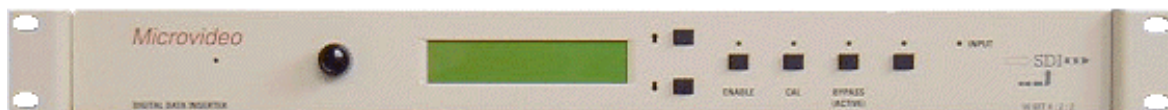


Aspect Ratio Signalling Data Inserter

Features:

- Inserts line 23 - Aspect Ratio Data
- For UK DTTV applications
- Front panel or remote control
- Serial Digital Video interface (270Mb/s)
- Power fail by-pass relay

In a broadcast system which is using both standard 4:3 and wide screen (16:9) format pictures it is useful to label the video signal with aspect ratio information. This allows equipment in the transmission chain to know what the picture format is. Microvideo supply Data Inserters and Decoders for this Aspect Ratio Signalling.



The first half of line 23 is being used to carry aspect ratio information about the picture for systems with the capability of having wide screen images. We are able to support two wide screen data signalling formats:

PAL Plus Data format :

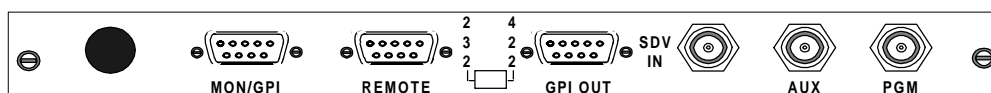
Data is put on line 23 using Biphase coding with a clock frequency of 1.67MHz. This is low enough to be recorded by consumer VCR's and decoded in the presence of noise. The data packet has a duration of 27.4uS. It consists of a sync run in, data identification, followed by 14 Consumer Information Bits (CIB). These CIB's are sectioned into four groups; Aspect ratio, Enhanced Services (Colour Plus), Subtitle formats and free(user bits). The Microvideo WSS-GEN inserter supports programming of all these groups, including the recently defined surround sound bit, bit 11.

Active Format Descriptor for Digital Terrestrial :

The waveform used is of the same specification as PAL Plus but the 14 bits of data are interpreted differently. They are used to convey the source aspect ratio (4:3 or 16:9) and the active format descriptor (AFD) that is required for digital terrestrial systems. This data is similar to that transported by Video Index signalling (See Microvideo Video Index Inserter datasheet).

Specifications

Video in/out : Serial digital video (270Mb/s) to SMPTE259M (EBU Tech 3267-E)
Two SDV outputs; PGM out (has power fail relay bypass) and AUX out.



Control

Front Panel

The unit may be controlled through front panel operation, GPIs or RS232 / 422. Front Panel controls allow enabling and disabling of GPI inputs.

RS232 / RS422 Control

RS422 can overwrite front panel control settings and can enable / disable GPI inputs, it cannot disable front panel control, this can only be done with 'panel disable' button on front of unit. The front panel always displays the current status of the inserter.

GPI Control

GPI inputs need to be held in state required. Unconnected GPI's are held high (TTL levels). The relevant signalling bits on line 23 will change immediately after GPI control changed or on receiving a complete instruction packet from the remote input. Front panel control will also have immediate effect.