



S-D7802 Digital Wireless Receiver Instruction Manual

TRANTEC
SYSTEMS



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The Trantec SD-7802 Receiver represents our commitment to our customers by providing high quality, reliable wireless audio links, using our considerable design expertise gained over many years as a leading edge manufacturer.

Thank you for purchasing this product and please study this manual, especially the safety instructions before installing and using this equipment.

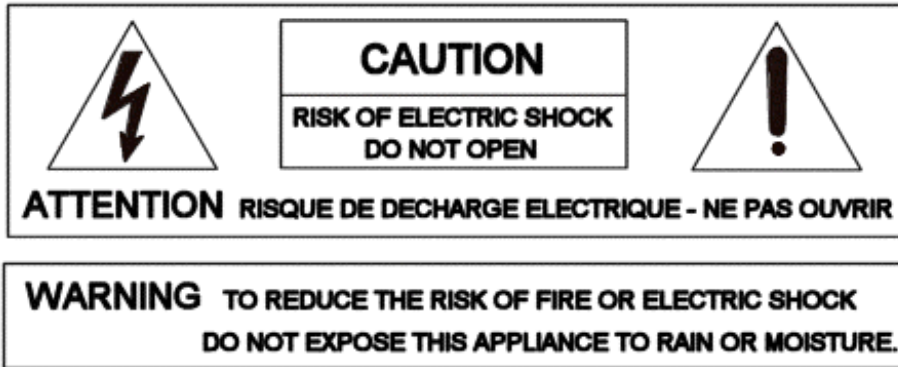
1. SAFETY PRECAUTIONS

- Keep the system away from direct sources of heat, e.g. Central heating radiators, heaters, and direct sunlight.
- Do not expose the unit to an environment where it could be splashed with liquids as this may result in fire or electric shocks.
- Keep the system clean by using a slightly damp cloth. Never use household cleaning agents or solvents.
- Avoid using or storing the system in damp or dusty conditions.
- Always disconnect from the AC outlet when not in use.
- The unit is designed for indoor use, do not install it outdoors. If the unit should get wet, there is a danger of electric shock.
- Never remove the external covers of the unit, exposing the electronics, or modify the unit in any way.
- Do not handle the mains lead with wet hands.
- Never pull the cord of the AC lead when disconnecting from an AC outlet. Always hold the plug.
- Ensure that the mains plug is securely inserted in the wall outlet.
- Route the AC power lead in such a way that it is not likely to be stepped on or tripped over.
- Do not use if the AC lead becomes damaged. This may result in fire or electric shock.
- Never touch any part of the equipment during a thunderstorm as this may result in severe electric shock.
- Use the unit only with the voltage specified on it. Using a voltage higher than that specified may result in fire or electric shock.
- Do not cut, kink, otherwise damage or modify the power supply cord. In addition, never place heavy objects (including the unit itself) on the power cord. Doing so may result in fire or electric shock.
- Always mount the unit on a stable surface or install in a stable location. The unit may otherwise fall causing personal injury and/or property damage.
- When moving the unit, be sure to remove its power supply cord from the wall outlet first. Moving the unit with the power cord connected to the outlet may cause damage to the power cord, resulting in fire or electric shock.
- Do not place heavy objects on the unit as this may cause the unit to fall resulting in personal injury and/or property damage. In addition, the object itself may fall off and cause injury and/or damage.
- Do not place containers of liquid or metallic objects on top of the unit. If they accidentally spill into the unit, this may cause a fire or electric shock.

Should the covers be removed or there is any other breach of the above instructions, the warranty becomes null and void, in addition to personal risk from burns and/or electric shock.

If any of the following conditions occur when using the unit, switch off and remove the AC lead from the outlet immediately and contact your nearest dealer.

- Smoke or unusual smell
- Water or foreign object inside the unit
- Physically damaged housings



DO NOT REMOVE COVER.
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead within a triangle is intended to tell the user that parts inside the product are a risk of electric shock to persons.

The exclamation point within a triangle is intended to tell the user that important operating and servicing instructions are in the manual provided with the equipment.

WARNING - Indicates a potentially hazardous situation that could result in death or serious personal injury.

CAUTION - Indicates a potentially hazardous situation that could result in moderate or minor personal injury, and/or property damage.

2. General Description

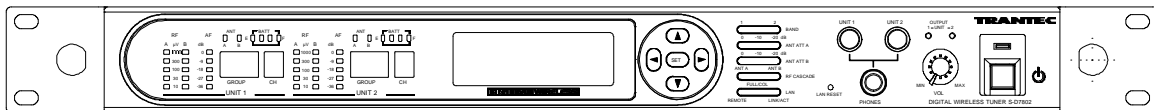
The S-D7802 is a dual UHF wireless receiver that employs a digital diversity system and supports digital audio transmission.

3. Features

- High quality 32kHz/24-bit digital audio data reception
- Digital audio transmission capability eliminates the need for an analog compander, thus freeing the S-D7802 from compander-induced distortion and dynamic tracking inaccuracies
- True Diversity receiver ensures stable radio signal reception
- High multi-channel density
- Industry standard digital interface support
- Display of transmitter battery life and setting information from the transmitter
- Can be monitored and remotely controlled by a PC
- LAN audio monitoring facility
- Wide receiver RF Bandwidth, typically 60MHz

4. Items and Functions

[Front Panel]



Radio Signal Reception Level Meter

Bargraph LEDs light to indicate strength of signal received by the corresponding antenna.

Audio Input Level Meter

Bargraph LEDs light in response to received audio signal input levels.

Receiving Antenna Indicator

LED corresponding to selected antenna lights.

Battery Indicator

Indicates approximate remaining transmitter battery life (alkaline batteries).

Display	Hours Remaining (continuous use)
E ●●●● F (All four indicators lit)	4.5 – 6
E ●●●○ F (Three indicators lit)	3 – 4.5
E ●●○○ F (Two indicators lit)	1.5 – 3
E ●○○○ F (One indicator lit)	0.5 – 1.5
E ○○○○ F (All four indicators flashing)	0 – 0.5

Group Indicator

Displays the received group number.

Channel Indicator

Displays the received channel number.

Note:

- A dot located at the lower right of both the group and channel indicators flashes if the “CH IDENTITY” function is set to OFF
- The “CH.S.” indication is displayed while scanning channels. If another indication is displayed or the indicator flashes, refer to “Network Function Manual”

Operation Menu Display

Shows results of operation key settings.

For more information, refer to “6. Menu Operation”

Operation Keys

Change menus in the operation menu display, as well as receiver setting items.

For more information, refer to “6. Menu Operation”

Band Indicator [BAND]

Displays whether the band is set to “1” or “2”.

Antenna Attenuator Level Indicator [ANT ATT A, ANT ATT B]

Displays the set attenuator level in three increments (“0,” “-10” and “-20dB”).

For normal operation leave attenuator in “0” position.

RF Cascade Indicator [RF CASCADE]

Cascade-connected antennas are automatically identified by corresponding LEDs. Refer to “7. Sharing an Antenna Between Two Receivers”.

Note:

Indicators for band, antenna attenuator level and RF cascade switch from steady ON to flashing if a digital audio output clock signal supply error occurs. Refer to “6.3.6. Word Clock Settings”.

Network Status Indicator [LINK/ACT]

Is lit when a network is connected.

Flashes during data transmission or reception.

Network Status Indicator [FULL/COL]

LED lights when network is in full duplex communication mode.

Flashes when data interference (collision) is detected.

Remains unlit while half-duplex communications are in progress between the receiver and network (PC).

Remote Indicator [REMOTE]

Lights when the receiver is in remote operation mode.

Refer to Section 6.1 for more information.

Flashes when a PC uses the equipment verification function.

Refer to Section 1.1 of the SD7000 Digital Microphone Software Manual for more information.

Network Reset Key

Holding down this key places the receiver in maintenance mode.

Pressing this key again sets the receiver back to normal mode.

For information about the maintenance mode please consult your BBM dealer.

Headphone Socket [PHONES]

Allows received audio to be heard through connected headphones.

Headphone Output Unit Selector Key [UNIT1, UNIT 2]

Refer to “10. Monitoring With Headphones” for more information.

Headphone Volume Control [VOL]

Adjusts the headphone output volume.

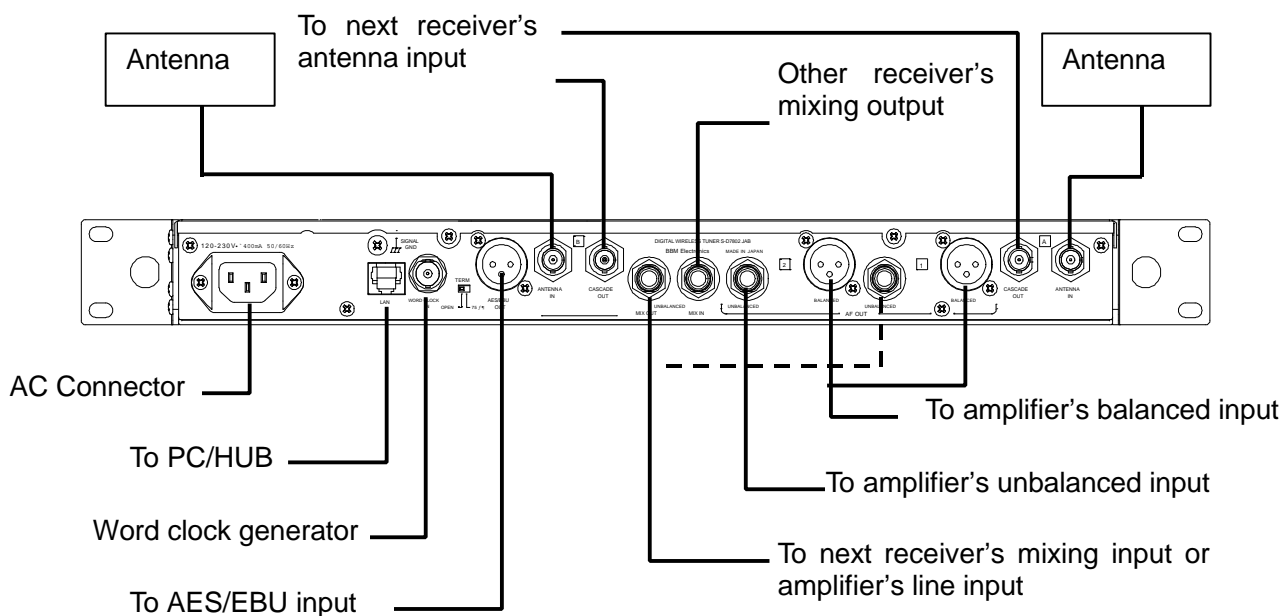
Audio Output Level Indicator [OUTPUT]

Lights when the received audio signal level exceeds the specified value (–36dBFS).

Antenna Mounting Kit Mounting Holes

Refer to “9. About The Antenna Mounting Kit” for more information.

[Rear Panel]



LAN Connector [LAN]

Used to connect to a PC via a LAN cable. (Refer to the SD7000 Digital Microphone Monitor Software Manual for more information.)

Word Clock Input Terminal [WORD CLOCK IN]

Allows connection to a word clock signal source.

Terminal Selector Switch [TERM]

Sets the word clock termination to "Open" or "75Ω".

AES/EBU Output Connector [AES/EBU OUT]

Outputs digital audio signal to an AES/EBU input-equipped device.

Antenna Input Connector [ANTENNA IN]

Connects to an external antenna.

Antenna Output Connector [CASCADE OUT]

Used when sharing a single antenna between two receivers.

Refer to "7. Sharing An Antenna Between Two Receivers" (the description of antenna cascade connections).

Mixing Output Jack (Unbalanced) [MIX OUT]

Mixes and outputs audio signals from both module units, which can be monitored via the headphone output.

Mixing Input Jack (Unbalanced) [MIX IN]

Connect to another receiver's mixing output.

Audio Output Jacks (Unbalanced) [AF OUT]

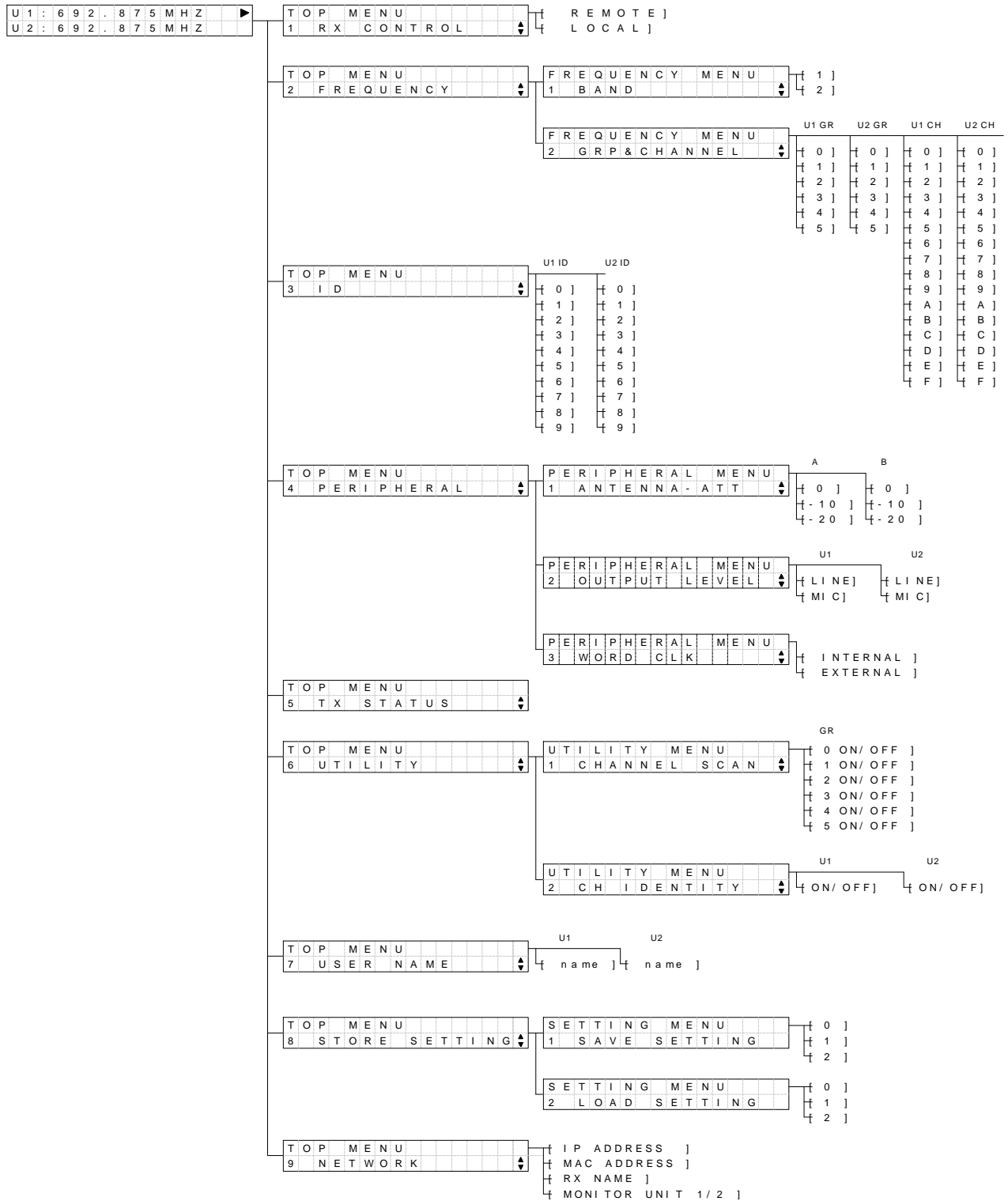
Connect to the microphone input jack or line input jack of the device being connected.

Audio Output XLRs (Balanced) [AF OUT]

Provide balanced outputs.

6. Menu Operation

Receiver Settings Screen Menu Configuration



6.1 Receiver Settings Changes and Confirmation

Two operation modes are available for receiver settings:

- Local mode: Change and confirm settings using the receiver's LCD screen and keys.
- Remote mode: Change and confirm settings using dedicated software installed on a PC connected to the receiver via a network. (See the SD7000 Digital Microphone Monitor Software Manual).

6.2 Basic Operation - Local Mode

Use the Left (◀) and Right (▶) keys to move between menu levels, the Up (▲) and Down (▼) keys to select the items, and the Set key to confirm the settings values in the lowest menu level.

(This does not apply to the keys used in user name settings explained later. Refer to the section "6.3.8 User Name Settings" for more information.)

Press the power switch to turn on the power to the receiver.

U 1	:	6	9	2	.	8	7	5	M	H	Z			▶
U 2	:	6	9	2	.	8	7	5	M	H	Z			

Confirm that the front panel Remote indicator remains unlit (local mode). If the indicator is lit (remote mode), follow the procedure below to switch the remote mode to local mode. Press the Right key and enter the settings menu selection hierarchy, then display the "1 RX CONTROL" indication using the Up and Down keys.

T	O	P		M	E	N	U							
1	R	X		C	O	N	T	R	O	L				▲▼

Press the Right key to enter the REMOTE/LOCAL settings hierarchy, then display the "LOCAL" indication using the Up and Down keys.

◀	S	E	L	E	C	T		R	X		C	T	R	L
		[		L	O	C	A	L]				▲▼

Press the Set key to confirm the setting to "LOCAL." An asterisk (*) is displayed, indicating that the receiver has been set to local mode. The Remote indicator on the front panel turns off.

◀	S	E	L	E	C	T		R	X		C	T	R	L
		[	*	L	O	C	A	L]				▲▼

Press the Left key to navigate back up the menu structure.

6.3. Settings Item Details

6.3.1 Receiver Operation Mode

Refer to the above items 6.1 and 6.2 for explanation of menu navigation and selection.

◀	S	E	L	E	C	T	R	X	C	T	R	L
		[	*	L	O	C	A	L]			▲▼

6.3.2 Frequency Settings

6.3.2.1 Band Settings

Set each module unit's band.

Press the Right key, then Up and Down keys to navigate to "Top Menu 2 Frequency". Press the Right key then Up or Down keys to go to "Frequency Menu 1 Band", and Right key again to go to the screen shown below. Use the Up and Down keys to select the band to be set. Press the Set key whilst the required setting item is displayed, and the receiver's setting is changed. Press the Left key to navigate back up the menu structure.

◀	S	E	L	E	C	T	B	A	N	D		
		[	*			1]					▲▼

6.3.2.2 Group and Channel Settings

Set each module unit's group and channel.

From "Top Menu 2 Frequency", press the Right key then Up or Down keys to go to "Frequency Menu 2 Grp&Channel". Press the Right key to go to the screen shown below. Align the module unit selection cursor (< >) with the unit indicator using Left and Right keys, then use the Up and Down keys to select the module unit for which the frequency is to be set.

◀	<	U	1	>	*	G	2		*	C	1	
	U	1	:	7	1	2	.	6	7	5	M H Z	▲▼

When the desired module unit is displayed, use the Left and Right keys to move the settings item selection cursor ([]) to the desired settings item (group or channel), then change the settings value display using the Up and Down keys. The frequency display in the lower row changes along with the displayed value, however the displayed frequency cannot be directly changed.

		U	1	[G	3]	*	C	1		
	U	1	:	7	2	4	.	4	7	5	M H Z	▲▼

Press the Set key whilst the required setting item is displayed, and the receiver's setting is changed. An asterisk (*) is displayed for the items that have been set. Press the Left key to navigate back up the menu structure.

		U	1	[*	G	4]	*	C	1	
	U	1	:	7	2	6	.	8	7	5	M H Z	▲▼

desired source is displayed, press the Set key to change the setting. If the Word Clock signal is not correctly supplied when set to “External,” the band indicator, antenna attenuator indicator and RF cascade indicator flash to indicate a signal supply error. Press the Left key to navigate back up the menu structure.

6.3.7 Transmitter Status Confirmation

The status of the transmitter from which each module unit is receiving a radio signal is displayed.

From “Top Menu 5 TX Status” press the Right key to show transmitter status. The upper row displays Unit 1, and the lower row displays Unit 2.

Each module unit has three display items, which are (from left to right): transmitter cover status (open - OPN, or closed - CLS), transmitter type (handheld - HD, or belt-pack - BT) and transmitter gain value. Press the Left key to navigate back up the menu structure.

◀	U 1	:	C L S		B T	-	3 5	d B
	U 2	:	O P N		H D	-	1 5	d B

6.3.8 User Name Settings

Set each module unit’s name.

From “Top Menu 7 User Name” press the Right key to show the screen below. Display the module unit for which the name is to be set using the Up and Down keys.

◀	<	U S E R 1	>	N A M E	▲
V O X		M I C 1			▼

When the desired module unit is displayed, press the Right key. The flashing cursor (_), which indicates the name edit status, is displayed.

	[	U S E R 1		N A M E]	▲
V O X		M I C 1			▼

Move the cursor to the desired entry position using the Left and Right keys, then select the character to be entered using the Up and Down keys.

	[	U S E R 1		N A M E]	▲
V O X		M I C 2			▼

Press the Set key to confirm the setting change. The display reverts to the unit selection mode. Press the Left key to navigate back up the menu structure.

◀	<	U S E R 1	>	N A M E]	▲
V O X		M I C 2			▼

6.3.9 Global Save of Receiver Settings

Current receiver settings can be globally saved in 3 steps.

From "Top Menu 8 Store Setting" press the Right key then Up or Down keys to show "1 Save Setting". Press the Right key to show the screen below. Display the setting number to be saved using the Up and Down keys. Press the Set key when the desired setting number is displayed.

S	A	V	E	S	E	T	T	I	N	G				
		T	O	S	E	T	[1]				▲▼	

A confirmation message is displayed and set data is saved if the Set key is pressed.

◀		S	A	V	E	T	O	1	?				
		[		Y	E	S]						

The following message is displayed when save is complete. Press the Left key to navigate back up the menu structure.

◀		N	O	W	S	A	V	I	N	G				
S	A	V	E	C	O	M	P	L	E	T	E	!		

6.3.10 Global Read of Receiver Settings

Read the settings saved in 6.3.9

From "Top Menu 8 Store Setting" press the Right key then Up or Down keys to show "2 Load Setting". Press the Right key to go the screen below. Display the setting number to be read using the Up and Down keys. Press the Set key when the desired setting number is displayed.

L	O	A	D	S	E	T	T	I	N	G				
F	R	O	M	S	E	T	[1]					

A confirmation message is displayed and set data is read if the Set key is pressed.

◀		L	O	A	D	F	R	O	M	1	?		
		[Y	E	S]					▲▼	

The following message is displayed when reading is completed. Press the Left key to navigate back up the menu structure.

◀		N	O	W	L	O	A	D	I	N	G		
L	O	A	D	C	O	M	P	L	E	T	E		

6.3.11 IP Address Confirmation

Confirm the receiver's IP address.

From "Top Menu 9 Network" press the Right key then Up or Down keys to show "1 IP Address". Press the Right key to show the screen below.

◀		I	P	A	D	D	R	E	S	S				
1	0	.	1	5	4	.	2	3	.	9	5			

6.3.12 MAC Address Confirmation

Confirm the receiver's MAC address (network card unique identifier).

From "Top Menu 9 Network" press the Right key then Up or Down keys to show "2 MAC Address". Press the Right key to show the screen below.

◀		M	A	C	A	D	D	R	E	S	S			
0	0	1	5	-	5	F	9	2	-	A	0	9	5	

6.3.13 Receiver Name Confirmation

Confirm the receiver's name.

From "Top Menu 9 Network" press the Right key then Up or Down keys to show "3 RX Name". Press the Right key to show the screen below.

◀		R	X	N	A	M	E							
2	N	D		F	L	O	O	R						

6.3.14 Selecting the Network Radio Signal Transmission Module

Select which module's audio signals are to be transmitted to the network.

From "Top Menu 9 Network" press the Right key then Up or Down keys to show "4 Monitor Unit". Press the Right key then display the desired unit number using the Up and Down keys. When the setting number is displayed, press the Set key to confirm the setting. Press the Left key to navigate back up the menu structure.

◀		M	O	N	I	T	O	R	U	N	I	T		
		[	*	U	N	I	T	2]					▲▼

6.4 Functions Adjustable for Operating Environment

6.4.1 Channel Scan

This function checks for idle channels that are free of interference.

From “Top Menu 6 Utility”, press the Right key the Up or Down keys to go to “Utility Menu 1 Channel Scan”. Press the Right key to show the screen below. Select the group to be scanned using Up or Down keys, then press the Set key.

S	E	L	E	C	T		G	R	O	U	P				
C	H		S	C	A	N		[	G	R	P	2]	▲	▼

Press the Up or Down key to turn the function on. Pressing the Set key with ON displayed begins scanning for idle channels.

◀		C	H		S	C	A	N		G	R	P	2			
					[*	O	N]						▲	▼

Usable idle channels are displayed after completion of channel scanning. Press the Left key to navigate back up the menu structure.

V	A	C	A	N	T		C	H		G	R	P	2		
0	1	2	3	4	5		7	8	9		B				F

6.4.2 RF Interference Check

Turn off the transmitter showing the problem and set the Channel Identity of the module unit receiving the signal to OFF.

From “Top Menu 6 Utility”, press the Right key and the Up or Down keys to go to “2 Ch Identity”. Press the Right key to show the screen below. Navigate to the required unit with Left or Right keys and turn the Channel Identity off using Up or Down keys.

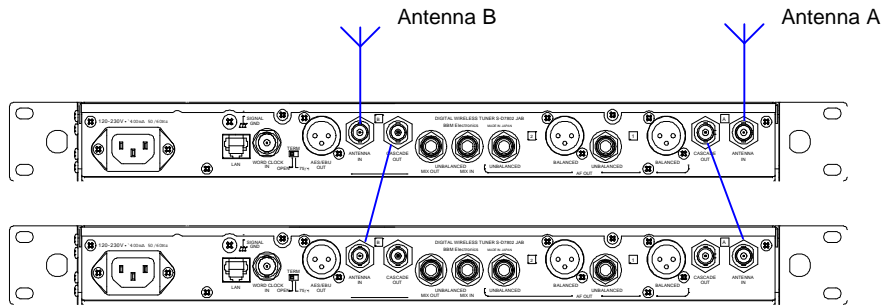
◀			U	1				U	2		C	H	I	D		
			[*	O	N]		*	O	F	F			▲	▼

If the front panel RF bar graph LEDs light, this indicates interference in the frequency set for the corresponding unit. In such cases, change to another frequency free of interference.

7. Sharing An Antenna Between Two Receivers

After connecting an antenna to one receiver, connect that receiver's antenna output BNC (CASCADE OUT) to another receiver's antenna input BNC (ANTENNA IN). When an antenna is shared, the RF Cascade indicator lights are lit on the receiver where the antenna is mounted.

[Rear view]

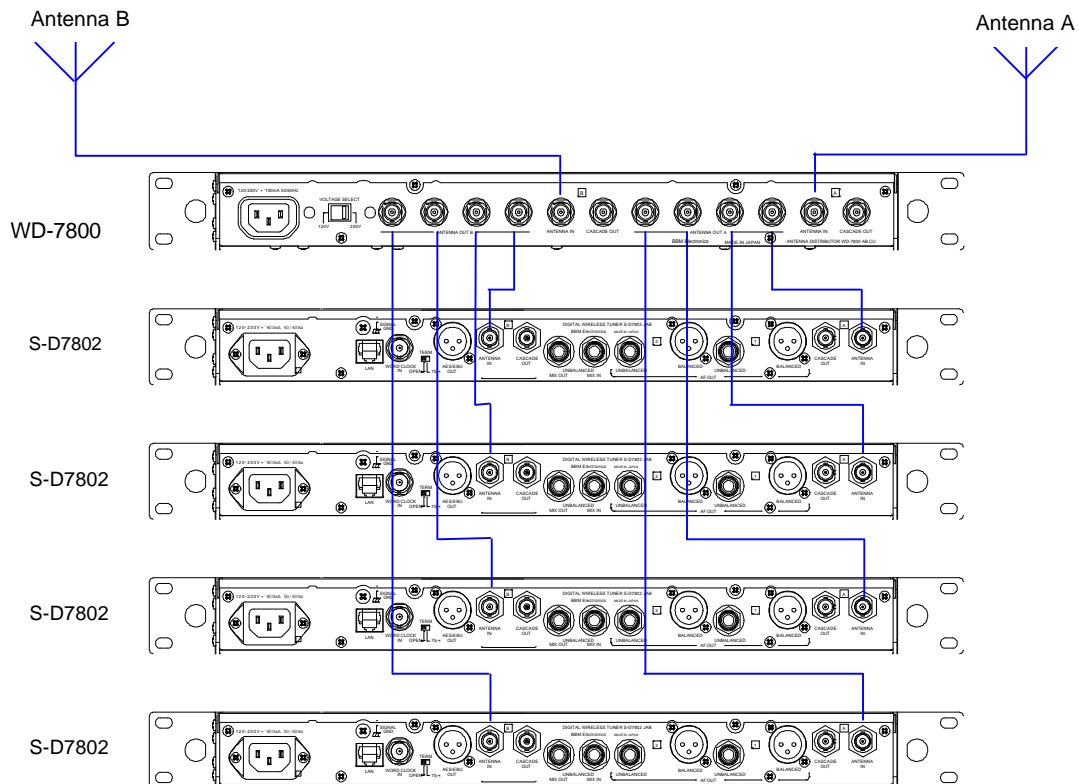


8. Sharing An Antenna Among Three Or More Receivers

Use a WD-7800 Antenna Distributor.

Connect the distributor's antenna output BNC to the receiver's antenna input BNC (ANTENNA IN).

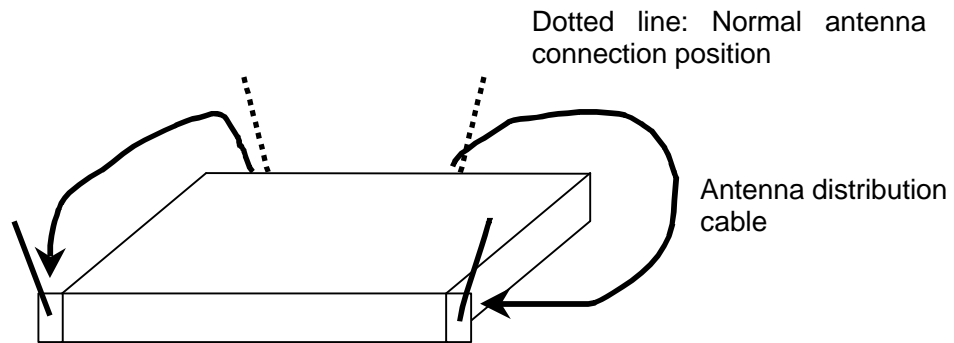
Connect the antenna to the distributor's antenna input BNC (ANTENNA IN).



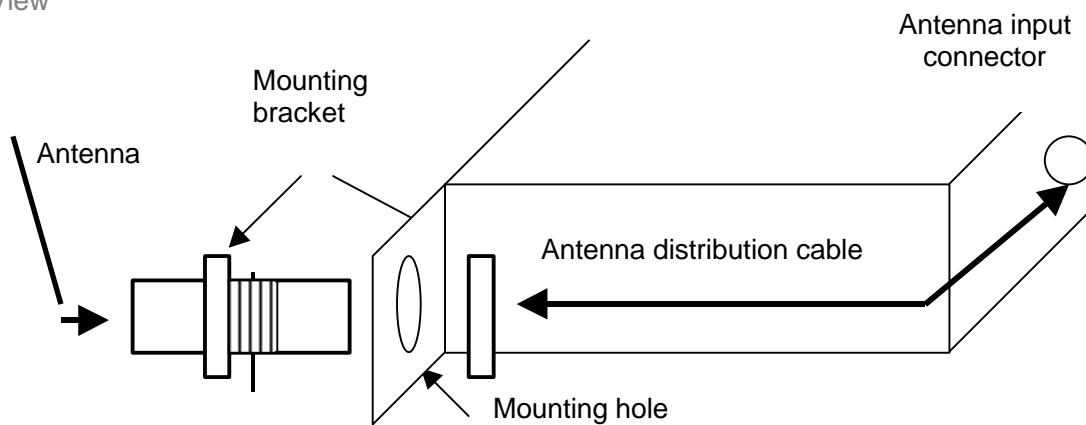
9. About The Antenna Mounting Kit

Use the antenna mounting kit when front-mounted antennas are required.
Fix the rack ears to the mounting holes, then connect the antennas and antenna distribution cables.

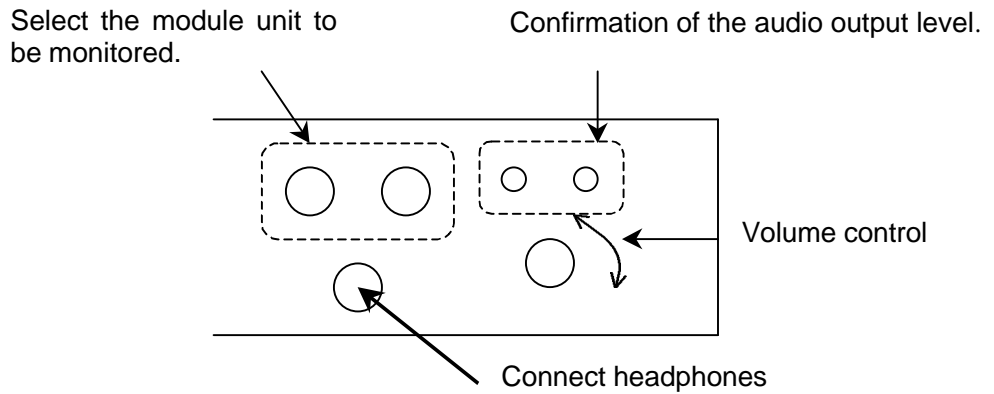
Front View



Side View



10. Monitoring With Headphones



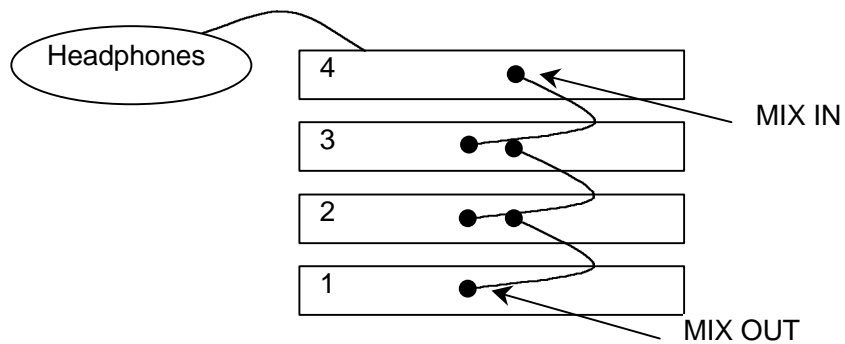
Press the button for Unit 1 or Unit 2 to select the module to monitor. Pressing both keys allows mixed audio from both modules to be heard.

11. Headphone Cascade Connections

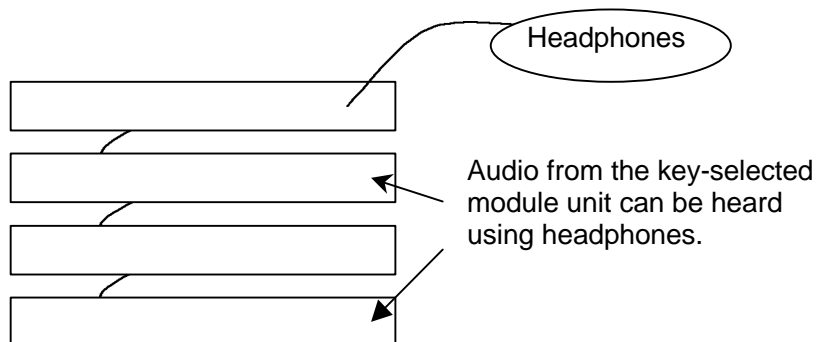
Audio output from multiple receivers can be monitored from a single headphone jack by connecting receiver mixing inputs and outputs in cascade. Audio from the module units selected with the unit selector key is mixed together and output to the headphone jack. Audio output from any selected module unit can be heard through one headphone jack.

Receiver 1 can only monitor audio received by Receiver 1, while Receiver 2 can monitor audio received by both Receivers 1 and 2. Similarly, Receiver 3 can monitor audio received by Receivers 1 through 3, and Receiver 4 can monitor audio received by Receivers 1 through 4

[Rear View]



[Front View]



12. About The Network Function

What can be performed from a PC?

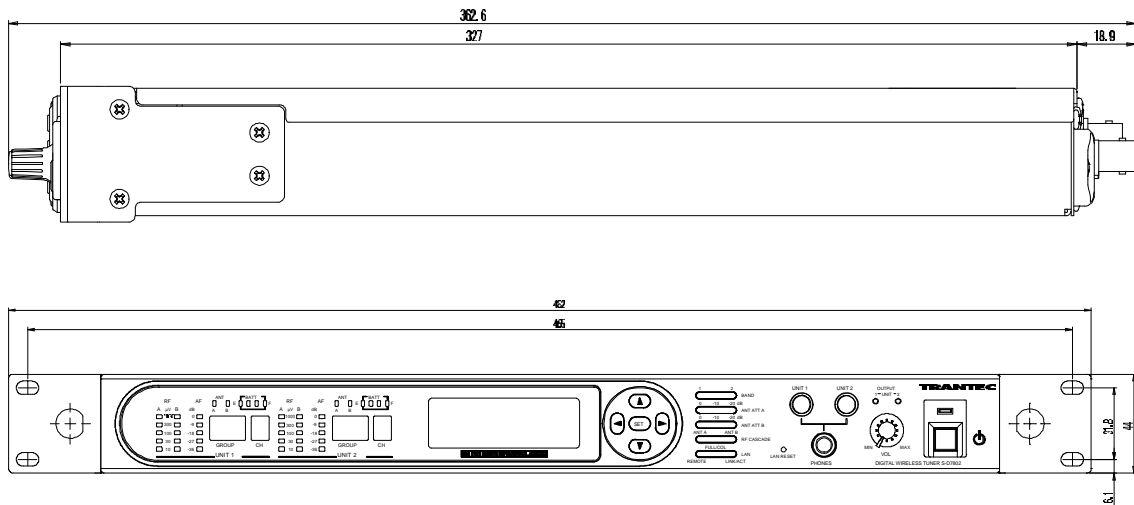
- Monitoring and control
- Parallel level meter monitoring during operation
- Parameter check and adjustment during installation
- Remote audio monitoring

Refer to the SD7000 Digital Microphone Monitor Software Manual for more information.

13. Specifications

S-D7802 Dual Channel Receiver

Frequency Response:	20 Hz – 15 kHz
Audio Connector:	XLR ~ Analog, balanced 1/4" phone jack ~ Analog, unbalanced
Maximum Output Level:	Balanced XLR 20 dBu or more (line level) –20 dBu or more (microphone level) Unbalanced 1/4" phone jack 14 dBu or more (line level) –26 dBu or more (microphone level)
Dynamic Range:	100 dB or more
Distortion:	Less than 0.05%
Audio Mixing Input/Output:	1/4" phone jack
Headphone Output:	1/4" phone jack
D/A Converter Resolution:	24 bits, 48 kHz
Digital Audio Compression:	ADPCM
AES/EBU Output:	Balanced XLR
Word Clock Input for AES/EBU:	BNC input (75 Ω /open)
ID Number:	10 selectable numbers
LAN Port:	Ethernet including audio streaming
RF Frequency Range:	690–750 MHz or 790–870 MHz
RF Input:	2 BNC sockets (diversity), 50 Ω (actual)
RF Cascade Output:	–3dB, 2 BNC sockets (diversity), 50 Ω (actual)
Selectable Frequencies:	5 groups/16 channels per group in 30 MHz bandwidth, tunable in 25 kHz units and 2 selectable bands
Occupied Bandwidth:	200 kHz or less
Modulation System:	pai/4-DQPSK
Sensitivity (Error Free):	–90 dBm or less
Adjacent Channel Rejection:	50 dB or more
Image Rejection:	65 dB or more
Power Source:	100–230 VAC, 50/60 Hz, 400 mA
Operating Temperature Range:	–10 °C to +40 °C
Dimensions:	482 x 44 x 362.6 mm (1U)
Weight :	4 kg



14. Accessories Included

AC Power Cord (UK use only)

2 x Antenna (direct-mount type)

Antenna mounting kit:

- 2 x MB-15B brackets (fitted)

- 8 x M3x8 screws (fitted)

- 4 x M5 screws and washers

- 2 x BNC to BNC antenna distribution cables

4 x rubber feet

2 x blanking plugs

Software CD

Manual

For more information on this and other products, go to www.trantec.co.uk

CE Declaration of Conformity

This equipment is in compliance with the essential requirements and other relevant provisions of Directives 1999/5/EC, 89/336/EC or 73/23/EC.

IMPORTANT NOTICE

Before using this wireless microphone system, please observe the requirements of each country with respect to frequency allocations and individual licensing requirements.



This symbol indicates that this piece of electrical/electronic equipment must be disposed of separately from normal waste at the end of its operational life. Please dispose of this product by taking it to your local recycling or collection point.