DCX.Mixer

Remote control software for DCX2496

STUTE Engineering

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1. Introduction

Note: A free demo of the MS-Windows version is available in our web download section.

1.1 Application

The “DCX.Mixer” provides the user interface, like a gain slider or the mute switches. The “DCX.Server” controls the DCX 2496 via a RS232 or USB-RS232 interface.

Note: “DCX.Mixer” is able to control up to 16 cascaded DCX2496 devices. Read the Behringer DCX manual to get more details. DCX2496 LE models are not supported (no RS232/RS485 interface).

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

Mode “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.

1.2 Important

- Take notice the instructions and specifications from the “DCX.Server” manual
- Wrong DCX2496 settings can damage your audio equipment or may cause damage to the ear
- You use the software on your own risk

1.3 Styles

The software provides 3 styles for the user interface. You change the style via the software setup: header menu / file / app setup / app style.

1.4 Language

The interface is available in German and English. Based on the language set in the operating system, the language is selected automatically.

2. Connection to DCX2496

Preparation

- Connect the Behringer DCX2496 with the DCX.Server PC to the RS232 or USB-RS232 interface
- Power on the DCX2496
- Start “DCX.Server” software. Select the COM port (RS232)
  - Read more in the “DCX.Server” user manual

2.1 Connection

- Start “DCX.Mixer”. You see the “**Home**” screen ===>

- “DCX.Mixer” searches automatically the “DCX.Server” (right rectangle “DCX.Server” is empty), wait 10-20 sec
- When the “DCX.Server” is found, the right rectangle displays the DCX. Server PC image (2nd screenshot)
- Select the DCX2496 device ID, default “1”
  - How do you find the correct DCX Id => DCX2496 setup

  - Or press “Search devices…”

See

- Press “Read DCX2496 data” to connect the “DCX.Mixer” with the DCX2496 and read the settings
- After successful reading the “DCX.Mixer” screen displays the DCX2496 settings

2.2 Control a second DCX2496 device

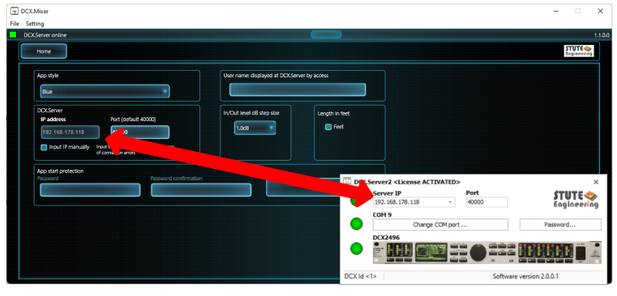
- Press the “Home” button in the header, from every other screen. The screen shown on the right appears
- Select another DCX2496 device Id
- Press “Read DCX2496 data”

Note: The 2nd DCX2496 must be connected to the first one via RS485 from the DCX2496 rear side. See Behringer DCX2496 manual for correct device settings.

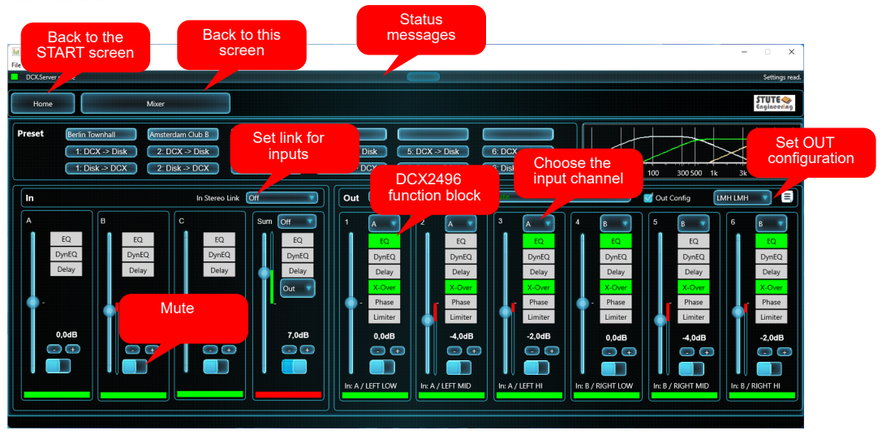
2.3 Network

- The displayed DCX.Server IP address / Port must be the same in “DCX.Mixer” setup. Enable the “input manually” option (Setup, IP address) and add the DCX.Server IP manually, in case of connection issues.
- Allow the network connection via the PC firewall (DCX.Server ↔ DCX.Mixer), TCP/IP and UDP

DCX.Mixer setup screen and DCX.Server



3. Screen “Mixer”



Note: For a detailed description of the DCX function blocks, please refer to the DCX2496 manual.

The Mixer screen summarises the settings of the DCX2496 very efficiently. The status of all main functions is displayed: Here you can see at a glance the levels to the inputs and outputs, which channels are muted or which functions (EQ, X-OVER,...) are active. You can also access the settings for the functions directly by clicking on the rectangles. Via the mouse wheel you activate or deactivate the function.

3.1 Fast access

- Adjust the gain of Input and Output: Move the slider or press the +/- buttons or use the mouse wheel
  - Note: The gain step rate (0.1dB, 0.5dB or 1dB) is defined in the program “Setup”
- Mute a I/O channel, press the switch to mute or un-mute the channel. The coloured rectangle below shows the status (red = muted)
- Switch a DCX2496 function on / off via the mouse wheel over the function name from the function block, like “EQ” or “Phase”
- Open the details screen for a DCX2496 block via mouse click into a block, like EQ. - Details are displayed for the selected block and channel
- Select per output the signal source: In A or B or C or SUM
- Select source for “Sum” channel
- Mute / un-mute all outs with one click
- Select a link for the inputs, i.e. A+B
- Store the DCX2496 settings in one of 6 presets incl. name
- Transmit the preset settings to the DCX2496

3.2 Set DCX2496 “Out configuration”

- Checkbox “Out configuration”: enable / disable the out stereo link
- List box “LMH LMH”: Select a link schemata
- Press the button on the right to transfer one or both settings to the DCX2496

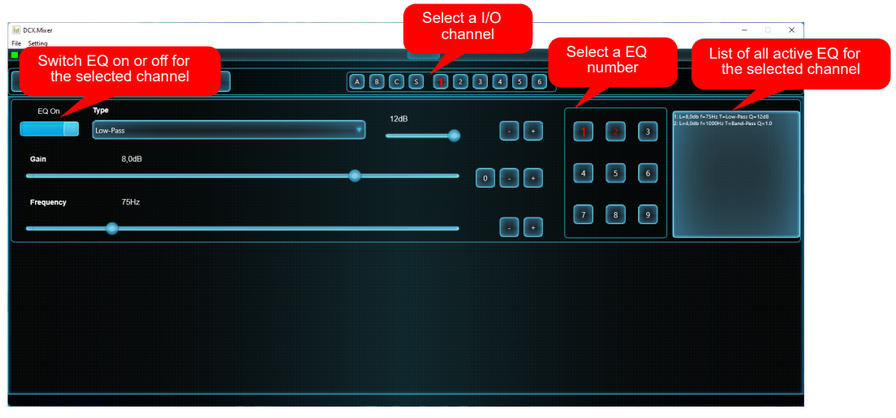
3.3 Screen zoom / position

Select a screen corner to resize the screen size of the DCX.Mixer software. Select with the mouse the header to move the position. Both are stored and used for the next program start (only MS-Windows and macOS).

4. Control the DCX2496 function blocks

Note: For a detailed description of the function blocks, please refer to the DCX2496 manual.

4.1 EQ



Control the 9 equalizer for each input and output channel.

- Select first a DCX2496 channel in the header
  - A,B,C = Input A,B,C, S = Sum, 1..6= Output 1..6. The active channel is displayed red
- Select the EQ number
- Select a EQ parameter, like “Gain”. The “0” set the gain to zero = off

Press “Mixer” in the header to jump back to the “Mixer” screen.

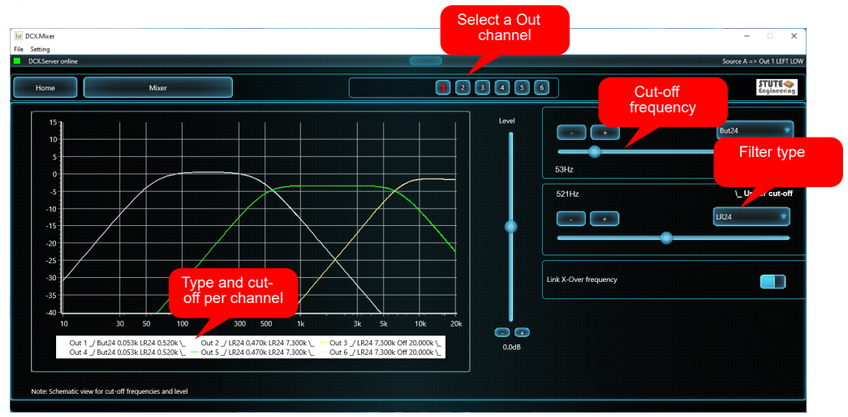
4.2 DEQ

Control the dynamic equalizer for each input and output channel.

- Select first a DCX2496 channel in the header
  - A,B,C = Input A,B,C, S= Sum, 1..6= Output 1..6. The active channel is displayed red
- Select a DEQ parameter, like “Gain”

Press “Mixer” in the header to jump back to the “Mixer” screen

4.3 X-OVER



Control the cut-off frequencies, filter types and delays for the outputs 1 to 6.

- Select first a DCX2496 channel in the header: 1..6 = Output 1..6.
  - The active channel is displayed red
- Select a parameter, like “Gain”
- Note: “Link X-Over” on synchronizes the linked channels
  - Example: Out config “LMH LMH” => Modification of channel 1 modifies also channel 4 (see “Mixer” screen)

Press “Mixer” in the header to jump back to the “Mixer” screen. The chart is a schematic view for the gain and cut-off frequencies.

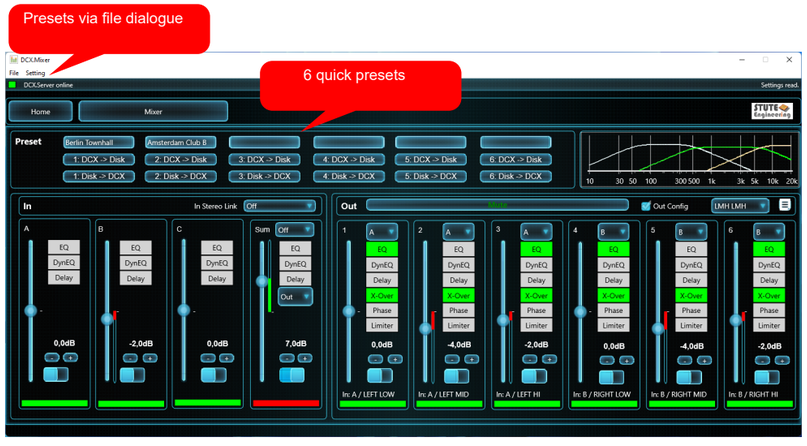
4.4 Limiter, Delay, Phase

Control of “Limiter”, “Delay” and “Phase” per output channel 1..6.

- Select first a DCX2496 channel in the header: 1..6 = Output 1..6.
  - The active channel is displayed red
- Select a parameter, like “Phase”

Press “Mixer” in the header to jump back to the “Mixer” screen.

4.5 Preset



With the presets you have an easy way to save the settings of the DCX2496 on the PC and transfer them back to the DCX2496 when needed.

4.5.1 6 quick presets

- Press “DCX => Disk” to store the current DCX2496 settings at your PC
- Press „Disk => DCX“ to transfer the settings to the DCX2496
- Enter in the text box above the buttons a short description

4.5.2 File

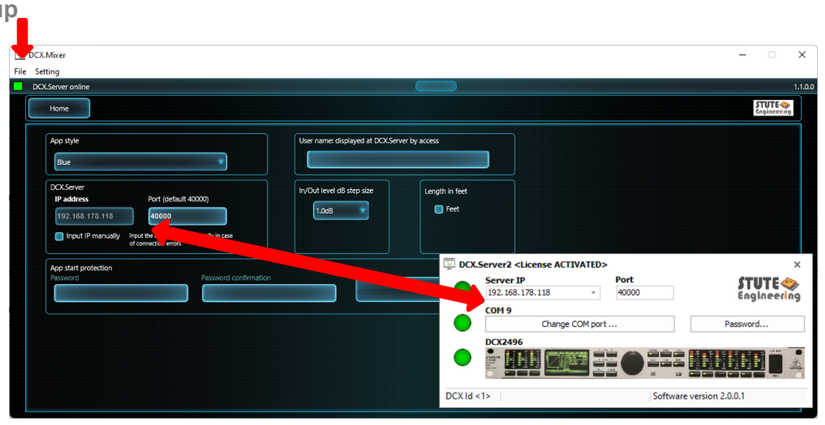
macOS / MS-Windows

- Header menu, choose “Setting”
- Select “DCX => Disk” to store the current DCX2496 settings at your PC in a file
  - Input a file name
- Press „Disk => DCX“ to transfer the settings to the DCX2496 from a file
  - Select a file from the dialogue

Android

- Press button “ToDisk” to store the current DCX2496 settings at your PC in a file
  - Input a file name
- Press button „ToDCX“ to transfer the settings to the DCX2496 from a file
  - Select a file from the dialogue

4.6 Setup



DCX.Mixer and DCX.Server

MS-Windows/ macOS: Press in the header menu “File / App setup” to view the setup screen.

Android: Press the “Setup” button 

- App style: Change the colour style for the screens
- User name: Displayed in DCX.Server app after connection with DCX.Mixer
- DCX.Server: IP address and port of the DCX.Server.
  - IP address:
    - „Input manually“ disabled: IP should be automated set. In connection error enable it
    - „Input manually“ enabled: Input the IP from DCX.Server manually
  - Port: default 40000
- Password: Connection to a DCX2496 only possible via a password input
  - Input the password twice
  - Press “Save”
  - The password is requested after restart of DCX.Mixer
- In/Out Level dB step size: Defines the steps in dB when you change the gain for Input and Output
- Length in feet: Delay lengths are displayed in feet instead meter

5. Error handling

Message / Issue	Measure
DCX.Server offline / not found	Start DCX.Server Check DCX.Server IP address, see chapter “Setup”. Enable “Input IP manually” and input the IP from DCX.Server  Check IP address, see chapter 5.1 Network issues. Check the firewall settings (PC/Router). Allow the communication (UDP, TCP/IP, Port). Check: DCX.Server PC needs a wired LAN connection
RS232 interface not connected	USB-RS232 interface not connected to DCX.Server PC Wrong COM port (RS232) selected in DCX.Server
DCX2496 switched off DCX2496 offline	Switch on DCX2496 DCX2496 Id number correct (1..16). Press “Search devices…” Check “Port” setting at DCX2496 device
Case “Password forgotten”	Enter “Stute Engineering” to reset the password
DCX.Server software version not supported / outdated	Download the latest DCX.Server version from the internet

Important: Allow the network communication between the software DCX.Server and DCX.Client via the firewall from the DCX.Server PC. During the operation the firewall recognise the new network traffic and ask how to proceed. For a proper work allow the software communication.

5.1 Network IP address / 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 PC network connection.

6. System

6.1 Supported DCX2496 functions

Note: DCX2496 setup “Delay Link” is not supported and should be switched off.

6.1.1 Input A, B, C, Sum

- In A/B/C/Sum: Gain, Mute, Delay, EQ 1..9, Dynamic EQ, Sum Level from In A/B/C
- Source Sum signal: A+B, A, B, C, …
- Adjustment “In Stereo Link”: In A+ In B…

6.1.2 Output 1..6

- Gain, Mute, Delay (long & short), EQ 1..9, Dynamic EQ,
- X-Over incl. X-Over link, Phase, Polarity, Limiter
- Source for Out 1..6: A,B,C, Sum
- Adjustment “Out configuration”: MONO, LMH LMH,..

6.2 System requirements

- PC with MS-Windows 10 or higher, network access (Wi-Fi, LAN) 1)
- PC with macOS Catalina or higher, network access (Wi-Fi, LAN), universal binary (ARM64 & x86_64) 1)
- Android 7 or above tablet computer, 32 bit or 64bit , network access (LAN)
- For DCX.Server read the corresponding manual

1) You get the DEMO and unlimited version via our download page.

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