NVX

XDSP28

BLUETOOTH DIGITAL SIGNAL PROCESSOR

USER MANUAL

THANK YOU FOR CHOOSING NVX

Thank you for purchasing this XDSP28 from NVX. Please read this manual in order to fully understand how to get the best result from this product and ensure that the advice on how to look after the product and the safety precautions are followed. We hope you enjoy using the product as much as we enjoyed creating it.

The NVX XDSP28 is a digital audio processor that offers an enormous variety of high accuracy settings and configurations for improving your audio system's performance. The DSP provides real-time equalizing, filtering, balancing, gain, phase inversion, limiting, and digital output and input routing among other treatments.

Before mounting and installing your new DSP, please read through the whole user manual. If you have any questions concerning your DSP or any other NVX products, contact your nearest NVX dealer/distributor.

WHAT'S IN THE BOX

- Digital Signal Processor

- Remote level controller

- Level remote cable 5M

- Screws 6pcs

- Allen keys 2pcs

- User manual

TABLE OF CONTENTS

SAFETY & WARRANTY

DO NOT EXPOSE THIS PRODUCT TO EXCESSIVE DAMP OR MOISTURE
Doing so may result in shock or damage to the product.

BEFORE WIRING, DISCONNECT THE CABLE FROM THE NEGATIVE BATTERY TERMINAL
Failure to do so may result in electric shock or injury.

ENSURE GOOD AND CORRECT CONNECTIONS
Failure to make the correct connections may result in permanent damage to the product.

DO NOT USE ANY FUNCTIONS THAT MAY TAKE YOUR CONCENTRATION AWAY FROM DRIVING YOUR VEHICLE
Do not set up your DSP whilst driving. Doing so may result in an accident. For prolonged interaction with the product, make sure that your vehicle is stationary and parked in a safe location.

CAUTION
Never connect any speaker leads to the car chassis. This can cause severe damage to your car audio setup. Before drilling or cutting any holes, investigate the layout of your vehicle thoroughly. Use caution when working near the fuel/hydraulic lines and electrical wiring. Observe the correct polarity when wiring. Improper phasing may cause a loss of bass response.

WARRANTY
All NVX products carry a full warranty depending on the conditions in the country where it is sold. The warranty is valid from the date of the original receipt as proof of purchase (warranty period differs depending on local warranty laws and policies). Contact your international NVX dealer or distributor concerning specific procedures for your country's warranty policies.

WHAT IS NOT COVERED
• Damage to product due to improper installation.
• Subsequent damage to other components.
• Damage caused by exposure to moisture, excessive heat, chemical cleaners and/or UV radiation.
• Damage through negligence, misuse, accident or abuse. Repeated returns for the same fault may be considered as abuse.
• Any cost or expense related to the removal and/or abuse. Repeated returns for the same fault may be considered as abuse.
• Damage caused by amplifier clipping or distortion.
• Items repaired or modified by any unauthorized repair facility.
• Return shipping on non-defective items.
• Products returned without a return authorization number.
• Damage to product due to use of sealant.

WARNING
NVX equipment is capable of sound pressure levels that can cause permanent damage to your hearing and those around you. Please use common sense when listening to your audio system and practice safe sound. Keep the volume at a level so you can still hear outside noise. Failure to do this may result in an accident. NVX recommends caution when listening at a high volume. For safety and enjoyable listening, the sound should be clear without distortion.

INTERNATIONAL TECHNICAL INQUIRIES
For international technical support please contact the dealer/distribution agent for your country.

INSTRUCTIONS

INSTALLATION EXPERIENCE
Installation of NVX XDSP28 may require experience with a variety of mechanical procedures including cable wiring, drilling, etc. This manual only provides general installation and operation instructions. If you have any reservations about your installation skills, please contact your local authorized NVX dealer for help.

CHOOSING DSP MOUNTING LOCATIONS
Choose a mounting location in an area where the DSP will not be damaged, and where the DSP is not covered up. Mount the DSP so that it remains dry - never mount an DSP outside the vehicle or in the engine compartment. If the DSP is to be installed in an enclosed space, make sure there is sufficient air circulation for the DSP to cool itself. When mounting the DPS under a seat, ensure that it is clear of all moving parts and does not affect the seat functionality. Make sure that the DPS is mounted securely using nuts and bolts or screws.

INSTALLATION PRECAUTIONS
NOTE! Proceed only if you are a qualified installer, otherwise let your dealer do it.
• Always wear protective eye-wear when using tools.
• Turn off all stereo and other electrical devices before you begin.
• Disconnect the (-) negative lead from your vehicle's battery.
• Keep the DSP in the package until final installation, and always rest it upwards.
• Never use force when installing a DSP.
• Locate all fuel lines, brake lines, oil lines and electrical cables when planning your installation.
• Check clearances on both sides of a planned mounting surface before drilling any holes or fixing screws.
• When routing cables, keep input-signal cables away from power cables and speaker wires.
• When making connections, make certain all cables are secure and properly insulated.

POWER CONNECTIONS
To get the very best performance out of your NVX DSP, carefully follow the instructions below:

GROUND CONNECTION (GND):
Connect the DSP Ground (GND) terminal to a solid point on the vehicle's metal chassis, as close to the DPS as possible. Scrape away any paint from this location; use a star-type lock washer to secure the connection.
Ground wire:
Recommended size: 16 AWG

BATTERY CONNECTION (+BAT):
Connect a wire directly to the vehicle's 12V positive battery terminal, and install an appropriate fuse and holder within 30cm/12" from the battery terminal. Keep the fuse uninstalled at the time for routing and connecting the power wire. Be sure to use grommets whenever routing wires through the firewall or other metal parts. When routing/connecting is done, installation of the fuse into the fuse holder can be finalized.
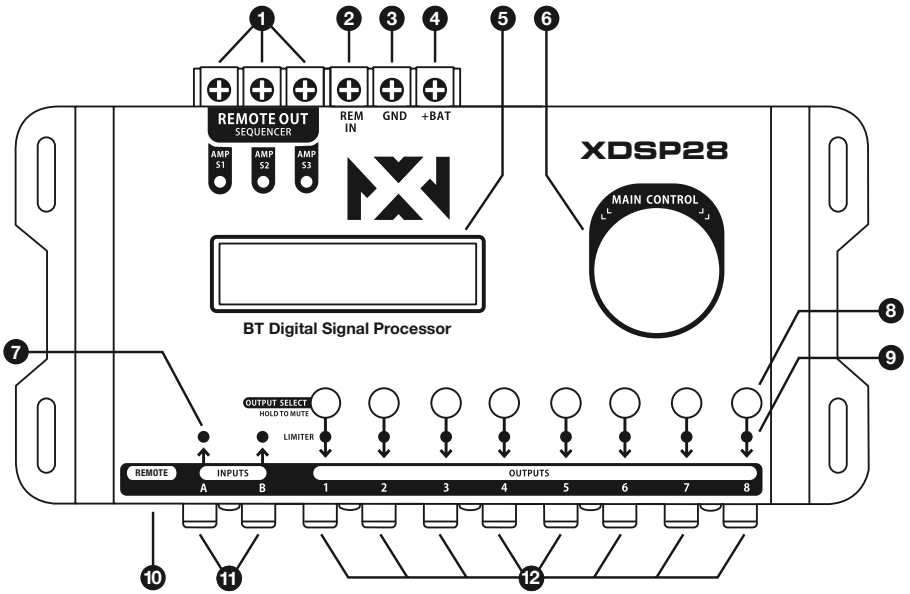**+12V wire:**
Recommended size: 16 AWG (Min. 1A fuse)

REMOTE CONNECTION (REM IN):
Connect the DSP Remote (REM IN) terminal to the source unit Remote turn on lead using a minimum of 18 AWG. If your source unit does not have a turn on connection, connect the DSP (REM IN) terminal through a power switch button which can provide a +12V signal.

CONTROL PANEL

|		
1	Remote out	Three different (with delay) remote out for amplifiers. Use 18 AWG cable.
2	Remote in (REM IN)	Automatic start from source.
3	Negative ground (GND)	Connect to the vehicle chassis. Minimum 16AWG cable.
4	Positive battery (+BAT)	Connect to positive pole of battery (+12V). Minimum 16 AWG-cable.
5	Display	LCD display.
6	Main control	Navigation input, settings adjustments.
7	Input LED indicator	The LEDs will light indicating that the respective input signal has reached the maximum level allowed.
8	Output select	Quick press will take you to configuring output channels when changing settings. HOLD will turn specific output channels on or off. Blue light - channel output on. Red light - channel output off.
9	Output LED indicator	The LEDs will light when the "output limit" of the channel is reached.
10	Remote	Remote level controller.
11	Inputs (A B)	RCA input (Stereo).
12	Outputs	8 individual RCA outputs.

NAVIGATION AND CONTROL

Navigation and control of the NVX XDSP28 are made via the "MAIN CONTROL" knob and the "OUTPUT SELECTS" hotkeys.

MAIN CONTROL
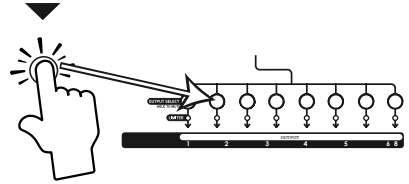**Rotation:** NAVIGATION/INCREASE/DECREASE
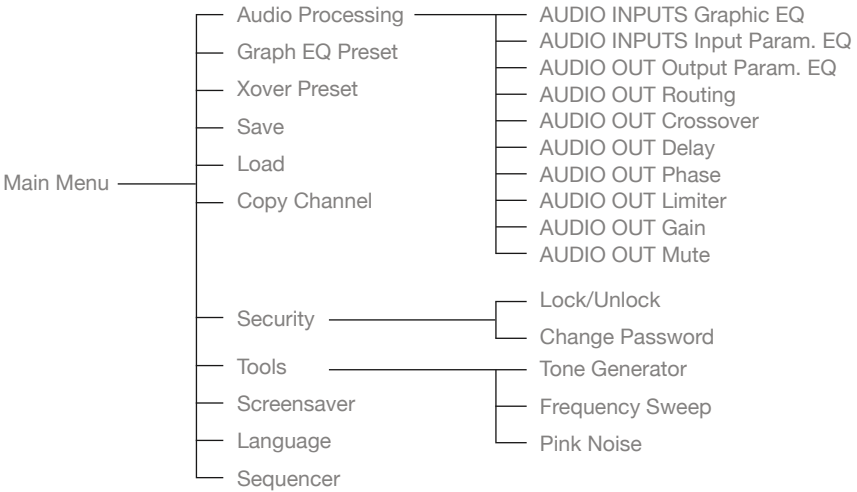**Quick Press**: ENTER/SELECT
Hold: RETURN
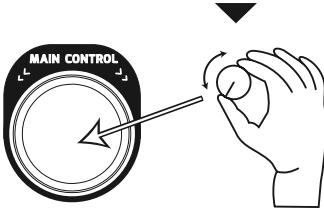
OUTPUT SELECTS
Quick press: SELECT CHANNEL
Hold: OUTPUT ON / OFF

MENU NAVIGATION

Main Menu
- Audio Processing
  - AUDIO INPUTS Graphic EQ
  - AUDIO INPUTS Input Param. EQ
  - AUDIO OUT Output Param. EQ
  - AUDIO OUT Routing
  - AUDIO OUT Crossover
  - AUDIO OUT Delay
  - AUDIO OUT Phase
  - AUDIO OUT Limiter
  - AUDIO OUT Gain
  - AUDIO OUT Mute
- Graph EQ Preset
- Xover Preset
- Save
- Load
- Copy Channel
- Security
  - Lock/Unlock
  - Change Password
- Tools
  - Tone Generator
  - Frequency Sweep
  - Pink Noise
- Screensaver
- Language
- Sequencer

CONNECT BLUETOOTH

When "BT" is flashing in the display, the unit is ready for pairing. Connect to Bluetooth by finding "XDSP28" in the Bluetooth list on your mobile device. Bluetooth audio will override the RCA input audio.

Unpair Bluetooth connection with the "Load default" settings. Turning off Bluetooth mode on the mobile device enables the RCA input.

Make sure to lower the source level connected to the A & B input, before turning off the Bluetooth, to avoid damaging the system.

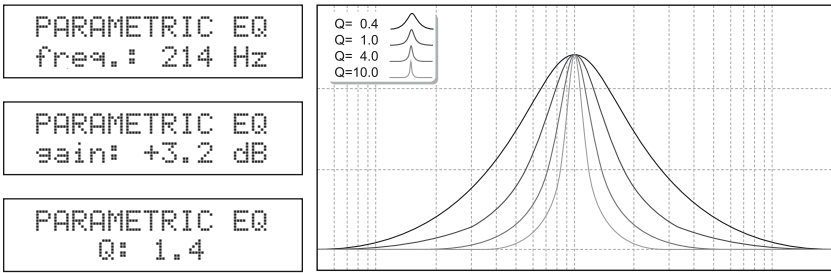# AUDIO PROCESSING

The input graphic equalizer has 15 bands:

25Hz, 40Hz, 63Hz, 100Hz, 160Hz, 250Hz, 400Hz, 630Hz, 1kHz, 1.6kHz, 2.5kHz, 4kHz, 6.3kHz,10kHz, 16kHz

Each band has a variation of ±12 dB, with a pitch of 0.1 dB. The graphic equalizer acts on the two inputs simultaneously.

```
     GRAPHIC EQ
f: 63 Hz +2.6 dB
```

The parametric equalizer allows you to choose a gain / attenuation at a specific frequency, as well as the bandwidth of that equalizer by means of the Q factor, the smaller the Q the greater the width of that equalization band, affecting to a greater extent the neighboring frequencies. NVX XDSP28 has 1 parametric equalizers for the inputs

```
PARAMETRIC EQ
freq.: 214 Hz
```

```
PARAMETRIC EQ
gain: +3.2 dB
```

```
PARAMETRIC EQ
    Q: 1.4
```

Q= 0.4
Q= 1.0
Q= 4.0
Q=10.0

The parametric equalizer allows you to choose a gain / attenuation at a specific frequency, as well as the bandwidth of that equalizer by means of the Q factor, the smaller the Q the greater the width of that equalization band, affecting to a greater extent the neighboring frequencies. NVX XDSP28 has 8 parametric equalizers for the outputs (1 for each output)
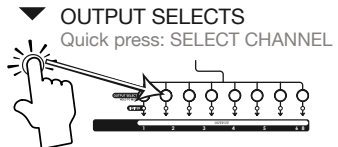
```
PARAMETRIC EQ
freq.: 214 Hz
```

```
PARAMETRIC EQ
gain: +3.2 dB
```

```
PARAMETRIC EQ
    Q: 1.4
```

Q= 0.4
Q= 1.0
Q= 4.0
Q=10.0
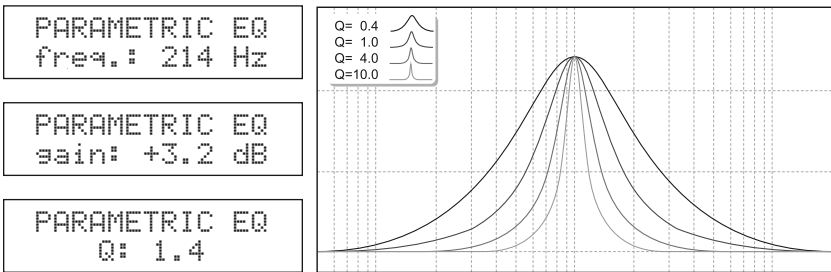
To change the output channel, just press (quick) the output select.

OUT1, OUT2, OUT3, OUT4, OUT5, OUT6, OUT7, OUT8

▼ OUTPUT SELECTS
Quick press: SELECT CHANNEL

AUDIO OUT- Routing

The purpose of the routing option allows you select the audio source A, B or A + B (sum) for each output. Turning the "MAIN CONTROL" dial moves the audio source to the selected route. To select another channel, quickly press the corresponding "OUTPUT SELECT".

```
    ROUTING
IN A+B ---> OUT1
```

Example:

Selecting A for OUT1, OUT2 & OUT3 - and - Selecting B for OUT4, OUT5 & OUT6 gives you the option to run an active 3-way setup.

Selecting A for OUT1, OUT3 - and - Selecting B for OUT2, OUT4 gives you the option to run a front and back setup.

Selecting A+B for OUT7 & OUT8 gives you a subwoofer setup.

AUDIO OUT- Crossover

The crossover function allows precision definition of the cutoff frequencies for the high-pass filter and the low-pass filter, as well as filter attenuations and topology individually by output. Available filters and attenuators:

HPF: Butterworth 12/24/36/48 dB/Oct Linkwitz-Riley 12/24/36/48 dB/Oct	LPF: Butterworth 12/24/36 dB/Oct Linkwitz-Riley 12/24/36 dB/Oct

```
  HPF OUT1
 f:12 Hz LR48
```

```
  LPF OUT1
 f:107 Hz BT12
```
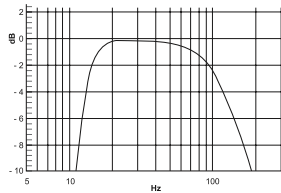

In the "CROSSOVER" menu, each setting in the "MAIN CONTROL" changes the parameter in editing, between output, filter type, frequency and attenuation / topology.

To select another output channel for editing you can also quickly press the OUTPUT SELECT "OUTPUT SELECT" of the corresponding output.

AUDIO OUT- Phase

Use this function to resolve problems caused by canceling frequencies. From this screen you can reverse the phase of all outputs individually. Turning the "MAIN CONTROL" dial changes the phase (0° or 180°) of the corresponding output. To select another channel, quickly press the corresponding "OUTPUT SELECT" shortcut.

```
    PHASE
  OUT1:180
```

AUDIO OUT- Delay

The Delay function allows for the digital alignment of transducers speakers via the time correction performed by the DSP, and ensures that the sound from all the speakers arrives at the listener with improved audio fidelity while avoiding frequency cancellations. See adjustment example below:

```
    DELAY
12.0cm 0.349ms
```

1. Identify the coil farthest from the listener or the box. This coil will be used as a reference;

2. Measure the distance from the other coils to the reference coil. These are the distances used in configuring the delay of each output channel.

Front Panel

Reference (R*)

8cm

15cm
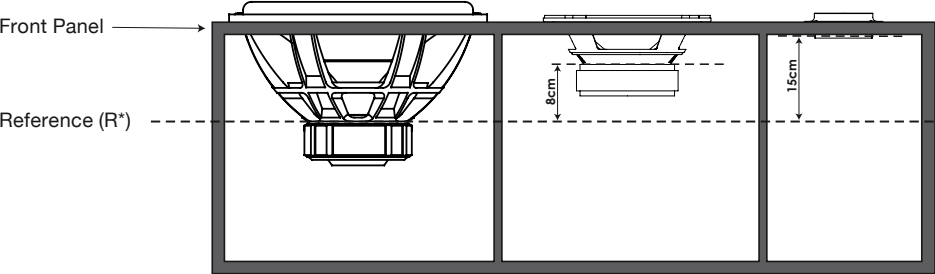
AUDIO OUT- Limiter

To protect your amplifiers and speakers, the XDSP28 has a limiter with an integrated "Dynamic Attack-Release" system for each of the 8 outputs. Use this function to attenuate and prevent damage caused by signal peaks.

The Threshold (-24 to 0 dB) setting defines a threshold for the Limiter's activation: the Limiter kicks in when this threshold is exceeded.

The Attack parameter (0.1 to 100 ms) defines how fast the Limiter reacts / acts when the signal exceeds the Threshold.

The Release parameter (1 to 1600 ms) controls the recovery time elapsed between the time the signal falls below the Threshold and deactivation of the Limiter.

In addition to manual adjustments of Attack and Release values, it is possible to enable the "AUTO" mode, where the Attack and Release parameters are controlled in real time by the "Dynamic Attack-Release" system, providing ideal conditions for sound fidelity.

```
     LIMITER
THRES.: -9.5 dB
```

```
     LIMITER
ATTACK: 0.1 ms
```

```
     LIMITER
RELEASE: 500 ms
```

```
  LIMITER OUT1
AUTO: [OFF] ON
```


Entrada

Tempo

Saída

Tempo

Ganho

1

Attack

Release

Tempo
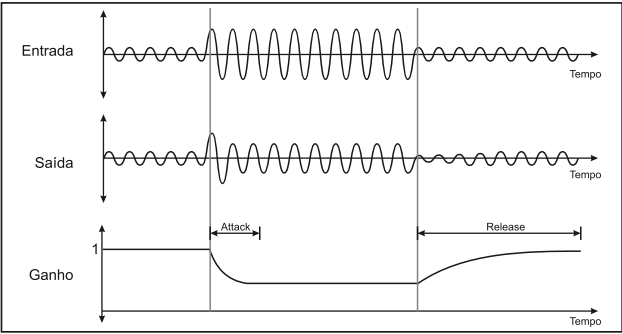
This menu allows you to adjust the gains of the individual outputs within a range of -45 to +15 dB, as well as to increase the volume of the NVX XDSP28 from 0 to 100%.

```
MASTER LVL: 82%
OUT1 GAIN: +3 dB
```

AUDIO OUT- Mute

The outputs can be switched individually on and off quickly by holding down the OUTPUT SELECT that corresponds to the output desired..

The LED color indicates the status of the output.

- **BLUE:** Output ON.
- **RED:** Output OFF (MUTE).

In the "MUTE" screen, you can still turn off and on all the output channels simultaneously using the "MAIN CONTROL" go to the output field and select "ALL-ENTER" or "ALL-ENTER ON". Then fast touch on "MAIN CONTROL". You can also turn the input graphic equalizer on or off.

```
   OUT1: ON
GRAPH EQ: ON
```

```
MUTE ALL (ENTER)
  GRAPH EQ: ON
```

```
ON ALL [ENTER]
 GRAPH EQ: ON
```

FUNCTIONS

GRAPHIC EQ Preset

NVX XDSP28 has 12 graphic equalization presets to choose from.

- • FLAT
- • LOUDNESS
- • BASS BOOST
- • MID BASS
- • TREBLE BOOST
- • POWERFUL

- • ELECTRONIC
- • ROCK
- • HIP HOP
- • POP
- • VOCAL
- • PANCADAO (Heavy beat)

```
ON ALL [ENTER]
 GRAPH EQ: ON
```

```
GRAPH EQ PRESETS
   Loudness
```

X-OVER Presets

The NVX XDSP28 offers 11 crossover presets. These can be selected from "XOVER Preset" in the menu. Each preset can be used for all outputs. Use HOTKEYS for output selection.

```
 XOVER PRESETS
OUT1 <- SWBW1
```

The crossover presets you can choose from is the following:

SWBW1

```
HPF  50Hz  BT12
LPF 150Hz LR24
```

SWBW2

```
HPF  10Hz OFF
LPF  80Hz LR24
```

SWBW3

```
HPF  30Hz BT12
LPF  90Hz LR24
```

WOOFER1

```
HPF  100Hz  LR24
LPF 1000Hz LR24
```

WOOFER2

```
HPF  60Hz   BT12
LPF 1000Hz LR24
```

WOOFER3

```
HPF  45Hz   BT12
LPF 800Hz  LR24
```

DRIVER1

```
HPF  700Hz   LR24
LPF 7000Hz  LR24
```

DRIVER2

```
HPF 1000Hz  LR24
LPF 7000Hz  LR24
```

DRIVER3

```
HPF 1650Hz BT12
LPF 22000Hz OFF
```

TWEETER

```
HPF 7000Hz   LR24
LPF 22000Hz LR24
```

CUSTOM

```
HPF 10Hz     OFF
LPF 22000Hz OFF
```

SAVE / LOAD (factory reset)

The XDSP28 has four memory slots available for saving personalized settings, accessed via the "SAVE" function. Saved settings can be named with titles up to 15-characters long. Besides the memory space available to the user, there is auto save, where all parameters and settings are saved in a separate working memory. Or rather, if there is a drop in power or the product is turned off during configuration, the settings will not be lost. This function cannot be disabled.

To load previously saved settings use the "LOAD" function. This function also allows the factory presents to be loaded via the "DEFAULT" memory.

```
SAVE MEMORY1
   Memory1
```

```
    LOAD
   Default
```

SECURITY

This function locks the ability to edit the XDSP28 settings, including blocking the save and load settings. Via the "SECURITY" menu you can lock, unlock ("LOCK/UNLOCK") and change the password ("Change Password").

The on/off function for output channels is not blocked. **Default password: 1234.**

```
  SECURITY
 Lock/Unlock
```
▶
```
ENTER PASSWORD
     ____
```

```
  SECURITY
Charge Password
```
▶
```
CHARGE PASSWORD
Current PW:____
```

AUDIO OUT- Gain

This function allows you to copy all audio settings from one output channel to another. The copied functions are: parametric output equalizer, routing, crossover, alignment, phase inversion, limiter, gain and mute.

1. Select a "SOURCE" output channel using the "OUTPUT SELECT" hotkeys or by turning the "MAIN CONTROL".

2. Select a "DESTINATION" output channel using "OUTPUT SELECT" shortcut keys or by turning the "MAIN CONTROL".

3. The confirmation message will appear. If confirmed, as output channels from "ORIGIN" to the "DESTINATION" output channel, overwriting as the "DESTINATION" output channel.
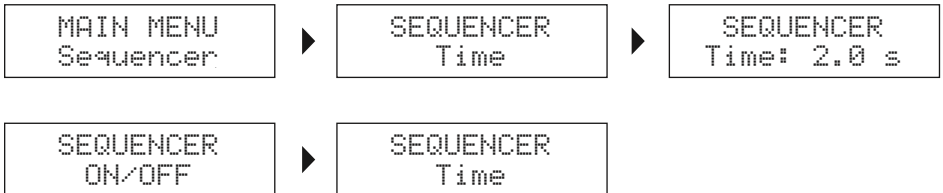
```
COPY CHANNEL
Source: OUT1
```
▶
```
COPY CHANNEL
Destination: OUT2
```
▶
```
COPY CHANNEL
NO [YES]
```
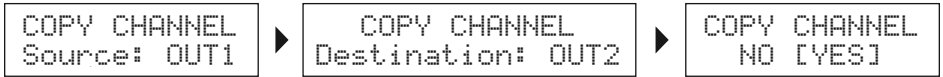
SEQUENCER

The feature gives you the option of activating different products with delay. This function has three outputs **(AMP S1, AMP S2 & AMP S3)** and are activated and deactivated in a sequential order, according to the remote input (REM in)

The interval between each output is up to 4 sec. If configured to 0 sec, all three outputs will enable/disable at the same time (After 3 sec after "REM in" is active).
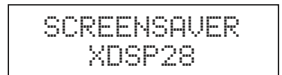
Use a 18 AWG cable from the outputs.

It's possible to turn off this function.

```
MAIN MENU
Sequencer
```
▶
```
SEQUENCER
Time
```
▶
```
SEQUENCER
Time: 2.0 s
```

```
SEQUENCER
ON/OFF
```
▶
```
SEQUENCER
Time
```

SCREENSAVER

The NVX XDSP28 has a screensaver function, which allows the user to define a 15-character scrolling text.

```
SCREENSAVER
XDSP28
```

LANGUAGE

You can select from the following operating languages: English, Spanish and Portuguese.

TOOLS

The NVX XDSP28 has tools to aid in the regulation of your sound system, TONE GENERATOR, FREQUENCY SWEEP and PINK NOISE GENERATOR. These tools are signal sources for all outputs, that is, during their use as inputs.

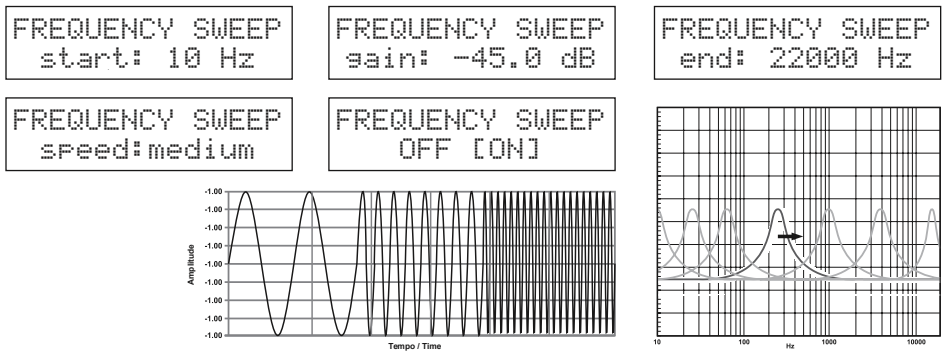**Make sure to always start with gain: -60 dB due to a high output signal!**

TONE GENERATOR

A tone Generator is used to generate a specific frequency with gain control. Each press on the "MAIN CONTROL" parameter is edited between frequency, gain and ON / OFF. With the generator on it is still possible to change the frequency and gain in real time, and even modify other audio parameters of the processor.

```
TONE GENERATOR
 freq: 100 Hz
```

```
TONE GENERATOR
 gain:-45.0 dB
```

```
TONE GENERATOR
   OFF [ON]
```
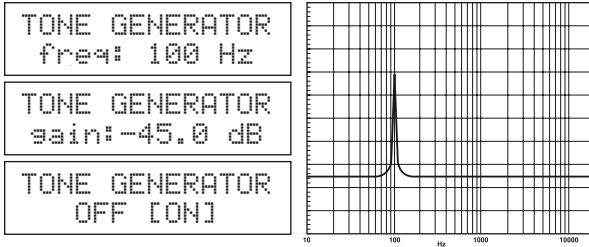
FREQUENCY SWEEP

The frequency sleep allows you to perform a frequency scan, with the option of selecting the initial and final frequency, gain, scanning speed and ON / OFF. When activating the sweep enters a continuous cycle, to close it simply press any of the "OUTPUT SELECTS" or move the "MAIN CONTROL".

```
FREQUENCY SWEEP
  start: 10 Hz
```

```
FREQUENCY SWEEP
 gain: -45.0 dB
```

```
FREQUENCY SWEEP
 end: 22000 Hz
```

```
FREQUENCY SWEEP
 speed:medium
```

```
FREQUENCY SWEEP
   OFF [ON]
```

PINK SWEEP

The Pink Sweep lets you generate a signal that maintains the same magnitude for the entire frequency range, generally used to calibrate audio systems in order to obtain flat response and due alignment between the tracks. Each press on the "MAIN CONTROL" parameter in editing is changed between gain and ON / OFF. With the pink noise on it is still possible to change the gain of noise in real time, and even modify other audio parameters of the processor.

```
 PINK NOISE
gain:-45.0 dB
```

```
 PINK NOISE
  OFF [ON]
```
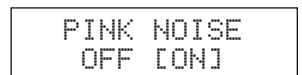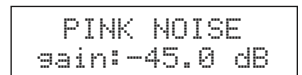
SPECIFICATIONS

Number of Input Channels:	2, BT
Number of Output Channels:	8
Graphic Equalizer:	15 Bands, gain ± 12dB
Graphic Equalization Presets:	12
Parametric Equalizer:	1 Input + 1 per Output, Gain ± 12dB, Q Factor 0.4 to 10.0
Crossover with Variable Frequency:	Butterworth 12/18/24/36/48 dB / Oct Linkwitz-Riley 12/18/24/36/48 dB / Oct
Crossover Presets:	11
Routing between Inputs & Outputs:	A, B or A + B (Stereo/Mono)
Alignment:	0 to 8ms (275cm) - Step 0.0145ms (0.5cm)
Phase Inversion:	0° or 180°
Limiter:	Threshold -24 to 0dB / Attack 0.1 to 100.0ms Release 1 at 1600ms / Attack / Release
Output Gain:	-45 to + 15dB
Master Level:	0 to 100%
Memory Positions Save / Load:	Working memory (auto save) + 4 memory positions
Copy of Channels:	Copy settings between output channels
Safety:	4-digit security password
Frequency Generator:	10Hz to 22kHz
Frequency Sweep:	Freq. Start and end 10Hz at 22kHz Level -60 to 0dB / Speed control
Pink Noise Generator:	10Hz to 22kHz, Level -60 to 0dB
Screensaver:	Editable text with 15 positions
Languages:	English,Portuguese and Spanish
Latency:	1.08ms
Input Impedance:	10 kΩ
Output Impedance:	47 Ω
Max Input Voltage:	2V RMS (5.6 Vpp (+ 8.2 dBu))
Max Output Voltage:	2V RMS (5.6 Vpp (+ 8.2 dBu))
Input Saturation Indicator:	1 per Entry
Output Saturation Indicator:	1 per Output (with Limiter link)
Signal-to-noise ratio:	>94dB
Total Harmonic Distortion (T.H.D):	0.01%
Channel Separation:	>80dB
Frequency Response:	10Hz-23kHz @ -1dB
Power supply:	10V-16V DC
Max Current Consumption:	0.5A @ 14.4V DC
Dimensions (W x H x D):	37 x 200 x 101 mm
Weight:	475g

TROUBLESHOOTING

Symptom	Check / Control
No sound / No active unit	• Check and measure voltage at +12V and REM IN (Allowed working range is 10.0-16V DC). • Check ground connections. • Check the external fuse. • Check input signal and cables from the source unit. • Check if the output selector is in mute (RED) • Check gain and settings in the menu on your XDSP28
Noise or Distorted sound / Low output	• Check if the input indicator is RED. (Lower the input signal). • Check crossover/input level/gain on XDSP28. • Check gain settings on your amplifier. • Check ground connections of all installed audio equipment (source unit, amplifier, etc).

WARRANTY

NVX warrants to the original retail purchaser that this product is to be free from defective materials and workmanship for a period of one (1) year from the date of purchase, if it is properly used and maintained. If this product proves defective in either material or workmanship, NVX, at it's discretion, will (a) repair the product, or (b) replace the product, at no charge for parts or labor.

If the product model is no longer available and cannot be repaired effectively or replaced with an identical model, NVX at it's sole option may replace the unit with a current model of equal or greater value. To obtain a repair or replacement under the terms of this warranty, please return to dealer first, if possible, and the dealer will direct you accordingly for repairs or replacement.

You will be required to submit a copy of the original receipt. Return shipping for exchanges/repairs is the sole responsibility of the original retail purchaser.

Limitations

- This limited warranty does not cover failure of the product resulting improper installation, misuse, abuse, accident, neglect, mishandling, or wear from ordinary use or environmental deterioration.

- This limited warranty does not cover cosmetic damage, including paint damage, or consequential damage to ordinary use or environmental deterioration.

- This limited warranty does not cover cosmetic damage, including paint damage, or consequential damage to other components or premises which may result for any reason from the failure of the product.

- This limited warranty is null and void for products not used in accordance with NVX's instructions.

- This limited warranty is null and void for products with altered or missing serial numbers and for products not purchased from an authorized dealer.

- This limited warranty terminates if you sell or otherwise transfer this product to another party.

- This limited warranty is null and void for any speaker or subwoofer that has been damaged due to over-powering causing burnt voice coils and /or mechanical failures such as ripped spiders or surrounds.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE, JURISDICTION TO JURISDICTION, OR COUNTRY TO COUNTRY. NVX'S RESPONSIBILITY FOR MALFUNCTIONS AND DEFECTS IN HARDWARE IS LIMITED TO REPLACEMENT OR REPAIR AS SET FORTH IN THIS WARRANTY STATEMENT. ALL EXPRESS AND IMPLIED WARRANTIES FOR THE PRODUCT, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN TIME TO THE TERM OF THIS WARRANTY. SOME STATES, JURISDICTIONS, OR COUNTRIES DO NOT ALLOW THE EXCLUSION OF CERTAIN IMPLIED WARRANTIES OR CONDITIONS, OR LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY OR CONDITION LASTS, SO THIS LIMITATION MAY NOT APPLY TO YOU. NVX DOES NOT ACCEPT LIABILITY FOR SPECIAL, INDIRECT, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, INCLUDING WITHOUT LIMITATION, ANY LIABILITY FOR THIRD PARTY CLAIMS AGAINST YOU FOR DAMAGES OR FOR PRODUCTS NOT BEING AVAILABLE FOR USE. THE MAXIMUM LIABILITY FOR WHICH NVX MAY BE RESPONSIBLE WILL BE NO MORE THAN THE AMOUNT YOU PAID FOR THE PRODUCT THAT IS THE SUBJECT OF THE CLAIM. SOME STATES, JURISDICTIONS, OR COUNTRIES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

Warranty Outside the U.S. The Warranty on this product shall comply with applicable law when sold to a consumer outside of the United States. To obtain any applicable warranty service, please contact the dealer from which you purchased this product, or the distributor that supplied this product.

WHAT TO DO IF YOU NEED WARRANTY OR SERVICE

Defective products should be returned to the place of purchase. Your authorized NVX dealer is trained to handle and expedite any warranty claim. Assistance in locating an authorized dealer can be found at nvx.com or by contacting NVX directly.

Alternatively, if it becomes necessary for you to return defective product directly to NVX, please refer to the following instructions for warranty service:

- Receive your RA Number from NVX online at **nvx.com/support**

- Package all defective components in the original packaging (if available) or in a package that will prevent shipping damage.

- Package the original packaging in an additional shipping container to avoid shipping damages and to comply with most shipping couriers such as UPS and FedEx.

- Insure your return at the price paid as NVX is not responsible for insurance losses or damages occurring in shipment to our facility.

- Clearly mark RA Number on the outside shipping container.

- Return only defective components as the return of functioning items increases your return freight charges

  - Non-defective returns or products not eligible for warranty service will be returned freight collect

- Include a copy of the original receipt with the purchase date clearly visible, and a "proof-of-purchase" statement listing the customer's name, dealer's name and invoice number, and product purchased.

  - Warranty expiration on items without proof-of-purchase will be determined from type of sale and the manufacturing date code.

- Ship your package freight prepaid to the address below. Items sent freight collect or COD will be refused.

NVX
Attn: Returns
742 S. 11th st.
Louisville, KY 40210

Failure to follow the steps listed above may void your warranty. Any questions can be directed via email to **cs@nvx.com** or via mail at the address listed above.