

Digital Video Mixer

ODYSSEY – 2

User's manual

Precautions

- Penetration of liquid into the device may cause its failure. For prevention of fire or electrical shock do not operate or leave the device in the rain or in the places with high humidity.
- The device must be placed far from powerful sources of heat such as direct sunlight, heat radiators etc.
- Before making any connection it is necessary to switch off the power of the device and the power of all equipment connected to it.
- **This device is grounded through the ground wire of the power cable. To avoid injury of people and loss of the device operability the cable must be connected only to a socket with a grounding contact to which a grounding circuit is connected. The external equipment to be connected to the device must have connectors and cables of the corresponding types. All the equipment to be connected must be grounded without fail.**
- All cables connected to the device must be laid in such a way that excludes possibility of failure caused by their tension, bend, break etc.
- Before cleaning the device it must be disconnected from a power supply network. Use only slightly damp cotton cloths well wrung out. It is not recommended to use cleaning liquids, sprays or other chemicals.
- User must not repair the device by his/her own forces. For service and maintenance it is necessary to apply to qualified specialists.
- To prevent an electrical shock do not open the device with a connected power supply cable. Dangerous voltages are present even at switched-off power button.
- During operation and maintenance of the device it is necessary to take measures to exclude appearance of static voltages that could cause a failure of some components of the device. For this, avoid use of furniture made of polymer materials and clothes made of wool and other materials producing static electricity.

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1. Connection to a power supply network and preparation for work

1.1. Rear panel

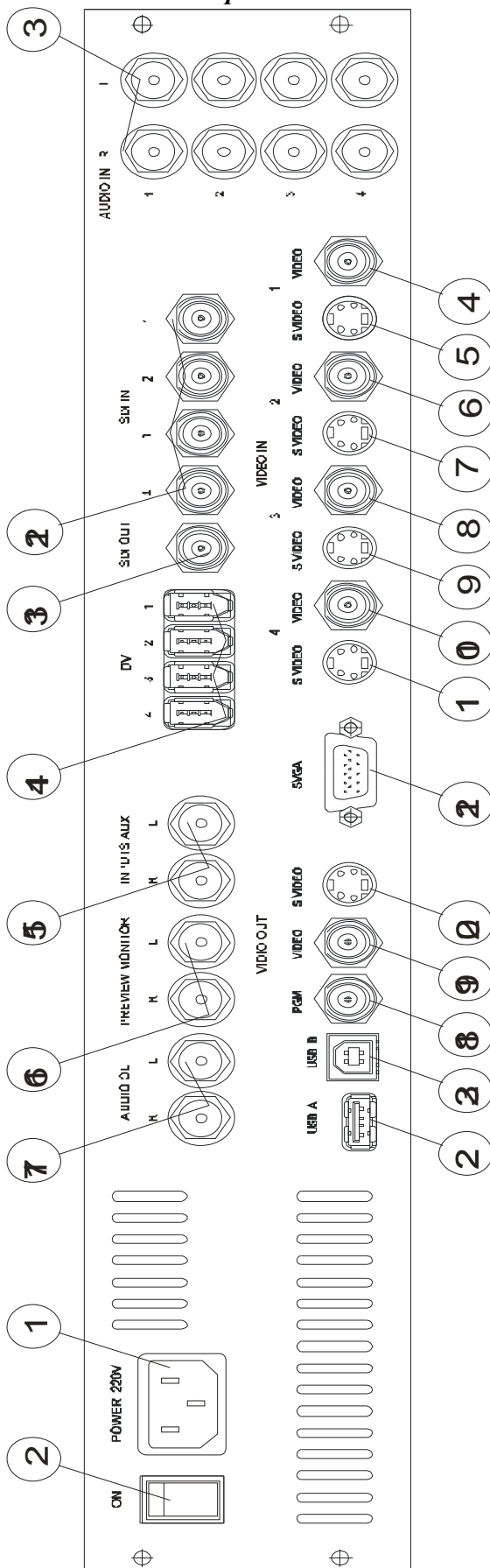


Figure 1

1.2. Destination of connectors (Fig. 1)

1	POWER 220V	220 V power supply connector
2	I/O	power supply switch
AUDIO IN :		
3	1, 2, 3, 4 L/R	audio inputs RCA connectors for sound accompaniment sources connection
VIDEO IN :		
4, 6, 8, 10	VIDEO	video inputs BNC connectors for composite - video sources connection
5, 7, 9, 11	S-VIDEO	mini Din connectors for S-Video (Y/C) sources connection
12	SDI IN	BNC connectors for SDI signals sources connection (option)
13	SDI OUT	BNC connector for SDI signal consumer connection (option)
14	DV (1,2,3,4)	connectors for DV devices (IEEE1394) connection (option)
15	INPUTS AUX (L/R)	RCA connectors for supplementary sound stereo source connection
16	PREVIEW MONITOR (L/R)	RCA connectors for preview of program sound output
17	AUDIO OUT(L/R)	RCA connectors of program sound output
VIDEO OUT:		
18	PGM	video outputs BNC connector of program composite video output
19	VIDEO	BNC connector for display of a program on a control video monitor
20	S-VIDEO	mini Din connector of Y/C program video output
21	SVGA	connector for a control VGA monitor connection
22	USB A	USB connector for the mouse, keyboard, flash-card connection
23	USB B	USB connector for external control and loading of captions

1.3. Connection to a power supply network

Is made through the power supply connector **POWER 220V** on the rear panel (1 on Fig. 1). Connection must be made to a socket with a ground contact. Before this, it is necessary to make sure that the power switch button (2 on Fig. 1) is in **O (OFF)** position .

1.4. Connection of signal sources

It is possible to connect 4 non-synchronous sources of video signals PAL/SECAM/NTSC to the composite inputs (BNC connectors - 4, 6, 8, 10 on Fig. 1) [1V/75Ohm] and/or 4 sources to S-video inputs (Y/C connectors - 5, 7, 9, 11 on Fig. 1)[Y: 1V/75Ohm, C: 0.3V/75Ohm].

** In an extended version: and/or 4 SDI sources (12 on Fig. 1) and/or up to 4 DV sources (IEEE1394) (14 on Fig. 1).*

Connection of audio sources is made by **AUDIO IN** connectors – **1, 2, 3, 4 L/R** (eight RCA connectors – 3 on Fig. 1), and also through **MIC/AUX** – auxiliary linear stereo audio switchable input [0.74V/10kOhm] (two RCA connectors - 15 on Fig. 1).

1.5. Connection to outputs

For commutation of a program signal the following outputs are used:
PGM – PAL/SECAM video signal composite output (BNC connector - 18 on Fig.1) [1V/75Ohm],

S -VIDEO – video signal Y/C output (Y/C connector – 20 on Fig. 1) [Y: 1V/75Ohm, C: 0.3V/75Ohm],

AUDIO OUT – linear stereo output of the program sound accompaniment (RCA connectors - 17 on Fig. 1) [0.74V/10kOhm].

** In an extended version: SDI signal output (13 on Fig. 1) and/or up to 4 DV outputs (IEEE1394) (14 on Fig. 1).*

For program signal control the following outputs are used:

VIDEO – composite output to the monitor for control of video (BNC connector – 20) [1V/75Ohm],

PREVIEW MONITOR – linear stereo output for sound accompaniment control (RCA connectors - 16) [0.74V/10kOhm].

CAUTION! All connections must be made at switched-off power of the external equipment to be connected!

2.2. Destination of control elements (Fig. 2)

	<u>POWER</u>	power and reset buttons zone
(1)	ON / RESET	power switching on, reset at the switched-on power
(2)	OFF	power switching off, power-saving mode switching on
(3)	TEST	Color Bar Generator switching on at the program output
	<u>LOGO GENERATOR</u>	logogenerator buttons zone
(4)	LOGO1	first logotype output switching on
(5)	LOGO2	second logotype output switching on
(6)	TIME	time output switching on
(7)	DATE	choice of a time display mode
	<u>INPUTS STD</u>	zone of buttons for input color TV system standard choice
(8,9,10,11)	(PAL/SECAM)	choice of input color TV system standard
	<u>COMPOSITE / Y/C INPUTS</u>	zone of buttons for choice of the source type
(12,13,14,15)	N1, N2, N3, N4	choice of the source from the composite or S-video input
(16,17,18,19,20)	PREVIEW	choice of the control monitor mode (squarer / full screen)
(21,22,23,24,25)	PROGRAM BUS	program bus of mixing
(26,27,28,29,30)	PRESET BUS	preset (preparation) bus
(31)	TITLE ON	captions displaying switch on
(32)	AUDIO FOLLOW	audio + video switching mode switch on
	<u>FADE TO BLACK</u>	fade control
(33)	AUTO FADE	fade control with a preset speed
(34)	AUDIO/VIDEO	choice of the fade mode
	<u>AUTOTRANSITION</u>	control of mixing
(35)	AUTOTAKE	performance of a video transition with a preset speed
(36)	WIPE / MIX	choice of the video transition type (wipes or mixing)
(37)	T-FADER	transition manual controller
(38,39)		indication of extreme positions of transition manual controller
	<u>PICTURE STORE</u>	picture store
(40)	PICT 1	first picture store switching on
(41)	PICT 2	second picture store switching on
	<u>SOURCE</u>	choice of a source for a picture store
(42)	PRESET BUS	preset bus switching on, for choice of a source for a store
(43)	ME	program output, as a source for a store, switching on
(44)	TEST	TEST signal, as a source for a store, switching on
(45)	COLOR MATE	choice of a color tone as a source for a store
	<u>WIPES GENERATOR</u>	generator of wipes
(46)	DIRECTION	choice of wipes direction
(47)	INVERT	inversion of wipes direction
(48)	FLIP-FLOP	mode at which wipes direction inverts at each transition
(49)	MULTI	combined wipes mode
(50)	USER 1	User 1 preferences switching on
(51)	USER 2	User 2 preferences switching on
(52-57)		variants of wipe
	<u>MENU</u>	menu buttons zone
(55)	MENU ON	menu switching on
(56)	ALT	extension of buttons functions
(57)	ENTER	input of the chosen function
(58)	ESC	last command cancel
(59-68)		alphanumeric data input buttons
(69-72)		menu operation buttons
	<u>AUDIO MIXER</u>	audio mixer controls zone
(73,74)	MIC / AUX	auxiliary source sound level control
(75-82)	IN1-IN4	basic sources sound level control
(83,84)	MASTER OUT	program output sound level control

3. Basic operations

3.1. Mixer switching on/off

Set the power button on the rear panel (2 on Fig.1) to the **I** position to switch on the mixer. The LED on the **ON/RESET** button placed on the front panel (1 on Fig. 2) will switch on to indicate the mixer switching on and the beginning of the mixer operation system (**OS**) loading. During the OS loading (about 20 seconds) it is not recommended to perform any operations.

To switch the mixer to a power-saving mode (**STANDBY** mode) press the **OFF** button on the front panel (2 on Fig. 2). For a quick restart of the mixer or to cancel the power-saving mode the **ON / RESET** button (1) is used. To switch off the mixer set the power button on the rear panel (2 on Fig.1) to the **O** position.

** After power switching off, the settings made during operation will be saved in the mixer nonvolatile memory.*

3.2 Preparation for work

The mixer is a complicated hardware and software complex; therefore it is necessary to familiarize with this User's Manual thoroughly before switching it on. Study the destination of connectors on the rear panel and operating controls on the front panel.

Assemble the system in its minimum configuration: the mixer, the SVGA monitor, the mouse and the keyboard.

** The mouse and the keyboard in the version 1.0 are connected via a standard hub to the USB A port, and in the version 1.1 – to any of the USB A ports.*

Switch on the power of the mixer. On the control monitor screen the operation system (**OS**) loading indicator will appear. When loading is complete, in approximately 20 seconds, the main window of the mixer control program will be displayed. Press the **Setup** button in the left lower corner of the screen with the help of the mouse – the **Main** window will appear (Fig. 3).

Enter the **OS settings** mode. The new window will appear (Fig. 4).



Figure 3



Figure 4

From here you can enter: into network settings by pressing the **Network** button, or into **File Manager** mode to input new versions of software, or into date and time setting mode by pressing the **Date / Time** button, the **Date / Time settings** window will appear.

** Performance of date/time output in the program is described in Chapter 4.3.*



Figure 6

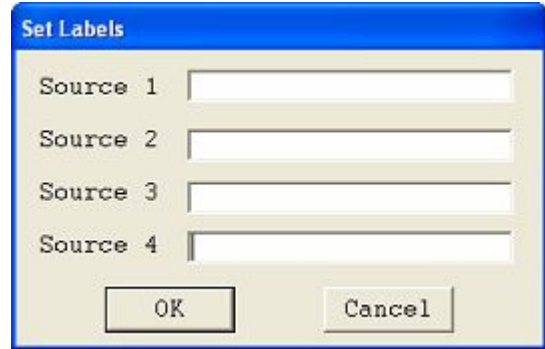


Figure 7

After pressing the **Preview options** button in the **Main** window the new window will open (Fig. 6). By putting flags in the **Captions for sources** zone you can allow input of various inscriptions in the sources windows on the control monitor:

Source labels – the source name,

Video format – indication of the input signal type,

Video standard – color TV system standard of the source,

Source on PGM/PST – indication of the source bus: **PRESET** – for a source on the **PRESET BUS**, **PROGRAM** – for a source on the **PROGRAM BUS**.

In a similar way, by putting a flag in front of the **Show time** the current time output is allowed, **Show date** – date output, **Show audio lev.** – audio signal level output, **Out video standard** – output of the color TV system standard chosen for the output.

By pressing of the **Set labels** button the corresponding window is opened (Fig. 7). In this window the inscriptions – the sources names (marks) are typed.

** The inscriptions are typed with the help of alphanumeric buttons (59-68 on Fig. 2) on the front panel or using a standard computer keyboard connected to the USB A port (22 on Fig.1) on the rear panel of the mixer.*

3.3. Choice of sources on the mixing buses

A preparatory choice of four sources, for further working with them, from 16 possible ones (four composite, four Y/C as well as optional sources: four SDI and four DV) is made using the **IN1 ÷ IN4** buttons on the mixer front panel (12, 13, 14, 15 on Fig. 2). This choice can also be made through the menu: first, press the **Mixer SetUp** button in the **Main** window (Fig.3), and then in the opened **Mixer SetUp** window (Fig. 8) open the next window by pressing the **Inputs** button (Fig.9). Here you can choose the input number using the **Input** switch, then, with the help of the **Video format** switch you can activate the necessary type of the input.

In a similar way, the color TV system standard for each of the chosen inputs is set by the **PAL/SECAM** buttons (8, 9, 10, 11 on Fig. 2) on the mixer front panel or with the help of the menu in the **Inputs** window – by choosing the number of the input and setting the necessary position of the **Video system** switch for it.

Besides, in the **Inputs window** you can adjust the brightness, contrast, saturation and color balance of the signal for each of the chosen inputs, using the **Brightness / Contrast / Saturation / Hue** virtual sliders or directly setting the numerical value of the parameter in a mini-window corresponding to each slider. The value is set with the help of 59-68 buttons on the mixer front panel or directly in the window, using the mouse.

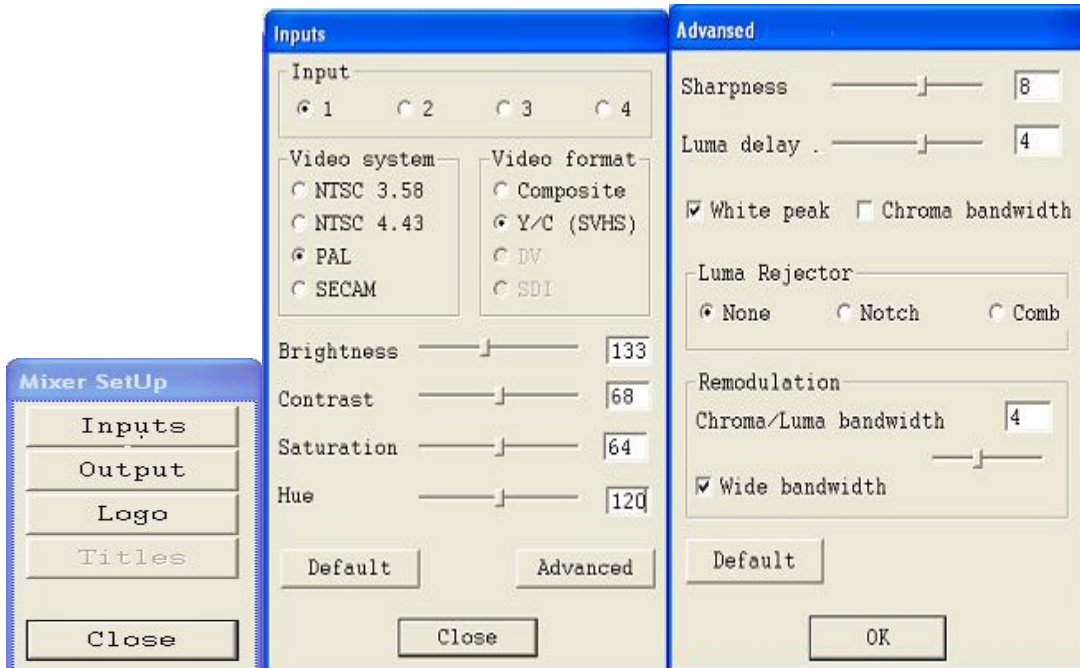


Figure 8

Figure 9

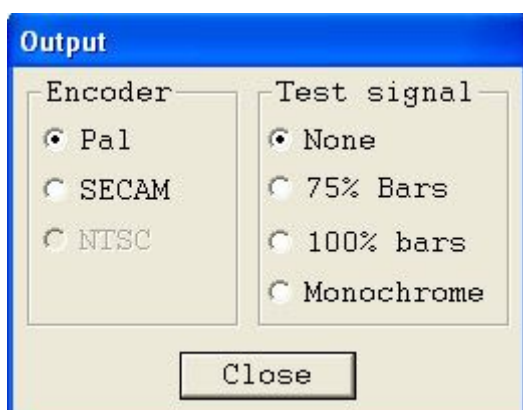
Figure 10

With the help of the **Advanced** button in the **Inputs** window you can enter the window for setting of additional parameters of the chosen signal (Fig. 10). Using the **Sharpness** slider you can, if needed, adjust the image sharpness, the **Luma delay** – to set the delay between luminance and chrominance signals. With the help of the **White peak** flag you can set the mode of luminance limitation by white, the **Chroma bandwidth** flag is used to choose the band of the chrominance signal, the **Luma Rejector** – to switch on/off rejector filtering. In the **Remodulation** field – having set the **Wide bandwidth** flag and moving the **Chroma / Luma bandwidth** slider you can set the necessary comb filter parameters for operation with PAL signal.

** For correct use of the described controls it is necessary to familiarize with the concept of PAL signal forming.*

Using the **Default** button you can return to factory settings.

3.4. Choice of the output signal mode



Using the **OUTPUT** button in the **MIXER SETUP** window (Fig. 8) you can open the window of program output settings (Fig. 11). PAL / SECAM / NTSC modes are switched by setting the corresponding position of the **Encoder** switch. The **Test Signal** switch allows to give to the output a test signal from the

Color Bar Generator with 75% or 100% level and also to switch off the chrominance subcarrier in it, using the **Monochrome** position of the switch to perform this.

Figure 11

3.5. Display of sources on the control monitor



The chosen (according to 3.3) four sources are simultaneously displayed on the control monitor screen in a squarer mode. Display mode control is performed from the front panel by the **IN1 + IN4, Pic1/Pic2** buttons on the **PREVIEW** bus (16, 17, 18, 19, 20 on Fig. 2) or through the main menu on the monitor by pressing the **Monitor** button and going to the corresponding window (Fig. 12).

Display of any of the sources may be viewed in a full-screen mode after pressing the corresponding button on the front panel (16-20) or in the menu in the **Monitor** window (1-4). To return to a squarer mode press the **Split** button in the menu.

To view images in the stores press the **Pic1** or **Pic2** button in the menu, to control the signal on the program output press the **M/E** button in the menu.

Figure 12

Using the **M/E** button and the **Preview Block** flag in the main menu you can either control the program output signal in a full screen mode (the flag is absent), or – after setting of the flag by a mouse click – view in rehearsal mode the result of preparatory operations made on the sources.

For example, at the preparation of the rear-projection, necessary procedures are fulfilled to choose the level of keying, its depth, adjustment of the color tone by which the keying is performed and so on; at this, the process of work is displayed on the control monitor but the signal does not come to the program output.

3.6. Operation with sources on the mixing buses.

On the front panel (Fig. 2) two mixing buses are represented:

– **PRESET BUS** – the preset bus with the **IN1 + IN4, Pic1/Pic2** buttons (26, 27, 28, 29, 30). It is designed for preparation of the next source to be directed to the mixer program output. The source choice is confirmed by the corresponding button LED switching on and also by highlighting the word **PRESET** in the window of this source on the control monitor in a squarer mode.

– **PROGRAM BUS** – the program bus with the **IN1 + IN4, Pic1/Pic2** buttons (21, 22, 23, 24, 25). Light indication on one of these buttons and highlighting the word **PROGRAM** in the corresponding window on the control monitor in a squarer mode will show that this source has been chosen as the program source: its signal is switched to the **PGM.** – the program output of the mixer.

The source can be switched to the mixer program output in the following ways:

– by pressing one of the **IN1 + IN4** buttons of the **PROGRAM BUS** – at this, an instantaneous direct transition (**CUT**) from the previous source to the given one takes place without loss of synchronization;

– with the help of the manual transition controller 37 (**T-FADER**). In this case the transition period is determined by the speed of the hand movement. The manual transition takes place either in **MIX** mode – by smooth superposition of one source on another (by fade-in), or in **WIPE** mode – by wiping off. To choose one of these modes the **WIPE / MIX** button (36) is

used. The choice of the wipe type is performed by using the front panel buttons 52-57 in the **WIPES GENERATOR** zone;

– by pressing the **AUTO TAKE** button (35). An automatic transition with the speed preset through the menu takes place; at this, available are the same **MIX** or **WIPE** transition types that are set with the help of the button 36.

Wipe output control is made by the buttons 46-49. With the help of the **DIRECTION** button (46) the direction of the wipe motion is chosen. The **INVERT** button (47) changes the direction of the wipe motion to the opposite. By the **FLIP-FLOP** button (48) you can choose the mode at which the wipe motion direction inverts at each transition. The **MULTI** button (49) switches on the mode at which the screen is divided into parts, and in each one a wipe acts. Each next pressing of this button increases the degree of the screen division and the number of wipes. The user can load individual types of wipe using the **USER 1** (50) and the **USER 2** (51) buttons.

With the help of **FADE TO BLACK** buttons you can perform the fading of the program into black. The transition is performed by pressing the **AUTO FADE** button (33). The transition speed is set with the help of the menu ... Transition mode choice (only video / only audio / video and audio) is determined by the **VIDEO/AUDIO** button (34) position.

3.7. Stores of frozen pictures

For realization of transitions (mixing) not only input signals are available but also static images (frozen pictures) that are kept in two stores. These images, together with the main sources, can be chosen on the **PREVIEW / PROGRAM BUS / PRESET BUS**, which allows to operate with them in the **MIX** and **WIPE** modes described in 3.6.

The **PICT 1** и **PICT 2** stores (the buttons 40 and 41 in the **PICTURE STORE** zone) are to be loaded previously. To perform this, you have to choose in the **SOURCE** buttons zone the source from which the frozen picture will be captured. This may be: a signal on the preset bus (the button 42 - **PRESET BUS**), a signal on the program output (the button 43 - **ME**), a signal of the Color Bar Generator, CBG (the button 44 - **TEST**) or a chosen color tone (the button 45 - **COLOR MATTE**). Change of the color tone is made by **repeated** pressing of the button 45. Then, by pressing of the **PICT 1** or the **PICT 2** button the loading of the first or the second store is performed.

3.8. Mixing of audio signals

For adjustment of audio signals level you can use slide controls (sliders) of the **AUDIO MIXER** zone: the 73-82 (on Fig. 2) determine the level of input audio signals and the 83 and 84 - **MASTER OUT** – control the level of audio signals at the program output. For visual control of the sound level, sources the levels of sound signals are shown on the control monitor in the windows with images of the, as well as positions of the sliders on the control scale. (See Fig...).

Video signals can be mixed either together with the corresponding signals of the sound accompaniment or separately. At activation of the button 32 - **AUDIO FOLLOW** (the LED is switched on) the mixing of audio signals is performed synchronously with video signals. At this, the sound of the source chosen on the mixing program bus will be present at the program output. When the **AUDIO FOLLOW** button is switched off, the audio signals from all the sources are mixed into an output audio signal with levels determined by the sliders 75-82. A signal from the **MIC/AUX** input can be controlled and mixed to the output audio signal independently on the presence of the **AUDIO FOLLOW** mode.

4. Expanded operations

4.1 Rear projection (keyer)



Figure 13

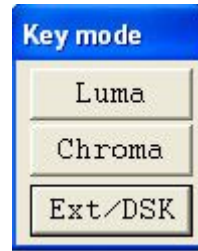


Figure 14



Figure 15

The mixer allows to realize a procedure of the rear projection – keying of the image by its luminance and chrominance (luma & chroma keying).

Control of the operations is made through the menu.

Entering into this mode is performed through the main window of the control program by opening the **Mode** window (Fig. 13) and by pressing the **Key** button in the opened window. Now in the **Key Mode** window (Fig. 14) you have to choose the mode of keying.

Figure 16

After pressing the **Ext / DSK** button an external source is used for getting the keying signal. This can be any of four chosen inputs. For this, enter the **Key Src** window (Fig. 15) and press the button of the corresponding input number. Use of a ready external keying signal does not require extra adjustments. You have only to assign one of the other three inputs to be a source of the “fill” signal.

The **Luma** button in the **Key Mode** window (Fig. 14) activates the internal keyer that performs keying by luminance from the source chosen in the **Key Src** window.

After pressing the button the **Key** window (Fig. 16) appears in the right part of the monitor screen. This window allows to adjust the luminance level by which the keying is performed.

The **Chroma** button in the **Key Mode** window (Fig. 14) activates the internal keyer by the chosen chrominance level on the image of the source selected in the **Key Src** window (see Fig. 15). After pressing the button the **KEY** window (see Fig. 16) with **GAIN** and **THLD** adjustments and the **CH..** window (Fig. 17) with **U** and **V** adjustments appear in the right part of the monitor screen. These adjustments allow to set the level, depth and color by which the keying is performed. To obtain a high-quality rear projection one must have a special skill in use of illumination, lighting of the object (scene), use of background and the background color choice. Usually blue or bright green are used.



Figure 17

**Correct use of keyer modes requires some theoretical training which is out of the framework of this manual..*

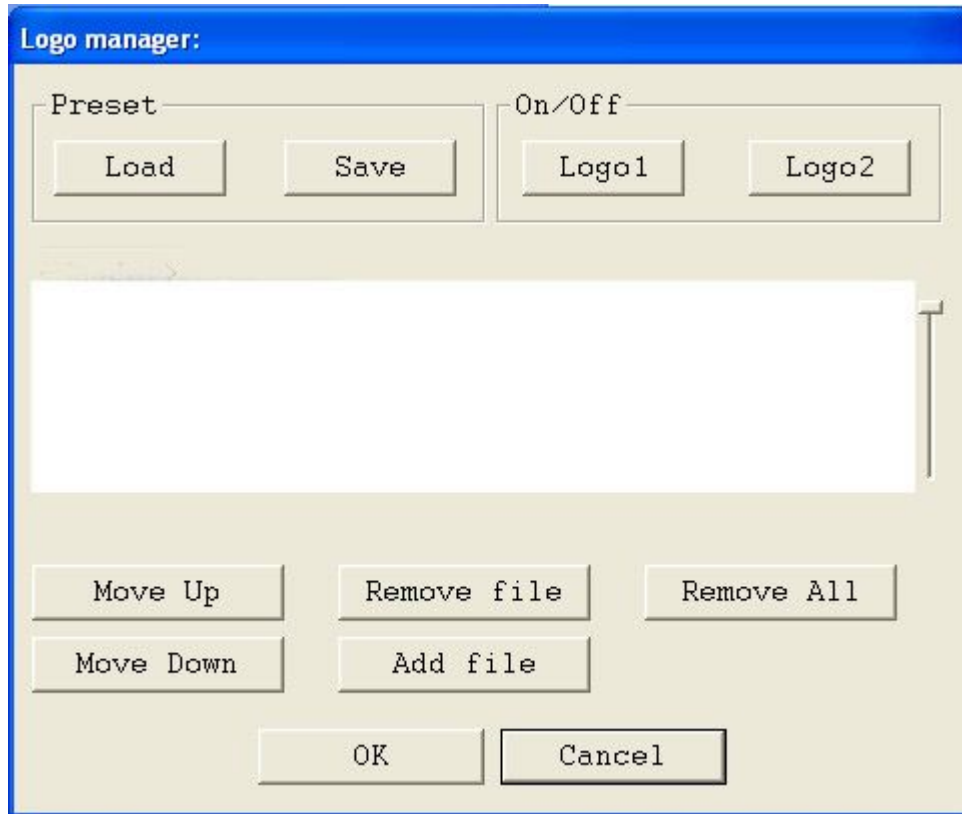


Figure 18

4.2. Operation of the logogenerator

The mixer allows to superpose graphic images – logotypes, both static and dynamic, on the output video signal. These objects must be formed previously, for example, in Adobe Photoshop program as graphic files with information about transparency – an alpha channel.

Then you have to convert the graphic files from standard formats (such as tif) to the mixer internal formats with the help of the LogoConverter program (designed for Windows XP platforms) which is delivered together with the device. The converted file will have .bbb extension if it contains a single image for a static logotype or .anm extension if it combines a set of images for a dynamic logotype or for a digital clock. (You can also download the LogoConverter program from our web-site www.vsgp.com).

To load logotypes to the mixer internal memory the converted files are to be saved in an ordinary USB Flash memory, then it must be connected to the USB port of the mixer – directly or via hub. The process of reading of large files – dynamic logotypes or clocks – may take a long time, therefore we recommend to download them to the mixer beforehand, with the help of the file manager (Fig. 3, the **OS Settings** button, Fig. 4, the **File Manager** button). At this, the mixer is able to perform a superposition of the logotypes also at direct reading of them from an external USB store.

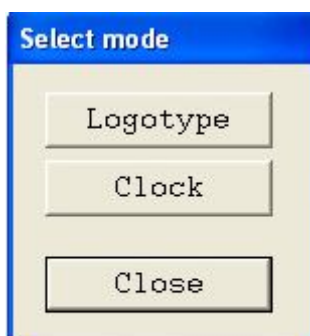


Figure 18

The **LOGO1** and **LOGO2** buttons on the front panel are used to switch on / off two logogenerators available in the mixer. For each of them it is necessary to previously prepare, load and save its list of logotypes. At this, all the logotypes in such a list will be switched on / off simultaneously (not in turn) at pressing of the above mentioned buttons. Preparation and saving of the logotype list are performed in the **Logo manager** menu (Fig.19), the path: **Mixer settings-Logo-Logotype**).

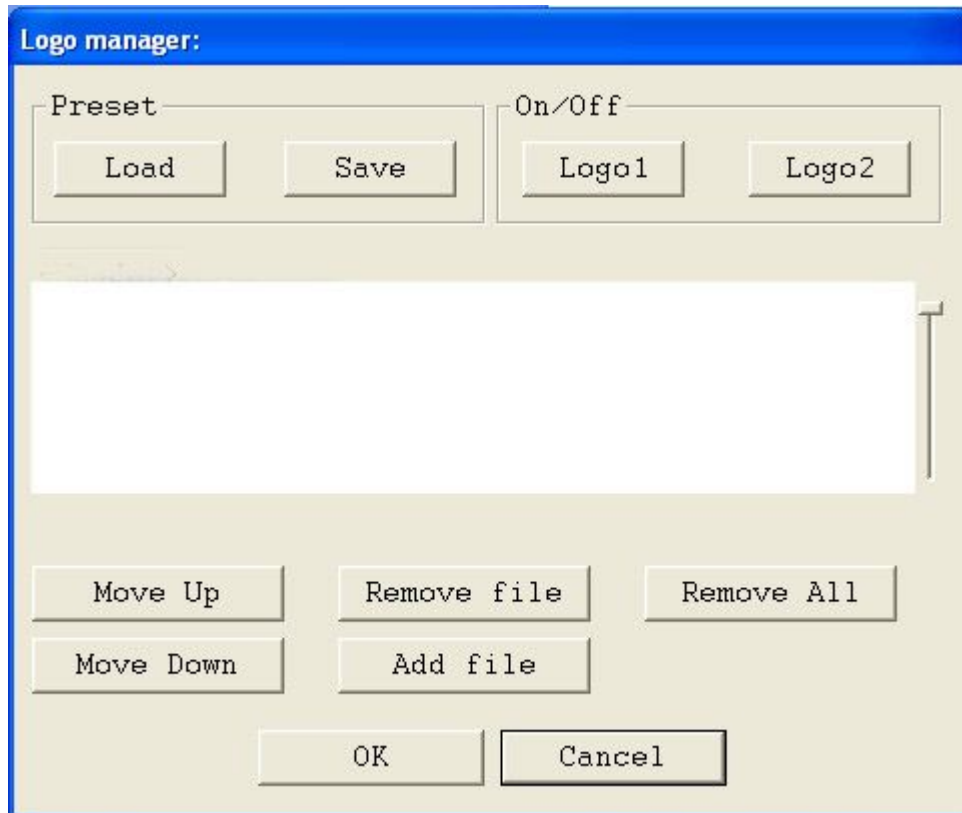


Figure 19

The **Move Up**, **Move Down**, **Remove File**, **Add file** and **Remove All** buttons (the lower part of the menu) are designed to form and edit the list of logotype files. The **Logo1** and **Logo2** (the right upper part) repeat the functions of the **LOGO1** and **LOGO2** buttons of the front panel. The **Load** and **Save** buttons in the left upper part of the menu are designed to load and to save the finished list of logotypes in the mixer internal memory or in an external store. The central white rectangular part displays the list of logotypes and their parameters as a table. The columns of the tables contain the following data:

- File Name – logotype file name,
- **A** – displays the ‘+’ sign if the logotype file contains information about transparence (alpha channel),
- W – logotype width in pixels,
- H – logotype height in pixels,
- X – logotype position on a horizontal line relatively to the right edge,
- Y – logotype position on a vertical line relatively to the upper edge,
- L1 – displays the ‘+’ sign if the logotype is assigned to the **LOGO1** list,
- L2 – displays the ‘+’ sign if the logotype is assigned to the **LOGO2** list.

To add a logotype to the list press the **Add file** button. At this, the **Select File** window will appear for selection of the file (Fig. 20). (See below the description of the **Select File** window functions). After recording the chosen logotype file to the list-table it is possible to set some parameters of its displaying (its position on the screen and assignment to the **LOGO1** or **LOGO2** list). To change the logotype position click the left mouse button in the field of the coordinate to be changed (X or Y). An element with its numerical value will appear, the value can be changed with the help of the menu buttons on the mixer front panel as well as by using the mouse or a standard PC keyboard.

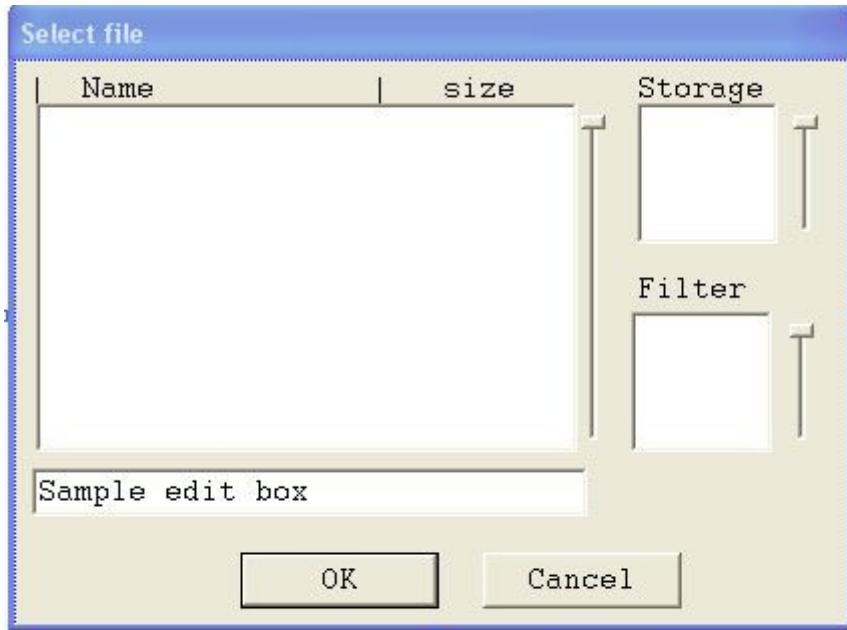


Figure 20

To enter the selected logotype into the **LOGO1** or **LOGO2** list click the left mouse button in the **L1** or **L2** area. At this, the '+' sign will appear in the corresponding field. The second pressing in the same area will cancel the entry, and the '+' sign will disappear.

To remove the logotype from the common list choose it by clicking the left mouse button and then press the «**Remove File**» button in the menu. To remove all logotypes from the list press the "**Remove all**" button. To change the position of the selected logotype in the list use the "**Move Up**" or "**Move Down**" buttons for moving it to a position up or down correspondingly.

The list of logotypes prepared in this way can be saved in the mixer internal memory for the further use. This is performed by pressing the **Save** and **Load** buttons in the menu. At this, the **Select File** dialog box will appear for indication of the path and the file name (See below the description of the **Select File** window functions).

The mixer can use the stored lists after each switch on / restart of the system and automatically assign, load and output the logotypes according to the chosen list. For this, after saving or loading the file of the list you have to press the **Ok** button in the **Logo manager** menu. The current loading list will be changed to the new one. When you exit the **Logo manager** menu by pressing the **Cancel** button the current loading list will not be changed.

The "**Select file**" window is designed for selection of the file and indication of the path to it in the internal or external file store. This window appears as auxiliary in such a menu as "**Logo manager**" or "**Clock**". It consists of three lists and a line for the full path.

The right upper list "**Storage**" is designed for displaying and selection of file stores. At this, the store named "**A**" must always be present in this list because this is the mixer internal Flash-memory. The store is selected in the list by clicking the left mouse button on the corresponding name.

The left (and the biggest) list is used for displaying and selection of files in the current folder of the chosen store. This list is formed as a table, one column of which contains the file name,

another column – the size in bytes, if it is a file, or the inscription “**Folder**”, if it is a folder. File selection is made by clicking the left mouse button or using the upper and lower arrow buttons of the external PC keyboard. The full path to the file will be displayed in the path line. You can change the current folder by double clicking the left mouse button in the field of its name. After this, the contents of the new folder will be automatically added to the list. To exit the current folder you have to double click the left mouse button on the folder named <.> (the first line in the list). If this name is absent in the list then the current folder is a root folder (the upper one) in this file store. The right lower list “**Filter**” contains lines for filtering of file types to be displayed in the main list. For example, selection of “*.anm” filter will result in displaying of only the files with “anm” extension in the main list, and selection of *.* filtering will lead to displaying of all types of files.

4.3 Output of the time logotype

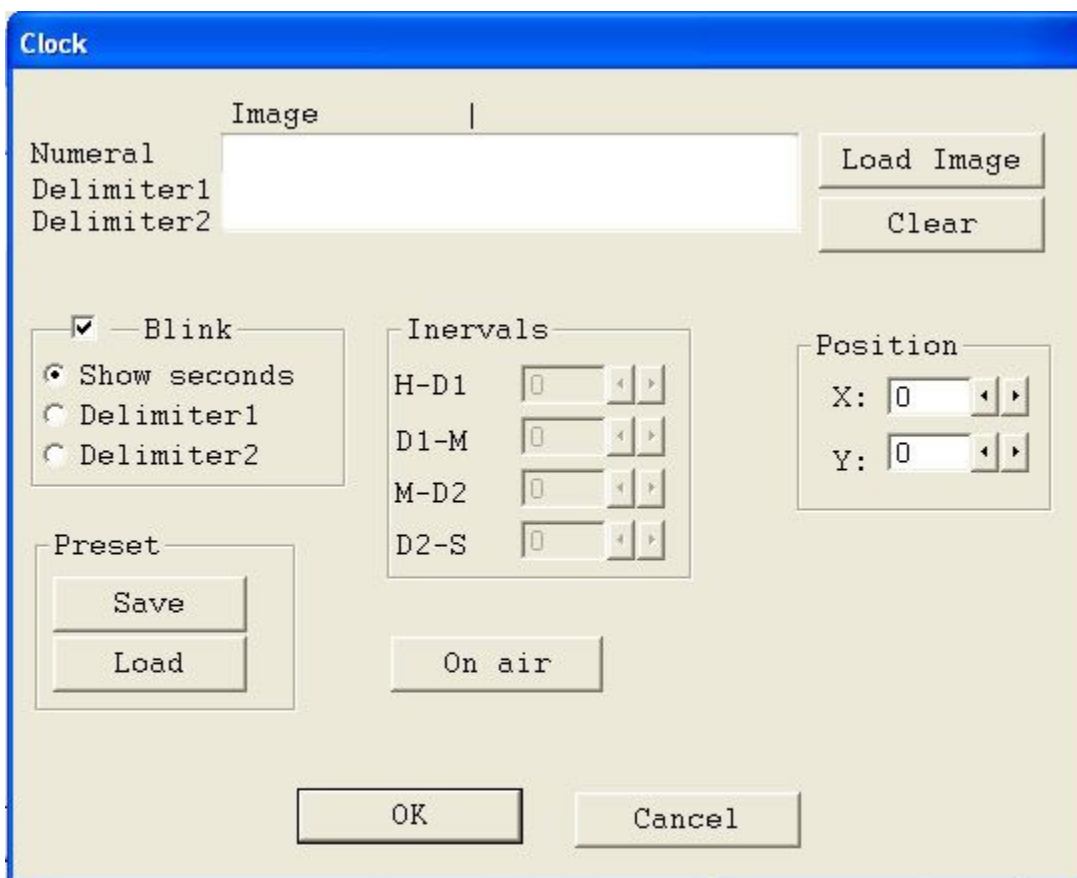


Figure 21

The mixer allows to superpose the graphic images that can change with various frequency on the output video signal, therefore, it is possible to superpose a digital clock. A clock is switched on / off by the “**Time**” button on the mixer front panel. Before this you have to set output parameters in the **Clock** menu (see Fig. 21).

The Clock menu contains a sort of a table with the fields (lines) "Numeral", "Delimiter1" and "Delimiter2". Click the mouse button in the "Numeral" field with the word <Empty>. All the line will be highlighted with blue color. Press the "Load Image" button, select the smalDigit.anm file. Now the image will be indicated in the table with its dimensions. In the same way select the ddot.bb file in the "Delimiter1" field and the dot.bbb file in the "Delimiter2" field. Set “200x200” in the "Position" field (to view the image in the middle of the screen). Then

set the “Blink” sign and the "Delimiter2" flag. Press the "On Air" button. On the program output you will see a digital clock in a “hh:mm.” shape. The dot after the minutes will blink every second.

Here is a more detailed description. .

For the present moment, the mixer clock is of a digital type (hh:mm:ss). You need three images. The first one is a dynamic logotype that has 10 frames; each corresponds to the image of a digit from 0 to 9. This image is used for displaying tens and digits for the hours, minutes and seconds. In the example we have set this image in the "Numeral" field. The second two images are static logotypes used for displaying of separation symbols between the hours and minutes, minutes and seconds. In the example of Delimiter1 it is a colon, and in the Delimiter2 it is a dot. In the Clock menu a flag in the "Blink" field switches on / off various “blinkers”, that is, the items that have to change every second. In our example it is the Delimiter2, that is, the dot after the minutes will disappear and appear every second.

The "On Air" button duplicates the "Time" button on the mixer panel. In order to avoid repeating of such adjustments every time, you can save all these settings with the help of the "Save" button in the "Preset" field. Saved will be the contents of the image table (or, rather, the paths to the image files), position and the “Blink” mode.

The last presets saved in this way will be loaded at starting of the mixer. You can keep several presets of this kind in the internal mixer store, for various cases. The «Intervals” field is not active for the present time. We plan to improve this in the future and to add a possibility of outputting not only a digital clock but also an analogue one.

Let us consider how to get the images themselves. You can obtain images for the Delimiter1 and Delimiter2 separators as ordinary logotypes by converting .tif files into .bbb with the help of the LogoConverter.exe program. To obtain the image for digits you need the "Logo List" program. Set “Clock” in the opening list on the tools panel of this program (the default setting is "Static Logo"). Then form a list of digit images. Press the button that has a shape of a yellow folder (near the red cross button). This button is used for adding an image into the list of the tif file. If the file format is correct then its name, size and its contents (in the form of the image itself, of its alpha channel separately and in the form of the image together with the alpha channel) will appear in the table. Do the same procedures with the image files of all digits from 0 to 9.

Then press "Create dynamic logo" in the <File> menu. After this an image of anm type will be created – that will be the image of the dynamic or animated logotype for “Odyssey 2”, in which the frames correspond to the images in the list, according to their order. And in the case of the clock these frames will change every second, minute or hour.

5. Video mixer specifications

Input signals:

Y/C input :	
Y-component	1V/75 Ohm
C-component	0.3V/75 Ohm
Composite input :	1V/75 Ohm
Audio input:	1V/10 kOhm

Output signals:

Y/C output:	
Y-component	1V/75 Ohm
C-component	0.3V/75 Ohm
Composite output:	1V/75 Ohm
Control video outout	1V/75 Ohm
Audio output:	1V/10 kOhm

Bandwidth:

Y/C in/out	5.5 MHz (-3dB)
Audio channel:	20 Hz-24 kHz

Signal-to-noise ratio:

S VIDEO	53 dB
Composite	50dB
Audio (at 1 kHz frequency)	65 dB

Power consumption:

20 W

Power supply source:

90-260B 50/60 Hz

Overall dimensions:

483x22x80mm

Weight:

4.5 kg

Connectors:

Video:	
S VIDEO in/out	4 pin mini-DIN connector
VIDEO in/out	BNC
SOURCE	BNC
PGM	BNC
Audio in/out	RCA (PHONO)
RS 232	DB9

Delivery set:

Video Mixer ODYSSEY
User's manual
Power supply cable