

# Microvideo

## PAL Plus Wide Screen Signalling Inserter



### Features

- Inserts line 23 - Widescreen Signalling
- Programmed and user defined presets
- Front panel or remote control
- Serial Digital Video interface (270Mb/s)
- Power fail by-pass relay

The first half of line 23 is being used to carry aspect ratio information about the picture for transmission systems with the capability of having wide screen images. There are two standards in use at present, these are PAL Plus and Active Format Descriptor (AFD). We can offer products for both types, however this datasheet describes only that of the Pal Plus Data inserter. The main benefit of Pal Plus is that it is read by many wide screen television receivers.

### PAL Plus Data format :

PAL Plus has 14 bits, divided into 4 groups

Group 1	4 bits	Aspect Ratio Info
Group 2	4 bits	Camera Mode and help signalling
Group 3	3 bits	Subtitle positions
Group 4	3 bits	Surround sound, copy restriction bits

The 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 Inserter supports programming of all these groups, including the recently defined surround sound bit, bit 11. For more information on the exact structure we refer you to ETSI document ETS300 294.

Below are the aspect ratios that can be signalled -

	bits	Description	Actual Video Format
	<b>2 1 0</b>		
0	0 0 0	Full 4:3	4:3
1	0 0 1	14:9 Center	4:3
2	0 1 0	14:9 Top	4:3
3	0 1 1	16:9 Center	4:3
4	1 0 0	16:9 Top	4:3
5	1 0 1	> 16:9 Center	4:3
6	1 1 0	4:3 with shoots and protect 14:9	4:3
7	1 1 1	Full 16:9	16:9

### Note :

State 7, Full 16:9, is the only one that signals an anamorphic picture. All the others are 4:3 with the relevant letter box.

## Specifications

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

### Analogue VBI Data (- AN option)

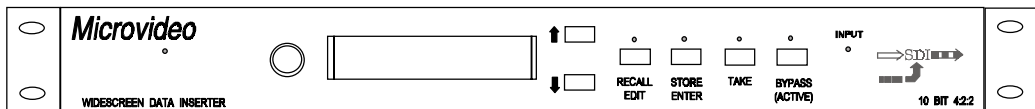
This allows analogue VBI data sources (eg. teletext) to be inserted into the SDV stream.  
This operates in a similar way to our standard VBI Inserter (INS-S).  
Refer to this data sheet for further specifications.

### Analogue Output (-MON option)

This provides a analogue PAL/NTSC output which can be used for monitoring purposes.

## Control

Front Panel Controls and LCD display allow setting of the data to be inserted onto line 23.



The unit has three modes of operation. These allow the user to select preset configurations and to program their own.

**Recall mode** - selects and inserts preset configuration.

**Edit mode** - The selected option is copied to the edit buffer, it can then be modified.

**Store mode** - New options can be programmed in and saved as a user defined preset with its own ASCII name.

Remote Control is available using GPI or RS232 (and RS422) interfaces.

GPI 1 = take low to enable.

GPI 2 select between preset 1 (low) and preset 2 (high)

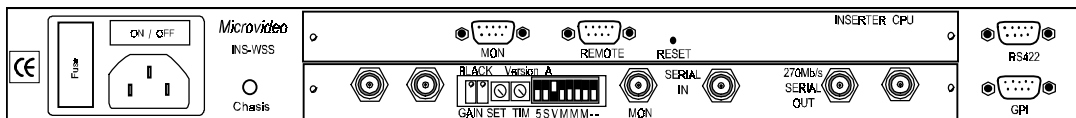
RS232 / RS422 This is used by our remote control panels or an automation system.

Contact Microvideo for protocol information.

## Notes

If the Analogue VBI Data Input (option -AN) is fitted, then the user may program which line the VBI data is inserted onto, from the front panel. This however cannot be programmed remotely.

## Rear Panel



Analogue  
VBI in

## Ordering Information:

INS-WSS-PAL	Widescreen Signalling Data Inserter for PAL Plus.
<b>options</b>	
-ITS	Insertion Test Signals, UK or CCIR patterns
-AN	Analogue input for other VBI sources
-MON	Analogue PAL monitoring output