

HEDGHOG PSC

Programmable standards converter

The Hedghog PSC can be programmed by using the two rotary encoders, push-button and Display. The following is a brief description of the various menus.



The top line of the display is the parameter the lower line is the parameter's value.

Rotating the left hand knob changes the parameter.

Rotating the right hand knob changes the value.

Pressing the left hand knob loads the new values into the converter and modulator, at the same time it saves the new values to memory.



PRESET NO x

Preset number.

There are 20 presets numbered from 1 to 20.

Each preset holds a unique converter setting and a unique modulator setting.

The bottom line is the name given to the preset and can be changed further down the menu.



TEST PATTERN

Selects test pattern from Test Card, Grey Scale, Cross Hatch, Cruciform, Black Screen and White Screen. The test patterns are fed in before the converter and so are available on all output standards.



CONVERTER

Turns the converter On/Off

When "Off":

The incoming video is fed directly to the modulator bypassing the converter.

The menu positions relating to the converter are collapsed.

If the converter had been setup prior to selecting "Off" the converted video will be available at the video out socket.



FRONT PORCH

Sets the length of the front porch.

The number on the left is the length in clock cycles. The next number is the approximate length in micro seconds.

The length of the line scan must remain constant. So as clock cycles are added or taken away from any part of the line scan the length of each clock cycle must get shorter or longer.

Therefore for example changing the number of cycles in the front porch the length in time of the sync pulse, back porch and active part of the line will change.

Cropping will also affect the clock cycle length.



SYNC PULSE

Sets the length of the horizontal sync pulse.

The number on the left is the length in clock cycles. The next number is the approximate length in micro seconds.



BACK PORCH

Sets the length of the back porch.

The number on the left is the length in clock cycles. The next number is the approximate length in micro seconds.



ACTIVE LINES

Sets the number of lines containing picture information in a field. Which is half the number of lines containing picture information in a frame. In this example for 405 lines gives 376 active lines in a frame.



NO OF LINES

Sets the number of lines in a frame



EQU PULSE

Turns equalising pulses On/Off



FIELD FREQ

Sets the field frequency of 25, 30, 50 or 60 Hz.



BROADPULSE WIDTH

Sets the length of the broadpulses.

When in "AUTO" they are calculated at 40% of the line length.

When set manually the number of cycles and approximate length of time is displayed.

When the number of cycles are reduced below 100 it goes into "AUTO".



NO OF BROADPULSE

Sets the number of broadpulses.

The range is 1 to 50.



LT CROP

Sets the number of pixels to be cropped from the left side of the picture.



RT CROP

Sets the number of pixels to be cropped from the right side of the picture.



VERT SHIFT

Sets the number of blank lines per field to be inserted below the picture. This can be used to shift the picture upwards.



SYNC HEIGHT

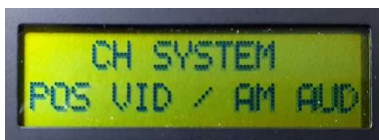
Sets the sync height of 20, 25, 30, 35, 40, 45 or 50%.



MODULATOR

Turns the modulator On/Off

When Off the modulator is turned off and the menu positions relating to the modulator are collapsed.



CH SYSTEM

Channel system, positive video and AM audio or negative video and FM audio.



VID CAR RF RANGE

Video carrier frequency range of 28.5 to 56.25 MHz, 56.25 to 112.5 MHz, 112.5 to 225 MHz, 225 to 450 MHz or 450 to 900 MHz.



VID CAR FREQ

Video carrier frequency.



VID/AUD SEP

Video audio carrier separation of 4.5, 5.5, 6.0, 6.5 MHz or Variable.

When Variable is selected the audio carrier frequency can be set manually.

Variable can only be selected when channel system is set to positive video and AM audio



AUD CAR RF RANGE

Audio carrier frequency range of 28.5 to 56.25 MHz, 56.25 to 112.5 MHz, 112.5 to 225 MHz, 225 to 450 MHz or 450 to 900 MHz.

Only available when VID/AUD SEP is in variable mode



AUD CAR FREQ

Audio carrier frequency

Only available when VID/AUD SEP is in variable mode



AUDIO GAIN

Audio input gain



SET NAME CHR x

The three photos above show 3 positions of 16 used to set the name of the preset. In the three photos characters in position 1,2 and 3 are been set. In each of the photos the cursor is under the character been set. Rotating the right rotary encoder will change the character above the cursor.



STARTUP PRESET

Sets the preset that will be loaded at startup.



VID:AUD RATIO

Sets the video to audio carrier ratio to 12 or 16 dB. Only available when AUD CAR RF RANGE is set to 4.5, 5.5, 6.0 or 6.5 MHz.

Default Settings

When the microcontroller is programmed the presets have random settings in them. The settings can be filled in manually or a set of default settings can be loaded into them. The default settings will populate the presets with suggested settings for various line standards and channels.

To load the default settings go to "PRESET NO. 20" and then scroll down to "SET NAME CHR 16". If the right hand push-button is pressed you will be asked to confirm that you want to load the default settings by pressing the left push-button. The default setting will then load.