DCX.Server

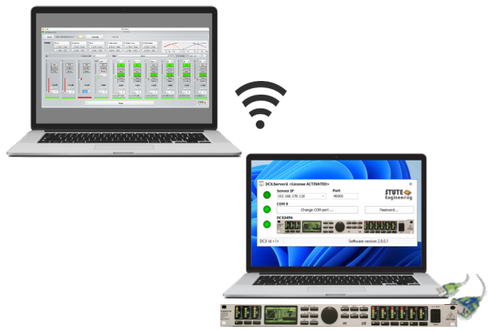
Remote control software for Behringer DCX2496

SERVER-EN 202501-A

STUTE Engineering

Application examples

Remote: Remote control of DCX2496 with 2 PCs, e.g. DCX2496 with “DCX.Server” software at the stage and “DCX.Mixer” software or “DCX.Client” software device, at the monitor position in the hall.



Direct: Control the DCX2496 with a single PC, e.g. prepare the DCX2496 settings in the studio. “DCX.Mixer / DCX.Client” and “DCX.Server” are installed at the same PC (macOS or MS-Windows PC).

1. Introduction

DCX.Server is offered as MS-Windows and macOS version. Tip: You get a free demo on our homepage, menu “download”.

1.1 How does it work?

To control the Behringer DCX2496 remotely you need this software “DCX.Server” and the “DCX.Client” or “DCX.Mixer” software:

DCX.Mixer

- The “DCX.Client” / “DCX.Mixer” provides the user interface, like a gain slider or the mute switches.
- The “DCX.Server” controls the DCX 2496 via a USB-RS232 interface.
  - The PC with DCX.Server must be connected to the local network via LAN cable.
  - “DCX.Mixer / DCX.Client” can be installed parallel to the “DCX.Server” at the same PC

DCX.Server

Note “DCX.Client” or “DCX.Mixer” is able to control via RS485 cascaded DCX2496 device (max. 16).

Note: DCX2496**LE** are not supported (device without RS232 / RS485 interface)

DCX.Client app for free (iOS, Android, macOS, MS- Windows)

DCX.Mixer software (MS-Windows / macOS / Android)

Important

- Incorrect settings of the DCX2496 can damage your audio devices or cause damage to your ears. Mute the outputs immediately if the volume is too high!
- Use the software at your own risk.
- Do not connect or disconnect the USB-RS232 interface while the DCX.server is running!
- Mute the DCX2496 outputs during the transmission of the complete configuration or stop the audio playback.
- Protect unauthorized control with a password.
- Follow the instructions in the DCX.Client / DCX.Mixer software.
- Do not close the “DCX.Server” software and do not switch off the “DCX.Server” computer while a data transfer to the DCX2496 is in progress!

2. Quick start

You get the software and a free trial version from our homepage, look for “download”.

2.1 Start

- Connect the DCX2496 with the DCX.Server PC via an USB RS232 interface (see specifications)
- Power on the DCX2496
  - Take notice the correct DCX2496 settings from chapter 5
- Start “DCX.Server” software
- Select the correct COM port (RS232)
  - LED left from COM lights green, if the port is successful initiated
- Select the IP address of your local network
- Start “DCX.Client” or “DCX.Mixer”
  - Wait 5 sec to 15 sec until the connection is confirmed with „DCX.Server online“. In error cases input the DCX. Server IP manually in DCX.Mixer / Client setup
  - The LED left from „Server IP“ lights green

When the DCX.Server is found, you are able to control via “DCX.Client” or “DCX.Mixer” software to your DCX2496. Read more in the manuals from “DCX.Mixer” or “DCX.Client”.

2.2 DCX.Server free trial

Without a valid license the DCX.Server software runs as a trial version. In combination with the free DCX.Client version, your DCX2496 device and a USB-RS232 interface you can easily check the proper work of the system before you buy it. After the successful test, the trial can be upgraded to the full version via the ordering of the license in our web shop, without any re-installation.

Trial limits: Control the gain & mute of the inputs A, B and C.

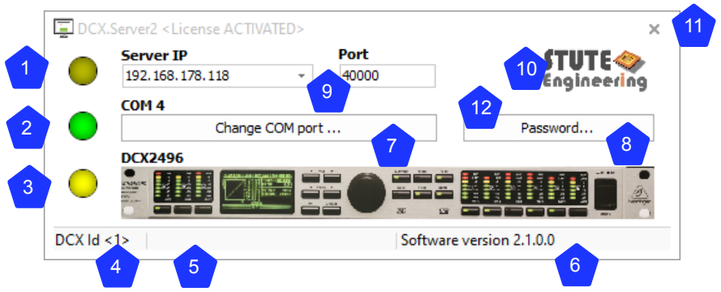
2.3 Firewall / network communication

Important: Allow the network communication between the software DCX.Server and DCX.Client / DCX.Mixer via the firewall.

During the operation the firewall recognise the new network traffic and ask how to proceed. For a proper work allow the software communication.

3. DCX.Server software

3.1 Functions



Number	Function	Description
1	LED Network connection status	• Green: Connected to the DCX.Client / DCX.Mixer • Yellow: Not connected to the DCX.Client / DCX.Mixer • Red: Network issues
2	LED RS232 interface status	• Green: Displayed RS232 port (e.g. COM 4) successful opened • Yellow: Searching DCX2496 devices • Red: Displayed COM port not found or in use via another software
3	LED DCX2496 communication status	• Green: Successfully connected with the DCX2496 device • Yellow: Connected, waiting for commands (after start) • Red: DCX currently not connected /DCX powered off
4	DCX2496 Device Id:	• DCX.Server is currently connected to the displayed DCX device Id
5	Name of the DCX.Client	• Connected currently with the displayed DCX.Client name (name from the client software “Settings” and “User name”)
6	Status messages	Notifications and error messages
7	Change COM port	Press the button, to select the RS232/COM port for the USB-RS232 interface. The current port number is displayed above of the button
8	Password 1)	Password protection for the settings: Server IP, Port and COM port. Set the password and re-start DCX.Server. Tip Clear: Input password + 2 times “empty” input in following screen Tip Reset: Input “Stute Engineering”
9	Network address	IP address and port (TCP/IP). Port number. Default 40000. Press “Enter” to confirm. **Note: IP and port must be identical to the values from the DCX.Client / DCX.Mixer software**
10	Help	Click at the image displays the PDF Help (PDF Reader required)
11	Close	Quit the program
12	Change the style 1)	Mouse click at the interface, empty space, changes the user interface style. macOS version: Function not supported.
13	Software version and installation key 1)	Click at the device image displays the software installation key and DCX.Server software version.

1) macOS: Function not supported.

Note: During operation with the DCX2496 device the LED “Network” and “RS232” flashes.

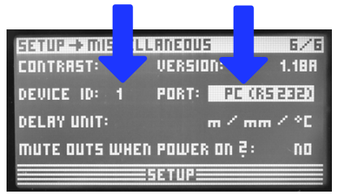
4. Control single or multiple DCX2496

Attention: Do not switch off the DCX2496 during an established connection to the DCX.Server and DCX.Client!

Important: The first DCX2496 must always be powered, when you control multiple DCX2496! You cannot control the 2nd, 3rd … DCX2496 device without the 1st one. Also take notice of the correct RS485 termination!

4.1 Control a single DCX2496 device

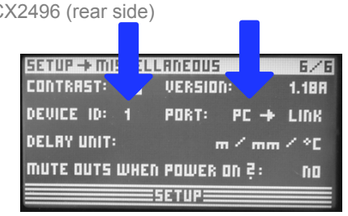
- Connect the USB-RS232 interface with the RS232 connector from the DCX2496 (rear side)
- DCX2496 adjust “SETUP Miscellaneous”
  - Set Port: PC (RS232)



4.2 Control two DCX2496 devices

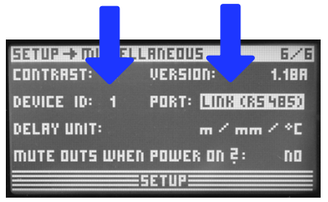
First DCX2496: Connect the USB-RS232 interface with the **RS232** plug of the DCX2496 (rear side)

- Adjust “SETUP Miscellaneous”
  - Set Port: „PC => Link“
  - Set „Device Id“ for example to „1“
- **Enable/ Push the RS485 “Term” button** from the DCX2496 rear side



Second DCX: Connect the 2nd DCX2496 with the first via the **RS485 connector**

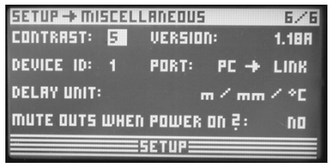
- Adjust “SETUP Miscellaneous”
- Set Port: „LINK (RS485)“
- Set the Device Id **different** to the Id from the first DCX2496
  - E.g. Device ID =2
- **Enable/Push the RS485 “Term” button** from the DCX2496 rear side



4.3 Control more than two DCX2496 devices

First DCX: Connect the USB-RS232 interface with the **RS232** plug of the DCX2496 (rear side)

- Adjust “SETUP Miscellaneous”
  - Set Port: **“PC => Link”**
- **Enable/Push the RS485 bus “Term” button** from the DCX2496 rear side

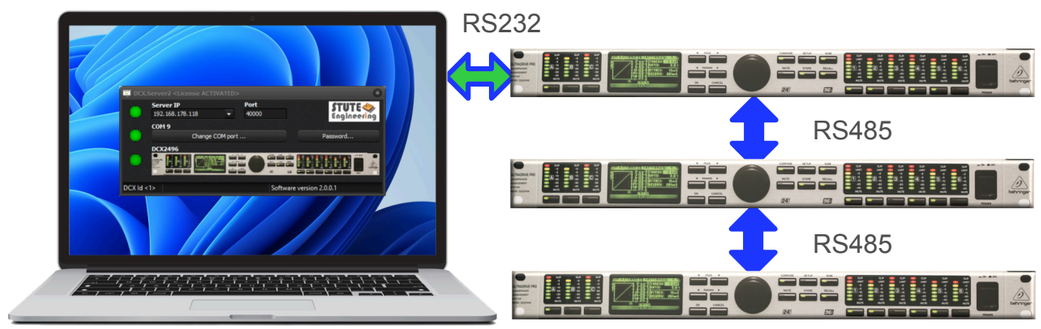


Second DCX: Connect the 2nd DCX2496 with the first DCX via the **RS485 connector**

- Adjust “SETUP Miscellaneous”
  - Set Port: **“LINK (RS485)”**
- Set the Device Id different to the Id from the first DCX2496
  - E.g. Device ID =2
- **Disable the RS485 “Term”** button from the DCX2496 rear side

Last DCX: Connect the 3rd DCX2496 with the 2nd DCX via the **RS485 connector**

- Adjust “SETUP Miscellaneous”
  - Set Port: **“LINK (RS485)”**
- Set the Device Id different to the other one
  - E.g. Device ID =3
- **Enable/Push the RS485 “Term”** button from the DCX2496 rear side



5. Low cost DCX.Server PC

5.1 MS-Windows

A cheap Windows system can be built based on a low end mini PC with a pre-installed MS-Windows 10 operating system. A PC with a CPU x5-Z8350, 1.9GHz or used Laptop is sufficient. The system setup is similar to the standard MS-Windows PC: Execute the DCX.Server setup.exe file, connect the USB-RS232 interface and install the driver, if needed.

5.2 Linux

Alternative a Linux PC system can be uses, e.g with Linux Mint. The MS-Windows software DCX.Server can be executed with WINE. Advantage of Mint: The setup includes the driver for USB RS232 interface on FTDI chip basis. A PC with a CPU x5-Z8350, 1.9GHz is sufficient.

Important: Configure in WINE the RS232 port as COM 1.

5.3 Atomic Pi PC

The Atomic Pi PC will work with Linux Mint as hardware platform.

6. Error handling

6.1 Notification via LED

- Server IP shines yellow: DCX.Client or Mixer software currently not connected to the server. Start a program and the LED colour changes to green after successful connection between DCX.Server and DCX.Client or DCX.Mixer.
- COM port LED shines red: USB-RS232 interface not connected to the PC. Or interface not installed/detected. Use another interface (USB interface with FTDI chip set recommended).
- COM port LED shines yellow: Scan for DCX2496 devices ongoing. Please wait.
- DCX2496 shines red: DCX2496 is switched off or RS232 interface not connected to the DCX2496

6.2 Messages (footer)

- No COM port detected: No USB-RS232 interface connected or driver missed
- COM x not found: No USB-RS232 interface connected or driver missed
- **After pressing button „Change COM port…" (MS-Windows) / open the list box** no serial ports listed: No USB-RS232 interface connected or installed. Or RS232 driver issue.

6.3 Network / App

Server connection not possible Check the IP address/Port of the DCX.Server and DCX.Client / DCX.Mixer:

- Check the IP list from the DCX.Server and select a valid IP address
- Example:
  - DCX.Client computer IP: 192.168.178.44 (MS-Windows command to view the IP of the PC: cmd/ipconfig)
  - DCX.Server computer IP: 192.168.195.1 select another IP, e.g. 192.168.178.72
- Server connection not possible: Allow communication via MS-Windows PC firewall
- Message "Enable Wi-Fi" or app DCX.Client quits immediately after start: Activate Wi-Fi at your mobile phone or tablet. Check the DCX.Server network connection.

6.4 DCX.Server with Linux/Wine

Wine error message after DCX.Software closing: Please confirm and ignore the message. Re-Boot the Atomic Pi PC for a re-start of DCX.Server, after confirmation of the message.

7. System requirements DCX.Server

7.1 Computer

- Network connection: Wired LAN connection, e.g. via power net adapter
- Operating system 1)
  - MS-Windows software: MS-Windows 10 (32 & 64 bit) / 11 or Linux (see chapter 6)
    - CPU min. x5-Z8350, 1.9GHz or faster (or adequate AMD type), 2GB RAM
  - macOS software : macOS 12 or higher (universal bundle arm64 & x86_64)
- Hardware RS232 port or USB port for a USB-RS232 interface (see below)
- Internet connection to activate your software license

1) You get the Demo and unlimited version via our download page. The license can be ordered via our web store.

7.2 RS232 interface

- Min. supported baud rate: 38.400 baud
- Support of the RTS control signal
- USB RS232 interface
  - USB 2.0 bus or higher
  - Interface recommended with FTDI chipset (like Digitus DA-70156)

Web: http://www.Stute-Engineering.de