

## ARIES AR-318 S&H / CLOCK / NOISE GENERATOR MODULE

The Aries AR-318 is a 3-function module containing a noise generator, a sample and hold, and a voltage-controlled clock. The noise generator has 3 outputs: White Noise, Pink Noise, and Slow Random voltage (sub-audio noise); all are simultaneously available.

The sample and hold circuit has a signal input and 2 sample command inputs. In the standard S/H operation, a trigger is patched into the trigger input and the module samples the input signal each time it receives a new trigger. Each sampled voltage appears at the output. With a gate patched into the gate input, the module functions as a track and hold, tracking the input voltage when the gate is high, and holding the last voltage tracked when the gate goes low. The T/H function can also be gated by the push button on the front panel. The output voltage can be adjusted to unity gain by the control on the front panel.

The voltage-controlled clock oscillates between 0.3 Hz and 30 Hz, and is controllable by the clock frequency control and by any voltage patched into the FM input. The clock includes a reset sync input by which its frequency and waveshape can be controlled by rising edges from another LFO. The clock has simultaneous square wave, sawtooth wave and trigger outputs. By the front panel switch, the clock's trigger output can be routed to the S/H sample command input.

### FEATURES:

#### Sample & Hold

- Gate In
- Trigger In
- Sample In
- Sample out
- Output level control
- Internal/external switch
- Manual trigger Clock Oscillator

#### VCO

- FM input
- Sync input
- Trig output
- Ramp output
- Square output
- 0.3 Hz to 30 Hz frequency control Noise
- White output
- Pink output
- Random output

#### Specifications

- Sampling Time 10 mS
- S/H Drift - less than 1 mV / sec
- S/H Gain 0 to Unity +/- 10%
- Clock Frequency Range 0.03 Hz to 30 Hz (>6 octaves)
- Clock Output Level 0V to +10 volts
- Control Sensitivity 1V octave +/-10%

#### Power Consumption

- 24mA at +15V
- 24mA at -15V

# S&H/CLOCK NOISE GENERATOR

4 5 6  
3 7  
2 8  
1 9  
0 10

S&H OUTPUT LEV.

3  
0.3 30

CLOCK FREQ.

EXT. CLOCK

TRIGGER  
SOURCE

MANUAL  
TRIGGER

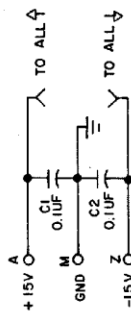
GATE	SYNC	TRIG
IN	⚡	W
OUT	⏏	P
TRIG	FM	R

S&H      CLOCK      NOISE

AR-318

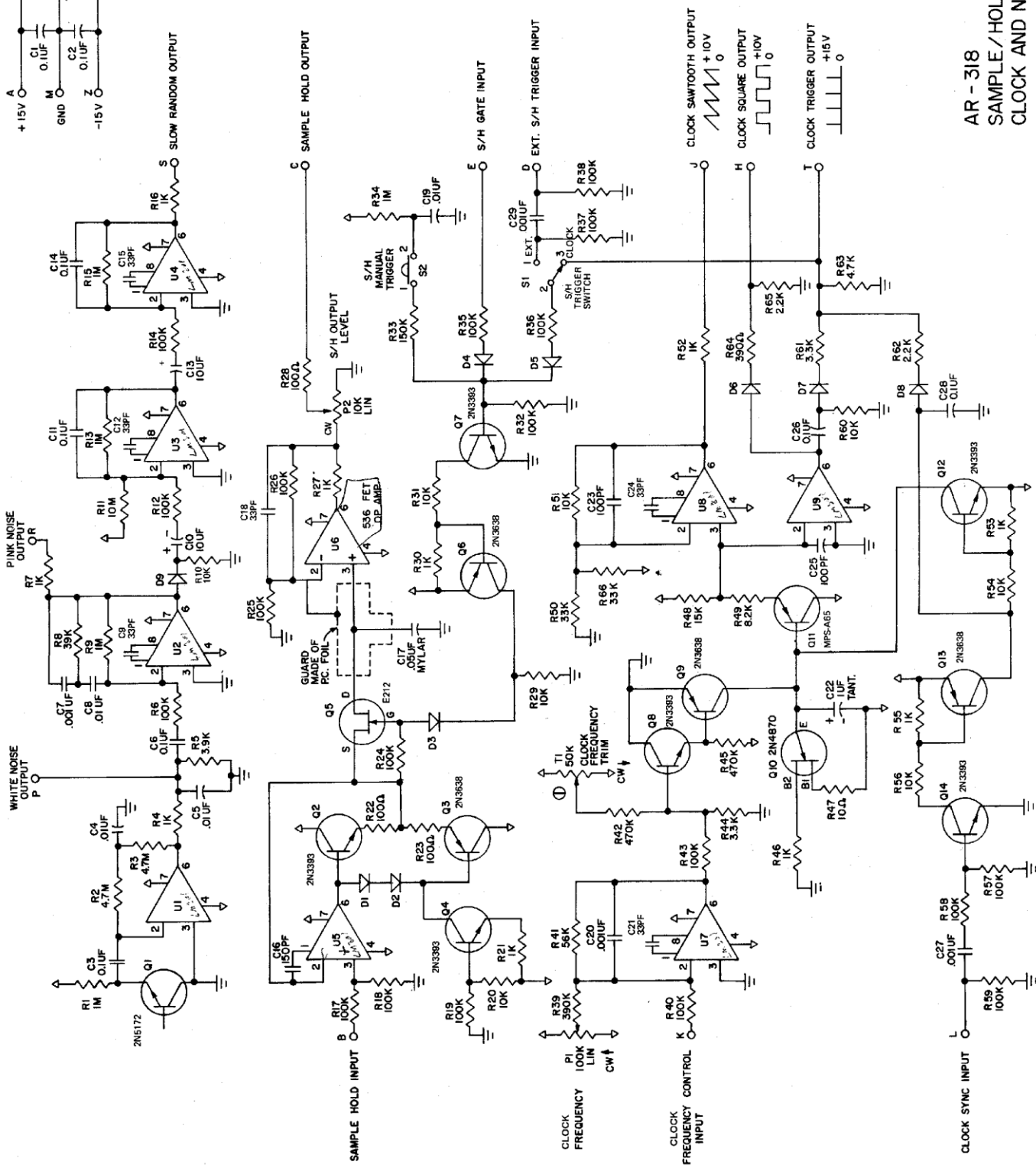






- NOTES:
1. ALL OP AMPS (U1 - U9) EXCEPT U6 ARE LM301A.
  2. ALL RESISTORS ARE 1/4W 10% CARBON.
  3. ALL DIODES ARE SILICON 1N4148

HIGHEST REFERENCE DESIGNATION:  
 C29 U9  
 D9 S2  
 P2 T1



AR - 318  
 SAMPLE/HOLD,  
 CLOCK AND NOISE GENERATOR