Noise + S&H 130
Kit Assembly Instructions

Features

- White noise output containing a broad spectrum of all frequencies
- Pink noise output which contains more lower frequencies and less higher frequencies (white noise filtered by a low pass filter -3dB/octave)
- Red noise output which contains even more of the lower frequencies for a nice deep rumble (pink noise filtered by a low pass filter -3dB/octave)
- Blue noise is brighter than white noise with more higher frequencies than lower frequencies (white noise filtered by a high pass filter +3dB/octave)
- Purple noise output is brighter still and getting quite a thin sound with mostly high frequencies only (white noise filtered by a high pass filter +6dB/octave)
- Sample and hold function which can take the white noise as its input or an externally applied signal
- The sample rate for the sample and hold gate can be set using the sample rate control or from an external sample rate control voltage

	Kit Contents			
Description	Reference	MOTM Qty	MU Qty	Notes
Components Kit Main PCB	7216-230-1	1	1	See BOM Main PCB
Components Kit Socket PCB	7216-230-2	1	1	See BOM Socket PCB
Accessories Pack including:	7216-230-3	1	1	
Pot Sticky Pads	7210-188	2	2	
10mm M4 Spacers	7210-186	1	1	
M4 x 14 Cap Head Screws	7210-187	1	1	
Toggle Switch Dress Nut	7210-196	1	1	
M3 x 8mm Stainless Panel Screws	7210-189	4	4	
LED Spacer	7210-185	1	1	
8-Pin IC Socket	7212-331	2	2	
14-Pin IC Socket	7212-332	2	2	
16-Pin IC Socket	7212-333	1	1	
Power Lead	7216-164	1		
MOTM Front Panel	7216-530	1		Black
MOTM Back Panel	7216-830	1		
MU Front and Back Panel	7219-530		1	
Main PCB	7216-030-M	1	1	
Socket PCB	7216-030-S	1	1	
Jack Sockets	7216-610	1	1	Pack of 10
B100k Pots Long Shaft Angled	7216-702	1		Pack of 2
B100k Pots Short Shaft Angled	7216-732		1	Pack of 2
KM20B Knobs	7212-102	1		Pack of 2
MU Knobs	7219-102		1	Pack of 2
General Assembly Guidance Booklet		1	1	
Circuit Schematic Main PCB	S-7216-030-c	1	1	

PCB Layout Main PCB	S-7216-030-c	1	1	
BOM	S-7216-030-c	1	1	
Circuit Schematic Socket PCB	S-7216-030-c	1	1	
PCB Layout Socket PCB	S-7216-030-c	1	1	
BOM	S-7216-030-c	1	1	

Assembly Instructions

The Noise + S&H module differs from other modules in that the socket PCB also has components on it. Naturally this does mean that the sockets should be soldered only after all components have been soldered in place. Depending on your confidence, it may also be prudent to test the complete module before soldering the jack sockets in place.

U4 on the main PCB does not use a socket and is soldered direct to the PCB. Aligning the legs of the IC with the PCB pads takes some patience especially if you have not one like this before.

A few of the resistors are mounted vertically due to space constraints and the desire not to use 1/8W resistors which earlier prototypes did.

Calibration

This module has two calibration trimmers, one on each of the two PCBs.

Main PCB – White noise level

Adjust Pr1 to set the white noise output level at around +/-5V using an oscilloscope. Being noise, there is no definitive voltage level so you can also adjust to your own preference.

Socket PCB – Red noise offset

Adjust Pr1 to set the red noise output as that it is equally distributed above and below 0V using an oscilloscope

Specification

- Supply voltage +/-12Vdc
- Supply current +40mA / -40mA
- Input signal level +/-5V
- Gate sample frequency rate 0.02Hz to over 110Hz
- Main PCB dimensions 43.5x86.68mm
- Socket PCB which also contains active circuits 42x110mm

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