PM-88va2lcd

8x8 analog video / 2ch unbalanced
audio routing switcher with local control
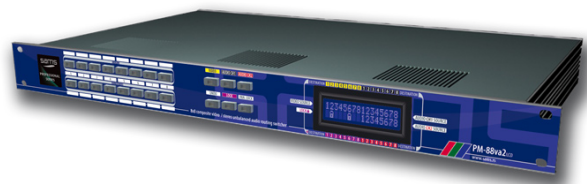
USER MANUAL FOR USE AND MAINTENANCE

Read the instructions before using the device.

Keep this manual for periodic usage.

sams

WARRANTY

Dear User,
Thank you very much for purchasing our product.
Your purchase is a wise investment. The equipment you have purchased is manufactured with great care from high-quality parts and materials. It is designed to fully meet the needs according to specifications, if properly installed, used and maintained according to the enclosed instructions.

Any technical failure or deficiency that occurs during the warranty period specified on the invoice of the purchased equipment will be inspected and serviced by Sams elektronik doo or an authorized service center of the manufacturer, with the conditions set out in the warranty statement.

THIS DEVICE IS INTENDED FOR PROFESSIONAL USE.

WARRANTY STATEMENT

1. Product has declared characteristics. Within the warranty period, manufacturer ensures the removal of technical failures, product defects or replacement of products if declared characteristics of the product are changed.
2. If the goods are not delivered as specified with the contract, the consumer has the right to request from the manufacturer / service provider to eliminate the lack of conformity, without charge, repair or replacement, or to request an appropriate price reduction or terminate the contract.
3. Any repair or replacement must be made within a reasonable time without significant inconvenience to the consumer, taking into account the nature and the purpose for which the consumer has purchased the product.
4. The consumer has the right to terminate the contract, if he can realize the right to repair or replacement, or if the manufacturer / servicer has not completed repair or replacement within a reasonable time or if the manufacturer / servicer did not perform repair or replacement without significant inconvenience to the consumer.
5. The consumer may not terminate the contract if the lack of conformity of the product is negligible.
6. The product will function properly when used in accordance with the user manual.
7. Period of servicing the product is 6 years from the launch on the market.

The product purchased outside the territory of Serbia does not fall under the terms of this warranty, only to 1 year factory warranty from date of purchase.
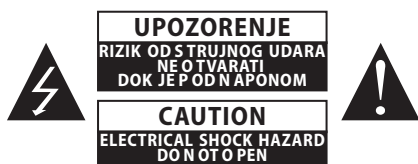
TERMS OF WARRANTY

1. The warranty period begins on the date of sale referred in the invoice.
2. The buyer loses the right to warranty if the defect cause failure from not following the user manual instructions, improper installation, comes to mechanical damage during use, repairs and modifications by unauthorized persons, installation of non-genuine spare parts, and if the buyer does not comply with all warnings listed in the user manual.
3. The warranty is voided if the device is damaged during the disturbances from the environment, natural disasters (floods, hail, etc.), suffered an electric shock or lightning strike.

IMPORTANT NOTES

1. Be sure to thoroughly read the user manual.
   If you have any doubts about the instructions, contact the technical support of the manufacturer.
2. Before contacting for technical help, please make sure that are provided with all necessary conditions for normal operation.
3. If the malfunction or defect in the device does not eliminate within a reasonable time from the date of failure, the warranty period shall be extended for as many days as the unit is in service.
4. For all maintenance interventions shall solely be authorized services listed in this Warranty Certificate.

SAFETY WARNINGS

UPOZORENJE
RIZIK OD STRUJNOG UDARA NE OTVARATI DOK JE POD NAPONOM
CAUTION
ELECTRICAL SHOCK HAZARD DO NOT OPEN

IMPORTANT SAFEY

WARNING

TO AVOID RISK OF FIRE OR ELECTRIC SHOCK
DO NOT EXPOSE THE UNIT TO MOISTURE OR RAIN

The symbol "lightning in a triangle" is to alert the user to the presence of high voltage. In poor conditions the user may be exposed to shock.

The symbol "exclamation mark in a triangle" is to alert the user to comply by the terms of use in user's manual, which is supplied with the device.

CLASS I DEVICE
Grounding is connected to the chassis of the device.
The power supply is protected with fuse against overload.

WARNING

TO AVOID ELECTRIC SHOCK, DO NOT OPEN COVER.
DEVICE MAINTENANCE REQUIRES PROFESSIONAL PERSON AUTHORIZED BY THE MANUFACTURER.

1. Read all safety and operating instructions before using the device.
2. Keep all safety and operating instructions.
3. Follow the instructions from the user manual.
4. Do not upgrade device, except in the case advised by the manufacturer.
5. Do not use the device in the presence of water and / or moisture.
6. Do not pour water or moisten the device with any type of liquid.
7. Openings on device are provided for ventilation.
8. Do not block air flow through the ventilation openings.
9. This product is powered by AC ~ 230V ± 10%, 50Hz.
10. This product is equipped with a three-wire cord with grounding.
11. This device is equipped with a protective fuse in the power outlet. Do not bypass fuse.
12. Do not replace the fuse. Replacement can be made by a person authorized by the manufacturer.
13. Do not bend the power cord so that it can be damaged.
14. Connect connectors as in the enclosed instructions. Deviations from the allowed values predicted for the inputs and outputs of the device can cause severe damage and warranty void.
15. Do not use the device in an environment that contains flammable or explosive materials in any physical state.
16. Turn off the power corde before cleaning. Do not use liquid, aerosol or flammable cleaners. Use only a dry cloth.
17. Servicing is performed by a qualified person. Removing the cover user is exposed to high voltages.
18. Never use the device when the cover is open and the device is powered on.
19. Do not expose to extreme high or low temperatures.
20. Do not expose to sudden temperature changes.
21. Call service in the following cases:
    - The power cord or plug is damaged
    - Liquid or foreign objects is inside the device
    - The machine is exposed to water and moisture
    - The device does not function according to specification
    - The unit has been dropped or damaged
    - The characteristics are significantly changed
22. Use only specified replacement parts.
23. Professional person authorized by the manufacturer must check the device after completion of service.
24. Allow a free rack unit (1RU) above and below the device for ventilation or put rack fan under the device.

Pictures and drawings listed in this user manual are for information purposes only and may differ from the actual device. Design and specifications of the device may change without prior notice.

TECHNICAL SUPPORT AND SERVICE

Sams elektronik has made every effort to ensure that the equipment works in perfect condition. In the event that problems that occur can not be resolved, or if you have any questions regarding this equipment or information about other products produced from Sams elektronik, contact your local sales representative or call Sams elektronik directly through one of the ways listed below:

Sales: +381 11 3806 254
Technical support: +381 11 2402 212
Service: +381 11 4056 051
Email:
Sales - sasa@sams.rs
Technical support and service - sams@sams.rs

Web site: www.sams.rs

Address:
SAMS ELEKTRONIK d.o.o.
48 Zivka Davidovica st
11050 Belgrade
Serbia

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Description   Page

UNPACKING AND INSTALLATION

The box contains:
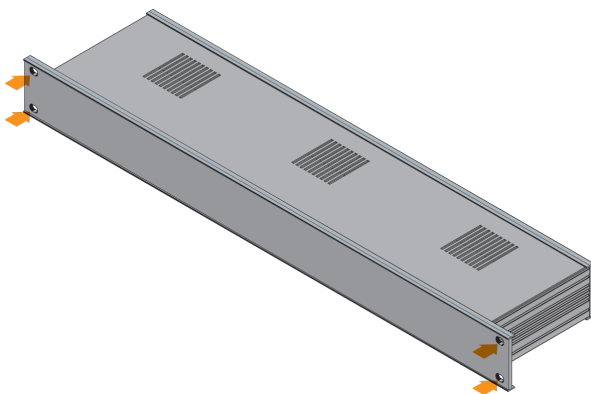
- Device
- Power corde
- User manual (optional)

Before use, check the contents of the box. For any deficiency report to the seller or the manufacturer of the product.
DEVICE IS INSULATED BY PROTECTIVE WRAP AND PACKED IN A CARDBOARD BOX.
DEVICE IS SENSITIVE TO SHAKES AND DROPS. HANDLE WITH CARE DURING TRANSPORT AND ASSEMBLY.
Check if the product is damaged during transport.

PROCEDURES FOR SAFE USE OF THE DEVICE:

1. - Remove the protective wrap from the chassis.
   - For devices that are AC 230V / 50Hz powered, the device is supplied with power cord.
   - Use only power corde that comes with the device.
2. Device is mounted in a 19" special-purpose rack cabinets designed for this type of device. Screw device with four screws. Screws for fastening are not supplied with the device.
3. The device must be connected to ground. A device that is not connected to the grounding does not function properly according to factory declarations and can cause adverse effects on users and other equipment.
4. Strictly comply to all steps for proper connection of devices in the system.

Places for fastening

MAINTENANCE

The system maintains only person authorized by Sams elektronik doo.
Any voluntarily opening device, upgrading or servicing is strictly prohibited and is subject to warranty void, and the possibility of injury.

REMOVAL AND STORAGE

1. Before dismantling the device, switch off the power, remove the power cord and remove all other connectors.
2. Remove the four screws for fastening.
3. Remove the device from rack cabinet.
4. Wrap the machine in the foil to protect it from dust. Package it in a box.
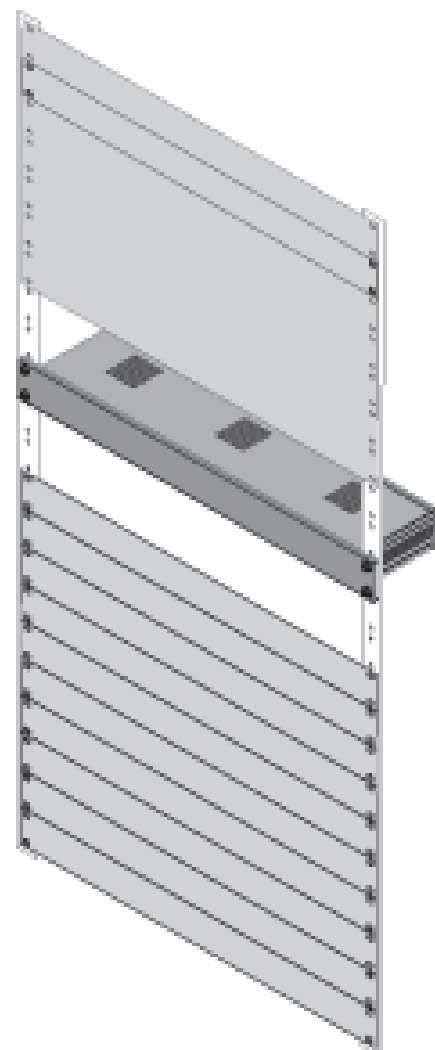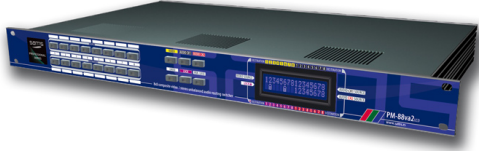5. The device must be stored in a room without moisture.


Illustration - mounted device

DESCRIPTION

PM-88va2lcd

8x8 analog video / 2ch unbalanced audio routing switcher with local control

- Low price
- 8 video inputs / outputs
- 8 stereo audio inputs / outputs
- Separate routing of audio video
- Separate routing of audio channels
- Vertical interval switching
- Undo function by destination and level
- Locking of individual connections
- Return to the previous state due to power failure
- 2ch unbalanced analog audio signals
- IP 67 keys with min. 5,000,000 switching
- PC interface

PM-88va2 a 8x8 integrated video / audio 2ch matrix. Inputs supporting composite signals only. PM-88va2 has integrated XY command on the front panel. PM-88va2 is designed for professional use in post production.

front side

rear side
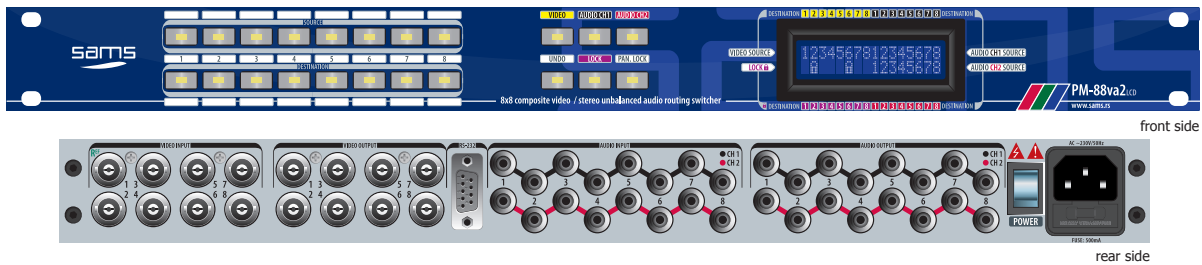
TECHNICAL SPECIFICATIONS

Specifications and designs are subject to change without notice

GENERAL INFORMATION
- Code:.. 007.102
- Weight: .... 2 Kg
- Type: .... 1RU rack frame
- Dimensions: ....1RU x 19" x 200mm
- Delivery includes:........................device, power corde, user manual

VIDEO MATRIX
INPUT
- Number:.. 8
- Level:...1V p-p nominal video
- Impedance:.. 75Ω
- Connectors:..BNC female

OUTPUT
- Number:.. 8
- Connectors:.. BNC
- Impedance:.. 75Ω
- Hum on output: .... > 43dB at 5.5MHz
- Output level: .... 1V p-p

PERFORMANCE
- Frequency responce:.............................. ± 0.1dB (50Hz to 5.5MHz)

AUDIO MATRIX
INPUT
- Number:..8, unbalanced / 2channels
- Impedance:...> 40KΩ
- Connectors:.. RCA

OUTPUT
- Number:..8, unbalanced / 2channels
- Connectors:.. RCA
- Impedance:.. 10Ω
- Max output level: .... + 6dB

PERFORMANCE
- Frequency responce:...........................< ± 0.1dB (20Hz to 20KHz)
- S/N ratio: .... > 100 dB unity gain 20 Hz to 20 KHz
- TDH:...0.01% at 20Hz to 20KHz
- Inter channel Cross talk:...........................> 90dB at 20Hz to 20KHz

POWER
- Voltage: ....~230V AC ± 10%
- Power: 30W
- Frequency: 50Hz
- Overload protection: ....front Mounted Circuit Breaker

TEMPERATURE
- Performance:...5-40°C
- Operating:...0-50°C

ORDERING INFORMATION

Code	Name	Description
007.102	PM-88va2lcd	Video / 2CH audio matrix 8x8

INSTALLATION
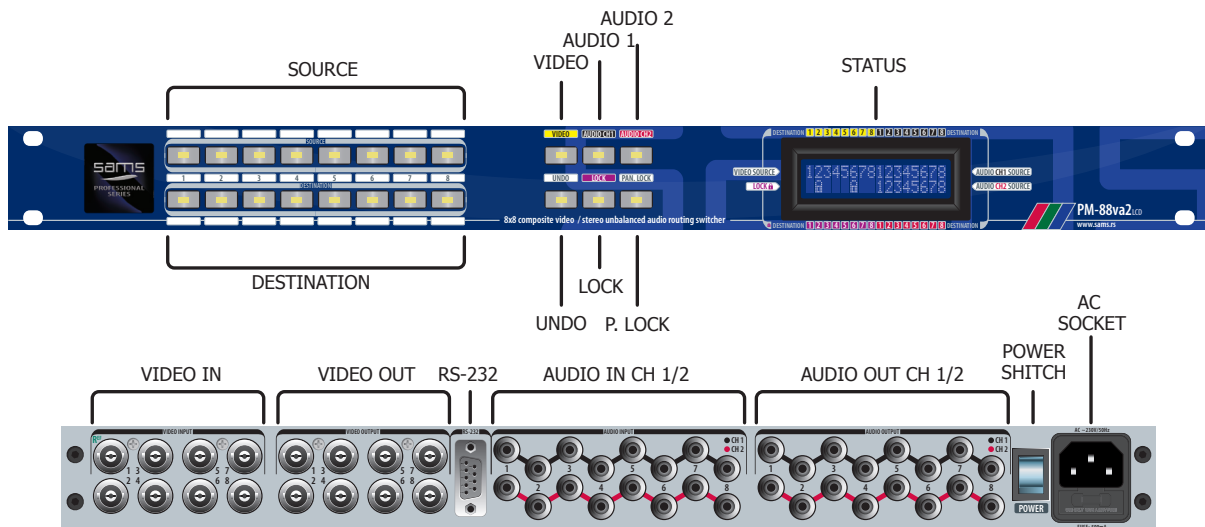
CONNECTIONS TO X-Y COMMAND

On the front panel, select the type of signal you want to connect, press the button VIDEO-AUDIO1-Audio2 ENABLE. If the button is illuminated, you can use the video or audio source. Video button blinks until you connect an external reference. Video sources can be used without external reference but connection will not be synchronized. To make the connection, press the output. While holding the button, press the button of the desired input. In this way you connect signals.

Notice if LOCK button is ON when you press output button. Only if LOCK button is off you can use this output. Buttons are numericaly defined. You can connect one input to more then one output. To check which input is connected to which output, just press one of input buttons and output(s) will light on. In the same way you can press output button to see which input is connected. Connection status is displayed on the LCD.

LOCK

This key is used to lock the desired output. Press the desired output. You will see that there is already pre-selected input. If necessary, the user change the desired input by pressing as described above in the text. Press output and then press LOCK. If the LOCK button is illuminated, the output is locked. Unlocking is done in the same way. Press the locked output (LOCK button is illuminated). While holding the button, press the LOCK. Status of locked outputs is displayed on the LCD.

UNDO

When you press and hold the output, and if UNDO button is illuminated, pressing UNDO returns the connection to the previous connection status. This means that any reconnection can take a step back. Memory remembers only one step in all three levels of connection (Video - Video 1 - Video 2) independently, except in cases that routing switcher is reseted or turned on for the first time.
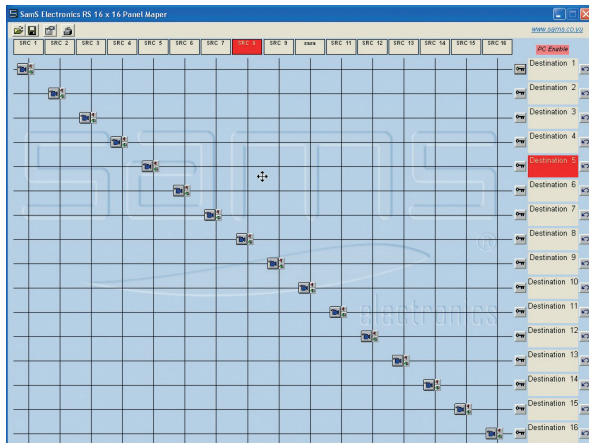
PANEL LOCK

PANEL LOCK button is used to lock the entire panel due to the use of computer. If you have the software to control the routing switcher via a computer, you must lock the routing switcher. If the PANEL LOCK is off, the software is used only for monitoring the connections.
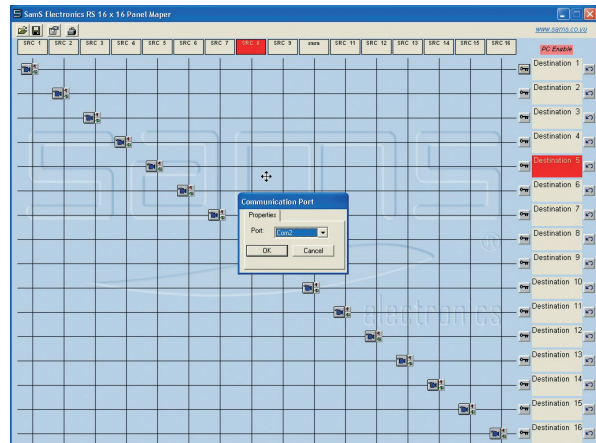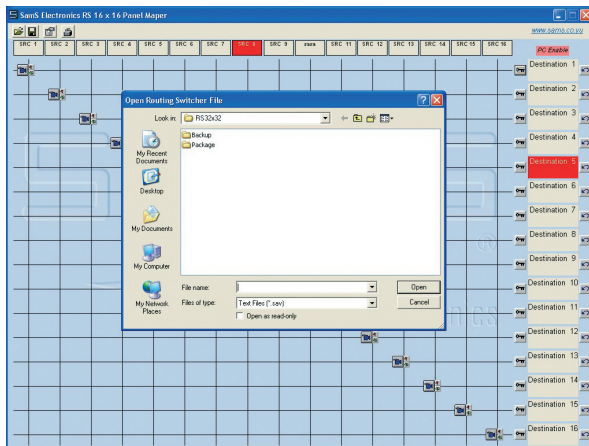
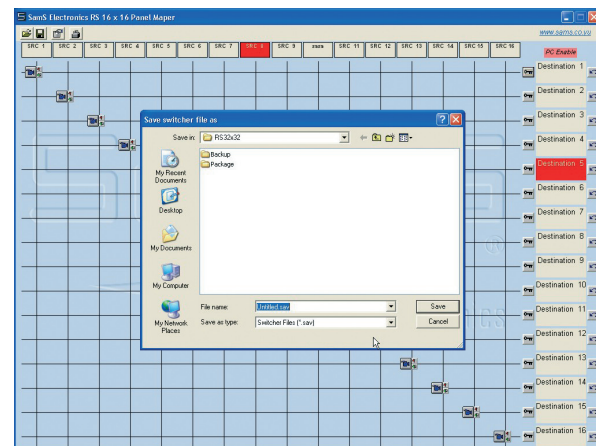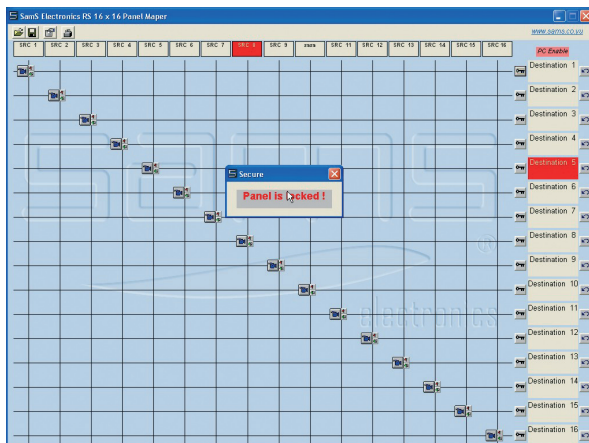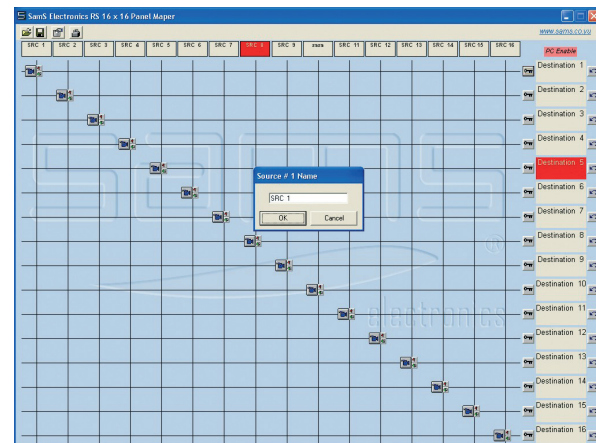# ROUTING SWITCHER STATUS ON LCD
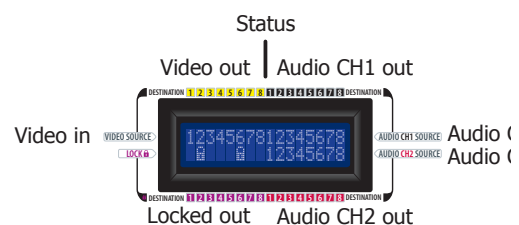
SOFTWARE

1

2

Loading status

Saving status

Lock window

Naming inputs / outputs
Double click on field

This program controls the routing switcher.
Designed as a replacement of the main commands.
The program is used only in Windows OS. It is recommended to be used on newer types of computers.
To view the entire program window minimum screen resolution must be 1024x768px.
Also, the computer must have a free serial port (RS-232) to communicate with the routing switcher.

Installation is simple. Insert the installation CD into the CD-ROM. If the installation itself does not start, open the contents of the disc and double-click setup.exe.
Start the program (Figure 1). Press the "Properties" button (Figure 2) to set the communication parameters. It is very important to choose the correct serial port to COM selection. If the correct port is selected and if routing switcher is connected to a PC, the "COM OK" green colors will appear. It will not be included if you do not connect properly or if routing switcher is turned off.
If you want to control the routing switcher using a PC, press PANEL LOCK on the front panel of the remote control. Red indicator "PC ENABLE" will appear instead of "OK COM". Destinations that were previously locked will not be used.
Using the program is simple. Place the arrow at the intersection (XY) and press the left mouse button. The parameters for this intersection will appear with the selection VIDEO-AUDIO 1-AUDIO 2. When you choose press the OK button. The connection is established and it can be seen on the screen. If you want to save your connections status press the SAVE button. If you want to load some of the saved status of the connections, press LOAD button.
You can lock the PC panel by pressing the LOCK button on the menu. Unlocking is done closing window UNLOCK on the center of the screen. If you want to lock certain destinations press button KEY. In the same way it unlocks. By pressing UNDO return to the previous state of the selected intersection.

Recommended configuration:

- Intel or AMD compatible
- 256Mb RAM
- Windows XP
- Resolution min 1024x768

NOTES

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