

5

6

1

2

3

0

ON/OFF

ENT

P.B

ARROW CURSOR

REC LEVEL

MONITOR

OUTPUT

MIC — INPUT — LINE

REC/P.B TRIGGER

```
*07 END POINT ↵Coarse *Fine *Chop<ENT>
(002,203-040,000) 3,000 *Name#APACHE02
```

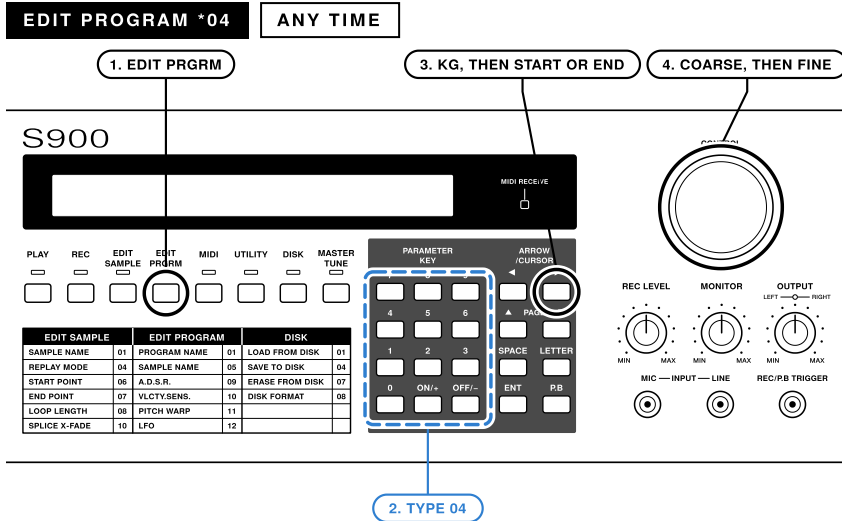
End pulled in to 5,000 before the next ENT: each chop keeps the points it was made with.

1. A chop is a sample of its own: it has its own start, end, loop, pitch, loudness and replay mode, copied from the break at the moment you press ENT.
2. Only the audio is shared, so eight slices of one break cost eight directory slots and no sample memory.
3. Select a chop on *01 like any other sample to play it, map it, stretch it or chop it again.
4. The audio is freed when the last sample using it is deleted.

NOTE

Discard, resample and reverse refuse on a shared sample (Shared); a copy on *01 is always a full independent sample again. Save the break and its chops to the same disk with DISK *04 save entire disk: the break saves as a full sample, each chop as a one-block file that re-attaches on load. A stock S900 or an older superOS shows the chops as silent empty samples; do not re-save a chopped disk from one.

9 START AND END PER KEYGROUP



```
*04 Start 4,000 *End 0,000 *Porta 0
*KG1 *Usw 128 *Xfd OFF *Mix 64 *AA 0
```

Keygroup 1 starts 4,000 steps in. End 16,383 is the sample's own end.

1. Press EDIT PRGRM and go to *04.
2. Pick the keygroup on KG (KGall edits every keygroup).
3. The cursor runs KG, Start coarse, Start fine, End coarse, End fine. Coarse is 0 to 16, fine 0 to 999: 0,000 to 16,383 spans the sample's own start to its own end, whatever its length. 16,383 reaches the end to the word.
4. The next note on that keygroup plays from Start to End. Start 0,000 with End 0,000 is off: the sample plays its own start to its own end, as it is.

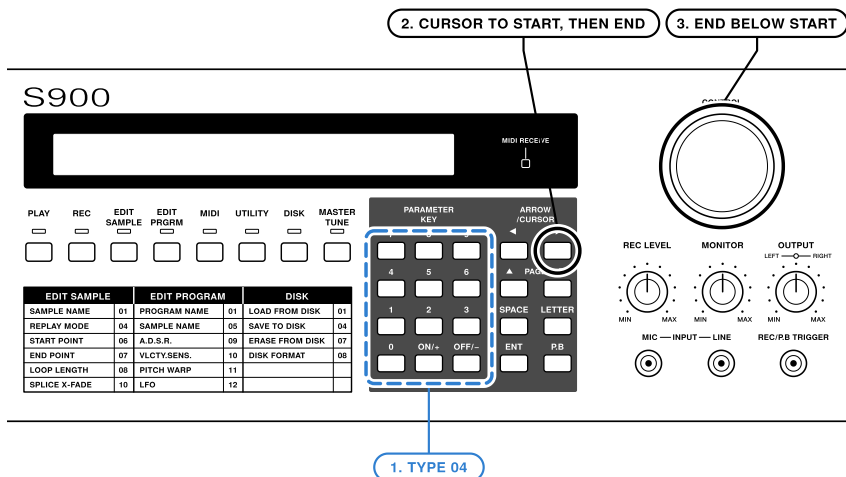
NOTE

The points belong to the keygroup and save with the program; the sample is never changed, so EDIT SAMPLE still shows its own points. The scale is the sample's own window, so on a chop it covers the chop's slice only. Two keygroups, or two chops, can play different parts of one sample at the same time. Turn KG and the fields read back that keygroup's values.

10 PLAY A KEYGROUP BACKWARDS

EDIT PROGRAM *04

ANY TIME



```
*04 *Start 16,000 *End 2,000 *Porta 0
*KG1 *Usw 128 *Xfd OFF *Mix 64 *AA 0
```

Start 16,000 and End 2,000: the keygroup plays that stretch of the sample in reverse.

1. On EDIT PROGRAM *04, set Start past the part you want.
2. Set End below Start. End 0,000 is off (the sample's own end); End 0,001 is as good as the sample's own start.
3. Play: the note runs backwards from Start to End. Start 16,383 with End 0,001 plays the whole sample backwards.

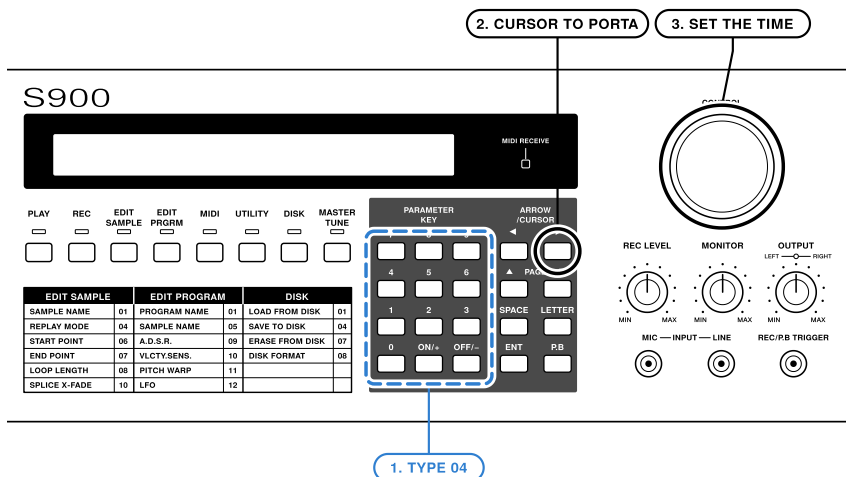
NOTE

The two points are always kept at least 100 words apart, in either direction; Start moves to make room, End only at the edge of the sample. With both on the same value the note plays 100 words forwards. A looped sample reversed down to its first word loops that one word.

11 PORTAMENTO PER KEYGROUP

EDIT PROGRAM *04

ANY TIME



```
*04 *Start 0,000 *End 0,000 *Porta 40
*KG1 *Usw 128 *Xfd OFF *Mix 64 *AA 0
```

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

1. On EDIT PROGRAM *04, pick the keygroup and move the cursor to Porta.
2. Set 0 to 127: 0 off, 1 the fastest glide, 127 the slowest.
3. Each new note glides from the previous note on its channel. PortaCC (UTILITY *01, default 5) writes the same value into every keygroup on the receiving channel.

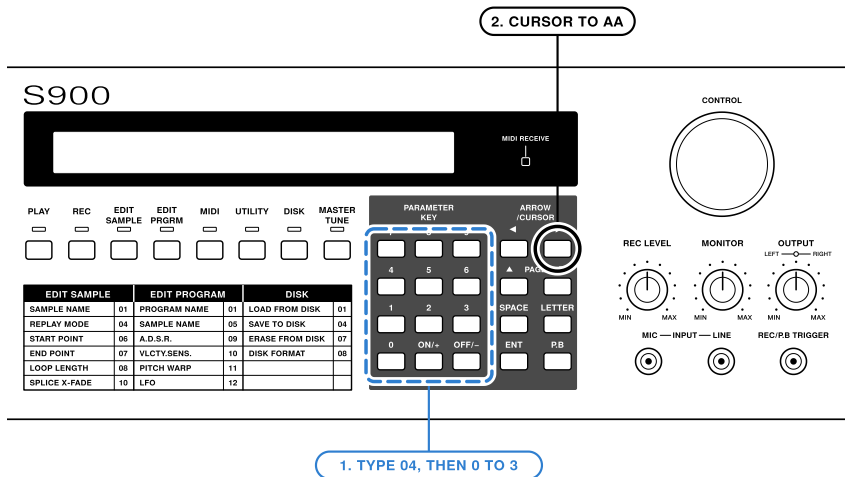
NOTE

The glide runs in semitones, so an interval takes the same time anywhere on the keyboard. Different keygroups can glide at different rates at once. Saved with the program.

12 ANTI-ALIASING CAP PER KEYGROUP

EDIT PROGRAM *04

ANY TIME



```
*04 *Start 0,000 *End 0,000 *Porta 0
*KG1 *Usw 128 *Xfd OFF *Mix 64 AA 3
```

AA 3 on keygroup 1: its anti-aliasing filter is off.

1. On EDIT PROGRAM *04, pick the keygroup and move the cursor to AA (the last field).
2. Set 0 to 3. 0 tracks pitch, as stock. 1 and 2 open one or two octaves brighter. 3 switches the filter off for the raw aliased top end.
3. AAcapCC (CC 16 by default, UTILITY *02) sets the same value over MIDI: 0-31 = 0, 32-63 = 1, 64-95 = 2, 96-127 = 3.

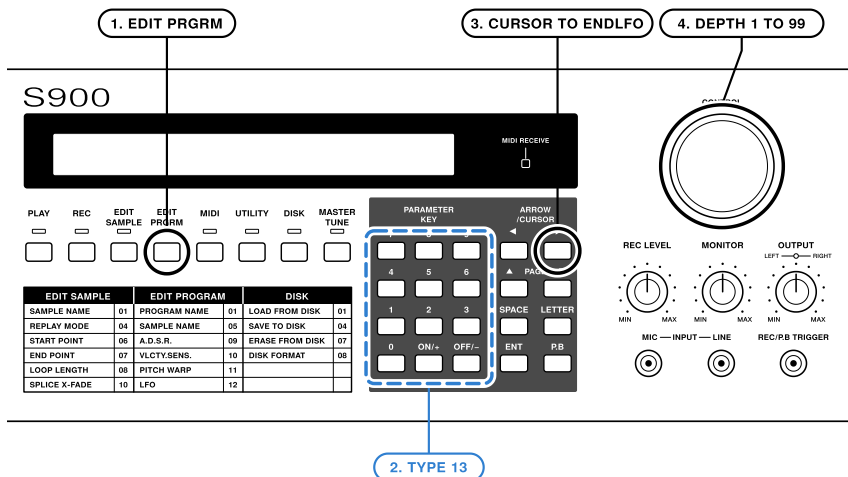
NOTE

Saved with the program, per keygroup. Cannot drive the hardware beyond stock limits.

13 TRANSWAVE MORPH

EDIT PROGRAM *13

LOOPED OR ALTERNATING SAMPLE



```
*13 LFO DEP *Aft.tch *Mod.whl →EndLFO
*KG1 0 50 20
```

Keygroup 1 with *EndLFO 20: its notes sweep the loop window through the sample.

1. Give the sample a short loop (one cycle of a sustained tone works best) and set its replay mode to Looping or Alternating on EDIT SAMPLE *04. One-shots never morph.
2. Press EDIT PRGRM, go to *13 LFO DEPTH and pick the keygroup on KG (KGall for the whole program).
3. Cursor to *EndLFO and set a depth, 1 to 99. 0 is off, and the sample plays exactly as stock.
4. Play. The loop window moves through the sample in whole loops, so it never clicks: the LFO (its rate and delay from *12) swings it by the depth, and the mod wheel (CC 1) sets where in the sample it sits, 0 = the first cycle, 127 = the last. With a depth set, a note starts on the loop instead of running through the sample first.

NOTE

The depth is a keygroup byte, saved with the program; CC 84 writes it too. The window stays inside the sample's own start and end, so on a chop it stays inside the slice. Alternating samples get a window that plays forwards then backwards. CC 89 at 64 or above switches the keygroup to wheel mode: the mod wheel alone moves the window down from the loop (64 and up = the loop), scaled by the depth, no LFO; below 64 is the normal mode. Loops under 32 words or of 32,768 words or more, and half-bandwidth samples, do not morph. Manual section 13.

14 FILTER OVER MIDI AND FROM THE PANEL

EDIT PROGRAM *06

NOTES HELD

1. EDIT PRGRM

3. CURSOR TO FILTER

4. TURN WHILE YOU PLAY

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

```
*06 S *Loudness >Filter *Transpose *fine
*KG1 +50 63 +00 +00
```

Filter turned from 99 to 63 on keygroup 1. CC 74 sets the same value, 0 to 99.

- On EDIT PROGRAM *06, pick the keygroup, move the cursor to Filter and turn it while notes sound: the cutoff moves mid-note.
- Send CC 74 on a channel: every keygroup whose own MIDI channel matches takes the value, even with nothing sounding. 100 to 127 act as 99.
- Save the program to keep the setting.

NOTE

The filter CC number is fixed at 74. A repeated identical value is ignored, so a DAW re-sending the same value at every loop cannot overwrite a panel edit.

15 SEND KNOB MOVES TO A DAW

UTILITY *02

ANY TIME

1. UTILITY

3. CURSOR TO FILTKNOB

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

```
*02 SUPEROS >FiltKnob ON *AAcapCC 16
```

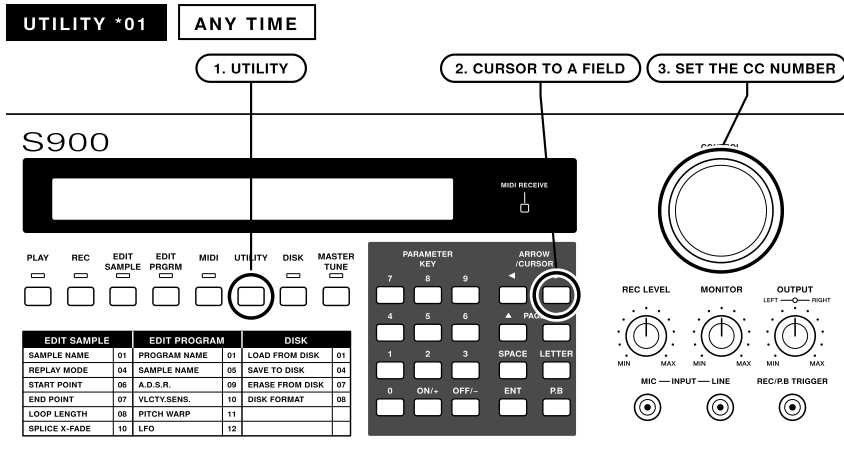
FiltKnob on: panel Filter and Loudness edits go out as CC 74 and LoudCC.

- Press UTILITY and go to *02 SUPEROS.
- Put the cursor on FiltKnob and press ON/+.
- Turning Filter or Loudness on an EDIT PROGRAM page now transmits the CC on the basic channel, so a sequencer records the move.

NOTE

Every SUPEROS setting returns to its default at power-on; they are not saved to disk.

16 ASSIGN THE SUPEROS CONTROLLERS



```
*01 SUPEROS ↗StartCC 13 *PortaCC 5
*LoudCC 11 *PitchCC 12 *EndCC 14
```

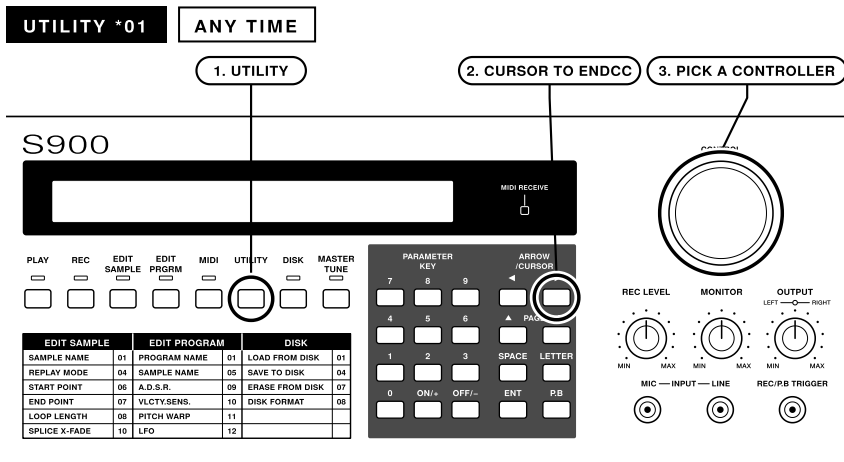
Defaults: StartCC 13, PortaCC 5, LoudCC 11, PitchCC 12, EndCC 14.

1. Press UTILITY. *01 SUPEROS holds the controller numbers.
2. StartCC: start point of every keygroup on the channel, for its next notes, on the *04 Start scale: CC 0 is the sample's own start. 14-bit: the fine half is StartCC + 32 (CC 45 by default), and 127 with fine 127 is Start 16,383; coarse alone works as a plain controller.
3. PortaCC: portamento time. LoudCC: loudness, CC 50 = centre, live on sounding notes. PitchCC: transpose in quarter semitones, CC 64 = centre, sounding notes retune.
4. Set a number with the knob or the digits; it takes effect at once.

NOTE

CC 1, 7 and 64 belong to the stock OS: do not use them. StartCC, PortaCC, LoudCC and PitchCC set to 0 answer CC 0; set an unused number to silence one. The SuperOS map ships as StartCC 13 (fine 45), EndCC 14, AACapCC 16, PortaCC 5, LoudCC 11, PitchCC 12, filter 74. Controller point changes are stored in the keygroups, so what you hear is what saves.

17 SWEEP THE END POINT



```
*01 SUPEROS *StartCC 13 *PortaCC 5
*LoudCC 11 *PitchCC 12 ↗EndCC 14
```

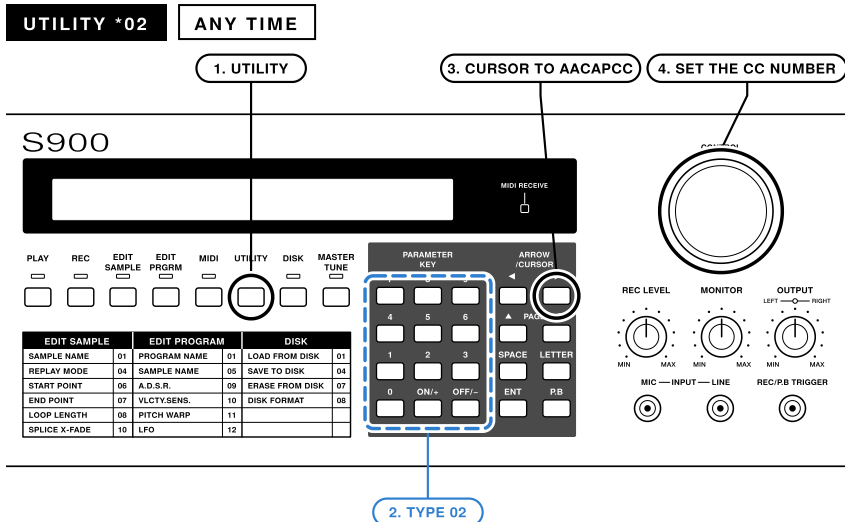
EndCC ships assigned to CC 14; set 0 to switch it off.

1. EndCC ships at 14, so it works out of the box; UTILITY *01 changes the number, and 0 switches it off.
2. Send that controller: the end point of every keygroup on the channel moves for its next notes, on the *04 End scale. CC 127 is the sample's own end, to the word; each step down is one 128th of the sample's own window (CC 0 is one 128th in).
3. On a one-shot it is a length control. On a looped sample the loop hangs off the end, so the loop window moves through the sample from note to note.

NOTE

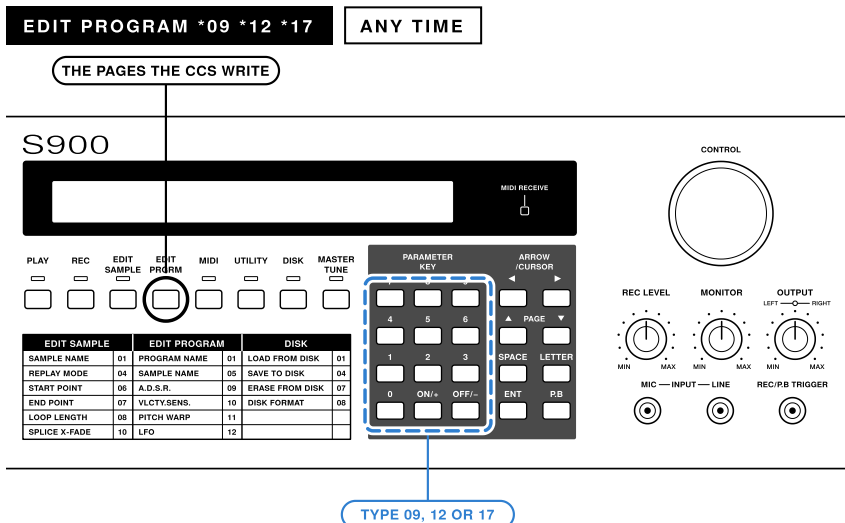
The scale is the sample's own start to its own end (a chop's slice on a chop), so a controller position always means the same point. End below Start plays the note backwards.

18 AA CAP CONTROLLER



1. AACapCC ships at 16, so it works out of the box; UTILITY *02 changes the number, and 0 switches it off.
2. AACapCC is the controller for the per-keygroup AA cap on the receiving channel: value 0 to 31 = cap 0, 32 to 63 = 1, 64 to 95 = 2, 96 to 127 = 3.

19 ENVELOPES AND LFO OVER MIDI

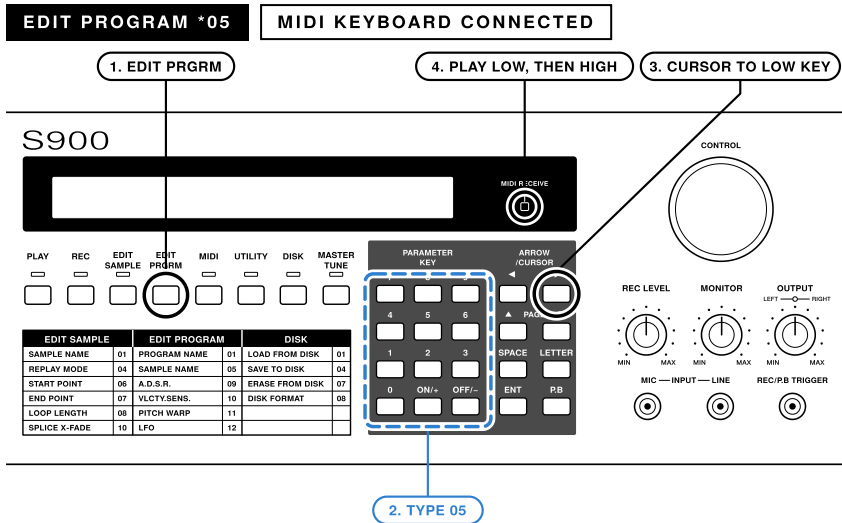


1. Nothing to assign: thirteen fixed controllers write every keygroup on the receiving channel.
2. ENV: attack 73, decay 75, sustain 79, release 72. VCF: attack 80, decay 81, sustain 82, release 83, amount 85 (0 to 100 = -50 to +50).
3. LFO: rate 76, depth 77, delay 78, desync 86 (64 and up = on). Filter cutoff is 74. Transwave: depth 84, wheel mode 89 (64 and up = on).
4. Values above a parameter's range (0 to 99) clamp to it.

NOTE

A computer can also read and write the running machine's memory over MIDI SysEx, press its keys and start a recording: manual section 16.

20 SET A KEY RANGE BY PLAYING IT

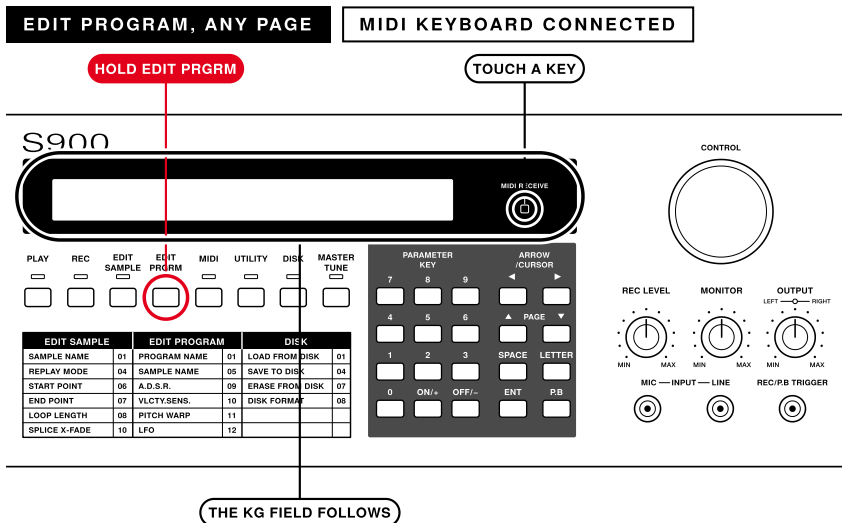


```
*05 *Soft sample TONE at C3 60
*KG1 →Low key C0 24 *Hi key G8 127
```

Cursor on Low key. The next note played on the keyboard lands here.

1. Press EDIT PRGRM and go to page *05.
2. Move the cursor to Low key.
3. Play the lowest note of the range. The field takes it and the cursor moves on to Hi key.
4. Play the highest note. The played note always sounds.

21 SELECT A KEYGROUP BY PLAYING IT



```
*04 *Start 0,000 *End 0,000 *Porta 0
*KG1 *Usw 128 *Xfd OFF *Mix 64 *AA 0
```

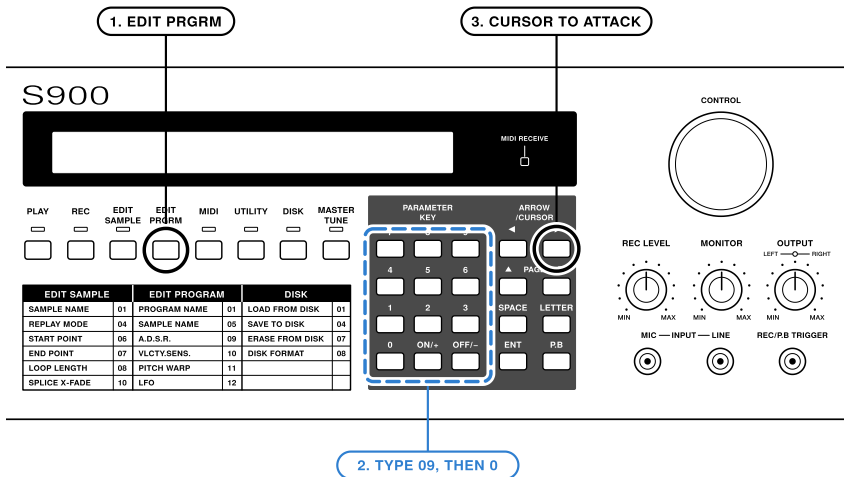
The KG field shows the keygroup being edited; it jumps to the one the note plays.

1. Stay on the EDIT PRGRM page you are editing.
2. Hold the EDIT PRGRM key and touch a note on the keyboard.
3. The keygroup that note plays becomes current. Touch it again to cycle through keygroups that overlap there.

22 INSTANT ATTACK

EDIT PROGRAM *09

ANY TIME



```
*09 ENV  Attack *Decay *Sustain *Release
*KG1      0      99      0      74
```

Attack 0: the note opens at full level on the first sample.

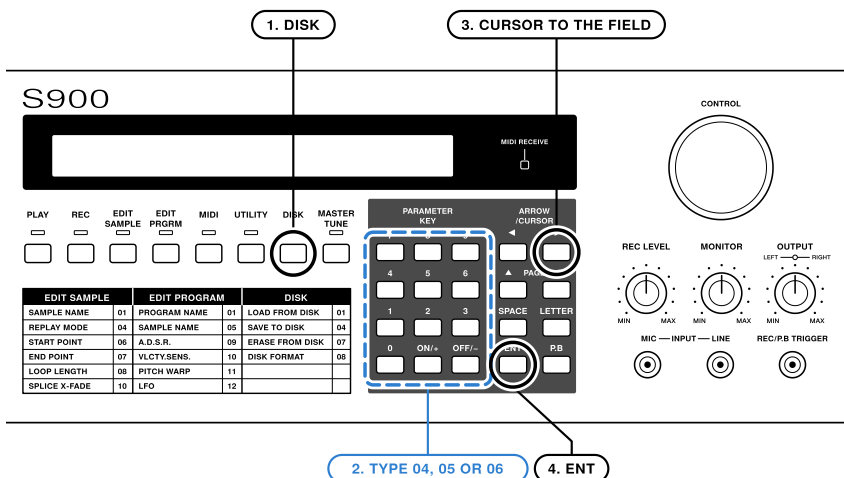
1. Press EDIT PRGRM and go to page *09 ENV.
2. Put the cursor on Attack and set 0.
3. Attack 0 opens the amplifier fully at note-on. Attack 0 on the filter envelope (*17 VCF) starts it at full level. Attack 1 is the old fastest ramp.

DISK

23 SAVE TO DISK

DISK *04

STOPPED



```
*04 Clear ensemble and save      Mem- 33%
ens 1      33% (ENT)           Dsk- 16%
```

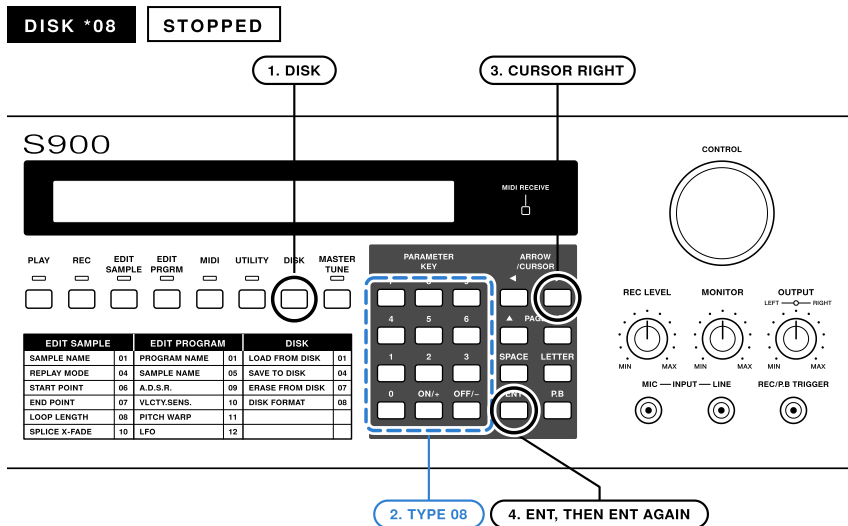
*04 saves the whole ensemble. *05 saves a program, *06 a sample.

1. Press DISK and go to *04 (ensemble), *05 (program) or *06 (sample).
2. Choose the ensemble or the name and press ENT.
3. Every write is read back and CRC-checked; a failed span is rewritten once. Only a second failure reports an error, while the sound is still in memory.

NOTE

Saves are uncompressed; compressed disks you already own still load. Saving the whole ensemble writes parents before their chops automatically.

24 FORMAT A DISK



1. Press DISK and go to *08 DISK FORMAT.
2. Move the cursor onto Prepare new disk and press ENT.
3. Read FORMAT ERASES THE DISK! Press again = go.
4. Press ENT again to format, or move the cursor to cancel.

SUPEROS CONTROLLER DEFAULTS

FIELD	DEFAULT	WHAT IT MOVES
StartCC (UTIL *01)	13, fine 45	Keygroup start, 16,384 steps
PortaCC	5	Keygroup portamento, 0 = off
LoudCC	11	Loudness, 50 = centre, live
PitchCC	12	Transpose, 64 = centre, live
EndCC	14	Keygroup end point
FiltKnob (UTIL *02)	OFF	Send panel Filter/Loudness
AAcapCC	16	Keygroup AA cap 0 to 3
Filter	74, fixed	Filter of matching keygroups

These reset at every power-on. 0 switches EndCC and AAcapCC off; the other four then answer CC 0. CC 1, 7 and 64 are the stock OS's.

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	85	VCF amount
77	LFO depth	86	LFO desync
78	LFO delay	74	Filter cutoff
84	Transwave depth	89	Wheel mode

WHERE THINGS ARE

The stretch is EDIT SAMPLE *14 (the stock VX pages *14 and *15 are gone). The superOS settings are UTILITY *01 and *02, and MIDI is the stock *01 to *04. Start, End, Porta and AA are per keygroup on EDIT PROGRAM *04, and the transwave depth is EDIT PROGRAM *13. The filter CC number is fixed at 74.

ALWAYS ON, NOTHING TO PRESS

Loads and boot read whole cylinders per revolution; every save is read back and CRC-checked; attack 0 is instant; destructive loads, FORMAT and name overwrites ask first. MIDI stays live while a recording is armed. A CPU fault prints SYSTEM ERROR on the top line with the panel still running and a section key clears it: power off and on before you carry on, and report what you did last.

BACK TO THE STOCK OS

Boot your original disk. superOS changes nothing on the instrument. Sound disks load both ways; a stock S900 ignores the superOS keygroup settings. superOS needs the version 1.2 EPROM.

ABOUT THESE PAGES

The screens are real frames of this build, captured in an emulator with a test disk loaded. The panel drawing is traced from a photograph of a production S900 (Wikimedia Commons, CC BY 2.0, photo by Angie Schwendemann).