

Manual 1x 40W digital audio amplifier

1. Technical data:

Supply voltage: 10-26V
Output power: max. 40W at 8 Ohm speaker, THD=10% at 25V supply
Speaker impedance: **12V** supply-> **40hm** **24V** supply → **80hm**
Dimension: about 24 x 60 x 15mm (0,95 x 2,4 x 0,6 inch)
Weight: about 8 gram (0,28 oz)

2. Basics:

- The amplifier has the smallest dimensions, nearly no weight and highest efficiency, resulting in very little self heating.
- Different speaker combinations can be connected → See table below.
- The amplifier is delivered with max. volume already set, according to the ordered speakers. **Changes can damage the speaker(s) !**
- It is recommended to use **twisted pair** cables for speaker wiring. The cables should be kept as short as possible.
- The amplifier should be mounted in a well ventilated area for some cooling.
- The amplifier is over temperature protected
- It is recommended adding a 2A fuse in the + Power line.
- Do **NOT** use any tape for its mechanical installation. Use the mounting holes.
- For safety reasons, a range check at **running** sound system is highly recommended.
- Note the right supply polarity, avoid any short circuit conditions. Otherwise the amplifier will be **destroyed** !
- Using an extra battery for the amplifier would be ideal. This would separate the drive-, sound- and receiver supply properly. As an alternative the “**Audio-Isolator**” can be used → see below

- **IMPORTANT note when using the main battery for powering the amplifier:**

Make sure the amplifier is connected in **PARALLEL** to the speed controller power leads. Specially when **MINUS** power of the controller is switch, f.e. by a “SafetyPowerSwith” (SPS-unit)! → see connecting diagram below.

Otherwise amplifier and speaker(s) can be destroyed!

!!! In general there is NO warranty on damaged speakers !!!

Volume is already set to maximum, for the following conditions:

Powered by : _____ [S LiPo]

Speaker type: _____ Impedance: 4 Ohm 8Ohm

Number of speakers: _____ Connected in: Serial Parallel Directly

Individual amplifier order → Volume must be set properly by customer !!!

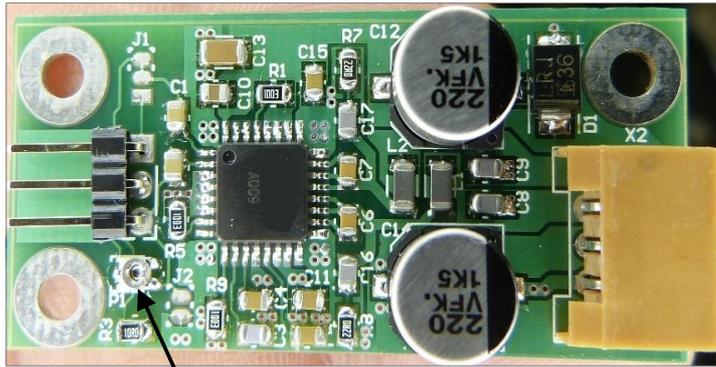
**If the volume (factory setting) will be increased, speaker(s) can be damaged.
No warranty!**

3.Electrical connections:

Audio Input

Connect to „LS“ of TBS Mini

bn:
rd: Audio +
or: Audio -



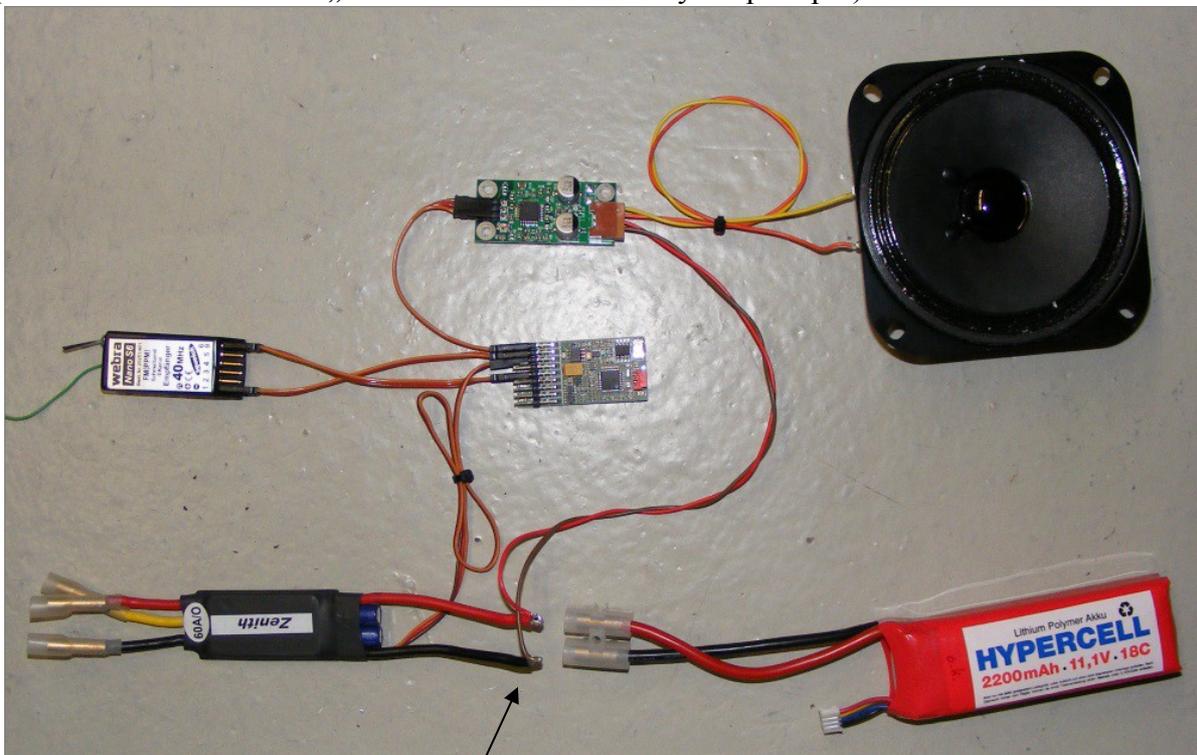
Power connection

ye: Speaker +
or: Speaker -
rd: Power +
bn: Power -
bk: not used

Volume setting in combination with TBS Micro or Mini

Connecting diagram

(TBS Mini control mode: „indirect soundselection“ by Prop3 input)



The power supply leads of the amplifier **MUST** be connected always on the **ESC** side.
Never use the balancer socket at the battery for connecting the power leads!
Otherwise amplifier and speaker can be damaged !

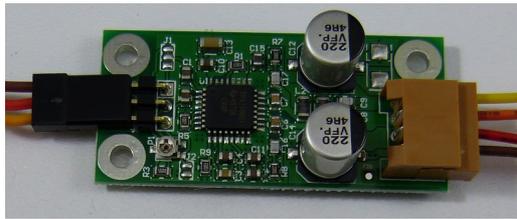
An “**Audio-Isolator**” is available to realize a galvanic isolation between receiver and motor supply. The isolator is simply plugged between the soundunit and amplifier.
It ensures a properly separated control and drive supply.
If a speed controller with “opto-input” is already used, the Audio-Isolator is highly recommended!



Audio-Isolator:

Connection examples for two speakers

SERIAL connection



Yellow = Spkr. 1 +

Spkr. 1 -

Spkr. 2 +

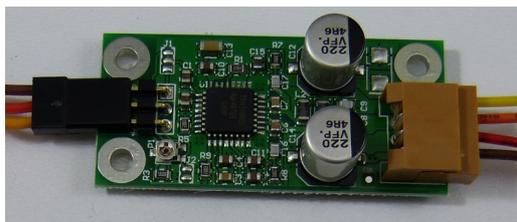
Orange = Spkr. 2 -



Important:

- use **twisted pair** cables only. Wire cross section should be around AWG22
- Route **BOTH** speaker cables to the amplifier !
- The cross connection from Speaker1- to Speaker2+ must be done close to the amplifier.

PARALLEL connection



Yellow = Spkr. +

Orange = Spkr. -



Important:

- use **twisted pair** cables only. Wire cross section should be around AWG22

Installation examples in customer models:



Technical changes reserved

Not suitable for children under 14 years old



Benedini Modellbauelektronik
Müllergasse 15, 52159 Roetgen
Web: www.benedini.de
Mail: thomas@benedini.de



BENEDINI
RC ELECTRONICS Sound Light Smoke