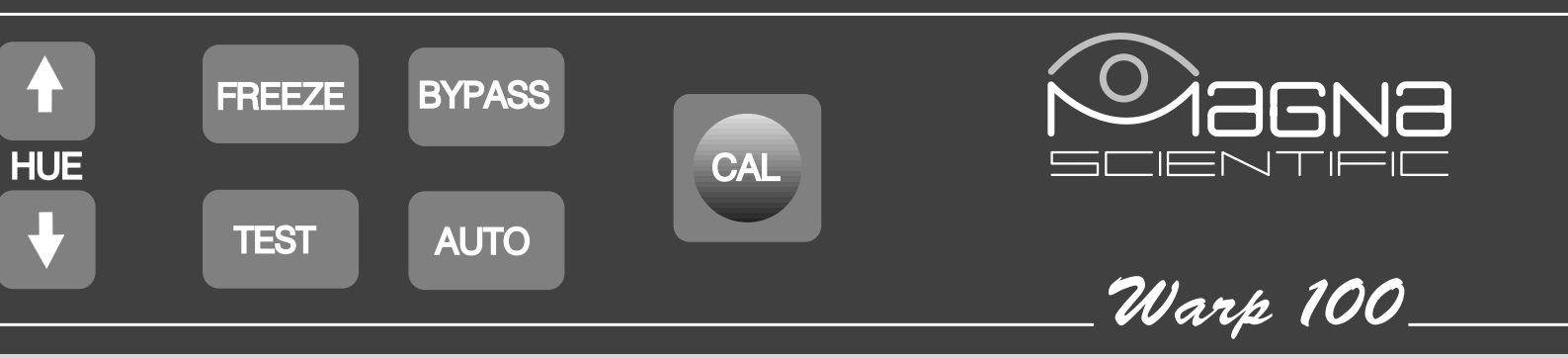
WARP 100
High Performance
Digital Transcoder



WARP 100

WARP 100 is a high performance professional transcoder designed, developed and manufactured by Magna Scientific to satisfy the needs and requirements of a demanding market.
Transcoding is achieved through the demodulation and re-modulation of the chrominance signal which, together with the regenerated luminance, sync and burst, conform the transcoded output video, whose characteristics are compliant with ITU-R (former CCIR) 624-3 standard.
Video processor is fully digital, and operates with composed video input signals (CCVS) or Y/C, and also it has an auxiliary input which can be switched automatically.
The optional digital Adapting Comb Filter can be used to get optimal separation of Luminance and Chrominance components. Also optional, a programmable noise reducer helps to improve the quality of the input source.
Warp 100 has an internal bars and ramp generator which can easily be activated from the front panel or automatically on video absence, also it allows the programming of other options.
Full remote control is achieved through **M-LINK**, a Magna Scientific custom designed network.
The benefits and characteristics of **WARP 100** plus its optimal cost-performance relationship make it one of the best choice in the market.

Features:

- Menu selection of transcoding standards:

PAL B	⟷	PAL N
NTSC	⟷	PAL M
NTSC 4.43	⟷	NTSC 3.58

- Can be configured as a video processor (same Input and Output Standard).
- Digital Video Processor with wide range Hue, Set-Up, Chrominance and Luminance controls.
- Burst and Sync regeneration.
- Bar and Ramp generator
- Two Composite Video, one Y/C inputs which can be switched in the vertical interval.
- Two composite Video Outputs.
- Easy menu driven operation and programming with all user's options stored in non-volatile memory.
- Automatic power fail recovery
- Remote control capability.

Optionals:

- 3-line Adaptive Digital Comb Filter, operates even with non SC/H stable sources.
- Programmable Digital Adaptive Noise Reduction subsystem.
- VBI pass through.

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Technical Specifications:

Input

• Main Video	1, CCVS 1, Y/C
• Auxiliary Video	1, CCVS
• Input impedance	75 Ω (internally terminated)
• Sync threshold	150 mV
• Burst threshold	80 mV

Output and Sync Generator

ITU-R 624-3 fully compliant

• Video outputs	2, CCVS 1, Y/C
• White Clipping Levels	
PAL B and PAL N	700 mV
PAL M and NTSC	714 mV
• Sync Levels	
PAL B and PAL N	300 mV
PAL M and NTSC	286 mV
• Sync Edges	
PAL B and PAL N	200 nS
PAL M and NTSC	250 nS
• Subcarrier Frequency	
PAL B	4.43361875 MHz
PAL N	3.58205625 MHz
PAL M	3.57561149 MHz
NTSC	3.579545 MHz

Digital Process

ITU-R 601 fully compliant

• Sampling frequency:	
Luminance	13.5 MHz
Chrominance	6.75 MHz
• Luminance resolution	8 bit
• Chrominance resolution	8 bit
• Architecture	4 : 2 : 2

Control Range

• Luminance	0 to 200%
• Chrominance	0 to 200%
• Setup	± 200 mV
• Hue (NTSC input)	± 40º

Performance

• Frequency response:	
CCVS	3.8 MHz
CCVS (Comb filter)	5.5 MHz
Y/C	5.5 MHz
• Luma-Chroma delay	≤ 3 nS
• Differential gain	≤ 2%
• Differential phase	≤ 2º
• S/N Ratio (weighted)	≥ 72 dB
• S/N Ratio (unweighted)	≥ 60 dB
• Noise Reducing	up to 12 dB in 10 steps

General

• Mains Power	80 to 240 V 47 to 440 Hz
• Consumption	≤ 15 W
• Enclosure	1 std.rack unit
• Weight	aprox. 8 lbs.

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