Art.-No. 69941-x, 69942-x



## Sound package 1 and 2 Ford Transit from 2018 3-way sound system incl. subwoofer and amplifier

Ford Transit YOM 2018





#### **Packing List:**

1x mid-high module incl. acoustic fabric cover (left & right), covered 2x "XE26" neodymium softdome tweeter Ø 26mm (pre-mounted in molded part) 2x "XE100" midrange driver Ø 100mm (pre-mounted in molded part) 2x "XM165" low-midrange driver "Power-Woofer" Ø 165mm pre-mounted 2x mounting ring for "XM165" 10165-MR 2x mid-high crossover incl. cable assembly 2x low frequency crossover incl. cable assembly

1x 5-channel DSP amplifier incl. 2.2m ISO cable and mounting instructions

1x subwoofer of your choice incl. mounting kit and 4,8m subwoofer cable

with sound package II (69942-x):

2x living room speakers of your choice incl. mounting set and mounting instructions

#### Mounting kit mid-tweeter:

8x pan-head screw 3.9 x 13

#### Mounting kit woofer crossovers:

2x: Felt self-adhesive 5x7cm,2x plastic disc black

#### Mounting set for MDF subwoofer

4x Velcro pads round 4x self-adhesive velcro pads 4x pan-head screw 3,5x13mm

#### **Optional accessories:**

- Vehicle specific radio connection cable for factory Ford radio
- Remote control to control the subwoofer
- and to regulate the sound setup - Bluetooth function integrated in the amplifier
- Rocker switch

#### Installation note:

To avoid vibration noise, secure all wiring harnesses with insulating tape or similar. Insulation of the vehicle doors is strongly recommended.

Radio Adjustment Notice: To achieve the best sound, all settings on the radio (bass, treble, loudness, etc.) should be set to should be set to zero or neutral.

Art.-No. 69941-x, 69942-x



## **General installation instructions** - must be observed!

#### Power supply:

An optimal power supply must be ensured, therefore it is mandatory to provide an appropriate power supply for the amplifier. A 10mm2 power cable with a fuse rating of min. 30A for High Power is sufficient for this purpose. 2.5mm2 power cable with a fuse protection of min. 25A for the standard version.

#### Radio settings:

For the best sound, all radio settings (bass, treble, loudness, equalizing, etc.) should be set to ZERO or OFF.

#### Installation note:

To avoid vibration noise, secure all wiring harnesses with insulating tape or similar.

# **Cable routing / connection scheme**



<u>Tweeter "XE 26</u> Mounting in the dashboard in the mid-high module, pre-installed.

<u>Midrange driver, XE 100</u> Mounting in the dashboard in the mid-high module, pre-installed.

<u>woofer "XM 165"</u> Mounting in the vehicle body door.

<u>Crossovers</u> MHT crossover vehicle specific in mid-high module

TT crossover vehicle specific Mounting on the door panel.

Sound package 1 & 2

Assembly instructions Status: 31.10.2023

Art.-No. 69941-x, 69942-x



# 1. woofer mounting: disassembly vehicle paneling





2.1 Lower the window pane completely.Carefully unclip the switch unit for the window regulator(A). Unscrew the screw underneath.



2.2 Press off rear-view mirror adjustment switch (B) (driver's side) from the latching and disconnect cable connections. Unscrew the crosshead screw behind the unlocking lever (C).



2.4 Lift off the covers (D) + (E) and remove the screws underneath. Remove the screws underneath.

2.5 Carefully lever out the door sill light and remove the screw underneath.

2.6 Remove the screws at the lower edge of the door trim.

2.7 Lift out the top of the door trim and at the same time pull it off horizontally from the inner door panel.

2.8. unhook door release bowden cable.

2.9 Unplug switch for power window and entry light.

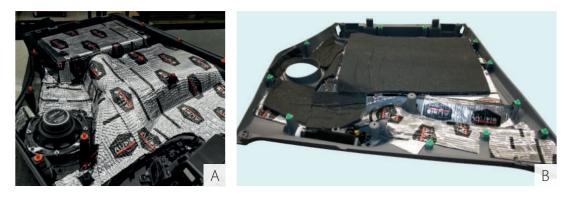
Sound package 1 & 2

Art.-No. 69941-x, 69942-x

JEHNERT Sound Design

## 2. insulation of the vehicle doors and door panels.

2.1 Recommendation: Insulation of the door lining



- Line the door panels from the rear with Alubutyl, see (Fig. A), then cover with insulation fleece. see (Fig. B).

#### Important recommendation:

The use of woofers in the door panel causes vibrations due to the oscillations of the bass, which can lead to rattling noises in the vehicle door:

#### Measures against vibration noise:

#### 2.2. insulation of the vehicle doors

- Cover the back of the door trim with insulating fleece (Order No. 27000) or foam material. or
- Stabilize rear side of door trim with stiffening compound (GRP fiber filler or similar). **IMPORTANT:** Make sure to leave the cut-outs for the door airbag and speakers free!
- Cover the \*backside of the door panel inside (=outer door skin) with self-adhesive bitumen mats / tar mats (see example above).
- by tapping the vehicle door, localize vibration noises from door mechanism parts (e.g. Bowden cables etc.) and localize cable harnesses and wrap them with foam / felt, sponge rubber or similar.
- cut off protruding cable ties (rattling noises!)
- glue felt or foam under the original wiring harness

#### 2.3. insulation of the rear side of the door panel

- Apply insulation fleece (order no. 27000) to the back of the door trim. or foam
- or
- or
- Stabilize the rear side of the door trim with stiffening compound (GRP fiber filler or similar). **IMPORTANT**: Make sure to leave the cut-outs for the door airbag and speakers free!



ATTENTION / Danger !!! No insulating material behind side airbags

#### **IMPORTANT:**

No insulating material behind speakers and door releases. Leave out fastening clips

Sound package 1 & 2

Assembly instructions Status: 31.10.2023

Art.-No. 69941-x, 69942-x



## 3. woofer mounting: original installation location vehicle door

The factory woofer in the vehicle door is replaced in each case by a 165mm JEHNERT Power Woofer:



- Disconnect the original speaker connector and remove the factory speaker (without adapter frame). Note: The original loudspeaker connection is used for the "Input" crossover adaptation.
- 3.2 For the loudspeaker connection (cable routing from the crossover to the loudspeaker) drill a hole in the plastic cover behind the crossover.

behind the crossover (approx. 7mm, see yellow arrow).

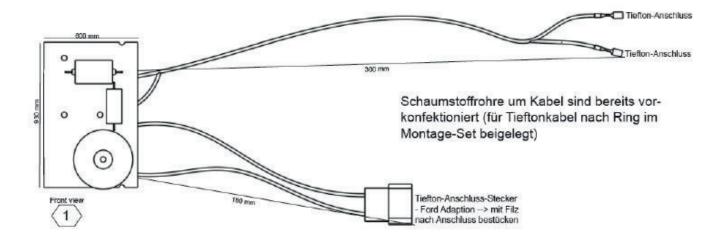
3.3 Mount the JEHNERT crossover as shown in the illustration: Lead the loudspeaker cable through the pre-drilled hole in the plastic to the loudspeaker.

to the loudspeaker. Glue the crossover to the door panel so that it is short-circuit proof.

3.4 Mount JEHNERT woofer adapter ring with the 3 factory screws. Connect loudspeaker cable with 15cm foam tube, connect the woofer and mount it with 4 screws (lens head 3.9x13).

To avoid vibration noise, secure all cable harnesses with felt/insulating tape or similar.

3.5. connect factory loudspeaker cable with crossover input and plug with a piece of felt 5x12cm.



Art.-No. 69941-x, 69942-x

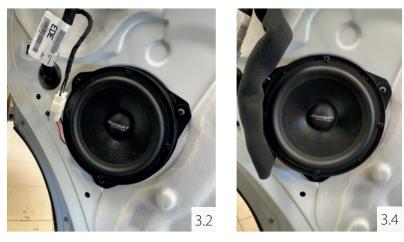


# 3. woofer mounting - original installation location in the vehicle doors.

In order to protect the woofer and adapter ring from water ingress, we recommend attaching a "Rainstop mat"



3.1 Cut the Rainstop mat to the size of the mounting ring and make a slight cut in the lower area (yellow marking). (woofer dismantled in illustration for clarity).



3.2 Connect the factory loudspeaker cable with the crossover input and wrap the plug with insulating material to prevent vibration.

vibrations with insulating material. Fasten the crossover to the door panel with one of the self-tapping screws (4,2x13mm)

and plastic ring to the door panel, before mounting glue on the self-adhesive felt as insulation

-> The crossover must be completely seated on the felt, otherwise there is a risk of short circuit!

-> when installing a fully active system, the installation of the crossover is not necessary and the corresponding loudspeaker cable harness must be routed from the amplifier to the loudspeaker installation location.

3.3. connect the woofer to the crossover.

3.4 Mount the pre-assembled woofer with the cut-to-size Rainstop mat using 4 countersunk pan head screws 3.9 x 16 (each side) to the factory mounting hole.

**CAUTION!!!** the cable connections of the woofer must not come into contact with the inner door panel --> insulate if necessary.

**Note:** After all woofers are connected to the crossover, the polarity of all woofers should be checked on a 9 volt battery (on crossover input cable on radio/power amp side):

Pole of FW input + to + of 9 V battery. Pole of FW input - to - of 9 V battery

Both woofers must resonate evenly during this check! (the loudspeaker must move outwards (the speaker must move outwards, not inwards, towards the magnet) A reversed polarity of the woofer can cancel out the entire bass response!

*f* To avoid vibration noise, secure all cable harnesses with insulating tape or similar.

Sound package 1 & 2

Assembly instructions Status: 31.10.2023

Art.-No. 69941-x, 69942-x



## 4. mounting of the mid-high modules on the dashboard





4.1 Dismantle the A-pillars.



Driver's side

Passenger side

4.2 Installation location for mid-high frequency module on the dashboard. Lead the subwoofer cable to the mid-tweeter module (see Fig. D).



(Screw mounting takes place without soff cover!)

4.3 Place the midrange/tweeter module on the dashboard and screw it tight.

4.4 Check that it is firmly seated, then fit the acoustic fabric cover and press it firmly into the center.

4.5 Install the A-pillar trim.

Assembly instructions Status: 31.10.2023

Art.-No. 69941-x, 69942-x



# 5. subwoofer and amplifier mounting

Ideally, the amplifier is placed under the driver or passenger seat. However, this is space-dependent! If mounting under the driver's seat is not possible, the amplifier can be mounted at any mounting location (note cable length from radio to amplifier 2.2m in the scope of delivery).

The cable routing and installation varies, depending on the vehicle body. The necessary cable routing is the power supply from the battery to the amplifier as well as the subwoofer cable from the mounting location subwoofer to the mounting location amplifier.

- To avoid vibration noise, mount the subwoofer with the supplied mounting kit. Alternatively, the subwoofer can also be mounted with one mounting bracket per side (not included in the scope of delivery)

Assembly instructions Status: 31.10.2023

Art.-No. 69941-x, 69942-x



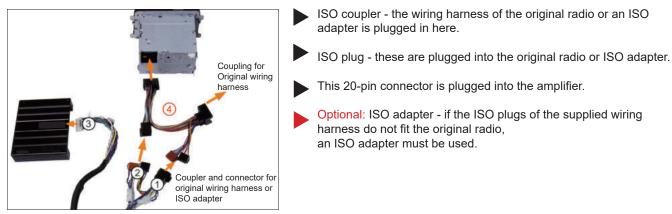
# 6. radio connection scheme

The amplifier must be supplied with a separate power supply and ground to the body battery (under the driver's seat) with a cable cross-section of 10mm2 and a fuse rating of 30A.

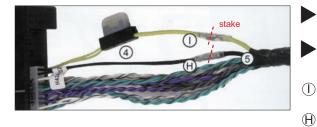
The power supply of the amplifier must not be active (mounted fuse) until the stripped cable is connected to the power connector of the amplifier.

### Amplifier connection »Standard amplifier«:

1. connection to the car radio



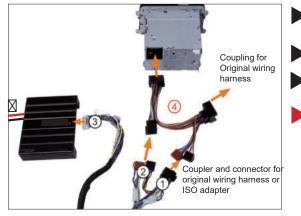
2. connection for direct power supply from the battery.



- This side is connected directly to the battery. For this purpose, the cable connections I and H are disconnected.
- After disconnecting cable connections I and H, the open ends must be insulated individually.
- +12 volt line for connection to the positive pole of the car battery.
- Ground line for connection to the negative pole of the car battery or for connection to the ground point of the car chassis.

### Amplifier connection »High-Power Amplifier«:

#### 1. connection to the car radio



- ISO coupler the wiring harness of the original radio or an ISO adapter is plugged in here.
- ISO plug these are plugged into the original radio or ISO adapter.
  - This 20-pin connector is plugged into the amplifier.
- Optional: ISO adapter if the ISO plugs of the supplied wiring harness do not fit the original radio, a vehicle-specific ISO adapter must be used.

The power connection is made directly to the battery using a 10mm2 cable - the positive wire must be fused just before the battery (30A).

JEHNERT Sound Design

#### Art.-No. 69941-x, 69942-x

## 7. amplifier power supply

The power connection is made to the + pole of the battery, which is protected by a 30A fuse.

The power supply of the amplifier may only be active (mounted fuse) as soon as the stripped cable is connected to the power connection of the amplifier.

The following explanation serves as an example for connection directly to the body battery (under the driver's seat).

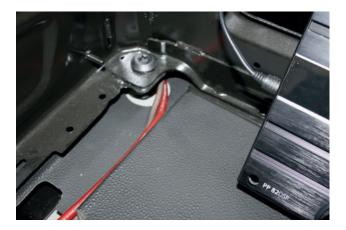
10 mm2 cable red = +12V, and 10 mm2 cable black = ground from the body battery to the amplifier:

7.1. remove passenger seat: remove screws at the seat rails and tilt seat backwards (because of the belt).

7.2. remove driver's seat: remove screws at seat rails, tilt seat backwards (pay attention to seat sensor cable).

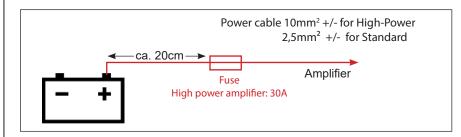
7.3. remove battery cover (if present).





7.4. run power cables (+ and -) from battery in driver's seat, under floor mat to seat console (passenger side) and under console to amplifier mounting location.

Ideally, the amplifier can be mounted to the subwoofer in the passenger seat console, see step 6. (However, the installation location may vary depending on the vehicle equipment and available space).



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# 8. assemblies

8.1. Seats

- Reconnect all plugs on the seats!

- Reinstall the driver and passenger seats in the vehicle (Important: Connect all plugs!).

## Notes:



Ford Transit YOM 2018 Sound package 1 & 2	Assembly instructions Status: 31.10.2023	JEHNERT Sound Design
Sound package 1 a 2	ArtNo. 69941-x, 69942-x	AUTOMOTIVE

### **Notes:**

#### Warranty:

As the manufacturer, we provide a 2-year warranty for these sound systems, calculated from the date of purchase from the dealer. Within this warranty period, we will, at our option, repair or replace, free of charge, any defect caused by material or manufacturing manufacturing defects. Excluded from the warranty are damages caused by improper use or installation, wear and tear or interventions by third parties. The warranty does not cover consequential damage or defects that only insignificantly impair the value or usability of the sound systems. A warranty obligation is not triggered in the case of damage caused by external influences. Systems with additional or incorrect mounting holes are excluded from exchange. These are damages to the components that cannot be repaired.

Our team in Pliezhausen will be happy to provide you with advice and assistance at any time:

### JEHNERT Sound Design

»Development and production of car audio systems«

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