



moog



**memorymoog**

# THE ULTIMATE SC

## MONOPHONIC CONTROLS

Activate mono modes, determine trigger priority and activate mono KB output. 1 to 6 voices may be played in unison in the mono mode (up to 18 oscillators per note).

AUTO TUNE  
Tunes all 18 oscillators in under 5 seconds.

GLIDE  
Active in all monophonic and polyphonic modes.

PROGRAM DISPLAY  
Shows current program.

ALPHANUMERIC DISPLAY  
Provides direct feedback to player; shows incremental settings, selected modes of operation and instrument functions.

LFO MODULATION  
A master low-frequency oscillator that controls a simultaneously. A selection amount can be as part of a program.



PITCH BEND  
The maximum pitch bend interval is programmable.

HOLD  
Memorizes a chord pattern played on the keyboard. Playing different keys will transpose that chord pattern.

ARPEGGIATOR  
Triggers keys held down in various selectable modes: up, down, up-down, auto hold and transposable.

SYSTEM CONTROLLER  
The primary interface point between musician and instrument. All functions of the Memorymoog (programs, chains, keyboard modes, arpeggiator modes, etc.) are accessed at this point.

KB MODE  
Establishes voice assignment priorities.

# THE SOUND OF MOOG.

**VOICE MODULATION**  
 The third oscillator or filter contour of each voice can control that voice's frequency, pulse width, or filter. Filter contour can control amount of Osc 3 effect. A set modulation amount can be stored as part of a program.

**SYNC**  
 Osc 2 can be synchronized to Osc 1; applying a modulating signal only to Osc 2 produces the "sync sweep" effect.

**WAVEFORMS**  
 Adjustable pulse, sawtooth, and triangular; can be combined into more complex waveforms.

**REAR-PANEL CONNECTIONS**  
 Input/output ports for the programmable foot pedals and foot switches, external monophonic synthesizer, cassette interface and audio connections.

**PROGRAMMABLE VOLUME**  
 Sets the output level for each program; allows all program levels to be balanced.



**PROGRAMMABLE FOOT PEDALS**  
 Foot pedal control of pitch, volume, filter cutoff, modulation amount, and/or sync sweep.

**LOW & KEYBOARD CONTROL**  
 Osc 3 can operate in a low frequency mode with or without keyboard tracking for use in the VOICE MODULATION section.

**RETURN TO ZERO**  
 Resets the contour generators whenever the voice is retriggered.

**UNCONDITIONAL CONTOUR**  
 Completes the attack portion of the contours whether or not the key is held down.

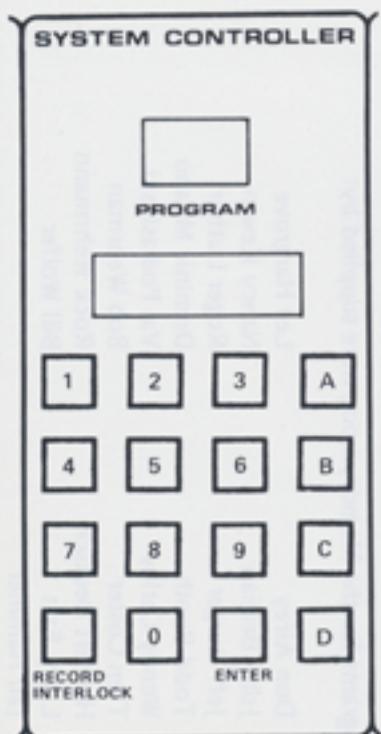
**KEYBOARD FOLLOW**  
 Shortens the contour times for higher notes on the keyboard to achieve realistic synthesis of acoustical instruments.

# memorymoog

## REFERENCE GUIDE

### VOICE LISTING (see reverse)

### SYSTEM CONTROLLER CODES



- A advances current program
- B backsteps current program
- C1 Cassette save; stores Memorymoog information on standard cassette
- C2 Cassette load; reprograms Memorymoog w/information from tape
- C3 Cassette verify; checks information on cassette (without loading it)
- C4 Voice defeat/voice identify routine
- C5 tunes all oscillators to unison
- C6 Tune Calibration; defeats AUTO-TUNE
- C7 User service routine for tuning oscillators
- C8 Enables or disables security code
- C9 Activates live panel
- C0 Flashes all LEDs
- D0-9 Program chains

- ARPEGGIATOR MODES

1 - Up (unlatched)

2 - Down (unlatched)

3 - Up/down (unlatched)

4 - Up (latched)

5 - Down (latched)

6 - Up/down (latched)

7 - Auto chord trigger

8 - First note to last note

9 - First note to last note (latched)

- CHORD HOLD

- SECURITY CODE (RECORD PROTECT) ROUTINE

- 6 VOICES — 3 OSCILLATORS PER VOICE

- CONCENTRIC COARSE & FINE TUNE CONTROLS FOR OSCILLATORS

- 10 PROGRAM CHAINS — 20 PROGRAMS PER CHAIN

- 4 KEYBOARD PLAYING MODES

- POLYPHONIC GLIDE

- CONTOUR MODES — UNCONDITIONAL CONTOURS, RETURN-TO-ZERO, AND KEYBOARD FOLLOW

- 2 PROGRAMMABLE FOOTPEDAL INPUTS

- 100 PROGRAMS

## VOICE LISTING

	SYNTH	STRINGS	BRASS	SYNTH
0	Synth Sweep w/ Glide	1 String 1	2 Brass 1	3 Vocal Chorus
10	Octave Trill	11 String 2	12 Brass 2	13 Tuned Percussion
20	Sync Sample & Hold	21 String 3	22 Brass 3	23 Octave Synth
30	Poly Glide	31 String 4	32 Brass 4	33 Sizzle
40	Sync Sweep 1	41 String 5	42 Brass 5	43 Sync 4
50	Wind Chimes	51 String 6	52 Brass 6	53 Double Reed
60	FM 1	61 String 7	62 Brass 7	63 Synth Organ
70	Bowed Octaves	71 String 8	72 Brass 8	73 Release Voice
80	Synth Woodwinds	81 String 9	82 Brass 9	83 Surprise
90	Quint Synth	91 String 10	92 Brass 10	93 Triangle Waves

	EFFECTS	SYNTH	KB	SYNTH
5	Filter Trill	6 Synth (Sq. Waves 1)	7 Electric Piano 1	8 Sync 1
15	Bells	16 Recorder	17 Power Synth	18 Sync 2
25	Take-Off	26 Butterflies in Space	27 Clav 1	28 Sync 3
35	Log Drum	36 Flutes	37 Clav Wah	38 Unconditional Contour
45	Sirens	46 Sync Sweep 2	47 Celeste	48 Sync Sweep 3
55	UFO	56 Chorus Synth	57 Clav 3	58 Echo Whistle
65	Sync Sweep 4	66 Square Waves 2	67 Quint Harpsichord	68 Wind Chimes 2
75	Quint Filter Trill	76 Quint Oscillator Trill	77 Accordion	78 Synth Plectrum
85	Drop Off	86 Ring Mod	87 Harpsichord 2	88 Repeat Voice
95	Ring Mod 2	96 Dupe No. 75	97 Octave Synth 2	98 Synth Plectrum 2

Factory programs for the Memorymoog were supplied by:

Don Airey	Lee Hargrove
John Bezjian	Nancy Kewin
Jeff Burger	Roger Luther
Todd Booth	Dominic Milano
Wendy Carlos	Val Podlasinski
Tom Coster	Bob Wehrman
Herbert Deutsch	Rock Wehrmann
Larry Fast	Bill Wolfer
Jan Hammer	

We would like to thank the countless people whose comments, suggestions and musical creativity have contributed to the making of the Memorymoog.



The Memorymoog is a six-voice, programmable polyphonic synthesizer designed to give the performer as much versatility as possible in an instrument of its type.

The Memorymoog has the classic Moog sound associated with the Minimoog and other Moog products.

Housed in an anodized aluminum cabinet trimmed with select walnut, the Memorymoog is as beautiful to see as it is to hear.

All Memorymoog functions are under the control of a Z-80 micro-computer which continually monitors the soundpath, responding to all performer input through the keyboard, panel controls, foot pedals and system controller.

The front-panel settings are stored as a "program". The Memorymoog will remember 75 programs. These are stored and recalled through the system controller, which is used to access all special functions of the Memorymoog.

In addition, 10 program chains — sets of 10 programs — can be stored and stepped through forward or back with footswitches for fast onstage voice changes.

Two programmable foot pedal inputs provide control of volume, pitch, filter cutoff frequency, modulation amount, and sync sweep allowing the performer to keep both hands on the keyboard. The routing and settings of these pedals are programmable.

Different keyboard modes may be selected through the system controller. The modes are: 1. Cyclic - the first key played is sounded by voice #1, the second key, voice #2, etc. 2. Cyclic with memory: similar to #1 except that a repeated key will not be reassigned. 3. Reset: any single key will be assigned to voice #1 (this mode will behave like a monophonic keyboard on individual lines). 4. Reset with memory: similar to #3, but with memory function described in #2.

In monophonic performance, the number of active voices (one to six) may be selected to be played in unison. The keyboard priority (low-note, high-note, or last-note-played) may also be selected.

Glide may be activated in either the monophonic or polyphonic modes of operation.

The Memorymoog operates in a continuous edit state; setting of any control may be instantly changed by moving that control.

When editing, the alphanumeric display shows both the memorized value of the control and the edited value.

All information stored in the Memorymoog may be saved on a standard cassette for later re-use.

The Memorymoog is designed to be as musical and versatile as possible; it can be the base of any keyboard player's setup.

## SPECIFICATIONS-MEMORYMOOG

### KEYBOARD

C-C, 61 keys (5 octaves)

### VOICES

The Memorymoog is a 6-voice instrument. Each voice contains:

### OSCILLATORS

3 Audio oscillators — range: 16', 8', 4', 2'. (Range is extended to 32' with transpose switch in performance area).

Waveforms available: variable pulse, sawtooth, and triangular.

Oscillators 2 & 3 have dual concentric frequency pots; center knob for fine tune (12 turns), outer knob for coarse tune.

Sync Osc 2 to Osc 1.

Osc 3 acts as an audio or modulation oscillator. Osc 3 rate: .2 Hz to 8 KHz.

### VOICE MODULATION

Osc 3 signal or filter contour may be routed to Osc 1, 2, pulse width 1, 2, and/or filter. Filter contour can control amount of Osc 3 modulation effect.

### MIXER

Individual level controls for each oscillator and digital pink noise source.

### MODULATION

LFO frequency — .1 Hz to 100 Hz. Waveforms available: triangle, reverse sawtooth, sawtooth, square, or sample & hold. Routing to Osc 1, 2, 3, pulse width 1, 2, 3, and/or filter.

### VOLTAGE CONTROLLED FILTER

Moog 24 dB/octave filter. Filter tracking selectable 1/2, 2/3, or full.

### CONTOUR GENERATORS

Two four-part (Attack, Decay, Sustain, Release) contour generators. Attack time: 10 sec. maximum.

Decay & Release time: 20 sec. maximum.

Return-to-zero, unconditional contour, and keyboard follow modes are selectable for the contours.

### FOOTPEDALS

Two Moog 1120 footpedals can be connected. Pedal 1 controls pitch, volume, & filter. Pedal 2 controls mod amount & Osc 2 pitch. Pedal assignment and sensitivity are stored as part of a program.

### GLIDE

Type: Linear

Active in all monophonic and polyphonic modes. Glide modes are dependent on keyboard assignment modes.

### SYSTEM CONTROLLER CODES

- C1 — Cassette Save
- C2 — Cassette Load
- C3 — Cassette Verify
- C5 — Frequency center for Osc 2 & 3 to Osc 1 (zero beats)
- C6 — Tuning Calibration - defeats auto tune
- C7 — Auto assigned tuning (for servicing)
- C9 — live front panel (useful for programming)
- D0-D9 — Program sequence codes
- A — advance program chain
- B — back step program chain

### OUTPUTS

Programmable volume for program level balancing. Master output volume control. Headphone output level.

### REAR PANEL

Balanced line (600 ohms) & high level (unbalanced 5K ohms) outputs.

Footpedal in 1 & 2

External synthesizer CV, gate, and S-trig outputs (with range & scale trims)

Release, Hold, Program Advance, and Program Back Step footswitch inputs.

External Clock input (to arpeggiator).

Cassette Interface

### POWER REQUIREMENTS

Domestic: 115 volts ± 10% 50/60 Hz

Export: 230 volts ± 10% 50/60 Hz

110 watts

### DIMENSIONS & WEIGHT

Net weight: Approx. 38 lbs. (17.2 kg)

Overall size: 40" by 18 1/2" by 6 1/2"

101.6 cm by 46.7 cm by 16.5 cm

The Moog logo consists of the word "moog" in a lowercase, sans-serif font. The letters are white with a black outline, set against a dark blue rectangular background. The letters are slightly slanted to the right.

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