



EMERSON MOOG MODULAR SYSTEM

EMERSON MOOG MODULAR SYSTEM

The Emerson Moog Modular System (EMMS) is composed of a main system unit encased in a stainless steel shell with a steel angle iron frame. Inside of this shell, there are five wood module mounting cabinets. Outside of this shell, there is the primary controller (usually referred to as the “keyboard”) unit.

The EMMS consists of three types of wood cabinets:

MAIN CONSOLE CABINET:

- 48 1/4” Wide by 15” High by 16” Deep
- Sloped front with two rows of modules
- Top row consists of standard removable Moog modules, 22 positions
- Bottom row consists of “Console” panels that are not removable

EXPANSION CABINET:

- 48 1/4” Wide by 9 1/2” High by 8 1/4” Deep
- One row of standard removable Moog modules, 22 positions

KEYBOARD CABINET:

- 43” Wide by 4” High by 9” Deep
- 5- Octave Pratt-Read organ-style keyboard
- Range, Scale, and Portamento controls, with Glide/No Glide switch

POWER SUPPLIES:

For increased reliability, the original Moog 930 power supplies have been replaced with modern linear power supplies. The rear of the system has a tool-removable cover to protect the user from potentially hazardous voltages.

SPECIFICATIONS:

- Input: 120 VAC
- Outputs: +12 VDC @ 6.8 amps, - 6 VDC @ 4 amps, +15 VDC @ 1.5 amps, -15 VDC @ 1.5 amps
- Sequencer cabinet power: +12 VDC @ 2 amps, -6 VDC @ 2 amps
- Lamp power: 6.3 VAC @ 6 amps

PRESET REMOTE:

A Preset Selector Remote is connected to the main cabinet via a standard DB-25 cable. It allows selection of presets from a convenient location away from the main system. A special preset scanner allows the user to set the remote to automatically step through the presets, with a configurable rate control.

CABINETS:

All cabinets are made to the same specifications as the original Moog modular console design:

- Quality wood with the same color and finish as the original systems
- Metal Nut Bars for module mounting
- Original 6-32 Truss-head screws for mounting modules to Nut Bars
- Original piano hinges for mounting of the console panels

MODULES:

All modules are made to the exacting specifications of the original Moog modules:

- Metal C-Frames and PCB brackets
- Original 4-40 Oval-head screws for mounting C-Frames to the front panels
- AMP DUO-TYNE edge connectors
- Switchcraft and Cinch-Jones jacks
- Original manufacturer knobs
- Front panels made using the same processes specified by Moog and pressed on the exact type of turret press.

There are three classes of modules used in the EMMS:

1. Standard Moog modules
2. Standard Moog modules that were modified over the years to meet Emerson’s needs
3. Custom modules that are unique to Keith Emerson’s system and have never been replicated until now

Below is an overview of each module or panel in the system. To orient yourself start at the bottom cabinet, left most position.

EXPANSION CABINET 3



POSITION 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

EXPANSION CABINET 2



POSITION 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

EXPANSION CABINET 1



POSITION 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

MAIN CONSOLE MODULE ROW



POSITION 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

MAIN CONSOLE PANEL ROW



POSITION 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

BOTTOM EXPANSION CABINET



POSITION 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

EMERSON MOOG MODULAR SYSTEM OVERVIEW

TUNER

Bottom Expansion Cabinet, positions 1 and 2

**** Unique to Keith Emerson's Original System ****

- Custom module containing a tuner powered by the system. The input is internally connected to the center panel in the main console panel section.

PRESET PROGRAMMER MASTER MODULE

Bottom Expansion Cabinet, position 3

**** Unique to Keith Emerson's Original System ****

- Collects the preset control voltages from the Programmer Preset modules to the right
- Illuminated push button switch that turns off any active preset module, and puts the programmable modules in the main console into the mode set up on their respective front panel controls (“panel mode”)
- Circuitry implemented on custom circuit boards, derived from the handmade point-to-point vectorboard circuits in Emerson's original system.
- The circuit schematics are identical.

PROGRAMMER PRESET MODULE

Bottom Expansion Cabinet, position 5

**** Unique to Keith Emerson's Original System ****

- Two presets, enabled by illuminated pushbutton switches
- Two sets of preset settings controls behind the front panel
- Upper preset button enables settings controls on the left side
- Lower preset button enables settings controls on the right side
- Fine tuning screwdriver adjustment potentiometers on the front panel for VCO 1, 2, and 3 for each preset, with locknuts to prevent accidental retuning
- Octave Up/Normal/Octave Down switches for VCO 1, 2, and 3 for each preset
- Circuitry implemented on custom circuit boards, derived from the handmade point-to-point vectorboard circuits in Emerson's original system.
- The circuit schematics are identical.

Note: All Programmer Preset modules are separated by blank panels that can be removed by thumbscrews, allowing access to control settings

PROGRAMMER PRESET MODULE

Bottom Expansion Cabinet, position 7

**** Unique to Keith Emerson's Original System ****

- Two presets, enabled by illuminated pushbutton switches
- Two sets of preset settings controls behind the front panel
- Upper preset button enables settings controls on the left side
- Lower preset button enables settings controls on the right side
- Fine tuning screwdriver adjustment potentiometers on the front panel for VCO 1, 2, and 3 for each preset, with locknuts to prevent accidental retuning
- Octave Up/Normal/Octave Down switches for VCO 1, 2, and 3 for each preset
- Circuitry implemented on custom circuit boards, derived from the handmade point-to-point vectorboard circuits in Emerson's original system.
- The circuit schematics are identical.

Note: All Programmer Preset modules are separated by blank panels that can be removed by thumbscrews, allowing access to control settings.

EMERSON MOOG MODULAR SYSTEM OVERVIEW

PROGRAMMER PRESET MODULE

Bottom Expansion Cabinet, position 9

**** Unique to Keith Emerson's Original System ****

- Two presets, enabled by illuminated pushbutton switches
- Two sets of preset settings controls behind the front panel
- Upper preset button enables settings controls on the left side
- Lower preset button enables settings controls on the right side
- Fine tuning screwdriver adjustment potentiometers on the front panel for VCO 1, 2, and 3 for each preset, with locknuts to prevent accidental retuning
- Octave Up/Normal/Octave Down switches for VCO 1, 2, and 3 for each preset
- Circuitry implemented on custom circuit boards, derived from the handmade point-to-point vectorboard circuits in Emerson's original system.
- The circuit schematics are identical.

Note: All Programmer Preset modules are separated by blank panels that can be removed by thumbscrews, allowing access to control settings.

PROGRAMMER PRESET MODULE

Bottom Expansion Cabinet, position 11

**** Unique to Keith Emerson's Original System ****

- Two presets, enabled by illuminated pushbutton switches
- Two sets of preset settings controls behind the front panel
- Upper preset button enables settings controls on the left side
- Lower preset button enables settings controls on the right side
- Fine tuning screwdriver adjustment potentiometers on the front panel for VCO 1, 2, and 3 for each preset, with locknuts to prevent accidental retuning
- Octave Up/Normal/Octave Down switches for VCO 1, 2, and 3 for each preset
- Circuitry implemented on custom circuit boards, derived from the handmade point-to-point vectorboard circuits in Emerson's original system.
- The circuit schematics are identical.

Note: All Programmer Preset modules are separated by blank panels that can be removed by thumbscrews, allowing access to control settings.

PROGRAMMER PRESET MODULE

Bottom Expansion Cabinet, position 13

**** Unique to Keith Emerson's Original System ****

- Two presets, enabled by illuminated pushbutton switches
- Two sets of preset settings controls behind the front panel
- Upper preset button enables settings controls on the left side
- Lower preset button enables settings controls on the right side
- Fine tuning screwdriver adjustment potentiometers on the front panel for VCO 1, 2, and 3 for each preset, with locknuts to prevent accidental retuning
- Octave Up/Normal/Octave Down switches for VCO 1, 2, and 3 for each preset
- Circuitry implemented on custom circuit boards, derived from the handmade point-to-point vectorboard circuits in Emerson's original system.
- The circuit schematics are identical.

Note: All Programmer Preset modules are separated by blank panels that can be removed by thumbscrews, allowing access to control settings.

EMERSON MOOG MODULAR SYSTEM OVERVIEW

902 VCA FRONT PANEL

Bottom Expansion Cabinet, position 15

- Front panel with standard controls and jacks, no electronics behind, no function
- Used as a decorative space panel

911 ENVELOPE GENERATOR FRONT PANEL

Bottom Expansion Cabinet, position 16

- Front panel with standard controls and jacks, no electronics behind, no function
- Used as a decorative space filler panel

904B VOLTAGE CONTROLLED HIGH PASS FILTER FRONT PANEL

Bottom Expansion Cabinet, positions 17 and 18

- Front panel with standard controls and jacks, no electronics behind, no function
- Used as a decorative space filler panel

914 FIXED FILTER BANK FRONT PANEL

Bottom Expansion Cabinet, positions 19, 20, 21, and 22

- Front panel with standard controls and jacks, no electronics behind, no function
- Used as a decorative space filler panel
- Mounted with thumbscrews for easy removal
- Removing panel exposes system power supply voltage test points

EMERSON MOOG MODULAR SYSTEM OVERVIEW

CP3A MIXER

Main Console panel row, positions 1, 2, 3, and 4

**** Unique to Keith Emerson's Original System ****

- Standard Moog CP3A module
- Illuminated slide switches to enable console control voltages to the two 921A Oscillator Driver modules directly above. These switches are the same as used in the original Moog CP3A.
- Trunk Line jacks which provide inputs to the master output XLR driver circuit
- Voltage control of mixer channel volumes from the Preset Programmer using a custom Vactrol circuit board
- PCB's created from original factory trace layout films

Special components used include:

- NOS Illuminated slide switches
- NOS 1458 dual op amps, identical to the original design
- 1% metal film resistors for all CV summing functions

CP3A MIXER

Main Console panel row, positions 5, 6, 7, and 8

**** Unique to Keith Emerson's Original System ****

- Standard Moog CP3A module
- Illuminated slide switches to enable console control voltages to the single 921A Oscillator Driver module directly above. These switches are the same parts as used in the original Moog CP3A.
- Trunk Line jacks which provide inputs to the master output XLR driver circuit
- Voltage control of mixer channel volumes from the Preset Programmer using a custom Vactrol circuit board
- PCB's created from original factory trace layout films

Special components used include:

- NOS Illuminated slide switches
- NOS 1458 dual op amps, identical to the original design
- 1% metal film resistors for all CV summing functions

CUSTOM INTERFACE PANEL

Main Console panel row, positions 9 and 10

**** Unique to Keith Emerson's Original System ****

- Audio Output switch to turn XLR jacks on the rear of the system on and off
- Frequency Counter Select rotary switch to determine what signal is routed to the tuner in the bottom expansion cabinet - External, VCO1, VCO2, or VCO3
- Pedalboard Outputs - (2) 1/4" and (2) Cinch-Jones 2-pin male, output to ground when "Drone" switch is in the ON position
- Dymo labels on a hand-drilled and hand-stuffed blank panel

CP3A MIXER

Main Console panel row, positions 11, 12, 13, and 14

- Standard Moog CP3A module
- Illuminated slide switches to enable console control voltages to the 904A Lowpass Filter module directly above. These switches are the same parts as used in the original Moog CP3A.
- Trunk Line jacks which provide inputs to the master output XLR driver circuit
- PCB's created from original factory trace layout films

Special components used include:

- NOS Illuminated slide switches
- NOS 1458 dual op amps, same as the original design
- 1% metal film resistors for all CV summing functions

EMERSON MOOG MODULAR SYSTEM OVERVIEW

CONSOLE VOLTAGES AND TRIGGERS PANEL

Main Console panel row, positions 15, 16, 17, and 18

**** Unique to Keith Emerson's Original System ****

- Illuminated slide switches to enable console control voltages to the 904A Lowpass Filter module directly above. These switches are the same parts as used in the original Moog CP3A.
- Reversible Attenuator using custom circuit board that allows filter modulation depth to be controlled both by the front panel control and the preset programmer
- Illuminated slide switches to enable console controller triggers to the leftmost (2) 911 Envelope Generator modules in the main console module row above, as well as coupling of the 911 outputs to the left and right 902 VCA modules in the main console row above. These switches are the same parts as used in the original Moog CP3A.
- 1/4" and Cinch-Jones 2-pin male connectors for controllers 1, 2, and 3

Special components used include:

- NOS Illuminated slide switches
- Old-school CA3080 and 1458 chips used for VC functions
- 1% metal film resistors for all CV summing functions

CUSTOM INTERFACE PANEL

Main Console panel row, positions 19 and 20

**** Unique to Keith Emerson's Original System ****

- Two sets of four-jack multiples
- Pushbutton switches to provide ground signal on associated output jacks when depressed
- Dymo labels on a hand-drilled and hand-stuffed blank panel

CP8 CONSOLE POWER AND FUSES

Main Console panel row, positions 21 and 22

- Main power switch
- Pilot lamp
- Fuses for power supplies and lamp power

921 OSCILLATOR DRIVER

Main Console module row, position 1

**** Unique to Keith Emerson's Original System ****

- Standard Moog 921A module
- PCB created from original factory trace layout films
- Modification to add input and Volts/Octave adjustment from Preset Programmer section

Special components used include:

- LM308 main CV summing amp as per original design, sourced NOS
- 1% metal film resistors for all CV summing functions

EMERSON MOOG MODULAR SYSTEM OVERVIEW

921B VOLTAGE CONTROLLED OSCILLATOR

Main Console module row, position 2

- Standard Moog 921B module
- PCB created from original factory trace layout films

Special components used include:

- 2N3954 Dual FETs, sourced NOS
- CA3080 CAN-8 chips, sourced NOS
- u796 Multiplier CAN-10 chips, for Sync circuit, sourced NOS
- LM/CA3046 DIP-14 chips, sourced NOS
- 1% metal film resistors per original design

921 OSCILLATOR DRIVER

Main Console module row, position 3

*** *Unique to Keith Emerson's Original System* ***

- Standard Moog 921A module
- PCB created from original factory trace layout films
- Modification to add input and Volts/Octave adjustment from Preset Programmer section

Special components used include:

- LM308 main CV summing amp as per original design, sourced NOS
- 1% metal film resistors for all CV summing functions

921B VOLTAGE CONTROLLED OSCILLATOR

Main Console module row, position 4

- Standard Moog 921B module
- PCB created from original factory trace layout films

Special components used include:

- 2N3954 Dual FETs, sourced NOS
- CA3080 CAN-8 chips, sourced NOS
- u796 Multiplier CAN-10 chips, for Sync circuit, sourced NOS
- LM/CA3046 DIP-14 chips, sourced NOS
- 1% metal film resistors per original design

921 OSCILLATOR DRIVER

Main Console module row, position 5

*** *Unique to Keith Emerson's Original System* ***

- Standard Moog 921A module
- PCB created from original factory trace layout films
- Modification to add input and Volts/Octave adjustment from Preset Programmer section

Special components used include:

- LM308 main CV summing amp as per original design, sourced NOS
- 1% metal film resistors for all CV summing functions

EMERSON MOOG MODULAR SYSTEM OVERVIEW

921B VOLTAGE CONTROLLED OSCILLATOR

Main Console module row, position 6

- Standard Moog 921B module
- PCB created from original factory trace layout films

Special components used include:

- 2N3954 Dual FETs, sourced NOS
- CA3080 CAN-8 chips, sourced NOS
- u796 Multiplier CAN-10 chips, for Sync circuit, sourced NOS
- LM/CA3046 DIP-14 chips, sourced NOS
- 1% metal film resistors per original design

921 VOLTAGE CONTROLLED OSCILLATOR

Main Console module row, positions 7 and 8

- Standard Moog 921
- PCB's created from original factory trace layout films

Special components used include:

- 2N3954 Dual FETs, sourced NOS
- CA3080 CAN-8 chips, sourced NOS
- u796 Multiplier CAN-10 chips, for Sync circuit, sourced NOS
- LM/CA3046 DIP-14 chips, sourced NOS
- 1% metal film resistors per original design
- J113 FET, sourced NOS

903A RANDOM SIGNAL GENERATOR

Main Console module row, position 9

**** Unique to Keith Emerson's Original System ****

- Standard Moog 903A module
- PCB created from original factory trace layout films
- Modification to add 1/4" jacks that allow patch cord connections controlled by the four switches added to the adjacent 905 module

Special components used include:

- Noise diode implemented with 2N3392 transistor, per original Moog manufacturing update

905 REVERBERATION

Main Console module row, positions 10 and 11

**** Unique to Keith Emerson's Original System ****

- Standard Moog 905 module
- PCB created from original factory trace layout films
- Internal standard 6" reverberation tank replaced with RCA jacks on rear of module to connect to external reverberation tank
- Additional audio input jack added
- Wet/Dry mix front panel control modified to provide wet mix only (dry signal is always passed through unaffected)
- Four toggle switches added to front panel to enable connection between jack pairs added to adjacent 903A module

EMERSON MOOG MODULAR SYSTEM OVERVIEW

904A VOLTAGE CONTROLLED LOW PASS FILTER

Main Console module row, positions 12 and 13

- Standard Moog 904A module
- PCB's created from original factory trace layout films

Special components used include:

- Original NOS Mallory 3243J Rotary Switch for range selection
- Obsolete Clarostat U80 series trim pots replaced with identical, obtainable trim pot, or fixed resistors with hand-trimmed values.

1631 RING MODULATOR

Main Console module row, position 14

- Standard Moog CE (Custom Engineering) 1631 front panel
- Circuit board based on original Moog CE circuit

904A VOLTAGE CONTROLLED LOW PASS FILTER

Main Console module row, positions 15 and 16

**** Unique to Keith Emerson's Original System ****

- Standard Moog 904A module
- PCB's created from original factory trace layout films
- Additional audio input and output jack added
- Modified to add voltage controlled resonance for control by Preset Programmer

Special components used include:

- Original NOS Mallory 3243J Rotary Switch for range selection
- Obsolete Clarostat U80 series trim pots replaced with identical, obtainable trim pot, or fixed resistors with hand-trimmed values.
- Vactrol on resonance control to provide Preset Programmer control

902 VOLTAGE CONTROLLED AMPLIFIER

Main Console module row, position 17

- Standard Moog 902 module
- PCB created from original factory trace layout films

Special components used include:

- Original NOS Rocker Switch for Linear/Exponential response selection
- Obsolete Clarostat U80 series trim pots replaced with identical, obtainable trim pot, or fixed resistors with hand-trimmed values.

902 VOLTAGE CONTROLLED AMPLIFIER

Main Console module row, position 18

- Standard Moog 902 module
- PCB created from original factory trace layout films

Special components used include:

- Original NOS Rocker Switch for Linear/Exponential response selection
- Obsolete Clarostat U80 series trim pots replaced with identical, obtainable trim pot, or fixed resistors with hand-trimmed values.

EMERSON MOOG MODULAR SYSTEM OVERVIEW

911 ENVELOPE GENERATOR

Main Console module row, position 19

**** Unique to Keith Emerson's Original System ****

- Standard Moog 911 module
- PCB created from original factory trace layout films
- Modified to add voltage control of T1, T2, T3, and Sustain for control by Preset Programmer

911 ENVELOPE GENERATOR

Main Console module row, position 20

**** Unique to Keith Emerson's Original System ****

- Standard Moog 911 module
- PCB created from original factory trace layout films
- Modified to add voltage control of T1, T2, T3, and Sustain for control by Preset Programmer

911 ENVELOPE GENERATOR

Main Console module row, position 21

**** Unique to Keith Emerson's Original System ****

- Standard Moog 911 module
- PCB created from original factory trace layout films
- Modified to add voltage control of T1, T2, T3, and Sustain for control by Preset Programmer

911 ENVELOPE GENERATOR

Main Console module row, position 22

- Standard Moog 911 module
- PCB created from original factory trace layout films

995A REVERSIBLE ATTENUATOR

Expansion Cabinet 1, position 1

- Standard Moog 995A module
- PCB created from original factory trace layout films

921 VOLTAGE CONTROLLED OSCILLATOR

Expansion Cabinet 1, positions 2 and 3

- Standard Moog 921
- PCB's created from original factory trace layout films

Special components used include:

- 2N3954 Dual FETs, sourced NOS
- CA3080 CAN-8 chips, sourced NOS
- u796 Multiplier CAN-10 chips, for Sync circuit, sourced NOS
- LM/CA3046 DIP-14 chips, sourced NOS
- 1% metal film resistors per original design
- J113 FET, sourced NOS

EMERSON MOOG MODULAR SYSTEM OVERVIEW

904A VOLTAGE CONTROLLED LOW PASS FILTER

Expansion Cabinet 1, positions 4 and 5

- Standard Moog 904A module
- PCB's created from original factory trace layout films
- Controlled by adjacent 992 Control Voltages module

Special components used include:

- Original NOS Mallory 3243J Rotary Switch for range selection
- Obsolete Clarostat U80 series trim pots replaced with identical, obtainable trim pot, or fixed resistors with hand-trimmed values.

992 CONTROL VOLTAGES

Expansion Cabinet 1, position 6

- Standard Moog 992 module
- PCB created from original factory trace layout films
- Controls adjacent 904A module

911 ENVELOPE GENERATOR

Expansion Cabinet 1, position 7

- Standard Moog 911 module
- PCB created from original factory trace layout films

902 VOLTAGE CONTROLLED AMPLIFIER

Expansion Cabinet 1, position 8

- Standard Moog 902 module
- PCB created from original factory trace layout films

Special components used include:

- Original NOS Rocker Switch for Linear/Exponential response selection
- Obsolete Clarostat U80 series trim pots replaced with identical, obtainable trim pot, or fixed resistors with hand-trimmed values.

911 ENVELOPE GENERATOR

Expansion Cabinet 1, position 9

- Standard Moog 911 module
- PCB created from original factory trace layout films

902 VCA FRONT PANEL

Expansion Cabinet 1, position 10

*** *Unique to Keith Emerson's Original System* ***

- Front panel with standard controls and jacks, no electronics behind, no function
- Used as a decorative space filler panel
- Front panel switch connected to panel jacks to allow A/B switch for patch cords

911A DUAL TRIGGER DELAY

Expansion Cabinet 1, position 11

- Standard Moog 911A module
- PCB created from original factory trace layout films

EMERSON MOOG MODULAR SYSTEM OVERVIEW

911 ENVELOPE GENERATOR

Expansion Cabinet 1, position 12

- Standard Moog 911 module
- PCB created from original factory trace layout films

911 ENVELOPE GENERATOR

Expansion Cabinet 1, position 13

- Standard Moog 911 module
- PCB created from original factory trace layout films

902 VOLTAGE CONTROLLED AMPLIFIER

Expansion Cabinet 1, position 14

- Standard Moog 902 module
- PCB created from original factory trace layout films

Special components used include:

- Original NOS Rocker Switch for Linear/Exponential response selection
- Obsolete Clarostat U80 series trim pots replaced with identical, obtainable trim pot, or fixed resistors with hand-trimmed values.

902 VOLTAGE CONTROLLED AMPLIFIER

Expansion Cabinet 1, position 15

- Standard Moog 902 module
- PCB created from original factory trace layout films

Special components used include:

- Original NOS Rocker Switch for Linear/Exponential response selection
- Obsolete Clarostat U80 series trim pots replaced with identical, obtainable trim pot, or fixed resistors with hand-trimmed values.

902 VOLTAGE CONTROLLED AMPLIFIER

Expansion Cabinet 1, position 16

- Standard Moog 902 module
- PCB created from original factory trace layout films

Special components used include:

- Original NOS Rocker Switch for Linear/Exponential response selection
- Obsolete Clarostat U80 series trim pots replaced with identical, obtainable trim pot, or fixed resistors with hand-trimmed values.

901A OSCILLATOR CONTROLLER

Expansion Cabinet 1, position 17

- Standard Moog 901A module
- PCB created from original factory trace layout films

Special components used include:

- Original CA3019 CAN-10 Precision Diode Array chips, sourced NOS

EMERSON MOOG MODULAR SYSTEM OVERVIEW

901B OSCILLATOR

Expansion Cabinet 1, position 18

- Standard Moog 901B module
- PCB created from original factory trace layout films

Special components used include:

- Film capacitors for frequency range selection feature hand-selected parts to bring octaves into precise match, per the original manufacturing process
- Original 1N34 Germanium Diodes for the sine wave shaper, sourced NOS

901B OSCILLATOR

Expansion Cabinet 1, position 19

- Standard Moog 901B module
- PCB created from original factory trace layout films

Special components used include:

- Film capacitors for frequency range selection feature hand-selected parts to bring octaves into precise match, per the original manufacturing process
- Original 1N34 Germanium Diodes for the sine wave shaper, sourced NOS

903 WHITE SOUND SOURCE

Expansion Cabinet 1, position 20

*** *Unique to Keith Emerson's Original System* ***

- Standard Moog 901B module
- PCB created from original factory trace layout films
- Dual 4-position multiple jack clusters added

Special components used include:

- Noise diode implemented with 2N3392 transistor, per original Moog manufacturing update

EMERSON SAMPLE AND HOLD MODULE

Expansion Cabinet 1, positions 21 and 22

*** *Unique to Keith Emerson's Original System* ***

- Custom module designed by Moog music for Emerson
- Circuitry implemented on custom circuit board, derived from the handmade point-to-point vectorboard circuit in Emerson's original system. The circuit schematics are identical.
- Uses adjacent 901A, 901B, and 903 modules for sample rate and sampling signal sources

960 SEQUENTIAL CONTROLLER

Expansion cabinet 2, positions 1 through 8

- Standard Moog 960 module
- PCB's created from original factory trace layout films

Special components used include:

- Original Motorola Resistor-Transistor Logic (RTL) MC700 series chips, sourced NOS
- Original T2 series Lamps
- Original Switchcraft pushbutton switches
- Original CA3019 CAN-10 Precision Diode Array chips, sourced NOS

EMERSON MOOG MODULAR SYSTEM OVERVIEW

962 SEQUENTIAL SWITCH

Expansion cabinet 2, position 9

- Standard Moog 962 module
- PCB created from original factory trace layout films

Special components used include:

- Original Motorola Resistor-Transistor Logic (RTL) MC700 series chips, sourced NOS
- Original T2 series Lamps
- Original Switchcraft pushbutton switches

994 MULTIPLES

Expansion cabinet 2, position 10

- Standard Moog 994 module

961 INTERFACE

Expansion cabinet 2, positions 11, 12, and 13

- Standard Moog 961 module

Special components used include:

- Original Motorola Resistor-Transistor Logic (RTL) MC700 series chips, sourced NOS

960 SEQUENTIAL CONTROLLER

Expansion cabinet 2, positions 14 through 21

- Standard Moog 960 module
- PCB's created from original factory trace layout films

Special components used include:

- Original Motorola Resistor-Transistor Logic (RTL) MC700 series chips, sourced NOS
- Original T2 series Lamps
- Original Switchcraft pushbutton switches
- Original CA3019 CAN-10 Precision Diode Array chips, sourced NOS

962 SEQUENTIAL SWITCH

Expansion cabinet 2, position 22

- Standard Moog 962 module
- PCB created from original factory trace layout films

Special components used include:

- Original Motorola Resistor-Transistor Logic (RTL) MC700 series chips, sourced NOS
- Original T2 series Lamps
- Original Switchcraft pushbutton switches

EMERSON MOOG MODULAR SYSTEM OVERVIEW

CUSTOM BRAIN SALAD SURGERY ALBUM COVER ARTWORK PANEL

Expansion cabinet 3, positions 1 and 2

**** Unique to Keith Emerson's Original System ****

- Created specifically for Emerson's system

CUSTOM MILITARY AIRCRAFT WEAPONS SYSTEM SWITCH CLUSTER

Expansion cabinet 3, positions 3 and 4

**** Unique to Keith Emerson's Original System ****

- Created specifically for Emerson's system
- Switches turn on LED display panels, and rear panel AC outlet

CUSTOM LED DISPLAY PANEL

Expansion cabinet 3, position 5

**** Unique to Keith Emerson's Original System ****

- Seven self-blinking LEDs
- Controlled by switch on Military Switch panel

CUSTOM LFO BASED ON 902 FRONT PANEL

Expansion cabinet 3, position 6

**** Unique to Keith Emerson's Original System ****

- Triangle/Square waveforms
- LFO rate controlled by Fixed Control Voltage control

CUSTOM LFO BASED ON 902 FRONT PANEL

Expansion cabinet 3, position 7

**** Unique to Keith Emerson's Original System ****

- Triangle/Square waveforms
- LFO rate controlled by Fixed Control Voltage control

CUSTOM LFO BASED ON 902 FRONT PANEL

Expansion cabinet 3, position 8

**** Unique to Keith Emerson's Original System ****

- Triangle/Square waveforms
- LFO rate controlled by Fixed Control Voltage control

994 MULTIPLES

Expansion cabinet 3, position 9

- Standard Moog 994 module

CUSTOM DRONE VOICE VCO BASED ON 911 FRONT PANEL

Expansion cabinet 3, position 10

**** Unique to Keith Emerson's Original System ****

- Controls for Frequency, Interval, PWM Rate, and PWM Depth
- Drone Voice enabled by S-Trigger on 911 S-Trig input

EMERSON MOOG MODULAR SYSTEM OVERVIEW

CUSTOM DRONE VOICE VCF BASED ON 911A FRONT PANEL

Expansion cabinet 3, position 11

**** Unique to Keith Emerson's Original System ****

- Controls for Frequency, LP/BP/HP Select, and Resonance

911 ENVELOPE GENERATOR FRONT PANEL

Expansion cabinet 3, position 12

**** Unique to Keith Emerson's Original System ****

- 911 Front panel with standard controls and jacks, no electronics behind, no function
- Used as a decorative space filler panel
- Output jack serves as CV input for Drone VCO's

CUSTOM SEQUENCER SPEED RAMP GENERATOR BASED ON 911 FRONT PANEL

Expansion cabinet 3, position 13

**** Unique to Keith Emerson's Original System ****

- 911 Front panel with standard controls and jacks, no electronics behind, no function
- Used as a decorative space filler panel
- S-Trigger input resets ramp to zero volts, after which it slowly climbs to +10 volts, typically used as a 960 Sequencer step rate control voltage
- Ramp voltage on output jack

CUSTOM LED DISPLAY PANEL

Expansion cabinet 3, position 14

**** Unique to Keith Emerson's Original System ****

- Seven self-blinking LEDs
- Controlled by switch on Military Switch panel

914 FIXED FILTER BANK

Expansion cabinet 3, position 15 through 18

- Standard Moog 914 module
- PCB's created from original factory trace layout films

Special components used include:

- Real inductors used in original Pi-Filter configurations, custom made and wound to precise original factory values

EMOVISION

Expansion cabinet 3, position 19 through 22

**** Unique to Keith Emerson's Original System ****

- Custom panel with LCD video display
- Displays program material from DVD player or other video source