

# **DZ-MATRIX** MATRIX AUDIO PROCESSOR



# 1 - Safety instructions

# Important safety information



This appliance is designed to operate in a heated space and away from any form of humidity or water splashes. Use in humid, unprotected areas or areas subject to extreme temperature fluctuations may pose a risk to the appliance and any person in the vicinity.



Only competent technical services recognized by CONTEST are authorized to carry out maintenance on this device. Routine maintenance procedures must be carried out in accordance with the precautions described in this manual.



This appliance contains non-insulated parts inside its casing that are live and whose voltage is high enough to pose a risk of electric shock. Under no circumstances should you perform maintenance on this appliance while the power is on.

# Symbols used



The IMPORTANT symbol indicates an important recommendation for use.



The WARNING symbol indicates a risk to the physical integrity of the user and any other person present. The product may also be damaged.



The CAUTION symbol indicates a risk of damage to the product.

# Instructions and recommendations

#### 1 - Read the instructions:

It is recommended that you read all operating and usage instructions before using the appliance.

#### 2 - Keep the instructions:

It is recommended that you keep the operating and usage instructions for future reference.

#### 3 - Heed the warnings:

Please heed all warnings and operating instructions of the product.

#### 4 - Follow the instructions:

It is recommended that all operating and usage instructions be followed.

#### 5 - Water and humidity:

Do not use this appliance near water, for example, near a bathtub, washbowl, sink or laundry tub; or in a wet location or near a swimming pool, etc...

#### 6 - Installation:

Do not place this appliance on an unstable stand, tripod, bracket, or table. The appliance may fall, causing serious injury to a child or adult and serious damage to the unit. Only use a rolling cabinet, a shelf, at ripod, a stand or a table recommended by the manufacturer or sold with the appliance. In all cases, when installing the appliance, follow the manufacturer's instructions and use only with tools recommended by the manufacturer. Care should be taken when moving the cabinet while the appliance is in use. Sudden stops, excessive force and rough surfaces may cause the unit to tip over.

#### 7 - Ceiling or wall mounting:

It is recommended that you contact your dealer before mounting.

#### 8 - Ventilation:

Slots and openings in the casing are provided for ventilation, to ensure the product can be used with confidence and to prevent overheating. These openings should not be blocked or covered. Care must be taken to never block these openings by placing the product on a bed, sofa, blanket or other such surface. This appliance should not be placed in an enclosed installation such as a suiciase or rack unless proper ventilation has been provided or the manufacturer's instructions have been followed.

#### 9 - Heat:

It is recommended that the product be kept away from heat sources such as radiators, stoves, heat reflectors, or other products (as well as amplifiers) that produce heat.



WARNING: To reduce the risk of electric shock, never remove the covers. There are no user-serviceable parts inside the casing. Contact qualified service personnel for maintenance of this appliance.

To reduce the risk of electric shock, do not use an extension cord, multi-socket, or other connecting device unless all metal parts that come into contact with each other are completely out of reach.

# Noise level



Public address systems are capable of delivering a sound pressure level (SPL) that is harmful to human health. Seemingly non-critical sound pressure levels can damage hearing if a person is exposed to them over a long period. Do not stand in the immediate vicinity of operating loudspeakers.

# **Environmental protection**

 HITMUSIC is an advocate of protecting the environment - we only sell clean products that comply with RoHS standards.
 Your product is made of materials that must be recycled. Do not dispose of it as household waste and bring it to your local waste sorting centre. Authorised sorting centres will take back your appliance at the end of its service life in order to dispose of it in an environmentally-friendly manner.



Points de collecte sur www.quefairedemesdechets.fr Privilégiez la réparation ou le don de votre appareil !

#### 10 - Power supply:

This product operates only on the voltage indicated on the label on the back of the unit. If you are unsure of the voltage of your electrical system, consult your dealer or power company.

#### 11 - Electric cable protection:

Care must be taken to ensure that electrical cables are not likely to be walked on or pinched by objects placed upon or against them, paying particular attention to the cables around the plugs and their exit points on the appliance.

#### 12 - Cleaning:

Unplug the appliance from the wall outlet before cleaning. Do not use accessories not recommended by the manufacturer. Use a damp cloth to wipe the surface of the appliance. Do not place the device underwater.

#### 13 - Period of non-use:

Unplug the power cord from your player if you are not going to use it for a long period.

#### 14 - Ingress of objects or liquids:

Never allow objects of any kind to enter this appliance through the openings as they may cause a fire or electric shock.

Never spill liquids of any kind on the product.

#### 15 - Damage requiring maintenance:

Refer all servicing to qualified service personnel in the following cases:

- When the power cord or plug is damaged.

- If liquid has been spilled or objects have fallen into the product.
- If the product has been in contact with rain or water.
- If the product does not operate normally by following the instructions.
- If the product has received a shock.

#### 16 - Maintenance/servicing:

Do not attempt to service this product yourself. Doing so would expose you to dangerous voltage. Refer all servicing to qualified service personnel.

#### 17 - Operating environment:

Operating temperature and humidity: +5 to +35°C; relative humidity not exceeding 85% (unobstructed ventilation hole).

Do not install the unit in a poorly ventilated space or a place subject to high humidity or direct sunlight (or strong artificial light).

# 2 - Introduction

The DZ-MATRIX is the heart of the matrix system. Its peripheral controllers, input/output boxes, and microphone console complement this series dedicated to public address systems, message broadcasting, and zone management.

The comprehensive software allows all inputs and outputs to be assigned and the signal to be processed according to the needs of the installation.

The numerous networking options make it ideal for installations in shopping centres, restaurants, hotels, museums, conference rooms, and any location where precise configuration of inputs and broadcasting zones is required.

# 3 - General features

# 3-1 The matrix system

Projects using DSP interfaces generally require a minimum number of inputs and outputs. This determines the choice and number of dedicated matrices. The DZ-MATRIX offers a wide range of input/output options to cover most applications. It can be used in two main modes:

# 3-1-1 On the LAN network:

- Standard: 8 analogue inputs/8 analogue outputs on the DZ-MATRIX rear panel ports.
- Optional: 4 digital inputs/4 digital outputs via remote devices.
- Maximum system inputs/outputs: 12 x 12.
- Several matrices can be connected on the same network, but they will remain independent of each other.

# 3-1-2 On the DANTE network:

After installing the DZ-DANTE modules in the DZ-MATRIXs, the latter can be interconnected using the Dante network. A maximum of 16 DZ-MATRIXs can be connected via this network, i.e. a maximum of 192 inputs and 192 outputs.

In this configuration, all the matrices interact (e.g. microphone calls from a DZ-MICDESK).

# 3-2 DSP functions

The system uses a simple, intuitive parameter-setting interface. The user-friendly graphical interface provides direct access to all the main functions and settings to optimise the time spent on configuring your installations.



All the functions can be configured using the software. Settings can be stored as presets. They can be duplicated or modified.

# 3 - 3 - The network

The DZ-MATRIX uses 3 types of network connection:

**1 - RD** (Remote Device), based on the RS-485 protocol and symmetrical AES3 for digital audio control and transport. This port is powered by 24 V DC.

RD port wiring:

- 1- AES TX +
- 2- AES TX-
- 3- AES RX+
- 4- RS485 TX
- 5- RS485 RX
- 6- AES RX-
- 7- DC24V
- 8- MASSE



Use a CAT 5e (or higher) shielded cable to connect peripherals to the RD ports. The maximum length is 100 metres.

WARNING: Never connect an RD port to a router, as this may damage the devices.

### 2 - TCP/IP for LAN control.

10/100M adaptive Ethernet connection with DHCP function.

#### 3 - DANTE Network

For optimum system performance, use a Gigabit router.



### 1 - Display.

Displays information about the device, such as the name, ID, preset in use and communication status.



- a Device name.
- b Name of the preset in use.
- c IP address of the DZ-DANTE card when installed.
- d Device ID. The ID is automatically obtained when the device is properly connected.
- e Connection indicator between the PC and the device. If the connection is good, the two icons will flash alternately.
- f DSP connection indicator.
- g DANTE icon when DZ-DANTE is installed.

#### 2 - ANALOG

Analogue input indicators. The green LED indicates the presence of a signal, the red LED indicates signal clipping on the corresponding input.

#### 3 - RD

RD remote input indicators. The green LED indicates the presence of a signal, the red LED indicates signal clipping on the corresponding input.

#### 4 - ANALOG

Analogue output indicators. The green LED indicates the presence of a signal, the red LED indicates signal clipping on the corresponding output.

# 5 - RD

RD remote output indicators. The green LED indicates the presence of a signal, the red LED indicates signal clipping on the corresponding output.

#### 6 - STATUS

**FAULT:** Red LED indicating a DSP malfunction. The information is shown on the display. **COMM:** Green LED indicating communication status between the PC or mobile device and the DZ-MATRIX.

This LED also indicates communication between several matrices connected through the DZ-DANTE card. The LED flashes during data transfer. It remains off if the matrix is disconnected from the network. **POWER:** Blue LED indicating that the matrix is powered up.

# 4 - 2 - REAR PANEL



# 1 - Power input

The input voltage can vary from 100 to 240 V AC, 50-60 Hz. If you need to replace the fuse, replace it with a fuse of the same rating (T1.6 A).

# 2 - Slot for optional DZ-DANTE extension

DZ-DANTE is part of the DZ-MATRIX system.

This extension allows 8 digital inputs and 8 digital outputs to be added to the DZ-MATRIX. It also handles a broadcast input/output for Emergency functions.

The DZ-DANTE card can be used to cascade up to 16 matrices, which are themselves equipped with the DZ-DANTE card.

DZ-DANTE is equipped with the Brooklyn II Audinate® module.



Before installing the card, make sure that the DZ-MATRIX is switched off.





### 3 - LAN

10/100M adaptive Ethernet connection port with DHCP function.

- The yellow light going out indicates a transmission problem. If it is on and the green light is off, the device has detected the network, but no connection is available.

- If the green light is on, the connection to the network is established.

### 4 & 5 - GPI

This function is used to control input/output priority/mute all outputs of channels 1-8 by dry contact or relay. (1.5 V voltage and 200  $\Omega$  resistance).

See diagram on page 25.

### 6 - ON <> OFF

Enables or disables the Ethernet port.

#### 7 & 8 - RD 9/10, 11/12

RD ports can be used to connect a remote control accessory such as DZ-BOX22, DZ-CTL, DZ-CTL2OUT, DZ-EXPAND or DZ-MICDESK.

These ports transmit and receive AES3 digital audio and RS485 control data.



#### 9 - RELAY

Dry contacts, the ON/OFF state can be individually controlled in the System menu. They are generally used as switches for third-party electrical equipment. Warning: 24 V DC, control current: Less than 500 mA.

#### 10 - RS232

This interface is used to remotely control DZ-MATRIX parameters, such as changing a preset or modifying the gain of a channel. See controls on page 50.

RS-232 connector wiring



#### 11 - INPUT

Euroblock connectors with 8 balanced analogue inputs.

### 12 - OUTPUT

Euroblock connectors with 8 balanced analogue outputs.

# 5 - Software

# 5-1 Introduction to the software

The software provides users with a quick interface to control one or more machines, configuration settings can be stored in preset files, which is very convenient for recalling or resetting the various applications.

# 5-2 Operating system and installation

The software can be downloaded from the Audiophony-pa website:

https://audiophony-pa.com/software/DZ-MATRIX Setting Software v2.0.8.zip

DZ-CTL2OUT

A8 Release.doc

After downloading the folder, unzip the "DZ-MATRIX Setting Software vX.X.X" folder on your computer and run the "DZ-MATRIX Setting Software\_vX.X.X.exe" file.





EET dll

te.dll

•••



DZ-PAD



MahApps.Metro. dll

CLinerStyle.dll



MaterialDesignTh emes.Wpf.dll

ControlzEx.dll

Microsoft.Xaml.B ehaviors.dll

CSFileIO.dll









WPFLocalization. dll



MaterialDesignC

CommLibrary.dll



# 5-3 Choosing the operating mode when opening the software

Once the connection has been established. When the software is opened, a dialogue box as shown below appears.

Select the communication mode.

MODE SELECT		×
Network Interface Configure		
Network Select Ethernet	Name: Ethernet Refresh Address: 192.168.1.134	
• Stan Ethernet		
Syst Wi-Fi		
Den     None     Den	Enter	

Then select the operating mode:



Operating principle: Standalone:



2 - Mode with the DZ-DANTE module: Several matrices are interconnected



Click "Enter" to launch the software.

To connect the IP address, use the router's internal local network. The router and PC must use the DHCP function.

On opening, the software interface will look like this:

DZ-MATRIX System Control Editor v2.0.8										
System Help										
	Device Info	Dante Inp	ut Config	I	Device Config					
Matrix System List	Device OutLook	Device Name	Device ID	Status	Detail Info					
								- 1		

Click on "Scan" to identify the connected devices:

	Device Info	Dante Inp	out Config		1	Jevice Config	
	Device OutLook	Device Name	Device ID	Status		Detail Info	
	1						
	1						
	1						
		Scan	ning				
			Current Main System				
<b>X</b>							

Select the matrix you want to manage.

DZ-MATRIX System Control Editor	v2.0.8				- β ×
System Help					
Di	evice Infa	Dante Inp	ut Config		Device Config
Matrix System List	Device OutLook	Device Name	Device ID	Status	Detail Info
D2 MAIRE Date # : 1020 Date # : 102104.133 Date # : 102104.133 Date # : 000 Date # : 102104.146		System Connect On Do you need to core	ange X Nen 1 Nen		
Scan					Statue :
Connect-Status	Communication-mode : Dante	Current-Preset :			

The connection process identifies all the connected devices:

DZ-MATRIX System Control Edite	or v2.0.8				- 5 ×
System Help					
	Device Info	Dante In	out Config		Device Config
	Device OutLook	Device Name	Device ID	Status	Detail Info
		DZ-MATRIX	0100	Online	Main Matrix System
	Ric I	DZ-BCX22	0160	Online	Connect to RD-11/12 port in Main System
	• 74	DZ-MICDESK	0150	Online	Connect to RD-9/10 port in Extension Module
		DZ-PAD	0190	Online	Connect to RD-9/10 port in Extension Module
		DZ-CTL2OUT	nnecting	Online	Connect to RD-9/10 port in Extension Module
		DZ-CTL	0140	Online	Connect to RD-9/10 port in Extension Module

Establish the identity of each device: "Config Device ID" menu

DZ-MATRIX System Contro	ol Editor v2.0.8				- ø ×			
System Help								
Load All	Device Info	Dante Inp	ut Config	I				
Save As	Device OutLook	Device Name	Device ID	Status	Detail Info			
Config Device ID Mode Select		DZ-MATRIX	0100	Online	Main Matrix System			
Exit Dante IP: 192.168.1.153	10 - 10 10 - 10	DZ-80/022	0160	Online	Connect to RD-11/12 port in Main System			
DZ-MATRIX 2	• ~	DZ-MICDESK	0150	Online	Connect to RD-9/10 port in Extension Module			
Device ID : 0200 Dante IP : 192.168.1.166	800	DZ-PAD	0190	Online	Connect to RD-9/10 port in Extension Module			
		DZ-CTL2OUT	0180	Online	Connect to RD-9/10 port in Extension Module			
		DZ-CTL	0140	Online	Connect to RD-9/10 port in Extension Module			

For each matrix connected, specify its identity then click on "Save".

DZ-MATRIX System Control Editor va	2.0.8					- 8 ×
System Help						
Devi	ice Info		Dante Inpu	t Config		Device Config
Matrix System List	Device OutLook	Devic	e Name	Device ID	Status	Detail Info
	Device ID (	Configuration				×
DZ-MATRIX		Device Name	Device II	P And MAC	Device ID	Main Matrix System
Device ID : 0100	813	DZ-MATRIX	DANTE IP : MAC : 00-1	192.168.1.153 D-C1-24-96-ED	1 00	Connect to RD-11/12 port in Main System
Dante IP : 192.168.1.153		DZ-MATRIX 2	DANTE IP : MAC : 00-1	192.168.1.166 D-C1-21-69-26	2 00	
DZ-MATRIX 2						Connect to RD-9/10 port in Extension Module
Device ID : 0200 Dante IP : 192.168.1.166						Connect to RD-9/10 port in Extension Module
	× á					Connect to RD-9/10 port in Extension Module
	-					Connect to RD-9/10 port in Estension Module
				Auto	Save Da	nice
Scan				Neiresi		
Connect-Status	Communication-mode : Dan	nte Cu	rrent-Preset :			

### Select a matrix to identify the elements connected to it

DZ-MATRIX System Control Edito	or v2.0.8				- 8 ×		
System Help							
	Device Info	Dante Inp	ut Config		Device Config		
Matrix System List	Device OutLook	Device Name	Device Name Device ID Status		Detail Info		
DZ-MATRIX		DZ-MATRIX	0100	Online	Main Matrix System		
Device ID : 0100 Dante IP : 192.168.1.153		DZ-80X22	0160	Online	Connect to RD-11/12 port in Main System		
DZ-MATRIX 2	• 7	DZ-MICDESK	0150	Online	Connect to RD-9/10 port in Extension Module		
Device ID : 0200 Dante IP : 192.168.1.166	800	DZ-PAD	0190	Online	Connect to RD-9/10 port in Extension Module		
	-	DZ-CTL2OUT	0180	Online	Connect to RD-9/10 port in Extension Module		
		DZ-CTL 01A0 Online			Connect to RD-9/10 port in Extension Module		
					1		

Click on "Load From Device" to retrieve the settings saved in the matrix.



# 5-4 DSP functions on inputs



1 - EXP/GATE: The Expander/Gate function attenuates signals below the threshold value and lets signals above the threshold value through. When the signal is above the threshold, the output signal remains identical to the input signal. Setting the ratio value to its maximum turns the Expander into a Noise Gate.

- Threshold: -80 dB to +20 dB. Click this button to set the gate trigger level for the selected channel.

- Ratio: Gain ratio between the input signal and the amplified signal, from 1:1 to 10:1.

- Attack: Response time when the signal is greater than the specified threshold, from 10 to 150 ms. The attack time is the time it takes for the gate to open completely once the threshold has been reached.

- Release: Expander response time when the signal falls below the specified threshold, from 10 ms to 1000 ms.
- Bypass: Disables the Expander/Gate.
- Flat: Restores the default settings.
- 2 Polarity: Reverses the signal phase by 180°.
- 3 DC48V: Turns on 48 V phantom power for condenser microphones.
- 4 Microphone sensitivity: Input sensitivity for a microphone from -48 dB to 0 dB.

5 - Link: Used to link two inputs. This will link the setting and mute. Inputs 1-2, 3-4, 5-6, 7-8, 9-10 and 11-12 can be linked.

6 - Filters: High-pass and low-pass filter: These filters are used to cut out unnecessary frequencies that are not reproduced by the source. For example, a voice microphone will be set to 100 Hz for the high-pass filter and 4 kHz for the low-pass filter.

- Freq: Cut-off frequency.
- Type: Type of filter.
- 7 Bypass: The signal is not processed and goes on to the next processing module.
- 8 Flat: All parameters are reset to factory settings.

#### 9 - COMP:

A compressor can limit the dynamic range of a signal above a certain level. When the signal exceeds the threshold, it is compressed by a ratio greater than 1. Below the threshold, the input and output signals remain identical. Setting the ratio to its maximum value turns the compressor into a limiter.

- Threshold: Threshold at which the signal is compressed, from -30 dB to +20 dB.
- Ratio: Compression ratio. For example, a ratio of 3:1 means that if the input level is 3 dB higher than the threshold, the output signal will be 1 dB higher than this threshold. The ratio value can be set between 10:1 and 1:1.
- Attack: Compressor response time when the signal exceeds the selected threshold. From 10 to 150 ms.
- Release: Compressor response time when the signal is below the selected threshold, from 10 ms to 1000 ms.
- Bypass: Disables the compressor.
- Default: restores the compressor's default values.
- Gain: Adjusts the output level of the compressor.

10 - Delay: A delay can be set for each input. It can be set in milliseconds (up to 1361 ms) or metres (up to 467 m).

- Bypass: The signal is not processed by the Delay function.

11 - Input and output channels: Click on the channel name (input or output) to display the DSP window for the chosen channel.

- Mute: mutes the signal.

- Fader: Adjusts the channel level.

You can enter a value in dB to adjust the channel level. To do this, double-click on the button below the fader.

- Changing the channel name:

Double-click on the channel name.

Enter the name you want to assign to the channel.

Confirm with "Save".



12 - Parametric equalizer: 5 parametric filters are available to adjust the curve of your input signals.

- Freq: filter centre frequency between 19.7 Hz and 20.16 kHz

- Qfact: This is the filter quality factor (Q). The higher the value, the finer the processed area of the spectrum. Can be set from 0.4 to 128.

- Gain: Gain or attenuation of the selected frequency, from -18 dB to +18 dB.

- Type: Filter type, Peak/Low/High.

- Bypass 1~5: Temporarily bypasses the individual processing of filters 1~5 without having to use the general "Bypass" function.

# 5-5 DSP functions on outputs

On the "DSP Channel" page, click on the name of the output channel to enter the DSP settings for the corresponding output channel.



This menu is identical to the input channels, but without the Expander/Gate section. The parametric equalizer here has 8 bands, instead of 5 for the inputs. Please refer to the description of the DSP functions on the inputs (5-4).

# 5-6 Matrix

This part of the software is used to assign inputs to outputs by means of a graphical representation in matrix form. By clicking on the grey boxes, a small window will prompt you to enable the link from the input to the output, adjust the volume and confirm your action.

Several inputs can be assigned to several outputs.

If the connection is active, the box will turn green, with the output level displayed. Otherwise, it will remain grey.



#### 1 - Standalone mode:

The matrix can route 12 input signals to 12 separate outputs. This is referred to as a 12 × 12 matrix.

- IN (OUT) 01 to IN (OUT) 08 are analogue inputs/outputs available on the rear panel.
- IN (OUT) 09 to IN (OUT) 12 are digital inputs/outputs (RD ports) and are converted into analogue signals.

#### 2 - DANTE system mode:

- The matrix can route 20 input signals to 20 separate outputs. This is referred to as a 20 × 20 matrix.
  - IN (OUT) 01 to IN (OUT) 08 are analogue inputs/outputs available on the rear panel.
  - IN (OUT) 09 to IN (OUT) 12 are digital inputs/outputs (RD ports) and are converted into analogue signals.
  - D-IN (OUT) 01 to D-IN (OUT) 08 are DANTE digital inputs/outputs and are converted to analogue signals.

DZ-MATRI	X System Control Ec	litor v2.0.8												- a ×	
System	Help	Load From Device		rn: Meter											
		Device Info					ı	Dante Input C	Config			Device Config			
Curre	ent Matrix System	DSP Ch	annel		Matrix		Ducker			ec	Auto M	ixer	Save/Load/Copy	System	
oz															
Dani				5 5	2 3	2 9	5 5	2 3	2 22	970 974	0.00	1 S			
	All Device List	1931		<u> </u>											
		1932		•											
DZ-MATRIX		1405			•										
Device ID :	0100	1400													
		1908													
DZ-80X22		IN10 IN11													
Device ID :	0160	0-IN01													
DZ-MICDES	ĸ	D-IN02 D-IN03													
Device ID :		D-IND4 D-IND5													
		D-IN06 D-IN07													
DZ-CTL2OU		D-IND8													
Device ID :	0180				Input	Channel 🕨						•	utput Channel		
07.010		IND1 Multer	IND2 Mute	IN02 Mute	Mute	1N05	PAD6 Mute	1907	Mute	Mute	00/702 00 Muze N	una ouros tute Muse	OUTES OUTES Nute	OUTER OUTER	
Design ID :	0190	*1:4	<sup>68</sup> 1.3	#13	<sup>98</sup> 1.2	*1:1	*L38	*1:a	*1:1	*1:1	°1:1 *1	1:1 81:	a #1a #1a	*138 *138	
DZ-CTL			588	3 4 8	558	**	2 4 5	8 8 8	-22 -42 -42 -42	3 4 5 4 6	2 <b>4</b> 5	2 2 2	5 6 8	2 4 5 2 4 5 2 4 5 2 4 5	
Desice ID -	0140		\$ . 5	8 2 3	40 13 20 31	80 (D 70 (D 70 (D)	2 4 4 2 4 2 4 2 4 2 4 2 4 2 4 2 4 2 4 2	8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2.2	40 2 3 4	00 13 40 10 13 10	49 49 49	10 40 11 40 11 10 70 71 70 71	222	
		000	018	000	018	000	0.0	003	Coli	008	000 000	200 000	000 000	000 000	
				_				_							
Connect-s	Status	Comm	unication	mode : Dant	•	C	urrent-Prese	t : Default							

# 5-7 DANTE configuration

5-7-1 DANTE configuration in software



**1 - DANTE receivers:** Displays the matrices equipped with a DZ-DANTE module connected to the network. Used to select a matrix in order to configure the inputs and outputs.

- 2 Receiver inputs: Displays the digital inputs of the receiver matrix.
- 3 DANTE transmitters: Used to select the DANTE transmitter assigned to each input of the matrix.
  - There are several assignment options for each receiver input:
  - None: No DANTE assignment.

Third-party device: Indicates that routing is active on the chosen input. This assignment has been made on the DANTE Controller. It could be an internal routing in the same matrix or with another DANTE product (for example a ConvD2in).
 DZ-MATRIX (ID:DXXXX): Used to select the transmitting matrix.

- 4 Transmitter output: Used to choose the digital output of the matrix selected in the DANTE transceiver.
- 5 Refresh: Refreshes the page if you are working in parallel with the DANTE Controller.
- 6 Save To Device: Saves the displayed configuration in the DZ-MATRIX memory.
- 7 Save to PC: Saves the configuration to a folder on the connected computer.
- 8 Load from PC: Recalls a previously saved configuration.

# 5-7-2 DANTE configuration in the DANTE Controller interface

The DANTE Controller window uses the settings made in the DZ-MATRIX System Control Editor software. BrodcastInput1 or BrodcastOut1 visible on the DANTE Controller are not assignable. These inputs/outputs are reserved for Emergency mode and DZ-MIC-DESK microphone calls.





Notes: The configuration shown on the DANTE Controller corresponds to the configuration shown on the DZ-MATRIX System Control Editor software.

# 5-8 Ducker

The Ducker is designed to attenuate one or more channels when priority signals are activated. The main applications are automatic speaking for conferences or priority messages.

For example: The signal from a microphone can attenuate the background music (talkover).

Once the message has been broadcast, the volume of the background music is automatically restored.

	DZ-MATRIX System Control Edit	ltor v2.0.8								- ø ×
	System Help	Load From Device Sync Met								
		Device Info		Dante	Input Config			Devic	ce Config	
	Current Matrix System	DSP Channel	Matrix	Ducker	FB	ac	Auto Mixer	Save/Load	Сору	System
11	DZ-MARIOX (DA0100)	Ducker Input Priority Se								
	Dante IP: 192.168.1.153	1003	101 OUT02	OUT03	OUT04	OUTOS	OUT06	OUT07	OUTOB	
			Level 0	Level 0	LevelO	LavelO	Lavel 0	Level 0	Level 0	
	All Dentire Link	IN02 Unvet 0	Level 0	Level 0 V	Level 0 V	Letero V	Level 0	Level 0 V	Level 0	
	All Device List	IN04 Level 0	- Level 0 -	Level 0 👻	Level 0 V	Level 0 -	Level 0 -	Level 0 -	Level 0 -	
		IN05 Level 0	- Level 0 -	Level 0 🐨	Level 0 🖛	Level 0 🔻	Level 0 🔻	Level 0 -	Level 0 🔻	
	DZ-MATRIX	IND6 Level 0	Level 0 V	Level 0 💌	Level 0 🔻	Level 0 🐨	Level 0 🐨	Lavel 0 🐨	Level 0 🔻	
	Device ID : 0100	IN07 Level 0	👻 Level 0 🐨	Level 0 🐨	Level 0 🔻	Level 0 🔻	Level 0 🔻	Level 0 🔫	Level 0 🔻	
		IN08 Level 0	- Level 0 -	Level 0 🔻	Level 0 🔻	Level 0 💌	Level 0 🔻	Level 0 🔻	Level 0 🔻	
		IN09 Level 0	🕶 Level D 🔫	Level D 🔻	Level 0 🔻	Level 0 🔻	Level 0 🐨	Level 0 🔻	Level 0 🔻	
	DZ-BOX22	IN10 Level 0	- Level 0 -	Level 0 🔻	Level 0 🔻	Level 0 🔻	Level 0 🔻	Level 0 🔻	Level 0 🔻	
	Device ID : 0160	IN11 Level 0	Level 0 🔫	Level 0 👻	Level 0	Level 0	Level 0 🔻	Level 0	Level 0 🔻	
		IN12 Level 0	Level 0 🔻	Level 0 🔻	Level 0 🔻	Level 0 🔻	Level 0 🔻	Level 0 🔻	Level 0 🔻	
	[]	D-IN01 Level 0	👻 Level D 💌	Level 0 🐨	Level 0 🔻	Level 0 🐨	Level 0 🔻	Level 0 🖛	Level 0 🐨	
	DZ-MICDESK	D-IN02 Level 0	👻 Level 0 👻	Level 0 🔻	Level 0 🔻	Level 0 🔻	Level 0 🔻	Level 0 🔻	Level 0 🔻	
	Device ID : 0150	D-IN03 Level 0	Level 0	Level 0 👻	Level 0	Level 0	Level 0 🔻	Level 0	Level 0 🔻	
		D-IN04 Lawet 0	Level D V	Level D *	Level 0	Level 0 🐨	Level 0 🔻	Level D 👻	Level 0 👻	
	07. CT 2017	D-IN05 Level 0	Level 0	LevelD	Level 0	Level 0	Level 0	Level 0	Level 0	
	02-012001	D-IN06 Level D	Level 0	Level D	Level 0	Level 0	Level 0	Level 0	Level 0	
	Device ID : 0180	D-IN07 Level 0		Level 0	Level 0	Level 0	Level 0	Level 0	Level 0	
					Lanna I.	Lance	Lance T		Land	
_	DZ-PAD	Ducker Parameter Settin								
	Device ID : 0190				4					
		Threshold -2202	-2008	-2308	-2008	-2028		-2038	-2058	
		Depth 4005	-4045	-4040 0 7	-4008	-40:5	-4045	-4045	-4045	
	DZ-CTL	Active Time 2000m5	2000ms 2	2000-15	2000-15	2000ms 0	2000ms 0	200ms 0	2900ms 0	
	Desire ID - 0140	Bypass By	Dans Bypess	Dypass	Dypass	Pypass	Bypass	Вураза	Bypass	
	Refresh									
	Connect-Status	Communication-mody	: Dante	Current-Preset : Dr	fault					

**1** - Priority management of inputs on each analogue output 1 to 8. There are 15 priority levels, the highest being 15. This function does not apply to the RD outputs.

2 -

- Threshold: Attenuation threshold. From 0 dB to -80 dB.
- Depth: Attenuation level.
- Activation Time: Rate of gain change to attenuate inputs.
- BYPASS: The signal is not processed.

# 5-9 FBC module

The FBC (Feedback Compression) function allows feedback to be effectively suppressed and processed. The dynamic filter and the static filter have the same function. They filter out the unwanted components or characteristics of a signal in a certain frequency range. The differences between them are as follows:

- 1 Static filters: The frequency points that have been measured remain fixed in their position.
- 2 Dynamic filters: The filter will be removed when the feedback disappears. It is not fixed to a specific frequency.

Even in difficult environments, it can significantly suppress feedback and effectively prevent clipping of audio equipment and speakers.



1 - FBC Input Select: You can choose from 12 inputs. When the corresponding input is switched on, the filter for that channel is activated. The default filter is a dynamic filter. The corresponding LED from 1 to 24 turns green.

**2 - FBC Output Select:** You can choose from 12 outputs. When the corresponding output is switched on, the filter for that channel is activated. The default filter is a dynamic filter. The corresponding LED from 1 to 24 turns green.

#### **FBC Settings:**

3 - FBC Mode: The Speech or Music functions are suitable for meetings and musical performances, where feedback and noise are automatically analysed.

4 - Filter Release: Used to determine the rate at which the dynamic filter is cleared. Fast/Medium/Slow

#### FBC Parameters:

5 - Static Filter Setup: By default, this is a dynamic filter (the light is green). Click on Static filter configuration to switch to the static filter (the light turns red).



Page 20

The automatic clearing time of the dynamic filter is limited to 2~3 s. At this point, you can press this button to clear the dynamic filter immediately.

7 - Clear All Filters: Resets all dynamic and static filters.

8 - Bypass: Disables the FBC function.

9 - Indicators 1 to 24: Once the system has detected the frequency to be processed, if it is a static filter, the indicator boxes 1 to 24 turn red and the filtering effect is reflected on the graph. For dynamic filters, the attenuation also appears on the graph and the indicator boxes turn green.

Warning: The DZ-MICDESK does not have the FBC function. When the DZ-MICDESK is connected, the FBC function of the corresponding channel cannot be activated.

# 5-10 Auto Mixer

The Auto Mixer automatically controls the gain of multiple microphones in real time, significantly reducing feedback, noise and filtering of adjacent microphones. It maintains a constant system gain, even when several speakers are speaking simultaneously, and crossfades seamlessly without any signal compression.



#### Source Select

Local Input: Selects the input channels (1-12) to be processed.

Activation Time: Sets the start time for mixing the signal from the selected input channel. Press ON to activate the time setting and use the horizontal slider to adjust the time value.

# 5-1 SAVE / LOAD / COPY

This menu is used to manage backup parameters. This data can be stored directly in the DZ-MATRIX's internal memory in the form of presets. Its memory contains a total of 24 presets.



- 1 Import All Preset: Imports all preset types from the selected device to your computer.
- 2 Export All Preset: Exports all preset types from the computer to the selected device.
- 3 Preset List: Displays all saved presets.

#### 4 - Device/Local PC

#### Warning:

Save/load/delete operations are limited to the preset list. All device configuration data, with the exception of the preset list, must be managed via "Load All" and "Save As..." in the "System" menu.

#### If a device is selected:

Load: First select a preset, click OK to load it, and wait a few seconds until loading is complete.



Save: Select a preset from the list, then customise the name and click Save.

DZ-MATRIX System Control Edito	DZ-MATRIX System Control Editor v2.0.8								
System Help	Load From Device Sym	c Meter							
C	Device Info		Dante Input 0	Config		Device Config			
Current Matrix System	DSP Channel	Matrix	Ducker	FBC	Auto Mixer	Save/Load/Copy	System		
DZ-MATRIX (ID:0100)		Preset List							
Dante IP: 192.168.1.153		01.Le Bon Mix							
		02.Preset 1							
All Device List		03.Europe2							
DZ-MATRIX	Import all preset types from	04.Empty							
Device ID : 0100	computer to device	05.Empty							
DZ-BOX22			Players Input Sam	Propert Name I					
Device ID: 0160		Chappel Copy	i nuae ingan suver	Teset funde : Save	LOOD DERIE				
	Export all preset types from		Enter Preset Name :						
Device ID : 0150	device to computer file	Copy From IN01 V							
		CH01 CH02		Save Cancel CH08		Select All Copy			
DZ-CTL2OUT		CH09 CH10	СН11 СН12						
Device ID : 0180		Input Chan	wi 🎫			Output Channel	î		
	END1 END2	IN03 IN04	INDS INDS INDS	IN08 CUTO1 C		UTD4 CUTD5 CUTD9	00/107 00/108		
DZ-PAD	*1:8 *1:8	8138 8138 8		S138 S138 S	138 8138 81		*138 *138		
Device ID : 0190			▝▋᠅▋᠅						
DZ-CTL	30 0 30 0 4 30 7 40 7	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	30	**************************************	9 7 7 9 9 7 7 9 9 7 7 1	30 30 30 37 40 40 40 40 40 40 40 40 40 40 40 40 40		
Design ID - 0140	40 -33 -60 -33 -70 -35 -70 -85	80 3 80 3 4 40 13 40 13 4 .70 2 .70 2 .7	6 3 90 3 90 3 6 13 40 13 40 13 7 45 70 45 70 45	60 3 60 3 60 40 43 40 43 40 40 45 70 45 70	-3 -60 -3 -60 -13 -60 -13 -60 -15 -70 -15 -70	3 68 3 68 3 13 68 13 68 13 27 79 77 79 78	40 -33 -40 -33 -70 -25 -70 -25		
Refresh		40		40			40 - 40 - 40 - 40 - 40 - 40 - 40 - 40 -		
Connect-Status	Communication-m	ode : Dante	Current-Preset : Default						

**Delete:** Select a preset and click Delete, the preset will be deleted.



#### - If "Local PC" is selected:

Load: Select Local PC and click Load. The preset will be loaded locally from the computer.

DZ-MATRIX System Control Edi	tor v2.0.8						- o ×			
System Help	Load From Device Sym	ic Meter								
	Device Info		Dante Input	Config		Device Config				
Current Matrix System	DSP Channel	Matrix	Ducker	FBC	Auto Mixer	Save/Load/Copy	System			
DZ-MATRIX (D-0100)		Preset List								
Dante IP: 192.168.1.153		01.Le Bon Mix								
		02.Preset 1								
All Device List		03.Europe2								
DZ-MATRIX	Import all preset types from	04.Manual preset								
Device ID : 0100	computer to device	05.Empty								
			Status Cum	nt Select Press, Number is U						
DZ-80022		Dark Lord K Kny Lord								
Device ID: 0160	Export All Presets	Channel Copy	annel Copy							
DZ-MICDESK	Deport all preset types from									
Device ID : 0150	device to computer file		to input channel selected below :							
		CH01 CH02	CH01 CH02 CH03 CH04 CH05 CH06 CH07 CH08 Select All Copy							
DZ-CTL2OUT		CH09 CH10	CH11 CH12							
Device ID : 0180	ſ	Input Channel	· •			Output Channel				
	NU2 NU2	IND3 INS4 I	INDS IND6 IND7 Mute Mute Muse	IN03 OUTD1 Nuce Muce	OUT02 OUT03 0	DUTDA OUTOS OUTOS Muse Muse	0UT07 OUT08 Mute			
DZ-940	<sup>35</sup> L <sub>31</sub> = <sup>45</sup> L <sub>31</sub> =	**L***********************************	1.33 "1.33 "1.3		** L ** E ** L ** E **	Las <sup>a</sup> Las <sup>a</sup> Las	**L.**= **L.**=			
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Depice ID : 0140		40 41 40 41 40 70 43 70 43 70		40 15 40 15 70 30 70 70		13 00 13 00 1 13 00 13 00 13	40 43 40 43 -76 43 -70 43			
Refresh										
Connect-Status	Communication-m	iode : Dante	Current-Preset : Default							

Save: When Local PC is selected, click Save to save the current preset on the computer.

**6** - Channel Copy: Input channels  $(1 \sim 12)$  can be selected and copied to any input channel  $(1 \sim 12)$ . The same applies to outputs.

Select All: Click on this button to select all channels (CH1~CH12).

Copy: After selecting the input/output channel to any other channel, click Copy, all parameters will be copied.

# 5-12 System



1 - Relay Control: IN01-IN08 or Paging (DZ-MICDESK) can be selected. When there is a broadcast signal on the selected channel, the corresponding relay terminal on the rear panel of the DZ-MATRIX makes contact and can be used to control the starting or stopping of external devices.

2 - Device Name: You can customise the device name here. After modifying it, press Save to confirm.

Change Device Name Wind	ow	
Current Device is		
Input New Name:		
	Save	Cancel

- 3 Default: Replaces the device name with the default setting: DZ-MATRIX.
- 4 Password Setting: Used to change the password.

Password Setting	
Current Password :	
New Password :	
Confirm Password :	
	OK Cancel

**5 - Lock System:** Press this button to lock the system. If you forget the password, you can use the admin password: DZ88 to unlock the system.



6 - Reset Default Setting: Restores all parameters, except the preset list, to default settings.

DZ-MATRIX System Control Edit	or v2.0.8							-	ø ×
System Help	Load From Device Sym	Meter							
	Device Info		D	lante Input Config			Device	Config	
							Input Setting		
	GR 1				GPI 2	1N05			
	Mate All Conputs				Ellergency monty				
				1					
			DZ-MAT	Pasword	Setting				
			Reseting d	efaultwait a mome	int				
	S128 S128	C128 C128	S128 S128	SI28 SI28	SI 28 SI	28 SI 28 S	128 8128	8128 8128	S 1 38
	+33 +32 +6 +6 +2 +2	+10 +10 +10 +0 +10 +10 +10 +10 +10 +10 +	0 +10 0 +10 -10 +1 -10 +1	0 +10 0 +11 -12 +4 -12 +4 -12 +2 +2 +2		+11 +11 +11 +11 +11 +11 +11 +11 +11 +11	+32 +32 +32 +40 +40 +42 +42 +42 +42 +42 +42 +42 +42 +42 +42	+10 +10 +10 +10 +10 +10 +10 +10 +10 +10	0 +10 10
		400 44 40 44 400 44 -70 425 -70 425	8 <b>3</b> 8 <b>3</b>	6 8 6 8 7 8 7 8		-5	45 46 45	-00 -01 -00 -01 -00 -01 -00 -01 -00 -01 -00 -01 -00 -01	
			-3548 -3548	-3548			0.0		
Connect-Status	Communication-m	ode : Dante	Current-Preset	t : Le Bon Mix					
•			Q Rechercher		. 🗉 🧟 🖻			^ @ <> D ;	14:22 17/04/2023

7 - Reset to Factory Setting: Restores all parameters to default settings, including the preset list.

DZ-MATRIX System Control Edito	r v2.0.8						- 0 ×
System Help	Load From Device Sync	Meter					
	Device Info		Dante Inpi	it Config		Device Config	
Current Matrix System	DSP Channel	Matrix	Ducker	FBC	Auto Miner	Save/Load/Copy	System
DZ-MATRIX (Di0100)	GPI Control						
Dante IP: 192,168,1.153	GPI 1	IN01 -		GPI 2			
	Emergency Priority 💌	Output Zones Setting		Disable			
All Device List							
Dz-MAIROC							
DZ-8C822							
Device ID : 0160			anning				
	<u> </u>		All the presets will reset to fa	ctory! Are you sure to reset factory			
DZ-MICDESK	Relay Control	_	setting ?		Restore		
Device ID : 0150	Kelay1 None	·					
	Relay2 None	•		Ou Non	Reset to	Factory Setting	
02-CTL2OUT							
Device ID : 0180	IN21	Input Chann		NOT CUTO	CUTRE CUTRE	Output Channel	
DZ-PAD	blas blas						
Device ID : 0190			노래 노래 노	1 1 1			31 <sup>-</sup> L31 - L31 -
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DZ-CTL		**************************************		2 4 7 4 7 1 1 4 7 1 1 4 7 1 1 4 7 1 1 1 1	**************************************	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	****
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Refresh	008 008	Coll Coll	608 608 608	000 680	0.00 0.00	0.00 0.00	608 608
Connect-Status	Communication-me	ode : Dante	Current-Preset : Defau	lt			

8 - GPI Control: For easy control of the IN/OUT priority (GPI function takes priority) and volume of the selected IN/OUT. Note: The GPI voltage is 1.5 V and the resistance is 200  $\Omega$ . It is only used for relay or switch control.

#### GPI 1 wiring



- 1) Place the connector on the GPI 1 port on the back plate.
- 2) The other end connects the green/white wire and the brown wire of the network cable to form a short circuit.
- 3) The GPI light on the software automatically lights up (green), which means that it is activated.
- 4) Set the type of priority according to your needs.

#### GPI 2 wiring



- 1) Place the connector on the GPI 2 port on the back plate.
- 2) The other end connects the green and brown wires of the network cable to form a short circuit.
- 3) The GPI light on the software automatically lights up (green), which means that it is activated.
- 4) Set the type of priority according to your needs.

GPI Control mode1: Input Priority



- a Input Priority: Select input 1 to 8 for priority control.
- b Output gain for priority: These potentiometers are used to adjust the output gain for each channel.

#### GPI Control mode 2: Mute all outputs

GPI Control			
GPI 1			

#### GPI Control mode 3: Emergency priority



Emergency priority is only used for emergency broadcasting. This mode has a higher priority than "DUCKER". When the emergency broadcast is initiated, the volume setting of the corresponding channel (whether muted or at minimum) will automatically revert to the default volume.

- c Input Priority: Select input 1 to 8 for priority control.
- d Priority: The top level (highest number) has a higher priority. The highest level is 16.
- e Output zones setting: Select the output channel, set it in the pop-up window.

EMERGENCY WIN	DOW												×		
GPI-2 Emergency Fun	ction														
Matrix System	OUT01	OUT02	OUT03	OUT04	OUT05	OUT06	OUT07	OUT08	OUT09	OUT10	OUT11	OUT12			
DZ-MATRIX(ID:0100)															
Z DZ-MATRIX(ID:0200)															Ŀ
DIZ-MATRIX((D:0300)															
D2-MATRIX(ID:0400)															
DZ-MATRD((D:0500)															
	Save To	Device		oad From	Device		Select All		a	ear All					
		1		1						1					
	[	1					g			h					

f - Output channel selection zone: Select the output channel. It will turn green if selected, grey if not.

- g Select All: Selects all channels.
- h Clear All: Deselects all channels.
- g Select All: Selects all channels.
- **h** Save to device: After selecting a channel, click this button to confirm the selection.

i - Load From Device: Used to retrieve presets already saved.

# 6 - Devices

# 6 - 1 - DZ-MICDESK

Zone-managing microphone console





#### 1 - Mic input

3-pin XLR female connector for the gooseneck electret microphone (supplied). It uses phantom power supplied by the base of the DZ-MICDESK.

#### 2 - Display

Displays selected zones, volume and ID.

#### 3 - BUSY/COM operation indicators

When communication with the DZ-MATRIX is correct, the green COM indicator flashes.

When several microphones with different priority levels are trying to transmit in the same zone, the microphone with the highest priority level is able to transmit normally.

The red BUSY indicator of the microphone with the lowest priority lights up and the display shows "Paging Busy..." until the microphone with the highest priority has finished transmitting.

#### 4 - Signal indicator LEDs

The green LED indicates the presence of a signal when the microphone is activated. The red LED indicates the clipping limit.

#### 5 - VOLUME

It controls the volume of the microphone sent to the selected zones. Press this button to select all zones.

#### 6 - SCROLL

You can select one or more zones by turning the knob to the left or right and pressing it to confirm.

#### 7 - TALK

When you press and hold the button, the chime sounds and the red ring on the microphone lights up, indicating that you can speak. Release the button when you have finished speaking.

#### 8 - Port RD

Connecting to the DZ-MATRIX. The maximum length of the CAT 5E (or higher) cable is 100 metres.

### 9 - Port USB

This port is used to load the MP3 file used for the chime. The maximum duration of the chime is 4 seconds.

To do this, connect your DZ-MICDESK to the computer using the USB port. It will be recognised as a USB drive. All you have to do is replace the MP3 file.

# 6-1-1 DZ-MICDESK Editor

This page is used to configure all the functions of the DZ-MICDESK.



1 - Connect Status: When the LED is green, it means that the communication status is normal. If it is grey, there is no communication.

2 - Max Zone Setting: A maximum of 64 zones can be configured and managed.

3 - Zone Setting: Each zone can select 1 to 12 outputs.

The zone name can be changed. To do this, double-click on the desired zone.

4 - Choosing the matrix: In-line selection of the DZ-MATRIX (only with the DANTE option): Each zone (3) can select any output 1 to 12 from the DZ-MATRIX in-line (5).



- 5 Output Enable: Select the output channel corresponding to the zone. It is green when selected, grey when deselected.
- 6 All Output Select: Selects all output channels at once.
- 7 Mic Vol: Adjusts the microphone volume from 0 to 32.
- 8 Chime Vol: Adjusts the chime volume from 0 to 32.
- 9 Master Vol: Adjusts the master volume. from 0 to 32.

10 - Priority: Sets the priority level from 1 to 16. The higher the level, the higher the priority.

11 - Mode select: Selects the broadcast mode. Emergency is only used for emergency broadcasting. This mode has the highest priority, higher than the GPI 3 "Emergency priority" control mode and "DUCKER". When the DZ-MICDESK's emergency broadcast is triggered, the broadcast volume setting of the corresponding zone (whether muted or at minimum) will automatically revert to the default volume.

12 - Screen Saver: When this box is ticked, the device will enter a standby state if there is no operation for the time selected beforehand.

Note: The factory default setting is ON. To prolong the life of the LCD screen, it is recommended that the user set it to ON. You can choose between 10 sec, 30 sec and 60 sec

#### 13 - Lock Mode:



Automatic: The DZ-MICDESK automatically locks if no action is taken. You will then have to enter the code chosen during configuration to unlock it.

DZ+MATRIX System Control Editor va	2.0.8				0	×
System Help						
			Locking			
			- ouni			
	Max Zone Setting					
Connect-Status	Communication-mode : E	Cante Cu	rrent-Preset : Default			

Manual: The DZ-MICDESK locks when the "Lock" button in the DZ-MICDESK configuration window is pressed (PC).

14 - Password Setting: Used to change the password. The password can be made up of numbers and letters.



15 - Lock: Used to lock the DZ-MICDESK.

System Help				
		Locking		

16 - Device Name: The default name is displayed in the box. Click to change the device name.



17 - Save To Device: Once the settings have been changed, they must be saved in the device to take effect.

steen Made					
Devi	ce islo	Dante Input Config		Device Config	in i
		- entre •			
		Saving.			
		Screen Saver	Lock Mode : Manual 1		

- 18 Load From Device: Loads presets from the device.
- 19 Default: Resets the presets.

DZ-MATROX System Control Editor v	20.8					-	Ø ×
System Help							
Devi	ice trifo		Dante Input Config		Device Config		
Current Matrix System D2-MATRIX (D-0100) Dente IN 102-346-1.333							
All Device List							
02-MATRIX Device ID : 0100							
02-80002							
Device ID : 0160			=				
Device ID : 0150							
D2-CTLIDOUT			Neset Detault.				
02:400	12						
Device ID : 0190			Sover Saver 20				
D2-CTL Device ID : 0140							
Referat							
Connect-Status	Communication-mode : Dar	to CL	rrent-Preset : Delault				

20 - Save To PC: Saves the current presets to the computer.

Enregistrer sous								>
← → ~ ↑	DZ-MATRIX S	etting Software_x2.0.	8 + DZ-MICDESK		v C	,P Rech	ercher dans : D2	-MICDE.
Organiser - Nouv	eau dossier						= -	0
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<ul> <li>         Telechargement     </li> <li>         Videos     </li> </ul>								
> - Windows (C)								
<ul> <li>ESD-US8 (D)</li> <li>Backup2 (0.192)</li> </ul>								
= ESD-USB (D)								
> 🎦 Android								
Nom du fichier:								
Type: D	Z-MICDESK File(*MR)	0						
<ul> <li>Masquer les dossiers</li> </ul>						Emepistr	er Ann	uler

21 - Load From PC: Loads presets from the computer.

Ouwir					3
← → ~ ↑ ■ * Di	Z-MATRIX Setting Software_v	0.8 > DZ-MICDESK	~	С	P Rechercher dans : DZ-MICDE
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ESD-USB (D:)     Android     Captures Matrice     DM838 record d					
Nom du fichie	r:			~	DZ-MICDESK File(*MRM)
					Ouvrir Annuler

# 6-2 - DZ-CTL2OUT

Volume control unit for channels 9/10 or 11/12 of the matrix with two analogue outputs.

# FRONT PANEL



Turn the knob to the left or right to adjust the volume. Press the knob to access the input and output routing functions.

# **CONNECTION BOARD**





2 analogue line outputs assigned to RD ports 9/10 or 11/12 on the DZ-MATRIX

2 analogue outputs			
Balanced			
Connectors	2 x 3-pin terminals, 5 mm pitch		
Impedance	240 Ohms		
Maximum output power	+20 dBu		
Frequency response @ 0 dB	20 Hz ~ 20 kHz +/- 1.5 dB		
Dynamic range	-107 dB max., A-weighted		
Crossover distortion	-87 dB max., A-weighted		

LCD display	
Volume adjustment	-∞ ~ +15 dB

Ports	
RD to DZ-MATRIX network port, RJ45, maximum 100 m CAT 5E cable (or higher)	

Dimensions (L x H x D)

147 x 86 x 47 mm



1 - Connect Status: When the LED is green, it means that the communication status is normal. If it is grey, there is no communication.

2 - Select Input Channel to Control Volume: Selected channels are green.

			- 0 ×
System Help			
		Dante Input Config	Device Config
Current Matrix System	Connect Status :		
All Device List	IN01 IN01 IN02 IN02	Curtos Curtos Curtos	ble Routing Function
Denvice 10 : 0100	NV3 (N55 N04 (N54	00/103 00/095 00/104 00/094	
D2-80x22 Device ID : 0160	18406 18406 18406 18407	CUTOS CUTOS CUTOS	
DZ-MICDESK Device ID : 0150	1000 1000 1000 1000 1000 1000 1000 1000	CUT08 CUT08 CUT09 CUT09 CUT09 CUT09	
DZ-CTL2OUT Device ID : 0180	N11 N11 N12 N12 All leput Select	00711 00711 00712 00712 All Output Select	Al Routing Select
D2-950 Device ID : 0150	Device Name : D2-CTL201	of Soven Saver 🔯 💭 Lock Mode : Man	nal 🔹 look Research Selling
Device ID : 01A0		Save To Device Load From Device Default Save To P	C Load from PC
Connect-Status	Communication-mode : Dante	Current-Preset : Default	

3 - All Input Select: Selects all input channels at once.

4 - Input Channel Name: The default name is displayed in the box. Click to change the input channel name. Note that the channel name will be changed on all devices as well as the matrix.

5 - Select Output Channel To Volume And Routing: Selected channels are green.

6 - All Output Select: Selects all output channels at once.

7 - Output Channel Name: The default channel name is displayed in the box. Click to change the output channel name. Note that the channel name will be changed on all devices as well as the matrix.

8 - Enable Routing Function: This function enables or disables routing of matrix sources to the selected zone. Selected channels are green, unselected channels are grey.

9 - All Routing Select: Selects all routings at once.

10 - Screen Saver: When this box is ticked, the device will enter a standby state if there is no operation for the time selected beforehand.

Note: The factory default setting is ON. To prolong the life of the LCD screen, it is recommended that the user set it to ON. You can choose between 10 sec, 30 sec and 60 sec.

#### 11 - Lock Mode:



Automatic: The DZ-CTL2OUT automatically locks if no action is taken. You will then have to enter the code chosen during configuration to unlock it.

Manual: The DZ-CTL2OUT locks when the "Lock" button in the DZ-CTL2OUT configuration window is pressed (PC).

#### 12 - Lock: Locks the DZ-CTL2OUT.

Click on Unlock and enter the password (13) to unlock. If you forget the password, you can use the factory password "DZ88" to unlock.



13 - Password Setting: Used to change the password. The password can be made up of numbers and letters.

Password Setting	
Current Password :	
New Password :	
Confirm Password :	
	OK Cancel

14 - Device Name: The default name is displayed in the box. Click to change the device name.

Change Device Name Windo	w	
Current Device is :		
Input New Name :	_	
	Save	Cancel

15 - Save To Device: Once the settings have been changed, they must be saved in the device to take effect.

DZ-MATRIX System Control Editor y	42.0.8		- 0 ×
System Help			
De	Ace Info	Danze Input Config	Device Config
Current Matrix System DZ-MATRIX (DJ0160)	Connect Status :		
Dunie IP: 192.168.1.133			
All Device List		С/ПН ОЛИЯ С/ПЕ ОЛИЕ С/ПЕ ОЛИЕ С/ПИ ОЛИ	
D2-80x22 Device ID : 0160		0.016 0008 0008 0008 0008 0008 0008 0008 0	
DZ-MICDESK Device ID : 0150		Cortes Contes	
DZ-CTL2OUT Device ID : 0180	All Input Select	All Output Select	All Routing Select
D2:9A0 Device ID : 0190		🗹 Soren Saver 🐹 🗍 Lock Mode : Manual	
DZ-CTL. Device 10 : 01A0 Rafeath			
Connect-Status	Communication-mode : Dante	Current-Preset : Default	

17 - Default: Resets the presets.

18 - Save To PC: Saves the current presets to the computer.

DZ-MATRIX System Control Editor v2	.0.8		- 0 ×
System Help			
Devic	e Info	Dante Input Config	Device Config
	Connect Status :		
		Reset Default Orm	
Device ID : 0180	All Input Select	All Output Select	All Routing Select
		tt 💟 Scrien Swer 20. 💧 Lock Mode : Stan	
Connect-Status	Communication-mode : Dante	Current-Preset : Default	

19 - Load From PC: Loads presets from the computer.

∈ → ∽ ↑ 🎴	<ul> <li>DZ-MATRIX Setting Software</li> </ul>	e_v2.0.8 > DZ-CTL2OUT	~	C	2	Rechercher	dans : DZ-C	120
Organiser • Nouveau	dossier						≣ •	
> 🔚 Bureau	Nom	Modifié le	Type	Taille				
Documents  Compared a second	☐ 1.RC2	29/03/2023 07:50	Fichier RC2		66 Ko			
ESD-USB (D)								
Type : DZ-C	TI 20LIT File(* BC2)							-
iper or e								
Masouer les dossiers					En	registrer	Annule	r
Ouvrir								
Ourrir - → × ↑	* DZ-MATRIX Setting Software	ey288 > DZ-CTL2OUT		/ C	٩	Rechercher	dans : DZ-C	1.2
Ouvrir - → · ↑ È Irganiser • Nouveau	DZ-MATRIX Setting Software dossier	ey208 > DZ-CTL2OUT		< 0	٩	Rechercher	dans : DZ-C	n.2
Ouvrir  Inganiser - Nouveau Bureau	I = DZ-MATRIX Setting Software dossier Nom ^	ey288 > DZ-CTL2DUT Modifie le	Type	<ul> <li>C</li> <li>Taile</li> </ul>	P	Rechercher	dans : DZ-C	112
Ourrin           □ → → ↓           □ Decumers           □ Decumers           □ Mindon           □ Scauge Z(192)           ■ ESD-USB (D)           □ Aptind           □ Aptind           □ Aptind	i = DZ-MATROX Setting Software dosaier Nom ^ D 1.4C2	ey288 > DZ-CTL2OUT Modifie le 28(01/2823 07:59	5 Type Fichier RC2	Z C	Р 66 Ка	Reshercher	dans : DZ-C	1.2
Overie Decements Dec	I = DZ-MATRIX Setting Software distiler Nom ^ ] 14C2	eya08 + DZ-CTL2DUT Modifie te 28/01/2021 07:50	Type Ficher RC2	Z C	Р 66 Ко	Rechercher	odens : DZ-CC	1

# 6 - 3 - DZ-BOX22

The DZ-BOX22 is an audio input and output module including 2 analogue input channels and 2 analogue output channels. The device includes integrated A/D and D/A converters that process AES3 digital audio signals to and from the DZ-MATRIX. The DZ-BOX-22 uses 2 digital input channels and 2 digital output channels.

A total of 4 digital input channels and 4 digital output channels can be occupied on the DZ-MATRIX.

#### FRONT PANEL

Switchable 48 V phantom power for condenser microphones.



Status indicators for input signals A and B.

Status indicators for output signals A and B.

Adjusts the mic input level.

If RCA input A is used simultaneously with the microphone input, the two will be mixed together.

# CONNECTION BOARD

2 analogue line outputs assigned to RD ports 9/10 or 11/12 on the DZ-MATRIX



RJ45 connector for connection to the DZ-MATRIX.

The maximum length of the CAT 5E (or higher) cable is 100 metres.

Inputs	
Balanced	
Connectors	3-pin XLR and RCA
Input impedance	5.1 ΚΩ
THD+N	< 0.01 % typ 20-20 kHz, 0 dBu
Maximum input level	20 dBu
Frequency response	20 Hz ~ 20 kHz +/- 1.5 dB
Dynamic range	-107 dB max., A-weighted
Crossover distortion	-87 dB max., A-weighted
Outputs	
Balanced	
Connectors	2 x 3-pin terminals, 5 mm pitch
Impedance	240 Ohms
Maximum output level	+20 dBu
Frequency response	20 Hz ~ 20 kHz +/- 1.5 dB
Dynamic range	-107 dB max., A-weighted
Crossover distortion	-87 dB max., A-weighted
Indicator lights	
Signal	-30 dBu, green
Clip	+17 dBu, red
Ports	
RD to DZ-MATRIX network port, RJ45, maxim	num 100 m CAT 5E cable (or higher)
Dimensions (L x H x D)	147 x 86 x 47 mm

# 6-3-1 DZ-BOX22 Editor

	1 2	3 4	
DZ-MATRIX System Control Edito	pr v2.0.8		- 6° ×
System Help	Load from Davica Sync Autar		
	Device Info	Dante Input Config	Device Config
Current Matrix System DZ-MATRIC (D00100) Dame IP 192 158 1 153	Connect Status :		
All Device List D2-MATRIX Device ID : 0100	Device Name : D2/80X22	Save To Device Default	
DZ-BOX02 Deskter ID : 0160 DZ-MICDESK Deskter ID : 0150			

1 - Connect Status: When the LED is green, it means that the communication status is normal. If it is grey, there is no communication.

2 - Device Name: The default name is displayed in the tab. Click to change the device name.

Change Device Name Window		
Current Device is :		
Input New Name :		
	Save	Cancel

- 3 Save To Device: Once the settings have been changed, they must be saved in the device to take effect.
- 4 Default: Resets the presets.

DZ-MATRIX System Control Editor	r v2.0.8		-	8 ×
System Help	Load From Device Sync Meter			
D	evice Info	Dante Input Config	Device Config	
	Connect Status :			
		See 'n Oesa Changing.		
02-460 Device ID : 0100 02-011 Device ID : 0100 02-011 Device ID : 0100 Nathesh				
Connect-Status	Communication-mode : Dante	Current-Preset : Default		

# 6-4 - DZ-PAD

The DZ-PAD is a wall-mounted volume controller with a 4.3" touch screen.

The DZ-PAD unit allows you to control inputs, outputs, scenes and the system. The system is fully configurable.

It can be assigned to any DZ-MATRIX output. It can also be used to route any input to any output, as in the Matrix menu of the Control Editor software.



#### 1 - RD IN port

Connects to the DZ-MATRIX or DZ-EXPAND. The maximum length of the CAT 5E (or higher) cable is 100 metres.

#### 2 - RD EXP port

LINK connection for additional controllers (4 controllers max.).

#### 3 - Power connector

Auxiliary +24 V DC power input, required to connect two or more DZ-PADs.

#### 4 - Touch screen

Displays connection status, ID, volume, model, channel selection and other information.

# 6-4-1 Touch screen functions

	Input	Output	
	Preset	System	
ID: 10	)50		

#### Home screen

Provides access to four different submenus:

- Input
- Output
- Preset
- System.



#### Menu Input

In the Input menu, volumes and mutes can be set and visually checked.

Channels: Used to select to channel to be adjusted.
 Faders: Used to adjust the input level of the selected channel

**3 - Mute:** Used to mute the volume of the selected channel.

**4 - Icons and ID:** When they flash alternately, this indicates that a connection has been established with the DZ-MATRIX. The device ID is displayed.

- 5 UP: Go to the next page.
- 6 DOWN: Go to the previous page.
- 7 MENU: Go to the home page.





#### Output menu

In the Output menu, the routing function lets you assign any input to any output. Volumes and mutes can be set and visually checked.

1 - Mute: Used to mute the volume of the current output channel.

2 - Outputs: Scrolls through outputs 1 to 12 in standalone mode or 1 to 20 if the DZ-DANTE option is installed.

**3 - Inputs:** Used to enable or disable inputs 1 to 12 in standalone mode or inputs 1 to 20 if the DZ-DANTE option is installed.

**4 - Output Volume:** Used to adjust the level of the current output.

#### Preset menu

The Preset menu is used to call up the presets stored in the DZ-MATRIX.

**1 - PRESET LIST:** All the presets stored in the DZ-MATRIX are listed here.

2 - LOAD: Used to load the selected preset.



#### System menu

The System menu displays the device firmware version, address and name.

1 - Information: Displays the device name, address, firmware version and language currently in use. 2 - Lock: Used to lock the device. To unlock, enter the password. If you have forgotten the password, you can enter: "DZ88".

8 10 2 3 4 5 DZ-MATRIX System Control Ed 12 13 6 9 15 16 17 20 18 19 21 22 14

# 6-4-2 DZ-PAD Editor

1 - Connect Status: When the LED is green, it means that the communication status is normal. If it is grey, there is no communication

2 - Input Page: After clicking on Enable, the input page can be accessed from the DZ-PAD touch screen. The option is green is enabled, grey if not. If disabled, the page will not be visible on the DZ-PAD.

3 - Output Page: After clicking on Enable, the output page can be accessed from the DZ-PAD touch screen. The option is green is enabled, grey if not. If disabled, the page will not be visible on the DZ-PAD.

4 - Preset Page: After clicking on Enable, the presets page can be accessed from the DZ-PAD touch screen. The option is green is enabled, grey if not. If disabled, the page will not be visible on the DZ-PAD.

6 - All Input Select: Selects all input channels at once.

7 - Input Channel Name: The default name is displayed in the dialogue box. Click on the channel to change its name. Note that the channel name will be changed on all devices as well as the matrix.

8 - Select Output Channel To Volume And Routing: Selected channels are green.

9 - All Routing Select: Selects all outputs at once.

**10** - Output Channel Name: The default channel name is displayed in the box. Click to change the output channel name. Note that the channel name will be changed on all devices as well as the matrix.

11 - Anable Routing Function: This function enables or disables routing of matrix sources to the selected zone. Selected channels are green, unselected channels are grey.

12 - All Routing Select: Selects all routings at once.

13 - Screen Saver: When this box is ticked, the device will enter a standby state if there is no operation for the time selected beforehand.

Note: The factory default setting is ON. To prolong the life of the LCD screen, it is recommended that the user set it to ON. You can choose between 10 sec, 30 sec and 60 sec.

#### 14 - Lock Mode:



Automatic: The DZ-PAD automatically locks if no action is taken. You will then have to enter the code chosen during configuration to unlock it.

Manual: The DZ-PAD locks when the "Lock" button in the DZ-PAD configuration window is pressed (PC).

#### 15 - Lock: Used to lock the DZ-PAD.

DZ-MATRIX System Control Edito	r v2.0.8		- ø ×
System Help			
	Device Info	Dante Input Config	Device Config
Current Matrix System	Connect Status :		Input Page Output Page Preset Page
Dante IP: 192.168.1.153			Enable Routing Function
All Device List			Not     2 Anno     2 Anno       Not     2 Anno     2 Anno
DZ-MICDESK Device ID : 0150			A DE DAR DAR

Click on Unlock and enter the password (13) to unlock. If you forget the password, you can use the factory password "DZ88" to unlock.



16 - Password Setting: Used to change the password. The password can be made up of numbers and letters.

Password Setting			
Current Password :	I		
New Password :			
Confirm Password :			
		ОК	Cancel

17 - Device Name: The default name is displayed in the box. Click to change the device name.

Change Device Name Window	v	
Current Device is :		
Input New Name:	_	
	Save	Cancel

- 18 Save To Device: Once the settings have been changed, they must be saved in the device to take effect.
- 19 Load From Device: Loads presets from the device.

DZ-MATRIX System Control Edite	or v2.0.8		- 0	×
System Help				
	Device Info	Dante Input Config	Device Config	
	Connect Status :			
All Device List				
Device ID : 0100				
DZ-800622 Device ID : 0160				
CQ-MICDESK Device ID : 0150				
		Saving ouni		
Device ID : 0180	All Input Select	All Output Select	All Routing Select	-
D2-HAD Device ID : 0190		🔽 Streen Saver 🔯 🚺 Lock Mode :		1
DZ-CTL Device ID : 01A0				
Befresh				
Connect-Status	Communication-mode : Dante	Current-Preset : Default		

#### 20 - Default: Resets the presets.

DZ-MATRIX System Control Editor v2.0	1.8		-	a ×
System Help				
	Connect Status :			
		00708		
		ourse ourse		
		Poret Default		
		reset Defaultan com		
	All Input Select	All Output Select	At Routing Select	
		🗹 Screen Saver 🔯 💭 Look Mode : Man		
Connect-Status	Communication-mode : Dante	Current-Preset : Default		

21 - Save To PC: Saves the current presets to the computer.

Enregistrer sous					
< → < ↑ :	<ul> <li>DZ-MATRIX Setting Software</li> </ul>	e_v2.0.8 → DZ-PAD	~	C P	Rechercher dans : DZ-PAD
Organiser • Nouvea	u dossier				≣ • (
> 🔚 Bureau	Nom	Modifié le	Туре	Taille	
Documents	1.RCT	29/03/2023 07:50	Fichier RCT	65 Ko	
🖻 🔀 Images					
Musique					
🛛 🛓 Téléchargement:					
Vidéos					
Windows (C:)					
ESD-USB (D:)					
式 backup2 (\\192.'					
ESD-US8 (D:)					
> 🚬 Android					
Nom du fichier : mar	nual .				
Type: DZ-	PAD File(*.RCT)				
Masquer les dossiers				Enn	egistrer Annuler

22 - Load From PC: Loads presets from the computer.

Ouwrin					
← → ~ ↑	DZ-MATROX Setting Software_v	2.0.8 > DZ-PAD	~	C	,0 Rechercher dans : DZ-PAD
Organiser • Nouvea	u dossier				≣• <b>□</b> (
> 🔚 Bureau	Nom	Modifié le	Type	Taille	
> 📓 Documents	1.RCT	29/03/2023 07:50	Fichier RCT	6	6 Ko
Musique	🗋 manual.RCT	27/04/2023 16:26	Fichier RCT	6	б Ко
<ul> <li>Téléchargement:</li> <li>Mellor</li> </ul>					
Windows (C)					
<ul> <li>ESD-USB (D;)</li> <li>backup2 (\\192."</li> </ul>					
ESD-US8 (D:)					
Captures Matrice					
DM838 record d					
Nom	du fichier :				DZ-PAD File(*RCT)
					Ouvrir Annuler

# 4-5 - DZ-EXPAND

The DZ-EXPAND is an RD port switch equipped with 4 output ports (1 audio and 3 controls). This interface is particularly useful when the in/out connection between devices is not possible or when the controllers are far from the DZ-MATRIX.

# FRONT PANEL



1, 2 and 3 - Indicate the activity status of each port.

4 - Indicates that the DZ-EXPAND is powered on.

# **REAR PANEL**



 24 V DC ~ 1000 mA power input. When too many devices are connected to the RD EXP port of the DZ-EXPAND and the POWER indicator on the front panel of the DZ-EXPAND is off, you should connect an external 24 V DC power supply.
 2 - RD connections for DZ-CTL/DZ-CTL2OUT (remote device control data only)/DZ-PAD.

3 - RD connection for DZ-MICDESK/DZ-CTL2OUT and DZ-BOX22 (remote audio data transport and control devices).

4 - RD connection to the DZ-MATRIX.

# **4-2 - DZ-DANTE**

Used to add 8 × 8 DANTE digital inputs/outputs to the DZ-MATRIX matrix. Cascades up to 16 matrices at 1 Gbit/s.



- 1 DANTE port: 100/1000 Mbps adaptive Ethernet connection port with DHCP function.
  - The yellow LED going out indicates a transmission problem. If it is on and the green LED is off, the device has detected the network, but there is no connection.
  - · If the green LED is on, the connection to the network is established

DANTE CARD	
Power supply	5 V DC supplied by the DZ-MATRIX
Audio codec	TDM, I2S
Audio network	DANTE input: 8 channels / Output 8 channels + 1 broadcast input/output
Control	SPI master and slave
Network	RGMII/MII
Operating temperature	0°C to 40°C
Finish	Sheet steel
Dimensions	122 x 32 x 115 mm
Weight	120 g
Accessories	2 x mounting screws 3 x 6 mm
BROOKLYN II CARD	
Sampling frequency	44.1/48/88.2/96/176.4/192 kHz
Sampling depth	16, 24 or 32 bits
Audio input/output channels (44.1/48 kHz)	Up to 64 x 64 channels
Audio input/output channels (88.2/96 kHz)	Up to 32 x 32 channels
Audio input/output channels (176.4/192 kHz)	Up to 16 x 16 channels
Audio input/output streams	Up to 32 x 32 simultaneous streams

# 7 - Installation examples

# 7-1 - Basic principle



# 7-2 - Two-storey shop



# 7-3 - Classroom



An audio/video system that's quick and easy to install in the classroom.

To prevent tampering by unauthorised persons, only the volume controls are available.

All other DSP functions such as equalisation or Ducking dedicated to each room can be set by the system administrator using the software.

# 8 - ANNEXE

# 8 - 1 - Codes RS232

N0.	Start Byte0 (1 Byte)	Start Byte1 (1 Byte)	Start Byte2 (1 Byte)	Length (2 Byte)	Device (2 Byte)	ID Address (High Byte)	ID Address (Low Byte)	Type (2 Byte)	Command (2 Byte)	Channel Local Channel: 0x 01 - 0x0C (n Byte) Network Channel: 0x0D - 0x14	Value (n Byte)	End Byte (1 Byte)	function
1	0x01	0x20	0x03	0x00 0x10	0x00 0x06	0x01 (High Byte of ID address)	0x00 (Low Byte of ID address)	0xA5 0xF8	0x00 0x01	Channel 1-12: 0x01-0x0C (1 Byte)	Volume: 0x00 -0xBE (1 Byte)	0x40	Input Gain
2	0x01	0x20	0x03	0x00 0x10	0x00 0x06	0x01 (High Byte of ID address)	0x00 (Low Byte of ID address)	0xA5 0xE8	0x00 0x02	Channel 1-12: 0x01–0x0C (1 Byte)	Phase: 0x00 - Normal, 0x01-Invert (1 Byte)	0x40	Input Phase
3	0x01	0x20	0x03	0x00 0x10	0x00 0x00	0x01 (High Byte of ID address)	0x00 (Low Byte of ID address)	0xA5	0x00 0x00	Channel 1-12: 0x01–0x0C (1 Byte)	Mute : 0x00–Off , 0x01–On (1 Byte)	0x40	Input Mute
4	0x01	0x20	0x03	0x00 0x10	0x00 0x00	0x01 (High Byte of ID address)	0x00 (Low Byte of ID address)	0xA5	0x00	Channel 1-12: 0x01–0x0C (1 Byte)	Invalid : 0x00 (1 Byte)	0x40	Get Input Status
5	0x01	0x20	0x03	0x00 0x13	0x00 0x00 0x06	0x01 (High Byte of ID address)	0x00 (Low Byte of ID address)	0xA5 0xE8	0x00 0x00 0x04	Channel 1-12: 0x01–0x0C (1 Byte)	Volume: 0x00 -0xBE         (1 Byte)           Phase         :0x00 - Normal, 0x01Invert (1 Byte)           Mute         :0x00-Off         ,0x01-On         (1 Byte)           Dc48V         :0x00-Off         ,0x01-On         (1 Byte)	0x40	Receive Input Status
6	0x01	0x20	0x03	0x00 0x10	0x00 0x06	0x01 (High Byte of ID address)	0x00 (Low Byte of ID address)	0xA5 0xE8	0x00 0x05	Channel 1-12: 0x01–0x0C (1 Byte)	Volume: 0x00 -0xBE (1 Byte)	0x40	Output Gain
7	0x01	0x20	0x03	0x00 0x10	0x00 0x06	0x01 (High Byte of ID address)	0x00 (Low Byte of ID address)	0xA5 0xE8	0x00 0x06	Channel 1-12: 0x01–0x0C (1 Byte)	Phase: 0x00 - Normal, 0x01–Invert (1 Byte)	0x40	Output Phase
8	0x01	0x20	0x03	0x00 0x10	0x00 0x06	0x01 (High Byte of ID address)	0x00 (Low Byte of ID address)	0xA5 0xF8	0x00 0x07	Channel 1-12: 0x01–0x0C (1 Byte)	Mute : 0x00-Off , 0x01-On (1 Byte)	0x40	Output Mute
9	0x01	0x20	0x03	0x00 0x10	0x00 0x06	0x01 (High Byte of ID address)	0x00 (Low Byte of ID address)	0xA5 0xF8	0x00 0x08	Channel 1-12: 0x01–0x0C (1 Byte)	Invalid : 0x00 (1 Byte)	0x40	Get Output Status
10	0x01	0x20	0x03	0x00 0x13	0x00 0x06	0x01 (High Byte of ID address)	0x00 (Low Byte of ID address)	0xA5 0xE8	0x00 0x08	Channel 1-12: 0x01–0x0C (1 Byte)	Volume: 0x00-0xBE         (1 Byte)           Phase         :0x00 - Normail, 0x01Invert         (1 Byte)           Mute         :0x00-Off         ,0x01-On         (1 Byte)           Invalid         :0x00         (1 Byte)         (1 Byte)	0x40	Receive Output Status
11	0x01	0x20	0x03	0x00 0x11	0x00 0x06	0x01 (High Byte of ID address)	0x00 (Low Byte of ID address)	0xA5 0xE8	0x00 0x09	Matrix Output Channel : 0x01–0x14 (1 Byte) Matrix Input Channel : 0x01–0x14 (1 Byte)	Routing:0x00-Off , 0x01-On (1 Byte)	0x40	Matrix Mixer
12	0x01	0x20	0x03	0x00 0x10	0x00 0x06	0x01 (High Byte of ID address)	0x00 (Low Byte of ID address)	0xA5 0xF8	0x00 0x0A	Matrix Output Channel : 0x01–0x14 (1 Byte)	Invalid : 0x00 (1 Byte)	0x40	Get Matrix Mixer Status
13	0x01	0x20	0x03	0x00 0x23	0x00 0x06	0x01 (High Byte of ID address)	0x00 (Low Byte of ID address)	0xA5 0xE8	0x00 0x0A	Matrix Output Channel : 0x01–0x14 (1 Byte)	Matrix Local         Input 01 : ::000-OTI, 001-Ori (19/re)           Matrix Local         Input 03 : :000-OTI, 001-Ori (19/re)           Matrix Local         Input 03 : :000-OTI, 001-Ori (19/re)           Matrix Local         Input 03 : :000-OTI, 001-Ori (19/re)           Matrix Local         Input 05 : :000-OTI, 001-Ori (19/re)           Matrix Local         Input 05 : :000-OTI, 001-Ori (19/re)           Matrix Local         Input 05 : :000-OTI, 001-Ori (19/re)           Matrix Local         Input 07 : :000-OTI, 001-Ori (19/re)           Matrix Local         Input 07 : :000-OTI, 001-Ori (19/re)           Matrix Local         Input 07 : :000-OTI, 001-Ori (19/re)           Matrix Local         Input 01 : :000-OTI, 001-Ori (19/re)           Matrix Local         Input 11 : :000-OTI, 001-Ori (19/re)           Matrix Local         Input 11 : :000-OTI, 001-Ori (19/re)           Matrix Network Input 02 : :000-OTI, 001-Ori (19/re)         Matrix Network Input 03 : :000-OTI, 001-Ori (19/re)           Matrix Network Input 05 : :000-OTI, 001-Ori (19/re)         Matrix Network Input 05 : :000-OTI, 001-Ori (19/re)           Matrix Network Input 05 : :000-OTI, 001-Ori (19/re)         Matrix Network Input 05 : :000-OTI, 001-Ori (19/re)           Matrix Network Input 05 : :000-OTI, 001-Ori (19/re)         Matrix Network Input 05 : :000-OTI, 001-Ori (19/re)           Matrix Network Input 05 : :000-OTI, 001-Ori (19/re) <td>0x40</td> <td>Receive Matrix Mixer Status</td>	0x40	Receive Matrix Mixer Status
14	0x01	0x20	0x03	0x00 0x10	0x00 0x06	0x01 (High Byte of ID address)	0x00 (Low Byte of ID address)	0xA5 0xF8	0x00 0x0B	Channel 1-12: 0x01–0x0C (1 Byte)	Invalid : 0x00 (1 Byte)	0x40	Input Gain Up, Step=1dB
15	0x01	0x20	0x03	0x00 0x10	0x00 0x06	0x01 (High Byte of ID address)	0x00 (Low Byte of ID address)	0xA5 0xE8	0x00 0x0C	Channel 1-12: 0x01–0x0C (1 Byte)	Invalid : 0x00 (1 Byte)	0x40	Input Gain Down, Step=1dB
16	0x01	0x20	0x03	0x00 0x10	0x00 0x00	0x01 (High Byte of ID address)	0x00 (Low Byte of ID address)	0xA5	0x00	Channel 1-12: 0x01-0x0C (1 Byte)	Invalid : 0x00 (1 Byte)	0x40	Output Gain Up, Step=1dB
17	0x01	0x20	0x03	0x00 0x10	0x00 0x00	0x01 (High Byte of ID address)	0x00 (Low Byte of ID	0xA5	0x00 0x00	Channel 1-12: 0x01-0x0C (1 Byte)	Invalid : 0x00 (1 Byte)	0x40	Output Gain Down, Step=1dB
18	0x01	0x20	0x03	0x00 0x10	0x00 0x00	0x01 (High Byte of ID address)	0x00 (Low Byte of ID	0xA5	0x00 0x00	Channel 1-12: 0x01-0x08 (1 Byte)	DC-48V: 0x00-Off , 0x01-On (1 Byte)	0x40	Input DC-48V
19	0x01	0x20	0x03	0x00 0x10	0x00 0x00	0x01 (High Byte of ID address)	0x00 (Low Byte of ID	0xA5	0x00 0x10	Relay 1 / Relay 2: 0x01 / 0x02	Relay Channel 1-None : 0x00–0x09 (1 Byte)	0x40	Relay Control
20	0x01	0x20	0x03	0x00 0x10	0x00 0x00	0x01 (High Byte of ID	0x00 (Low Byte of ID	0xA5	0x00	Invalid : 0x00	Invalid : 0x00 (1 Byte)	0x40	Get Relay Status
21	0x01	0x20	0x03	0x10 0x00	0x00	0x01 (High Byte of ID	0x00 (Low Byte of ID	0xA5	0x00	Relay 01 Channel 1-None :	Relay 02 Channel 1-None : 0x00- 0x09 (1 Byte)	0x40	Receive Relay Status
22	0x01	0x20	0x03	0x00 0x1F	0x00 0x00 0x06	0x01 (High Byte of ID address)	0x00 (Low Byte of ID address)	0xE8 0xE8	0x00 0x12	16 Chars Device Name -ASCILL Code (16 Byte)	Invalid : 0x00 (1 Byte)	0x40	Modify Device Name
23	0x01	0x20	0x03	0x00	0x00	0x01 (High Byte of ID	0x00 (Low Byte of ID	0xA5	0x00	Invalid : 0x00	Invalid : 0x00 (1 Byte)	0x40	Get Device information
24	0x01	0x20	0x03	0x00	0x00	0x01 (High Byte of ID oddrose)	0x00 (Low Byte of ID oddress)	0xA5	0x00 0x12	16 Chars Device Name -ASCILL	Firmware Version: 0x10 – 0x99	0x40	Receive Device information
25	0x01	0x20	0x03	0x00	0x00	0x01 (High Byte of ID oddrose)	0x00 (Low Byte of ID oddress)	0xA5	0x13 0x00	Preset number : 0x01 – 0x18	Invalid : 0x00 (1 Byte)	0x40	Recall Preset
F				UXIU	UKUD	Noted: RS232	auuress)	UXEO	UX14				
						ID address ,example: if ID==0x100 then High Byte of ID address=0x01 and Low Byte of ID address=0x00							

# 8-2 - Possible connections to the DZ system:

#### 8-2-1 Number of connections:

		Maximum number of	PC control (wired)		PC control (Wi-Fi)		iOS App		Android App	
		DZ-MATRIXs	Yes/No	Maximum number	Yes/No	Maximum number	Yes/No	Maximum number	Yes/No	Maximum number
Via LAN	100 Mbps	You can search	Yes	1	Yes	2	Yes	1	Yes	1
	1000 Mbps	for the number of connections to the same local network. But the maximum number of simultaneous connections is 11	Yes		Yes					
Via DZ- DANTE card	100 Mbps	3	Yes	1	Yes	2	Yes	2	Yes	2
	1000 Mbps	16	Yes		Yes					

#### 8-2-2 Control systems:

		Used simultaneously							
		PC(LAN) + PC(WIFI)	PC(LAN) + Smartphone IOS	PC(WIFI) + Smartphone IOS	PC(LAN) + Smartphone Android	PC(Wifi) + Smartphone Android	PC(LAN) + Smartphone Androi + Smartphone IOS	PC(WIFI) + Smartphone Android + Smartphone IOS phone	PC(Wifi) + PC (lan) + Smartphone IOS+ Smartphone Andoid
Via LAN	100 Mbps	No	Yes (1+1)	Yes (1+1)	Yes (1+1)	Yes (1+1)	No	No	No
	1000 Mbps								
Via DZ-DANTE card	100 Mbps	Yes (1+1)	Yes (1+1)	Yes (1+1)	Yes (1+1)	Yes (1+1)	Yes (1+1+1)	Yes (1+1+1)	Yes (1+1+1+1)*
	1000 Mbps								

\* 1+1+1+1 = 1 PC on Wi-Fi + 1 PC on LAN + 1 iOS smartphone + 1 Android smartphone

# 9 - SOFTWARE



The software for Windows® can be downloaded from the Audiophony-pa website: <u>https://audiophony-pa.com/software/DZ-MATRIX Setting Software\_v2.0.8.zip</u>



The application for Android can be downloaded from the Audiophony-pa website: https://audiophony-pa.com/software/DZ-CONTROL\_android.apk

The application for iOS can be downloaded from the Audiophony-pa website: https://apps.apple.com/us/app/dz-control/id6446382679