

## MATRIX MODULATION

### SOURCES

- 00 DELETE MODULATION
- 01 ENVELOPE 1
- 02 ENVELOPE 2
- 03 ENVELOPE 3
- 04 LFO 1
- 05 LFO 2
- 06 VIBRATO
- 07 RAMP 1
- 08 RAMP 2
- 09 KEYBOARD
- 10 PORTAMENTO
- 11 TRACKING GENERATOR
- 12 KEYBOARD GATE
- 13 VELOCITY
- 14 RELEASE VELOCITY
- 15 PRESSURE
- 16 PEDAL 1
- 17 PEDAL 2
- 18 LEVER 1
- 19 LEVER 2
- 20 LEVER 3 = LEVER 2 REVERSE

### DESTINATIONS

- 00 DELETE MODULATION
- 01 DCO 1 FREQUENCY
- 02 DCO 1 PULSE WIDTH
- 03 DCO 1 WAVE SHAPE
- 04 DCO 2 FREQUENCY
- 05 DCO 2 PULSE WIDTH
- 06 DCO 2 WAVE SHAPE
- 07 DCO 1 - DCO 2 MIX
- 08 VCF FM BY DCO 1
- 09 VCF FREQUENCY
- 10 VCF RESONANCE
- 11 VCA 1 VOLUME
- 12 VCA 2 VOLUME
- 13 ENV 1 DELAY
- 14 ENV 1 ATTACK
- 15 ENV 1 DECAY
- 16 ENV 1 RELEASE
- 17 ENV 1 AMPLITUDE
- 18 ENV 2 DELAY
- 19 ENV 2 ATTACK
- 20 ENV 2 DECAY
- 21 ENV 2 RELEASE
- 22 ENV 2 AMPLITUDE
- 23 ENV 3 DELAY
- 24 ENV 3 ATTACK
- 25 ENV 3 DECAY
- 26 ENV 3 RELEASE
- 27 ENV 3 AMPLITUDE
- 28 LFO 1 SPEED
- 29 LFO 1 AMPLITUDE
- 30 LFO 2 SPEED
- 31 LFO 2 AMPLITUDE
- 32 PORTAMENTO RATE

## MASTER EDIT

### MIDI

- 00 BASIC CHANNEL
- 01 OMNI MODE
- 02 CONTROLLERS
- 03 PATCH CHANGES
- 04 SYSTEM EXCLUSIVE
- 05 LOCAL CONTROL
- 06 PEDAL 1 SELECT
- 07 PEDAL 2 SELECT
- 08 LEVER 2 SELECT
- 09 LEVER 3 SELECT
- 10 SEND PATCH
- 11 SEND ALL
- 12 MIDI ECHO
- 13 SPILL OVER
- 14 ACTIVE SENSE
- 15 PATCH MAP
- 16 PATCH MAP EDIT

### CASSETTE

- 20 STORE ALL
- 21 CHECK ALL
- 22 LOAD ALL
- 23 SELECTIVE LOAD
- 50 EDIT RECALL
- 51 PATCH INITIALIZE
- 52 CALIBRATE
- 53 DISPLAY BRIGHTNESS
- 54 SOFTWARE VERSION
- 55 MASTER TUNE
- 56 STEREO OUTPUT
- 57 SWITCH QUICK

### VIBRATO

- 30 SPEED
- 31 WAVEFORM
- 32 AMPLITUDE
- 33 SPEED MOD SOURCE
- 34 SPEED MOD AMOUNT
- 35 AMP MOD SOURCE
- 36 AMP MOD AMOUNT

### MISC.

- 30 SPEED
- 31 WAVEFORM
- 32 AMPLITUDE
- 33 SPEED MOD SOURCE
- 34 SPEED MOD AMOUNT
- 35 AMP MOD SOURCE
- 36 AMP MOD AMOUNT
- 50 EDIT RECALL
- 51 PATCH INITIALIZE
- 52 CALIBRATE
- 53 DISPLAY BRIGHTNESS
- 54 SOFTWARE VERSION
- 55 MASTER TUNE
- 56 STEREO OUTPUT
- 57 SWITCH QUICK

## SPLIT EDIT

- 0 LEFT UPPER LIMIT
- 1 LEFT TRANSPOSE
- 2 LEFT MIDI OUTPUT
- 3 RIGHT LOWER LIMIT
- 4 RIGHT TRANSPOSE
- 5 RIGHT MIDI OUTPUT
- 6 LEFT-RIGHT BALANCE
- 7 VOICE/ZONE SELECT

## PATCH EDIT

### DCO 1

- 00 FREQUENCY
- 01 FREQ MOD BY LFO 1
- 02 SYNC
- 03 PULSE WIDTH
- 04 PW MOD BY LFO 2
- 05 WAVE SHAPE
- 06 WAVE SELECT
- 07 LEVERS
- 08 KEYBOARD/PORTAMENTO
- 09 KEY CLICK

### DCO 2

- 10 FREQUENCY
- 11 FREQ MOD BY LFO 1
- 12 DETUNE
- 13 PULSE WIDTH
- 14 PW MOD BY LFO 2
- 15 WAVE SHAPE
- 16 WAVE SELECT
- 17 LEVERS
- 18 KEYBOARD/PORTAMENTO
- 19 KEY CLICK

### VCF/VCA

- 20 BALANCE
- 21 FREQUENCY
- 22 FREQ MOD BY ENV 1
- 23 FREQ MOD BY PRESSURE
- 24 RESONANCE
- 25 LEVERS
- 26 KEYBOARD/PORTAMENTO
- 27 VCA 1 VOLUME
- 28 VCA 1 MOD BY VELOCITY
- 29 VCA 2 MOD BY ENV 2

### FM/TRACK

- 30 VCF FM AMOUNT
- 31 FM MOD BY ENV 3
- 32 FM MOD BY PRESSURE
- 33 TRACK INPUT
- 34 TRACK POINT 1
- 35 TRACK POINT 2
- 36 TRACK POINT 3
- 37 TRACK POINT 4
- 38 TRACK POINT 5

### RAMP/PORTAMENTO

- 40 RAMP 1 RATE
- 41 RAMP 1 TRIGGER
- 42 RAMP 2 RATE
- 43 RAMP 2 TRIGGER
- 44 PORTAMENTO RATE
- 45 PORT MOD BY VELOCITY
- 46 PORTAMENTO MODE
- 47 LEGATO PORTAMENTO
- 48 KEYBOARD MODE

### ENV 1

- 50 DELAY
- 51 ATTACK
- 52 DECAY
- 53 SUSTAIN
- 54 RELEASE
- 55 AMPLITUDE
- 56 AMP MOD BY VELOCITY
- 57 TRIGGER MODE
- 58 ENVELOPE MODE
- 59 LFO 1 TRIGGER

### ENV 2

- 60 DELAY
- 61 ATTACK
- 62 DECAY
- 63 SUSTAIN
- 64 RELEASE
- 65 AMPLITUDE
- 66 AMP MOD BY VELOCITY
- 67 TRIGGER MODE
- 68 ENVELOPE MODE
- 69 LFO 1 TRIGGER

### ENV 3

- 70 DELAY
- 71 ATTACK
- 72 DECAY
- 73 SUSTAIN
- 74 RELEASE
- 75 AMPLITUDE
- 76 AMP MOD BY VELOCITY
- 77 TRIGGER MODE
- 78 ENVELOPE MODE
- 79 LFO 1 TRIGGER

### LFO 1

- 80 SPEED
- 81 SPEED MOD BY PRESSURE
- 82 WAVEFORM
- 83 RETRIGGER POINT
- 84 AMPLITUDE
- 85 AMP MOD BY RAMP 1
- 86 TRIGGER MODE
- 87 LAG
- 88 SAMPLE INPUT

### LFO 2

- 90 SPEED
- 91 SPEED MOD BY KEYBOARD
- 92 WAVEFORM
- 93 RETRIGGER POINT
- 94 AMPLITUDE
- 95 AMP MOD BY RAMP 2
- 96 TRIGGER MODE
- 97 LAG
- 98 SAMPLE INPUT