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CAD AUDIO WX3000 Wireless Microphone System User Guide

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CAD AUDIO WX3000 Wireless Microphone System

Introduction

CADLiveTM is designed to outperform your expectations and deliver exceptional performance. Engineered to compliment the new generation of exceptional sound systems – The CADLive Series taps our Equitek studio heritage along with our live sound know-how in creating an impactful and easy-to-use line of mics.

The CADLive 3000 series feature True Diversity operation to minimize multipath interference along with CADLock™ Automatic Tone Encoded Squelch to eliminate unauthorized transmissions in the signal path. Frequency agile design when partnered with ScanLink™ technology will precisely scan, select and link to the optimum channel allowing for an easy, flexible frequency plan.
The CADLive handheld transmitter features metal construction and the CADLive D90 Supercardioid dynamic capsule provides a powerful, smooth and highly articulate profile. The handheld and body pack transmitters also include SoftTouch™ multi-function On-Off/Mute switches. CADLive bodypack transmitters are equipped with CADTone™ circuitry ensuring accurate reproduction of Hi-Z guitar and Lo-Z mic inputs.

CADLive wireless features 10, 30, 50mW transmitter power adjustment and dynamic range up to 110dB. Receivers and transmitters are equipped with a high definition LCD display and full RF, AF, Battery Life, Mic Sensitivity and RF power metering.

Receivers are housed in an all-metal chassis and supplied with single/dual rack ears and a BNC relocation kit. Body pack systems include Equitek E19 earworn and E29 lavalier mics. Both systems are supplied with a heavy-duty carry case.

Features

- True Diversity to minimize multipath interference

- CADLock™ Automatic Tone Encoded Squelch eliminates unauthorized interference
- Frequency agile operation for maximum frequency plan flexibility
- ScanLink™ technology for instantaneous and automatic channel configuration
- CADTone™ Body Pack input – Optimized Impedance interface -Hi-Z for Guitar and Lo-Z for mic
- Metal construction Handheld Transmitter equipped with CADLive™ D90 capsule
- High Contrast LCD displays on TX and RX
- Transmitters feature 10, 30, 50mW power adjustment to aid in multiple system applications.
- Simultaneous usage of up to 15 systems per frequency band
- Dynamic Range > 110dB
- AA Batteries with up to 15 Hrs of battery life
- Systems ship with rack ears single/dual BNC relocation kit and durable carry case
- BodyPack systems include miniature E19 Earworn, E29 Lav, WXGTR guitar cable
- XLR and ¼" outputs on receiver

Startup Guide

1. Install new high quality alkaline batteries into transmitter, observing proper polarity.
2. Power up receiver by holding power button for one second.
3. Hold the SET button for one second to unlock the receiver menu.
4. Hold the SCAN button for one second to activate the ScanLinkTM environmental frequency analysis, which automatically selects a clear operating frequency.
5. Turn on the transmitter by holding the power button for one second.
6. Open the battery compartment to reveal the IR node.
7. Press the LINK button (note the IR node will illuminate). Align the two IR nodes (transmitter and receiver) at a distance of 4″-12″ (ambient room light can affect distance) for a few seconds while the receiver updates the transmitter. Your system is now ScanLink'd.

Accessing Advanced Features (SET button)

All advanced features are accessed by holding the "SET" button for one second to unlock the menu. Press the "SET" button to advance through menu items. Menu items may be adjusted using arrow keys.

1. Manually Select Frequencies
   GR (frequency group)
   CH (channel)
2. Receiver Squelch Level
   SQL (used to reduce sensitivity to competing RF by sacrificing operating distance)
3. Transmitter Power
   TX SET RF (higher power increases operating distance, lower power improves simultaneous usage)
4. Transmitter audio gain
   TX SET GAIN (lower gain may be used as needed for louder performers)
5. Receiver Output Volume
   VOL (may be reduced if audio signal overloads mixer)

Specifications

Frequency Range	R Band 580 - 600MHz
	S Band 655 - 679MHz
Frequency Response	40Hz - 15kHz
Dynamic Range	>110dB
Transmitter Power	Switchable 10, 30, 50mW
Battery Life	Up to 15 Hrs
Dimensions	17" [43.2cm] x 12" [30.5cm] x 4" [10.2cm]
Weight	5lbs [2.3kg]

Receiver RX3000 (Front)

1. Power button.

2. IR ScanLink node. Use for linking transmitter and receiver.

3. LINK button. Use to initiate TX-RX link.

4. SET button. Unlocks advanced features.

5. SCAN button. Use to initiate environmental frequency analysis.

6. UP and DOWN buttons. Use to adjust advanced feature menu items.

7. High-Contrast display.

    1. Multi-segment RF signal strength meter.

    2. Multi-segment AF signal level meter.

    3. ANT.A/ANT.B diversity indicator.

    4. IR indicates active IR communication.

    5. SQL squelch level indicator.

    6. GR CH group and channel indicator.

    7. Operating Frequency.

    8. TX SET RF indicates transmitter RF power setting.

    9. TX SET GAIN indicates transmitter audio gain setting.
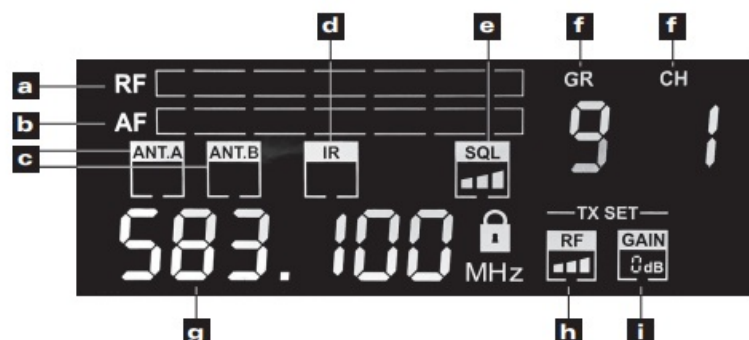
Receiver RX3000 (Rear)

1. DC power input jack. 12-18VDC, 300mA min, center positive.

2. XLRM-type low-impedance balanced audio output.

3. 1/4″ [6.35mm] high-level unbalanced ouput

4. BNC 50 ohm antenna inputs.

Channelization

These frequencies have been approved for use within the United States and Canada as of the date of publication of this manual. It is the user's responsibility to comply with local regulations.

655 – 679MHz Band S

CH	Group 1	Group 2	Group 3	Group 4	Group 5
1	580.000	580.600	582.500	580.500	580.800
2	582.200	581.100	583.500	581.000	583.000
3	584.600	582.400	584.900	583.300	584.000
4	586.600	583.400	586.100	584.700	585.400
5	588.500	584.800	586.900	585.900	587.400
6	590.600	586.000	588.800	586.700	589.300
7	593.500	586.800	590.900	588.600	591.400
8	596.500	594.300	594.400	590.700	595.200
9	600.000	597.300	597.400	594.200	598.100

CH	Group 6	Group 7	Group 8	Group 9	
1	581.300	581.900	582.100	583.100	
2	582.800	584.100	583.600	584.200	
3	584.500	586.500	584.300	587.300	
4	587.100	587.700	585.300	593.300	
5	587.900	591.000	591.200	599.200	
6	589.800	593.700	593.900	584.400	
7	592.700	595.800	596.000	587.500	
8	595.700	597.700	597.900	589.500	
9	598.200	599.300	599.500	599.400	

580 – 600MHz Band R

CH	Group 1	Group 2	Group 3	Group 4	Group 5
1	655.400	656.250	655.200	656.775	656.100
2	658.500	657.500	656.675	659.500	657.225
3	660.575	659.225	657.800	661.200	659.550
4	662.050	661.725	659.450	662.600	661.575
5	664.425	663.350	660.750	663.700	663.900
6	666.200	664.550	663.200	665.250	667.500
7	669.450	667.800	665.325	666.500	668.750
8	670.650	669.575	669.225	670.100	670.300
9	672.275	671.950	671.525	672.425	671.400
10	674.775	673.425	673.575	674.450	672.800
11	676.500	675.500	676.600	675.775	674.500
12	677.750	678.600	678.575	677.900	677.225

CH	Group 6	Group 7	Group 8	Group 9	Group 10
1	655.425	655.700	656.550	655.500	657.075
2	657.400	658.800	657.800	656.975	659.800
3	660.425	660.875	659.825	658.100	661.500
4	662.475	662.350	662.025	659.750	662.900
5	664.775	664.725	663.650	660.050	664.000
6	668.675	666.500	664.850	663.500	665.550
7	670.800	669.750	668.100	665.525	666.800
8	673.250	670.950	669.875	669.525	670.400
9	674.550	672.575	672.250	671.825	672.725
10	676.200	675.075	673.725	673.875	674.750
11	677.325	676.800	675.800	676.900	676.075
12	678.800	678.050	678.900	678.875	678.200

Simultaneous Use
580 - 600MHz Band R

Group	Channel	Frequency
1	1	580.000
1	3	584.600
1	9	600.000
3	5	586.900
3	6	588.800
3	7	590.900
3	9	597.400
4	2	581.000
4	3	583.300
4	7	588.600
5	9	598.100
6	1	581.300
6	8	595.700
8	5	591.200
9	9	599.400

Simultaneous Use
655 - 679MHz Band S

Group	Channel	Frequency
1	1	655.400
1	9	672.275
1	12	677.750
2	1	656.250
2	4	661.725
2	5	663.350
2	10	673.425
2	12	678.600
3	1	655.200
3	5	660.750
5	12	677.225
6	6	668.675
8	2	657.800
8	12	678.900
10	3	661.500

Handheld TX3000 Transmitter

1. CADLive D90 supercardioid dynamic capsule.

2. Enclosed transmitting antenna.

3. IR node for Scan-LinkTM

4. Power/Mute button. Hold for power, press for mute.

5. High-contrast display

    1. a) Operating frequency

    2. b) RF power indicator

    3. c) Transmitter audio gain indicator

    4. d) Mute indicator

    5. e) Battery strength indicator

   6. 6. Battery compartment. Use only high quality AA alkaline batteries. Observe polarity.
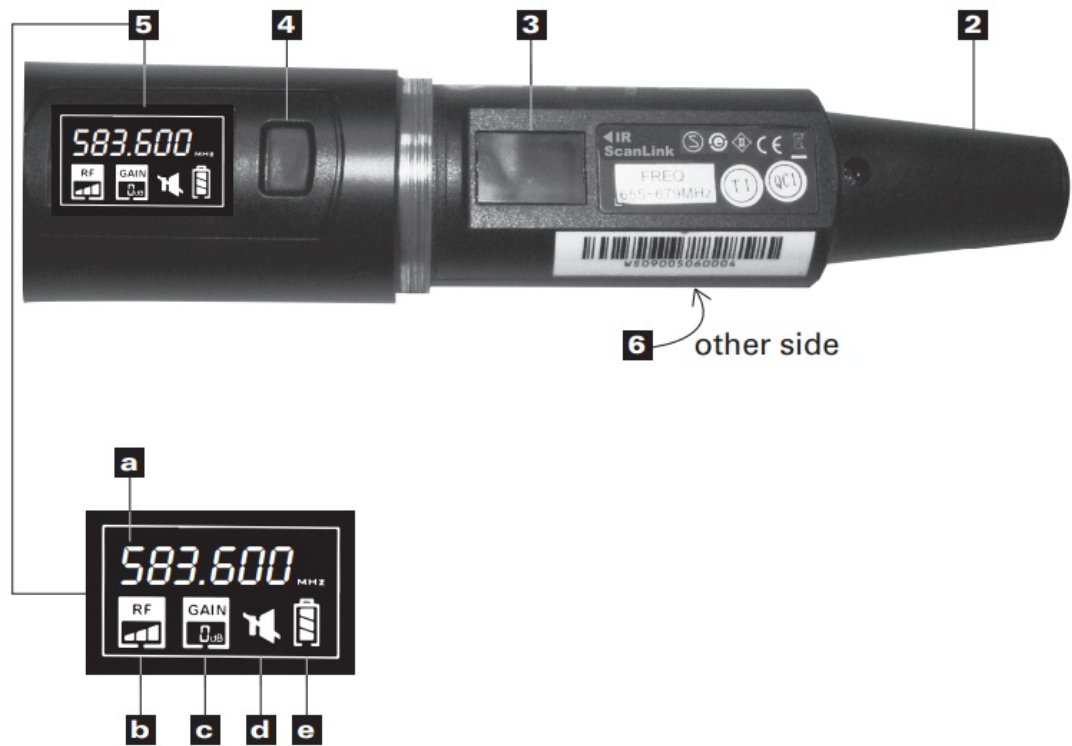
Bodypack TX3010 Transmitter

1. Power/Mute button: hold for power, press for mute.
2. CADTone TB4M-type audio input connector.
3. Transmitting antenna
4. Power indicator
5. High-contrast display
    1. a) Operating frequency
    2. b) RF power indicator
    3. c) transmitter audio gain indicator
    4. d) mute indicator
    5. e) battery strength indicator
6. IR node for ScanLink
7. SET button. Unlocks advanced features.
8. UP arrow button. Use to adjust advanced feature menu items.
9. Battery compartment. Use only high quality AA alkaline batteries observing proper polarity.
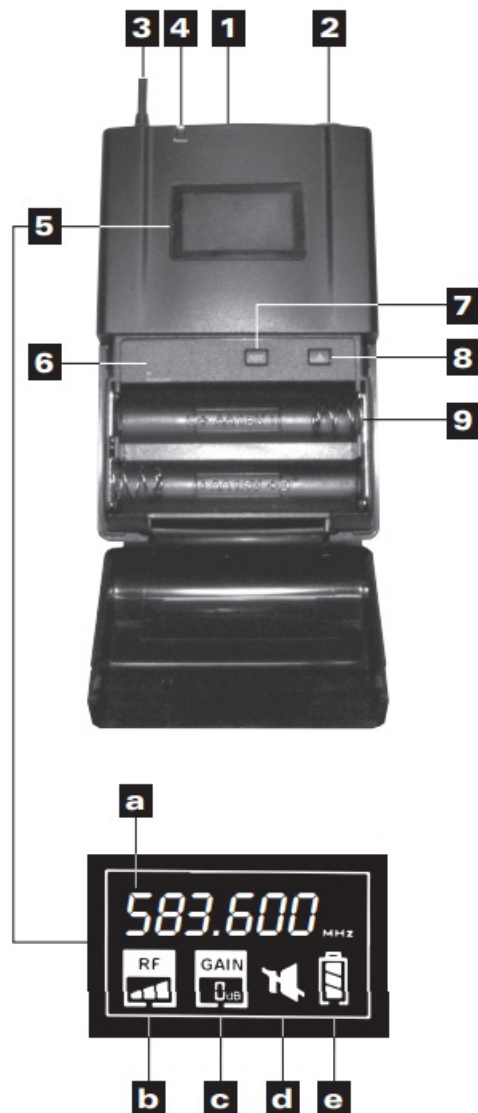
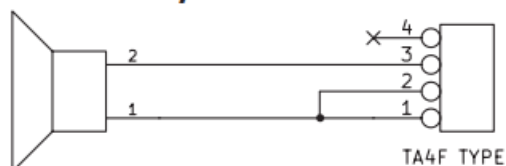**Interfacing to CADTone TB4M-type input connector**

3-wire type electret mic
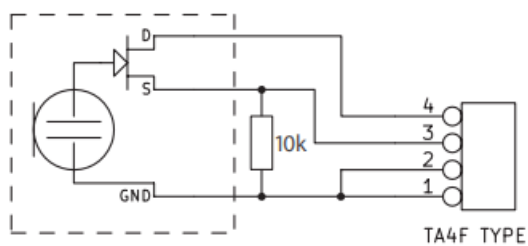
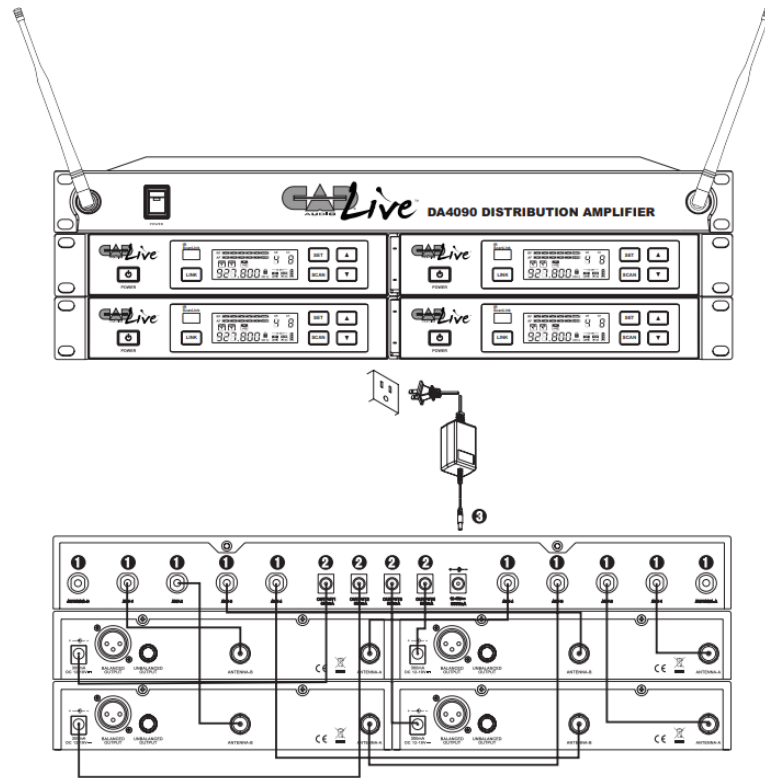2-wire type electret mic
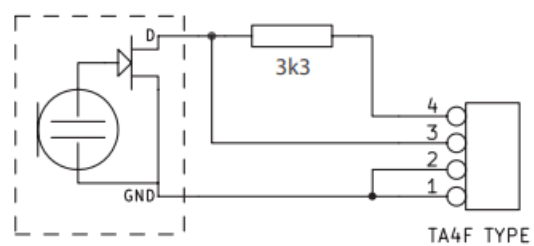
Dynamic mic

Instrument

Using the DA4090 Distribution Amplifier to Simplify Multiple-System Installations

1. BNC 50 ohm cable.
2. Power cable.

3. Power adapter.

Individuals with cardiac pacemakers and other similar medical devices should consult with their physician before using any RF devices. Though the output level of this wireless system is below 50 milliwatts, the proximity of the transmitter to the implant device could pose a threat.

As with any wireless product, environmental conditions can reduce or in some cases prohibit a successful connection between the transmitter and the receiver.

This device complies with Part 15 of the FCC Rules. Most users of CAD Audio wireless products in the United States do not need a license for operation. However, the rules for unlicensed operation state that this device must not operate in excess of 50 milliwatts and it must not cause harmful interference to other wireless devices, and must accept interference received from other devices. Wireless products meeting CAD factory standards adhere to these rules. The FCC reserves the right to change these rules at any time. For more information contact the FCC at 1-888-CALL-FCC (TTY: 1-888-TELL-FCC) or visit the FCC's wireless microphone website at: **www.fcc.gov/cgb/wirelessmicrophones**.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Two-Year Limited Warranty

CAD Audio hereby warrants that this product will be free of defects in material and workmanship for a period of two years from the date of purchase. In the unlikely event that a defect occurs CAD Audio will, at its option, either repair or replace with a new unit of equal or greater value. Retain proof of purchase to validate the purchase date and return it with any warranty claim.

This warranty excludes exterior finish or appearance, damage from abuse, misuse of the product, use contrary to CAD Audio's instructions or unauthorized repair. All implied warranties, merchantability, or fitness for a particular purpose is hereby disclaimed and CAD Audio hereby disclaims liability for incidental, special or consequential damages resulting from the use or unavailability of this product.

This warranty gives you specific legal rights and you may have other rights that vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above exclusions and limitations may not apply to you.

Note: No other warranty, written or oral is authorized by CAD Audio.

Documents / Resources

	CAD AUDIO WX3000 Wireless Microphone System [pdf] User Guide WX3000 Wireless Microphone System, WX3000, Wireless Microphone System, Microphone System, System

References

- **User Manual**