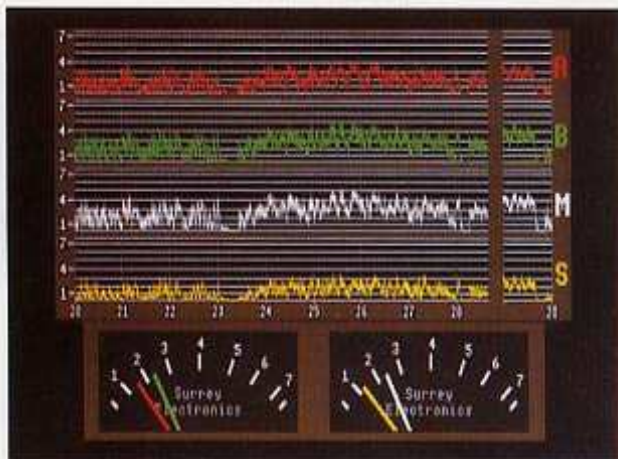


PPM10: IN-VISION PPM

- TWIN TWIN POINTER DISPLAYS
- CHARTS PROGRAMME LEVELS – A POWERFUL ANALYTICAL TOOL
- RGB OUTPUTS, OR SUPERIMPOSED ON PAL PICTURES



COLOUR VIDEO PRINTER



UNTOUCHED SCREEN PHOTOS

PPM10 takes stereo audio inputs and generates a high definition colour video display emulating the well known coaxial twin movements, long regarded as a most satisfactory way of monitoring stereo audio levels and mono compatibility. The eye can judge the level displayed, at a glance, from the angle of pointers, without needing to refer to scale markings.

Two sets of coaxial pointers comprising Red (A, Left), Green (B, Right) and White (M, Sum) and Yellow (S, Difference) are displayed, while S+20dB may be selected by a front panel control, with a legend appearing on the M and S display. Small coloured indicators on the PPM dials may be switched on to hold peak levels indefinitely, for 10 seconds, or for 1 second.

Four charts may be switched on to give continuous recordings of programme levels, with time spans across the screen between 5 minutes and 24 hours. The charts do not merely record peak amplitudes, but using techniques adapted from our paper chart recorders they also give a good impression of programme dynamic range and the effects of audio processing, such as compression or limiting, can be seen clearly. Where time spans longer than 60 minutes across the screen are selected the time scale is marked in real clock time. The unit does not utilise a cooling fan and is acoustically silent.

All characteristics of PPM10 are under control of a high speed computer and this includes the quasi logarithmic PPM scale law. Elimination of the temperature coefficient and ageing of a mechanical meter movement allows unrivalled accuracy over both the short and long term. Simulating the specified special meter ballistics in the computer, separately from the attack and decay times, has uniquely resulted in excellent representation of pointer behaviour.

PPM10 produces 625 line RGB outputs or, with the addition of the coder board, a standard composite PAL output. This may be free running, or genlocked to any incoming video or synch source, either of studio quality, or from video recorders with line timing jitter. The PPM picture may partially or fully superimpose on the programme video as adjusted by the front panel control. For the absolute minimum intrusion into picture area, just the PPM marks and the four pointers may be selected.

Additional software will allow options, such as operating a level alarm or dumping of charts to a printer.

PPM10 SPECIFICATION – Fully complies with BS6840-10 (IEC268-10A and BS5428-9 revisions)

Input impedance:	40k Ohms balanced, floating Protected against static voltages on signal lines
Input sensitivity for Mark 4	A+B 0dBV.7 M+S -3dBV.7 coherent on both inputs reads Mk 4 on M and Zero on S. +3dBV.7 on one channel reads Mk 4 on M and Mk 4 on S. (S sensitivity can be increased by 20dB)
Line balance. 20Hz - 20kHz	Better than -60dB from 600 Ohms source
Common mode rejection. 20Hz - 20kHz	Better than -45dB



Scale law	4dB increments between Mark 1 and Mark 7 (-12/+12dB)															
Low level performance	Isolated 10ms burst of 5kHz at 30dB below Mark 6 reading gives 3% deflection.															
Calibration accuracy and temperature stability, 0 - +50°C	Within 0.2dB. Logarithmic law and display position under software control															
Frequency response at any Mark	20Hz - 20kHz ± 0.3 dB 10Hz -2dB; 40kHz -1dB															
Rise time: response to isolated bursts of sine wave whose steady state amplitude deflects to Mark 6	<table border="0"> <tr> <td>100ms of 5kHz</td> <td>0</td> <td>± 0.5dB</td> </tr> <tr> <td>10ms of 5kHz</td> <td>-2.5</td> <td>± 0.5dB</td> </tr> <tr> <td>5ms of 5kHz</td> <td>-4.0</td> <td>± 0.75dB</td> </tr> <tr> <td>1.5ms of 5kHz</td> <td>-9.0</td> <td>± 1.0dB</td> </tr> <tr> <td>500μs of 10kHz</td> <td>-17.0</td> <td>± 2.0dB</td> </tr> </table>	100ms of 5kHz	0	± 0.5 dB	10ms of 5kHz	-2.5	± 0.5 dB	5ms of 5kHz	-4.0	± 0.75 dB	1.5ms of 5kHz	-9.0	± 1.0 dB	500 μ s of 10kHz	-17.0	± 2.0 dB
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Fall back time	Mark 7 to Mark 1 2.8s ± 0.15 s															
Dynamic linearity and overload characteristic	When above 10ms or 1.5ms bursts of 5kHz altered in level between -20dB and +10dB indications change in direct proportion. 100V ac input sustained indefinitely.															
Reversibility error	Bipolar rectification within 0.2dB at all Marks, any frequency 10Hz-40kHz															
Distortion introduced into 600 Ohms signal line	Supply on or off, 20Hz-20kHz at +20dBV.7: Less than -70dB, 0.03%															
Chart span	OFF, 5, 10, 20, 60m; 2, 4, 8, 24h. Records A, B, M, S or S+20dB. Charts are marked in real clock time on hour settings.															
Video outputs	9 way D connector. R, G, B: 1 volt in 50 Ohms. 15.625kHz/50Hz non-interlaced.															
OPTIONAL PAL OUTPUT	The PAL coder is of studio quality, but there is some degradation in image quality due to the PAL footprint.															
Composite output	BNC connector. 1 volt in 50 Ohms composite PAL free running, or locked to incoming video or synch.															
Composite input	BNC connector. 1 volt in 50 Ohms required.															
Supply input	IEC connector. 90-120V or 200-250V 50-60 Hz 50VA.															
Safety	Complies with IEC65-2. BS415.															
Dimensions and weight	W, 483mm, H, 88mm, D, 400mm: 5kg.															