Buchla pulse generator V2

The Buchla pulse generator turns non-Buchla gate signals (+5V to +15V) into the typical Bucha pulse required for proper behaviour of the 208's sustained/transient envelope switch and other Buchla modules.

The circuit works with +/-12V or +/-15V.

The LED resistor should be selected on test according to the desired brightness. 10K is a good value to start with. The LED monitors the incoming gate signal and can be omitted.

The board can be soldered directly to a Cliff minijack socket and installed to a boat or panel or mounted with a screw (3.2mm mounting hole). If the minijack is not used, the input should be wired to the in pad. The output can be wired either directly to a module's pulse input or to a banana socket.

Happy building !

Disclaimer

This circuit is tested and safe as long as built and used as it should. I assume no liability for issues, damages, accidents... Double check the output before connecting it to a module for the first time. Build and installation is at your own risk and should only be done by people experienced in electronics who know what they're doing. If in doubt, don't do it.

BOM

Part	Quantity	Supplier suggestion
		The parts are also available from other suppliers
Resistors		Tayda
220 ohms	1	
1k	1	
6k8	1	
10k	3 (1 SOT for optional LED)	
20k	1	
Trimmer 3362P		
10k		Tayda
Capacitors		
4.7nF film	1	Tayda
100nF multilayer ceramic	2	Tayda
Diodes		
3.6V Zener	1	<u>Tayda</u>
1N5818 or other Schottky	2	Tayda
3mm LED	1 (optional)	Tayda
Misc		
741 opamp	1	<u>Tayda</u>
DIP8 IC socket	1	Tayda
Cliff CL1384 mono jack socket PC mount	1 (optional)	TME

Pulse out scaling

This is for a 208, adapt for other modules.

Set the sequencer, envelope and pulser trigger source switches to keyboard and the envelope mode select switch to transient.

Depress a key of the keyboard.

It should fire the sequencer, envelope and pulser.

The envelope and pulser should behave in transient mode and their length shouldn't be related to how long the key is depressed, if it is adjust the trimmer located above the pulse out banana in order to get correct behaviour.

Some may prefer a sustained behaviour of the pulser and keep it on as long as the key is depressed, this is possible with a fine adjustment of the trimmer, keeping the envelope working well in both sustained and transient modes.

