

Sync 20000

Frame Synchronizer /
Noise Reducer



Sync 2000D

Frame Synchronizer / Noise Reducer



(local control panel not included with the base configuration)

Frame Synchronization & Timebase Correction

A full frame TBC and frame synchronization facility allows even low quality inputs to be interfaced and timed to your facility.

System timing is adjustable and flexible. Genlock reference inputs allow for optimum system integration.

Video

- digital and IEEE 1394-ports
- recursive noise reduction and median filter adjustable for luminance and chrominance separately
- digital enhancement separated in luminance and chrominance
- proc-amp for detailed signal adjustments
- digital genlock circuit
- test pattern generator
- transparent processing of VBI

Color Correction and Legalizer

The unit features RGB color correction and legalization.

Blacklevel, whitelevel and gamma can be controlled independently.

Video Noise Reduction

Powerful recursive video noise reduction, median filtering and transversal filtering eliminate random video noise in luminance and chrominance components with a minimum of artefacts. Our long experience in video noise reduction technology ensures that the best results can be derived from impaired input signals.

Detail Enhancement

Horizontal and vertical enhancement (aperture correction) allow crisp clear pictures - even from degraded sources.

Gain, Amplitude and Color Control

Full controls of video gain, black level, hue (NTSC) are available at the touch of a button so that all signals can be corrected before they enter your system.

Audio

Video signals almost invariably have an associated audio feed. Any video-processing unit that frame synchronizes or standards converts will have a processing delay which has implications for lip sync. This unit allows external audio or audio embedded in the serial digital signals to be delayed, re-inserted or extracted as analog, AES/EBU or SPDIF digital, providing amazing system flexibility when audio may need to be monitored, changed or even removed altogether. The flexibility of the audio processing makes this unit suitable for a tremendous array of applications in studio facilities or broadcast environments.

- delay adjustable from 4 ms to 1000 ms for each channel individually
- automatic delay correction
- level adjustable from $-\infty$ to +18 dB for each channel

individually

- embedding and de-embedding of analog/AES/SPDIF audio signals
- DV embedder and de-embedder
- support for all 4 SDI audio-groups (16 channels)
- support for sampling rates of 32 / 44.1 / 48 kHz

Time code

- timecode generator and regeneration
- accepts VITC in all VBI lines with auto detection of lines or manual line selection
- receives timecode via DV interface
- accepts SMPTE RP188 via SDI
- supports VITC, LTC, RP188 and DV timecode at output
- support for EBU and SMPTE standard at LTC input and output

Presets

In addition to the presets provided for several groups of functions, full panel presets are also available. These allow the store and recall of complete panel setups.

Presets can also be saved and recalled to / from a PC via remote control software.

Remote Control

All functions and features are available via a serial remote connector.

This may be used for computer control, automation system or remote control panel.

Quality

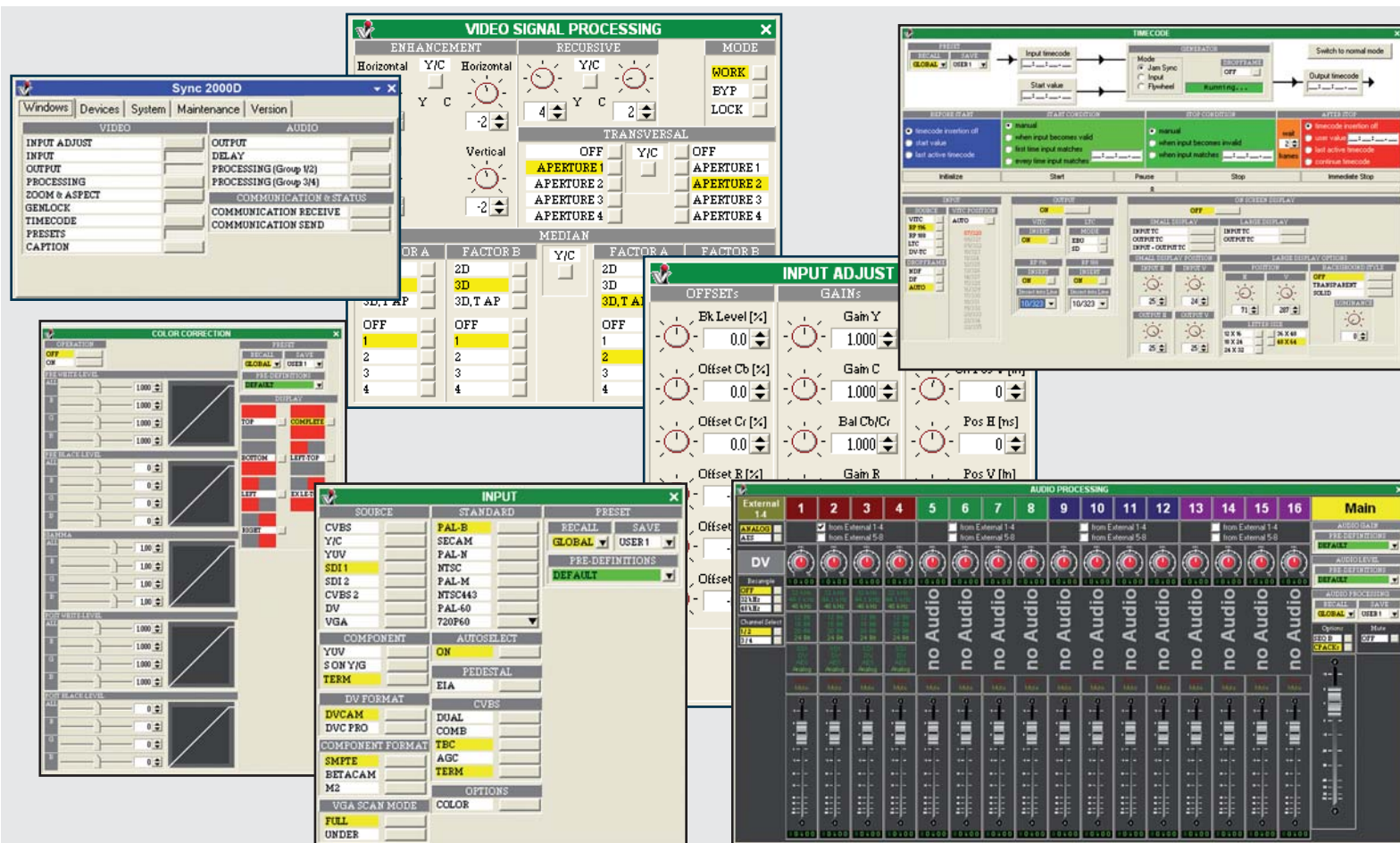
XForm Systems is proud to manufacture high quality equipment for the demanding broadcast and studio facilities markets since more than twenty-five years. Quality is paramount in our design and manufacturing facilities.

MS Windows based Remote Environment

A remote control application for MS Windows based PCs is available as an option. You can control and monitor every function of the Sync 2000D from your PC, even functions which are not accessible via the local control panel. With a single PC you are able to control as many units as you can connect to monitor the complete state of the system in several windows, one for each group of functions. Adjust the systems settings with graphical control components. You do not have to guess about the results of your adjustment - you are able to see it while modifying it! A PC running MS Windows Vista, MS Windows XP or MS

System Requirements

Windows 2000 with at least 500 MHz and 256 MByte of RAM. The software needs 6 MB of disk space. A screen resolution of at least 1024 x 768 pixels with 64 k of colors is recommended. The communication with the unit is done via a standard RS232-port, alternatively an Ethernet adapter is available.



All Preset functions for the different groups of functions are summarized in the Remote Environment in a single window. That allows a short look into all relevant system functions. You can name the several presets and save them to a file for documentation purposes and later recall them to set up the unit exactly as it was before.

The timecode window allows the definition of timecode procedures with start condition, stop condition, with jam sync and many other features. Monitor input and output timecode simultaneously in the remote or in the on screen display. Just define everything as you want it to be!

The remote environment contains a complete audio control for embedded and external audio. You can adjust the level of all channels and route everything as you want.

Complete graphical control of color correction and legalization with a quick overview of all parameters.

Change and monitor the zoom, aspect, pan, scan and crop settings. Helpful predefined presets are available with one mouse click.

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Input Formats and Video Standards

SDI Serial Digital Component
ITU BT.656 / SMPTE 259M
Genlock Analog Black Burst/CVBS

Input Video Connectors

SDI 1 x BNC
Genlock 2 x BNC

Output Formats and Video Standards

SDI Serial Digital Component
ITU BT.656 / SMPTE 259M

Output Video Connectors

SDI 1 x BNC

Audio Processing

Audio Delay Time 4-1023ms
Audio Gain $-\infty$... +18dB
Number of embedded channels: 16
channel swap via routing matrix

Video Processing

Quantizing Scheme 4:2:2 conforming to
ITU BT656, SMPTE 259M
Digital Enhancement Horizontal and Vertical
Noise Reduction Recursive Y and C up to 20 dB
Full Frame TBC

Frequency Response

Luminance (Y) 5.5 MHz, 0.5 dB
Chrominance (C) 0.5...1.5 MHz, 0.5 dB
Differential Phase $<1^\circ$
Differential Gain $<1\%$
Signal to Noise Ratio >68 dB CCIR Flat field

Power Requirements

AC Voltage 90 - 260V, 50 / 60 Hz
Power Consumption <100 VA

Physical

Dimensions 44 x 444 x 360mm (H x W x D)
Weight 6 kg approx
Chassis 1 RU 19" Rack mounting
Cooling Forced air – cross flow (side to side)

Option /AEB

Analog / AES Audio Embedding / Deembedding
Digital Audio AES or SPDIF 32kHz / 44.1kHz / 48kHz
up to 24 Bit
ADC/DAC Resolution 24 Bit
Analog In 4 x Mini-XLR (balanced)
Digital In 2 x BNC
Analog Out 4 x Mini-XLR (balanced)
Digital Out 2 x BNC

Option /AER

as Option /AEB but unbalanced analog I / O

Option /DV

supports IEEE1394, DV / DVCAM / DVCPRO25 525
/ 625 lines
Firewire connector (6 Pin), common I / O

Option /TC

LTC In- and Output, BNC, format EBU / SMPTE
VITC, SMPTE RP188
60Hz DropFrame and non-DropFrame

Option /CC

RGB Color Corrector and Legalizer

Option /RC

RS232C Remote Control 9 D-Sub
Windows Control Software available

Option /KBS2000D

local control panel



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