



- Long loop switch
- 1A. Long loop adjustment
- Long loop randomize switch
- 2A. Long loop randomize adjustment
- Short loop switch
- 3A. Short loop adjustment
- 3B. Short loop release button
- Glitch 3
- Glitch 2 Slow-mo
- Glitch 1 Short glitch
- Tone generator switch

- 7A. Tone volume
- ON hold switch
- 8A. Power adjustment
- Pitch adjustment
- Touch sensor base
- 10A. Touch sensor (up)
- 10B. Touch sensor (down)
- Reset button
- Joystick jack
- 1/4" audio output jack
- Volume adjustment
- Sound activated lights

NOTE: The illustrations above are just approximate representations. Actual settings may vary slightly.

1 Long loop:

Many different types of sounds can be created using this mod.

In fig.0, any setting from the begging to the end of section "A" will cause random glitches when any button is pressed on the S&M keypad. Setting "B" will cause rhythmic loops to be generated.

2 Long Loop Randomize:

Once you have created a loop with the "long loop" mod, the Randomize mod will introduce tone and timing randomness into that loop. There is a small window of just a few degrees in the adjustment setting that will have the desired effect. Turning it to high will stop the loop, too low will have no effect. Fig 1 is an illustration of the window. Point "A" is where the random ness will start to come in. It will increase up to point "B". Any further then point "B" will cause the loop to stop.

As the pitch is lowered, this window moves down also. In Fig. 2

below I've illustrated two windows. "A" is when the pitch is all the way down, "B" is when the pitch is all the way up. The Loop randomize mod will also work without the Long loop mod and will function as a sound glitch.

3 Short loop:

This mod, when set properly will grab any sound that is playing and loop it. You can achieve some interesting results by grabbing different letter sounds from different words. For instance, looping the "L" sound from "level", will sound different than looping the "E" sound. The hold release button will allow you to turn off the effect momentarily. This can be used to allow a word to advance before grabbing another sound.

The adjustment knob allows you to achieve a glitch/distortion effect. Turning the knob will fade bits of noise into whatever sound is playing. At a certain point in the rotation, the function of the mod will change to a loop. Right before the point where it changes to a loop, you can get some very interesting loop/release/glitch effects.

In fig.3, point "A" to point "B" shows where the distortion is faded in. Point "B" is the in between loop/release spot. Point "C" is the loop setting.

The first half of the rotation of the adjustment has no effect when this mod is used on its' own, but when it is combined with the long loop, the whole sweep can be used to introduce randomness, distortion and other effects into the loop.

4 Glitch3:

This glitch, oddly enough, often causes the words "wjoo joo" to appear on the screen. It also causes the S&M to create a quite, blipping sequence.

5 Glitch 4:

This has an interesting, slow motion effect that causes sounds to be created more slowly than usual. This is not a pitch change, but more a stretching of the sound. It also functions as a sound glitch that will generate strings of random sound. Try turning this effect on and pushing the "GO" button.

6 Glitch 1:

I included this glitch because I thought it might be useful in a setting where you are playing with other musicians. This glitch will cause short, random sounds to be generated whenever a button on the keypad is pressed. I thought this could be used to emphasize drum hits or other accent other musical elements where a quick "random" blip could be added.

7 Tone generator:

The adjustment sets the level of the tone and the pitch setting (#9) sets the pitch. The tone also interacts with different sounds in some interesting ways (like the long loop). I find this mod to be most effective when used with the power adjustment (turned all the way down) and the pitch control touch points.

8 ON hold switch:

This is effectively the same as holding down the ON button on the touch pad, but is a surprisingly useful feature. Turning this switch on will allow you to subject the S&M to extreme pitch and power changes without crashing. I also like to use it with the long loop by hitting the reset button until I get a good loop.

8A Power adjustment:

Lowering the power will often cause the S&M to switch into a strange random pattern of tones. Try this with and without the on hold switch.

9 Pitch:

I've calibrated this control so that you should be able to adjust it all the way up and down without crashing.

10 Pitch control touch sensors:

touching the base sensor will cause the pitch to drop. Touching sensor 10A while also touching the base will raise the pitch slightly. Touching 10B will lower it. My favorite way to use these is as follows:

- Turn on the on hold switch
- Turn on the tone generator
- Lower the pitch adjustment almost all the way
- Now press on the base sensor and press the other two together and separately. You should get all kinds of static, blipping and tonal tweaking.

11 Reset button:

momentarily disconnects the power.

12 Joystick jack:

Any standard atari joystick will work (except the paddles)

Trigger-ON

Up-short loop

Down, left, right- sound glitches

13 Audio output jack:

The speaker will shut off when a cord is plugged into the jack

14 Volume:

The volume adjustment functions differently depending on whether the S&M is playing through the internal speaker or out the jack.

If it is plugged into an amp or mixer, the curve of volume adjustment is very smooth (it changes evenly across the whole length of the slider). If it is playing out the internal speaker, the curve is much sharper, so the volume reduces almost to silence in just half the movement of the slider.

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These lights respond to any sound that is made by the S&M and are not effected by the volume setting.