RX-AUDIO-24-D RX-AUDIO-24 Evaluation Board

TX-AUDIO-24/AE-D TX-AUDIO-24/AE Evaluation Board

The TX-AUDIO-24/AE-D and RX-AUDIO-24-D demo boards may be used “as is” to set up a high quality wireless digital audio link for applications such home theatre systems, audio media center, wireless headphones, etc…
Each demo board includes an RF module ready to plug in. All that is required to set up the wireless audio link is a suitable line level audio source and a DC power supply for the transmitter, and an audio amplifier and a DC power supply for the receiver.

RX-AUDIO-24-D

TX-AUDIO-24/AE-D

Specifications: RX-AUDIO-24-D

- Supply voltage - 7 to 12Vdc
- Current consumption: 100mA (typ)
- Operating temperature: -10 to +60 deg. C
- Audio output connectors: RCA socket
- Headphone output: 3.5mm stereo socket
- User data input: Pin header
- Power indication: LED
- Communications indicator: LED
- Power supply input: 2.1mm DC socket, centre pin +
- Channel selection: DIP switch or Tact switch or Automatic
- Channel ID configuration: DIP switch
- Dimensions: 80mm x 67mm x 21mm (without RF module inserted)

Specifications: RX-AUDIO-24-D

- Supply voltage - 7 to 12Vdc
- Current consumption: 100mA (typ)
- Operating temperature: -10 to +60 deg. C
- Audio input connectors: RCA socket
- User data input: Pin header
- Power indication: LED
- Power supply input: 2.1mm DC socket, centre pin +
- Channel selection: DIP switch or Tact switch
- Channel ID configuration: DIP switch
- Dimensions: 72mm x 60mm x 16mm (without RF module inserted)

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Operating Instructions

Transmitter:

Review the TX-AUDIO-24/AE manual for full details on the transmitter module.

The demo board accepts the TX-AUDIO-24**/AE** model.
(Note: The TX-AUDIO-24 version transmitter is not compatible with this demo board—only the **/AE** model is to be used).

The transmitter module is inserted into the socket provided on the demo board, taking careful note of correct orientation. Correct orientation is with the module label facing the white and yellow RCA audio connectors.

An external DC power supply in the range of 7V to 12VDC is connected to the DC power supply input. A suitable power supply may be a wall adaptor or a 9V or 12V battery. The power supply DC plug is centre positive.

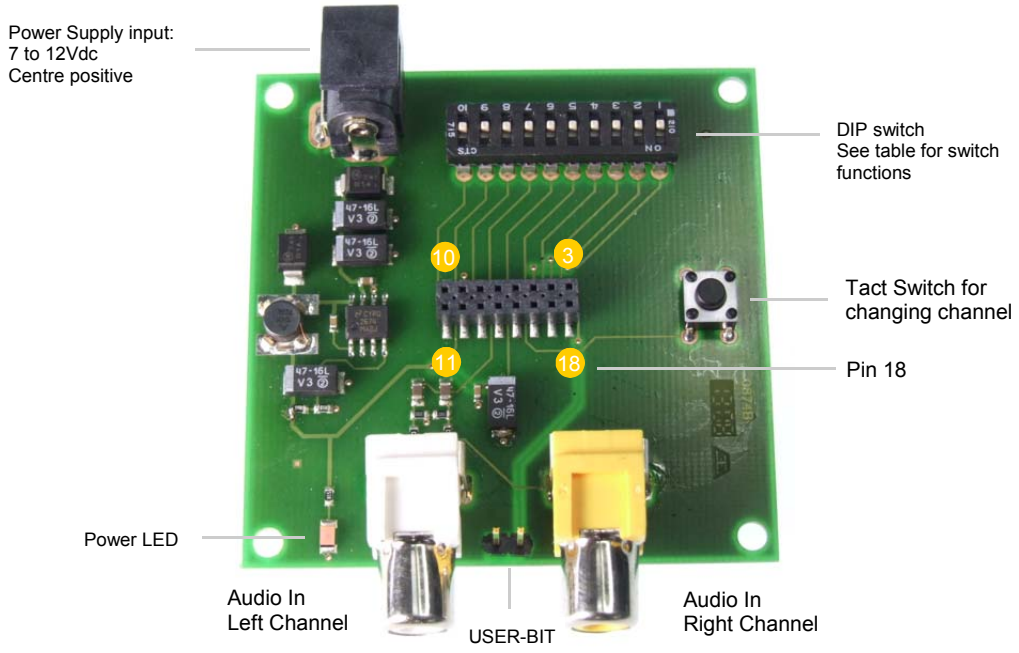
Connect a stereo audio source to the RCA input connectors. The audio source of 10Kohm and 2Vpp max will be suitable.

Refer to the TX-AUDIO-24/AER user manual for information on configuring the operating channel selection, channel ID and scrambling requirements, and set the DIP switches according to your preferred parameters. The Tact switch will operate depending on the DIP switch settings you choose.

The USER_BIT pin header is not necessary for the basic operation of the transmitter. This input is provided for developers wishing to transmit a data stream over the link for purposes such as:

- Remote control command
- Title of music composition being transmitted

Transmitted data has zero effect on the audio signal being transmitted.



Operating Instructions

Receiver:

Review the RX-AUDIO-24 manual for full details on the receiver module.

The demo board accepts the RX-AUDIO-24 receiver.

The receiver module is inserted into the socket provided on the demo board, taking careful note of correct orientation. Correct orientation is with the module label facing the Volume Control

An external DC power supply in the range of 7V to 12VDC is connected to the DC power supply input. A suitable power supply may be a wall adaptor or a 9V or 12V battery. The power supply DC plug is centre positive.

Connect a stereo audio amplifier to the RCA output connectors. The audio load impedance is around 10K ohm.

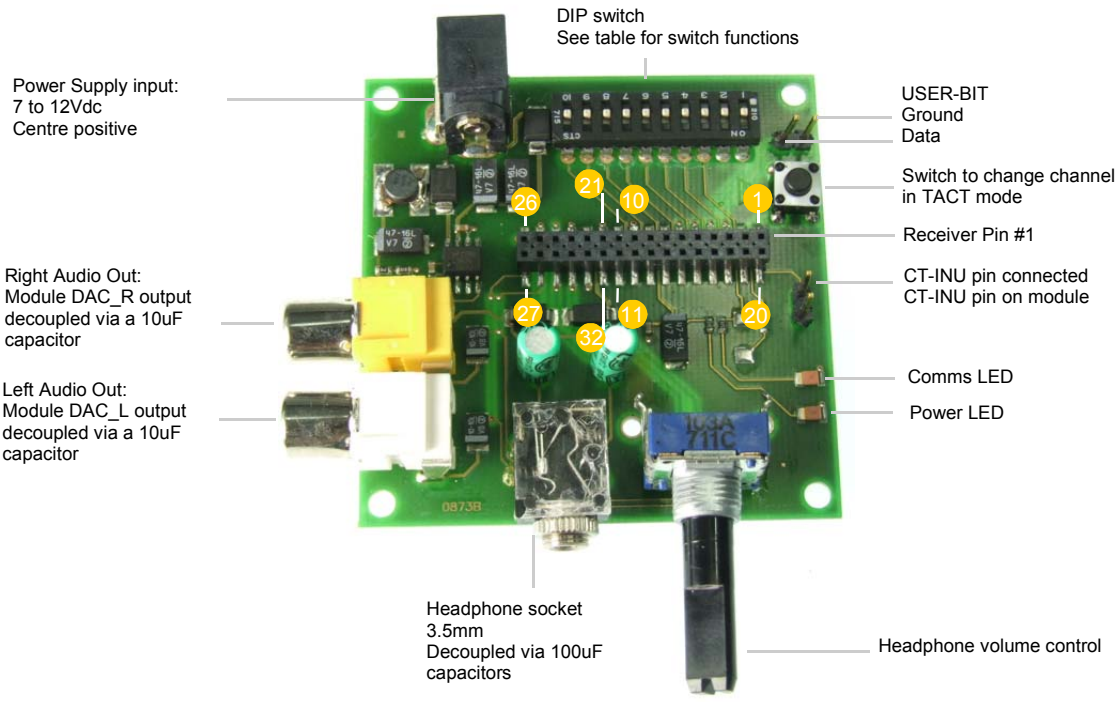
Alternatively, connect a stereo headphone to the 3.5 mm stereo jack (minimum 12 ohm impedance)

Refer to the RX-AUDIO-24 user manual for information on configuring the operating channel selection, channel ID and scrambling requirements, and set the DIP switches according to your preferred parameters. For proper operation, ensure the parameters equate to those chosen for the transmitter

The USER_BIT pin header is to output data that may be sent from the transmitter side . This output is provided for developers wishing to transmit a data stream over the link for purposes such as:

- Remote control command
- Title of music composition being transmitted

Transmitted data has zero effect on the audio signal being received.



Description of Main board components

Name	Description
VOLUME	Stereo headphones amplifier volume control
3.5mm STERO JACK	Stereo headphones amplifier volume output decoupled via 100uF capacitors
AUDIO_OUT Dx	Module DAC_R output decoupled via 10uF capacitor
AUDIO_OUT Sx	Module DAC_L output decoupled via 10uF capacitor
Vdc_GND Supply	Supply voltage jack. 7Vdc to 12Vdc, center positive
TACT_SW	Pushbutton to change channel. Connected to TACT_SW pin of the receiver module
USER_BIT	Pin to output serial data, connected to USER_BIT pin of the receiver module
CT_INU	Pin connected to CT_INU pin of the receiver module
DIP SW	10 Position DIP switch. Each switch is connected to the same named pin on the receiver module. When the switch is closed (ie ON position), the associated line is pulled low.

DIP Switch identification: Transmitter and Receiver

Default: All switches OFF. Please refer to RF module manuals for further details

DIP Switch #	Description	
1	OB	Out of Band signal test
2	FORMAT	Signal Scrambling
3	CH-MODE	Selects Tact channel select mode or DIP switch channel select mode.
4	ID0	Used to configure system ID. Only systems with the same ID will output the transmitted audio signal. 16 possible combinations,
5	ID1	
6	ID2	
7	ID3	
8	SW0	Channel select relative to DIP switch 3. The setting of DIP switch 3 determine whether these are active or not. Active when DIP switch 3 is in DIP mode.
9	SW1	
10	SW2	