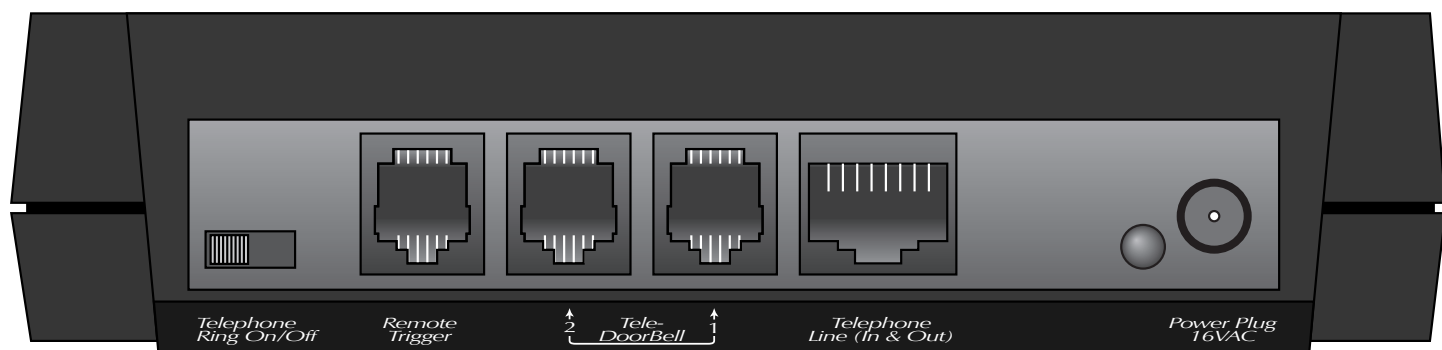


DTI-1

Instruction Manual



Doorbell Telephone Interface



1. SAFETY INSTRUCTIONS



“WARNING” “ TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.”

“CAUTION” “ TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER - SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Safety Instructions

1. Read Instructions - All the safety and operating instructions should be read before the appliance is operated.
2. Retain Instructions - The safety and operating instructions should be retained for future reference.
3. Heed Warnings - All warnings on the appliance in the operating instructions should be adhered to .
4. Follow Instructions - All operating and user instructions should be followed.
5. Water and Moisture - The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.
6. Carts and Stands - The appliance should be used only with a cart or stand that is recommended by the manufacturer. An appliance and cart combination should be moved with care. Quick stops, excessive force and uneven surfaces may cause the appliance and cart combination to overturn.
7. Wall or ceiling Mounting - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. Ventilation - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings. Place the DTI-1 in a well-ventilated location, leaving at least 2 inches (5cm) of clearance on all sides, top and rear of unit for air flow. If ventilation is blocked, the DTI-1 may overheat and malfunction.
9. Heat - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
10. Power Sources - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
11. Grounding or Polarization - The precautions that should be taken so that the grounding or polarization means of an appliance is not defeated .
12. Power - Cord Protection - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, receptacles, and the point where they exit from the appliance.
13. Cleaning - The appliance should be cleaned only as recommended by the manufacturer.



14. Non-use Periods - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
15. Object and Liquid Entry - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through the openings.
16. Damage Requiring Service - The appliance should be serviced by qualified service personnel when:
 - A. The power - supply cord or the plug has been damaged; or
 - B. Objects have fallen, or liquid has been spilled into the appliance; or
 - C. The appliance has been exposed to rain; or
 - D. The appliance does not appear to operate normally; or
 - E. The appliance has been dropped or the enclosure is damaged.
17. Servicing - The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.
18. Avoid using a telephone (other than cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
19. Do not use the telephone to report a gas leak near the leak.

Precautions

1. Do Not Touch The DTI-1 With Wet Hands. Do not handle the DTI-1 or power cord when your hands are wet or damp. If water or any other liquid enters the DTI-1 cabinet, take the DTI-1 to qualified service personal for inspection.
2. Location of the DTI-1 - Do not expose the DTI-1 to direct sun light or heating units as the DTI-1 internal components temperature may rise and shorten the life of the components. Avoid damp and dusty places.
3. Care – From time to time you should wipe off the front and side panels and the cabinet with a soft cloth. Do not use rough material, thinners, alcohol or other chemical solvents or cloths since this may damage the finish or remove the panel lettering.

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2. INTRODUCTION

Congratulations on your purchase of the DTI-1 Doorbell Telephone Interface, a system that offers enhanced security while providing unparalleled convenience. The system can be used with or without a doorbell.

Operation of this unit is subject to the following conditions:

1. This device may not cause harmful interference.
2. This device may accept any interference including interference that may cause undesired operation.

Complies with Part 68, FCC Rules FCC REG NO. 5ERCAN-31264-OT-N REN: 0.8B (DOC/CSA/NTRL/C approved)

3. PARTS LIST

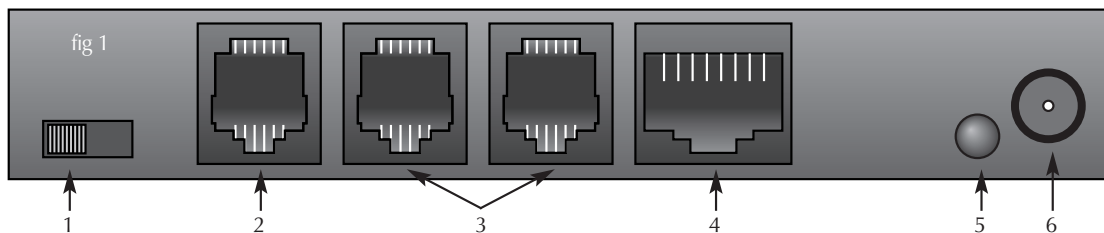
The DTI-1 Doorbell Telephone Interface system is shipped from the factory with the following components:

1. DTI-1 Doorbell Telephone Interface control unit enclosed in plastic housing
2. TDB-2 TeleDoorBell speaker unit with wall mounting plate
3. CSA/UL approved class 2 Power Supply, Input 120VAC, 60Hz, Output 16Vac 250 mA. Note: the system will also work with a class 2 Power Supply Input 120VAC, Output 16-24Vdc 350 mA. Please make sure that the output does not exceed 24 VDC or serious damage may occur.
4. Two modular RJ-11 Male open-ended patch cord. Used to splice and connect door speaker unit, door strike and doorbell, to the DTI-1 system unit.
5. RJ-45 8 pin male to male modular patch cord.
6. Four (4) #6 wood screws for mounting.
7. Two (2) white painted oval-head machine screws.
8. RJ31X (CA38A) Data Jack included.

4. FEATURES

The DTI-1 Doorbell Telephone Interface is a telephone based doorbell system that provides the system user with the capability of communicating with a door speaker from any installed telephone set, including cordless. Unmatched in convenience, this unique new product provides the following features:

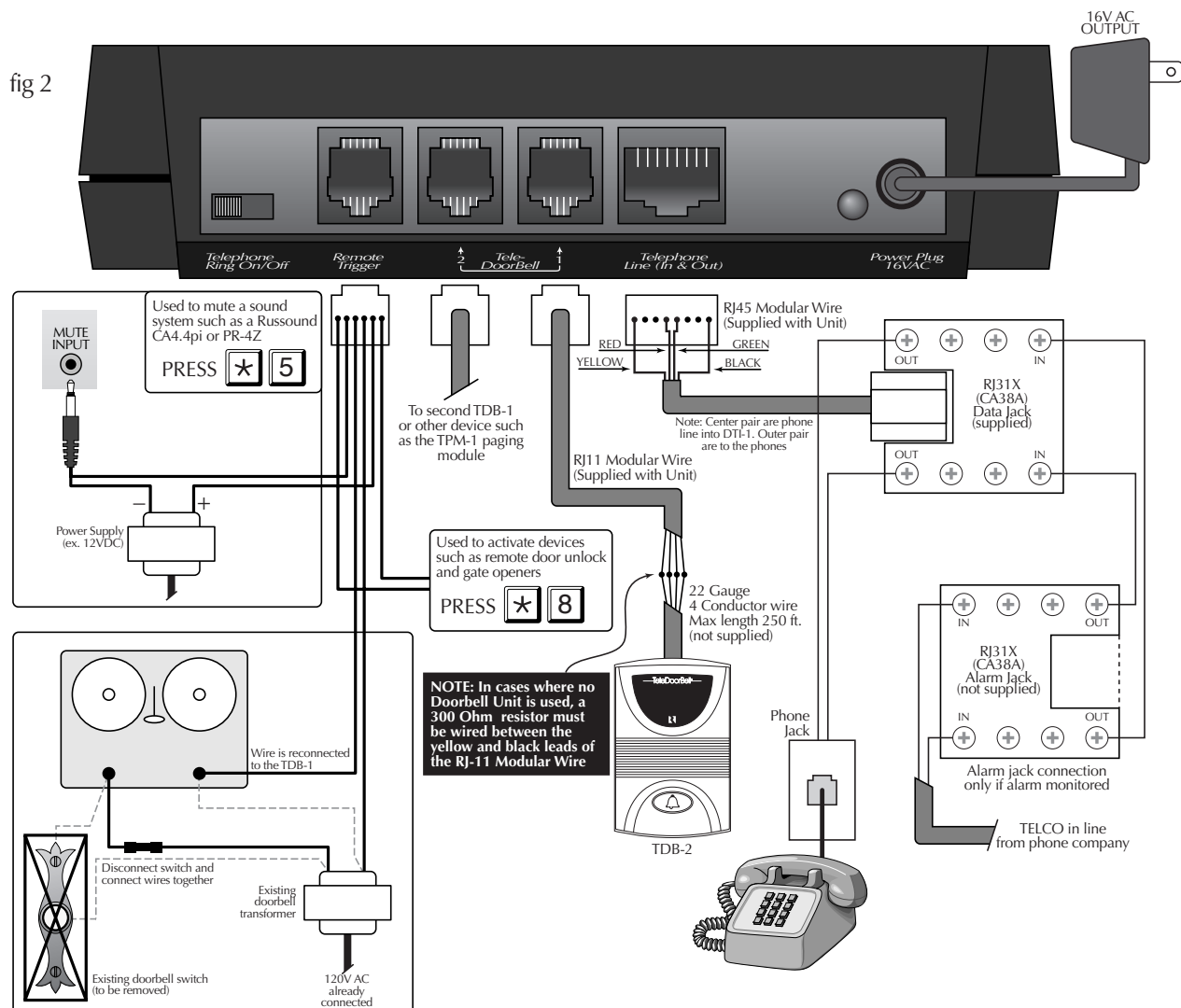
1. System will work as a replacement or in parallel with any standard doorbell.
2. Supports speakerphone quality conversation between the telephone and the door speaker.
3. Unique telephone ringing when door speaker button is depressed.
4. Allows homeowner to activate the door speaker(s) by entering a unique touch-tone code from any telephone.
5. Toll Restriction, 1+ long distance and 011 international, user selectable.
6. Relay closure to ring doorbell or a number of other devices.
7. Can be set to ring doorbell only.
8. RJ31X (CA38A) Data Jack.
9. Door speaker has LEDs for constant illumination.
10. The system gives a user two minutes to access door following the depression of the door speaker button.
11. If the door speaker button is depressed, when the telephone is in use on an outside call, the user hears a beep tone to alert that there is a visitor at the door. The user can then put the telephone call on hold and connect to the door speaker. Alternatively, a user can hang up on the telephone call and then pick up the handset and they will be connected to the door speaker.
12. A DTMF code selection (dialed from any connected telephone) allows the system user to access the door speaker outside of the two-minute window.
13. Relay closure activated by DTMF digit *8, provides 6-second door strike contact operation. (Normally Open NO).
14. Automatic relay closure for six (6) seconds upon door button depression or telephone line ringing. Used to mute sound system
15. Password protection for programming which user can change to a personal 3-digit DTMF code.
16. Progress tones to guide user while programming.



5. CONNECTIONS

1. Telephone Ringer Selector Switch – This switch enables/disables ringing of the telephones. When positioned to the left, this switch enables ringing of the telephones.
2. Doorbell/Door Strike/Sound system mute (Relay Contacts) Connecting Jack – The center two pins connect to the doorbell button and will ring an existing or new doorbell. The adjacent pair will provide a six second closure upon door button depression or incoming telephone line ringing (this is used to mute a sound system). The adjacent pair offers a user selectable (*8) relay closure than can be used to operate a door strike or other relay controlled ancillary devices.
3. Door Speaker Connecting Jacks – Each of these jacks enables a connection to door speaker for communicating to a door speaker.
4. Telephone Line (In & Out) Connecting Jack – This jack provides connection to the incoming telephone line on the inner pair and connection to household telephone(s) on the outer pair.
5. Power Status LED – When "ON," this lamp indicates the presence of power to the unit, when "OFF," it indicates the absence of power to the unit.
6. Power Supply Jack – This jack is the connecting point for AC power supply to the unit; The supply is typically 16 VAC at a minimum of 250 mA, but can be as high as 20Vac, which will provide greater ringing power to the telephones. Can also use a 16-24 VDC supply. (Note: Do not exceed 24 VDC or serious damage can occur to the controller unit)

CAUTION: For added protection we strongly recommend you use surge protectors on both your power supply and on the C/O line (phone line) to protect against lightning and other energy surges.



6. INSTALLATION

To complete the installation the installer must supply the following:

- RJ31X/CA38A disconnect and bypass jack. This will provide a bypass capability whereby the telephone line continues to work if the DTI-1 needs to be removed from the telephone line. Note: If installation is done at a location that has an existing alarm jack (RJ31X/CA38A) then ensure that the alarm is installed before the DTI-1 RJ31X/CA38A jack. Otherwise, the alarm system may not have disconnect priority.
- Two plastic wall anchors to mount the TDB-2 door speaker unit near a point of entry.

Figure 1 shows the detail of the connectors located on the front of the unit. Figure 2 shows interconnection of the DTI-1 with other parts that form the system.

Installation of the system requires that the installer install a 4-conductor wire (24 AWG) be installed from the location of the door speaker unit to the location of the system control unit. It is recommended that the system control unit be installed near the point-of-entry of the customer's main telephone line. Please ensure that adequate AC power is available in the general vicinity.

1. First drive an initial mounting screw 2" above the doorbell wiring hole leaving about a 1/4" of screw shaft extending from wall.

2. Thread wire through opening at bottom of unit.

NOTE: We recommend that you use a silicon sealer to protect the wiring around the wiring hole.

3. Hang TDB-2 on initial mounting screw as shown in figure 3.
4. Secure TDB-2 to wall with a secondary mounting screw as shown in figure 4.
5. Connect the four wires to the wiring posts of the TDB-2 as shown in figure 5.
6. Replace the cover as shown in figure 6.

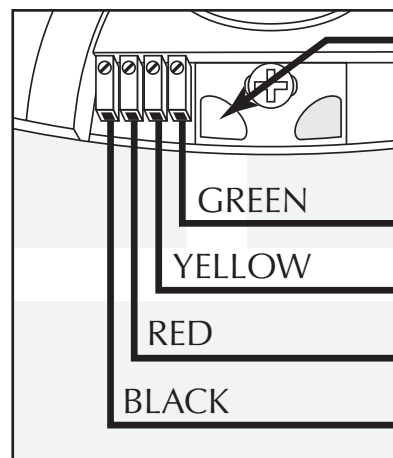


fig 3

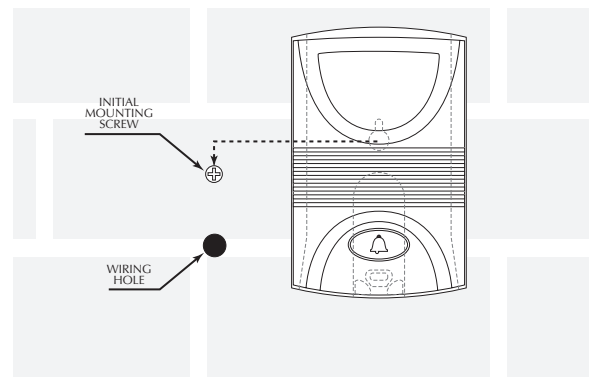


fig 4

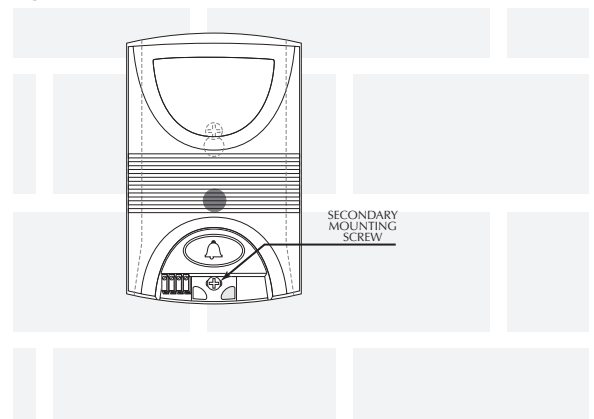


fig 5

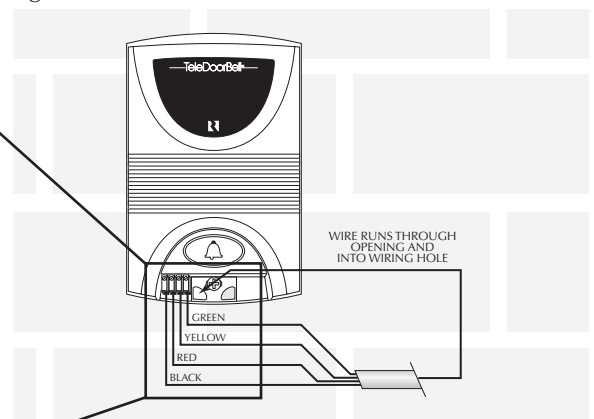
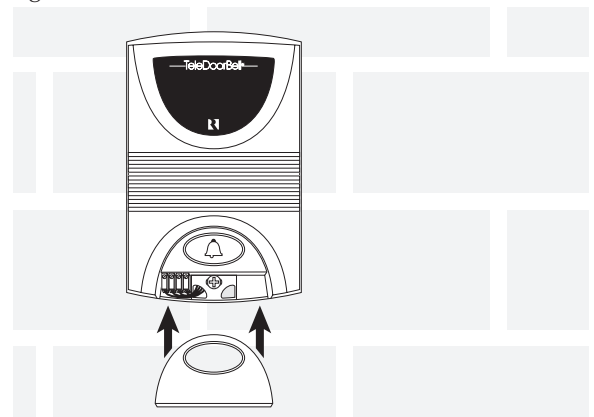


fig 6



7. OPERATION

1. If your doorbell rings or you hear the unique DTI-1 ring signal, pick up any telephone in the house within two minutes. You can now talk to the person at the entrance.
2. If two minutes has expired, then pick up any telephone and press ***#*** on the touch tone keypad on your telephone. This will connect you to the door speaker.
NOTE: Using ***#*** can be done at times when no one has depressed the door speaker button and provides the user with a monitor function.
3. The DTI-1 provides a six second contact closure when the door button is depressed or when the telephone line rings. This provides a mute function if connected to Russound Multi-Zone controller with mute capabilities such as the CA4.4pi, PR-4Z and CP 4.6.

Action	Result
Door box button depressed and call answered within six seconds	Relay closes for six seconds to provide mute function. The mute relay will stay closed for duration of conversation.
Door box button depressed and call answered after six seconds but within two minutes	Mute relay releases after six seconds following button depression. User will be connected to door box automatically. User can trigger the mute function by depressing *5. This will provide a six second mute pulse.
Telephone line ringing – User does not answer call	Mute relay closes during the time the line rings and six seconds beyond the last ring.
Telephone line ringing – User answers call	Mute relay will release six seconds after call is answered.

4. While on a regular telephone conversation, depression of the door speaker button will cause a unique call indication tone to be applied over the conversation. The door bell will also ring, if enabled. ***4** can be used to put the telephone call on hold and connect to the door speaker. Using ***4** again will return to the telephone call. This hold feature can be used only once per door speaker button depression. Alternatively, a user can hang up the active conversation and then pick up the receiver and a connection will occur with the door speaker. A user has two minutes to do this, otherwise, ***#*** needs to be used to activate option mode before using either ***5**, ***8** or ***9**. If a door strike system has been installed, to automatically open a door or a gate, a user can activate it by depressing ***8** on the keypad while connected to the speaker. This will cause a five second contact closure and open the door or gate automatically.

8. PROGRAMMING

Pick up handset.
Press ***#***.
Press ***7**.
Listen for 2 beeps.
Enter your passcode.
Default is **111**.

In the following, an acknowledgment of three beeps will indicate that the dialing sequence is disabled, two beeps will indicate the dialing sequence is enabled.

Long Distance Restrictions

Disable/Enable 1+ dialing ****1**.
Disable/Enable 011+ dialing **011**.

Change Passcode

Enter Passcode Mode **727**.
Listen for 2 beeps
Enter New Passcode **???**.

NOTE: If the power goes out, the DTI-1 will lose its programming and return to factory setting, including password. To prevent loss of programming, use of a UPS power device is recommended.

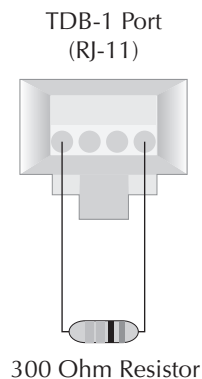
9. TROUBLE SHOOTING

Problem	Solution
Controller not responding.	1. Check your AC and power adapter, confirm LED Power Indicator is ON. 2. Check the power connection into the unit.
Your phones don't work.	1. Are your phones wired into the RJ31X/CA38A data jack (output)? To test connection, remove the RJ45 wire from the RJ31X/CA38A data jack which bypasses the DTI-1 and connect the phones directly to the main incoming line. 2. Check for any breaks in the RJ45 wire.
When a door speaker is pressed, phones ring but you have no audio communications to the door.	1. The green and yellow wires may be reversed, either at the speaker or at the controller. 2. The red and black wires may be reversed, either at the speaker or at the controller.
The DTI-1 Doorbell Telephone Interface works but the phones don't ring when the speaker button is pressed.	1. Your ringer switch located at the front of the controller may be set to the OFF position. 2. The yellow wire is not properly connected to either the speaker or the controller section of the speaker. 3. One of the phones may be causing too much of a load; unplug all phones and begin testing with one phone at a time until the defective phone is found.
You have a dial tone feedback at the speaker when door speaker button is pressed.	Reverse the In and Out on the RJ45 data jack.
When pressing [*][*][*] (for monitoring the door) you get an operator recording (eg. "this is an invalid number") and you have no communication to the speaker.	1. You have attached the phones on the premises in parallel with the DTI-1 across your outgoing phone line 2. Your telephones may not be touchtone compatible. Or the touchtone switch is in the off position. 3. Please check the connection of the yellow wire at both ends. 4. If you have more than one telephone line you may have wired the wrong line to the controller.
On a gate installation, you have no audio communication to the speaker.	The unit has been designed to go a maximum of 250 ft. with a 22 gauge wire. A possible solution to gain an additional 100ft. would be to increase the gauge thickness (18 or 16). You can also double up the red and black wires to give it the added gauge.
Telephone does not ring when door button is pressed.	1. If you have more than one telephone line you may have wired the wrong line to the controller. 2. Check the connection of the yellow wire at both ends.

10. TECH TIPS

When the DTI-1 system is using the TPM-1 Paging Module and there is no TDB-1 being used, a 300 Ohm resistor is required for the audio circuit to be completed to the TPM-1. The following diagram shows the placement of the resistor in series with the two outer conductors of the RJ-11 connector (Yellow/Black).

To initiate a page, press *** pause, then *9. A pause of at least one half second is required for the system to first recognize the communication request (***) then the *9 command is given to activate the paging module.



11. WARRANTY

The Russound DTI-1 and TDB-2 are fully guaranteed for One (1) year from the date of purchase against all defects in materials and workmanship. During this period Russound will replace any defective parts and correct any defect in workmanship without charge for either parts or labor. For this warranty to apply, the unit must be installed and used according to its written instructions. If service is necessary, it must be performed by Russound. The unit must be returned to Russound at the owner's expense and with prior written permission. Accidental damage and shipping damage are not considered defects under the terms of the warranty. Russound assumes no responsibility for defects resulting from abuse or servicing performed by an agency or person not specifically authorized in writing by Russound. Damage to or destruction of components due to improper use voids the warranty. In these cases the repair will be made at the owner's expense. To return for repairs, the unit must be shipped to Russound at the owner's expense, along with a note explaining the nature of the service required. Be sure to pack in a corrugated container with at least 3 inches of resilient material to protect the unit from damage in transit.



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the right
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