

T2800

863 MHz FM Base Station Transmitter - Europe

USER MANUAL

For use with Williams AV R2863 Receivers.



Recycling Instructions



Help Williams AV protect the environment!

Please do not dispose of equipment or used batteries in the household trash. Take the equipment to an electronics recycling center or return to the factory. Take batteries to a retail or community recycling location.

Safety Warnings



WARNING! To reduce the risk of fire or electric shock, do not expose the system to rain or moisture. Do not use this apparatus near water. The system should not be exposed to dripping or splashing, and objects filled with liquids such as beverages should not be placed on the charger. Clean only with a dry cloth.

Servicing or attempting to service this device will void the warranty

Refer servicing to qualified personnel. Servicing is required when the system has been damaged in any way: if liquid has been spilled or objects have fallen into the unit, if the unit has been exposed to moisture, if the unit does not operate normally, or if the unit has been dropped.

Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus that produces heat.

Use only attachments/accessories specified by the manufacturer.

Unplug the unit during lightning storms or when unused for long periods of time.

Be advised that different operating voltages require the use of different types of line cord and attachment plugs. Check the voltage in your area and use the correct type.

Use only the power supply provided by Williams AV. Other power supplies may have similar specifications, but may not be equivalent in emissions ratings, in-rush current, etc. Use of an unapproved power supply may leave the device partially or completely inoperable, and will void the warranty.

This apparatus has been designed with class-1 construction and must be connected to a main socket outlet with a protective ground connection (the third grounding prong).

Protect the power cord from being walked on or pinched, particularly at plugs, receptacles, and near the power jack on the charger.

This apparatus must be grounded.

The MAINS plug or an appliance coupler is used as the disconnect device, so the disconnect device should remain readily operable.

System Overview

Thank you for purchasing the T2800, 863 MHz FM Base Station Transmitter. This transmitter was designed for Europe and other areas where 863 MHz is the permitted frequency range for hearing assistance. This transmitter is compatible with R2863 Receivers.

Much like a miniature radio station, the T2800 broadcasts a speaker's voice, pre-recorded audio program or live audio over a channel in the 863 MHz FM frequency band. This hearing assistance system helps large or small groups overcome background noise, and distance, to clearly hear the speaker or audio program.

The T2800 features Mic Inputs, Line Inputs, and a built-in MP3 player for pre-recorded content. A dual-color Thin-Film-Transistor (TFT) display shows settings for transmit channel, transmitter locked, volume, record volume, mode, cycle (repeat), total number of audio files and current audio file playing.

Features

- (1) 3.5mm Mono Mic Inputs
- (1) XLR Mono Mic Input
- (2) RCA Line Level Inputs
- (1) USB Flash Drive Slot
- (1) Micro SD Card Slot
- Dual-color OLED Display Screen with Audio Level Meter
- Built-In MP3 Player
- 16 FM Channels between 863 - 865 MHz
- Rack-mountable (1/2 width, 1 RU high) with the RPK 001 rack mount kit (Rack mount ears require M3 x 10mm screws. Williams AV does not supply the screws.)
- Remote Antenna ANT 036 is available

TRANSMITTER APPLICATIONS

- House of Worship
- Hearing Assistance
- Conference Rooms

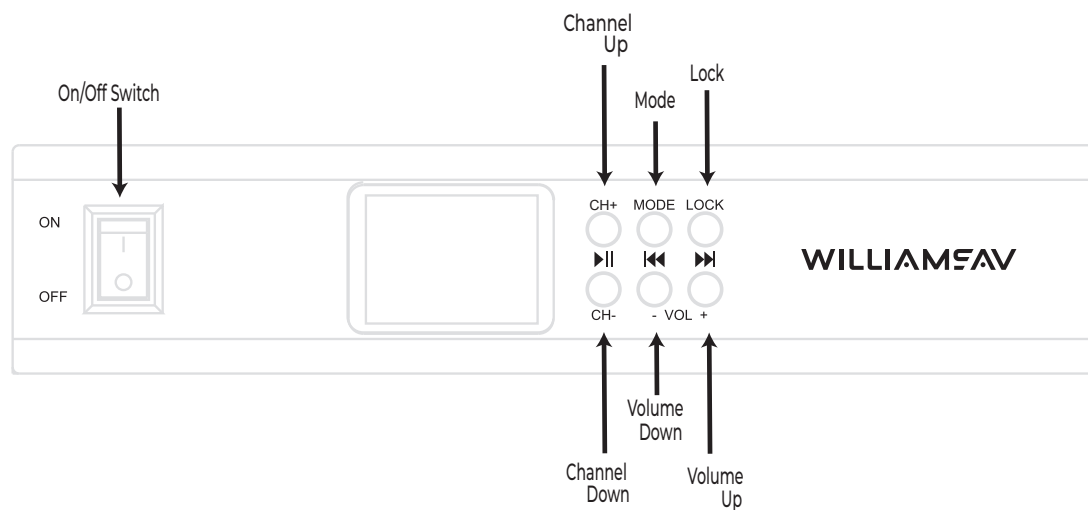
IMPORTANT NOTES ABOUT FRONT DISPLAY SCREEN CARE

The Front Display should be cleaned with a clean, damp microfiber cloth only. This will prolong the life and legibility of the screen. Do not use glass cleaner, or any other type of cleaner, or cloth/paper towel on the screen.

The T2800 should be turned off when not in use to maximize the life of the screen pixels.

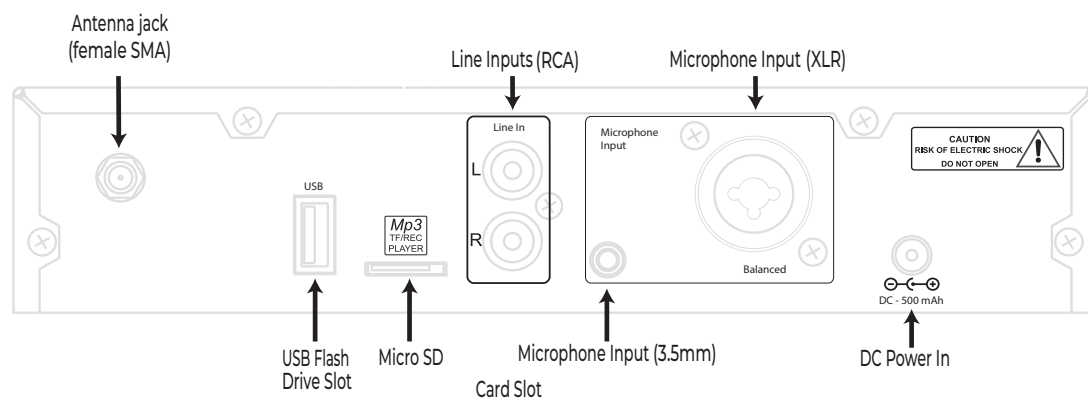
Wiring and Connections

FRONT VIEW

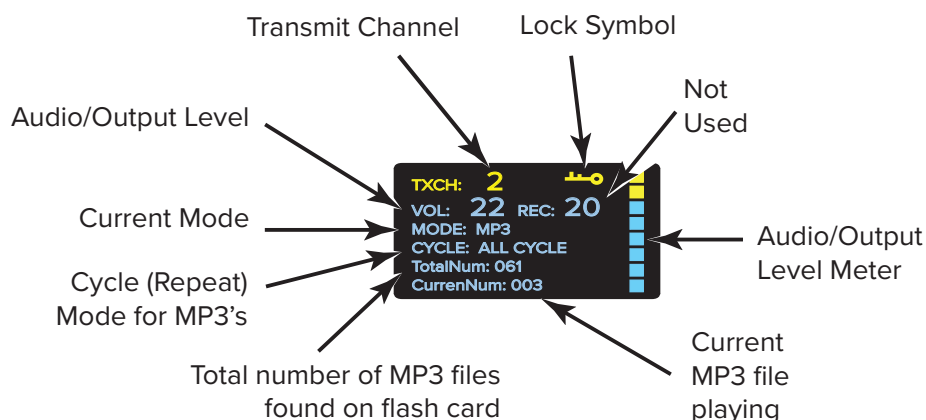


Controls and Features

BACK VIEW



DISPLAY



Operating Instructions

The transmitter can broadcast programs from a live mic, line level input, MP3 audio files from an SD Card or USB Flash Drive, as well as record from the MIC inputs and play back the recording.

LIVE MICROPHONE

1. Make sure the unit is turned OFF.
2. Connect a microphone with a 3.5 mm plug or XLR plug into the respective jack (see page 3) on the rear of the T2800.
3. Turn the unit on.
4. Change the input to Microphone:
 - a. Push and hold the Lock button until the lock symbol turns off.
 - b. Push the mode button repeatedly until MODE on the display begins blinking.
 - c. Use the left and right arrow to change the Mode to MIC.
 - d. Push-and-hold the LOCK button until the lock symbol turns on.
5. With a R2863 receiver, tune to the channel displayed on the front of the T2800, for example "TX: 01".
6. Have a listener use the receiver while someone speaks into the microphone. Determine if the level is too high or too low*.
7. If the transmitter level needs to be adjusted, push-and-hold the LOCK button to turn it off. Then repeatedly push the MODE button until VOL: is flashing on the display. Use the left and right arrows to adjust the volume of the transmitter to an acceptable level.

LINE LEVEL AUDIO PROGRAM

1. Make sure the unit is turned OFF.
2. Connect the line-level source to the RCA jacks on the rear of the T2800. **NOTE:** The L and R audio is combined into one mono channel that will be heard by the audience.
3. Turn the unit on.
4. Change the input to the RCA Line Level jacks:
 - a. Push and hold the Lock button until the lock symbol turns off.
 - b. Push the mode button repeatedly until MODE on the display begins blinking.
 - c. Use the left and right arrows to change the Mode to LINE.
 - d. Push-and-hold the LOCK button until the lock symbol turns on.
5. With a R2863 receiver, tune to the channel displayed on the front of the T2800. For example, "TX: 01".
6. Have a listener use the receiver and start the audio program playing on the source device. Determine if the level is too high or too low*.
7. If the transmitter level needs to be adjusted, hold the LOCK button to turn it off. Then repeatedly push the MODE button until "VOL:" is flashing on the display. Use the left and right arrows to adjust the volume of the

transmitter to an acceptable level.

MP3 PLAYER

1. Make sure the unit is turned OFF.
2. Insert a Micro SD card, or a USB Flash Drive, into the appropriate port.
3. Turn the unit on.
4. Change the input to the MP3 Player:
 - a. Push and hold the Lock button until the lock symbol turns off.
 - b. Push the mode button repeatedly until MODE on the display begins blinking.
 - c. Use the left and right arrows to change the Mode to MP3.
 - d. Push-and-hold the LOCK button until the lock symbol turns on.
5. Push the Play button on the T2800 to begin the MP3 player playing. The audio meter on the right should begin pulsing with the audio.
6. Using the Mode button, set the Cycle:
 - a. **All Cycle:** continuously plays all MP3 files going from 001 to the last file, then starts at 001 again.
 - b. **Single Play:** Plays the current (CurreNum) MP3 file once, then stops.
 - c. **Single Cyc:** Plays all of the MP3 files from 001 to the last file, then stops.
7. With a R2863 receiver, tune to the channel displayed on the front of the T2800, for example "TX: 01".
8. Have a listener use the receiver. Determine if the level is too high or too low*.
9. If the transmitter level needs to be adjusted, push-and-hold the LOCK button to turn it off. Then repeatedly push the MODE button until VOL is flashing on the display. Use the left and right arrows to adjust the volume of the transmitter to an acceptable level.

***NOTE:** If the audio level meter pulses and stays mostly in the red, the transmitter volume may need to be lowered. The peaks of a persons voice (like the "p" sound) may take the meter into the red, but most of the spoken audio should be in the blue range of the meter. Another way to know if the level is too high is if the speaker's voice sounds distorted or not clear when they are speaking at the recommended distance from the microphone. Adjust the audio so that the speaker's voice is loud and clear without distortion.

Specifications

Dimensions:	21.1 cm W x 11.7 cm H x 16.5 cm D (8.3" x 1.8" x 6.5") (Depth includes power cord and antenna)			
Shipping Weight:	1.36 kg (3 lbs)			
Color:	Black with white legends			
Power:	AC: 100 to 240 VAC, 50-60 Hz			
	DC: 9 VDC, 80 mA current consumption			
Power Switch:	Rocker, front panel			
Temperature Range:	Operating: 0° C to 40° C (+32° F to 104° F)			
	Storage: -20° C to 70° C (-4° F to +158° F)			
Frequency Range:	863 - 865 MHz			
Compatible Receiver:	R2863			
Channel Frequencies:	Selectable, 16 channels, 863 – 865 MHz:			
	Ch. 1 863.075	Ch. 5 863.575	Ch. 9 864.075	Ch. 13 864.575
	Ch. 2 863.200	Ch. 6 863.700	Ch. 10 864.200	Ch. 14 864.700
	Ch. 3 863.325	Ch. 7 863.825	Ch. 11 864.325	Ch. 15 864.825
	Ch. 4 863.450	Ch. 8 863.950	Ch. 12 864.450	Ch. 16 865.000
Non-interfering group channels:	1, 4, 8, 11, 16. Can be used simultaneously for up to 5 groups.			
Max. Carrier Power:	7.88dBm			
Frequency Response:	20 Hz - 16 kHz			
Signal-to-Noise Ratio:	80 dB			
Display:	Large, Red: Lock symbol, TX CH: 0-100 Large, Blue: Vol: 1-36, Rec: 1-23 Small, Blue: Mode: Microphone Input / Line Input / MP3 Player Cycle: All Cycle / Random Play / Single Play / Single Cycle			
Menu Push Buttons:	Mic/Record (not used), Mode/Stop, Lock, Play/Pause, Back (<), Forward (>)			
Line Input:	Two RCA jacks; L and R, summed internally to mono			
Microphone Input:	(1) XLR combo jack			
Antenna Connector:	Female SMA			
Approvals:	CE, UKCA, RoHS3 and WEEE			
Warranty:	2 Years			

Hereby, Williams AV declares that the FM transmitter is in compliance with Directive 2014/53/EU and other Union harmonization as applicable.

Additional Documentation

The full text of the EU declaration of conformity (and other technical documentation) is available by contacting Williams AV at the following email address: regulatory@williamsav.com

Troubleshooting

No Sound:

- Check that the power supply is plugged into the AC outlet, the power switch is on, and the front display is on.
- Check the Mode on the front display to make sure the intended input is selected.
- If using the Line Level inputs, make sure the device plugged into these jacks is playing.
- With any source being used, the audio level display meter should be pulsing with the audio. If it is not, the transmitter will not be broadcasting anything.
- Make sure the receiver is tuned to the same channel as shown on the front of the transmitter.
- Make sure the volume on the receiver is high enough to hear the audio.
- When playing MP3 files, make sure the Cycle is set to repeat correctly. If it plays one file and stops, it is probably set to Single Play.

2 Year Warranty

Williams AV, a brand owned by Williams AV, products are engineered, designed and manufactured under carefully controlled conditions to provide you with many years of reliable service. Williams AV warrants the T2800 863 MHz FM Transmitter against defects in materials and workmanship for 2-years. During the first two years from the purchase date, we will promptly repair or replace the T2800 863 MHz FM Transmitter.

WILLIAMS AV HAS NO CONTROL OVER THE CONDITIONS UNDER WHICH THIS PRODUCT IS USED. WILLIAMS AV, THEREFORE, DISCLAIMS ALL WARRANTIES NOT SET FORTH ABOVE, BOTH EXPRESS AND IMPLIED, WITH RESPECT TO THE T2800 863 MHZ FM TRANSMITTER, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. WILLIAMS AV SHALL NOT BE LIABLE TO ANY PERSON OR ENTITY FOR ANY MEDICAL EXPENSES OR ANY DIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES CAUSED BY ANY USE, DEFECT, FAILURE OR MALFUNCTION OF THE PRODUCT, WHETHER A CLAIM FOR SUCH DAMAGES IS BASED UPON WARRANTY, CONTRACT, TORT OR OTHERWISE. THE SOLE REMEDY FOR ANY DEFECT, FAILURE OR MALFUNCTION OF THE PRODUCT IS REPLACEMENT OF THE PRODUCT. NO PERSON HAS ANY AUTHORITY TO BIND WILLIAMS AV TO ANY REPRESENTATION OR WARRANTY WITH RESPECT TO THE T2800 863 MHZ FM TRANSMITTER. UNAUTHORIZED REPAIRS OR MODIFICATIONS WILL VOID THE WARRANTY.

The exclusions and limitations set out above are not intended to, and should not be construed so as to contravene mandatory provisions of applicable law. If any part or term of this Disclaimer of Warranty is held to be illegal, unenforceable or in conflict with applicable law by a court of competent jurisdiction, the validity of the remaining portions of this Disclaimer of Warranty shall not be affected, and all rights and obligations shall be construed and enforced as if this Limited Warranty did not contain the particular part or term held to be invalid.

If you experience difficulty with your system, call Toll-Free for Customer Assistance:

1-800-843-3544 (U.S.A.) or **+1-952-943-2252** (International)

*For a Complete Warranty Statement go to: <https://williamsav.com/support/warranty-product-registration/>

If it is necessary to return the system for service, your Customer Service Representative will give you a Return Authorization Number (RA) and shipping instructions.

Pack the system carefully and send it to:

Williams AV

Attn: Repair Dept.

10300 Valley View Road

Eden Prairie, MN 55344