

nuConnect trX



Transceiver

Wireless Transmitter / Receiver

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Device approval and conformity with EC directives

Nubert electronic GmbH hereby declares that this product complies with the 2014/53/EU directives, provided that it is installed and used in accordance with the manufacturer's instructions. The full text of the EU Declaration of Conformity is available at the following Internet address: <https://www.nubert.de/konformitaetserklaerungen/716/>

- Do not change the serial number of the device. It is part of the operating approval.
- If the device is repaired or modified by workshops or other third parties not authorized by Nubert, it loses its operating license.
- Only accessories and devices may be connected which in turn comply with all legal requirements and are approved.
- The device may only be used for the applications specified in the „Intended Use“ section

Intended use

This device is designed exclusively for sound reproduction in dry rooms. Use the device only as described in this manual. Any other use (particularly safety-relevant or medical use, installation in open environment like IP-certified products) is considered improper and may result in property damage or even personal injury. Nubert electronic GmbH does not assume any liability for damages caused by improper use.

Safety instructions

The entire operating manual, in particular the safety instructions, must be read in full before connecting and commissioning the device. For your own safety, be sure to follow all warnings and safety instructions in this manual and on the device. The user is not permitted to carry out any work on the device other than the described work. Keep this document so that you have access to it at all times. Furthermore, it must also be handed over to possible re-owners.

Key to the symbols



The **triangle symbol with exclamation mark** (without additional comment) indicates important instructions for commissioning, operation and maintenance of the device.

The term **Caution!** next to the triangle symbol indicates a medium risk. Failure to observe this warning may result in property damage.

The term **Danger!** next to the triangle symbol indicates a high risk. Failure to observe this warning may result in death or personal injury.



This symbol indicates that you must read and observe the operating instructions and the safety and warning notices in order to operate the device.



Devices with this symbol may only be used in a dry indoor environment.



Equipment marked with this symbol must not be disposed of with household waste. Refer to the Disposal section at the end of this manual.

General information



Never leave the device unattended when in use



Danger of electric shock!

To avoid the risk of electric shock, the device may not be opened by the user. There are no user-serviceable parts inside the device. Service work and repairs are reserved for qualified specialists authorized by Nubert. If you need service, please contact Nubert electronic GmbH directly (info@nubert.de)!



Danger of suffocation!

Never let children use or play with neither speaker nor packaging unattended. Make sure that children cannot remove any small parts from the device! These parts could be swallowed and cause suffocation. In case of swallowing any parts, contact a doctor immediately!



Danger of injury or damage!

When moving the device, take care to avoid injury and damage!



Caution!

The device can only be switched off completely by disconnecting it from the power supply. Therefore, it must be positioned so that you have free access to either the USB connector on the device or the power supply. If any of the following situations occurs, the device must be disconnected from the mains. Contact Nubert electronic GmbH (info@nubert.de) immediately!

- The device has been damaged or has fallen down.
- Power cord or plug is damaged
- Objects or liquid have got into the device
- The device has been exposed to excessive moisture or rain.
- The device does not work properly or exhibits a significant reduction in performance.
- The device smells burnt, develops smoke or makes unusual noises.



Only use accessories recommended by Nubert!

Installing instructions



Caution!

An unstable location can damage the device.

- Only place the device on a flat, stable surface and make sure that it cannot be knocked over!
- Also make sure that no unintentional pulling can occur on the cables to avoid knocking over the device or damaging the connection sockets!
- Keep strong mechanical shocks away from the device!



Caution!

Excessive heat build-up inside the unit can shorten its service life or lead to fire.

- Never cover the device! Make sure that there is sufficient air circulation around the device!
- Do not operate the device near heat sources such as radiators or stoves!
- Do not expose to direct sunlight!
- Never place burning candles or similar open fire sources on or near the device!



Danger of explosion!

Installation in unsuitable locations can cause explosions. Do not use the device

- in environments where there is a risk of fire or explosion!
- at extremely low or extremely high temperatures!
- near flammable gases or vapours!
- near strong dust!
- near flammable materials!



Danger of electric shock!

The device has no special protection against the intrusion of liquids or objects into the system. There is therefore a risk of electric shock.

- Never touch the device with wet hands!
- Only use the device in a dry place!
- Do not operate it outdoors or in damp rooms!
- The device must be protected from liquids of all kinds, including dripping and splashing water.
- Do not place any containers containing liquids (e.g. flower vases) on or near the device!
- If the device is moved from a cold environment to a warm room, condensation may form inside the unit. Wait at least six hours until the device has reached room temperature and is dry before switching it on!
- No objects or foreign bodies may get into the device.
- Should the device come into contact with liquids or should objects have gotten inside, please disconnect it immediately and contact Nubert electronic GmbH (info@nubert.de)!



General Connection Instructions

- Only insert the USB plug of the power supply cable into USB connectors of intended devices such as computers or USB power supplies! Make sure that the device receives 5 V DC from the power source! Do not connect the device to any other power sources!
- Make sure that all connections have been made correctly and that all plugs are firmly seated in the connectors before connecting the device to the power source.
- Disconnect the power-source before changing any cable-connections
- If you want to disconnect connections on the device, always pull the plug, never at the cable!
- Use only the intended cables and connectors! Failure to do so may result in damage or malfunction.
- If the device is not used, or is unsupervised, for a longer period of time, disconnect the power source by disconnecting the power cable at either device or power source!!
- Only use cables and accessories recommended by Nubert!

Care and cleaning tips



Caution!

- Improper handling of the device may result in damage.
- Always disconnect the power supply from the mains before cleaning the device!
- Never use strong cleaning agents or solvents such as petrol, spirit or similar!
- Before recommissioning, make sure that all connections are correct, that there are no short circuits and that the device and power supply is completely dry.

Service

If you have any questions or problems during the commissioning of your Nubert system, please do not hesitate to contact our service team:

- **Phone:**
0049 7171 8712-0
- **E-mail:**
info@nubert.de
- Please keep your customer number ready!

Technical Data nuConnect trX

Product type	Wireless Audio Transmitter / Receiver
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Audio Transmitter Configuration

Input, Analogue	1x LINE IN, unbalanced (3.5 mm jack)
Input, Digital	1x SPDIF optical (TOSLINK) max. 96 KHz, 24 bit 1x USB (USB-C) max. 48 kHz, 16 Bit
Output	1x Nubert X-Connect wireless output, stereo, 192 KHz, 24 bit

Audio Receiver Configuration

Input	1x Nubert X-Connect wireless input, stereo, 192 KHz, 24 bit
Output, Analogue	1x unbalanced (3.5 mm jack)
Output, Digital	1x SPDIF, electrical (USB-C) (for use with Nubert digital Port-inputs)

General

Gain, Transmitter to Receiver	0 dB
Latency, Transmitter to Receiver	20 ms
Signal-to-Noise Ratio	118 dBA (SPDIF IN) 103 dBA (LINE IN)
THD+N	0.006 % (A-weighted) SPDIF IN/OUT 0.03 % (A-weighted) LINE IN/OUT
Frequency Response	20 – 22 khz (+0, -0.5 dB) SPDIF IN / OUT 20 – 22 kHz (+0, -0.5 dB) LINE IN / OUT
Input Sensitivity	3 V rms (for 0 dB FS)
Max. Input Level	3 V rms
Max. Output level	3 V rms
Power supply voltage	5 V DC
Power requirements in operation	1.5 Watts
Wireless Frequency bands	Transmitter Power
5180 – 5240 MHz	15.75 dBm / 37.6 mW
5736 – 5818 MHz	15.75 dBm / 37.6 mW
Dimensions	4.7 x 1.7 x 9 cm
Weight	60 g

Unpacking and Scope of Delivery

Unpacking

To avoid possible damage to the enclosure of the device, do not use sharp or pointed objects when unpacking it. Please keep the packaging in a safe place in case you need to transport the device at a later date.

Scope of Delivery

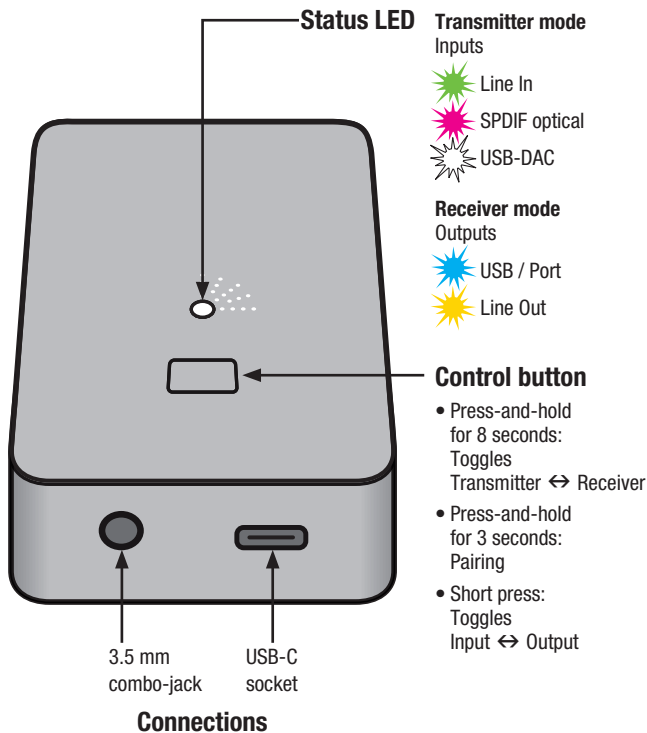
If the delivery is complete, it contains the following parts:

- 1 nuConnect trX
- 1 USB-A – USB-C cable, 20 cm
- 1 3,5mm jack – phono cable, 1.5 m
- 1 TOSLINK optical cable, 1.5 m
- 1 TOSLINK – 3.5 mm optical jack adaptor
- 1 phono 1x male – 2x female Y-split adaptor



Operating manual





Concept

The nuConnect trX is a so-called transceiver, meaning it can be configured as either a transmitter or a receiver, depending on application. To create a completely wireless chain using only the trX, you need two trX's: One configured as a transmitter, one configured as a receiver.

When used as part of the Nubert X-Connect system, the trX is compatible with a variety of speakers and devices, e.g. nuPro X and XS speakers, nuSub XW subwoofers and the nuConnect ampX. When used together with any of these speakers and devices you will normally need only one trX.

The nuConnect trX can be used in many different ways and configurations – read more about some of the typical applications on the backside of this manual.

1. Placement

Make sure the nuConnect trX is placed on a level, solid surface and that it has enough free space around it to allow air to circulate freely.

2. Connections

Connect all cables before you start configuring the trX. Use the supplied cables and adapters and connect the signal cables first.

You have the following options:

Transmitter mode – connections are *inputs*:

- Line in (3.5 mm combo-jack)
- Optical in (3.5 mm combo-jack)
- USB in (USB-C socket)

Receiver mode – connections are *outputs*:

- Line out (3.5 mm combo-jack)
- USB Port out (USB-C socket)

3. Power supply / powering on

If you haven't done it yet, connect the USB socket to a suitable power supply (e.g.) USB power supply, PC). The nuConnect trX will automatically power on.

4. Mode Selection

You can recognize the current mode from the color of the status LED:

Transmitter: Green, white or pink



Receiver: Blue or yellow



If you wish to change the mode, press-and-hold the control button for 8 seconds, the trX will then reboot in the new mode.

5. Wireless connection

In its default state, the trX is not paired with any device, the status LED blinking slowly.

Press-and-hold the control button for 3 seconds to begin the pairing process. The trX will now search for a compatible transmitter (master) or receiver (slave) for 2 minutes. The status LED will blink faster during the search.

Next, start the pairing process on the master or slave device. This is normally done by navigating to the setup menu and selecting either *wls master* or *wls slave*. Please see owner's manual of the device for details.

The two devices will now connect. Once the connection is established, the status LED will light permanently.

6. Selecting an in- or output

By pressing the control-button briefly (<1 second),
you change the in- or output

Transmitter Mode Connectors are *inputs*

3.5 mm combo-jack ●



Line In
Green LED



SPDIF optical
Pink LED

USB-C socket —



USB-DAC
White LED

Receiver Mode Connectors are *outputs*

3.5 mm combo-jack ●



Line Out
Yellow LED

USB-C socket —



Digital Port Out
Blue LED

Technical Information

Connecting the trX to computers

The nuConnect trX has an integrated so-called Class Compliant USB-DAC, meaning the trX is automatically recognized by Windows and macOS operating systems which in turn install the necessary drivers. You can select the playback device manually in the system settings menu of your operating system, if necessary.

Automatic stand-by of connected devices

Mode: the trX as transmitter

If the power supply to the trX is interrupted, devices connected to the trX, such as nuPro X active loudspeakers or nuSub subwoofers will be set to stand-by.

As soon as the trX is powered on again, the connected device or speaker will power on again if this function is supported.



Caution!

The level of nuPro X speakers in *w/s slave* mode cannot be adjusted. Do not connect devices with a fixed-level output (e.g. a CD player) to the trX if the trX is configured as a transmitter and paired with nuPro X speakers in *w/s slave mode*. Always use a preamplifier with level adjustment (e.g. an AV-receiver).

Wireless range

For optimum range and stability, make sure that the transmitter and the receiver are within line of sight of each other.



A free placement, e.g. next to your AV-receiver, not behind it, will help as well. Under those conditions, a range of up to 50 meters can be achieved, using two trXs. Walls and other objects limit the range considerably, but even under difficult conditions, the range will be 10 – 15 meters.

Typical applications

Replacing a phono cable

Devices **Transmitter: nuConnect trX**
(examples) **Receiver: nuConnect trX**

You can use two nuConnect trX's to replace a stereo phono cable. This is recommended as an alternative to long cable-runs or in situations where room constraints make it impractical or impossible to use a cable.

- Configure one nuConnect trX as the transmitter (line in,  green LED) and another as the receiver (line out,  yellow LED).


Note:

Compared to a wired connection, a wireless connection using the trX adds 20 ms of latency (delay) to the signal.

Creating a fully independent zone using nuPro X-series speakers

Devices **Transmitter: nuPro X-8000**
(examples) **Receiver: nuConnect trX w. nuPro X-3000 in Zone 2**

When used in the wls slave mode, a nuPro X speaker is controlled by a master-speaker and its level cannot be controlled independently. This behaviour eases daily operation in classic two-speaker setups but can be problematic if you wish to create a second, independent zone. To make your zone 2 independent, you can use a trX.

- Connect the trX to the Digital Port-input (USB) of the Zone 2 Master speaker (here the X-3000). Configure the trX as a receiver (Digital Port Out,  blue LED) and pair it with the Master speaker in your main zone (here the X-8000).
- The X-3000 now functions independently of the main zone. Music from the main zone can be listened to by selecting the port input.


Note:

The main-zone nuPro X-8000 stereo-pair must be connected wirelessly.

Connecting a non-wireless subwoofer wirelessly to nuPro X-series speakers

Devices **Transmitter: nuPro X-4000**
(examples) **Receiver: nuConnect trX w. nuVero AW-17 subwoofer**

You can use the trX to add wireless connectivity to a subwoofer without a built-in wireless receiver.

- Connect the trX to the line input of your subwoofer.
- Configure the trX as a receiver (Line Out,  yellow LED) and pair it with your nuPro X master speaker.

Note:

- The nuPro X stereo-pair must be connected wirelessly.
- The trX receives an unfiltered full-range signal, the crossover (lowpass-) frequency of the subwoofer must be set on the subwoofer itself. The crossover frequency (highpass) of the nuPro speakers must be set on the master speaker in the *System HP* menu.

Connecting non-wireless active speakers wirelessly to the nuConnect ampX

Devices **Transmitter: nuConnect ampX**
(examples) **Receiver: nuConnect trX w. nuPro A-700**

You can use the trX to add wireless connectivity to active speakers without a built-in wireless receiver.

- Connect the Line Out of the trX to the AUX In of the nuPro A-700.
- Configure the trX as a receiver (Line Out,  yellow LED) and pair it with your nuConnect ampX


Note:

- You can use the Power Port of the A-700 to power the trX.
- The nuConnect ampX must be configured as *w/s master*. You can use any nuPro X- or XS-series speaker as a transmitter instead of the ampX.
- You can use the trX with any active speaker with an analogue line input

Connecting a nuSub to your AV-receiver wirelessly

Devices (examples)	Transmitter: nuConnect trX connected to the Sub Out of an AV-receiver (AVR) Receiver: nuSub XW-900
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You can use a nuConnect trX to wirelessly connect a subwoofer to your AV-receiver.

- Connect the trX to the Sub Out of the AVR using the supplied 3.5 mm jack-phonocable and the Y-Adapter.
- Configure the nuConnect trX as the transmitter (line in,  green LED) and pair it with your nuSub.


Note:

- Power the trX using the USB Power Port of your AVR in order to use the auto stand-by functionality of the nuSub.
- Compared to a wired connection, a wireless connection using the trX adds 20 ms of latency (delay) to the signal. This is normally compensated for by the room-correction software of the AVR.
- The subwoofer connected via the trX needs to be set at a relatively high volume. This is normal and does not impact performance.

Connecting active wireless rear speakers to your AV-receiver

Devices (examples)	Transmitter: nuConnect trX connected to the Pre-Outs of your AV-receiver Receiver: nuPro X-3000
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The nuConnect trX makes it easy to connect nuPro X-series loudspeakers wirelessly to your AV-receiver (AVR).

- Select the channel to be played in the menu of the nuPro. Connect the trX to the Pre-Outs of your receiver.
- Configure the nuConnect trX as the transmitter (line in,  green LED) and pair it with each nuPro speaker one after the other.

Note:


- Power the trX using the USB Power Port of your AVR in order to use the auto stand-by functionality of the nuPro X speakers.
- Compared to a wired connection, a wireless connection using the trX adds 20 ms of latency (delay) to the signal. This is normally compensated for by the

- room-correction software of the AVR.
- The speakers, connected via the trX, need to be set at a relatively high volume. This is normal and does not impact performance.

Connecting your TV wirelessly to a nuConnect ampX

Devices (examples)	Transmitter: nuConnect trX connected to the optical output of your TV
	Receiver: nuConnect ampX

You can transmit the sound from your TV to your nuConnect ampX using the trX.

- Connect the trX to the optical output of your TV and configure it as a transmitter (optical in,  pink LED) and pair it with the ampX.


Note:

- The ampX must configured as *w/s slave*.
- A direct connection to nuPro X speakers is not recommended, as these do not provide control functions in slave mode.

Connecting your PC wirelessly to a Nubert X-series Soundbase

Devices (examples)	Transmitter: nuConnect trX connected to the USB port of a PC
	Receiver: nuPro XS-7500

You can use the trX to play the music stored on your PC on your Soundbase.

- Connect the trX to a USB port on your PC.
- Configure the nuConnect trX as the transmitter (USB-DAC,  white LED) and pair it with your Soundbase (*setup / w/s slave*). You can still use and operate your Soundbase normally. To listen to music from your PC, select the *wireless input* on the Soundbase.

Note:

Instead of the Soundbase, you can connect and use the nuConnect ampX in the same way.

Warranty terms

Warranty terms

Your provider and contractual partner:

Nubert electronic GmbH, Goethestr. 69, 73525 Schwäbisch Gmünd,
Germany (German). Managing Director: Günther Nubert, Bernd Jung
Register court: AG Ulm, HRB 700296 · Tax ID No.: DE 16758584

WEEE Reg. No. DE 48888173

Phone: +49 7171 8712-0 · Fax: +49 7171 8712-345 · E-Mail: info@nubert.de

For questions and individual advice, please dial our special number
+49 7171 8712-0

Our hotline is available from

Monday to Friday from 10:00-18:00 and Saturdays from 9:00-13:00.

Nubert warrants the Nubert product described in this manual to the purchaser under the following terms and conditions.

The purchaser's statutory warranty claims, in particular for subsequent performance and, if applicable, damages in the event of defects, shall remain unrestrictedly with the purchaser and shall be fully available to our customers.

1. The warranty period for the Nubert **product and its electronic components** described in this manual is **2 years** from the date of delivery. Your proof of purchase is the proof of guarantee.

2. Contents of the warranty claim

The guarantee applies to all parts and labour costs from delivery. It includes and is limited to the free repair or replacement of the defective part in the event of a material defect in the goods (e.g. Material defect or manufacturing defect). In addition, Nubert shall bear the costs of the return shipment of the affected product from or to the curb in the case of justified warranty claims, provided that the goods are within the countries of the European Union and the shipment was previously agreed with Nubert. Additional services are possible as a gesture of goodwill in accordance with Nubert's free discretion. For the duration of the guarantee, it is assumed that the material defect was already present at the time of transfer of risk. Replaced parts become the property of Nubert. Warranty services do not extend the warranty period, nor do they set a new warranty period in motion. The warranty period for installed spare parts ends with the warranty period for the entire device. The promise or the execution of warranty services is made without recognition of a performance obligation according to statutory warranty law.

3. The warranty claim does not apply in the case of

- repair attempts of any kind not previously agreed upon with Nubert
- improper operating environment or improper storage (e.g. damage due to moisture or particularly high or low temperatures)
- improper transport packaging (the original transport packaging, correctly used, provides sufficient protection)
- improper transport, if the transport was not previously agreed upon with Nubert (Nubert organizes the transport for you with Nubert selected Transport company. You will receive return tickets with the corresponding postage paid returns).
- improper mechanical effects on the goods
- improper operation, improper mounting

4. What to do in the event of a warranty claim

If possible, pack the defective device in its original carton with a copy of the purchase receipt and a meaningful description of the defect. Please note our shipping instructions. Please contact the Nubert team for a return or refund:

- Phone: +49 7171 8712-0
- Fax: +49 7171 8712-345
- E-mail: info@nubert.de

Of course, you can also return your defective product to the Nubert Service in Schwäbisch Gmünd or Aalen:

- Nubert electronic GmbH
Goethestr. 69,
D-73525 Schwäbisch Gmünd
Germany
- Nubert electronic GmbH
Bahnhofstr. 111,
D-73430 Aalen
Germany.

Shipping information: We recommend that you always keep the original carton, along with the protective foam inserts. Tip: Folding saves space! This is the only way to ensure a safe return shipment in the worst-case scenario. If, in exceptional cases, you use a different packaging, it should protect professionally against the typical dangers of shipping and have special protective cushions or equivalent protective devices. We would like to draw your attention to the fact that we accept no liability for damage caused by improper packaging for which you are responsible!

Disposal

Environmental protection: Ingredients, e.g. chemical pollutants in old appliances, can damage the environment and health if stored improperly, in particular if they are not shatterproof or disposed of properly by persons not authorised to do so. Especially in the case of illegal exports, there is no guarantee that the environment and human health will be protected from damage. Old appliances can also contain recyclable raw materials, old appliances can be repaired or parts can be reused and thus considerably protect the environment. Old appliances must therefore not be disposed of with normal household waste or exported illegally. As an end user, you are legally obliged to return or properly dispose of electrical equipment.

Old appliances: Electrical and electronic equipment is also marked with the crossed-out wheelie bin symbol. The symbol indicates that you, as the owner of this appliance, may not dispose of it with your household waste (grey bin, yellow bin, organic waste bin, paper or glass).



You can send the device to the municipal collection points to be collected separately from unsorted municipal waste for reuse. Used batteries and accumulators which are not enclosed by the waste equipment shall be separated from it at a collection point prior to delivery.

Old appliances can also be returned to us directly in our shops or shipped back to us for disposal. Please send an Email to info@nubert.de for a free return shipping label.

You can also request this by calling +49 7171-8712-0.

Please then send the old device to the following address:

Nubert electronic GmbH
Goethestr. 69,
D-73525 Schwäbisch Gmünd
Germany

Please ensure that the old appliance is properly packaged for shipment so that breakage is avoided as far as possible and mechanical compaction or breakage can be ruled out. The acceptance of waste equipment may be refused if there is a risk to human health and safety due to contamination.

Please note: You are responsible for the deletion of personal data on the waste equipment to be disposed of.

Warranty Terms as of: 26.7.2019

Technical changes, errors and misprints excepted.

You will find our General Terms and Conditions (AGB)
on our website: www.nubert.de/agb.htm

Overview

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