

DAS-10

AES/EBU switcher 10x1

USER MANUAL FOR USE AND MAINTENANCE

Read the instructions before using the device.

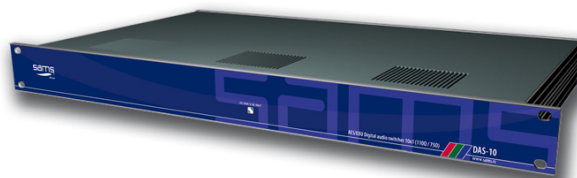
Keep this manual for periodic usage.



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Updated: 28. october 2014.



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.

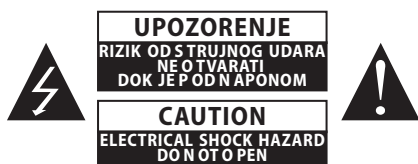
TERMS OF WARRANTY

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



IMPORTANT SAFETY

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 $\sim 230V \pm 10\%$, 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 cord 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

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UNPACKING AND INSTALLATION

The box contains:

- Device
- Power corde
- User manual (optional)

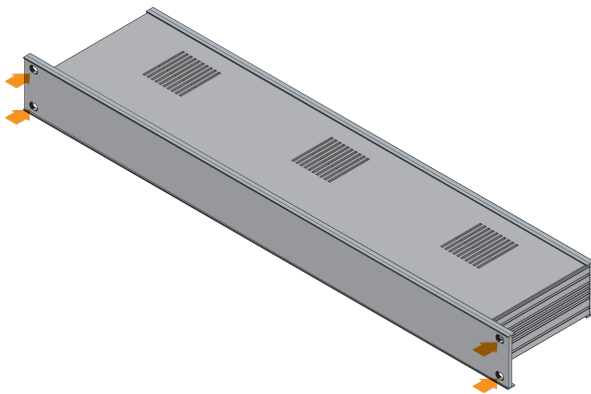
Before use, check the contents of the box. For any deficiency report to the seller or the manufacturer of the product.

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.

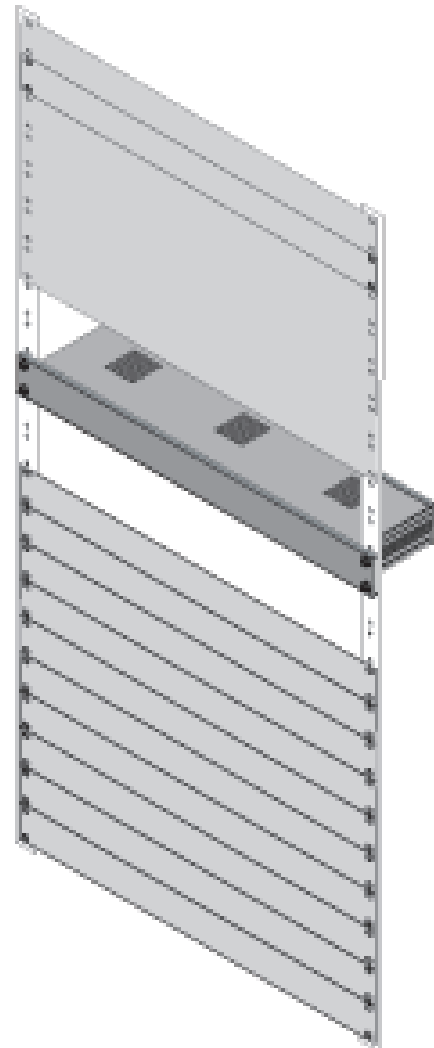
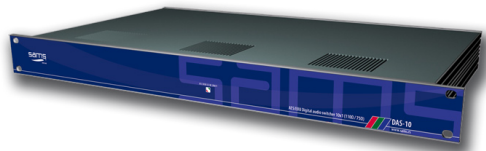


Illustration - mounted device

DESCRIPTION

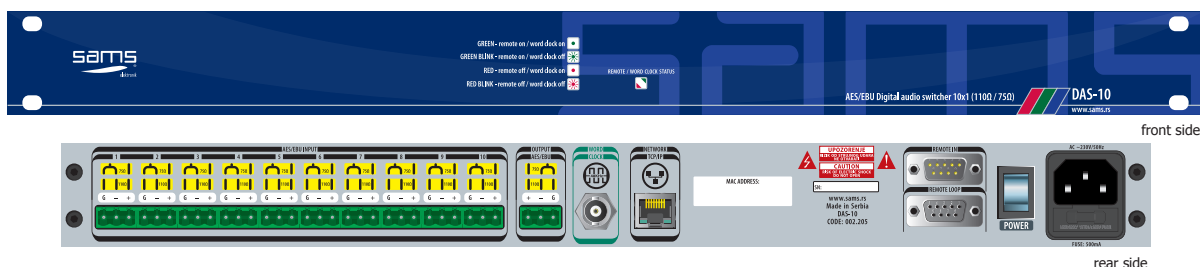
DAS-10

AES/EBU switcher 10x1



- 10x1 AES/EBU switcher
- 110Ω / 75Ω balanced / unbalanced inputs and outputs
- 24bit / 32-96KHz sampling and processing
- Can function independently or be linked with other 10x1 switchers
- Return to the previous state due to power failure
- Local or remote control
- PC control

DAS-10 is a 10x1 AES / EBU digital audio switcher. Input and output level has been mixed 75/110Ω and allows the signal to be converted from balanced to unbalanced format without amplitude and phase distortion as it is achieved by using transformers. High signal quality is achieved through the development in the SMD technology. Switcher has automatic signals equalization. It is designed to meet the most demanding requirements for switching signals in televisions and digital studios. Available in 1RU 19" chassis. Control may be the front panel or by remote control SCU-10. Also, the device can be controlled from a computer through a TCP-IP network. Can function independently or be associated with related switcher for audio-follow-video control.



TECHNICAL SPECIFICATIONS

Specifications and designs are subject to change without notice

GENERAL INFORMATION

- Code:002.205
- Weight: 1.5 Kg
- Type: 1RU rack frame
- Dimensions: 1RU x 19" x 100mm
- Required: remote control SCU-10
- Delivery includes:..... device, power corde, user manual

AES3 110Ω INPUT

- Connector: 3-pin terminal switch
- Impedance: 110Ω
- Max level: 7V p-p
- Min level: 0.2V p-p

AES3 110Ω OUTPUT

- Connector: 3-pin terminal switch
- Impedance: 110Ω
- Nominal level: 3.1V p-p ± 10%
- Rising time: 4ns to 31ns
- Symmetry: < -30dB (DC at 6MHz)
- Jitter: < 0.005UI at 700Hz/10KHz

EXTERNAL REFERENCE

- Number:1, BNC
- Word clock: 48KHz

TCP-IP

- Number:1, RJ-45

POWER

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

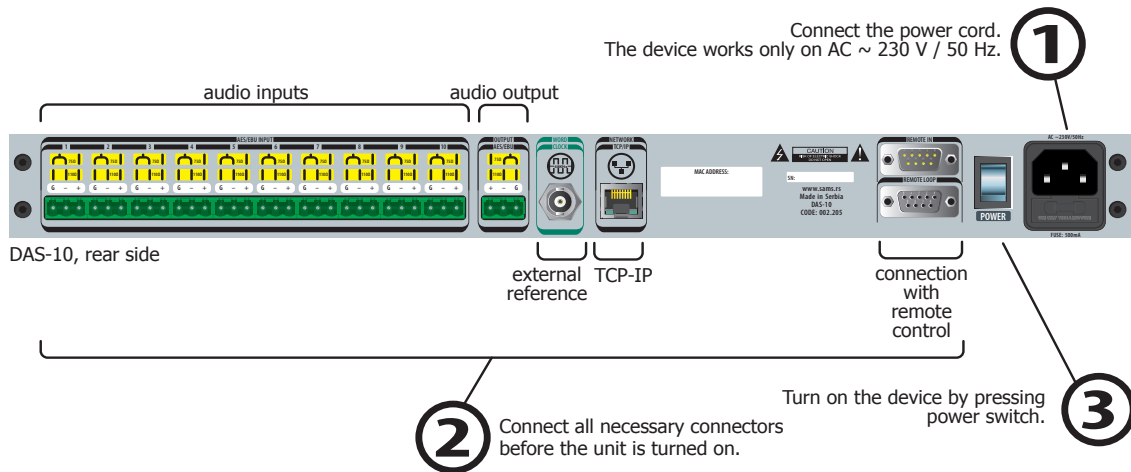
TEMPERATURE

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

ORDERING INFORMATION

Code	Name	Description
002.205	DAS-10	AES/EBU switcher 10x1
002.503	SCU-10L	Remote control 10x1

INSTALLATION

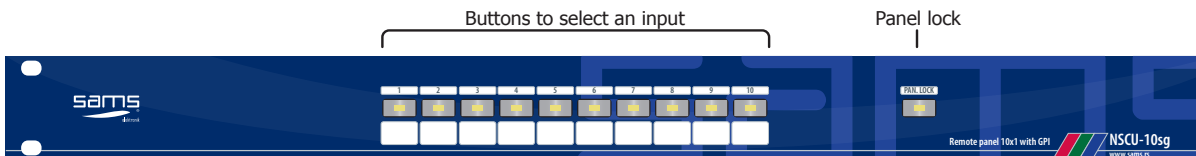


DAS-10, front side

4 Status is represented by LEDs on the front side

NOTE: WORD CLOCK (REFERENCE) is 48KHz audio signal

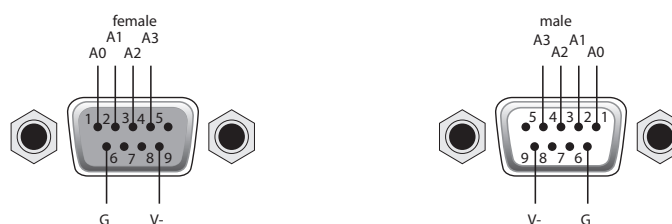
- GREEN - remote is ON / reference is ON
 - GREEN BLINK - remote is ON / reference is OFF
 - RED - remote is OFF / reference is ON
 - RED BLINK - remote is OFF / reference is OFF
- REMOTE / WORD CLOCK STATUS



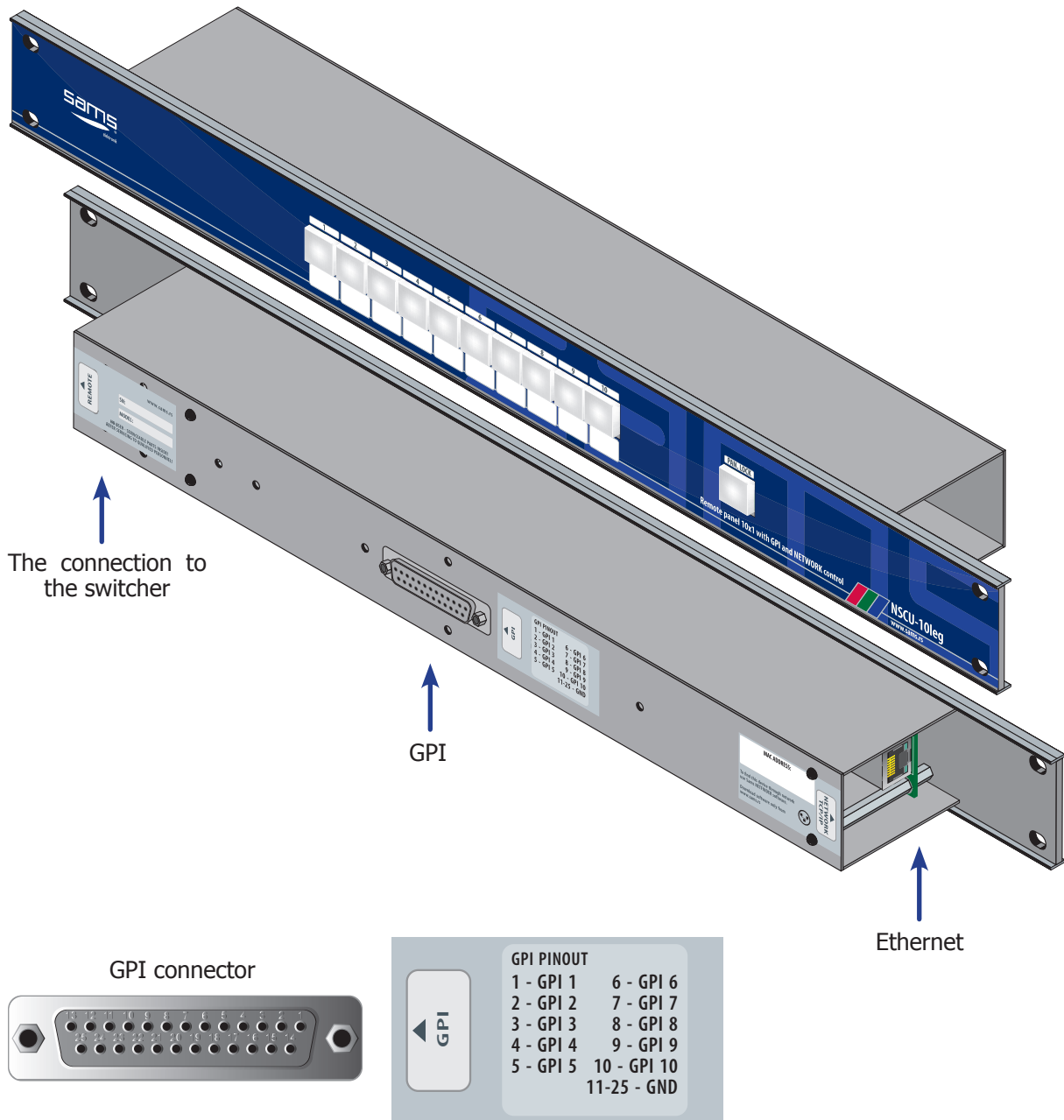
Remote control - NSCU-10, front side

NOTE: If the switcher is connected to the network, changes in inputs that are made in this way remote control does not detect.

CABLE CONNECTION BETWEEN SWITCHER AND REMOTE

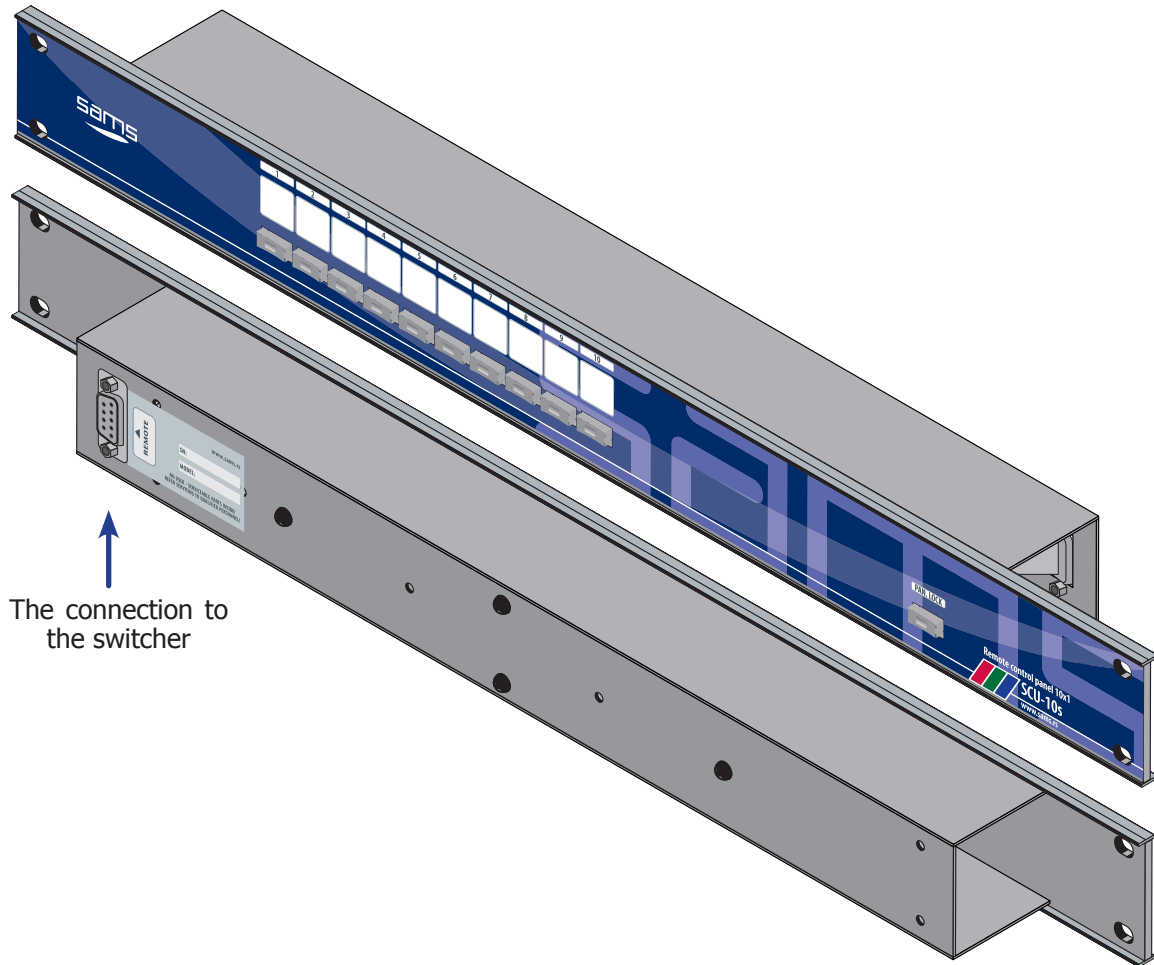


REMOTE CONTROL NSCU-10



NOTE: If the remote control is connected to the network, changes in inputs that are made in this way are detected by remote control.

REMOTE CONTROL SCU-10

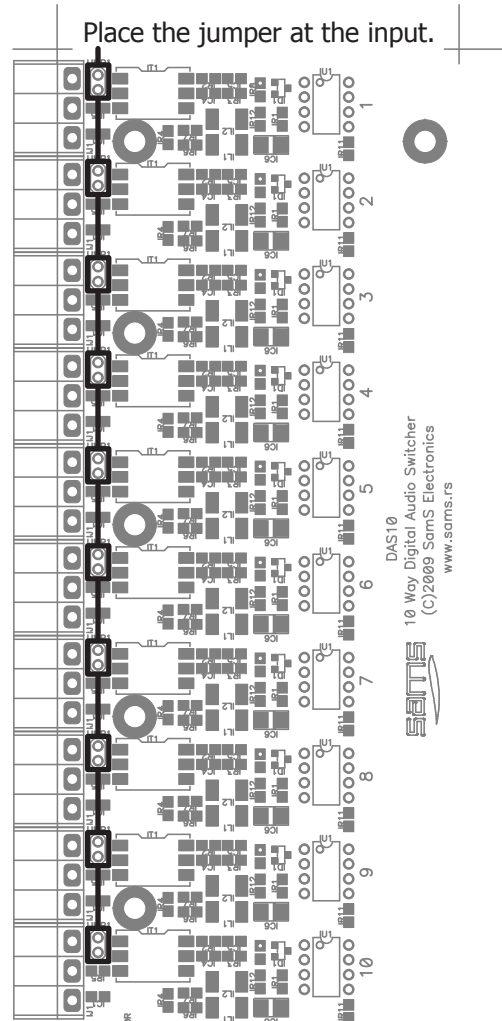
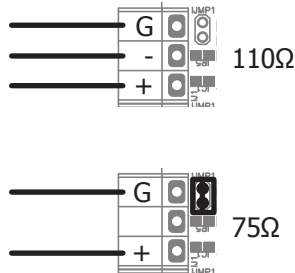


IMPEDANCE ADJUSTMENT

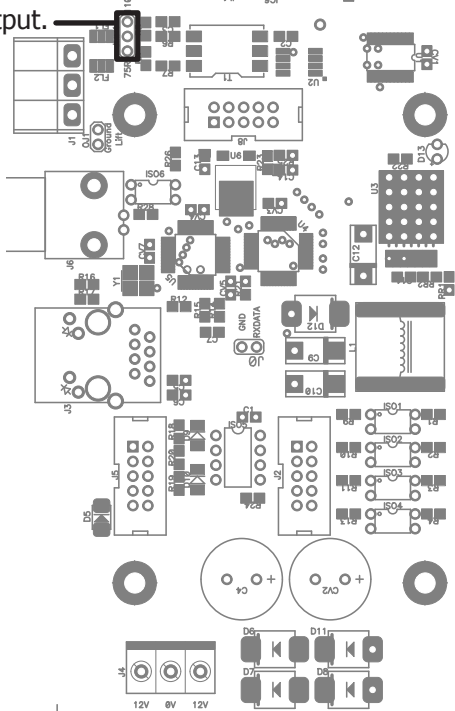
In order to perform impedance changes, it is necessary to open the device.

To change the input impedance to 75Ω, set jumper. Each input can be independently configured. Jumpers are marked with the name IJMP1.

Wiring inputs

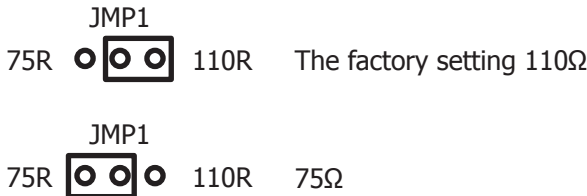


Place the jumper on the output.

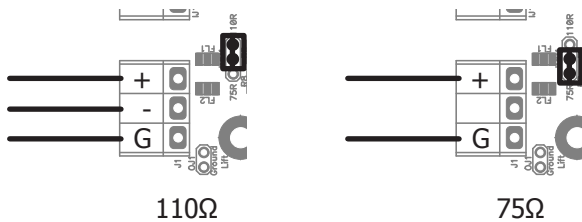


The output is factory set to 110Ω.

To change to 75Ω switch jumper as shown below.



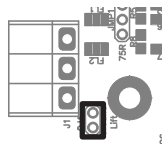
Wiring output



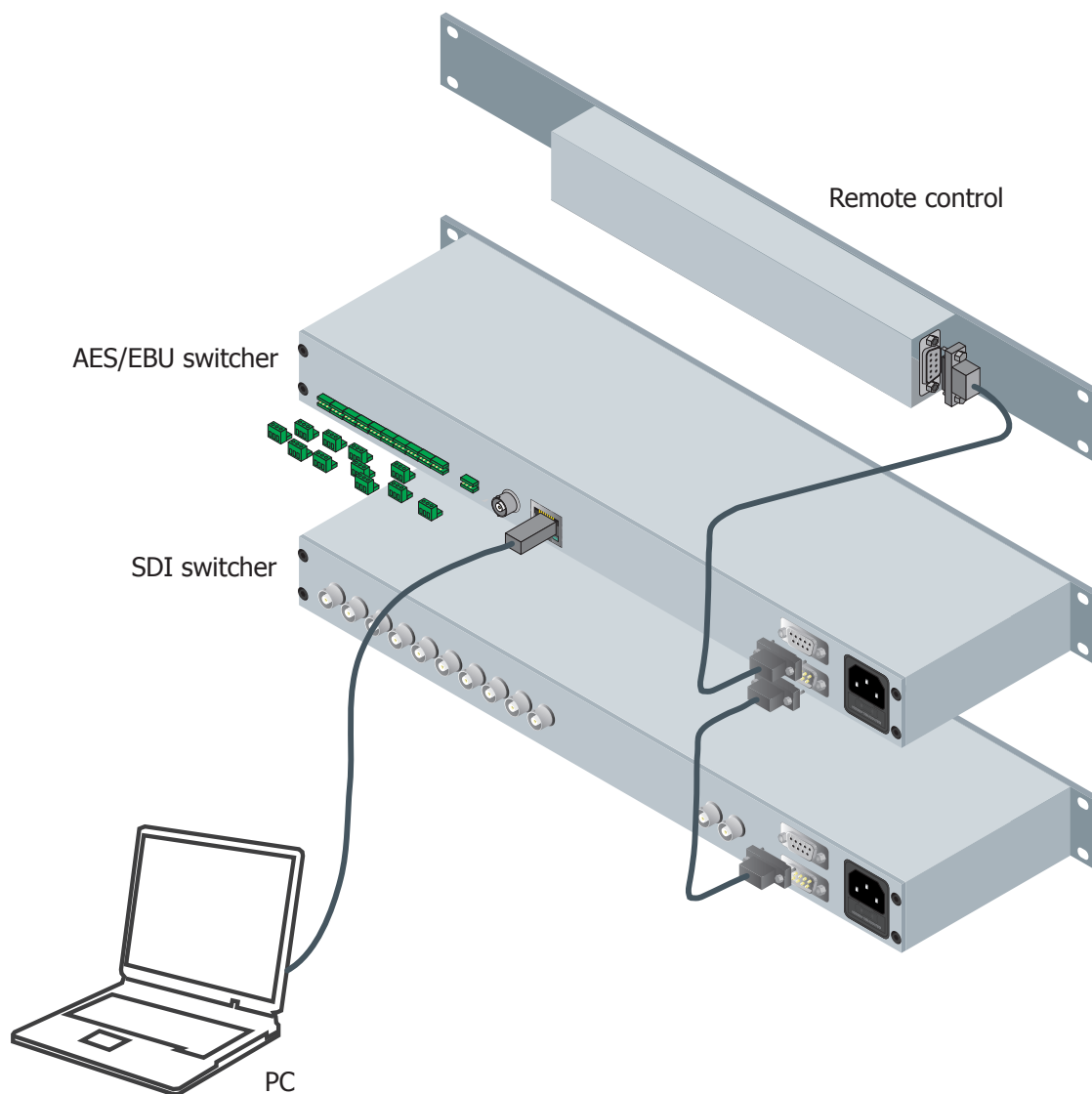
DAS10
10 Way Digital Audio Switcher
(C)2009 Sams Electronics
www.sams.rs

SETTING THE DEVICE GROUNDING

In systems where it is required GROUND LIFT, this option is enabled by setting jumper OJ1. The factory is not set.



CONFIGURATION AND CONNECTION, GRAPHIC EXAMPLE



NETWORK SETUP

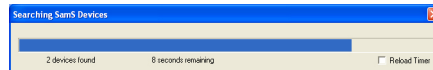
To change the settings, consult your network administrator.

The default IP address is 192.168.0.200. If there is a DHCP server, the device will be assigned a new address.

If there is a problem with connecting the device, check the firewall and allow UDP port 3040.

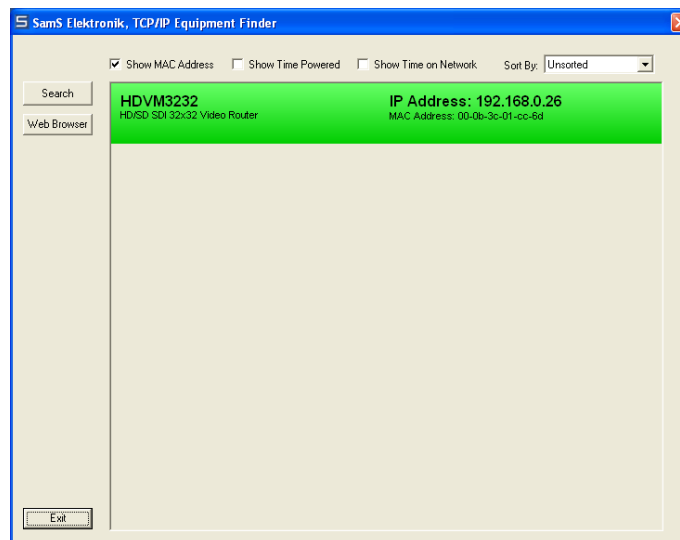
NETWORK ACCESS AND DEVICE CONTROL

The device can be configured through the web browser. First, the device must be found in the local network. To do this, start the Sams Netfinder software double clicking on the icon. The software first scans for devices.



Sams Netfinder: scan for devices

When the search is completed, a new window will open showing found devices.



Sams Netfinder: found devices

Click on the desired device and press the "Web Browser" located on the left side of the software. Browser will display the configuration options.

NOTE:

The device will be found from across the network only if the device was connected to a network cable before turning on.

If the program NETFINDER does not find the device on the network, try the following:

- Connect the inserter directly to the computer;
- The computer set with fixed IP address, as follows:
 - IP ADDRESS 192.168.0.15
 - SUBMASK IP 255.255.255.0
 - IP GATEWAY left blank;
- Set REPAIR network card, in order to fully accept the new settings (alternatively RELEASE / RENEW scenario);
- Try NETFINDER;
- The device must be seen;
- Write down the MAC ADDRESS and consult with the network administrator.

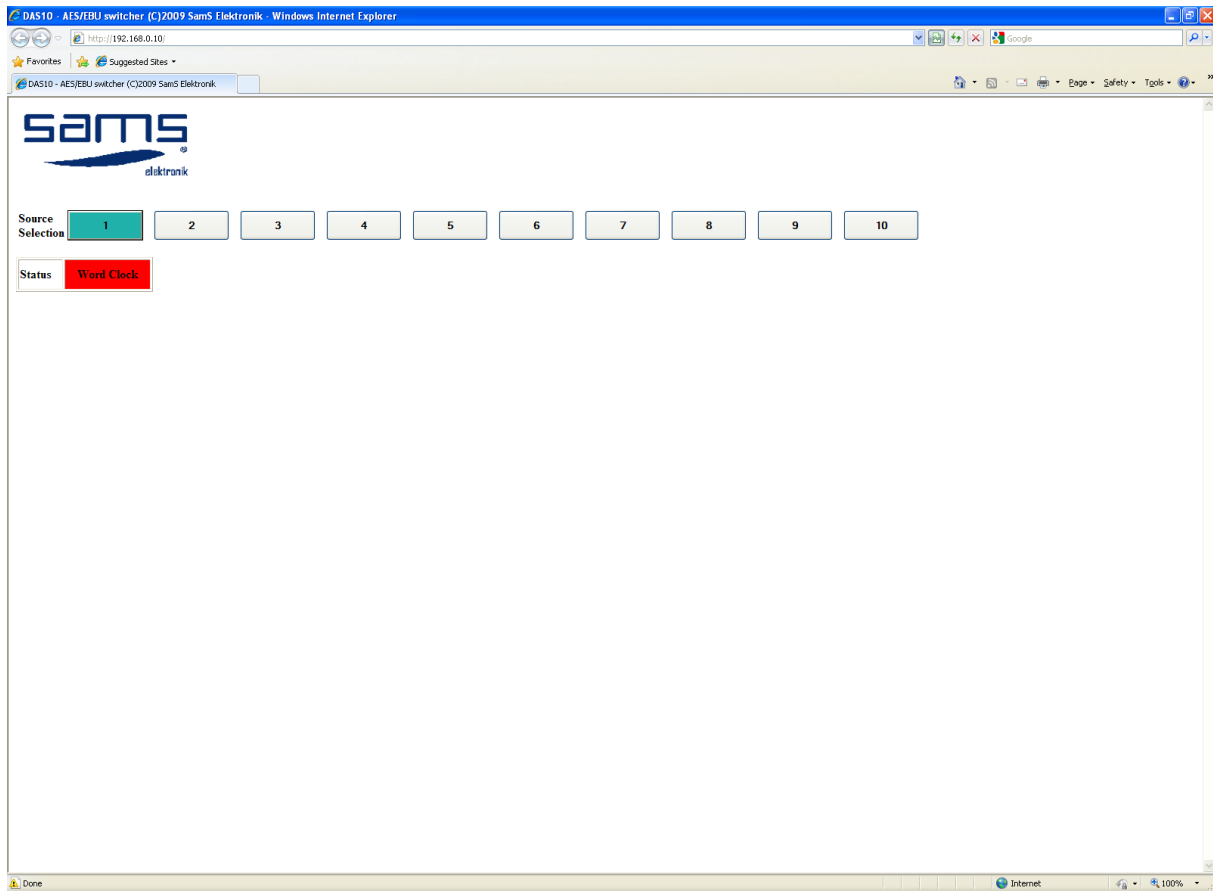
NOTE:

Do not use simultaneously with multiple places control over the network!

Just enter the correct value in the permitted range.

The manufacturer does not guarantee the validity of the results of irresponsible use of the device.

After a few seconds, the page will open.



Web browser

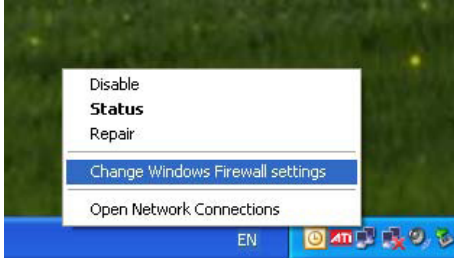
WORD CLOCK status: if it is green, everything is OK. If it is red, check cable or source of reference.

Each number represents the buttons of incoming signal. Pressing the button connects the selected input to the output.

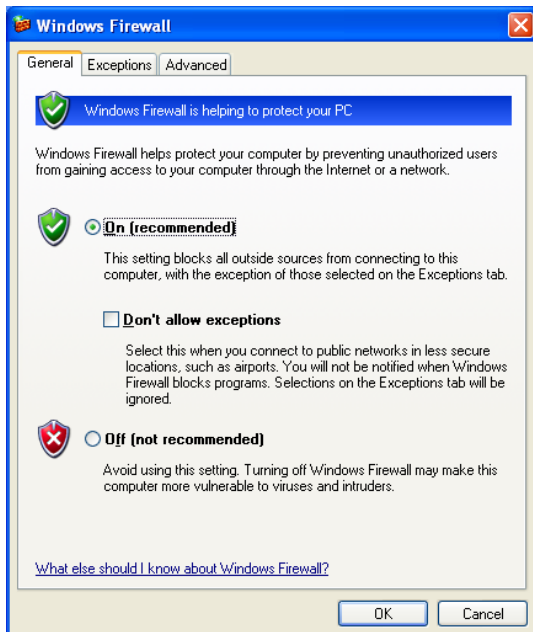
PROBLEMS AND SOLUTIONS IN A NETWORK ENVIRONMENT

If the software NETFINDER is not able to locate the device in the network try the following:

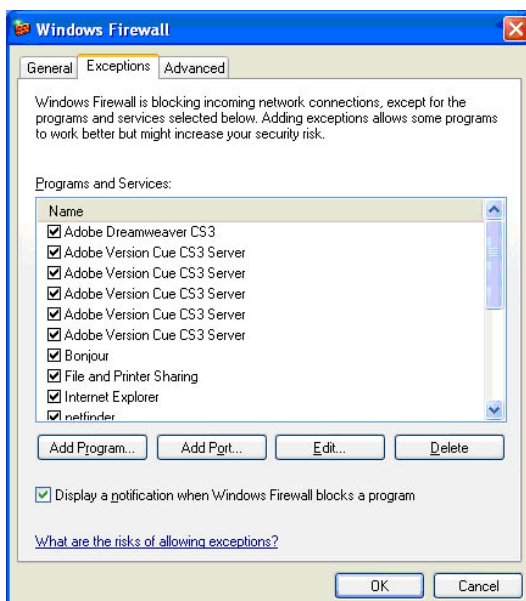
1. Right click on Local Area Connection
2. Select option "Change Windows Firewall settings"



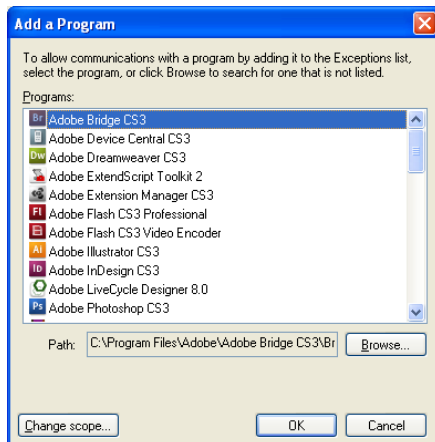
3. When a window "Windows Firewall" opens select tab "Exceptions"



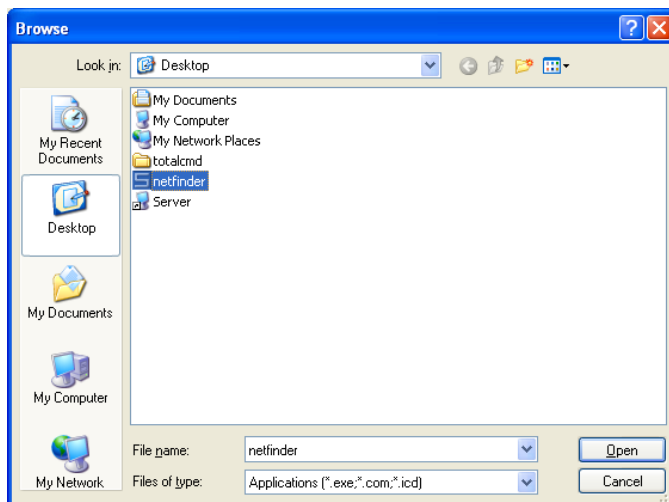
4. Click on button "Add program"



5. Click button "Browse".



6. Select application NETFINDER.



8. Click "Open", and "OK". "OK" and "OK"

If the above solution does not help, try the following:

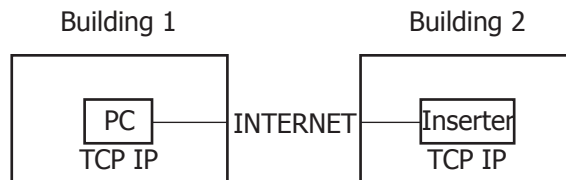
1. Download from address "<http://www.softcab.com/dhcp-server/index.php>" Tiny DHCP server*.
2. Before installation, note down the MAC address of the device.
3. Turn off the UTP cable, and if your computer has another network access, BT, WiFi etc. - disable them.
4. Network card on your computer set to a fixed address 192.168.0.1, subnet mask 255.255.255.0, default gateway and DNS leave blank.
5. Turn off all kinds of firewalls completely.
6. Install Tiny DHCP server.
7. In Tray icon will appear in the form of two shaking hands.
8. Click on that icon.
9. In the opened window, click the button "Add new".
10. Enter the MAC address of the device (MAC address is entered without dashes, dots and spaces) and press OK.
11. If the field is not marked with the MAC address of the device, click on it.
12. In the right part of the window in the drop down menu instead of "Ask me" choose "Automaticallz process the request".
13. In the IP Address field enter 192.168.0.200 (can be some other IP)
14. Connect the UTP cable to the computer and the other side to the device.
15. Turn on device.
16. Wait the computer to show "10mb connected..."

17. If the "tray" icon of DHCP server has not changed its color when you turn the device, turn the unit off, wait for a while and turn it on again.

18. Start application NETFINDER.

* Tiny DHCP server is free software, which is owned by the publisher SoftCab, Inc.

SOFTWARE SUPPORT



The device supports the development of specific software for customer needs, for remote configuration of software for playout systems, sending specific commands to the device IP address.

Commands are sent in the format:

`http://ip_address/get_data?cmd=value`

LIST OF COMMANDS:

src - input selection. Enter in the form `src=n` (n - value from 0-9 representing inputs from 1-10)

ref - send feedback about status of word clock. Enter in form `ref=.` Feedback is 0 - no reference, 1 - reference present

EXAMPLE:

`http://[ip_adresa]/get_data?src=0`

This means: first input selected

NOTE:

- If you use a web browser for programming, we recommend that it be Mozilla Firefox®, with disabled options to cache the page.

