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SYNTHI USERS

BOOK OF SOUNDS

by David Stevens

Information from

EMS

The SYNTHI USERS BOOK OF SOUNDS is designed to provide the user of the Synthi AKS with a source book of sounds. It contains sounds for every occasion, and will both aid the novice in finding his way around the machine as well as helping the more experienced user to set up sounds more rapidly.

All the patches contained in this book are complete in themselves - but they should not be considered final in any way. One can always go further and experiment around the patch. Control settings may vary slightly on each machine and the atmospheric conditions in which the machine is being used can also make a difference. This is especially so in the instrumental simulations where the 'plausability' of any given sound will depend on both the context in which it is heard (e.g. type of backing) and on the state of mind of the listener - the apparent timbre of any repeated sound will seem to change in an amazingly short period of time.

Some experimental patches are also included. These give some novel ways of altering the timbre of a sound, and include the 'portamento' or 'glide' effect, for which there has been a great deal of demand.

It is hoped that EMS will publish supplements to this book in the future, and in such publications we would like to include patches designed by Synthi Users. If you have designed any patches which you would like to see included in a future publication, please forward these to us for our consideration.

GENERAL NOTES

1. Coloured Pins

Red (high stability) pins should be used for controlling oscillators from the keyboard, especially when two oscillators are being used together.

Green (high resistance) pins are marked with an 'x' on the patch sheets. These are used for applying vibrato, especially when using the sequencer, to avoid having to re-tune the octave (although slight re-adjustment is still necessary), and also when it is required to supply a small voltage or signal to one device and a larger one to another - i.e. a green pin for small voltage, a white pin for larger voltage.

2. Two-oscillator tuning-up procedure

Set up the sound as on the patch sheet. Add two pins connecting the two oscillators to output channel 1 (A3/A4). Adjust oscillator 1 frequency until the two notes are in tune (no beats) at the desired frequency (unison, fifth, octave, etc.). At the point at which the two notes are in tune there is a definite 'blending' sensation. Remove the two pins, play a middle C and make any final fine adjustments that are needed. Then tune the octave as usual, using the input channel 1 level and pitch spread controls.

3. When vibrato is being applied to a voice, it is advisable to reduce the vibrato to 0 while tuning up.

4. To determine the resonance point on the filter, advance the response control until the filter oscillates, then back off slightly. This point does vary from machine to machine.

5. EXPERIMENT. NO PATCH IS FINAL!

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INSTRUCTIONS FOR SETTING UP THE PATCHES

PATCH 1

a. Tune oscillators to unison with vibrato set at zero (osc. 3 output levels).
b. Move joystick horizontally while playing, for bowing effect, or, if moved rapidly, for tremolo.

PATCH 2

a. Set osc. 3 level controls to 0 and filter response control to 10.
b. Play middle C and then advance ramp ware level control until both notes, i.e. filt/osc. and osc. 3 can be heard.
c. Adjust osc. 3 frequency control until osc. 3 and filt/osc. are in unison with each other (i.e. no beats).
d. Set level and response controls as on the patch sheet.

PATCH 3

a. Follow normal two-oscillator tuning-up procedure.
b. Playing procedure:- tap keys.
c. Adjust trapezoid level for desired amount of resonance.

PATCH 4

a. Set filter response control to resonant point, then back off very slightly.
b. Use transposition pads to extend range (i.e. 5th + 3rd + ½ octave).

PATCH 5

a. Adjust osc. 2 frequency control according to range desired. Sounds best in the lower ranges.
b. Tap keys, i.e. no sustain.

PATCH 6

a. Output channel 2 not monitored.
b. Play middle C, advance output channel 2 level until note breaks up, then retard slightly.

PATCH 7

a. Oscillator 1 is tuned an octave above osc. 2. Follow normal two-oscillator tuning-up procedure.
b. Remove tuning pins, play middle C and carry out final fine-tuning adjustments as necessary. When using the ring mod in this manner, it is even more important than usual to get the two oscillators exactly together. When they are in tune, no beats will be heard.
c. Filter frequency control setting is critical; carry out fine adjustments to get required voice after tuning up.

PATCH 8

a. Follow normal two-oscillator tuning-up procedure. Osc. 1 is an octave above osc. 2.
b. Start with output channel 2 level set at 0 (output channel 2 not monitored).
c. Play middle C and advance output Channel 2 level until note breaks up (feedback). Back control off slightly.
d. Play slow glissando from bottom to top of keyboard to check that all notes play normally. If any break up or are octave-doubled (i.e. note and its octave), retard the output channel 2 level while holding that note until the note is stable).

This feedback technique adds a considerable number of timbral possibilities to the Synthi A. Experiment with this patch by altering oscillator levels and waveform shapes, and filter frequency controls, (filt/osc. 2 output filter). Also increase output channel 2 level by varying amounts and see what happens.

PATCH 9

No additional instructions.

PATCH 10

No additional instructions.

PATCH 11

a. Oscillators 1 and 2 are tuned an octave apart.
b. Set output channel levels for correct balance.

PATCH 12

a. Follow normal two-voice tuning procedure, with Osc. 3 level (vibrato) set at 0. (Oscillators in unison).
b. Try trapezoid at 0 and between 7.5 and 8.
c. Add desired amount of reverb and vibrato.

PATCH 13

No additional instructions.

PATCH 14

a. Output channel 2 not monitored.
*b. Adjust for desired amount of vibrato.

PATCH 15

*a. Try voice with trapezoid level set at 5 and then at 10.

PATCH 16

a. Voice will not operate if oscillator output levels are not set sufficiently high.
b. Voice will break up if levels are set too high.
c. Also try adding a pin at F4.

PATCH 17
a. Output channel 2 not monitored (feedback path).
b. Set up with output channel 2 level at 0. Play middle C and advance control until note breaks up and then retard control slightly. Check all other notes on keyboard.
c. Alter oscillator and filter levels and filter controls, add the other oscillator, or try applying the same principle in different ways, e.g. envelope out - envelope in.
d. Try output channel 2 level at different settings beyond and before the break-up point.

PATCH 18
a. To obtain a portamento (glide) effect, connect the output of the ring mod and/or reverb unit (reverb mix set at 0) to the frequency control input(s) of the oscillator(s) being used. Whichever device is used for the portamento should not be being used for treating any sounds.
b. The output level of the device being used controls the rate of glide (effective between 6 and 10). But note that whenever the rate is changed the octave on the keyboard will have to be retuned.

PATCH 19
a. Slight random twiddlings of the filter frequency control add flavour to the voice!
b. Experiment with the joystick moving it about to add extra randomness to the voice.
*c. Adjust input level channel 1 for best inflections.
d. Try lower frequency range on osc. 1.

PATCH 20
a. Sounds best played very loud, through a good power amplifier system.

PATCH 21
a. Adjust balance between original control voltage (trapezoid) and inverted voltage (input channel 1) to get desired inflection on breath.

PATCH 22
No additional instructions.

PATCH 23
a. This is a variation of the wolf howl patch. Noise could possibly be introduced to make the effect nastier. Experiment with this one in a darkened room.

PATCH 24
a. To start effect, make a loud, low, long noise into the microphone.
*b. If nothing happens, adjust input level control while moaning into the microphone until effect starts. This control is critical.

c. Once started, effect will continue for an indefinite period of time.
d. Sound may be terminated by either:-
(i) turning input level either up or down; this causes the sound to die away gently, or
(ii) rapidly sticking a pin in a A8; this causes the sound to distort or buzz and die away more gradually.

PATCH 25 a. This treatment can be used with any source (e.g. instrument, voice, tape recorder) connected either directly or through an air or contact microphone. The input level control should be adjusted as necessary.
b. Channel 1 and 2 output levels should be adjusted for the best panning effect.

PATCH 26 a. Set sequence length to R.
b. Record random (or otherwise) sequence at moderate speed till sequencer is full.
c. Set sequence length to 5.
d. Keyboard then controls length of climax -
i.e. low note gives slow climax
high note gives faster climax
e. Joystick controls filter and oscillator 1 frequency.
f. Use either osc. 3 square or ramp wave to control osc. 1 (I5/I6). Try both.

PATCH 27 *a. Channel 2 output level should be adjusted while speaking into the microphone so that the envelope shaper triggers on voice peaks. Once set up the synthesizer will sit passively on its stand while you speak in a subdued voice through the microphone; until you raise your voice or give any word a stronger inflection.
b. Another possibility, rather than have the voice trigger off a sound effect, would be to use it to trigger off a treatment of the voice itself; i.e. voice normal until raised, then treatment begins.

SYNTHI Dopesheet
E.M.S.(London)Ltd.

Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

VIOLINS

External Connections:

C
S

FILTER/OSC: 7.5 | 0 | 6

RINGMOD: 10

OSCILLATOR 1: 5.9 | 0 | 0 | 4

ENVELOPE SHAPER: 7 | 4.5 | 5 | 10 | 0 | 10

OSCILLATOR 2: 5.9 | 6 | 0 | 4

OSCILLATOR 3: 6.4 | 5 | 0.1 | 0.5

NOISE GENERATOR

OUTPUT FILTER: 5 | 5

CHANNEL 1 -- OUTPUT -- CHANNEL 2: 5 | 0 | 10 | 6

External Patch:

	SIGNALS								CONTROLS								
	Iout	meter	2out	envelope	A r.m.	B r.m.	reverb	filter	1 osc freq	2 osc freq	3 osc freq	decay	reverb	filter	1 out lev	2 out lev	
out chan 1								●									1
out chan 2								●									2
osc 1									●								3
osc 2										●							4
osc 3 ⊓⊔											●						5
osc 3 ⩘																	6
noise																	7
inputs 1									●	●							8
inputs 2																	9
filter				●													10
trapezoid																	11
env signal	●				●		●										12
ring mod	●						●										13
reverb			●														14
stick ↔						●											15
stick ↕														●			16
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	

REVERBERATION: 3 | 6

INPUT LEVEL: 8 | 0

RANGE: 10 | seq.

PATCH 1

SYNTHI Dopesheet
E.M.S.(London)Ltd.

Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

BOWED DOUBLE BASS

External Connections:

C
S

FILTER/OSC: 4 8 10

RING MOD: 8

OSCILLATOR 1

OSCILLATOR 2

OSCILLATOR 3: 7.4 7 6 7

NOISE GENERATOR

OUTPUT FILTER: 0 /

CHANNEL 1 -- OUTPUT -- CHANNEL 2: 5 0 / /

ENVELOPE SHAPER

External Patch:

	SIGNALS								CONTROLS								
	Iout	meter	2out	envelope	A r.m.	B	reverb	filter	1 osc freq	2	3	decay	reverb	filter	1 out lev	2	
out chan 1																	1
out chan 2																	2
osc 1																	3
osc 2																	4
osc 3 ⊓⊔																	5
osc 3 ⩘								●									6
noise																	7
inputs 1											●			●			8
inputs 2																	9
filter				●													10
trapezoid												●					11
env signal	●																12
ring mod																	13
reverb																	14
stick ↔																	15
stick ↕																	16

A B C D E F G H I J K L M N O P

REVERBERATION

INPUT LEVEL: 6.7

RANGE

PATCH 2

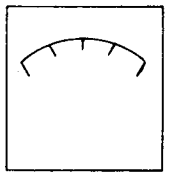
SYNTHI Dopesheet
E.M.S.(London)Ltd.

Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

PIZZICATO DOUBLE BASS

External Connections:



C
S

FILTER/OSC: 5.5 | 3 | 7

RING MOD:

OSCILLATOR 1: 4.4 | 8 | 7 | 7

ENVELOPE SHAPER: 1 | 1,8 | 3 | 10 | 10 | 8

OSCILLATOR 2: 4.4 | 3 | 4 | 6

OSCILLATOR 3:

NOISE GENERATOR:

OUTPUT FILTER: 1

CHANNEL 1 - - OUTPUT - - CHANNEL 2: 5 | 0

External Patch:

	SIGNALS								CONTROLS							
	1out	meter	2out	envelope	r.m. A	r.m. B	reverb	filter	osc freq 1	osc freq 2	osc freq 3	decay	reverb	filter	out lev 1	out lev 2
out chan 1																
out chan 2																
osc 1				●												
osc 2				●												
osc 3 ⊓⊔																
osc 3 ∿																
noise																
inputs 1									●	●						
inputs 2																
filter	●															
trapezoid												●				
env signal								●								
ring mod																
reverb																
stick ↔																
stick ↕																

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

A B C D E F G H I J K L M N O P

REVERBERATION:

INPUT LEVEL: 6.5

RANGE:

PATCH 3

SYNTHI Dopesheet
E.M.S.(London) Ltd.

Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

ELECTRIC PIANO

External Connections:

C
S

FILTER/OSC: 6 | res. | 8

RING MOD: 8

OSCILLATOR 1

ENVELOPE SHAPER: 0 | 10 | 5 | 10 | 6 | 7

OSCILLATOR 2: 4.7 | 6 | 5 | 6

OSCILLATOR 3

NOISE GENERATOR

OUTPUT FILTER: 5

CHANNEL 1 - - OUTPUT - - CHANNEL 2: 5 | 0

External Patch:

	SIGNALS								CONTROLS							
	Iout	meter	2out	envelope	A r.m.	B r.m.	reverb	filter	osc freq 1	osc freq 2	osc freq 3	decay	reverb	filter	out lev 1	out lev 2
out chan 1																
out chan 2																
osc 1																
osc 2					●	●										
osc 3 ⊓⊔																
osc 3 ⟋																
noise																
inputs 1																
inputs 2																
filter				●												
trapezoid												●				
env signal	●															
ring mod					●			●								
reverb																
stick ↔										●						
stick ↕																

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

A B C D E F G H I J K L M N O P

REVERBERATION

INPUT LEVEL: 6

RANGE: seq.

PATCH 4

SYNTHI Dopesheet
E.M.S.(London) Ltd.

Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

MARIMBA

External Connections:

C
S

FILTER/OSC: 5 6 8

RING MOD:

OSCILLATOR 1:

ENVELOPE SHAPER: 0 0 3 10 8→10 8

OSCILLATOR 2: 5.5 7.5 7 7

OSCILLATOR 3:

NOISE GENERATOR:

OUTPUT FILTER: 0

CHANNEL 1 - - OUTPUT - - CHANNEL 2: 6 0

REVERBERATION:

INPUT LEVEL: 6.2

RANGE:

External Patch:

	SIGNALS								CONTROLS							
	1out	meter	2out	envelope	A r.m.	B	reverb	filter	1 osc freq	2	3	decay	reverb	filter	1 out lev	2
out chan 1																
out chan 2																
osc 1																
osc 2								●								
osc 3 ⊓⊔																
osc 3 ⌇																
noise																
inputs 1										●						
inputs 2																
filter				●												
trapezoid												●				
env signal	●															
ring mod																
reverb																
stick ↔																
stick ↕																

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

A B C D E F G H I J K L M N O P

PATCH 5

SYNTHI Dopesheet
E.M.S.(London)Ltd.

Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

FLUTE

External Connections:

C
S

FILTER/OSC: 5.5 | 6.2 | 8

RING MOD:

OSCILLATOR 1:

ENVELOPE SHAPER: 3.5 | 0 | 4 | 10 | / | 8

OSCILLATOR 2: 6.3 | 5 | 0 | 8

OSCILLATOR 3: 6.2 | 4.9 | / | 2.1

NOISE GENERATOR:

OUTPUT FILTER: 6 | 8

CHANNEL 1 - - OUTPUT - - CHANNEL 2: 5 | 0 | 10 | 6

External Patch:

	SIGNALS								CONTROLS								
	Iout	meter	2out	envelope	r.m. A	r.m. B	reverb	filter	osc freq 1	osc freq 2	osc freq 3	decay	reverb	filter	out lev 1	out lev 2	
out chan 1																	1
out chan 2								●									2
osc 1																	3
osc 2								●									4
osc 3 ⊓⊔																	5
osc 3 ⁄⁄										X							6
noise																	7
inputs 1										●				●			8
inputs 2																	9
filter				●													10
trapezoid																	11
env signal	●		●														12
ring mod																	13
reverb																	14
stick ↔																	15
stick ↕																	16
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	

REVERBERATION:

INPUT LEVEL: 6.8

RANGE:

PATCH 6

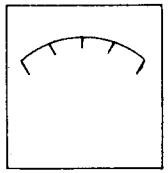
SYNTHI Dopesheet
E.M.S.(London)Ltd.

Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

CLARINET

External Connections:



C
S

FILTER/OSC: 8.1 | 6 | 6

RING MOD: 7

OSCILLATOR 1: 5.65 | 5 | 0 | 5

ENVELOPE SHAPER: 4 | 1.5 | 4 | 10 | / | 7

OSCILLATOR 2: 5 | 5 | 5 | 5

OSCILLATOR 3

NOISE GENERATOR

OUTPUT FILTER: 0

CHANNEL 1 - - OUTPUT - - CHANNEL 2: 6 | 0 | / | /

External Patch:

	SIGNALS								CONTROLS							
	Iout	meter	2out	envelope	r.m. A	r.m. B	reverb	filter	osc freq 1	osc freq 2	osc freq 3	decay	reverb	filter	out lev 1	out lev 2
out chan 1																
out chan 2																
osc 1					●											
osc 2						●										
osc 3 ⊓⊔																
osc 3 ∿																
noise																
inputs 1									●	●						
inputs 2																
filter				●												
trapezoid																
env signal	●															
ring mod								●								
reverb																
stick ↔																
stick ↕																

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

A B C D E F G H I J K L M N O P

REVERBERATION

INPUT LEVEL: 6.4

RANGE

PATCH 7

SYNTHI Dopesheet
E.M.S.(London)Ltd.

Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

OBOE

External Connections:

C
S

FILTER/OSC: 7 3 8

RINGMOD: 10

OSCILLATOR 1: 6.4 0 10 6.2

ENVELOPE SHAPER: 4 2 3.5 10 / 9

OSCILLATOR 2: 5.8 3 4 10

OSCILLATOR 3

NOISE GENERATOR

OUTPUT FILTER: 7 10

CHANNEL 1 -- OUTPUT -- CHANNEL 2: 4 0 10 6

External Patch:

	SIGNALS								CONTROLS								
	Iout	meter	2out	envelope	A r.m.	B	reverb	filter	1 osc freq	2	3	decay	reverb	filter	I out lev	2	
out chan 1																	1
out chan 2								●									2
osc 1					●	●											3
osc 2								●									4
osc 3 ⊓⊔																	5
osc 3 ⩘																	6
noise																	7
inputs 1									●	●				●			8
inputs 2																	9
filter				●													10
trapezoid																	11
env signal	●		●														12
ring mod								●									13
reverb																	14
stick ↔																	15
stick ↕																	16
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	

REVERBERATION

INPUT LEVEL: 6.5

RANGE

PATCH 8

SYNTHI Dopesheet
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Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

BASSOON

External Connections:

C
S

FILTER/OSC: 6.2 4 8

RING MOD: 8

OSCILLATOR 1

ENVELOPE SHAPER: 6 0 5 10 6 7

OSCILLATOR 2: 4.2 6 5 6

OSCILLATOR 3

NOISE GENERATOR

OUTPUT FILTER: 8.2

CHANNEL 1 -- OUTPUT -- CHANNEL 2: 5 0 / /

External Patch:

	SIGNALS								CONTROLS							
	Iout	meter	2out	envelope	A r.m.	B r.m.	reverb	filter	1 osc freq	2 osc freq	3 osc freq	decay	reverb	filter	1 out lev	2 out lev
out chan 1																
out chan 2																
osc 1																
osc 2					●	●										
osc 3 ⊓⊔																
osc 3 ∿																
noise																
inputs 1										●						
inputs 2																
filter				●												
trapezoid												●				
env signal	●															
ring mod					●			●								
reverb																
stick ↔																
stick ↕																

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

A B C D E F G H I J K L M N O P

REVERBERATION

INPUT LEVEL: 6.1

RANGE

PATCH 9

SYNTHI Dopesheet
E.M.S.(London)Ltd.

Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

TWO VOICE PATCH

External Connections:

C
S

FILTER/OSC: 7.8 | res. | 9

RING MOD: 10

OSCILLATOR 1: 5.9 | 2 | 5 | 3

ENVELOPE SHAPER: 2 | 3 | 4 | 10 | / | 10

OSCILLATOR 2: 5.35 | 4 | 5 | 4

OSCILLATOR 3: 6.4 | 5 | / | 2.1

NOISE GENERATOR:

OUTPUT FILTER: 5 | 5

CHANNEL 1 -- OUTPUT -- CHANNEL 2: 6 | 0 | 10 | 6

External Patch:

	SIGNALS								CONTROLS							
	1out	meter	2out	envelope	A r.m.	B r.m.	reverb	filter	1 osc freq	2 osc freq	3 osc freq	decay	reverb	filter	1 out lev	2 out lev
out chan 1																
out chan 2																
osc 1								●								
osc 2					●	●										
osc 3 ⊓⊔																
osc 3 ⁓										X				●		
noise																
inputs 1									●					●		●
inputs 2																
filter			●													
trapezoid																
env signal							●									
ring mod				●												
reverb																
stick ↔																
stick ↕										●						

A B C D E F G H I J K L M N O P

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

REVERBERATION: 3 | 10

INPUT LEVEL: 3 | 10

RANGE: | seq.

PATCH 10

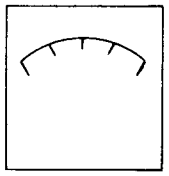
SYNTHI Dopesheet
E.M.S.(London)Ltd.

Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

TWO VOICE PATCH : SYNTHESIZER SOUND

External Connections:



FILTER/OSC: 8 | res. | 9

RINGMOD: 10

OSCILLATOR 1: 5.9 | 8.5 | 5 | 5

ENVELOPE SHAPER: 0 | 0 | 4.3 | 10 | 6 | 10

OSCILLATOR 2: 5.2 | 6.5 | 5 | 7

OSCILLATOR 3: 6.5 | 5 | / | 14

NOISE GENERATOR:

OUTPUT FILTER: 6 | 10

CHANNEL 1 -- OUTPUT -- CHANNEL 2: 1.5 | 0 | 10 | 6.5

External Patch:

		SIGNALS								CONTROLS							
		Iout	meter	2out	envelope	A r.m.	B	reverb	filter	1 osc freq	2	3	decay	reverb	filter	I out lev	2
out chan	1																
	2																
osc 1					●												
osc 2					●												
osc 3	⊓⊔																
	⩘									X	X						
noise																	
inputs	1									●	●						
	2														●		
filter				●													
trapezoid						●											
env signal						●	●		●								
ring mod								●									
reverb		●															
stick	↔																
	↕																

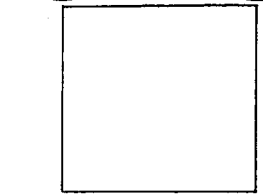
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

A B C D E F G H I J K L M N O P

REVERBERATION: 2 | 8

INPUT LEVEL: 6.5 | 10

RANGE:



PATCH 11

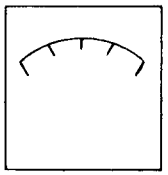
SYNTHI Dopesheet
E.M.S.(London)Ltd.

Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

SYNTHESIZER VOICE

External Connections:



FILTER/OSC: 6.5 | 6.1 | 9

RINGMOD: 10

OSCILLATOR 1: 6 | 5 | 0 | 8

ENVELOPE SHAPER: 0 | 0 | 4 | 10 | 0/7.5 | 6

OSCILLATOR 2: 6.05 | 6 | 9 | 7

OSCILLATOR 3: 6.5 | 4.9 | 0 | 1

NOISE GENERATOR

OUTPUT FILTER: 6

CHANNEL 1 -- OUTPUT -- CHANNEL 2: 5 | 0 | / | /

REVERBERATION: 0-4 | 6

INPUT LEVEL: 6.5

RANGE

External Patch:

	SIGNALS								CONTROLS								
	Iout	meter	2out	envelope	A r.m.	B r.m.	reverb	filter	osc freq 1	osc freq 2	osc freq 3	decay	reverb	filter	out lev 1	out lev 2	
out chan 1																	1
out chan 2																	2
osc 1					●			●									3
osc 2						●		●									4
osc 3 ⊓⊔																	5
osc 3 ∿									X	X							6
noise																	7
inputs 1									●	●							8
inputs 2																	9
filter				●													10
trapezoid												●					11
env signal	●						●										12
ring mod				●													13
reverb	●																14
stick ↔																	15
stick ↕																	16
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	

PATCH 12

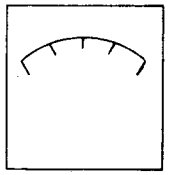
SYNTHI Dopesheet
E.M.S.(London) Ltd.

Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

WATER VOICE

External Connections:



C
S

FILTER/OSC: 6 | res. | 6

RING MOD:

OSCILLATOR 1: 5.5 | 1 | 0 | 5

ENVELOPE SHAPER: 6 | 2 | 5.2 | 10 | 10 | 7.5

OSCILLATOR 2:

OSCILLATOR 3: 6.8 | 4.9 | | 4

NOISE GENERATOR:

OUTPUT FILTER: 4 | 5

CHANNEL 1 -- OUTPUT -- CHANNEL 2: 7 | 0 | 10 | 8

External Patch:

	SIGNALS								CONTROLS							
	Iout	meter	2out	envelope	A r.m. B	reverb	filter		1 osc freq	2 osc freq	3 osc freq	decay	reverb	filter	I out lev	2 out lev
out chan 1								1								
out chan 2								2						●		
osc 1							●	3								
osc 2								4								
osc 3 ⊓								5								
osc 3 ∿			●					6								
noise								7								
inputs 1								8	●							
inputs 2								9								
filter				●				10								
trapezoid			●					11								
env signal						●		12								
ring mod								13								
reverb	●							14								
stick ↔								15								
stick ↕								16								

A B C D E F G H I J K L M N O P

REVERBERATION: 3 | 8

INPUT LEVEL: 6.5 |

RANGE:

PATCH 13

SYNTHI Dopesheet
E.M.S.(London)Ltd.

Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

ETHEREAL VOICE

External Connections:

osc 1 just down
tremolo osc -

C
S

FILTER/OSC: 5.5 | 8 | 8

RING MOD:

OSCILLATOR 1: 10 X

ENVELOPE SHAPER: 5.8 | 1 | 5 | 10 | 4 | 6

OSCILLATOR 2:

OSCILLATOR 3: 6 | 5 | 0 | 3 *

NOISE GENERATOR:

OUTPUT FILTER: 5

CHANNEL 1 -- OUTPUT -- CHANNEL 2: 6 | 6

External Patch:

	SIGNALS								CONTROLS								
	Iout	meter	2out	envelope	A r.m.	B	reverb	filter	1 osc freq	2	3	decay	reverb	filter	1 out lev	2	
out chan 1														●			1
out chan 2					X												2
osc 1																	3
osc 2																	4
osc 3 ⊓⊔																	5
osc 3 ∿			●											X			6
noise																	7
inputs 1														●			8
inputs 2																	9
filter				●	●	●											10
trapezoid											●						11
env signal							●										12
ring mod				●	●												13
reverb	●																14
stick ↔																	15
stick ↕																	16
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	

REVERBERATION: 5 | 7

INPUT LEVEL: 6.4

RANGE

PATCH 14

SYNTHI Dopesheet
E.M.S.(London)Ltd.

Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

FUNKY BASS

External Connections:

C
S

FILTER/OSC: 7 | res. | 7

RING MOD

OSCILLATOR 1

ENVELOPE SHAPER: 2 | 0 | 5.7 | 10 | 5/10 * | 10

OSCILLATOR 2: 3.8 | 5 | 5 | 7

OSCILLATOR 3: 4.5 | 5 | 0 | 5

NOISE GENERATOR

OUTPUT FILTER: 0

CHANNEL 1 - - OUTPUT - - CHANNEL 2: 5

External Patch:

	SIGNALS								CONTROLS								
	Iout	meter	2out	envelope	A r.m. B	reverb	filter		1 osc freq 2	3		decay	reverb	filter	I out lev 2		
out chan 1																	1
out chan 2																	2
osc 1																	3
osc 2				●													4
osc 3 ⊓⊔																	5
osc 3 ⩘														●			6
noise																	7
inputs 1										●							8
inputs 2																	9
filter	●																10
trapezoid												●		●			11
env signal							●										12
ring mod																	13
reverb																	14
stick ↔																	15
stick ↕																	16
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	

REVERBERATION

INPUT LEVEL: 6

RANGE

PATCH 15

SYNTHI Dopesheet
E.M.S.(London)Ltd.

Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

EXPERIMENTAL VOICE PATCH 1 -

OCTAVE-HALVING USING THE RING MODULATOR

External Connections:
or control osc 3.
filter etc

C
S

FILTER/OSC: 8 4 7

RING MOD: 7

OSCILLATOR 1

ENVELOPE SHAPER: 4 2 3.5 10 / 9

OSCILLATOR 2: 0

OSCILLATOR 3

NOISE GENERATOR

OUTPUT FILTER: 5 /

CHANNEL 1 - - OUTPUT - - CHANNEL 2: 5 0 / /

External Patch:

	SIGNALS								CONTROLS								
	Iout	meter	2out	envelope	A r.m. B		reverb	filter	1 osc freq	2 osc freq	3 osc freq	decay	reverb	filter	I out lev	2 out lev	
out chan 1																	1
out chan 2																	2
osc 1																	3
osc 2					●												4
osc 3 ⊓⊔																	5
osc 3 ∿																	6
noise																	7
inputs 1										●							8
inputs 2																	9
filter				●													10
trapezoid																	11
env signal	●																12
ring mod						●		●									13
reverb																	14
stick ↔																	15
stick ↕																	16
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	

REVERBERATION

INPUT LEVEL: 6.8

RANGE

PATCH 16

SYNTHI Dopesheet
E.M.S.(London) Ltd.

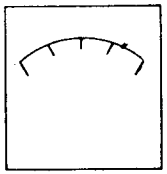
Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

EXPERIMENTAL VOICE PATCH 2 -

TIMBRAL CHANGES USING FEEDBACK

External Connections:



C
S

FILTER/OSC: 7 6 8

RING MOD

OSCILLATOR 1

ENVELOPE SHAPER: 2 2 4 10 / 8

OSCILLATOR 2: 4.5 5 7 6

External Patch:

	SIGNALS								CONTROLS								
	Iout	meter	2out	envelope	A r.m. B		reverb	filter	1 osc freq 2	3	decay	reverb	filter	1 out lev 2			
out chan 1																	1
out chan 2								●									2
osc 1																	3
osc 2								●									4
osc 3 ⊓⊔																	5
osc 3 ∿																	6
noise																	7
inputs 1										●				●			8
inputs 2																	9
filter				●													10
trapezoid																	11
env signal	●		●														12
ring mod																	13
reverb																	14
stick ↔																	15
stick ↕																	16
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	

REVERBERATION

INPUT LEVEL: 6.8

RANGE

NOISE GENERATOR

OUTPUT FILTER: 5 10

CHANNEL 1 - - OUTPUT - - CHANNEL 2: 5 0 10 6

PATCH 17

SYNTHI Dopesheet
E.M.S.(London)Ltd.

Name:

Sheet:

Patch:

Start:

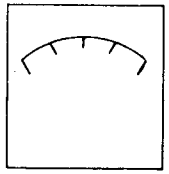
End:

Notes:

Description:

PORTAMENTO

External Connections:



C

S

FILTER/OSC

RING MOD

OSCILLATOR 1

ENVELOPE SHAPER

OSCILLATOR 2

OSCILLATOR 3

NOISE GENERATOR

OUTPUT FILTER

CHANNEL 1 -- OUTPUT -- CHANNEL 2

External Patch:

	SIGNALS								CONTROLS								
	Iout	meter	2out	envelope	A r.m. B	reverb	filter	1	osc freq 2	3	decay	reverb	filter	1	out lev 2		
out chan 1																	1
out chan 2																	2
osc 1																	3
osc 2																	4
osc 3 ⊓⊔																	5
osc 3 ∿																	6
noise																	7
inputs 1									●	(●)							8
inputs 2																	9
filter																	10
trapezoid																	11
env signal																	12
ring mod									●	(●)							13
reverb							or		●	(●)							14
stick ↔																	15
stick ↕																	16
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	

REVERBERATION

INPUT LEVEL

RANGE

PATCH 18

SYNTHI Dopesheet
E.M.S.(London)Ltd.

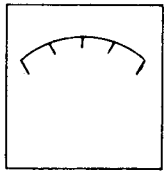
Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

BABY VOICE

External Connections:

Scope to Input 1.



C
S

FILTER/OSC

6 | res. | 7

RINGMOD

OSCILLATOR 1

6.5 | 5 | 3 | 3

ENVELOPE SHAPER

4 | 3.5 | 4 | 1 | 3.5 | 7

OSCILLATOR 2

0 | 5 | 0 | 4

OSCILLATOR 3

4 | 4.9 | 4 | 6

NOISE GENERATOR

OUTPUT FILTER

5 or 10 | /

CHANNEL 1 -- OUTPUT -- CHANNEL 2

7 | 0 | 10 | /

External Patch:

	SIGNALS								CONTROLS								
	Iout	meter	2out	envelope	r.m. A	r.m. B	reverb	filter	osc freq 1	osc freq 2	osc freq 3	decay	reverb	filter	out lev 1	out lev 2	
out chan 1																	1
out chan 2																	2
osc 1				●													3
osc 2									●								4
osc 3 ⊓⊔												●					5
osc 3 ∿		●							●					●			6
noise																	7
inputs 1									●		●	●		●			8
inputs 2																	9
filter	●																10
trapezoid											●			●			11
env signal								●									12
ring mod																	13
reverb																	14
stick ↔									●								15
stick ↕												●					16
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	

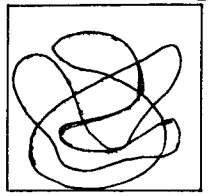
REVERBERATION

INPUT LEVEL

*

RANGE

7 | 10



PATCH 19

SYNTHI Dopesheet
E.M.S.(London)Ltd.

Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

JET PASSING OVERHEAD

External Connections:

C
S

FILTER/OSC: 6.1 | 5.8 | 7

RING MOD: 10

OSCILLATOR 1

7 | 5 | 5 | 4

ENVELOPE SHAPER

0 | 0 | 10 | 10 | 4.1 | 10

OSCILLATOR 2

7.2 | 5 | 0 | 4.9

OSCILLATOR 3

4.5 | 4.9 | 0.5 | /

NOISE GENERATOR

0 | 7

OUTPUT FILTER

5 | 5

CHANNEL 1 -- OUTPUT -- CHANNEL 2

8.5 | 0 | 10 | 8

or use hand or joystick panning

External Patch:

	SIGNALS								CONTROLS								
	Iout	meter	2out	envelope	A r.m. B		reverb	filter	1 osc freq 2	2	3	decay	reverb	filter	1 out lev 2		
out chan 1																	1
out chan 2																	2
osc 1							●										3
osc 2							●										4
osc 3 ⊓⊔										●							5
osc 3 ∿																	6
noise								●									7
inputs 1																	8
inputs 2																	9
filter				●													10
trapezoid									●	●				●			11
env signal					●	●											12
ring mod	●		●														13
reverb								●									14
stick ↔																	15
stick ↕																	16
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	

REVERBERATION

4 | 10

INPUT LEVEL

RANGE

Attack button - press and release immediately

PATCH 20

SYNTHI Dopesheet
E.M.S.(London)Ltd.

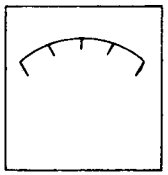
Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

DEEP BREATHING

External Connections:

Scope to Input 1.



C
S

FILTER/OSC: 5.9 5.8 8

RINGMOD: 10

OSCILLATOR 1

ENVELOPE SHAPER: 10 6.1 5.1 2.8 3 5.5

OSCILLATOR 2

OSCILLATOR 3

NOISE GENERATOR: ? 5

OUTPUT FILTER: 9.5

CHANNEL 1 - - OUTPUT - - CHANNEL 2: 10

External Patch:

	SIGNALS								CONTROLS								
	Iout	meter	2out	envelope	r.m. A	r.m. B	reverb	filter	osc freq 1	osc freq 2	osc freq 3	decay	reverb	filter	out lev 1	out lev 2	
out chan 1																	1
out chan 2																	2
osc 1																	3
osc 2																	4
osc 3 ⊓⊔																	5
osc 3 ∿																	6
noise					●	●											7
inputs 1														●			8
inputs 2																	9
filter				●													10
trapezoid		●												●			11
env signal																	12
ring mod								●									13
reverb																	14
stick ↔																	15
stick ↕																	16
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	

REVERBERATION

INPUT LEVEL: 10

RANGE

PATCH 21

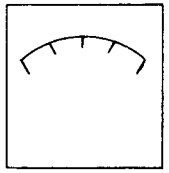
SYNTHI Dopesheet
E.M.S.(London)Ltd.

Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

DISTANT WOLF HOWL

External Connections:



FILTER/OSC: 6.2 | 5.8 | 7

RING MOD:

OSCILLATOR 1: 6.9 | 5 | 0 | 3.5

ENVELOPE SHAPER: 6 | 2 | 5.8 | 3.1 | 4 | 10

OSCILLATOR 2: 6.9 | 5 | 0 | 4

OSCILLATOR 3: 2.9 | 4 | 4.1 | 1.8

NOISE GENERATOR

OUTPUT FILTER: 4 | /

CHANNEL 1 - - OUTPUT - - CHANNEL 2: 8 | 0 | 10 | /

External Patch:

	SIGNALS								CONTROLS							
	Iout	meter	2out	envelope	A r.m. B		reverb	filter	osc freq 1	osc freq 2	osc freq 3	decay	reverb	filter	out lev 1	out lev 2
out chan 1																
out chan 2																
osc 1							●									
osc 2							●									
osc 3 ⊓⊔									●							
osc 3 ⟋										●						
noise																
inputs 1																
inputs 2																
filter			●													
trapezoid									●					●		
env signal	●															
ring mod																
reverb								●								
stick ↔																
stick ↕																

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

A B C D E F G H I J K L M N O P

REVERBERATION: 10 | 10

INPUT LEVEL:

RANGE:

PATCH 22

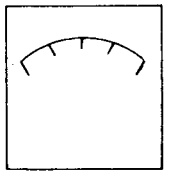
SYNTHI Dopesheet
E.M.S.(London)Ltd.

Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

NASTY NIGHT-TIME NOISES

External Connections:



FILTER/OSC: 5.5 5.4 8

RING MOD:

OSCILLATOR 1: 5.5 3 0 7

ENVELOPE SHAPER: 10 6 5.9 0 4 9

OSCILLATOR 2: 5.8 0 0 8

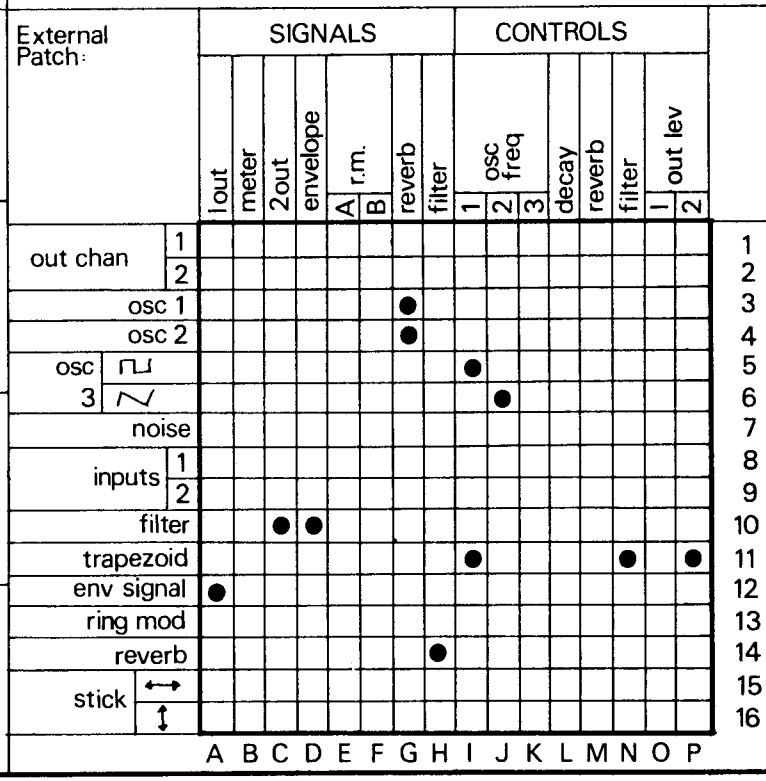
OSCILLATOR 3: 4.5 5 6.5 8

NOISE GENERATOR:

OUTPUT FILTER: 9 9

CHANNEL 1 - - OUTPUT - - CHANNEL 2: 6 0 10 5.2

External Patch:



REVERBERATION: 5 10

INPUT LEVEL:

RANGE:

PATCH 23

SYNTHI Dopesheet
E.M.S.(London)Ltd.

Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

SCI-FI BACKGROUND SOUND

External Connections:

Microphone.

C
S

FILTER/OSC: 6.2 | 6 | 4

RING MOD: 10

OSCILLATOR 1

ENVELOPE SHAPER: 10 | 3 | (| 3 | 5 | 6

OSCILLATOR 2

OSCILLATOR 3: 4.5 | 5 | / | 5

NOISE GENERATOR

OUTPUT FILTER: 5/o | 5/o

CHANNEL 1 -- OUTPUT -- CHANNEL 2: 6 | 0 | 10 | 7

External Patch:

	SIGNALS								CONTROLS								
	1out	meter	2out	envelope	A r.m.	B r.m.	reverb	filter	osc freq 1	osc freq 2	osc freq 3	decay	reverb	filter	out lev 1	out lev 2	
out chan 1																	1
out chan 2																	2
osc 1																	3
osc 2																	4
osc 3 ⊓⊔																	5
osc 3 ⩘														●			6
noise														(if reqd.)			7
inputs 1							●										8
inputs 2								●									9
filter																	10
trapezoid																●	11
env signal																	12
ring mod								●									13
reverb					●	●											14
stick ↔																	15
stick ↕																	16
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	

REVERBERATION: 6 | 10

INPUT LEVEL: 6.o→7.1* |

RANGE: |

PATCH 24

SYNTHI Dopesheet
E.M.S.(London)Ltd.

Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

TREATMENT

External Connections:

Instrument direct or microphone.

C
S

FILTER/OSC: 10 6 10

RING MOD: 10

OSCILLATOR 1

ENVELOPE SHAPER: 6 0 3 0 6 10

OSCILLATOR 2

OSCILLATOR 3: 4.2 4.9 7

NOISE GENERATOR

OUTPUT FILTER: 5 5

CHANNEL 1 -- OUTPUT -- CHANNEL 2: 5 0 10 10

REVERBERATION: 5 5

INPUT LEVEL: as reqd.

RANGE

External Patch:

	SIGNALS								CONTROLS							
	Iout	meter	2out	envelope	A r.m. B	reverb	filter		1 osc freq 2	3	decay	reverb	filter	1 out lev 2		
out chan 1																1
out chan 2																2
osc 1																3
osc 2																4
osc 3 ⊓																5
osc 3 ⩘													●			6
noise																7
inputs 1					●	●										8
inputs 2																9
filter	●			●												10
trapezoid												●		●		11
env signal							●									12
ring mod	●							●								13
reverb			●													14
stick ↔																15
stick ↕																16

A B C D E F G H I J K L M N O P

PATCH 25

SYNTHI Dopesheet
E.M.S.(London)Ltd.

Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

KEYBOARD SEQUENCER EFFECT

External Connections:

C
S

FILTER/OSC: 7 4 9

RING MOD:

OSCILLATOR 1: 5.5 6 6 10

ENVELOPE SHAPER: 0 7 0 10 6 4

OSCILLATOR 2: 6.5 4 10 3

OSCILLATOR 3: 2 7 4.5 8

NOISE GENERATOR:

OUTPUT FILTER: 5 5

CHANNEL 1 - - OUTPUT - - CHANNEL 2: 7 0 10 7

REVERBERATION: 10 6

INPUT LEVEL: 8

RANGE: 10 seq.

External Patch:

	SIGNALS								CONTROLS								
	Iout	meter	2out	envelope	A r.m. B		reverb	filter	1 osc freq	2	3	decay	reverb	filter	1 out lev	2	
out chan 1																	1
out chan 2																	2
osc 1				●													3
osc 2				●													4
osc 3 ⊓⊔									(●)								5
osc 3 ∿									●				●	●			6
noise																	7
inputs 1											●						8
inputs 2																	9
filter							●										10
trapezoid																	11
env signal								●									12
ring mod	●		●														13
reverb																	14
stick ↔									●					●			15
stick ↕									●	●							16

A B C D E F G H I J K L M N O P

PATCH 26

SYNTHI Dopesheet
E.M.S.(London)Ltd.

Name:
Sheet:
Patch:
Start:
End:
Notes.

Description:

KEYBOARD SEQUENCER EFFECT

External Connections:

C
S

FILTER/OSC: 7 4 9

RING MOD:

OSCILLATOR 1: 5.5 6 6 10

ENVELOPE SHAPER: 0 7 0 10 6 4

OSCILLATOR 2: 6.5 4 10 3

OSCILLATOR 3: 2 7 4.5 8

NOISE GENERATOR:

OUTPUT FILTER: 5 5

CHANNEL 1 - - OUTPUT - - CHANNEL 2: 7 0 10 7

External Patch:

	SIGNALS								CONTROLS								
	Iout	meter	2out	envelope	A r.m. B		reverb	filter	osc freq 1	osc freq 2	osc freq 3	decay	reverb	filter	out lev 1	out lev 2	
out chan 1																	1
out chan 2																	2
osc 1				●													3
osc 2				●													4
osc 3 ⊓⊔									(●)								5
osc 3 ⩘									●				●	●			6
noise																	7
inputs 1											●						8
inputs 2																	9
filter							●										10
trapezoid																	11
env signal								●									12
ring mod	●		●														13
reverb																	14
stick ↔									●					●			15
stick ↕									●	●							16
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	

REVERBERATION: 10 6

INPUT LEVEL: 8

RANGE: 10 seq.

PATCH 26

SYNTHI Dopesheet
E.M.S.(London)Ltd.

Name:
Sheet:
Patch:
Start:
End:
Notes:

Description:

INPUT-TRIGGERED EFFECT

External Connections:

Microphone or other source.

C
S

FILTER/OSC: 8.5 | 6 | 10

RINGMOD: 10

OSCILLATOR 1: 5.6 | 6 | 0 | 7

ENVELOPE SHAPER: 10 | 5 | 5.5 | 10 | 6.2 | 10

OSCILLATOR 2: 6.1 | 3.2 | 6 | 7

OSCILLATOR 3: 4.2 | 4.9 | 7 | 7

NOISE GENERATOR

OUTPUT FILTER: 5 | 1

CHANNEL 1 - - OUTPUT - - CHANNEL 2: 6 | 0 | 10

External Patch:

	SIGNALS								CONTROLS								
	Iout	meter	2out	envelope	r.m. A	r.m. B	reverb	filter	osc freq 1	osc freq 2	osc freq 3	decay	reverb	filter	out lev 1	out lev 2	
out chan 1																	1
out chan 2																	2
osc 1					●												3
osc 2						●											4
osc 3 ⊓⊔									●								5
osc 3 ⩘														●			6
noise																	7
inputs 1	●							●									8
inputs 2																	9
filter			●	●		●											10
trapezoid										●	●			●			11
env signal	●																12
ring mod				●													13
reverb			●														14
stick ↔																	15
stick ↕																	16
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	

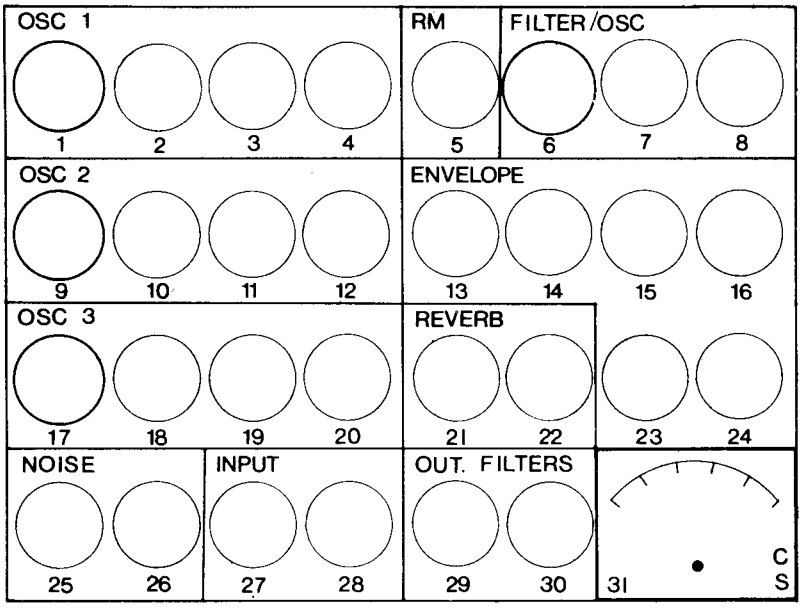
REVERBERATION: 0 | 10

INPUT LEVEL: 10 | /

RANGE

PATCH 27

SUPPLEMENTARY PATCHES - These will be added to the book on request.

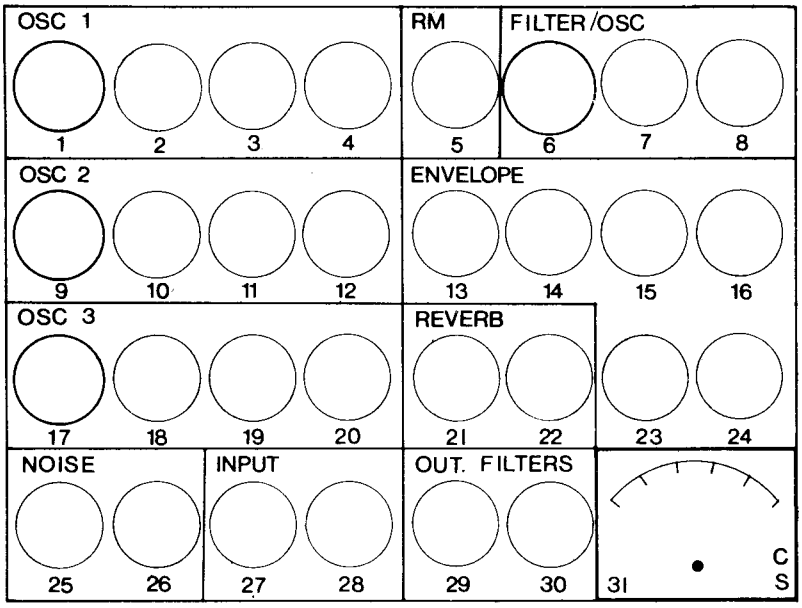


Effet: _____

Ref: _____

Obs: _____

	SIGNALS								CONTROLS								
	METER	OUT AMPS 1	OUT AMPS 2	ENVEL	RING MOD A	RING MOD B	REVERB	FILTER	OSC. FREQ 1	OSC. FREQ 2	OSC. FREQ 3	DECAY	REVERB	FILTER	OUT AMPS 1	OUT AMPS 2	
OSC 1 ~																	1
OSC 1 ⊓																	2
OSC 2 ⊓																	3
OSC 2 ~																	4
OSC 3 ⊓																	5
OSC 3 ~																	6
NOISE																	7
INPUT 1																	8
AMPS 2																	9
FILTER																	10
TRAPEZ																	11
ENV SIG																	12
RING MOD																	13
REVERB																	14
STICK ↔																	15
STICK ↕																	16
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	



Effet: _____

_____

_____

_____

Ref: _____

Obs: _____

_____

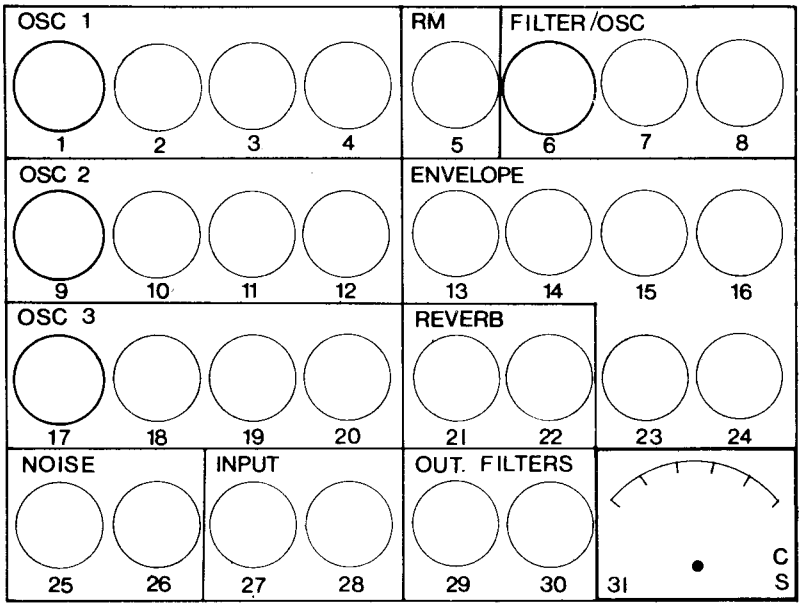
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_____

	SIGNALS								CONTROLS								
	METER	OUT AMPS 1	OUT AMPS 2	ENVEL	RING MOD A	RING MOD B	REVERB	FILTER	OSC. FREQ 1	OSC. FREQ 2	OSC. FREQ 3	DECAY	REVERB	FILTER	OUT AMPS 1	OUT AMPS 2	
OSC 1 ~																	1
OSC 1 ⊓																	2
OSC 2 ⊓																	3
OSC 2 ~																	4
OSC 3 ⊓																	5
OSC 3 ~																	6
NOISE																	7
INPUT 1																	8
AMPS 2																	9
FILTER																	10
TRAPEZ																	11
ENV SIG																	12
RING MOD																	13
REVERB																	14
STICK ↔																	15
STICK ↕																	16
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	



Effet: _____

_____

_____

_____

Ref: _____

Obs: _____

_____

_____

_____

_____

_____

	SIGNALS								CONTROLS								
	METER	OUT AMPS 1	OUT AMPS 2	ENVEL	RING MOD A	RING MOD B	REVERB	FILTER	OSC. FREQ 1	OSC. FREQ 2	OSC. FREQ 3	DECAY	REVERB	FILTER	OUT AMPS 1	OUT AMPS 2	
OSC 1 ~																	1
OSC 1 ⊓																	2
OSC 2 ⊓																	3
OSC 2 ~																	4
OSC 3 ⊓																	5
OSC 3 ~																	6
NOISE																	7
INPUT 1																	8
AMPS 2																	9
FILTER																	10
TRAPEZ																	11
ENV SIG																	12
RING MOD																	13
REVERB																	14
STICK ↔																	15
STICK ↕																	16
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	