

# Xintekvideo INC.

## VIDEO PROCESSOR / NOISE REDUCER MODEL VP100



### AN ADVANCED NOISE REDUCER VIDEO PROCESSOR FEATURING:

#### ***\*Xintekvideo's VIP Technology***

A digital Video Improvement Processor engine utilizing advanced filtering techniques with motion compensation to provide over 9 dB of random noise reduction with no objectionable artifacts.

#### ***\*Digital Luminance/Chrominance Delay Compensation***

Digitally controlled Y/C delay compensation permits accurate and stable correction of Y/C delay errors.

#### ***\*Digitally Generated High Frequency Correction Signal***

High frequency luminance details are digitally cored to minimize noise, and added to the luminance.

#### ***\*Color Phase and Color Gain Correction***

Variable color gain and color phase corrections permit restoring proper color hue and color phase.

#### ***\*Black Stretch and White Stretch Circuits***

Variable differential gain adjustment permits bringing out compressed highlights or fine details in blacks.

### DESCRIPTION:

The Model VP-100 Video Processor/Noise Reducer is a state of the art professional equipment. It achieves significant picture quality improvements by correcting most common video errors as well as enhancing quality by reducing background noise by up to 9 dB.

The unit provides independent noise reduction of the luminance and chrominance signals using Xintekvideo exclusive **VIP** technology. **VIP** (Video Improvement Processor) is a proprietary system that utilizes recursive filtering techniques in conjunction with sophisticated motion compensation to achieve outstanding noise reduction performance. The performance of the system is particularly startling when applied to very noisy video signals. (Try using other noise reducer with very noisy pictures and look at the artifacts generated by those processors!).

In addition, the Model VP-100 provides means to correct differential gain errors; It provides means to compensate luminance high frequency losses; It permits chrominance level and burst phase correction for proper restoration of color levels and color hue; It permits luminance/chrominance delay correction for a perfect match of luminance and chrominance positions.

The VP10 is ideal for transmission links utilizing digital compression techniques (e.g. MPEG), where random noise can severely affect compression efficiency. It is highly effective in video production applications to improve picture quality from poor tapes or old films. It is very useful at cable head ends when trying to pick up distant or weak stations.

# Random Noise Reducer

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## Model VP100

### *Specifications:*

#### **Input:**

NTSC Color TV Signal

1 volt peak to peak into 70 Ohms  
Return Loss >40dB

#### **Output:**

Main NTSC Color TV Signal

1 volt peak to peak into 75 Ohms  
Return loss >35 dB. Note: input automatically looped to Main Output under power loss.  
1 volt peak to peak into 75 Ohms

Auxiliary NTSC signal

#### **Video Specifications**

(with no processing)

Frequency Response

Flat response (+/- .5 dB) out to 4.5 MHz

Non-Linearity

<2% plus quantizing effect

Differential Phase

<2° plus quantizing effect

K Factor with 2T Pulse

Better than 1%

Frame Tilt

Less than 2%

Y to Color Differences relative timing

+/- 5ns

Input to Output delay

1 TV line plus 2usec, nominal

#### **Video Processing Specifications**

Frequency response

0dB to +6dB high frequency boost possible

Differential gain

0dB to 6dB white stretch

0dB to 6dB black stretch

Y to C timing

Variable +/- 140 nsec

Chroma to burst phase

Variable +/- 20 degrees

Chroma gain (with burst fixed or tracking)

Variable -6dB to +4dB

Video gain

Variable -3dB to +4dB

Luminance Noise Reduction

0 dB to 9 dB of noise reduction (motion and initial picture quality dependent).

Same as for Luminance

Chrominance Noise Reduction

#### **Environmental:**

Temperature

40°F to 105°F, Ambient

Humidity

10% to 90% non-condensing

#### **Power:**

120 volts AC, 60Hz, 24 Watts

#### **Mechanical:**

1.75"H, 19"W, 10"D, 8Lbs

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*Specifications Subject to Change without notice. 03/02*

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