# TX Series

user manual

Mach

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## DESIGN CONCEPT

The TX line from Mach is a complete series of professional speakers that borrows may design features from the larger Mach speakers. The speakers in the TX line deliver clean, loud, and dynamic sound in a rugged, easy to handle package.

Features include a heavy 1.5 mm steel grill with maximum air-to-metal ratio, protective metal corners and integrated handles. The cabinets are made of high quality MDF that is highly resistant to humidity and include excellent inner damping for improved clarity.

The top-boxes are easily placed in arrays due to their 15° trapezoidal shape. They feature our customized 1" compression driver with a specially designed 90° x 40° horn, which utilizes the WaveShaper technology from the larger Mach models, ensuring excellent dispersion control and clarity. All TX models feature a professional Speakon terminal with link option.

For additional sub-bass output, the speakers in the TX line can be supported by the TXS18, a reflex loaded subwoofer with stackable corners and integrated high-pass filter. The high-pass filter enables you to operate two subs and top-boxes with one amplifier. When connecting the TX12F or 15F through the high-pass output, the top-box woofer is protected against over-excursion.

The TXS18 also features an integrated aluminium top-hat adapter that enables you to place the TX12F or TX15F above the subwoofer with a speaker pole (P/N 93943004).

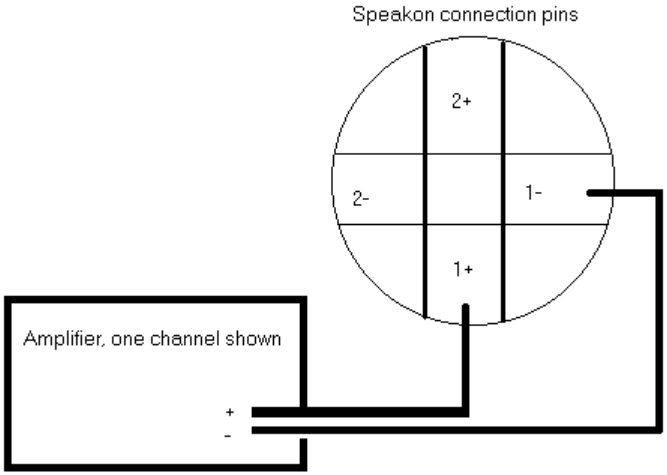
## CONNECTIONS

All models in the TX line are connected through the 1+ / 1- pins on the Speakon terminal. For correct polarity, connect the red (+) terminal on the amplifier to 1+ on the speaker. Likewise, connect the black (-) terminal on the amplifier to 1- on the speaker. If one speaker is operated with reverse signal polarity, the result is a strong decrease in bass output and lack of focus in the mid/high frequencies.

When using the high-pass output from the sub-woofer, simply link from the high-pass output on the sub to the input on the speaker. Pin configuration is stated on the label. Please refer to the recommended amplifier sizes in the specifications on the last page. *Do not connect the subwoofer high-pass output to the amplifier output, as this will cause damage to the amplifier.*

All models feature a Speakon speaker terminal with link option. This option allows two or more speakers to be operated in parallel from one amplifier.

*When using the link output option, be aware that impedance drops with each additional speaker connected through the link terminal*. The impedance is 4 ohm when two TX top-boxes are operated in parallel and approximately 2.5 ohm when three are operated in parallel. Always check the recommended minimum load of the amplifier.




Always use high quality speaker cables. Poor cables reduce sound quality and degrade speaker and amplifier reliability. Please refer to the following table for recommended cable lengths.

| Cable size/load | 8 ohm | 4 ohm | 2 ohm |
|---|---|---|---|
| 1.5# (15 AWG) | 15 m (50 ft.) | 7.5 m (25 ft.) | 4 m (13 ft.) |
| 2.5# (13 AWG) | 30 m (100 ft.) | 15 m (50 ft.) | 7.5 m (25 ft.) |
| 4.0# (11 AWG) | 60 m (200 ft.) | 30 m (100 ft.) | 15 m (50 ft.) |

## FLYING THE SPEAKERS

***Warning! Rigging the speakers shall be done by qualified personnel only.***

The top-boxes in the TX line feature an integrated flying system. Two flying points in the top plate and one in the rear panel make it easy and fast to fly the speaker and control the tilt. To fly the speaker, simply remove the M10 bolts in the top and rear and replace them with the genuine Mach M10 eyebolts (P/N 93940002), which have a certified load of 4 tons.

## HORN PROTECTION

The horns are protected by a thermal protection circuit that increases the impedance when current exceeds a safe level. The increased impedance reduces current to the horn, thus protecting it against damage. The audible result is a decrease horn output.

If this happens, the compression driver has reached its maximum power handling level. *Do not increase the high frequency level on the EQ or the tone control on the mixer.* This may damage the compression driver. If higher output is required, more or larger speakers are required.

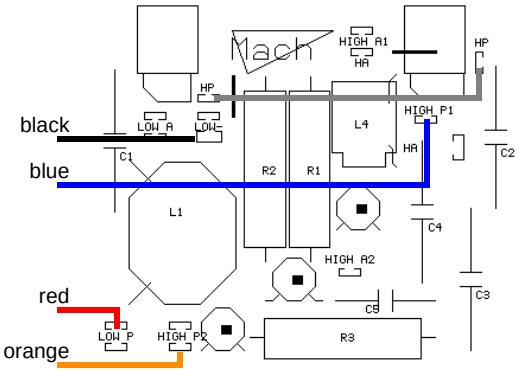
When volume is decreased and current returns to a safe level, the protection circuit automatically restores full signal to the horn, and the audio output returns to normal.

## CROSSOVER WIRING

The crossover is wired as shown.

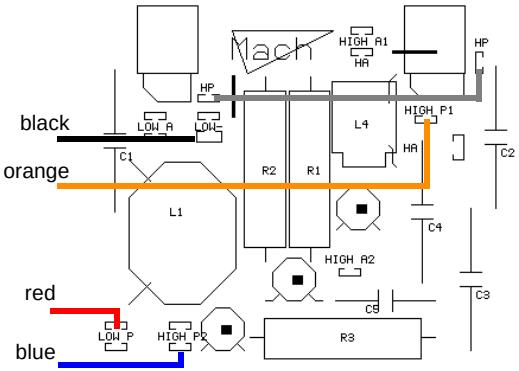
### TX15F, TX215F

- Red (Woofer +) to LOW P
- Black (Woofer -) to LOW -
- Orange (Tweeter +) to HIGH P2
- Blue (Tweeter -) to HIGH P1
- Jumper between HP and HP




### TX12F

- Red (Woofer +) to LOW P
- Black (Woofer -) to LOW -
- Orange (Tweeter +) to HIGH P1
- Blue (Tweeter -) to HIGH P2
- Jumper between HP and HP



## SPECIFICATIONS

| | TX112 mk II | TX12F | TX15F | TX215F | TXS18 |
|---|---|---|---|---|---|
| Woofer | 12” | 12” | 15” | 2x15” | 18" |
| Compression driver | 1” | 1” | 1” | 1” | - |
| Power handling (RMS) | 200 watt | 250 watt | 350 watt | 500 watt | 350 watt |
| Power handling (Program) | 400 watt | 500 watt | 700 watt | 1000 watt | 700 watt |
| Sensitivity (1w/1m) | 96 dB | 96 dB | 97 dB | 100 dB | 98 dB |
| Maximum SPL | 119 dB | 120 dB | 122 dB | 124 dB | 123 dB |
| Frequency response | 60-19k Hz | 59-20k Hz | 40-20k Hz | 49-20k Hz | 46-160 Hz |
| Nominal impedance | 8 ohm | 8 ohm | 8 ohm | 4 ohm | 8 ohm |