DL-20-RFG-H Hall Refuge Speakerphone

CAUTION: ALWAYS MAKE SURE UNIT IS FULLY CONNECTED BEFORE APPLYING POWER, AND REMOVE POWER BEFORE REMOVING ANY CONNECTORS. FAILURE TO DO SO CAN POTENTIALLY RESULT IN DAMAGE TO THE UNIT WHICH IS A NON-WARRANTY REPAIR.

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INTRODUCTION

The DL-20-RFG-H is a Hall Refuge Speakerphone designed to provide two-way communication with the installed hall and the machine room. Up to 50 DL-20-RFG-H units can be chained together on a single elevator hoist way and communicate on a single, shared simulated telephone line connection.

IMPORTANT SAFEGUARDS

READ AND FOLLOW ALL SAFETY INSTRUCTIONS - SAVE THESE INSTRUCTIONS

- Do not use outdoors.
- Do not let power supply cords touch hot surfaces.
- Do not mount near gas or electric heaters.
- Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
- The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- Do not use this equipment for other than intended use.

MICRO SD CARDS

The Micro SD card can be removed from the DL-20-RFG-H at any time. The SD card on the DL-20-RFG-H holds all the setup information which includes all audio files, and all programmable data. To make changes to the information on the Micro SD card, you **MUST** remove the Micro SD card, insert it into a computer running the E.C.C. Manager HRZ software, make the desired changes, then re-insert it into the DL-20-RFG-H. Removing the Micro SD Card and re-inserting it back into the DL-20-RFG-H causes a system RESET.

MICRO SDHC CARD SPECS

- **Micro SDHC Cards Only**: **2GB** to **32GB** with a speed rating of **Class 10** or higher.
- Approved Brands = SanDisk Max Extreme
- Partitioned and formatted as FAT (FAT 16) or FAT32
- Available through direct purchase from E.C.C.

To make changes to the information on the Micro SD card, you can either call the unit up on the DL-20-RFG-Hs phone line and enter REMOTE mode, or you can remove the Micro SD card, insert it into a computer running the E.C.C. Manager HRZ software, make the desired changes, then re-insert it into the DL-20-RFG-H. Removing the Micro SD Card and re-inserting it will cause a system RESET.

THE EMERGENCY TELEPHONE DIALER

The Emergency telephone is designed to work with a single analog simulated telephone line (POTS). This simulated phone line should be dedicated for all the DL-20-RFG-H units within a single elevator hoist way. Up to 50 DL-20-RFG-Hs can share a single simulated analog telephone line. The emergency telephone portion has the following features:

- Hands free Speakerphone communications
- A Programmable Emergency Phone Number
- Location Announcement of the floor number where the unit is installed
- Programmable Time Out.
- CPC Disconnect.
- Programmable Touch Tone Length (50ms to 1 second)
- Programmable Ring Delay (1 to 10)
- Line Sharing capable - Up to 50 units on the same line
- Programmable Press Switch to Abort
- Remote Programmable

LINE SHARING
The line sharing feature of the DL-20-RFG-H allows up to 50 DL-20-RFG-H units to share a single simulated telephone line. Each unit MUST be assigned a unique floor number using E.C.C. Manager HRZ, from 1 to 50. Floor 1 (the Controller unit) is required as it is the only unit that will answer an incoming call from the machine room.

INBOUND CALLS
The Controller unit of Floor 1 will answer all incoming calls. It will respond with the prompt:

"Elevator Phone System. Please dial the desired extension number".

When the operator dials a 2 digit floor number, the DL-20-RFG-H will transfer the call to the corresponding refuge phone. If there is no refuge phone at the dialed extension, the Controller will respond with:

"Sorry, that extension Number does not exist, please enter a valid extension number."

When a valid floor number is entered, the Controller will transfer the call to the new floor and then disconnect from the line.

TRANSFERRING BETWEEN FLOORS
The operator can transfer to another floor by dialing the 2 digit floor number then POUND (#).

EXTENSION NUMBER [#]
When a new floor is entered the current unit will say **"Transferring."** When the new floor unit answers, it will say **"Connected"** then pass control to the new refuge unit.

OUTBOUND CALLS

Each DL-20-RFG-H MUST be programmed with a dial out number if set to dial out. When the DIAL button is pressed, the unit will check the phone line state and start calling when it is available.

CONFLICT CONDITION

If the phone line is BUSY, the unit will play a simulated phone call to the person(s) in the hall. They will hear dial tone, then dialing, one ring, then an answer, with **"All operators are busy. Please wait for the next available operator."** Music will then be played. This announcement will repeat every 45 seconds.

Every 45 seconds the operator will hear **"Floor [xx] waiting"**, where [xx] is the waiting floor number. If other extensions are waiting, they will also notify the operator every 45 seconds. To answer the new call, the operator dials the 2 digit floor number then #. This will transfer the operator to desired floor.

If the Operator does not transfer, but hangs up on the first call, the next floor will immediately seize the phone line and will start the dialing sequence. Any floor left unanswered after 4 minutes will automatically terminate. In this case the person at the terminated floor MUST re-press the PHONE switch to initiate a new call.

The remote operator can switch between elevator cars by simply dialing the desired 2 digit floor number then #.

SYSTEM BOOT UP

The DL-20-RFG-H will issue a series of 4 beeps, then 5 beeps, and finally the message **"Refuge system on line"** and the selected floor position, under a normal boot up process. If the system repeats 2 beeps every 5 seconds, this means the SD card isn't inserted/recognized; try a new card in this case.

DL-20-RFG-H PRECAUTIONS

DL-20-RFG-H
STATIC
discharge
will DAMAGE
the board!

ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
**ELECTROSTATIC
SENSITIVE DEVICES**

The unit does NOT connect to 110/220vac directly, only 12VDC.

REMOTE PROGRAMMING (OVER PHONE)

The DL-20-RFG-H allows you to change the System Parameters A, B, and C, along with the Emergency Phone Number. To make any changes remotely, do the following:

1. Call the DL-20-RFG-H.
2. After the unit answers, enter the **2 digit floor number**.
3. Enter the **5 digit REMOTE Access Code**.
4. Enter the desired **Remote Mode Menu Selection**.
5. You can enter **#** at the **Selection Menu** to exit remote mode.
6. After entering a selection, you can enter **1 to Change it**, **7 to verify it**, or **3 to back out** to the **Selection Menu**.

DL-20-RFG-H REMOTE Instructions

1. Call the DL-20-RFG-H.
2. Enter the desired floor number (2 digits) and it should say "Connected."
3. Enter the 5 digit Remote Access Code then #. (35842 default)

Remote Mode Menu Selections

On entry, the DL-20-RFG-H will play the floor number and firmware version. Remote mode allows the following menu options (# will exit remote mode):

1. Phone number (16 digits max).

2. Parameter Group A (10 digits). (RED values are the only ones that change operation)

5	3	20	1	1	0	1	0	0
Number of First Message Cycles	Number of Dial Loops	Call Time Out in Minutes	Dial Method 0=Pulse 1=Tone	Elevator Hears First Message 0=No 1=Yes	Dial Type 0=Dial, Flash LED, play Floor location every 30 seconds 1=Don't Dial, Flash LED, play Floor location every 30 seconds	Straight to Elevator on Ring Up 0=No 1=Yes	Mute Dial Tone 0=No 1=Yes	Daily Phone Line Test 0=No 1=Yes

3. Parameter Group B (10 digits).

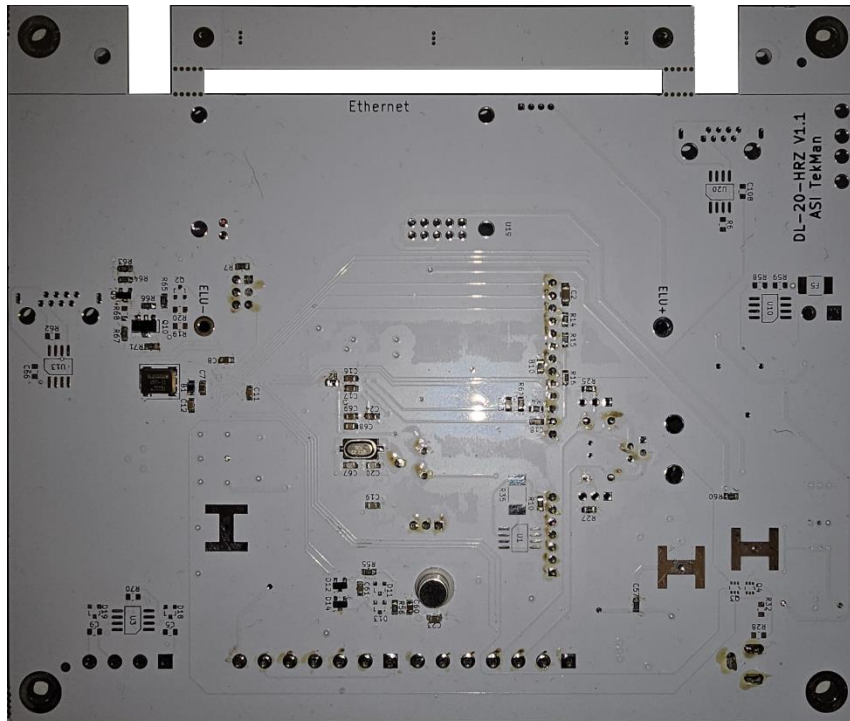| 2	1	0	1	6	4	8	1	4	4
Ring Delay	Touch Tone Length	Pulse Dial Speed 0=10pps 1=20pps	Phone Button Disconnect Disabled 0=No 1=Yes	Phone Mic Volume	Speaker Master Volume	ELU Level	Screen Saver Active	System Prompts Volume	PI Volume

4. Parameter Group C (10 digits).

0	0	0	0	0	0	0	0	0	0
0=All Off 1=Bad Battery/ Load Test 2=Fire Service (v2.17 up) 3=Both 1 & 2	Google Voice for Alarms 0=Off 1=On	Google Voice for Faults 0=Off 1=On	H	L Load Test Date Month	H	L Load Test Date Tens Year	CPC Detect 0=On 1=Off	Unused	Set to 5 in Remote Program Mode to Change Load Date

5. Parameter Group D (10 digits).

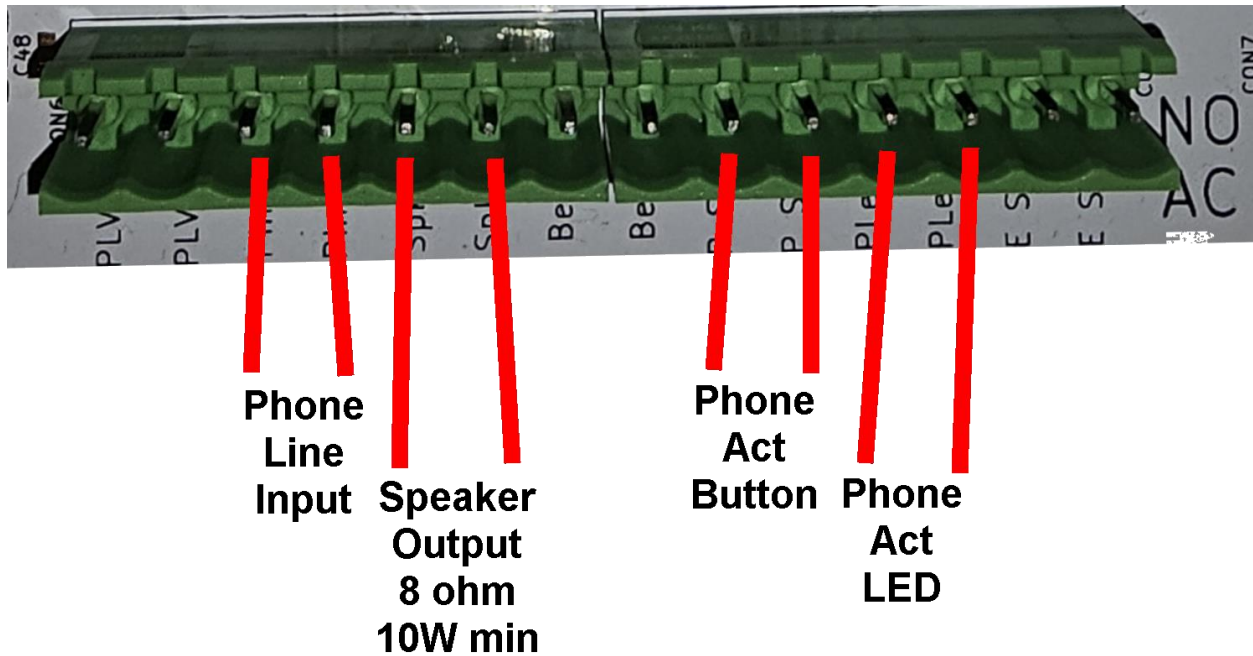| 10	1	7	4	4	16	0
Sensitivity to Audio	Touch Tone Min Detect Time (25.6mS x N)	Extension Waiting Volume	TT Volume for Transfers	TT Volume for Dialing	TT Detect Sensitivity	UNUSED

DL-20-RFG-H FRONT LAYOUT

DL-20-RFG-H PCB BACK SIDE CONNECTIONS
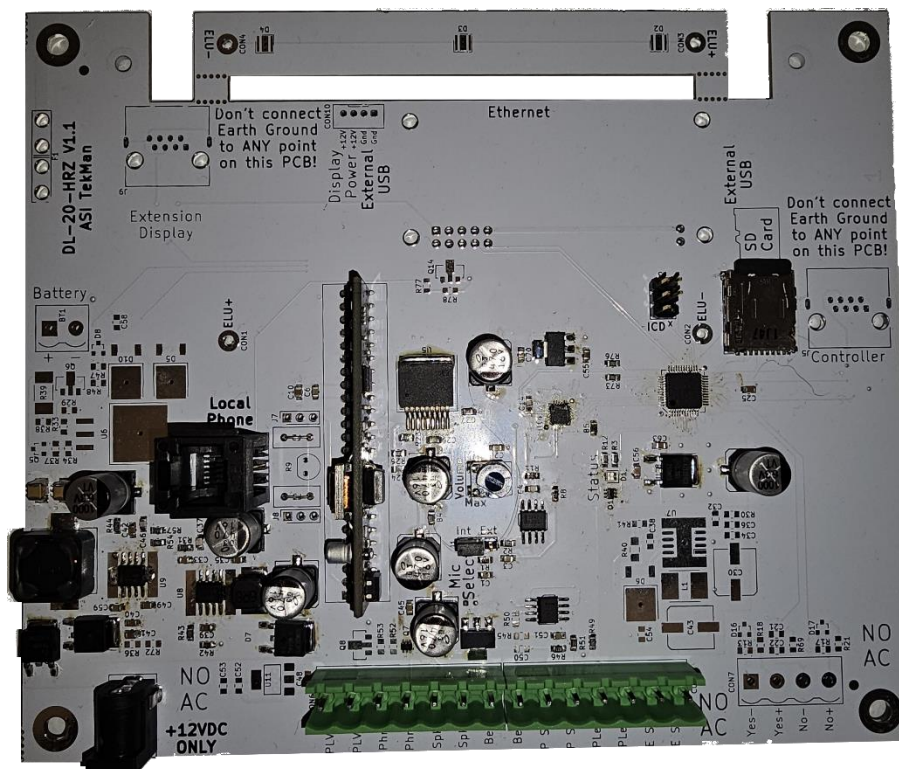
DL-20-RFG-H INTERFACE CONNECTOR

Phone Line Input

Speaker Output 8 ohm 10W min

Phone Act Button

Phone Act LED

DL-20-RFG-H MOUNTING SPECIFICATIONS

Unit cutouts and stud mounts

⊕ 5.200"
#8 stud hole
0.000"

5.200" ⊕
#8 stud hole
6.250"

0.250" diameter microphone hole, dense foam audio pipe recommended
0.835" ⊕
3.125"

0.000"
#8 stud hole
⊕ 0.000"

#8 stud hole
0.000" ⊕
6.250"

6.750" wide

5.700" tall

Side View

Back Side Part Clearance

0.800"

0.700"

Foam Audio Pipe
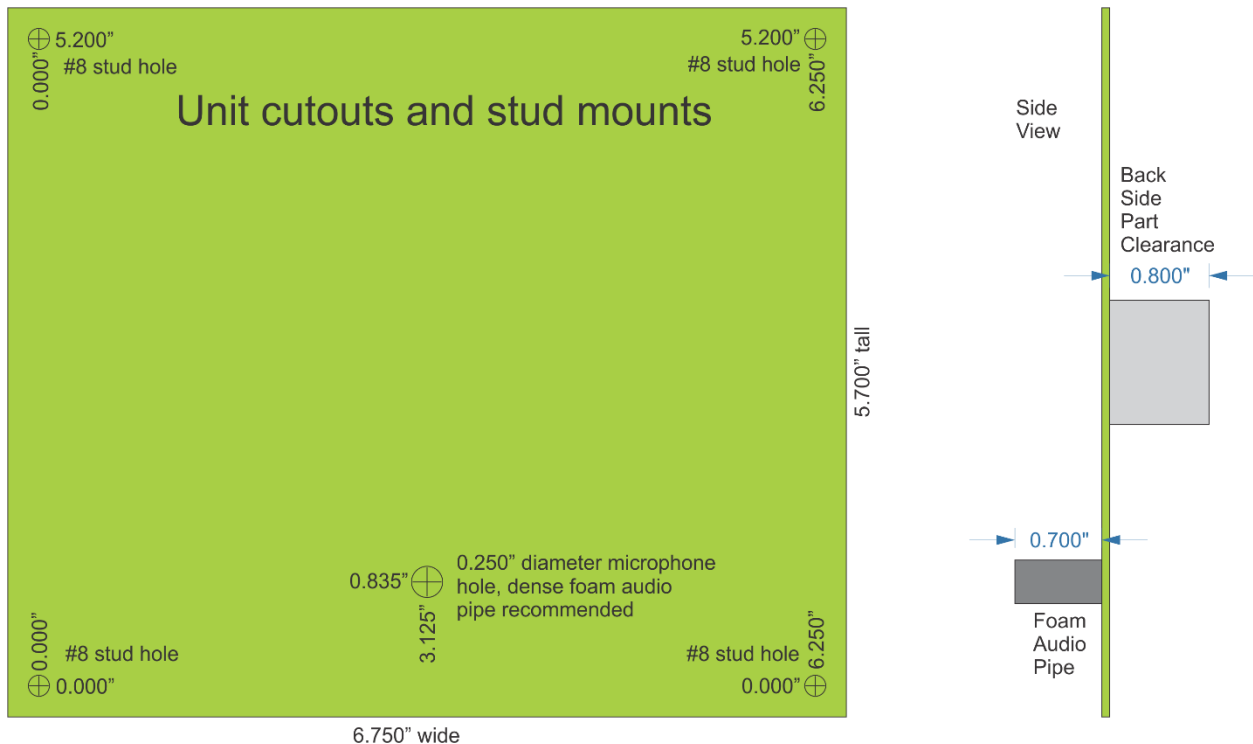
TROUBLE SHOOTING

SHORT BEEP TONE

A short BEEP tone, 200 milli-seconds long at a frequency of 800Hz, will be played whenever the DL-20-RFG-H is instructed to play a Voice file that is not on the SD Card.

TWO REPEATING SHORT BEEPS

If the system repeats 2 beeps every 5 seconds, this means the SD card isn't inserted/recognized. Try ejecting then reinserting the SD card. If the problem persists, try a new SD card.

CUSTOMER SUPPORT

All operation or technical questions should be directed to the Customer Support Center at **(818) 753-5669**, between 8:00 a.m. and 5:00 p.m. Pacific time. **Before calling the Customer Support Center**, we request that you have your DL-20-RFG-H PCB serial number and site serial number, along with the Firmware version.

POWER SPECIFICATIONS

- Power Supply Requirements: 12V DC @ 1A, Regulated Power Supply with UL Listing and Class IV Power Efficiency Rating
- Input Voltage= Regulated, 12V DC
- Max Current Draw = less than 1A @ 12V DC (12 Watts)
- Power Connector = 5.5mm (Outside Diameter) x 2.5mm (Inside Diameter) x 10mm (long)
- Barrel Plug, Center is Positive

POWER LOSS PROTECTION

This system does not have a backup battery, so the power input adapter (for all the units) should be connected to a UPS from the machine room.

PHONE LINE REQUIREMENTS

Requires a standard Analog (POTS) line simulator. Can be installed behind a PBX or directly on a CO line simulator. On hook voltage must be from 24V DC to 50V DC. Up to 50 DL-20-RFG-H units can share a single telephone line. Not Polarity Sensitive. Make sure the simulator/PBX will wort with the maximum unit distance at the site.

PHONE NUMBER STORAGE

The DL-20-RFG-H has a programmable phone number that can be from 1 to 16 digits in length. The STAR is used as a 1 second pause. The phone number is used only when the system is programmed to dial out for emergency calls.

SPEAKER REQUIREMENTS

- 8 ohms @ 10 Watts minimum. Recommended speaker is the Quam 4C3Z80T
- Non-Polarized

- Suggested 3" Minimum Diameter speaker cone

PHONE LED REQUIREMENTS

The phone LED output is designed to drive either a 6V/12V LED light, or a single LED without a limiting resistor. This output will NOT work with an incandescent light.

PHONE LINE SIMULATOR REQUIREMENTS

The DL-20-RFG-H requires a "true" phone line simulator that provides 48VDC on hook and a simulated 110vac DC biased 20Hz ring signal. The AD-40 simulator is recommended and it provides support up to 3KM from each end. All the DL-20-RFG-H units can be chained together in series.

ITEMS NEEDED FOR INSTALLATION

The following is a list of items, excluding tools, that are needed to install the DL-20-RFG-H:

1. Speaker: 8 ohm/10 Watt, recommended model is the Quam P/N 4C3Z80T.
2. Momentary Phone Activation Switch with LED. (Normally Open, 6V/12V LED light)
3. Analog Telephone Line Simulator; AD-40 recommended. (POTS Line)

ACTA SPECIFICATIONS

ACTA Certification (FCC Part 68) = AP4AL00BDL-20-RFG-H

ACTA STATEMENT

1. This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the rear side of the printed circuit board of this equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. If requested, this number must be provided to the telephone company.
2. This unit is installed in an elevator cab and requires that the Ring and Tip connection from the telephone line be attached to the DL-20-RFG-H via a screw terminal connector that is located directly on the printed circuit board of the DL-20-RFG-H. No USOC Jacks are used.
3. A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA.
4. The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US:AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (e.g., 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.
5. If the DL-20-RFG-H causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.
6. The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice so you can make necessary modifications to maintain uninterrupted service.
7. If trouble is experienced with the DL-20-RFG-H, for repairs or warranty information, please contact E.C.C., located at: **16521 SATICOY ST, Van Nuys, CA 91406, (818) 753-5669 in the U.S.A.** If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.
8. No repairs to the DL-20-RFG-H should be made by the customer (user). All repairs MUST be made by the manufacturer or authorized repair facility. Call E.C.C. for repair information at **(818) 753-5669**.
9. Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.
10. If your home or business has specially wired alarm equipment connected to the telephone line, ensure the installation of the DL-20-RFG-H does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

LIMITED ONE YEAR PARTS & LABOR WARRANTY

This E.C.C. PRODUCT is warranted against defects for a period of one (1) year from the date of the original invoice. Within this period, we will repair it without charge for parts and labor. To obtain warranty service the product must be returned, at the customer's expense, to E.C.C. along with a copy of the original invoice. After the unit has been repaired, E.C.C. will ship the PRODUCT back via UPS GROUND service at our expense. If any other form of return shipment is requested, the customer will pay for 100% of the shipping cost.

This Warranty does not apply if in the sole opinion of E.C.C., the PRODUCT has been damaged by lightning, or any other Acts of God, or by accident, misuse, neglect, improper location (high dust or tobacco smoke prone areas), improper packing, shipping, modification, or servicing by other than an authorized E.C.C. Service Center.

Except as specifically provided in this agreement, there are no other warranties, expressed or implied, including, but not limited to, any implied warranties or merchantabilities or fitness for a particular purpose and in no event shall E.C.C be liable for loss of profits or benefits, indirect, special, consequential, or other similar damages arising out of any breach of this warranty or otherwise.