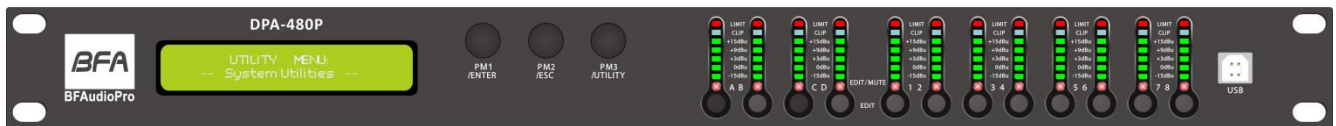




User_Manual

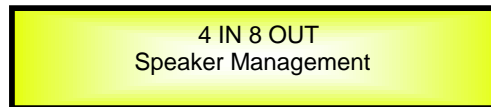
DPA-480P
Speaker Management Systems



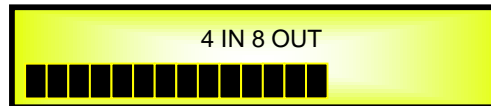
Described below are the functions of the front panel control buttons and encoders for the DPA-480P.

- **Getting Started**

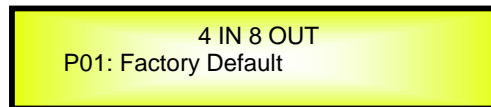
As soon as the 4 IN 8 OUT is turned ON the device model name will appear in the LCD screen:



and a status bar will show the progress of the 4 IN 8 OUT initialization process:



After the first time activation, the 4 IN 8 OUT will show on the LCD :



- **Encoders and ENTER, ESC buttons**

The 4 IN 8 OUT is equipped with 3 Relative Encoders, "PM1", "PM2" and "PM3", These encoders allow you to navigate the user interface and edit sections of the processor. They allow the user to navigate within the screen for the selection of sub-menus, pages and parameters and to select the values to be assigned during the editing operations.

The "ENTER" and "ESC" buttons allow the user to confirm or NOT confirm the operations performed by the encoders.

- **UTILITY, A/B/C/D and 1/2/3/4/5/6/7/8 buttons**

The UTILITY button allows the User to enter the Sub-menus and set the general characteristics of the Processor. The A , B , C and D buttons allow the User to enter the Editing Menus of the Processor's Input Channels and buttons 1, 2, 3 , 4, 5, 6, 7 and 8 allow the User to enter the Editing Menus of the Processor's Output Channels.

The A , B , C and D buttons as well as the 1, 2, 3 , 4, 5, 6, 7 and 8 buttons have double functions dependent on the push and hold time.

When the A , B , C and D buttons are pushed and held for more than one second Input Channels A or B or C or D are either muted or unmuted. The red LED will illuminate when the Channel is muted. When the "MUTE" LED is OFF, then the related Input Channel is UN-MUTED.

A momentary push of the A , B , C and D buttons enters the Editing Mode for the Input Channels (see later for the Input Channel Editing details).
The blue "EDIT" LED will now be ON.

When the 1, 2, 3 , 4, 5, 6, 7 and 8 buttons are pushed and held for more than one second the Output Channels 1, 2, 3 , 4, 5, 6, 7 and 8 are either muted or unmuted. The red LED will illuminate when the Channel is muted. When the "MUTE" LED is OFF, then the related Output Channel is UN-MUTED.

A momentary push of the 1, 2, 3 , 4, 5, 6, 7 and 8 buttons enters the Editing Menu for the Output Channels (see later for the Output Channel Editing details). The blue "EDIT" LED will now be ON.

- **4 IN 8 OUT Menu and Sub-Menu Structures**

As stated above, the start-up default screen is the following factory preset:



From this point, sub-menus are accessed and exited using the UTILITY", "A/B/C/D", "1/2/3/4/5/6/7/8", buttons and all parameters and values are navigated by the "PM1", "PM2" and "PM3" encoders. Please refer to the following menu structures:

MENU "UTILITY MENU" [Access by pushing the "UTILITY" button]

PM1 Encoder

[to navigate between menus]

PM2 or PM3 Encoder

[to chose option, then ENTER to load it;
(*) indicates the selected option]

1 UTILITY MENU:.....
<< System Utilities >>

ENTER ↓ ↑ ESC

1.1 SYSTEM UTILITY:
<< Delay Units >>

ESC
 ENTER

Delay Units
 Unit = Time(ms)
 Unit = Distance (m)

1.2 SYSTEM UTILITY:
<< Set Default Value >>

ESC
 ENTER

Set Default Value
 [Enter] to confirm

1.3 SYSTEM UTILITY:
<< Firmware Version >>

ESC
 ENTER

Firmware Version
 Version = 2.0.6

2 UTILITY MENU:.....
<< Program Utilities >>

ENTER ↓ ↑ ESC

2.1 PROGRAM UTILITY:
<< Recall a Program >>

ESC
 ENTER

Recall a Program
 01 : Factory Default
 :
 24 : Factory Default

2.2 PROGRAM UTILITY:
<< Save a Program >>

ESC
 ENTER

Save a Program
 01: Factory Default
 :
 24: Factory Default

2.3 PROGRAM UTILITY:
<< Delete a Program >>

ESC
 ENTER

Delete a Program
 01: Factory Default
 :
 24: Factory Default

3 UTILITY MENU:.....
<< Interface Utilities >>

ENTER ↓ ↑ ESC

3.1 Interface setup

ESC
 ENTER

Interface Setup
 configure RS485 ID=1,...,32

4 UTILITY MENU:.....
<< Security Utilities >>

ENTER ↓ ↑ ESC

4.1 SECURITY UTILITY:
Show Parameter

ESC
 ENTER

Parameter will
be shown
not be shown

4.2 SECURITY UTILITY:
Lock Unit

ESC
 ENTER

Lock Unit
 Lock: Off
 Lock: On

4.3 SECURITY UTILITY:
Change Password

ESC
 ENTER

Change Password
 []

4.4 SECURITY UTILITY:
Lock With Password

ESC
 ENTER

Enter Password
 []

MENU "Input A/B/C/D" Input Channels Editing [Access by pushing the "A/B/C/D" button]

PM1 Encoder

[to navigate between menus]

PM1 Enc.

[to chose values for the parameters, no need to confirm the chosen values, which are automatically loaded during the encoders use]

PM2 Enc.

PM3 Enc.

1. In- A/B/C/D [Name] Name
Name = [Name]

ENTER   ESC

-> Name = _

(For Editing the Device's Name, refer to the Details on the "Utility Menus Use" Section)

2. In- A/B/C/D [Name] N.Gate
Bypass=On

ENTER   ESC

-> Bypass=On

PM1 N/A.

Byp=On/Off

Thr=-80.0dBu ... -50 dBu

Rel=10ms ... 1000ms

Atk=1ms ... 1000ms

3. In- A/B/C/D Gain
Gain = + 0.0 dB

ENTER   ESC

-> Gain = + 0.0 dB

PM1 N/A.

-18 dB
:
+12dB
Step 1dB

0.1dB
:
0.9dB
Step 0.1dB

4. In- A/B/C/D Delay
Delay = 0.000 ms

ENTER   ESC

-> Delay = 0.000 ms

PM1 N/A.

000.0000mS
[1 ms steps]
420.0000mS

000.0000mS
[10.4 us steps]
000.9984mS

- 5 In- A/B/C/D [Name] Polarity
Polarity=Normal

ENTER   ESC

-> Polarity=Normal

PM1 N/A.

Polarity= Normal/Invert

6. In- A/B/C/D [Name] RMS Cmp
Bypass=On

ENTER   ESC

-> Bypass=On

PM1 N/A.

Byp=On/Off

Threshold=+16dBu ... -14dBu

PM1 N/A.

Ratio =2:1 ... 32:1

Knee=0% ... 100%

PM1 N/A.

Rel=0.1sec ... 3.0sec

Atk=5ms ... 200ms

PM1 N/A.

Make-up=-12dB ... +12dB

7. In- A/B/C/D [Name] EQ Byp
Bypass=On

ENTER   ESC

-> Bypass=On

PM1 N/A.

Byp=On/Off

8. In- A/B/C/D [Name] PEQ-XX(00 to 30)
Byp=on Type=Peaking_Eq

ENTER   ESC

-> Byp=on Type=Peaking_Eq

PM1 N/A.

Byp=On/Off

Type=Peaking_Eq/ Hi Shelv

1/ Hi Shelv 2/ Hi Shelv Q/ Lo Shelv 1/ Lo Shelv 2/Lo Shelv Q/ Lo Pass 1/ Low-Pass 2/Low Pass Q/HighPass1/ HighPass2/HighPass Q/Band-Pass/ Notch Filt/All Pass 1/All Pass 2

Type=Peaking_Eq

PM1 N/A.

Frequency=20Hz ... 20000Hz

PM1 N/A.

Gain=-15dB ... +15dB

Q=0.4 ... 128

Type= Hi -Shelv 1/ Hi -Shelv 2

PM1 N/A.

Frequency=20Hz ... 20000Hz

	PM1 N/A.	Gain=-15dB ... +15dB	Q=Fixed
Type= Hi -Shelv Q	PM1 N/A.	Frequency=20Hz ... 20000Hz	
	PM1 N/A.	Gain=-15dB ... +15dB	Q=0.1 ... 5.1
Type= Lo-Shelv 1/ Lo-Shelv 2	PM1 N/A.	Frequency=20Hz ... 20000Hz	
	PM1 N/A.	Gain=-15dB ... +15dB	Q=Fixed
Type= Lo-Shelv Q	PM1 N/A.	Frequency=20Hz ... 20000Hz	
	PM N/A.	Gain=-15dB ... +15dB	Q=0.1 ... 5.1
Type= Low Pass 1/ Low Pass 2	PM1 N/A.	Frequency=20Hz ... 20000Hz	
Type= Low Pass Q	PM1 N/A.	Frequency=20Hz ... 20000Hz	
	PM1 N/A.	Gain=-Fixed	Q=0.1 ... 5.1
Type= Hi ghPass1/ Hi ghPass2	PM1 N/A.	Frequency=20Hz ... 20000Hz	
Type= Hi ghPass Q	PM1 N/A.	Frequency=20Hz ... 20000Hz	
	PM1 N/A.	Gain=-Fixed	Q=0.1 ... 5.1
Type= Band-Pass	PM1 N/A.	Frequency=20Hz ... 20000Hz	
	PM1 N/A.	Gain=-15dB ... +15dB	Q=4 ... 104
Type= Notch Filt	PM1 N/A.	Frequency=20Hz ... 20000Hz	
	PM1 N/A.	Gain=Fixed	Q=4 ... 104
Type= All Pass 1	PM1 N/A.	Frequency=20Hz ... 20000Hz	
Type= All Pass 2	PM1 N/A.	Frequency=20Hz ... 20000Hz	
	PM1 N/A.	Gain=Fixed	Q=4 ... 104

MENU "Output 1/2/3/4/5/6/7/8" Output Channels Editing [Access by pushing the "1/2/3/4/5/6/7/8" button]

PM1 Encoder

[to navigate between menus]

PM1 Enc.

[to chose values for the parameters, no need to confirm the chosen values, which are automatically loaded during the encoders use]

PM2 Enc.

PM3 Enc.

1. Output[x] [Name] Name Name = [Name]

ENTER   ESC

-> Name = _

(For Editing the Device's Name, refer to the Details on the "Utility Menus Use" Section)

2. Output[x] [Name] Routing A=On B=Off C=Off D=Off

ENTER   ESC

-> InA: Level=0dB On

PM1 N/A

0 dB
:
-30dB

On/Off

-> InB: Level=0dB Off

PM1 N/A

0 dB
:
-30dB

On/Off

-> InC: Level=0dB Off

PM1 N/A

0 dB
:
-30Db

On/Off

-> InD: Level=0dB Off

PM1 N/A

0 dB
:
-30Db

On/Off

3. Output[x] [Name] Gain Gain = + 0.0 dB

ENTER   ESC

-> Gain = + 0.0 dB

PM1 N/A

-18 dB
:
+12dB
Step 1dB

0.1dB
:
0.9dB
Step 0.1dB

4. Output[x] [Name] Delay Delay = 0.000 ms

ENTER   ESC

-> Delay = 0.000 ms

PM1 N/A

000.0000mS
[1 ms steps]
128.0000mS

000.0000mS
[10.4 us steps]
000.9984Ms

5. Output[x] [Name] Polarity Polarity=Normal

ENTER   ESC

-> Polarity=Normal

PM1 N/A.

Polarity= Normal/Invert

6. Output[x] [Name] Limiter Bypass=On

ENTER   ESC

-> Bypass=On

PM1 N/A.
PM1 N/A.
PM1 N/A.

Bypass= On/Off
Threshold=-10dBu ... 20 dBu
Rel=0.1sec ... 5sec Atk=1ms ... 900ms

7. Output[x] [Name] HPF 20.0 Hz Bypass

ENTER   ESC

-> 20.0 Hz Bypass

PM1 N/A

[Freq.] 20Hz
:
20kHz

[Type/Slope]

Bypass
:
LR -48 dB /Oct

Slope=Bypass/ BW -6 dB/Oct / BW -12 dB/Oct / LR -12 dB/Oct / BS -12 dB/Oct / BW -18 dB/Oct / BW -24 dB/Oct / LR -24 dB/Oct / BS -24 dB/Oct / BW -36 dB/Oct / LR-36 dB/Oct / BW -48 dB/Oct / LR-48 dB/Oct /

8. Output[x] [Name] LPF 20.0 Hz Bypass

ENTER ↓ ↑ ESC

-> 20.0 Hz Bypass

PM1 N/A

[Freq.] 20Hz
:
20kHz

[Type/Slope]

Bypass
:
LR -48dB/Oct

Slope=Bypass/ BW -6 dB/Oct / BW -12 dB/Oct / LR -12 dB/Oct / BS -12 dB/Oct / BW -18 dB/Oct / BW -24 dB/Oct / LR -24 dB/Oct / BS -24 dB/Oct / BW -36 dB/Oct / LR-36 dB/Oct / BW -48 dB/Oct / LR-48 dB/Oct /

9. Output[x] [Name] EQ Byp Bypass=On

ENTER ↓ ↑ ESC
-> Bypass=On

PM1 N/A.

Byp=On/Off

10. Output[x] [Name] PEQ-XX(00 to 07) Byp=on Type=Peaking_Eq

ENTER ↓ ↑ ESC
-> Byp=on Type=Peaking_Eq

PAR1 N/A.

Byp=On/Off

Type=Peaking_Eq/ Hi -Shelv

1/ Hi -Shelv 2/ Hi -Shelv Q/ Lo-Shelv 1/ Lo-Shelv 2/Lo-Shelv Q/ Low-Pass 1/ Low-Pass 2/Low-Pass Q/High-Pass1/ High-Pass2/High-Pass Q/Band-Pass/ Notch

Filt/All Pass 1/All Pass 2

Type=Peaking_Eq

PM1 N/A.

Frequency=20Hz ... 20000Hz

PM1 N/A.

Gain=-15dB ... +15dB

Q=0.4 ... 128

Type= Hi -Shelv 1/ Hi -Shelv 2

PM1 N/A.

Frequency=20Hz ... 20000Hz

PM1 N/A.

Gain=-15dB ... +15dB

Q=Fixed

Type= Hi -Shelv Q

PM1 N/A.

Frequency=20Hz ... 20000Hz

PM1 N/A.

Gain=-15dB ... +15dB

Q=0.1 ... 5.1

Type= Lo-Shelv 1/ Lo-Shelv 2

PM1 N/A.

Frequency=20Hz ... 20000Hz

PM1 N/A.

Gain=-15dB ... +15dB

Q=Fixed

Type= Lo-Shelv Q

PM1 N/A.

Frequency=20Hz ... 20000Hz

PM1 N/A.

Gain=-15dB ... +15dB

Q=0.1 ... 5.1

Type= Low-Pass 1/ Low-Pass 2

PM1 N/A.

Frequency=20Hz ... 20000Hz

Type= Low-Pass Q

PM1 N/A.

Frequency=20Hz ... 20000Hz

PM1 N/A.

Gain=-Fixed

Q=0.1 ... 5.1

Type= High-Pass1/ High-Pass2

PM1 N/A.

Frequency=20Hz ... 20000Hz

Type= High-Pass Q

PM1 N/A.

Frequency=20Hz ... 20000Hz

PM1 N/A.

Gain=-Fixed

Q=0.1 ... 5.1

Type= Band-Pass

PM1 N/A.

Frequency=20Hz ... 20000Hz

PM1 N/A.

Gain=-15dB ... +15dB

Q=4 ... 104

Type= Notch Filt

PM1 N/A.

Frequency=20Hz ... 20000Hz

PM1 N/A.

Gain=Fixed

Q=4 ... 104

Type= All Pass 1

PM1 N/A.

Frequency=20Hz ... 20000Hz

Type= All Pass 2

PM1 N/A.

Frequency=20Hz ... 20000Hz

PM1 N/A.

Gain=Fixed

Q=4 ... 104

- **Menu "UTILITY" [access by pushing the "UTILITY" button]**

From the "Default Screen", it is possible access the "UTILITY" menu pushing the "UTILITY" button and the Sub-Menus pages can be selected just rotating clockwise and counter-clockwise the "PM1" encoder.

Once selected the sub-menu page, using the "ENTER" button can be accessed the Sub-Menus pages, again "scrollable" using the "PM1" encoder and accessible for the parameters' editing pushing again the "ENTER" button.

Note: In each sub-menu choice, the current selected or running choice is what shown on the LCD screen.

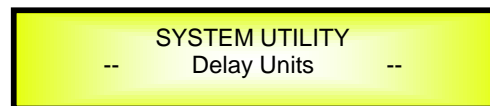
System Utilities Sub-menu – this sub-menu allows to access several operations related to the 4 IN 8 OUT Start Up and General Configuration:



UTILITY MENU:

From the "System Utilities Sub-menu", pushing "ENTER" will give access to the following pages:

- **Delay Units:** this page allows you to select the measurement unit to be used for the Delays: **Time** (in milliseconds "ms") or **Distance** (in meters "m"):



By pressing ENTER button and rotating the "PM2" or "PM3" encoder, it is possible to select the measurement unit to be used for the delay, which will be confirmed by pushing the ENTER button.

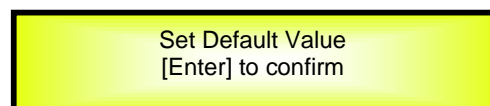
The following screen shows the selected delay measurement is Time (milliseconds)



- **Set Default Value:** All setting for 4 IN 8 OUT can be set to default value:



By pressing ENTER button, will show up the following screen of an interface to confirm to set the default value:



By pressing ENTER button one more time, will show up the following screen:



Wait around 3 sec for the processor set to the default value.

- **Firmware Version:** this page allows you to confirm the Firmware Version running on the 4 IN 8 OUT:



The correct Firmware Version is "V2.0.6"

Program Utilities Sub-menu – this sub-menu allows you to access several options related to the 4 IN 8 OUT operating mode and to manage the presets stored and recallable within the Unit:



- **Recall a Program:** this page allows the Loading of a preset program by pressing the "ENTER" button. You can store up to 24 presets in the 4 IN 8 OUT memory:



If presets have previously been stored by the user, anyone of them can be recalled:




By using the "PM1" encoder it is possible to scroll through the stored presets. Once the desired preset appears on the screen, select it by pressing the "ENTER" button and this will force the 4 IN 8 OUT to begin to load this selected preset and the following transitory screen will appear:



Loading New Program
01: PRESET 1

Once loaded the 4 IN 8 OUT will exit to the "Recall a Program" screen automatically and the above screen will disappear:



PROGRAM UTILITY
- Recall a Program -

Note: at any time it is possible to quit the recalling action by pressing the "ESC" button.

- **Save a Program:** this page allows you to store a new preset in the 4 IN 8 OUT's memory:



By pressing the ENTER button and rotating the "PM1" encoder, it is possible to scroll through the previously saved presets or the available empty locations (identified by "Factory default").

If no user presets are stored, the "Save a Program" screen will show empty memory locations for all 1-24 presets as shown in the example below for location 10:



When storing an edited configuration for the 4 IN 8 OUT, select the location for a preset from the **24 available** by using the "PM1" encoders.

Once the desired location appears on the screen, press "ENTER" button again to reach the **"Set Program Name"** page.

In this page the User can set a Preset Name by using the "PM3" encoder to choose a character and the "PM2" encoder to move between the available locations for the character's positioning.

The following is an example of a screen while entering the preset name "Stage 1 2x2" in location 10:

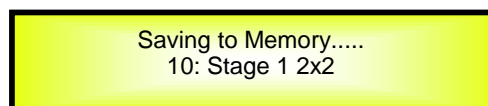


To store the Preset Name press the "ENTER" button again.

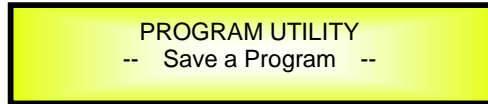
The above action will take you to the **"Enter to Save"** page showing the selected location for the preset and the final edited name:



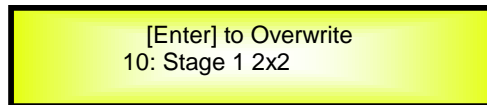
Pressing "ENTER" again, will store the preset in the selected location with the chosen name and the following transitory screen will appear on the LCD:



Once the preset is stored, the above screen will disappear returning to the following screen:



If during the Preset Storing process you want to overwrite an existing memory location select this location in the “**Save a Program**” page, then press ENTER button and you will be asked if you want to overwrite this preset with the following “[ENTER] to Overwrite” screen displaying the currently stored preset and location:



If you wish to proceed press “ENTER” again and the 4 IN 8 OUT will go ahead with the “**Set Program Name**” page and the subsequent overwrite on completion of the previously described storing process..

Note: at any time it is possible to quit the storing action by pressing the “ESC” button.

- **Delete a Program:** this page allows you to delete a preset already stored in the 4 IN 8 OUT memory:



By pressing the ENTER button and rotating the “PM1” encoder, it is possible to scroll through the previously saved presets and the available empty locations (identified by “Factory default”).

If no user presets are stored, the “Delete a Program” screen will show empty memory locations for all 1-24 presets as shown in the example below for location 10:



If Presets are available they will be shown in the “Delete a Program” page as follows:



By using the “PM1” encoder it is possible to select a preset to be deleted.

Pressing the “ENTER” button on a selected preset will bring up the “[Enter] to Delete.” page showing the selected preset.

For example, if we want to delete the preset 10, "Stage 1 2x2", the screen will be the following:



Confirming the deletion by pressing "ENTER" again, will force the 4 IN 8 OUT to erase the selected preset and the following transitory screen will appear:



Once the preset is deleted, the above screen will disappear returning to the following screen:



Note: At any time it is possible to quit the deleting action by pressing the "ESC" button.

Interface Utilities Sub-menu – this sub-menu allows you to define the remote control interface [RS485] to be used for controlling the 4 IN 8 OUT:

If use would like to connect more than one unit under the RS485 mode. By using "PM2"/"PM3" encoder, user can set the ID number from 1 to 32, to assign to the units connected, and confirm by pressing "ENTER" button.



Security Sub-menu – this sub-menu allows the User to set the parameters shown, lock the 4 IN 8 OUT and set a Password therefore limiting the unit's functions and controls to those who have only access to the appropriate Password.



Press "ENTER" button and then use the "PM1" encoder to scroll between options.

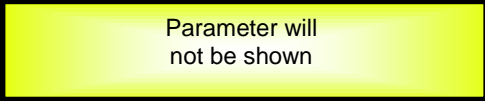
- **Show Parameter:** Pressing "ENTER" button from the above menu will access the "Show Parameter" Sub Menu



Press ENTER button again and use the "PM2" or "PM3" encoders to select between "be shown" or "not be shown" options.

Choosing the "be shown" option means that once the unit is locked, you cannot access parameter editing features, but they will be displayed on the LCD screen.

Choosing the "not be shown" option means that once the unit is locked, the parameters will not be shown at all. With this option, when trying to access a parameter, the following screen message will appear:



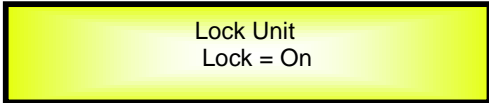
Parameter will
not be shown

- **Lock Unit:** this sub-menu allows the user to lock the device so no parameters can be edited or modified.



SECURITY UTILITY
-- Lock Unit --

When the Unit is in an unlocked condition, all parameters will be available for editing. When you select On, all parameters will be locked and are not available for editing.



Lock Unit
Lock = On

When you select lock from the menu, the unit will be locked and the lock menu automatically exited. The screen will revert to the "Default" showing the current XOVER configuration and the preset selected and beside the preset's name a "keylock" icon indicating that the 4 IN 8 OUT is locked.

- **Change Password:** from the "Change Password" sub-menu:



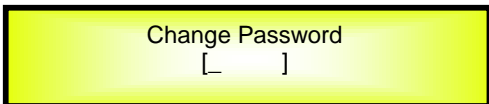
SECURITY UTILITY
-- Change Password --

Press "ENTER" to access the "**Change Password**" page:



Change Password
[]

Use the PM2 encoder to move between available locations, and the PM3 encoder to choose a character. The current position of the cursor for the characters to be entered is shown by a "blinking underscore".

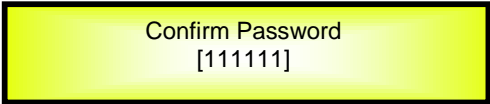


Change Password
[_]

Input the original password "000000" for the 4 IN 8 OUT, and press "ENTER" button, will access to the "**New Password**" Page. Use the "PM2" encoder to move between available locations, and rotate the PM3 encoder to edit a 6-position new password.
The following screen is the example with the new password after edition is "111111"



Press the ENTER button again, will access the "**Confirm password**" page, use the "PM2" encoder to move between available locations and rotate "PM3" encoder to choose a character, input the new password edited just now.
The following screen is the example with typing in new password "111111" edited just now.



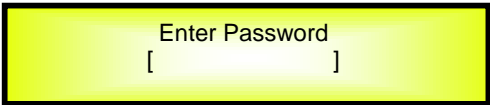
Press the ENTER button one more time, the new password will be set successfully.

- **Lock With Password:** from the "Lock With Password" sub-menu:

There's limitation to the editing function if the 4 IN 8 OUT is locked with password. All functions for this unit are banned.



Press "ENTER" to gain access to the "**Enter Password**" screen:



Use the "PM2" encoder to move between available locations, and rotate "PM3" encoder to select characters. If the password of this 4 IN 8 OUT never modified, input the default password "000000", the unit will be locked. In this case, default screen will show a "Key" icon, user cannot enter into the sub-menu, unless he holds the password.

- **Menu "Input A/B/C/D" Input Channels Editing [access by pushing the "A/B/C/D" buttons]**

From the "Default Screen", it is possible to access the "Input A/B/C/D" menu by pushing the "A" or "B" or "C" or "D" button. Once the button is pressed, the related blue "EDIT" LED will turn ON. The Sub-Menu pages can now be scrolled through by rotating clockwise and counter-clockwise the "PM1" encoder.

For parameter editing it is necessary to press "ENTER" button and an arrow will appear on the left of the screen "->". Then use the "PM2" and "PM3" encoders for editing and setting the parameter values. On some parameters that have three independent values, you will also need to use the PM1 encoder, eg filter parameter settings.

Note: All options can be done using the "PM1", "PM2", and "PM3" encoders and the current shown value of the selected option is AUTOMATICALLY loaded during the encoders' use and stored as the current value once leaving the page.

Remark 1: Select parameters the user desire by using 3 encoders. Once the user leaves this page, the above mentioned parameters would be saved to the 4 IN 8 OUT systems automatically.

Remark 2: Exit this page by pressing "ESC" button.

Audio Signal Input (A/B/C/D)

Name page – from this screen, it is possible to assign input channel a name with 6 characters. For example, name the Input A as "In L" in the Name Page:

```

In-A:  In L   Name
Name = In L

```

By pressing ENTER in the Name page, user can edit the name, and there will be an arrow, as the following screen shows:

```

In-A:  In L   Name
->Name = In L

```

The first character will flash.

Select character from these 6 positions by rotating "PM2" encoder and choose the desired characters by rotating "PM3" encoder. Once the new name is defined, for example, "In A", confirm this new name by pressing ENTER... A new name will display on the screen, after replaced the old one.

The following screen is shown with the new name "In A", by replacing the previous one "In L"

```

In-A:  In A   Name
Name = In A

```

N.Gate page– from this page, it is possible to set the Input Channels Noise Gate. Noise gate can be set as "ON" or "OFF" status. The following screen is the selected "ON" status:

In-A:	Name	N.Gate
Bypass	=	On

By pressing ENTER button in this page, an arrow “->” will show up on the left of the screen, and enter into the setting interface 1 of the noise gate:

In-A	In A	N.Gate
->Byp=On	Thr=-80.0dBu	

By using the “PM2” encoder, it is possible to set the noise gate as “ON” or “OFF”. By using the “PM3” encoder, it is possible to select its attack threshold from -80dBu to -50dBu.

By rotating “PM1” encoder, user can enter into the setting interface 2 of the noise gate:

In-A	In A	N.Gate
->Rel=10ms	Atk=3ms	

By using “PM2” encoder, user can set noise gate release time: from 10ms to 1000ms, and using “PM3” encoder to set noise gate attack time: from 1ms to 1000ms.

Gain page – from this screen it is possible to set the Input Channels Level from -18dB to +12dB, press “ENTER” button, an arrow will appear on the left of the screen “->” then use the “PM2” or “PM3” to set parameters.

The value set on this screen will only affect the input level of the selected Channel A.

The following is an example screen for the “Gain” page that has set the Gain of Input Channel A to +0.0dB:

In-A	In A	Gain
-> Gain	= +	0.0dB

Delay page – from this page it is possible to set the Input Channels Delay Time from 000.0000mS up to 420.9984mS, by steps of 1mS or 10.4uS.

To set the Delay time press ENTER, an arrow will appear on the left of the screen “->”. then use the “PM2” encoder to set the Delay Time in steps of 1mS and the “PM3” for setting the “fine” Delay Time in steps of 10.4 microseconds.

The following is an example screen for the “Delay” page where the Delay Time of Input Channel A is set to 160.1872mS:

In-A	In A	Delay
-> Delay	=	160.1872mS

Polarity page– from this page, it is possible to set input channels phase as “Normal” or “Invert”. The following is an example screen of “Normal” Polarity:

In-A	In A	Polarity
Polarity	=	Normal

By pressing ENTER button in this page, an arrow will appear on the left of the screen “->”. then use the “PM2” or “PM3” encoder for setting “Normal” or “Invert” Polarity.

RMS Cmp page– from this page, it is possible to set RMS Compressor for input channels. RMS Compressor can be set as “ON” or “OFF” status. The following is an example screen of “ON” status:

In-A:	In A	RMS Cmp
Bypass	=	On

By pressing ENTER in this page, an arrow will appear on the left of the screen “->”. Then enter into the setting interface 1 of RMS Compressor.

In-A	In A	RMS Cmp
->Bypass	=	On

RMS compressor status can be set as “ON” or “OFF” by using “PM2” or “PM3” encoder.

By rotating “PM1” encoder, user can enter into setting interface 2 of RMS Compressor:

In-A	In A	RMS Cmp
->Threshold	=	+16.0dBu

RMS Compressor attack threshold can be set with “PM2” or “PM3” encoder, with its range from -14dBu to +16dBu.

By rotating “PM1” encoder one more time, user can enter setting interface 3 of RMS Compressor:

InputA:	Name	RMS Cmp
->Ratio	=32:1	Knee =0%

RMS Compressor ratio can be set by “PM2” encoder, with its range rom 2:1 ~ 32:1. RMS Compressor knee can be set by “PM3” encoder, with its range from 0% ~ 100%.

By rotating “PM1” encoder once again, user can enter setting interface 4 of RMS Compressor:

In-A	In A	RMS Cmp
->Rel	=0.1sec	Atk =5ms

RMS Compressor release time can be set by “PM2” encoder, with its selectable range from 0.1s ~ 3s, and its attack time can be set by “PM3” encoder from 5ms ~ 200ms.

By rotating “PM1” encoder, user can enter setting interface 5 of RMS Compressor:

In-A	In A	RMS Cmp
->Make-up	=	0.0dB

By using “PM2” and “PM3” encoder, user can set RMS Compressor make up, from -12dBu to

+12dBu.

EQ Byp page – in this page, it is possible to set EQ Bypass of input channels, with its selectable status of "ON" and "OFF". Following is the example screen as Bypass ON:

In-A	In A	EQ Byp
Bypass	=	On

By pressing "ENTER" button in this page, an arrow will appear on the left of the screen "->", then enter setting interface of EQ Bypass:

In-A	In A	EQ Byp
->Bypass=On		

By using "PM2" or "PM3" encoder, user can set the EQ Bypass as "ON" or "OFF".

PEQ-[xx] (01to30) page – In this page, it is possible to set 30 available parametric equalization filters for input channels, with each parametric equalization filters can be selected as BELL, Shevling, High-Pass, Low-Pass, Band-Pass, Notch filter and Allpass.

In-A	In A	PEQ-01
Byp=Off	Type=Peaking_Eq	

When EQ Bypass is set as "OFF", by pressing ENTER in any parametric equalization page, an arrow will appear on the left of the screen "->", then enter setting interface 1 of parametric equalization filter:

In-A	In A	PEQ-01
->Byp=Off	Type=Peaking_Eq	

By using "PM2" encoder, it is possible to set the flat on or off for the current parametric equalization filter. By using "PM3" encoder, user can set the current parametric equalization filter's type, selectable as **Peaking_Eq/ Hi -Shelv 1/ Hi -Shelv 2/ Hi -Shelv Q/ Lo-Shelv 1/ Lo-Shelv 2/Lo-Shelv Q/ Low-Pass 1/ Low-Pass 2/Low-Pass Q/High-Pass1/ High-Pass2/High-Pass Q/Band-Pass/ Notch Filt/ All Pass 1/ All Pass 2**

When the parametric equalization filter is selected as **Peaking Eq**, by rotating "PM1" encoder again, user can enter the setting interface 2 of current input parametric equalization filter:

In-A	In A	PEQ-01
->Frequency =	20Hz	

By using "PM2" or "PM3" encoder, it is possible to set current input PEQ filter's frequency from the range of 20Hz to 20kHz.

By rotating "PM1" encoder again, user can enter the setting interface 3 of current input parametric equalization filter:

In-A	In A	PEQ-01
->Gain=0.0dB		Q=0.40

By using "PM2" encoder, user can set the gain of current parametric equalization filter from -15dB to +15dB, and by using "PM3" encoder, it is possible to set the Q factor of current parametric equalization filter from 0.4 to 128.

When the parametric equalization filter is selected as **Hi-Shelv 1/ Hi-Shelv 2/ Lo-Shelv 1/ Lo-Shelv 2**, by rotating "PM1" encoder again, user can enter the setting interface 4 of current input parametric equalization filter:

In-A	In A	PEQ-01
->Frequency =	20Hz	

By using "PM2" or "PM3" encoder, it is possible to set current input PEQ filter's frequency from the range of 20Hz to 20kHz.

By rotating "PM1" encoder again, user can enter the setting interface 5 of current input parametric equalization filter:

In-A	In A	PEQ-01
->Gain=0.0dB		Q=Fixed

By using "PM2" or "PM3" encoder, user can set the gain of current parametric equalization filter from -15dB to +15dB.

When the parametric equalization filter is selected as **Hi-Shelv Q/ Lo-Shelv Q**, by rotating "PM1" encoder, user can enter the setting interface 6 of current input parametric equalization filter:

In-A	In A	PEQ-01
->Frequency =	20Hz	

By using "PM2" or "PM3" encoder, it is possible to set current input PEQ filter's frequency from the range of 20Hz to 20kHz.

By rotating "PM1" encoder again, user can enter the setting interface 7 of current input parametric equalization filter:

In-A	In A	PEQ-01
->Gain=0.0dB		Q=0.1

By using "PM2" encoder, user can set the gain of current parametric equalization filter from -15dB to +15dB, and by using "PM3" encoder, it is possible to set the Q factor of current parametric equalization filter from 0.1 to 5.1.

When the parametric equalization filter is selected as **Low-Pass 1/ Low-Pass 2/ High-Pass 1/ High-Pass 2**, by rotating "PM1" encoder, user can enter the setting interface 8 of current input parametric equalization filter:

In-A In A PEQ-01
->Frequency = 20Hz

By using "PM2" or "PM3" encoder, it is possible to set current input PEQ filter's frequency from the range of 20Hz to 20kHz.

When the parametric equalization filter is selected as **Low-Pass Q/ High-Pass Q**, by rotating "PM1" encoder, user can enter the setting interface 9 of current input parametric equalization filter:

In-A In A PEQ-01
->Frequency = 20Hz

By using "PM2" or "PM3" encoder, it is possible to set current input PEQ filter's frequency from the range of 20Hz to 20kHz.

By rotating "PM1" encoder again, user can enter the setting interface 10 of current input parametric equalization filter:

In-A In A PEQ-01
->Gain=Fixed Q=0.1

By using "PM2" or "PM3" encoder, it is possible to set the Q factor of current parametric equalization filter from 0.1 to 5.1.

When the parametric equalization filter is selected as **Band-Pass**, by rotating "PM1" encoder, user can enter the setting interface 11 of current input parametric equalization filter:

In-A In A PEQ-01
->Frequency = 20Hz

By using "PM2" or "PM3" encoder, it is possible to set current input PEQ filter's frequency from the range of 20Hz to 20kHz.

By rotating "PM1" encoder again, user can enter the setting interface 12 of current input parametric equalization filter:

In-A In A PEQ-01
->Gain=0.0dB Q=4

By using "PM2" encoder, user can set the gain of current parametric equalization filter from -15dB to +15dB, and by using "PM3" encoder, it is possible to set the Q factor of current parametric equalization filter from 4 to 104.

When the parametric equalization filter is selected as **Notch Filt**, by rotating "PM1" encoder, user can enter the setting interface 13 of current input parametric equalization filter:

In-A In A PEQ-01
->Frequency = 20Hz

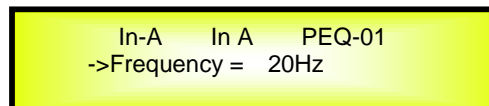
By using "PM2" or "PM3" encoder, it is possible to set current input PEQ filter's frequency from the range of 20Hz to 20kHz.

By rotating "PM1" encoder again, user can enter the setting interface 14 of current input parametric equalization filter:



By using "PM2" or "PM3" encoder, it is possible to set the Q factor of current parametric equalization filter from 4 to 104.

When the parametric equalization filter is selected as **All Pass 1**, by rotating "PM1" encoder, user can enter the setting interface 15 of current input parametric equalization filter:



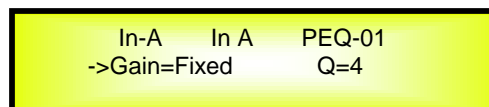
By using "PM2" or "PM3" encoder, it is possible to set current input PEQ filter's frequency from the range of 20Hz to 20kHz.

When the parametric equalization filter is selected as **All Pass 2**, by rotating "PM1" encoder, user can enter the setting interface 16 of current input parametric equalization filter:



By using "PM2" or "PM3" encoder, it is possible to set current input PEQ filter's frequency from the range of 20Hz to 20kHz.

By rotating "PM1" encoder again, user can enter the setting interface 17 of current input parametric equalization filter:



By using "PM2" or "PM3" encoder, it is possible to set the Q factor of current parametric equalization filter from 4 to 104.

Note 1: If selected the desired options by using 3 encoders, the option would be set as a current one for the unit automatically, and will be stored in the 4 IN 8 OUT system when you exit the page.

Note 2: By pressing "ESC" button, you can exit the page any time.

- **Menu "Output 1/2/3/4/5/6/7/8" Output Channels Editing [access by pushing the "1/2/3/4/5/6/7/8" buttons]**

From the "Default Screen", it is possible to access the "Output 1/2/3/4/5/6/7/8" menu by pressing the "1" or "2" or "3" or "4" or "5" or "6" or "7" or "8" button. Once pressed, the related blue "EDIT" LED will turn ON.

The Sub-Menus pages can now be scrolled through by rotating clockwise and counter-clockwise the "PM1" encoder.

For parameter editing it is necessary to press ENTER and an arrow will appear on the left of the screen "->". Then use the "PM2" and "PM3" encoders for selecting and setting the parameter values. On some parameters that have three independent values, you will also need to use the PM1 encoder, for example for the filter's parameter setting.

Note: All parameter editing can be done using the "PM1", "PM2", and "PM3" encoders and the current shown value of the selected option is AUTOMATICALLY loaded during the encoders' use and stored as the current value once leaving the page.

Audio Signal Output (1/2/3/4/5/6/7/8)

Name page – from this screen, it is possible to assign output channel a name with 6 characters. For example, name the Output 1 as "Low" in the Name Page:

Out-1	Out 1	Name
Name	=	Low

By pressing ENTER in the Name page, user can edit the name, and there will be an arrow, as the following screen shows:

Out-1	Out 1	Name
-> Name	=	Low

The first character will flash.

Select character from these 6 positions by using "PM2" encoder and choose the desired characters by rotating "PM3" encoder. Once the new name is defined, for example, "Sub", confirm this new name by pressing ENTER... A new name will display on the screen, after replaced the old one. The following screen is shown with the new name "Sub", by replacing the previous one "Low"

Out-1	Sub	Name
Name	=	Sub

Routing page – in this page, it is possible to assign input "A/B/C/D" to any output channel:

Out-1	Out 1	Routing
A=0dB	B=OFF	C=OFF D=OFF

By pressing "ENTER" button, an arrow will appear on the left of the screen "->". By using "PM1" encoder, user can set the input value for INPUT A/B/C/D. By using the "PM2" encoder, user can choose level of INPUT A to any output channel, from -30dB to 0dB. By using "PM3" encoder, user can choose "ON" or "OFF" the INPUT A to any output channel.

Out-1	Out 1	Routing
->InA:	Level=0dB	On

Gain page – from this screen it is possible to set the Output Channels Level from -18dB to +12dB, press "ENTER" button an arrow will appear on the left of the screen "->" then use the "PM2" or "PM3" to set parameters.

The value set on this screen will only affect the output level of the selected Channel 1/2/3/4/5/6/7/8.

The following is an example screen for the "Gain" page that has set the Gain of Output Channel 1 to +0.0dB:

Out-1	Out 1	Gain
-> Gain	= +	0.0dB

Delay page – from this page it is possible to set the Output Channels Delay Time from 000.0000mS up to 128.9984mS, by steps of 1mS or 10.4us.

To set the Delay time press "ENTER" button, an arrow will appear on the left of the screen "->". then use the "PM2" encoder to set the Delay Time in steps of 1mS and the "PM3" for setting the "fine" Delay Time in steps of 10.4 microseconds.

The following is an example screen for the "Delay" page where the Delay Time of Output Channel 1 is set to 118.1872mS:

Out-1	Out 1	Delay
-> Delay	=	118.1872mS

Polarity page– from this page, it is possible to set output channels polarity as "Normal" or "Invert". The following is an example screen of "Normal" Polarity:

Out-1	Out 1	Polarity
Polarity	=	Normal

By pressing "ENTER" button in this page, an arrow will appear on the left of the screen "->". then use the "PM2" or "PM3" encoder for setting "Normal" or "Invert" Polarity.

Limiter page – from this page it is possible to set the Output Channels Limiter.

Limiter can be set as "ON" or "OFF". The following is an example screen for the Limiter page where it is ON:

Out-1	Out 1	Limiter
Bypass	=	On

By pressing ENTER in this page, an arrow will appear on the left of the screen “->”, then enter into the setting interface 1 of Limiter:

Out-1	Out 1	Limiter
->Bypass	=	On

By using “PM2” or “PM3” encoder, it is possible to set the Limiter as “ON” or “OFF”.

By rotating “PM1” encoder, will enter into the setting interface 2 of Limiter.

Out-1	Out 1	Limiter
->Threshold	=	+16.0dBu

By using “PM2” and “PM3” encoder, user can set limiter attack threshold, with its range from -14dBu to +16dBu.

By rotating “PM1” encoder again, it will enter setting interface 3 of Limiter:

Out-1	Out 1	Limiter
->Rel =1 Sec	Atk =3ms	

User can set Limiter’s Release Time by using “PM2” encoder from 0.1 Sec to 5 Sec. With “PM3” encoder, it is possible to set Limiter’s Attack Time from 1 ms to 900 ms.

HPF page – in this page, it is possible to set the High-Pass filter of output channels:

Out-1	Out 1	HPF
F= 20Hz	Bypass	

By pressing ENTER button in this page, an arrow will appear on the left of the screen “->”, then enter into the setting interface 1 of High-Pass filter:

Out-1	Out 1	HPF
->Frequency	=	20Hz

By using “PM2” or “PM3” encoder, it is possible to set output channels’ High-Pass filter frequency from 20Hz to 20kHz.

By rotating “PM1” encoder, it will enter setting interface 2 of High-Pass filter:

Out-1	Out 1	HPF
->Slope	=	Bypass

By using “PM2” or “PM3” encoder, it is possible to set the High-Pass filter’s shape and order of the output High-Pass filter. Following is the available shape and order of the High-Pass filter: **Bypass/ BW -6 dB/Oct / BW -12 dB/Oct / LR -12 dB/Oct / BS -12 dB/Oct / BW -18 dB/Oct / BW -24 dB/Oct / LR -24 dB/Oct / BS -24 dB/Oct / BW -36 dB/Oct / LR-36 dB/Oct / BW -48 dB/Oct / LR-**

48 dB/Oct /

LPF page – in this page, it is possible to set the Low-Pass filter of output channels:

Out-1	Out 1	LPF
F= 20Hz		Bypass

By pressing ENTER in this page, an arrow will appear on the left of the screen “->”, then enter into the setting interface 1 of Low-Pass filter:

Out-1	Out 1	LPF
->Frequency	=	20Hz

By using “PM2” or “PM3” encoder, it is possible to set output channels’ Low-Pass filter frequency from 20Hz to 20kHz.

By rotating “PM1” encoder, it will enter setting interface 2 of Low-Pass filter:

Out-1	Out 1	LPF
->Slope	=	Bypass

By using “PM2” or “PM3” encoder, it is possible to set the Low-Pass filter’s shape and order of the output Low-Pass filter. Following is the available shape and order of the Low-Pass filter: **Bypass/ BW -6 dB/Oct / BW -12 dB/Oct / LR -12 dB/Oct / BS -12 dB/Oct / BW -18 dB/Oct / BW -24 dB/Oct / LR -24 dB/Oct / BS -24 dB/Oct / BW -36 dB/Oct / LR-36 dB/Oct / BW -48 dB/Oct / LR-48 dB/Oct /**

EQ Byp page – in this page, it is possible to set EQ Bypass of output channels, with its selectable status of “ON” and “OFF”. Following is the example screen as Bypass ON:

Out-1	Out 1	EQ Byp
Bypass	=	On

By pressing ENTER in this page, an arrow will appear on the left of the screen “->”, then enter setting interface of EQ Bypass:

Out-1	Out 1	EQ Byp
->Bypass=		On

By using “PM2” or “PM3” encoder, user can set the EQ Bypass as “ON” or “OFF”.

PEQ-[xx] (01to07) page – In this page, it is possible to set 7 available parametric equalization filters for output channels, with each parametric equalization filters can be selected as BELL, Shevling, High-Pass, Low-Pass, Band-Pass, Notch filter and All Pass Filter.

Out-1	Out 1	PEQ-01
Byp=Off	Type=	Peaking_Eq

When EQ Bypass is set as "OFF", by pressing ENTER button in any parametric equalization page, an arrow will appear on the left of the screen "->", then enter setting interface 1 of parametric equalization filter:

Out-1	Out 1	PEQ-01
->Byp=Off	Type=Peaking_Eq	

By using "PM2" encoder, it is possible to set the flat on or off for the current parametric equalization filter. By using "PM3" encoder, user can set the current parametric equalization filter's type, selectable as **Peaking_Eq/ Hi -Shelv 1/ Hi -Shelv 2/ Hi -Shelv Q/ Lo-Shelv 1/ Lo-Shelv 2/Lo-Shelv Q/ Low-Pass 1/ Low-Pass 2/Low-Pass Q/High-Pass1/ High-Pass2/High-Pass Q/Band-Pass/ Notch Filt/ All Pass 1/ All Pass 2**

When the parametric equalization filter type is selected as **Peaking_Eq**, by rotaing "PM1" encoder again, user can enter the setting interface 2 of current output parametric equalization filter:

Out-1	Out 1	PEQ-01
->Frequency =	20Hz	

By using "PM2" or "PM3" encoder, it is possible to set current output PEQ filter's frequency from the range of 20Hz to 20kHz.

By rotaing "PM1" encoder again, user can enter the setting interface 3 of current input parametric equalization filter:

Out-1	Out 1	PEQ-01
->Gain=0.0dB	Q=0.40	

By using "PM2" encoder, user can set the gain of current parametric equalization filter from -15dB to +15dB, and by using "PM3" encoder, it is possible to set the Q factor of current parametric equalization filter from 0.4 to 128.

When the parametric equalization filter type is selected as **Hi-Shelv 1/ Hi-Shelv 2/ Lo-Shelv 1/ Lo- Shelv 2**, by rotaing "PM1" encoder again, user can enter the setting interface 4 of current output parametric equalization filter:

Out-1	Out 1	PEQ-01
->Frequency =	20Hz	

By using "PM2" or "PM3" encoder, it is possible to set current output PEQ filter's frequency from the range of 20Hz to 20kHz.

By rotaing "PM1" encoder again, user can enter the setting interface 5 of current input parametric equalization filter:

Out-1	Out 1	PEQ-01
->Gain=0.0dB	Q=Fixed	

By using "PM2" or "PM3" encoder, user can set the gain of current parametric equalization filter from -15dB to +15dB.

When the parametric equalization filter type is selected as **Hi-Shelv Q/ Lo-Shelv Q**, by rotating "PM1" encoder again, user can enter the setting interface 6 of current output parametric equalization filter:

Out-1	Out 1	PEQ-01
->Frequency = 20Hz		

By using "PM2" or "PM3" encoder, it is possible to set current output PEQ filter's frequency from the range of 20Hz to 20kHz.

By rotating "PM1" encoder again, user can enter the setting interface 7 of current input parametric equalization filter:

Out-1	Out 1	PEQ-01
->Gain=0.0dB		Q=0.1

By using "PM2" encoder, user can set the gain of current parametric equalization filter from -15dB to +15dB, and by using "PM3" encoder, it is possible to set the Q factor of current parametric equalization filter from 0.1 to 5.1.

When the parametric equalization filter type is selected as **Low-Pass 1/ Low-Pass 2/ High-Pass 1/ High-Pass 2**, by rotating "PM1" encoder again, user can enter the setting interface 8 of current output parametric equalization filter:

Out-1	Out 1	PEQ-01
->Frequency = 20Hz		

By using "PM2" or "PM3" encoder, it is possible to set current output PEQ filter's frequency from the range of 20Hz to 20kHz.

When the parametric equalization filter type is selected as **Low-Pass Q/ High-Pass Q**, by rotating "PM1" encoder again, user can enter the setting interface 9 of current output parametric equalization filter:

Out-1	Out 1	PEQ-01
->Frequency = 20Hz		

By using "PM2" or "PM3" encoder, it is possible to set current output PEQ filter's frequency from the range of 20Hz to 20kHz.

By rotating "PM1" encoder again, user can enter the setting interface 10 of current input parametric equalization filter:

Out-1	Out 1	PEQ-01
->Gain=Fixed		Q=0.1

By using "PM2" or "PM3" encoder, it is possible to set the Q factor of current parametric

equalization filter from 0.1 to 5.1.

When the parametric equalization filter type is selected as **Band-Pass Q**, by rotating "PM1" encoder, user can enter the setting interface 11 of current output parametric equalization filter:

Out-1	Out 1	PEQ-01
->Frequency = 20Hz		

By using "PM2" or "PM3" encoder, it is possible to set current output PEQ filter's frequency from the range of 20Hz to 20kHz.

By rotating "PM1" encoder again, user can enter the setting interface 12 of current input parametric equalization filter:

Out-1	Out 1	PEQ-01
->Gain=0.0dB		Q=4

By using "PM2", it is possible to set the gain of current parametric equalization filter from -15dB to +15dB. By using "PM3" encoder, it is possible to set the Q factor of current parametric equalization filter from 4 to 104.

When the parametric equalization filter type is selected as **Notch Filt**, by rotating "PM1" encoder, user can enter the setting interface 13 of current output parametric equalization filter:

Out-1	Out 1	PEQ-01
->Frequency = 20Hz		

By using "PM2" or "PM3" encoder, it is possible to set current output PEQ filter's frequency from the range of 20Hz to 20kHz.

By rotating "PM1" encoder again, user can enter the setting interface 14 of current input parametric equalization filter:

Out-1	Out 1	PEQ-01
->Gain=Fixed		Q=4

By using "PM2" or "PM3" encoder, it is possible to set the Q factor of current parametric equalization filter from 4 to 104.

When the parametric equalization filter is selected as **All Pass 1**, by rotating "PM1" encoder, user can enter the setting interface 15 of current input parametric equalization filter:

Out-1	Out 1	PEQ-01
->Frequency = 20Hz		

By using "PM2" or "PM3" encoder, it is possible to set current input PEQ filter's frequency from the range of 20Hz to 20kHz.

When the parametric equalization filter is selected as **All Pass 2**, by rotating "PM1" encoder, user

can enter the setting interface 16 of current input parametric equalization filter:

Out-1	Out 1	PEQ-01
->Frequency = 20Hz		

By using "PM2" or "PM3" encoder, it is possible to set current input PEQ filter's frequency from the range of 20Hz to 20kHz.

By rotating "PM1" encoder again, user can enter the setting interface 17 of current input parametric equalization filter:

Out-1	Out 1	PEQ-01
->Gain=Fixed		Q=4

By using "PM2" or "PM3" encoder, it is possible to set the Q factor of current parametric equalization filter from 4 to 104.

Note 1: After selected the desired choice with 3 encoders, the choice would be set as the current one for the unit automatically, and would be stored in the 4 IN 8 OUT system when user quits this page.

Note 2: By pressing "ESC" to quit this page.

- **Input and Output Channels Last Edited Parameter Return Function**

Once you have escaped out of parameter editing within the individual Input or Output channels the 4 IN 8 OUT will remember this last editing action on that Channel. When you return for your next editing action pressing the EDIT button on that channel will immediately return you to the screen related to this last editing action.

This function makes fine tuning or modifying easier when it is necessary to make a number of adjustments to the same parameter in a short time sequence.

- **Input Channels and output Channels LINK Function**

The 4 IN 8 OUT is able to perform a unique LINK MODE between Input Channels as well as a link between Output Channels to enable quick and immediate editing (you cannot link output to input channels).

To link channels when editing, you will need to select a "Master" channel that will be the one to be edited and have it's parameters displayed on the LCD screen. You can then select and link other channels (Slaves) that you wish to apply the same changes to.

To enter a link mode session, select the Master channel Edit mode, then link the Slaves by pressing their related Edit buttons.

All Linked channels will be selected ready for adjustment when their "Blue" LED is lit in the Editing mode.

Now all Slave channels and only those selected will modify their parameters accordingly as you edit the Master channel.

All other existing parameters will stay the same within the Slave Channels unless edited by this link with the Master channel.

Note: The LINK function is NOT a COPY function.

If we want to edit the limiter of the Output channels 1/3/5, we can enter the editing mode of Output Channel 1 by pressing the related Edit button and turning on the Blue LED below the Output Channel 1 LED meters. This assigns the "role" of Master and displays this channel's parameters on the LCD:

A yellow rectangular box with a black border representing an LCD screen. It contains two lines of text: "Output1: Name Limiter" and "->Rel =1sec Atk =3ms".

Output1:	Name	Limiter
->Rel	=1sec	Atk =3ms

Then press the Edit button of Output Channels 1/3/5, turning on their related "Blue" LED's. Now all parameters edited on Output Channel 1, will also be applied to channels 3 and 5.

If we want to remove one of the linked channels from the Link, press the related Edit button.

Exiting the editing of the Master channel during a Link session will automatically terminate that session. The Link will also be automatically terminated if, during the editing of Output Channels you jump across to begin editing an Input channel or vice versa.


- **Factory Reset**

In the event of the password being lost or any other reason the user may require the unit to be reset to the original factory settings, a "Factory Reset" that will clear all settings of the 4 IN 8 OUT and return the device to the original factory setting, is available to the user.

Note: Continuing with this process will mean the 4 IN 8 OUT will re-initialize to the original factory settings and any previously stored information and changed parameters will be permanently lost.

– **Use the following procedure to perform the factory reset:**

1. While the 4 IN 8 OUT is switched OFF, simultaneously press the ENTER+ESC+UTILITY buttons on the front panel.
2. Maintain pressure on all three buttons as you turn the power switch to On and the following LCD screen appears on the 4 IN 8 OUT:

A rectangular LCD screen with a black border and a light yellow background. It displays the text "Doing Factory Reset" on the first line and "Please Wait....." on the second line.

Doing Factory Reset
Please Wait.....

3. Release the buttons and wait for the 4 IN 8 OUT to re-initialize.

Once completed, the 4 IN 8 OUT will resume regular operation as though it was a new unit from the factory and no previously programmed parameters will be available for use.


How to Connect 4 IN 8 OUT to the PC via RS485

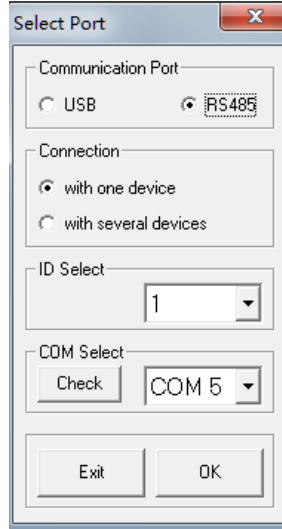
Conditions:

1. A PC installed with the 4 IN 8 OUT PC Setup
2. 4 IN 8 OUT
3. RS485 Cable, which complies with 568A or 568B Standard. We suggest 568B one.

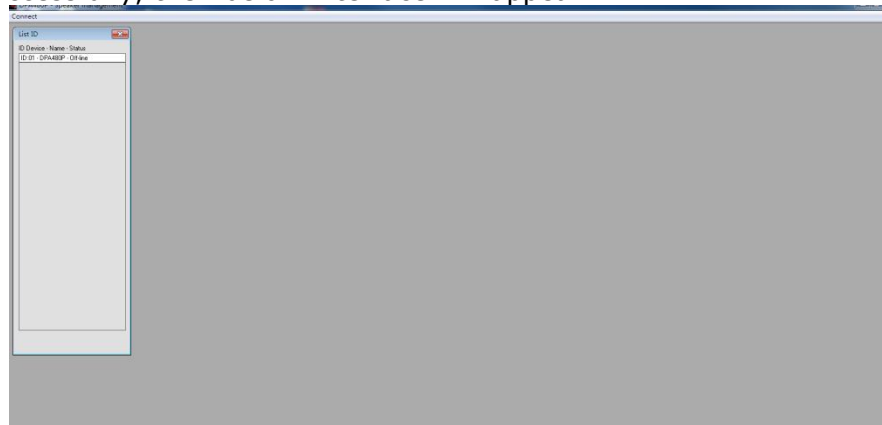
Note: 4 IN 8 OUT has 2 connection ways: USB and RS485. The default connection mode is USB.

Steps:

1. Power on the 4 IN 8 OUT
2. Connect the 4 IN 8 OUT to the PC with the RS485, then open the 4 IN 8 OUT PC Setup, select and click "Connect", then it will pop up a conversation window, where user has to set the "Communication Port" as "RS485"
3. If user only connect with one 4 IN 8 OUT, set "Connection" = "with one device"; if user would like to connect with more than one 4 IN 8 OUT, then set "Connection" = "with several devices"
4. Then ID Select will display the ID of the PC: . Please set ID Select to make the PC's ID same as the 4 IN 8 OUT's, as below Figure shows:

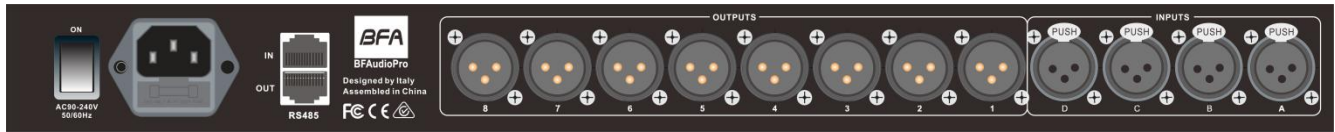


5. Click the "OK" button in below figure. If the 4 IN 8 OUT connects to the PC with RS485 successfully, then below interface will appear.



- **DPA-480P Technical Specifications**

The DPA-480P is based on a powerful analog and digital DSP platform having the following specifications



Analog Input Signal:	ChA/ChB/ChC/ChD Bal. Female XLR
Maximum Input Level:	+16dBu
Analog Output Signal:	Ch1/Ch2/Ch3/Ch4/Ch5/Ch6/Ch7/Ch8 Bal. Male XLR
Maximum Output Level:	+16dBu
Sampling Frequency:	96kHz
S/N:	107dBA
THD+N:	0.005%
Frequency Response (Bypass):	20Hz – 20kHz (+- 1 dB)
Power Supply:	Switching Power Supply
Remote Control:	USB, RS485