



**SENSEFORCE**

Sound-Feel -System

User Manual



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## **1.1 Application Note**

The SenseForce Pad Extreme is a body sound simulating seat rest. It has been developed for the usage on seating and lounge furniture in dry environment (living area) but is not certified for mobile usage like in cars. The SenseForce Pad Extreme complements any audio/sound signal with strong vibrations, which simulates immersive body sound.

The SenseForce Pad Extreme is an instrument for an increased sound experience directly on the body surface. It not a massage seat rest simulating a manual or medical massage therapy. According this application note the vibration of the SenseForce Pad Extreme is recommended to be controlled in a way that tactile stimulation can just be experienced. However, with strong vibration intensities the corresponding feeling could be called sound massage.

## **1.2 Functional Description**

The SenseForce Pad Extreme is a body sound simulating seat rest. With this seat rest music and sound can be made „feel able“ similar to the sound experience on an Open Air. The comfortable, compact and effective shape of construction enables an exceptionally easy and quick installation on seating and lounge furniture: at home on a sofa or chair, in the office on the office chair or on the gaming chair. With the Bluetooth connection the SenseForce Pad Extreme is quickly connected with any audio device (e.g. Smart Phone, Home Cinema system, Computer).

The SenseForce Pad Extreme is developed for immersive gaming, home-cinema and music sensation, relaxation or body experience. It also works like a live bass booster in combination to existing loud speakers or headphones. The new dimension of sensation, the tactile feedback, is produced by vibrations:

- Dependant on the setting of the vibration intensity and the quality of the played-in audio signal the SenseForce Pad Extreme affects a mood-amplifying effect like energy and power or a mood-attenuating effect like an embedded and pleasant relax-feeling.
- Tactile stimulation enables an innovative complementation of details in your Gaming, Home-Cinema or Music sounds and noise. In our 2D stimulation we perform directly on your body location dependent special signals: with your Ego Shooter, Racing Game or action-rich movie in your Home-Cinema or just from your Smartphone.
- Space consuming or neighbour disturbing sub-woofers belong to the past, because your Bass-Woofer experience can be felt directly on your body.
- There is no need any more to turn your headphones on with high sound levels, because you don't need to simulate the missing body sound coming from a big sound system anymore.
- With limited usage of maximum vibration intensity, you also can experience something like a "sound massage".



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With dimensions like a retrofit-able seat rest for a car seat the SenseForce Pad Extreme contains special patented area vibration actuators for the both the seat and the back area.

Operated by the included 12VDC power adapter the SenseForce Pad Extreme is sourced with your favourite music from a Smart Phone, MP3-Player, and Infotainment-System, Home Cinema- or Stereo system.

### **1.3 Generic Features**

- Multi-Zone special vibration
- Plug & Play: the SenseForce Pad Extreme is delivered for all most common interfaces
- Bluetooth Low Latency

The Immersive Feel Engine (IFE):

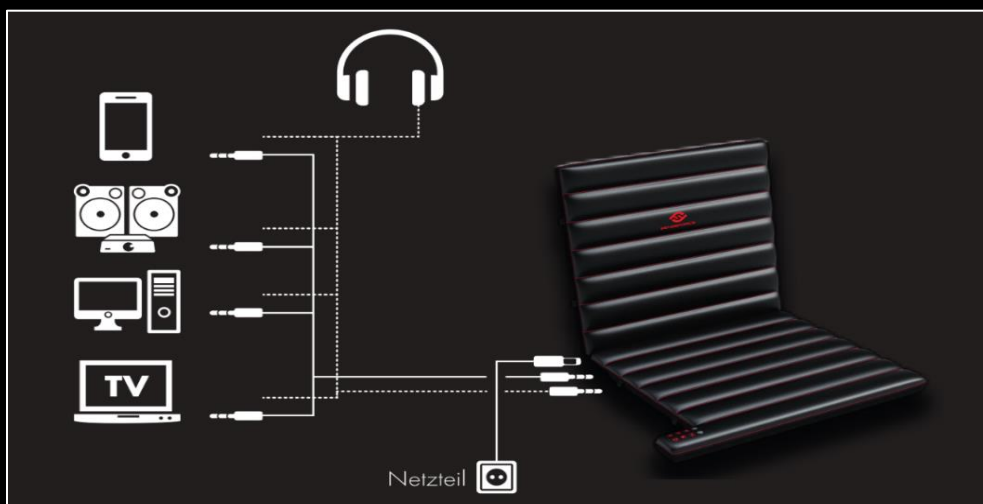
The SenseForce Pad Extreme provides several innovative technologies which are summarized in the immersive Feel Engine:

Sound Effect Simulation (SES):	tactile stimulation is being digitally processed dependent on the sound signal
Full Body Vibes (FBV):	entire body is being stimulated
Seat Comfort Improvement (SCI):	Patented system concept for improved seating and leaning comfort

## 1.4 Which devices can I connect?

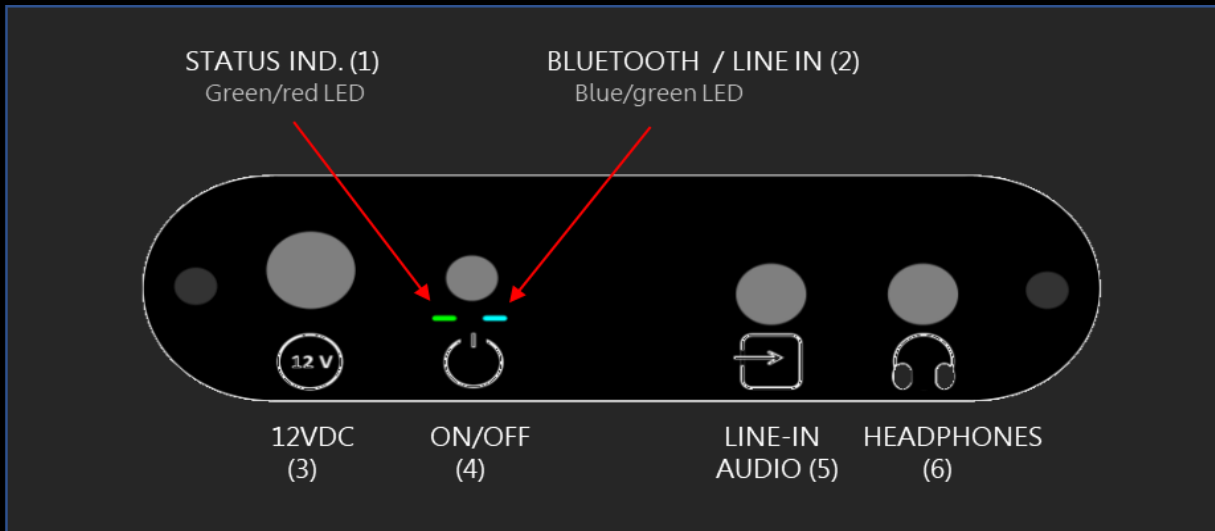
Basically, the SenseForce Pad Extreme can be connected with all commercially available devices with an audio-output (analogue or Bluetooth). Here a brief overview ordered by user groups:

Gaming	Home Cinema	Entertainment System	Consumer Devices
PCs	TV	Amplifier	Smartphone
All consoles	DVD Player	Receiver	Tablet
	Home Cinema System	DVD Player	Mp3 Player

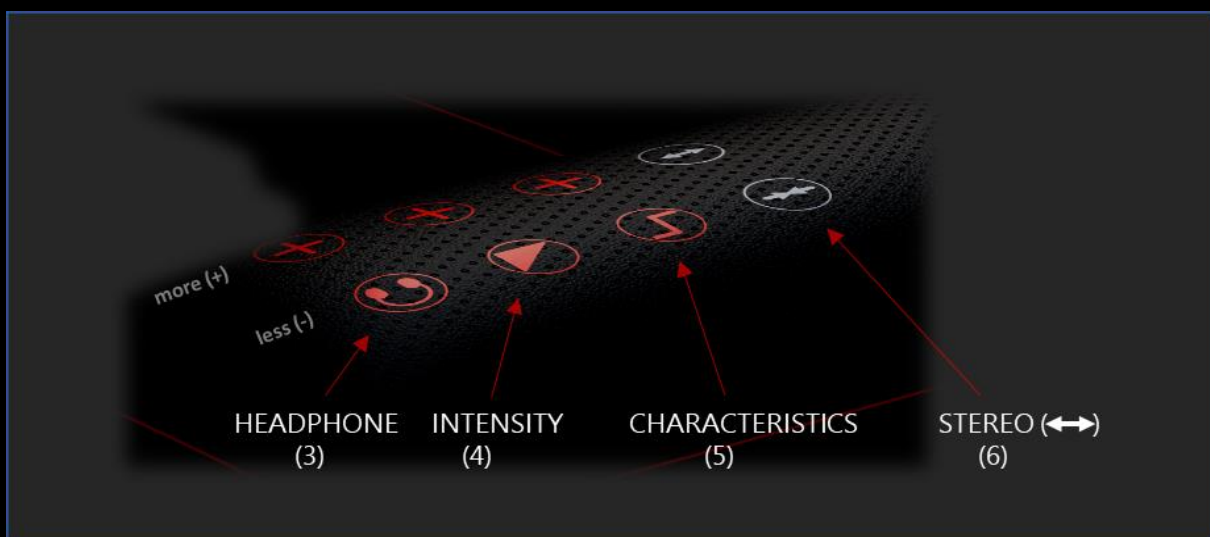


## 1.5 Interface and Control Elements

### Interfaces:



### Control Elements:



## 1.6 Initial Operation

- Connect the external 230V power supply with the 12V DC interface (3). and push the "on" button (4). The green/red LED (1) flashes now alternatively and the blue LED (2) flashes continuously. This means that the system is operational and still not connected with any audio source.
- Connect your headphones with the 3,5 mm headphone interface (6).
- The SenseForce Pad Extreme can be connected with your sound source either analogue via a 3.5mm audio jack cable (5) or wireless via Bluetooth.

### Bluetooth Connection

Activate on your Bluetooth capable media device (Smart-Phone/ Tablet/ PC etc) the Bluetooth-search function. Connect with the found device „iFeel MiniAmp“. As soon as both devices are connected the blue LED (2) flashes continuously and the green LED (1) flashes periodically. From now on SenseForce Bluetooth connects automatically with the latest connected media device. This happens as soon as the media device is ready to receive Bluetooth and the MiniAmp is switched on.

### Analogue Connection

Connect SenceForce with your media device via the enclosed 3,5mm jack cable (4). Now the green LED (1) flashes continuously, the LED (2) flashes green. This means that an audio cable is inserted and the MiniAmp works in Line-In Mode.

If you insert a 3.5mm Audio cable during Bluetooth operation the MiniAmp switches automatically to the Line-In mode and Bluetooth is being interrupted. If you pull out the Line-In cable the device works in Bluetooth mode again.

Note: if the SenseForce Pad Extreme is longer than 20 min without operation, it automatically switches off. In this case the "on" button (4) needs to be pushed again.

## 1.7 Feel Guidance

- Choose an audio track with good audio quality and good bass content.
- Put on your headphones on.
- Set the audio volume of your audio source (e.g. Smartphone or Computer) to the highest undistorted level and set your headphone level to a for you most enjoyable level with the tactile switches (3). Then set the intensity of the vibration with the tactile switches (4) to a comfortable level.

Note: the higher the audio level of the audio source is the higher is the vibration intensity.

- With the Tactile Switches (3) you can control your vibration characteristics. You can improve your sensation of objects or sound pictures even better and more precise. Just try the effect with various sounds, explosions, shots, steps, the soil texture and with various music genres e.g. Hip-Hop or classic.
- With the tactile switches (6) you can invert the original stereo signal (<->) an inverted stereo signal (>-<), in case you want exchange your seating with the back area of the SF-PX on a gaming chair for better vibration convenience.
- Memory Functions:
  - If you switch-off the SF-PX with the On/Off button, the settings of the session will be stored. If you switch-off the SF-PX by pulling out the power plug, the settings of the session will not be stored.
  - For the return to the factory settings, please switch-off the electronics. The press simultaneously the (+) and (-) headphone button and the "on" switch.

Note: All settings of the tactile switch board will be stored automatically as soon as the system is being shutdown via the power switch. They will not be stored when the power jack is being pulled out.

*We recommend for longer continuous usage to set the intensity level in a way that you just can feel a vibration sensation.*



## 1.8 Problem Solving

Issue	Measure	Check
no vibration and no headphone sound	connect external power supply and press "on" button	The green/red status LED (1) flashes alternatively and the operation mode LED (2) flashes continuously.
	connect SF-PX either via Bluetooth or via 3.5mm Line-In cable with the sound source	operational mode LED (2) flashes consciously blue, if Bluetooth connection is established, or it is continuously green with inserted Line-In cable
		check whether audio level of the media source is fully turned up
		check whether the sound device is switched on and media is started
		check whether the 3,5mm audio cable is <b>fully</b> inserted into the audio socket
		if a PC is used, check whether the media sound is directed to the sound board, the SPX is connected to
Vibration, but no headphone sound	insert headphone cable plug <b>fully</b> into the headphone socket.	
		check whether the headphone has an own volume control and turn it on
Headphone Sound but no vibration	conduct a reset: switch off and switch on the amplifier (on/off button)	
Vibrations are very weak	continuous push onto the intensity button (+) up to maximum	
	set the sound level of the audio source should be as high as possible	

	push characteristics button (+) up to the highest level (5 steps possible)	
	choose audio signal with better bass share	SF-PX cannot resolve vibration frequencies higher than 400 Hz
<b>control panel does not work, despite SPX delivers vibrations</b>		every push onto any button of the control panel should be indicated by the red signal at the interface panel
	check control panel function with an audio signal with good bass share	characteristics settings are without effect with only high frequency audio samples (e.g. flutes, bird singing )
<b>Bluetooth connection not possible</b>	reduce the distance between audio source and SF-PX to 5 meters	Bluetooth-reach between SF-PX and transmitter of the audio source is max 10 meters (air distance without any obstacles)
	if the SF-PX couples with the audio device, but does not connect, switch off and switch on the SF-PX and try to connect again.	switch off the Bluetooth modules of other Bluetooth sending devices in the room, most likely SF-PX cannot pair with the right Bluetooth device
<b>how do I know that the Bluetooth connection is established?</b>		if the Bluetooth connection is established the right LED (2) below the on/off button flashes continuously blue, the right LED (1) flashes blue

## **1.9 General Notes**

- Longer continuous usage (>15 min) with maximum intensity can affect mental or
- The producer of the SenseForce Pad Extreme does not take any responsibility for hearing damage due to too high headphone or speaker levels controlled by the user.
- For eventual disposition due to the usage of the SenseForce Pad Extreme the producer does not take any responsibility. In this case a further usage of the seat rest is not recommended.
- The SenseForce Pad Extreme should not be used by persons with pacemaker.
- In case of soiling the SenseForce Pad Extreme can be cleaned with some washing up liquid, water and a smooth, moist cloth (no rough sponge).

## **1.10 Safety Notes**

- Do not place naked flame sources, such as lighted candles on the apparatus.
- Use the seat rest only in moderate climates (e.g. not in tropical climates).
- Do not expose the seat rest to dripping or splashing.
- Do not place objects filled with liquids, such as vases on the seat rest.
- Remove the seat rest from the power supply if it is humid or wet.
- Make sure that all interfaces can be operated any time.
- Take care that the external power supply is ventilated by not surrounding it e.g. newspapers, table-cloths or curtains.
- Do not step on the seat rest; do not use it on the back side.
- Avoid sharp objects during usage.
- Storage and operations only in dry environment and temperature between 0 and 40 degree Celsius.
- During transport the seat rest must be protected against shock and shear forces.
- The seat rest inclusive auxiliary equipment must not be opened. In case of failure or defect please contact the producer. Self-opening results in a loss of warranty.
- Additional auxiliary equipment shall be used only in accordance with the producer.

## **1.11 Technical Data**

Vibration Data of the SenseForce Pad Extreme:

- Frequency Response: 10 Hz to 300 Hz
- Bluetooth latency audio source – Vibrations-Pad around 25 ms

Interfaces:

- Bluetooth Input
- Analog Audio Input (3.5mm jack)
- Headphone Output
- 12 VDC input für external power supply

Controls:

- Headphone volume
- Vibrations intensity
- Vibrations characteristic
- Stereo – Stereo inverse

Electrical Data:

- Input voltage: 12 VDC
- Max. current: 2,5 Ampere

Power Supply:

- Input voltage: 100-240VAC, 50/60Hz, 0,8A
- Output voltage: 12VDC, 2,5A, 30W
- Model: NT03123
- Producer: Leicke

## **1.12 What is in the Box ?**

- SenseForce pad Extreme
- External 12V Power Adapter
- High end audio cable with 3.5 mm jacks
- Quick Start Manual

### ***1.13 EU-Declaration of Conformity***

Producer: iFeel Tactile Systems GmbH  
Address: Ebrardstr. 72, 91054 Erlangen  
Product: SenseForce  
Model: Pad-Extreme 2D

Herewith the iFeel Tactile Systems GmbH, that the radio equipment (SenseForce Pad Extreme) corresponds with the guideline 2014/53/EU. The full wording of this EU conformity of declaration is available under the following internet address:

[www.senseForce.de](http://www.senseForce.de)