Pixie-FS   Time Base Corrector

Manual Version   V1.02

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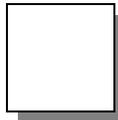
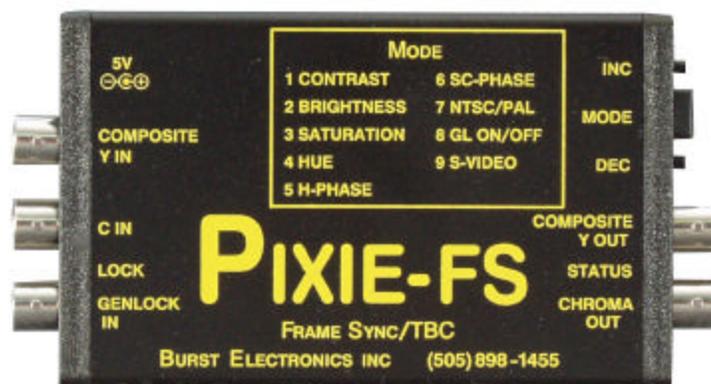## Pixie-FS Analog TBC w/ Infinite Window Frame Store

Congratulations on your purchase of the Burst Electronics model Pixie-FS Time Base Corrector with Infinite Window Frame Store. This is a fully functional TBC in an extremely compact enclosure (small enough to fit in a pocket). This product is designed to

take an asynchronous video source and synchronize this video to an external reference video signal (ie. House Black). Several adjustments to the video output are controlled by the Mode dial and Inc/Dec buttons. Features

- Full Frame Time Base Correction
- Adaptive Comb Filter Decoding
- Input Anti-Aliasing Filters
- NTSC/PAL
- Genlock capability
- Composite to S-Video Transcoding

- S-Video to Composite Transcoding

Mode Dial (Burst Electronics recommends using a Vectorscope and Waveform Monitor while adjusting the Mode functions)

1. Contrast (video gain) - adjusts the range between full White and full Black. At its minimum level, White and Black converge at +47IRE. At near the maximum level, Black rests at 0IRE and White at 112IRE. Each step of adjustment is approximately 0.3IRE. Caution should be observed not to exceed this range. Digitally created artifacts will appear across the video frame if this adjustment is overdriven.
2. Brightness (setup) - adjusts the level of DC offset of the active video. At its minimum level, Black rests at 0IRE and Whiter Than White at 27IRE. At the maximum level, Black rides at 69IRE and Whiter Than White at 112IRE. Each step of adjustment is approximately 0.3IRE.
3. Saturation - adjusts the amount of amplitude allotted to the Chromanance. At its minimum level (assuming Contrast and Brightness are set to NTSC standards), color vectors align to the center of the color boxes on a Vectorscope. At its maximum levels, color vectors amplitude are doubled.
4. Hue (phase) - adjust the phase angle of the Chromanance with respect to subcarrier. 0-360 degrees of phase can be achieved.
5. H-Phase - adjusts the Horizontal Phase relationship with respect to the reference video source. Depress either the Inc or the Dec button four (4) times for each 0.3uS step.
6. SC-Phase - adjusts the Subcarrier Phase relationship with respect to the reference video

source.

7. NTSC/PAL - Selects between NTSC and PAL as the video input/output.
8. GL On/Off - Selects whether a reference video source is being used to synchronize the input video source.
9. S-Video - Selects the type of input video source, either Composite video or S-Video (Y/C).

Saving Settings

The Pixie-FS will save the settings you have made automatically. After a setting has been adjusted, let the Pixie-FS sit for approximately 15 seconds. The LOCK LED will rapidly flash 5 times when the settings are being saved. Once the LED goes steady your settings are saved.

Transcoding

The Transcoding function allows the input video signal to be converted from either Composite video to S-Video or S-Video to Composite video. This function is controlled by both the "Mode #9 S-Video" control and an internal jumper at JP3. The jumper at JP3 commands the Pixie to output video as either Composite or S-Video. Transcoding is configured as follows

Mode #9	JP3	Input	Output
Composite In	Out-CVS	Composite	Composite
Composite In	Y-Out	Composite	S-Video
S-Video In	Out-CVS	S-Video	Composite
S-Video In	Y-Out	S-Video	S-Video

Specifications

Inputs:

- Composite or S-Video, BNC connectors
- Genlock (High-Z or 75 ohms)
- AGC - Sync priority
- Input Level +/- 6dB
- 4:2:2 CCIR656 Processing
- 9-bit A/D quantization
- 27MHz Sampling
- 4-line Adaptive Comb Filter

Outputs:

- Composite or S-Video, BNC connectors
- Level 1vpp

Performance:

- Frequency Response +/-1.0dB to 5.5MHz
- Differential Gain < 2%
- Differential Phase < 2^0
- SNR > 52dB
- K Factor M < 1%
- Infinite Frame Sync

Adjustments:

- Luminance
- Chroma
- Hue
- Brightness
- Genlock H-Phase +/- 2us
- Genlock Subcarrier Phase 0-360^0
- Genlock on/off
- Standards NTSC or PAL

- Input Selection CVS / S-Video

Power:

- 5VDC @ 420ma

Environmental:

- Operational Temperature Range 0^0 to 50^0 C
- Storage -20^0 to $+85^0$ C
- Humidity to 98% non-condensing

Dimensions:

- 2.8W x 0.8H x 4.5D