RDL 390DBT1A In Wall Bluetooth Audio Input Module Instruction Manual

NIORDL 390DBT1A In Wall Bluetooth Audio Input Module

Contents

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INSTRUCTION FOR USE

- Bluetooth Audio Input for Installed Sound System.
- Intuitive Single Button Pairing with LED Status Indication.
- Special Software Not Required for Module Setup.
- Customize the Module ID Name and Programming Password through the Bluetooth Connection.
- Sends Received Bluetooth Audio to RDL Format-A Receivers.
- Mono Summed or Stereo Audio Input Mode is Switch-Selectable on Rear Panel.
- Rear-Panel Switch Selects which RJ45 Pair (A, B or C) is Fed in Mono Summed Mode.
- Daisy-Chain up to Three D SERIES-BT1A modules to One Format-A Receiver in Mono Mode.
- Remotely Powered through Twisted Pair Cable.
- Signal and Power Pair Pass-Through on RJ45 Jacks.

The D SERIES-BT1A is part of the group of versatile wall-mounted products from Radio Design Labs. The standard mounting case can be directly fastened in North American electrical boxes or in RDL International wall boxes.

APPLICATION: The D SERIES-BT1A modules are Bluetooth audio receiving modules compatible with RDL® Format-A twisted pair receivers. When paired with a compatible Bluetooth enabled device, the module receives stereo audio from the Bluetooth source. The stereo signal is sent through two Format-A pairs to any RDL Format-A receiver. A stereo/mono switch set by the installer permits summed mono audio to be sent over one switch-selected pair to the Format-A receiver.

If set for stereo operation, an additional Format-A source (set to Pair A) may be daisy chained with the D SERIES-

BT1A to a three-pair Format-A receiver. If set for mono operation, up to three D SERIES-BT1A modules may be daisy chained to a single three-pair Format-A receiver. Connections between Format-A modules and Format-A receivers use standard CATx cable with RJ45 connectors.

The D SERIES-BT1A modules are powered from the Format-A receiver. The installer can customize the module name and programming password through the Bluetooth connection using a smartphone, computer or tablet terminal program. These modules feature studio-quality circuits and analog filters to provide audio performance exceeding expectations from consumer interface technologies. High performance, simplicity of operation and efficiency of installation make RDL the best value in professional Bluetooth interfaces.

Installation/Operation

Declaration of Conformity available from rdlnet.com. Sole EMC specifications provided on product package. Specifications are subject to change without notice.

TWISTED PAIR FORMAT-A
Models D SERIES-BT1A
Wall-Mounted Bluetooth® Audio Format-A Interface

Instructions for Bluetooth pairing

These instructions are based on the default RDL unit identification as RDL_BT_FA. If the RDL unit has been renamed by the installer, substitute the new name for RDL_BT_FA in the following steps.

PAIRING

1. Press and hold the PAIR button until the blue LED on the RDL unit illuminates, then release.
   Note: The blue LED flashes as long as the unit is available for pairing. If the blue LED stops flashing before the pairing process is completed, restart these steps.
2. While the blue LED is flashing, locate RDL_BT_FA on your device's Bluetooth settings and click PAIR DEVICE, following screen prompts to complete the pairing process.
   Note: The blue LED glows steady while the RDL unit is paired.

UN-PAIRING

The RDL unit will unpair automatically 30 seconds after the user device leaves the area. The user device may be manually disconnected by pressing and holding the PAIR button on the RDL unit.

RE-PAIRING

1. Press and hold the PAIR button until the blue LED on the RDL unit illuminates, then release.
2. While the blue LED is flashing, locate RDL_BT_FA under Previously Connected Devices on your device's Bluetooth settings and click RDL_BT_FA, following screen prompts to complete the re-pairing process.
   Note: If the re-pairing fails, click Forget Device on the user device and pair the RDL unit as a new device.

Upon successful pairing, the user device applications for audio playback through a Bluetooth interface may be used.

TYPICAL PERFORMANCE

Output: RDL Format-A (RJ45)
Format-A Input: RJ45 LOOP IN
Format-A Signal Pair Used: A, B, or C (summed mono mode, rear-panel switch-selectable); B and C (stereo mode, pair A pass through)
Frequency Response: 20 Hz to 20 kHz (± 0.5 dB)
THD+N: < 0.1%
Noise below -20 dBFS: < -70 dB
Crosstalk (channel to channel): < 70 dB
Audio Operating Levels: -20 dBFS = +4 dBu (balanced), nominal
Ambient Operating Environment: 0° C to 40° C
Power Requirement: 24 Vdc @ 100 mA (through RJ45)
Dimensions: 1.73" (4.39 cm) W; 4.11" (10.44 cm) H; 1.62" (4.11 cm) D
Package Type: Cardboard Box
Package Dimensions: 3.625 x 4.625 x 2.125 in.
Shipping Weight: 0.45 lb.
WEEE weight: 0.29 lbs.
Tariff code: 8518.50.0000

Scan the QR code above or see the DD SERIES-BTN44 page at **rdlnet.com** for programming information.

RDL Bluetooth® units can be programmed by the installer using Bluetooth enabled smart phones, tablets or computers equipped with a serial terminal program. The following is an example of a SERIAL TERMINAL PROGRAM for Android devices:

https://play.google.com/store/apps/details?id=de.kai_morich.serial_bluetooth_terminal

Note: RDL is currently unaware of a Bluetooth compatible serial terminal program for Apple® phones and tablets.

As supplied from the factory, RDL Bluetooth units have the following default settings loaded:

Product Name	RDL_BT_**	(** denotes suffix unique to each RDL model)
Program Code	1234	(Code used to program the unit)
Pair Code	0000	(Code used to pair to the unit, if required by Pair Mode setting)
Pair Mode	SIMPLE	(Mode setting to require or not require a Code for pairi ng)
Dim Mode	NORMAL	(Mode setting to determine Bluetooth LED intensity, ex cludes SYNC LED)

If these values are suited to the installation, no programming is required.

Note: The Product Name is typically changed to help a user identify the correct Bluetooth unit when pairing.

To enter programming mode (do all of the following steps)

1. Pair to the RDL unit.
   Note: Pairing instructions are provided on the product data sheet and on the instructions provided with the RDL unit.
2. Open the SERIAL TERMINAL PROGRAM.
3. Connect the SERIAL TERMINAL PROGRAM to the Bluetooth device. Note: The green LED on the RDL unit's

front panel will glow orange when the terminal program is connected.

4. Wait until '~' prompt is displayed.

   Note: The ~ is sent from the RDL unit to the terminal program when the RDL unit is ready to receive the program code.

5. Enter the Program Code.
6. Press and hold 1 second, then release the PAIR button.

   Note: If the Program Code entered is invalid, 'Error!' and a '~' prompt is displayed indicating the unit is awaiting a retry. After four invalid numeric entry attempts, the blue LED will flash, the unit will restart and un-pair any paired device.

7. RDL_BT V* is displayed upon successful code entry; The programming mode is now active.

   Note: V* denotes the firmware version. A '~#' prompt is displayed whenever the unit is awaiting a programming input.

   Note: Upon entering programming mode, all currently programmed settings are displayed.

While in the programming mode, any of the factory default settings may be changed. This is accomplished through the terminal program by typing the Syntax consisting of a two-character command followed by a colon followed by a valid entry. The opportunity is provided to confirm (Y or N) prior to saving the entry. If an invalid entry is entered, no prompt will be displayed.
Note: If the entry is invalid, 'Error!' and a '~#' prompt is displayed indicating the unit is awaiting a retry.
Note: Single character abbreviations may be used for defined input strings as indicated by an underlined character. For example, the letter "S" may be used for SIMPLE in order to shorten the time required to program the unit.

CN-CHANGE NAME

Syntax CN:<name>
where is an alphanumeric string (allowing special characters) with at least 1 character and no more than 32 characters. This changes the name the RDL unit displays to Bluetooth devices for pairing.
Note: Upon successful entry, the RDL unit will restart and un-pair any paired device. It is recommended to "forget" the prior name before re-pairing from the same device.

CC-CHANGE PROGRAM CODE

Syntax CC: <program code>

where is a numeric value with at least 4 digits and no more than 8 digits This changes the code required to enter the programming mode of the RDL unit via the serial terminal program

Note: Upon successful entry, the RDL unit will remain in the programming mode.

CP-CHANGE PAIR CODE
Syntax CP:<pair code>

where is a numeric value with 4 digits

This changes the Pair Code used to pair with the RDL unit.

Note: The Pair Code is only used if the Pair Mode is set to "CODE".
Note: Upon successful entry, the RDL unit will remain in the programming mod

CM-CHANGE PAIR MODE
Syntax CM:<pair mode>

where is an alphabetical string consisting of the word SIMPLE or CODE

This sets the RDL unit to either allow pairing without a pair code (SIMPLE mode) or to require a user to enter a code to pair with the unit (CODE mode).

Note: Upon successful entry, the RDL unit will restart and un-pair any paired device.
Note: Upon first pairing with the pair mode set to CODE, the PAIR CODE must be entered on the device that is pairing to the RDL unit. That device may resend that PAIR CODE upon subsequent pairings, or may challenge the user to re-enter the PAIR CODE.

CD-CHANGE DIM
Syntax CD:<dim mode>

where is an alphabetical string consisting of the word OFF or NORMAL or BRIGHT This changes the brightness of the front-panel LEDs.
The LEDs glow at full intensity when the PAIR button is pressed or the unit is in programming or pairing mode. Approximately 5 seconds after pairing is complete and during periods of inactivity, the LEDs will dim to avoid distraction in the room when set to NORMAL. The LEDs will remain at full intensity at all times when set to BRIGHT. The LEDs will extinguish when set to OFF.
Note: Upon successful entry, the RDL unit will remain in the programming mode.

In addition to programming the settings above, the following commands are available in programming mode:

CS-PRINT
Syntax CS:PRINT
This sends the list of current stored programmed settings to the terminal program display.
Note: Upon successful entry, the RDL unit will remain in the programming mode.

CR-REBOOT
Syntax CR:REBOOT
This reboots the unit without restoring default settings or making any changes to settings that have been programmed.
Note: Upon successful entry, the RDL unit will restart and un-pair any paired device.

To exit the programming mode (do any one of the following steps)

1. Disconnect the SERIAL TERMINAL PROGRAM,
2. Unpair the RDL unit from the device (hold the PAIR button >3 seconds), or
3. Send REBOOT command while still in programming mode.

Factory reset (restore factory default values)
The following steps will restore the RDL unit to its factory default settings. This may be required if the Program Code has been changed and its value has been misplaced, thus the current Program Code is not known.

1. Remove the RDL unit from its wall box.
2. Disconnect power and reconnect the power to the RDL unit.
3. Press and hold the recessed reset button (on the top of the RDL unit in line with the PAIR button) until the green LED starts flashing, then release.

Note: For security, the reset button is not labeled.

4. After the green LED stops flashing the device will automatically reboot using factory default programmed values.

Radio Design Labs Technical Support Centers U.S.A. (800) 933-1780, (928) 778-3554; Fax: (928) 778-3506
Europe [NH Amsterdam] (++31) 20-6238 983; Fax: (++31) 20-6225-287

Documents / Resources

	RDL 390DBT1A In Wall Bluetooth Audio Input Module [pdf] Instruction Manual 390DBT1A, D SERIES-BT1A, 390DBT1A In Wall Bluetooth Audio Input Module, In Wall Bluetooth Audio Input Module, Wall Bluetooth Audio Input Module, Bluetooth Audio Input Module, Audio Input Module, Module

References

- RDL Homepage
- RDL Homepage
- User Manual