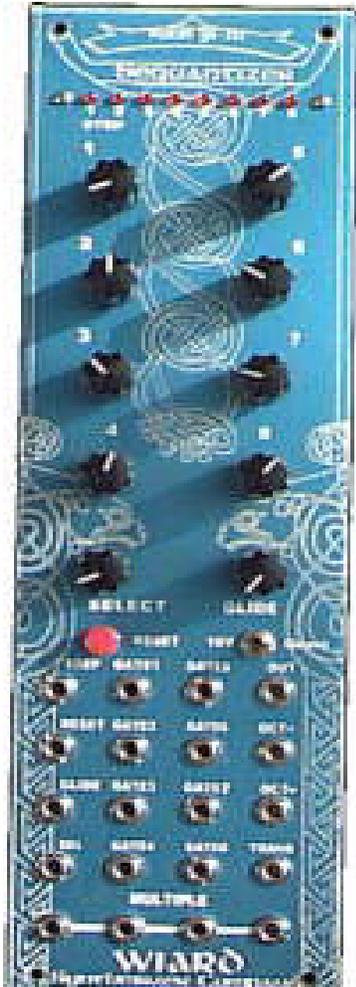


Wiard Synthesizer Company Sequantizer Module Preliminary Manual (v 0.2.1)

By Darwin Grosse and Grant Richter

Please see block diagram at end for additional information



The Wiard Sequantizer is perhaps the most sophisticated sequencer ever produced. In addition to a standard 8-step sequencer, this module provides quantization, slide and octave switches that would normally require several individual modules.

In addition, the Sequantizer includes a manually- and voltage-controlled stage selection function. When clocked, the stage selection function provides "variation" control in the sequencer running order. When un-clocked, the stage selection function selects the currently active stage. This provides manual and external control of the sequencing function, and allows the user an incredible level of sequence manipulation.

LED Series

The LED series at the top of the module displays the currently active sequencer step.

Front Panel Controls

1-8 (Sequencer Step Settings):

The Sequencer Step Settings are the output levels of the individual step settings. From the 10V out jack these levels range throughout the available 10-volt range. From the quantizer out jack the level ranges over a 1.5-octave range (16 semitones). This can be adjusted using the octave shift and transposition input functions.

Select (Stage Selection):

Stage Selection allows two different functions based on whether or not the sequencer is clocked. When clocked, the function provides variations to the sequence run order. The variations are:

Position 1: 1-2-3-4-5-6-7-8

Position 2: 2-1-4-3-6-5-8-7

Position 3: 3-4-1-2-7-8-5-6

Position 4: 4-3-2-1-8-7-6-5

Position 5: 5-6-7-8-1-2-3-4

Position 6: 6-5-8-7-2-1-4-3

Position 7: 7-8-5-6-3-4-1-2

Position 8: 8-7-6-5-4-3-2-1

When not clocked, the Stage Selection control allows any of the eight stages to be selected manually. This is very useful for tuning the individual stages.

Glide (Glide Time Setting):

The amount of "lag time" applied to the voltage output. This setting is used when the input signal on the Glide input jack is "high". Without a plug inserted, the Glide input is normalled "high" for all stages. When a plug is inserted, glide will only occur if the input is at a high level for that stage. The Glide input jack is normally used with the gate outputs to give per stage portamento.

Front Panel Switches, Buttons and Jacks

Reset:

The Reset button sets the current sequencer stage to the first step (as determined by the Select front panel control).

10V (10 volt range output):

This output the 0 to 10 volt setting of the stage without quantization. It can be used simultaneously with the quantized output. This is normally used to modulate both the wave envelope input on the Waveform City module and the FC2 input on The Filter.

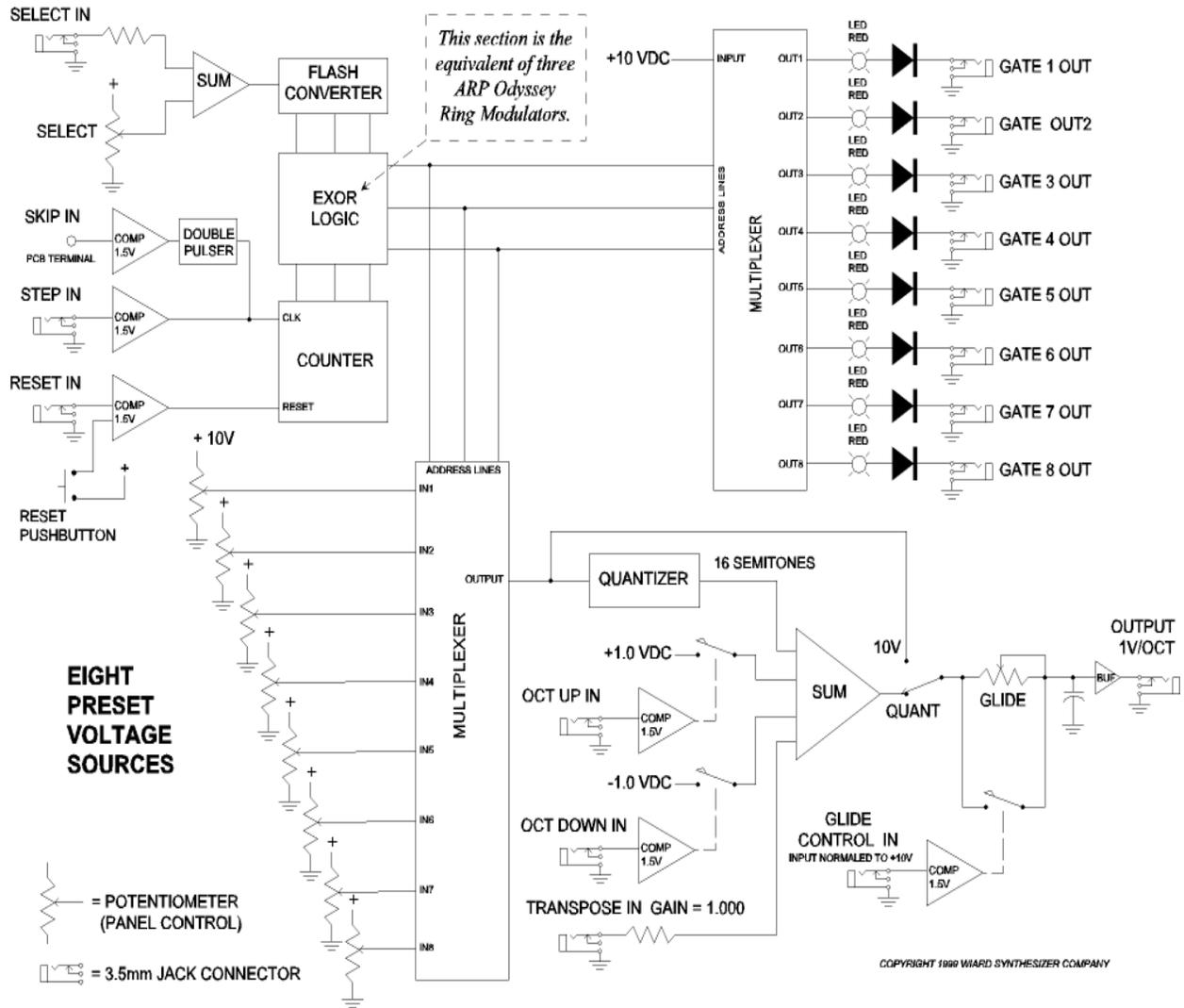
Patchbay Jacks

(listed top-to-bottom, from left to right)

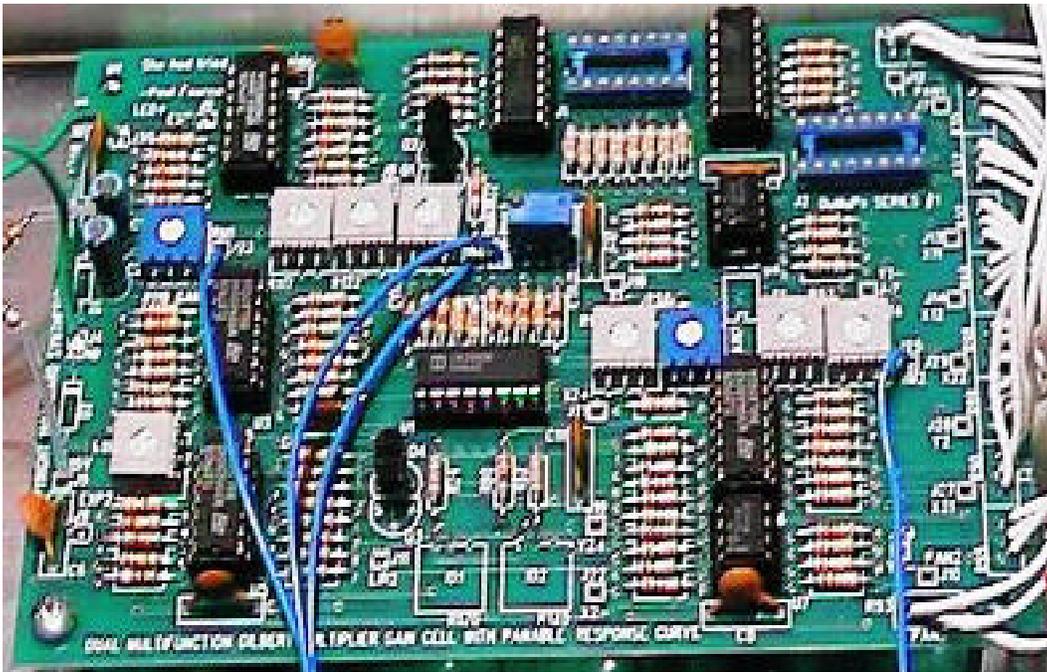
Jack Label	In/Out	Use
Step	Input	A pulse (or any low-to-high transition) will force the sequencer to move to the next step.
Reset	Input	When "high", this performs the same function as manually hitting the Reset button.
Glide	Input	When this input goes "high", a slew processor is applied to the output to glide the output voltage to its new value. The slew time is set using the Glide front panel control.
Select	Input	A voltage-control that duplicates the function of the Stage Select front panel control
Gate 1-8	Output	These eight output jacks go "high" whenever the respective sequence stage is current. These jacks are diode-isolated, so several outputs can be simultaneously connected (using the Multiple jacks) for pulse programming.
Out	Output	The quantized, lag-processed, octave-shifted and transposed output of the current sequence stage.
Oct+	Input	When "high", the output voltage is raised by one volt (i.e., pitch is raised one octave).
Oct-	Input	When "high", the output voltage is lowered by one volt (i.e., pitch is lowered one octave).
Trans	Input	A voltage control that allows the output voltage to be varied by up to 10 volts. This can be used to provide "key shifts" in the output sequence.

Multiple	Either	Any signal can be multiplied (that is, duplicated) by placing a signal into any of these jacks, and using the remaining three jacks as duplicate outputs.
----------	--------	---

WIARD SEQUANTIZER MODULE BLOCK DIAGRAM



NOTE: All gate selectable functions have input voltage thresholds of 2 volts for use with 5-volt systems (including TTL).



Sequantizer curcuit board lay-out