

# User Manual

## Digital tourguide system

This system is used in various types of excursions in museums or walking tours. The system includes the transmitter 210 used by a guide and the receivers DRR-210 to be carried by tourists. They allow a person to clearly hear each word of a guide in his/her earphones and provide an opportunity to stay at an exhibit that attracted attention for some time while the guide continues to speak.



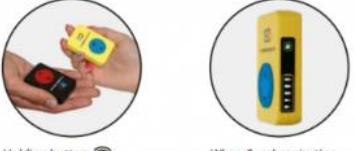
Pic1. Receiver DRR-210 (left) and transmitter 210 (right)

### Specifications:

- Operating frequency range of transmitter: 2400-2483 MHz
- Emission bandwidth of transmitter at 20 dB: 1 MHz
- Modulation type GFSK
- Supply voltage range of receiver and transmitter: 3.0-4.2V
- Baud rate: 1000000 Bd
- Transmitter current consumption, max: 50 mA
- Receiver current consumption, max: 50 mA
- Receiver and transmitter dimensions, max: 68x45x15 mm
- Receiver (transmitter) weight, max: 40 g
- Operating temperature: 0°C to +40°C
- Operating range 50-100m

## Detailed working algorithm:

**SYNCHRONIZATION**  
Performed when the earphones / microphone are disconnected



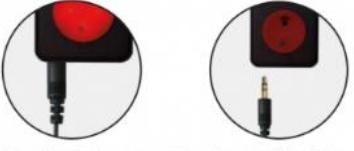
Holding button bring the transmitter to the receiver  
When Synchronization is successful, the backlight turns on

**THE SIGNAL LEVEL**



There is signal  
The connection was lost

**TO SWITCH ON / SWITCH OFF**



To switch on the device, connect the earphone / microphone to the receiver / transmitter  
To switch off the device, remove earphone / microphone

**BATTERY CHARGE**



Connect the charge to the device. When the device is fully charged the green LED will be lit up  
To charge several devices at the same time, use special equipment

**MICROPHONE MUTE**



To switch off  
Hold the button for 1-2 seconds until red LED is lit up  
To switch on  
Hold the button for 1-2 seconds until red LED is turned off

**BUILT-IN MICROPHONE**



To switch on  
Hold on buttons at the same moment for 3-5 sec until the green LED is lit up  
To switch off  
Hold on buttons at the same moment for 3-5 sec until the green LED is turned off

If there no signal from the transmitter for more than 3 minutes, the receiver will be automatically switched off

To be fully charged from 0 to 100% it will take 2.5 hours. The operating time of the transmitter is 60 hours, the receiver 100 hours

The transmitter is able to work without connecting an external microphone

## Charger.

1)



### Charger for equipment CHRG-210-36.

- Input DC 19V 4,6A.
- Input connector DC 5.5mm\*2.1mm
- Output DC 6 groups of 4.6V 2.5A
- Output 36 micro USB connectors.
- Power consumption 90W max.
- Dimensions: 300\*250\*36 mm
- Weight: 2.8 kg

Used to charge 36 devices of tour guide system: receiver DRR-210 and/or transmitter 210.

2)



#### **Charger for equipment CHRG-210-20.**

- Input DC 19V 2,6A.
- Input connector DC 5.5mm\*2.1mm
- Output DC 4 groups of 4.6V 2.5A
- Output 20 micro USB connectors.
- Power consumption 50W max.
- Dimensions: 248\*158\*36 mm
- Weight: 1.5 kg

Used to charge 20 devices of tour guide system: receiver DRR-210 and/or transmitter 210.

3)

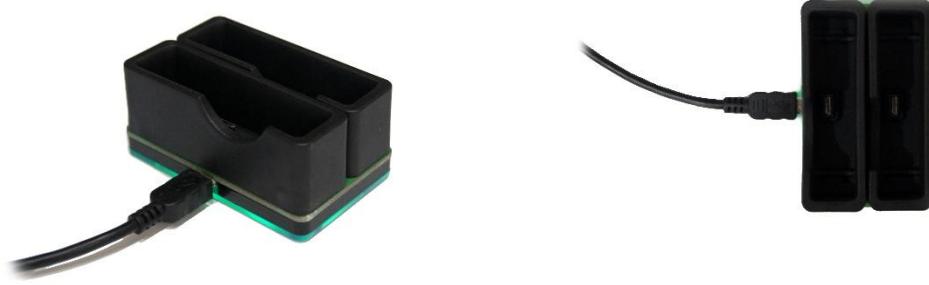


#### **Charger for equipment CHRG-210-10.**

- Input DC 19V 1,3A.
- Input connector DC 5.5mm\*2.1mm
- Output DC 2 groups of 4.6V 2.5A
- Output 10 micro USB connectors.
- Dimensions: 125\*158\*36 mm
- Weight: 0.8 kg
- Power consumption 25W max.

Used to charge 10 devices of tour guide system: receiver DRR-210 and/or transmitter 210.

4)



**Charger for equipment CHRG-210-2.**

- Input DC 5V 1A.
- Input connector micro USB
- Output 2 micro USB connectors.
- Power consumption 5W max.
- Dimensions: 80\*50\*33 mm
- Weight: 0.2 kg

Used to charge 2 devices of tour guide system: receiver DRR-210 and/or transmitter 210.



This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

#### RF Exposure Information

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.