

User Manual

TOM-Audio **TG-100** *eTour*



Table of contents

1. Safety instructions.....	3
1.1. Instructions on battery disposal.....	3
2. Overview of the controls of TG-100.....	4
2.1. Transmitter TG-100T.....	5
2.2. Receiver TG-100R.....	5
2.3. Shared elements.....	6
2.4. Sync Kit SK-100	6
3. Quick operation guide.....	7
4. Handling TG-100.....	8
4.1. Turning the devices On / Off.....	8
4.2. Connecting the mic to the transmitter.....	8
4.3. Connecting a playback device to the transmitter.....	8
4.4. Connecting a headphone to the receiver.....	9
4.5. Adjusting the radio channel.....	10
4.6. Automatic radio channel synchronisation	10
4.7. Summarising several receivers TG-100R as a group.....	10
4.8. Synchronisation using the Sync Kit SK-100.....	12
4.9. Controlling volume.....	13
4.9.1. Transmitter TG-100T.....	13
4.9.2. Receiver TG-100R.....	13
4.10. Recharging the batteries.....	14
4.10.1. Transportation and charging bag TC-35.....	15
5. Trouble-shooting.....	16
6. Specifications.....	17
6.1. Transmitter TG-100T.....	17
6.2. Receiver TG-100R.....	17
6.3. Sync Kit SK-100.....	18
6.4. Transportation and charging bag TC-35.....	18
7. Frequency table.....	19
8. Suggestions for channel setting when using multiple transmitters simultaneously.....	20

1. Safety instructions

- ✓ Please **pay attention** to the following safety instructions.
- ✓ Please read carefully though the following user manual and follow the given instructions.
- ✓ The devices must be sheltered from water and extreme heat.
- ✓ When switching from a cold to a warm environment water condensation can occur.
- ✓ Please pay attention to the instructions on how to deal with the rechargeable batteries und the charging process.
- ✓ Only use the designated batteries or rechargeable batteries. Pay attention to the polarity and dispose the batteries properly.
- ✓ Only use a clean and slightly wet cloth when cleaning the devices.
- ✓ Do not use solvent or aggressive detergents when cleaning the devices.
- ✓ Repairing and maintenance may only be executed by a trained expert.
- ✓ Do not open the devices by yourself.
- ✓ One may only use original spare parts or spare parts recommended by the manufacturer.
- ✓ Damage through improperly use leads to the extinction of any warranty.

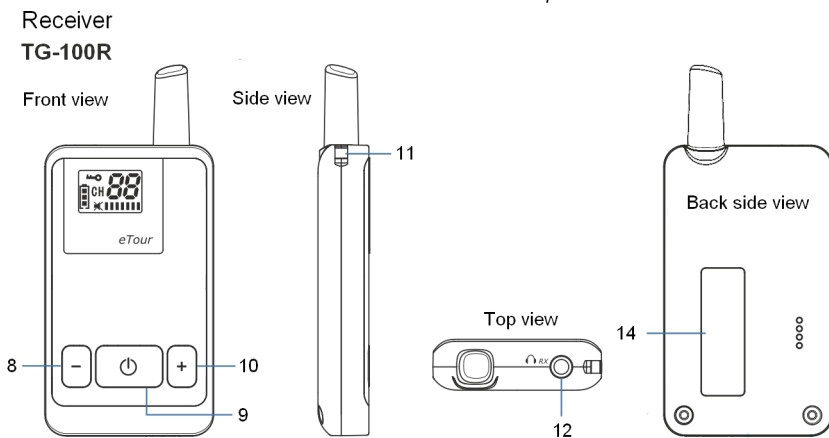
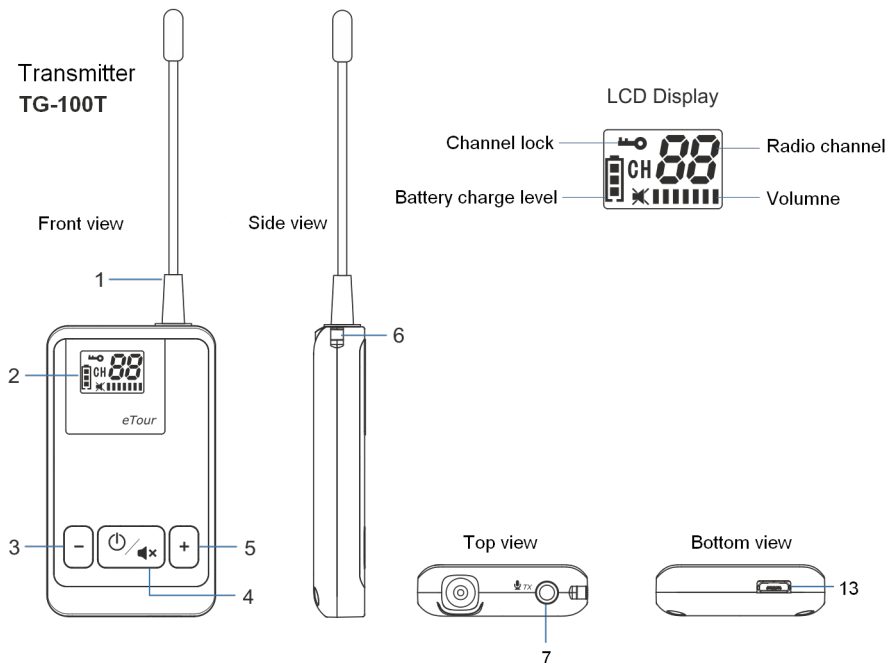
1.1. Instructions on battery disposal

Please dispose the batteries and rechargeable batteries conform to the provisions of the law! Batteries and rechargeable batteries contain toxic material which must not get into the environment.

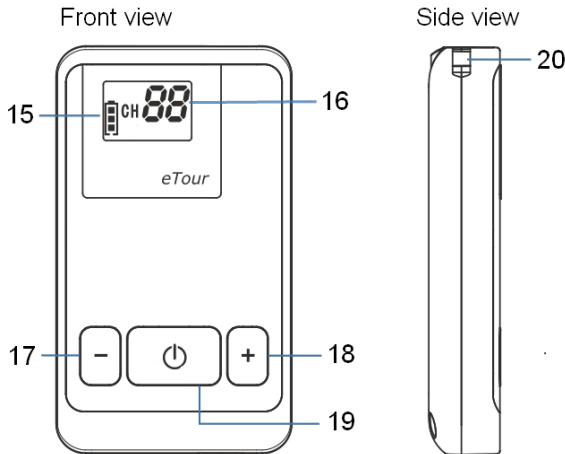
Do not throw used batteries and rechargeable batteries into fire!

Batteries and rechargeable batteries delivered by us can be returned by putting them into an adequately franked envelope and sending them to us. We then will despose them properly.

2. Overview of the controls of TG-100



SK-100 Sync Kit



2.1. Transmitter TG-100T

1. Antenna
2. LCD-Display
3. Decrease-button to adjust radio channel and volumne
4. On, Off, Mute and confirmation button
5. Increase-button to adjust radio channel and volumne
6. Connector for lanyard
7. 3,5 mm stereo jack for microphone / playback device input

2.2. Receiver TG-100R

8. Decrease-button to adjust radio channel and volumne
9. On, Off and confirmation button

- 10. Increase-button to adjust radio channel and volume
- 11. Connector for lanyard
- 12. 3,5 mm jack for earphone input

2.3. Shared elements

- 13. Micro-USB jack
- 14. Manufacturer label

Remark: The transmitter's and receiver's display are identical.

2.4. Sync Kit SK-100

- 15. Manufacturer label
- 16. Radio channel
- 17. Decrease-button to adjust radio channel and volume
- 18. Increase-button to adjust radio channel and volume
- 19. On, Off button
- 20. Connector for lanyard

3. Quick operation guide



On this page you will learn how to take the TOM-Audio TG-100 eTour in operation in a few simple steps:

1. Push the transmitter's On/Off button (No. 4) for approx. three seconds to turn it on.
2. Connect the supplied microphone with the transmitter's microphone jack (No. 7).
Remark: The volume level flashes when there is no microphone plugged in.
3. Push the receiver's On/Off button (No. 9) for approx. three seconds to turn it on.
4. Connect the supplied headphone with the receiver's headphone jack (No. 12).
5. Push the receiver's increase and decrease button (No. 8 and 10) simultaneously. The „CH“ indicator starts to flash.
6. Use the increase and decrease buttons (No. 8 and 10) to choose the matching channel to the transmitter. Confirm your choice by pushing the confirmation button (No. 9).
Attention: The transmitter's and receiver's channels must be congruent in order to get a connection.
The receiver's display flashes if it does not receive any signals.
7. The system is now ready to use.



Please enjoy!

4. Handling TG-100

4.1. Turning the devices On / Off

Please push the transmitter's () resp. receiver's () On/Off button for approx. three seconds to turn it on.

The serviceability is indicated by the activated display.


To turn off the devices please push the transmitter's () resp. receiver's () On/Off button for approx. three seconds.

The device is turned off when the display is deactivated.

Remark: The receivers turn off automatically if it does not receive any signals for approx. 20 min.

4.2. Connecting the mic to the transmitter

Please connect the supplied microphone with the transmitter's microphone jack (No. 7).

Remark: A flashing, cancelled out loudspeaker symbol () indicates that there is no microphone connected or the microphone is not connected properly.

4.3. Connecting a playback device to the transmitter

The transmitter's 3,5 mm microphone jack (No. 7) doubles as an input jack for playback devices (e.g. MP3-Player, smartphone, laptop)


Based on the plug you use the transmitter automatically recognises the connected device.

The microphone will be recognised by a 3,5 mm mono plug. A playback device will be recognised by a 3,5 mm stereo plug.

If the transmitter recognises a microphone, the volume will be display as usual.

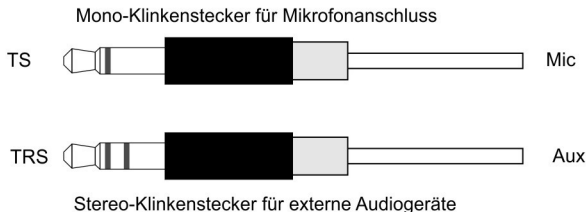
If the transmitter recognises a playback device, the volume level will flash and only show one bar (◀|).

In this case the volume must be controlled from the playback device.

By pushing the transmitter's mute button () the music will be muted. By pushing the mut button again the muting will be reversed.

Remark: Always use a stereo plug to connect a playback device to the transmitter. Otherwise the transmitter can not adjust the input level correctly.

Zur Beachtung:









4.4. Connecting a headphone to the receiver

Please connect the supplied headphone with the receiver's headphone jack (No. 12).



4.5. Adjusting the radio channel

The transmitter's and receiver's channels must be congruent in order to get a connection.

To adjust the transmitter's and receiver's radio channel please follow these steps:

1. Push the increase and decrease button ( / ) simultaneously for approx. three seconds.
2. The channel lock symbol () disappears and the channel symbol () starts flashing. This indicates the unlocking of the channel lock.
3. Use the increase and decrease buttons ( / ) to adjust the channel.

Attention: The transmitter's and receiver's channels must be congruent in order to get a connection.

4. Confirm your choice by pushing the confirmation button ( / ).
5. **Please note:** The minimum distance between the transmitter and receiver has to be at least approx. 30 cm. Otherwise disturbances and dropouts can occur.

4.6. Automatic radio channel synchronisation













Once the transmitter and receiver use the same radio channel, the receiver's radio channel synchronises automatically with the transmitter's channel.

For example: Transmitter and receiver both use channel five. The transmitter now changes to channel eight. The receiver now automatically changes its channel to channel eight as well. The radio communication is restored.

4.7. Summarising several receivers TG-100R as a group

In order to guide several groups of people simultaneously the radio channels

must be summarised as a group. To simplify the process of summarising the receivers into groups follow these instructions:

1. Push the increase, decrease and On/Off button (  ) simultaneously for approx. three seconds on the receivers you want to summarise as a group. The radio channel will be reset to factory setting „00“.
2. Please repeat step one with the transmitter you want to use with this group of receivers.
3. Push the transmitter's increase and decrease button ( ) simultaneously for approx. three seconds.
4. The channel lock symbol () disappears and the channel symbol () starts flashing. This indicates the unlocking of the channel lock.
1. Use the increase and decrease buttons ( ) to adjust the channel.
Remark: You can find suggestions about the right choice of radio channels in chapter eight in this user manual.
2. Confirm your choice by pushing the confirmation button (). Alternitavely the device will save and lock the radio channel automatically after five seconds.
3. The radio channel symbol () will stop flashing and the key symbol () will reappeare on the display.
4. The receivers now automatically change their channel to the transmitter's channel.
5. The transmitter and receivers now form a group.

4.8. Synchronisation using the Sync Kit SK-100



The Sync Kit SK-100 is available as an optional accessory which helps you to synchronise large number of devices. It only works the second generation of the charging and transportation bag, which was shipped from August 2014.



1. Please put the devices you want to synchronise in the charging cradle.
2. Connect the transportation and charging bag with a power outlet.
3. Turn on the Sync Kit SK-100 by pushing the On button () for approx. Three seconds.
4. Use the increase- and decrease button to choose your desired radio channel.
5. Now put the Sync Kit in one of the charging cradles.
6. The charging cradle's LEDs will flash five times. All devices are now synchronised


Remark: There must not be two Sync Kit SK-100 in the charging cradle of the transportation and charging bag while synchronisation.

4.9. Controlling volume

4.9.1. Transmitter TG-100T



You can adjust the microphone's sensitivity by pushing the increase and decrease button ( ).



The level of sensitivity reaches from the lowest setting with four bars () to the highest setting with seven bars ().

You can mute the microphone by pushing the mute button () once. By pushing the mute button again the muting will be reversed.



Remark: When choosing a high level of sensitivity, the speaker's broadcasted voice will get louder. However, the surrounding sounds will be broadcasted louder as well. To avoid this, the listeners should first adjust the volume on their receivers. We recommend keeping the microphone sensitivity at an average level.

4.9.2. Receiver TG-100R

You can adjust the receiver's volume by pushing the increase and decrease button ( ).

The volume level reaches from muting () to the highest setting with seven bars ().

4.10. Recharging the batteries

If the display shows a battery symbol with three bars () in it, the battery's capacity is approx. 100 %. In this case the transmitter's battery will last for approx. 15 h. The receiver's battery will last for approx. 20 h. If the display shows a flashing battery symbol with no bars () in it, the battery's capacity is approx. 10 %. In this case you should follow these instructions in order to charge the devices.

1. Please put the devices in the charging cradle of the provided transportation and charging bag.
Remark: The transmitter and receiver use the same charging cradle. The battery is charged via the micro-USB port.
2. Connect the transportation and charging bag with the power outlet using the provided power cable. You can find the plug for the charging cable on the right side of the charging cradles in the bag.
3. The LED of the occupied charging cradle will be on red while charging.
4. When charging is completed the LED will switch to green.
5. It takes about 6 hours to charge the device to full capacity.

Remark: The devices turn off automatically when putting them into the charging cradle. As soon a device is put into the charging cradle, the LED will turn red. The system now checks the rechargeable battery's capacity. This can take up to five minutes. After the check, charged devices will be marked with a green LED, devices that are getting charged will have a red LED.

4.10.1. Transportation and charging bag TC-35

The transportation and charging bag TC-35 can charge up to 35 devices simultaneously.

You can find the plug for the power cable on the right side of the charging cradles. The opening to the plug is marked by a metal ring.



Every transportation and charging bag comes with a range of the following power adapters:

- Plug-Type B (USA, Japan)
- Plug-Type C (Europe)
- Plug-Type G (United Kingdom)
- Plug-Type I (Australia, New Zealand)

The power adapter's voltage is 100 – 240 V.

5. Trouble-shooting

Problem	Solution
No sound from receiver	<ul style="list-style-type: none">• Please check if transmitter and receiver are turned on• Please check the battery's capacity• Please reduce the distance between transmitter and receiver (minimum distance: 30 cm)
Strong disturbing noises and rustle occur	<ul style="list-style-type: none">• Please check battery capacity and recharge if necessary• Please avoid sources of disturbance like halogen lamps• Please check if two transmitters are using the same channel. If this is the case turn one if the transmitter off or switch channel• Please reduce the distance between transmitter and receiver (minimum distance: 30 cm)
Transmitter and receiver are frozen	<ul style="list-style-type: none">• Please push the increase, decrease and On/Off button simultaneously for approx. three seconds. The device will be reset to factory settings.
Temporary loss of sound when moving in the area where the tour takes place	<ul style="list-style-type: none">• Please move to a different spot with the receiver. If the losses of sound still occur, please avoid this area and check if there are any disturbance sources
The LED on the charging cradle is red even though the device is fully charged	<ul style="list-style-type: none">• As soon a device is put into the charging cradle, the LED will turn red. The system now checks the rechargeable battery's capacity. This can take up to five minutes. After the check, charged devices will be marked with a green LED, devices that are getting charged will have a red LED.

6. Specifications

Transmission range on an open field:	approx. 100 m
Audio-sampling rate:	16 bit
Signal delay:	22 mS
Dynamic range:	>70 dB
Signal-to-noise ratio:	>65 dB (A)
T.H.D.:	<3%
Operating temperature:	-10 to +50°C

6.1. Transmitter TG-100T

Transmission power:	10 mV
Audio input:	3,5 mm jack for microphone / line
	in
Max. input level microphone:	-31 dBV / Line in: 0 dBV
Power supply:	Lithium polymer accumulator (3,7 V / 600 mAh)
Operating time:	approx. 15 h
Recharging time:	approx. 6 h
Antenna:	Helical antenna
Dimensions in mm	
w/o antenna (HxWxD):	69 x 40 x 12
Weight:	approx. 34 g
Lanyard color:	red
Housing color:	white

6.2. Receiver TG-100R

Sensitivity:	-110 dBm
Audio output:	3,5 mm jack
Power supply:	Lithium polymer accumulator (3,7 V / 600 mAh)
Operating time:	approx. 20 h
Recharging time:	approx. 6 h
Antenna:	integrated
Dimensions in mm	
w/o antenna (HxWxD):	69 x 40 x 12
Weight:	approx. 32 g

Lanyard color:	black
Housing color:	blue

6.3. Sync Kit SK-100

Spannungsversorgung:	Li-Polymer-Akku (3,7 V / 600 mAh)
Betriebsdauer:	ca. 20 Stunden
Ladezeit:	ca. 6 Stunden
Maße in mm ohne Antenne (HxBxT):	69 x 40 x 12
Gewicht:	ca. 32 g
Farbe Gehäuse:	weiß

6.4. Transportation and charging bag TC-35

Dimensions in mm (HxWxD):	approx. 250 x 430 x 120
Weight (filled):	approx. 4 kg
Gewicht (empty):	approx. 3 kg
Charging cradles:	35
Power adaptor:	100 – 240 V
Charging time transmitter:	approx. 6 h
Charging time receiver:	approx. 6 h
Color:	black

7. Frequency table

The frequencies of channel 1 – 16 are free of charge in the EU and Switzerland.

Ch.	Frequency	Ch.	Frequency	Ch.	Frequency	Ch.	Frequency
1	863.060	5	863.185	9	863.310	13	863.435
2	863.560	6	863.685	10	863.810	14	863.935
3	864.060	7	864.185	11	864.310	15	864.435
4	864.560	8	864.685	12	864.810	16	864.935

If you want to use channel 17 – 56 please first check the regulations with the local government agency.

Ch.	Frequency	Ch.	Frequency	Ch.	Frequency	Ch.	Frequency
17	865.060	27	865.185	37	865.310	47	865.435
18	865.560	28	865.685	38	865.810	48	865.935
19	866.060	29	866.185	39	866.310	49	866.435
20	866.560	30	866.685	40	866.810	50	866.935
21	867.060	31	867.185	41	867.310	51	867.435
22	867.560	32	867.685	42	867.810	52	867.935
23	868.060	33	868.185	43	868.310	53	868.435
24	868.560	34	868.685	44	868.810	54	868.935
25	869.060	35	869.185	45	869.310	55	869.435
26	869.560	36	869.685	46	869.810	56	869.935

Frequencies are given in Mhz.

8. Suggestions for channel setting when using multiple transmitters simultaneously

The following channel settings were calculated using software and only represent suggestions when using multiple transmitters simultaneously. As the conditions on site may vary, we can not guarantee that these settings will work without interferences.

The number of transmitters show how many transmitters are in use simultaneously. The column with the channels in it shows on which channels the transmitter need to transmit to avoid interferences.

If there are any interferences you can choose from option 1 – 5 and switch to the given channels.

When using channel 1 – 16:

Number of transmitters	Ch.	Option 1	Option 2	Option 3	Option 4	Option 5
2	1	5	9	13	2	11
	2	6	10	14	3	12
3	1	13	6	9	5	1
	2	14	7	10	6	2
	7	4	12	15	11	15
4	1	-				
	2					
	7					
	16					

When using all 56 channels:

Number of transmitters	Ch.	Option 1	Option 2	Option 3	Option 4	Option 5
4	3	12	17	18	29	1
	4	39	18	19	30	2
	27	48	29	30	41	29
	48	30	50	51	23	40
5	1	3	12	47	1	5
	2	4	37	48	6	10
	7	28	48	20	19	40
	16	48	30	41	20	41
	38	40	22	33	41	25
6	1	6	11	15	4	37
	2	7	10	16	17	19
	7	12	18	28	38	20
	16	18	20	30	39	53
	38	49	31	41	44	25
	21	32	23	33	55	56
7	1	9	5	13	2	9
	2	10	3	38	15	11
	11	4	49	49	28	16
	37	18	32	22	51	29
	48	29	53	53	23	32
	40	21	55	54	55	53
	52	33	56	36	56	36

Number of transmitters	Ch.	Option 1	Option 2	Option 3	Option 4	Option 5
8	1	9	9	-		
	2	10	3			
	11	8	4			
	37	38	39			
	30	41	51			
	45	23	43			
	34	25	54			
	45	36	56			

The given specifications are benchmarks and do not represent guaranteed specifications. Technical changes and mistakes reserved. Variations caused by productions may occur.

BMS Technologies GmbH
Maulacher Straße 25
74564 Crailsheim
Germany

Tel.: 0049 7951 / 9622 298
Fax: 0049 7951 / 9622 299
email: welcome@bms-tec.com

Effective: 8/2014

TOM-Audio TG-100 etour
Art.-No.: 36100

EU conformity declaration:
www.tom-audio.com/downloads

