Model 282e Quad Transevent Generator

firmware version 1.2.6

Four multi-segment continuous arbitrary voltage sources with variable time and attachable pulse grid. The user interface was inspired by powerful function generators that existed in Buchla 500/400/700 systems and allowed user to form complex functions applicable to various internal and external parameters.

Once powered up, the 282e displays an overview of all four functions with their time and attenuverter values. Pressing the respective **EDIT** button takes the user to **crosshair** edit mode in which turning the **Y** immediately creates the node on the vertical line previously defined by the **X**. Nodes can be deleted or moved by pressing **X** or **Y** accordingly. Subsequent use of **crosshair** button will make the cursor to step through all available nodes. Long press on the **crosshair** button activates some additional editing capabilities - **X** and **Y** encoder knobs shift whole function along the horizontal and vertical axes, respectively.

The **curve** button lets the user set the start **(X)** and the end **(Y)** points of the drawable continuous curve. The drawing process is accomplished by the lower knob marked with an arrow. As soon as the cursor reaches the end point, editing mode changes back to **crosshair**. If the model 224e controller is presented within the system, it can be used as a realtime input device for continuous functions, much like a drawing tablet or a digitizer. The long press on **curve** button activates the drawing mode on both modules, pressing any 282e's blue button reverts to their normal operation.

The third edit mode is *loop/cycle* mode which assists in defining a zone that shall become a sustained part of the function. Three directions are available: forward, backward and shuttle.

The long press on *loop/cycle* will force the function to be played repeatedly thus creating a periodic voltage and event pattern. This particular mode is indicated by red leds.

hint - Pressing *TIME* knob immediately toggles the state of the corresponding channel between cycle and one-shot, without the need to enter the edit screen.

hint - When cycled, the incoming pulse unconditionally resets function's phase.

Last but not least is the *pulse grid* mode. User can add or delete time-correlated pulses with either *X* or *Y* knob. Subsequent use of *pulse grid* button will make the cursor to step through all pulses on the grid. The long press on the *pulse grid* button engages the grid scrolling sub-mode, operating by either *X* or *Y* knob. The pulse line can be easily toggled from any screen - simply hold the respective *EDIT* button to press the *pulse grid*.

When finished with editing, press an active *EDIT* button to return to the overview screen.

Each function's execution time is set by its own *TIME* knob and is always displayed on the screen. Voltage control inputs with attenuvertion are also provided. Time range varies from 0.1 to 999 seconds (approx. 17 minutes). The long press on a *TIME* knob toggles the control focus between time and its attenuverter, for the corresponding channel. Holding the *EDIT* button and turning the respective *TIME* knob dials the value 10 times faster.

hint - Holding and turning any encoder modifies the corresponding parameter in coarse steps.

Copy-paste facility is readily available by holding the **EDIT** button on any source channel and then pressing the **EDIT** button on any other channel whereto the function is to be transferred. The confirmation dialog will appear and the user can choose which part should be copied. Holding the **EDIT** button followed by the **TIME** knob will cause the **clear** procedure to launch, with all the same confirmation window.

Current state of the 282e can be stored as a preset within the 200e compatible environment. A long press on the **X** knob toggles the remote status.

The display can be switched off by holding the **Y** knob, pressing any button reverts to the normal operation.

Global Parameters

Pressing **crosshair** and **pulse grid** buttons simultaneously causes the current version number to show up. The display brightness/inversion can be set with either **X** or **Y** knob, as well as some function dependant parameters: the non-cycled (one-shot) re-triggering mode and the cycle break behaviour. Preset manager type and start-up time are also selectable. Press any blue button to revert to normal operation.

Preset Manager

Located in the lower left area, the 200e compatible preset manager supplies the user with the simple controls. An additional on-screen menu visualizes the **store**, **recall** and **all remote on/off** functionality.

hint - Preset manager can be turned off globally by the small red dip switch on the module's circuit board.

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