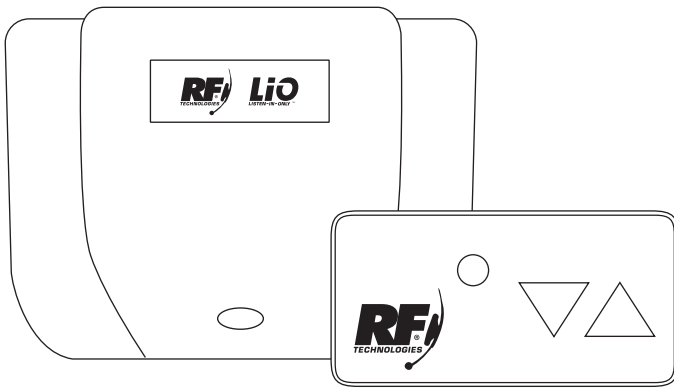


# **LiO**

**LISTEN-IN-ONLY™**

## **A DRIVE-THRU LISTEN-IN-ONLY AUDIO SYSTEM**

**#LIOP & #LIODP Series**



MT16010\_REV03



**DRIVE-THRU • SURVEILLANCE • ENTERTAINMENT**

**800.598.2370 • RFTECHNO.COM**

**NATIONWIDE REPAIRS & ON-SITE SERVICE**

330 Lexington Dr.  
Buffalo Grove,  
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542 S. Prairie  
Bethalto,  
IL 62010

555 W. Allen Ave.,  
Unit 5, San Dimas,  
CA 91773

## WARNINGS AND DISCLAIMERS

- Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.
- To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions.
- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- In no event shall R.F. Technologies, Inc. be liable to any party or any person, except for replacement or reasonable maintenance of the product, for the cases, including but not limited to below:
  1. Any damage and loss, including without limitation, direct or indirect, special, consequential or exemplary, arising out of or relating to the product;
  2. Personal injury or any damaged caused by inappropriate use or negligent operation of the user;
  3. Unauthorized disassemble, repair or modification of the product by the user;
  4. Any problem causing failed signal transmission resulting in consequential inconvenience, loss or damage, arising out of causes such as system malfunction, fault, set up or installation;
  5. Any problem consequential inconvenience, or loss or damage, arising out of the system combined by the devices of third party;
  6. Personal injury, any loss or damage, arising out of the drop caused by the incomplete installation;
  7. Loss of registered data caused by any failure;
- The apparatus should not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, should be placed on the apparatus;
- Batteries (battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like.

## SPECIFICATIONS

Operating Frequency (RX/TX)	1920-1930 MHz
Power Supply	5VDC, 1000mA
Battery Characteristics	3.7V 1100mAH 4.1Wh
Dimensions	5.5" x 4" x 1.4"
Weight	.36lbs
Contains FCC ID	Y82SC14D
Contains IC ID	9576A-SC14D

(Table 1)

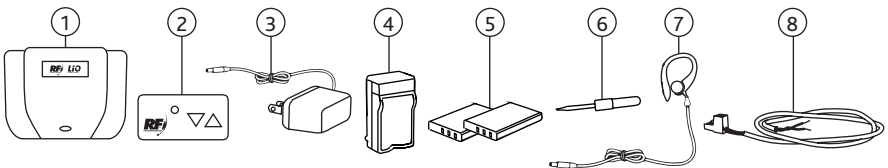
**\*NOTE:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

## LIO PARTS AND ACCESSORIES

#	Part #	Description	Quantity
1	#LIOBASE	LIO Base	1
2	#LIORECEIVER	LIO Belt Pack	1
3	#LIOBPS	Power supply	1
4	#LIOCHARGER	Battery charger	1
5	#BXB3030	Battery	2
6	N/A	Small, flathead screwdriver	1
7	#LIOHOOKHS	Hook style ear stick	1
8	#LIOCABLE	Audio cable with connector	1

(Table 2)



**If there are any missing parts or you need a replacement, please contact R.F. Technologies, Inc. at 800.598.2370 or [www.rftechno.com](http://www.rftechno.com)**

# INSTALLATION

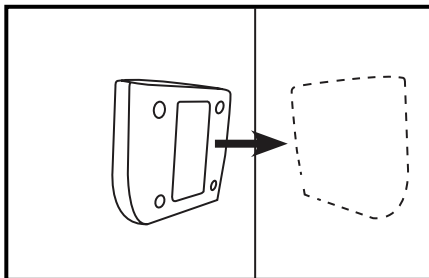
Please call 618.717.7026 with any troubleshooting questions. We can help!

## 1.1 Placement

The LIO Base should be placed near the current drive-thru system base station that offers the greatest line-of-sight in the intended use areas. Available power outlets should be taken into consideration when determining location to mount LIO Base. The LIO Belt Pack can be worn on a belt or placed in a pocket.

## 1.2 Mounting the LIO Base

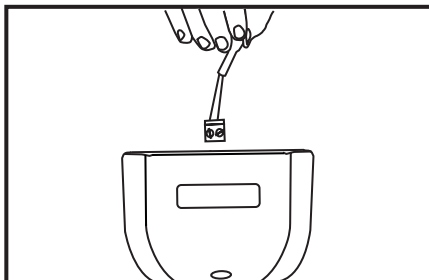
1. Determine a suitable mounting location.
2. Peel remaining loop dots from adhesive backing and attach to hook dots already on LIO Base with adhesive facing away from LIO Base. (Figure 1)
3. Firmly press LIO Base against wall with logo facing upright.



(Figure 1)

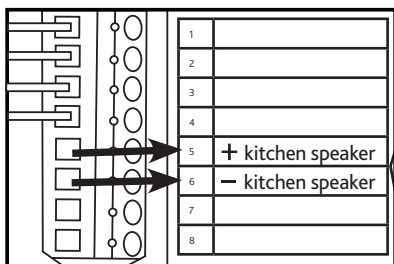
## 1.3 Connecting and Enabling LIO Base to Drive-Thru

1. Remove drive-thru base station's cover (if it has one).
2. Take Audio Cable with Connector and plug connector into LIO Base. (Figure 2)
3. Locate "kitchen speaker"\* outputs on current drive-thru system. (Figure 3)



(Figure 2)

\*NOTE: "kitchen speaker" may be labeled differently depending on existing drive-thru system. Some other options for "kitchen speaker" include, but are not limited to: "AUX SP," "Grill Speaker," "Monitor Speaker," "Ceiling Speaker," and "MON SP." (Table 3)



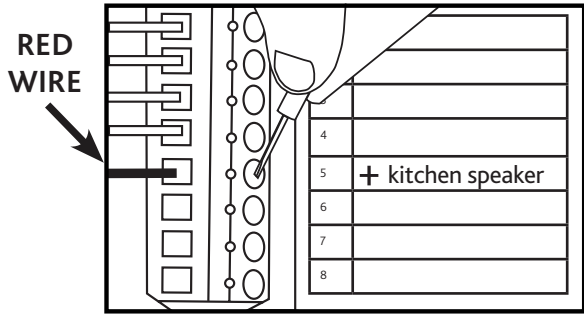
(Figure 3)

RFT IS A FAMILY-OWNED, INDEPENDENT MANUFACTURER OF AFTERMARKET PARTS AND IS NOT AFFILIATED WITH OR ENDORSED BY HME OR 3M, NOR ARE RFT PARTS APPROVED BY HME OR 3M FOR USE WITH HME OR 3M DRIVE-THRU SYSTEMS.

Drive-Thru System	Kitchen Speaker Output
3M XT-1	MON Spkr (+ -)
3M 960/1060	Monitor Spkr + Common -
HME 2000	Grill Speaker
HME 400	Ceiling Spkr
HME ION/EOS	Ceiling Spkr
HME IQ/6000	Ceiling Spkr
Panasonic UltraPlex	AUX SP (HC) -Remote
Panasonic Attune II	AUX SP (+, -)
Panasonic WX-C3010	AUX SP (+, -)

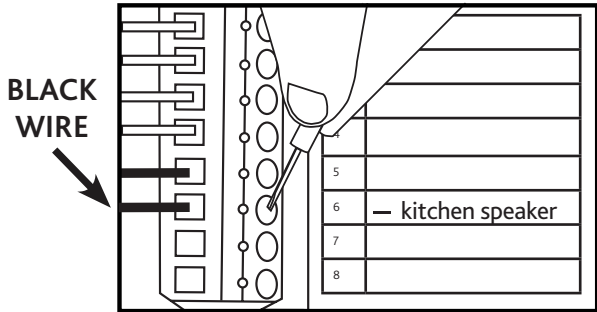
(Table 3)

4. Use provided Screwdriver to secure **RED wire** of Audio Cable to positive (+) terminal of kitchen speaker output. (Figure 4)



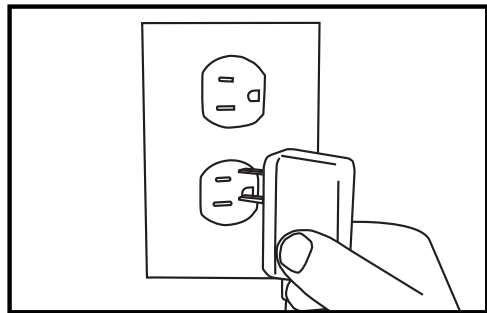
(Figure 4)

5. Secure black wire to negative (-) terminal of kitchen speaker output. (Figure 5)



(Figure 5)

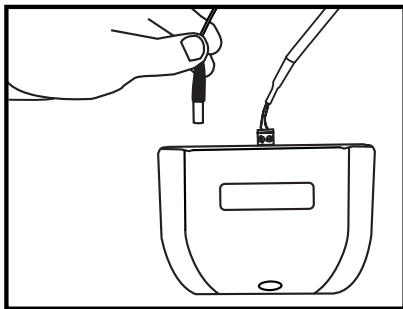
7. Plug power supply into wall outlet. (Figure 6)



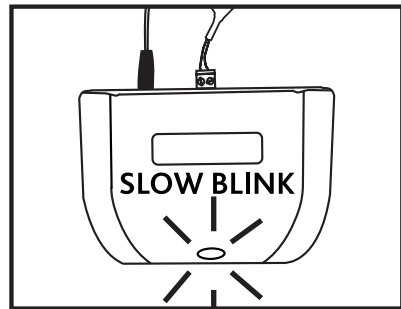
(Figure 6)

8. Insert power supply wire into LIO Base. (Figure 7)

9. LIO Base will blink in "no registration" mode. (Figure 8) (Table 4)



(Figure 7)



(Figure 8)

## 1.4 Registering LIO Belt Pack to LIO Base

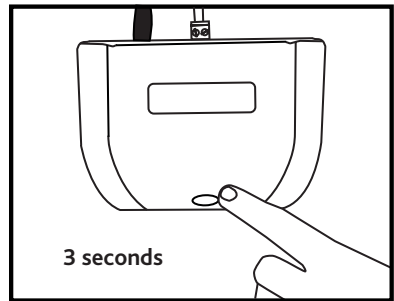
1. Turn off all other LIO Belt Packs (even if they have not been registered yet).
2. Unplug power from LIO Base and plug back in.
3. Hold down the power button on LIO Base for approximately 3-seconds. The "fast blink" pattern on the LIO Base should appear. (Figures 9 & 10) (Table 4)
4. Insert battery into LIO Belt Pack.
5. Press power button on LIO Belt Pack to turn on.
6. Hold down power button on LIO Belt Pack for approximately 3-seconds. The "fast blink" pattern on the LIO Belt Pack should appear. (Figures 11 & 12) (Table 4)
7. Wait until the LED on both the LIO Base and LIO Belt Pack appear solid. This should take just a few seconds, but could take up to one minute.
8. Plug earstick into LIO Belt Pack. (Figure 13)

The LIO Belt Pack and LIO Base are now registered. Any audio applied to the LIO Base can be heard in the earstick connected to the LIO Belt Pack.

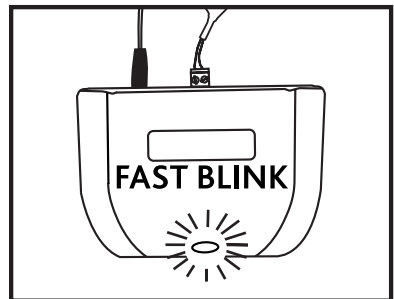
**\*NOTE:** Any stereo 3.5mm wired earphone is compatible with LIO Belt Packs.

A single LIO Belt Pack can be registered to a maximum of 4 LIO Bases at one time. If a LIO Belt Pack is registered to a 5th LIO Base, the 1st registered LIO Base is replaced.

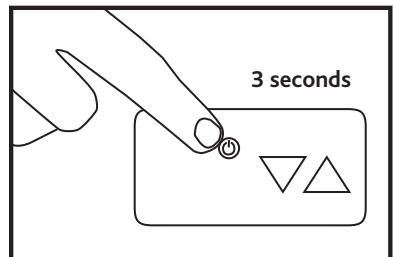
A single LIO Base can register a maximum of 21 LIO Belt Packs. The 22nd LIO Belt Pack will not register to the LIO Base. If this occurs, you must follow the Clearing Registrations process in section 2.2 for the LIO Base and re-register any LIO Belt Packs you wish to be registered to the LIO Base.



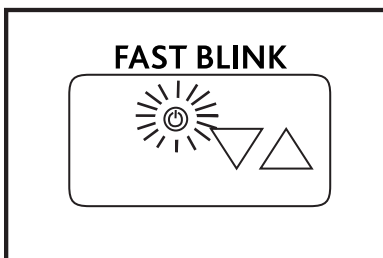
(Figure 9)



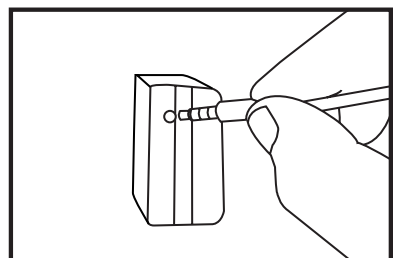
(Figure 10)



(Figure 11)



(Figure 12)



(Figure 13)



## CONNECTING LIO TO YOUR DRIVE-THRU SYSTEM

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### HME 2000

---

1. Remove center module by sliding up and away from wall.
2. Locate green terminal block on back of the center module.
3. Secure red wire into position 7 and black wire into position 8.
4. Remount the base station by lining up screws in wall with holes on back of center module.
5. Take off cover.
6. Locate red box with twelve white switches on the main circuit board.
7. Ensure that switches numbered 6 and 7 are in the up position.
8. Locate GRILL SPEAKER LEVEL just below left antenna.
9. Use small, flathead screwdriver to rotate clockwise until it doesn't turn any more.
10. Replace cover.

### HME 400

---

1. Open center module by pulling on black knob on the front panel.
2. Feed audio cable behind center module and through cutout.
3. Locate green terminal block located in top left corner of circuit board.
4. Using a small, flathead screwdriver, secure red wire into position numbered 7 on the terminal block.
5. Using a small, flathead screwdriver, secure black wire into position numbered 8 on the terminal block.
6. Locate row of white switches with red background labeled S6 (towards the bottom).
7. Ensure switches 2, 4, & 5 are in the up position
8. Close front panel of center module.

### HME 6000

---

1. Open the center module by using the 2 push tabs on top of the center module.
2. Feed audio cable behind center module and through cutout.
3. Locate green terminal block at top of circuit board labeled J2.
4. Secure red wire into slot labeled 6 and black wire into slot labeled 7.
5. Close center module.
6. Open panel on front of center module that swings to the right.
7. Locate "INBOUND VOL. GRILL" and adjust knob to 3 o'clock position.
8. Locate "A VOL. GRILL" and adjust knob to 3 o'clock position.
9. Locate "VEH. PRESS. TONE VOL. GRILL" and adjust knob to 3 o'clock position.
10. Close front panel.

### HME ION/EOS

---

1. Open the center module by using the 2 push tabs on top of the center module.
2. Feed audio cable behind center module and through cutout.
3. Locate green terminal block at top of circuit board (towards center), labeled J1.
4. Secure red wire into slot labeled 6 and black wire into slot labeled 7.
5. Close center module.
6. Press BACK button on center module to light up display.



7. Press MENU button on bottom left hand of screen.
8. Press VOLUME ADJUST button on bottom left hand of screen.
9. Press CEILING SPEAKER.
10. Highlight INBOUND AUDIO.
11. Use UP arrow to raise volume to 15.
12. Press BACK button 3 times to show the main screen.

### **Panasonic UltraPlex**

---

1. Press and release on top of center module cover to unlatch. Allow cover to swing down and expose settings.
2. Feed audio cable behind center module and through cutout.
3. Locate "REMOTE SP."
4. Using a small, flathead screwdriver, secure red wire into positive (H) terminal.
5. Using a small, flathead screwdriver, secure black wire into negative (C) terminal.
6. Locate black volume knob labeled "REMOTE SP VOLUME" and adjust to approximately 7.5.
7. Remove cover above volume control knobs to gain access to settings.
8. Ensure switches 2 (Menu Mic) & 3 (Talk On) are in the "ON" position.
9. Replace settings cover.
10. Close main cover of center module.

### **Panasonic UltraPlex II**

---

1. Pull down on top of center module cover to unlatch. Allow cover to swing down and expose settings.
2. Feed audio cable behind center module and through cutout.
3. Locate "REMOTE SPEAKER."
4. Using the small, flathead screwdriver, secure red wire into positive (H) terminal.
5. Using the small, flathead screwdriver, secure black wire into negative (GND) terminal.
6. Locate black volume knob labeled "REMOTE SP" and adjust to approximately 7.5.
7. Above volume knob, locate settings "REMOTE."
8. Ensure that TALK and BEEP are in the ON position.
9. Close main cover of center module.

### **Panasonic Attune I (3050 Headset)**

---

1. Gently push in and pull down to remove cover of base station and expose wires.
2. Feed audio cable behind center module.
3. Using the small, flathead screwdriver, secure red wire into leftmost terminal.
4. Using the small, flathead screwdriver, secure black wire into the space next to the red wire.
5. Locate the INSTALL SYSTEM SETTING area at the top of the center module.
6. Ensure the TALK and BEEP light are green. Skip to step 7 if lights are green.
  - a. Press the [NEXT] button twice to make the TALK light blink.
  - b. Press the [SEL] button once.
  - c. Press the [NEXT] button twice to make the BEEP light blink.
  - d. Press the [SEL] button once.
7. Locate the black AUX SP volume control knob.
8. Adjust volume level to 7.

## **Panasonic Attune II (450 Headset)**

---

1. Gently push in and pull down to remove cover and expose wires.
2. Feed audio cable behind center module.
3. Locate "AUX SP (8Ω) CLASS 2 WIRING."
4. Using the small, flathead screwdriver, secure red wire into positive (+) terminal.
5. Using the small, flathead screwdriver, secure black wire into negative (-) terminal.
6. Replace cover.
7. Press wrench icon.
8. Enter passcode: 12345
9. Press "lane."
10. Press "AUX Speaker."
11. Ensure that Outside MIC is "ON" and volume level set to 15.
12. Ensure that Headset TALK is "ON" and volume level set to 15.
13. Ensure that Beep is "ON" and volume level set to 15.

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## **3M 960/1060**

---

1. Take off cover.
2. Along right hand side of base station, locate MON SPKR and secure red wire in slot.
3. Secure black wire in slot directly below labeled COM.
4. Locate a control knob.
5. Locate volume control labeled MON INBD.
6. Rotate control knob clockwise until it doesn't turn any more.
7. Locate volume control labeled MON VOLUME.
8. Rotate control knob clockwise until it doesn't turn any more, then rotate counter-clockwise one quarter turn.
9. Replace cover.

## **3M XT-1**

---

1. Remove cover.
2. Feed audio cable behind center module and through cutout on left hand side.
3. Under the order point on the lefthand side, locate the two MON positions.
4. Using the small, flathead screwdriver, secure red wire into top "MON" position.
5. Using the small, flathead screwdriver, secure black wire into bottom "MON" position.
6. Replace cover.
7. Press MODE button once. It should prompt for a passcode on bottom of screen.
8. Hold down MODE button while pressing 1, 2, 3, 4. Let go of MODE button.
9. Press MODE button 3 times to get to SYSTEM MENU.
10. Scroll down to "Monitor Volume" and press ENTER.
11. Ensure that Inbound Listen Volume is set to 15 and Enable is "ON."
12. Ensure that Outbound Listen Volume is set to 15 and Enable is "ON."
13. Ensure that Vehicle Present Volume is set to 15 and Enable is "ON."
14. Press MODE button 2 times to get to Main Menu.

Volume may need additional adjustment depending on circumstances unique to each location.

## WARRANTY STATEMENT

R.F. Technologies, Inc. warrants that for a period of one (1) year following delivery, the LIO base and belt pack will (a) perform in accordance with published specifications, and (b) will be free from defects in materials or workmanship. In the event an R.F. Technologies, Inc. product does not meet this warranty, subject to the conditions set forth in these terms and conditions, R.F. Technologies, Inc.'s sole obligation will be, at its election, to repair or replace the R.F. Technologies, Inc. product in question or to refund the purchase price.

R.F. TECHNOLOGIES MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. IN NO EVENT WILL R.F. TECHNOLOGIES, INC. BE LIABLE FOR PUNITIVE, SPECIAL OR CONSEQUENTIAL DAMAGES.

This warranty will not apply to any R.F. Technologies, Inc. Products that have been (a) damaged by lightning, water, or power surges, (b) neglected, altered, abused, or used for a purpose other than the purpose for what they were provided, (c) repaired by you or any other party without R.F. Technologies, Inc.'s prior written authorization, or (d) otherwise used in a manner inconsistent with any instructions provided by R.F. Technologies, Inc.

In the event that R.F. Technologies, Inc. repairs or replaces a defective R.F. Technologies, Inc. product under warranty, the repaired or replaced product will be covered through the end of the original warranty period, but no repair or replacement will extend the warranty term past the one (1) year anniversary of the delivery date of the original R.F. Technologies, Inc. product.

This warranty contains the entire agreement of you and R.F. Technologies, Inc. with respect to any warrant matters, and supersedes any and all other written or oral statements, representations or agreements relating to the subject matter of this warranty, except that (if applicable) the terms and conditions of any other warranty or service agreement between you and R.F. Technologies, Inc. that explicitly supplements or incorporates, and does not replace or modify, the terms and conditions of this warranty will also apply to the R.F. Technologies, Inc. products you have purchased. To the extent any other warranty or service agreement between you and R.F. Technologies, Inc. expressly replaces or modifies the terms and conditions of this warranty, such replaced or modified terms shall not apply unless accepted by you (or your distributor, if applicable) and R.F. Technologies, Inc. in signed writing (e.g., The Extended Warranty Services Agreement). You should note that if you are interested in obtaining either an extended warranty or an extended warranty with overnight replacement service, you must notify R.F. Technologies, Inc. of the same and execute an agreement specified by R.F. Technologies, Inc. within 60 days of your purchase of the R.F. Technologies, Inc. products for which you are seeking coverage. If you purchased the R.F. Technologies, Inc. products from a party other than R.F. Technologies, Inc., R.F. Technologies, Inc. reserves the right to require proof of purchase to verify the timeliness of your request.

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555 W. Allen Ave.,  
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