TEST

Mixer Video Tech Designs

VMX400

Until recently , Sif , that *the market* of *devices mixing images from several sources* in Poland , *dominated in Poland by Panasonic , is at the same time strong and stable* enough that there is not enough *room for new products from other manufacturers . The reality turned out* to be *different and next to Mr. sonica* 's *mixers there* were also *Sif products from the English company Video Tech Designs.*

First impressions: ienie

J this is jui . Another piece of English lyre delivered in the package with a pornographic luxury briefcase with fl! CZ kll . Contrary to the image corrector of this finna described in LV 6/97, on the packaging we find only a modest inscription informing about the contents . Opening the package is not a problem, so check : we see what 's inside .

Polish and English manual , basic instructions, handy instruction manual , 2-year warranty, a wide range of audio and video cables , cinch -euroconnector, traditional power supply (9V DC) and the towel itself (dimensions in mm, width. x depth x height: 322 x 270 x 75). Clear instruction with many very useful notes, also of general nature . Solidly constructed housing (here not shoddy plastic), ergonomics Total distraction and reliable operation

yl
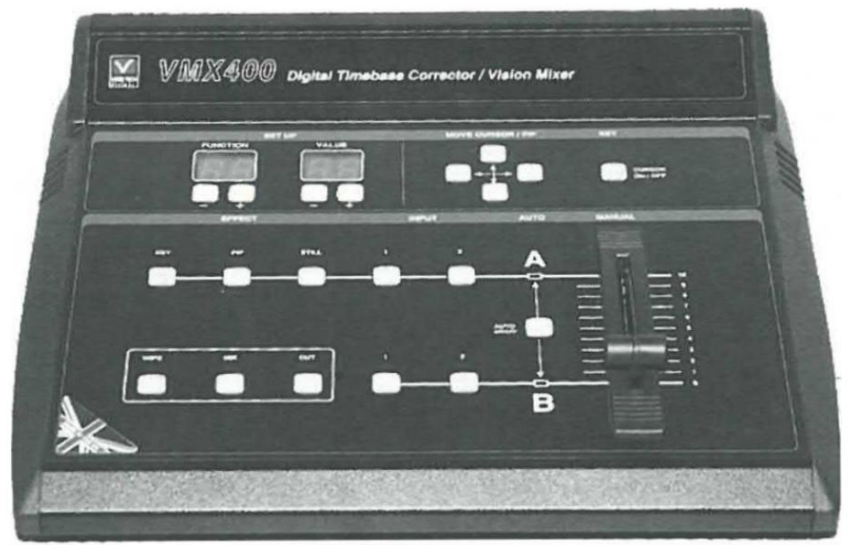
buttons and a slider resembled! CY Hebe lek. The deer, the device sticks to the ground reliably - on the one hand , it has a weight of 2.5 kg, rubberized legs and no need to apply a lot of force when operating the mixer functions .

Device functions _

Unlike all mixers available on the Polish market, only Video Tech Designs products (including the tested VMX400) provide a unique number of applications next to, of course, the obligatory mixing of video signals .

But let's start from the beginning: 30 basic patterns of curtains (revealing nannies), penetration and cutting. It includes the degree of edge blur at the junction of the mixed images and the inverted curtain, we hold a total of 240 original transitions between the vi deo channels . A special emphasis is given to the very attractive maximum blurring of the edges . In combination with some different curtains , we obtain an excellent result of point reflection of the light (from glare). In addition to full manual control over mixing, the manufacturer has provided automatic control of the transition - we have 10 pre - programmed times (1 / 2-9 seconds). During mixing , it is possible to freely change the type of curtain for penetrating or cutting, and to activate a different effect , which makes it possible to obtain spectacular, unique results.

This mixer is not equipped with a separate potentiometer and it controls the picture blanking function , the so-called fader. The fading effect is obtained by indirectly fading with the function allowing! Cll for the blurring of the image with a colored background. Only black is available in the bed . Kana! And - that's *jui.* 100 colors The choice of colors is appropriate: on the one hand , we find pure and pastel colors ,

on the other - light and dark. The function of applying the image with color in conjunction with the blurry and image in the image (see below) gives interesting visual effects, for example a shadow of an image on a colored tie .

Freezing the image, a well- known effect, but in the case of English mik cheese, the quality is surprising. You can choose from a frozen p61 image or a full image (high resolution). The size of the memory (8 MB) causes that in addition to the resolution of the part (720 x 625 dots) we get an excellent 16-bit resolution for the color. Let us add that the frozen image remains in the memory, and we will not turn off the function. The only limitation is scaling in the window.

Then the frozen image is automatically replaced with a live image from channel A.

Picture-in -picture is also not a new effect . We have a choice of 5 window sizes (3/4, 2/3, l / 2, l / 3, l / 4 of the screen), determining the presence of the window frame around61 and its color, and so you can freely move the window around the screen , r6w noi. in real time - we have the so-called the cursor keys (4).

In addition to the obvious vertical and horizontal displacement depending on the selection of two simultaneously pressed keys, we obtain the effect of centering the window vertically, horizontally and shifting diagonally. SI! this is actually well known from other features of the product , but ... the VMX400 provides something more . After exposing the window, we can add a blurred shadow around the window to the second vivid image and thus expose the window , with the shape of the shadow depending on the choice of the curtain.

Using different variants of penetration and curtains we get interesting results . For example, the mixing effects take place in a window; the mixing effect takes place outside the window with the full presence of the window; the mixing effect applies sitylly to

windows that can be opened or sicr displayed by selecting from the second fullscreen image .

The picture -in -picture feature allows you to:
• create a window with a picture clipping without compressing it .
K. keying, the study effect from this American equipment. In practice , you could: and: you could omit the description of the details of keying , if not for the fact that the English mixer does something more than the competition. Known from other mixers , luminance and chrominance keying is only a part of the VMX400 capabilities. Representative therefore

details. English mixer is available
4 variants of keying:
- by reference to the luminance (Y) and chrominance (C) components ,
- only to the Y component (Y information is ignored),
- only to component C (information C is ignored),
- to the Y and C components in the blue color scheme.

The selection of the keyed part of the image is made with the cursor. Moreover, we programmatically define the accuracy threshold separately for the Y component and the C component - after 16 steps for each of them. In other words, we define the permissible degree of deviation of the parameters y and c with respect to the indicated by image batch cursor .
further in the description of the mixer functions to present its possibilities which
they have far outdistanced their competitors .

1. TBC function - base corrector
time

In fact, the TBC circuit is present in every modern digital mixer .
R6zna , however, is its effectiveness.
Ui; the digital camera I am using is characterized by a very low fluctuation fluctuation - within 8-9 nanoseconds .
After passing through the mixer TBC circuit noticeably the sicr improves . In the case of competitive mixers present on the Polish market , I received a significant deterioration of the fluctuation parameter (trembling, undulating vertical lines at once) - 37 and more nanoseconds . Above the spark , however, the use of a mixer
possible as a time base corrector
it is only active in case of active channel A.
Putting a video signal on channel B automatically switches the sync reference to that of the source. This means that by taking full advantage of the mixing capabilities , we obtain a signal at the output as stable as the signal on channel B.
The consequence of such dependence is the need to direct a better, more stable vi deo signal to the B channel .

2. Additional lock-modes

Sync Lock Modes *(Sync Lock Mode)*

As a result of damage to the tape or bad operation of the recording or playback mechanism (there is also a problem with the problem of guiding the tape through different cameras - from the cassette on a different camera) , the sicr effect may appear : drift or even blurring of the image. Thanks to the three complementary son chronization modes, we can: restore the stability and legibility of the image. For example, the second sync mode checks the sicr in case of very noisy recordings with frequent frame bursts .

Color lock mode *(Colour Lock Mode)*

If the image reproduction is accompanied by freezing or temporary color fading , then activating the additional color lock mode will improve the color stability .

Black and white display mode *(Display Mode)*

Uses sicr for signals from black and white image sources , e.g. industrial cameras , and so: ie to obtain a better monochrome image effect
- no color mask .

Time constant for color *(Color Lock Constant)*

Slowing down the time constant improves the color reproduction quality in highly noisy recordings . I found the following expression: Znll improve the quality of the TV picture received from very remote transmitters , that is, with a very weak and noisy signal.

Unlocking the carrier color *(Color Subcarrier Locking)*

The instability in color reproduction can be attempted to correct, freeing the blockage of the color carrier.

3. Digital image processing

Negative. Thanks to the independent regulation of the luminance (Y) and chrominance (C) paths , three possible variants of the negative image are possible :
- inversion of Y brightness with unchanged C color information ;
- inversion of C colors while keeping the original information about the brightness of Y;
- simultaneous inversion of both signals YiC.

Brightness - Contrast - Color saturation

Commonly known functions . For kai: de go parameter it is possible to select within a 100 - point scale. The standard settings are ideally in the center

regulation. It means great possibilities of Confusion, i.e. a significant increase or decrease of the generated parameter .

Register change for color : vertical *(Vertical Color Shift),* horizontal *(Hori zontal Color Shift).* Zmorll , not only amateur recordings, tends to run out of color contours . You can remedy this by using the EQ available on the VMX400 mixer . Thanks to the possibility of: independent of the black and white components of the image (Y), the shifting of a part of the image is eliminated horizontally or vertically , we eliminate vertical or horizontal blur , depending on the need . Adjustment range for the vertical - up to three lines, horizontally - up to 1.3 % of the TV screen width (i.e. 700 nanoseconds}. Adjustment range for the vertical - every linicr , for the level - every 100 nanoseconds . .

Image enhancement: Composite Picture *Enhance ment,* S - Video (S (YfC) Picture Enhan cement). Filters with different characteristics that help to improve the legibility of the composite image with the limitation to 300 lines horizontally (9 positions) and S-video (I I +6 positions). Original signal with resolution below: less than 300 lines copied to format with higher: resolution, eg S-VHS, it is better to play as weak to less than 300 lines.

We obtain a reduction in the amount of noise and grain. Note, the image was originally recorded in the lower: Lower resolution and copied to the format with : Lower resolution not HC (day marked by sicr better: lll resolution. During analog copying, we lose the resolution.

Cecby lZytkowe - service

The VMX400 mixer is an accessory that enables the mixing of two video signals . This means that : we have two channels , A and B. The first of them is a fully digital channel (A), the second
analogue (B), similar to the mic of Vivanco cheese . Compression or the previously described correction functions can) iwe Sll only for channel A. The use of only one digital channel causes the need to provide a stable signal to the analog channel B and prevents manipulation on the input of channel B (e.g. change : Zr6for , stopping playback) without temporarily disturbing the synchronization.
The device is not operated by means of a menu combined with an on - screen display . They were replaced by two two-position alphanumeric displays placed directly on the console, operated by four buttons . The first display is used for: y to select a function, the second

- to select a parameter.

The number of entries has been limited to 2. Composite and S -Video are accepted . The device works well for mixing both 2 analogue signals and mixed signals, i.e. combined with S-Video (Y / C).

The mixer does not have the outputs to view the signal id inputs, moreover , the device is not controlled by electrical signals supplied from the outside .

It is a pure m. Vision mixer with no feeders me:liwosci m.iksowania diwiyku. Concentration of multi - function support for 2 displays and 4 controllers makes work difficult.

Image quality and effects

Of all the tested and known cameras for the amateur market , the VMX400 is characterized by a very high image quality . If not the highest: SZ <l, then at least r6wnll will not fit the Panasonic and Vivanco mixers described in LV . The VMX400 will clearly outperform Videonics' image quality.

All mixes and effects are performed smoothly and flawlessly . One could say exemplary. My attractiveness : the corrective properties of the image did not find any correspondence with the conclusions .
The bandwidth is different for each channel . However , it does not pose any limitations at work. Kana! digital for external resolution greater thanllC <l
500 hours (> 5.5 MHz), analog - over 600 lines (> 7.0 MHz). Reasumujllc. as the bottom of an amateur camera cannot guarantee a resolution close to 500 lines (even in digital format) . it heralds the blender a success ! e 1 longer.

Mixer limitations

Signal mixing with 2 ir6del No view on the inputs *
Only one
kana! digital with all the consequences *
vantage and   Brak m.iksera dzwiyku.

Summary

A seemingly simple device. In fact , they are very solidly designed and made. Shock - resistant . Stable working . Provides unheard of

in other mixers, wr \! CZ unique and at the same time very useful correction functions .

The fluidity of mixes, the quality of the effects and the signal of the video after processing can be treated as a model for amateur devices . Probably the best blue-box. Perfect for recovering written installments on archival grants .
The price of less than PLN 3,000 suggested by the Polish distributor, Studio Honek , is very tempting.

Roman Roszko

I IIEPOaTAt

Hits

exhibitions

Radio exhibition August 30 - September 7 , 1997

DVDs, digital cameras , flat panel screens , digital TV sets, *Internet terminals built into TV sets, multimedia car equipment, digital photography and home cinema focused on this year's IFA'97 exhibition in Berlin the greatest attention of visitors interested in the latest achievements video techniques. There* is no *shortage of quality, also in the peacock / wives , eco - communication and HiFif High-End equipment . The exhibition was attended by a record number of 812 companies from 33 countries, which were provided with stands with a total area of 130 thousand square meters . square meters .*

Photo 2. The latest model of Panasonic DVD player : DVD-A350 with two d decoders : iwi ku AC-3 and MPEG-2