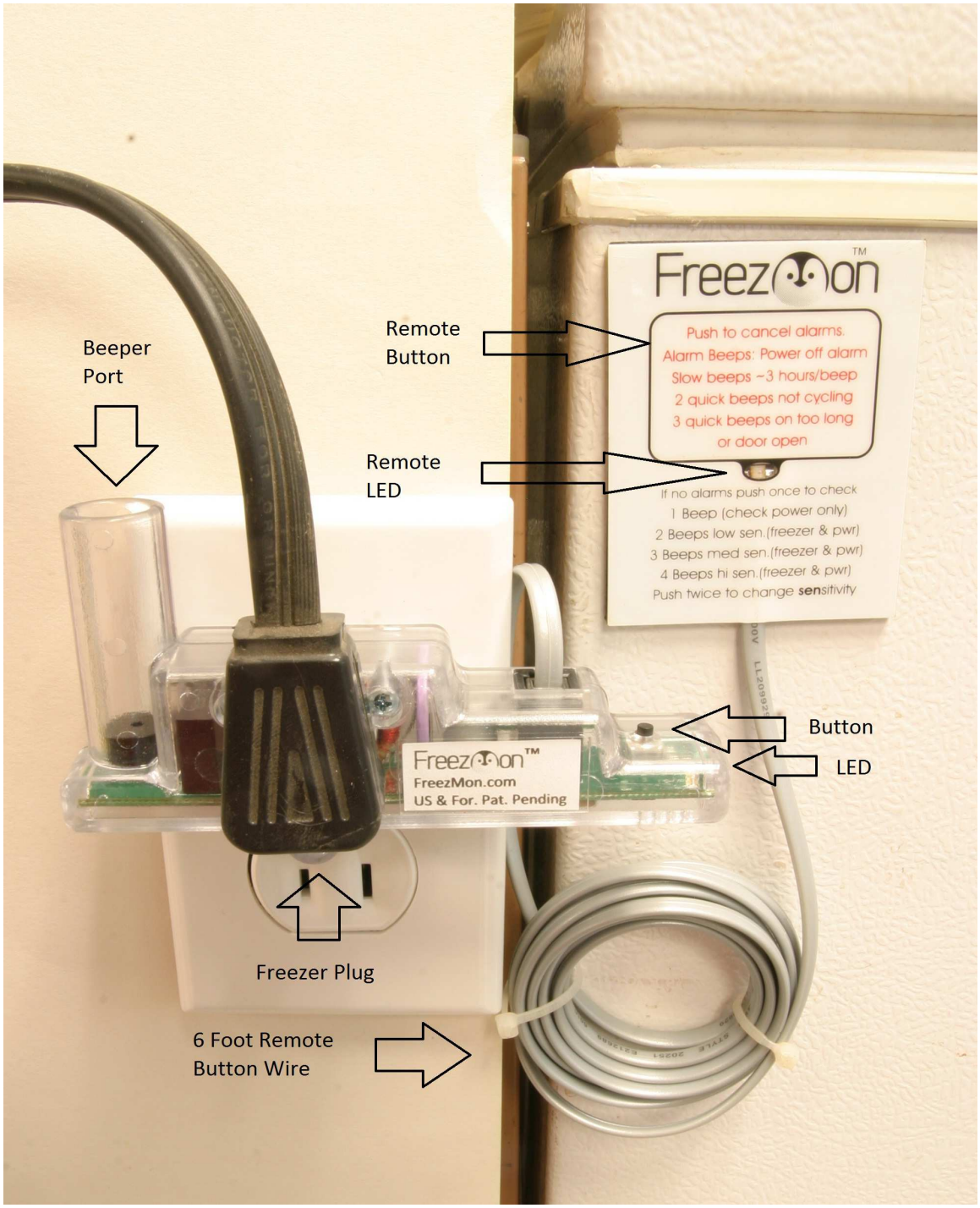
Manual

Rev C


Beeper Port
Remote Button
Remote LED
Push to cancel alarms.
Alarm Beeps: Power off alarm
Slow beeps ~3 hours/beep
2 quick beeps not cycling
3 quick beeps on too long
or door open
If no alarms push once to check
1 Beep (check power only)
2 Beeps low sen.(freezer & pwr)
3 Beeps med sen.(freezer & pwr)
4 Beeps hi sen.(freezer & pwr)
Push twice to change sensitivity
FreezMon.com
US & For. Pat. Pending
Button
LED
Freezer Plug
6 Foot Remote Button Wire

Introduction:

The purpose of the FreezMon is to monitor either a freezer or refrigerator to verify that they are cycling properly. It performs three functions: if the power fails it will beep: if the freezer or refrigerator fails to come on (it is accidentally unplugged) it will beep to warn that the freezer or refrigerator has stopped; if the freezer or refrigerator runs all the time (the door has been left open) the FreezMon will beep.

The FreezMon is designed to monitor a freezer or refrigerator that uses a thermostat and compressor to control the temperature inside the freezer or refrigerator. When the temperature in the freezer or refrigerator is too high the thermostat turns on the compressor. When the temperature inside the freezer or refrigerator is low enough the thermostat will turn off the compressor. By continually monitoring the room temperature and the freezer or refrigerator's on and off times the FreezMon can determine if there are any sudden changes in the normal cycling of your freezer or refrigerator.

Operation:

Power off:

If the power goes off the FreezMon will start beeping. A single beep will be issued approximately every 6 seconds. If the power stays off a beep will be added to the group of beeps every three hours the power is off. So after approximately 3 hours you will hear beep beep pause beep beep pause over and over again. After 6 hours you will hear beep beep beep pause beep beep beep pause over and over again. For each additional 3 hours the power is off a beep is added. As long as the power stays off, this will continue until the battery in the FreezMon runs out of power which typically takes 4 days. If the power comes back on within the first three hours the beeps will be turned off. After three hours, if the power comes back on, the FreezMon will continue to beep. You may cancel the alarms by pressing button on the unit or pressing the remote button.

If you experience a prolonged power outage you may find web sites useful.

http://www.foodsafety.gov/keep/charts/frozen_food.html
http://www.foodsafety.gov/blog/power_outages.html
http://www.fsis.usda.gov/Factsheets/keeping_food_Safe_during_an_emergency/index.asp

The Compressor runs continuously:

Suppose the freezer or refrigerator door gets left open. Then the compressor will run continually and the "compressor on time" will become too long which will trip the FreezMon's alarm. The FreezMon will issue beep beep beep beep pause (approximately 1 beep group every 2 seconds) repeatedly. Pressing either button will cancel the alarm.

The Compressor quits running:

Suppose the freezer or refrigerator's thermostat fails and the compressor quits running. The FreezMon will be monitoring the "compressor off time" and when the freezer or refrigerator is off too long the FreezMon will start beeping. For this alarm it will issue a beep beep beep pause (approximately 1 beep group every 2 seconds) repeatedly. Pressing either button will cancel the alarm.

The Door Light:

Many freezers or refrigerators have a small light bulb inside. A few seconds after the light comes on and goes off the FreezMon will beep.

Learning:

When the FreezMon is reset it erases its memory, turns off the LED and it starts looking for the compressor's cycle by monitoring the current drawn through the FreezMon. It learns the relationship of the cycle times to room temperature. The FreezMon uses this information to decide if the compressor is cycling properly. The compressor cycle time can range from 5 minutes to several hours depending on the freezer or refrigerator and the room temperature.

The current drawn by the ice maker can confuse the FreezMon. If your freezer or refrigerator has an ice maker we recommend that you empty the ice bucket and verify the ice maker is cycling during the learning time. This will assure the FreezMon "sees" a couple of ice maker cycles and it will make it easier for it to understand when the ice maker is operating.

Some refrigerators and freezers have defrost cycles that may only cycle every three days. For this reason the FreezMon will take at least three days to enable its alarms. A LED (light emitting diode) near the button on the case will come on to indicate the cycle alarms are enabled. If the room temperature changes the LED near the button on the case may go out. After the freezer or refrigerator cycles a few times the FreezMon will have the information it needs to enable the alarms at the new temperature.

Installation

To install the FreezMon simply unplug the freezer or refrigerator. Plug the FreezMon into the wall outlet, and then plug the freezer or refrigerator into the FreezMon.

Many times one will find the outlet is behind the freezer or refrigerator. The optional remote switch may be connected the FreezMon. The magnet on the back of the remote switch may be used to attach the switch to the freezer or refrigerator in a convenient location. This button performs the same function as the button on the FreezMon. It also has a LED (light emitting diode) which lights when ever the FreezMon beeps.

We recommend clearing the FreezMon's memory with any new installation. The memory may be cleared by holding down the button on the unit or the remote button for no more

than 15 seconds. The FreezMon will issue the current alarm sensitivity and then it will issue three signals that indicate it has cleared its memory. The LED on the remote will come on for about 5 seconds. The LED in the case will flash and the beeper will issue a lower beep. This indicates the memory has been cleared of any previously accumulated data and the FreezMon will restart learning your freezer or refrigerator.
In addition the sensitivity we be set to level 4 after the memory is cleared.
Setting the sensitivity:

You may check the sensitivity by pressing the button once. After a moment the FreezMon will beep once, twice, three or four time. The following table gives the meaning of each sensitivity level.

Beeps	Alarm description
1	Only alarm if the Power is off
2	Alarm if the power if off and if the cycle times are 200% present above the normal
3	Alarm if the power if off and if the cycle times are 150% present above the normal
4	Alarm if the power if off and if the cycle times are 125% present above the normal

To change the sensitivity press either button twice. On the second press the FreezMon will add one to the level; if the sensitivity level exceeds four it will be set to one. Then it will issue that number of beeps to indicate the current sensitivity level.

After reset the sensitivity will be set to level 4 the most sensitivity level.

Battery:

The FreezMon contains a rechargeable lithium battery. If the battery is fully discharged it takes 48 hours for the battery to reach 100% charge.

Primary purpose of the battery is to run the beeper for at least two days after the power is off. After that length of time the contents of the freezer or refrigerator have usually spoiled.

Beeper:

The beeper is acoustically coupled to a short plastic tube. This tube resonates with the beeper and increases the volume of the beep.

Power Requirements:

The FreezMon is very low power, it uses approximately 1.0 volt amps.

Load Capabilities:

The contacts are designed to deliver 120 VAC to loads as large as 15 amps. This allows the FreezMon to operate most house hold freezers or refrigerators.

Disclaimer:

The FreezMon is designed to catch the more common failures. It is not guaranteed to alarm in event of every refrigerator or freezer failure that may occur. It is the user's responsibility to verify the food is at the proper temperature and it is in good condition.

The FreezMon does not monitor the internal temperature of the freezer or refrigerator and we cannot guarantee the temperatures are at a safe level.

Every effort has been made to make sure the information contained in this manual is accurate. However, we do not guarantee it free of error. Please consult our website for the latest revision.

We warrantee the FreezMon against failure for a period of one year from the date of purchase. We do not warrantee its' contents of the freezer or refrigerator.

Testing:

Representative samples of the FreezMon were submitted to Intertek for testing. The FreezMon was found to pass the following standards:

UL498A Clause 22,23,24,26,27,29,30,31,32,36,38,41,43 and
UL464 Clause 13,17,22,24,28

Contact Information:
The FreezMon is manufactured by:

FreezMon LLC
2903 SW Scherer Rd.
Lee's Summit, MO 64082-1304

Web site http://www.FreezMon.com
Phone 816-524-8816