DL-20-ASI-3 Elevator Multi-Function Processor

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-ASI-3 is an Elevator Multi-Function Processor that was designed to simplify the COP panel on an elevator cab, and to provide powerful elevator monitoring features. The DL-20-ASI-3 reduces labor cost by reducing the amount of wiring required. It also saves valuable space by combining multiple functions on one board. The DL-20-ASI-3 saves even more money by allowing up to 8 elevator phones to share a single POTS line. The DL-20-ASI-3 provides all the following functions:

- Floor Position Indicator
- Voice Enunciator (Floor Position)
- Emergency Light Unit (ELU) with programmable intensity.
- Emergency Bell control and bell driver
- Emergency Phone (with built in Line sharing up to 8 per line)
- Fire Service Mode Indicator
- Medical EMS Indicator
- Seismic Sensor Indicator
- All Inspection Mode Indicators
- Nudging Alarm
- Fire Buzzer
- Floor Passing Chime
- Load Test Due Notification
- Battery Replacement Notification
- Elevator Host Controller Alert Notification.
- Elevator Host Controller Fault Notification.
- Email notification of Alarms, Faults, Battery Replacement, and Load Test Due.
- Advertising Display with up to 50 advertisements.
- USB port for local Advertisement updates, PI display updates, and firmware updates via a standard Flash Drive.
- Daily Telephone Line Operability Verification (ASME A17.1 code requirements)

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.
- Use caution when servicing batteries. Battery acid can cause burns to skin and eyes. If acid is spilled on skin or in eyes, flush with fresh water and contact a physician immediately.
- 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 on the DL-20-ASI-3 holds all the working files and setup information. The DL-20-ASI-3 will not function without a properly setup Micro SD card. All compatible Micro SD cards **MUST** be pre-setup with the E.C.C. Manager HRZ software first. Blank Micro SD cards will NOT work in the DL-20-ASI-3.

The Micro SD card can be removed from the DL-20-ASI-3 at any time. When re-inserting the Micro SD Card, always wait until prompted by the DL-20-ASI-3 before inserting the Micro SD card. You can also INSERT or REMOVE the Micro SD card when the DL-20-ASI-3 is powered down. The SD card on the DL-20-ASI-3 holds all the setup information which includes all video files, 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-ASI-3. Removing the Micro SD Card and re-inserting it back into the DL-20-ASI-3 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 to FAT (FAT 16) or FAT32
- Available through direct purchase from E.C.C.

Always wait until prompted by the DL-20-ASI-3 before inserting the Micro SD card. To make changes to the information on the Micro SD card, you can either call the unit up on the DL-20-ASI-3s phone line, then 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-ASI-3. Removing the Micro SD Card and re-inserting it will cause a system RESET.

ICON DESCRIPTIONS

Emergency Medical Service Active

Earthquake Sensor Active

Elevator is Over Loaded

Emergency Telephone Active

Backup Battery Needs Replacing

Communication with Controller is Lost

In Car Inspection Active

Car Top Inspection Active

Machine Room Inspection Active

Hoistway Inspection Active

Elevator is Disabled

Elevator on Emergency Backup Battery

Fire Service Mode is Active

PI GRAPHIC/ENUNCIATOR TEST

This utility allows you to verify all PI Graphics and Audio Enunciations for each landing. This function does NOT require the DL-20-ASI-3 to be connected to the elevator host controller.

TO ACTIVATE THIS TEST, FOLLOW THESE INSTRUCTIONS:

1. Power the DL-20-ASI-3 up.
2. Wait for screen to display the normal graphics.
3. Eject the SD Card and wait until screen reads “You MUST insert SD Card!”.
4. Press and hold down the Emergency Phone button and do NOT release.
5. Re-Insert the SD Card with the phone button held down.
6. You can release the phone button once the display on the DL-20-ASI-3 displays “PI Graphics Test”.

The DL-20-ASI-3 will start playing the audio enunciations while displaying the DOWN graphic for the 1st landing, followed by the UP Graphic, then the END OF CALL graphic. It will then repeat this process for all additional landings, in order. When finished with the last landing, the DL-20-ASI-3 will enunciate the “Going UP” and Going DOWN” audio prompts, and then will return to normal operation.

BATTERY BACKUP

When power fails, the battery backup will keep the emergency light unit, PI Indicator, Bell, and emergency phone operating. A fully charged battery will operate the ELU and phone for 4 hours, or the bell for 1 hour. You can determine the state of charge on the battery by measuring the “OPEN” circuit voltage across the battery terminals.

BATTERY SPECS

- Fully Charged – 6.48V approximately when measured across the battery while fully powered up and charged
- Fully Discharged – 5.82V, battery backup drop out limit
- Acceptable (chargeable) but non-operational range – 5.50V to 5.81V, battery is still good but needs to be charged
- Defective battery limit – 5.49V and below means the battery is bad and needs replacement
- Tested every day at 3 a.m., if defective the Battery Low icon is displayed (this only resets when battery is replaced) and a notification E-mail is sent

SYSTEM AUTO BATTERY TESTING

The DL-20-ASI-3 test the battery every day at 3 a.m. It removes the battery from the circuit for 10 seconds then tests the open circuit voltage. If the voltage is less than 5.50 volts it considers the battery defective. Upon detection of a defective battery the DL-20-ASI-3 displays the **Battery Low Icon** on the display.

If the Google Voice option is enabled, the DL-20-ASI-3 will place an elevator trouble call to Google Voice. The DL-20-ASI-3 will place a new call every day at 3 a.m. until the battery passes the test. When you check the elevator status in the REMOTE mode, it will also inform you if the battery needs replacing.

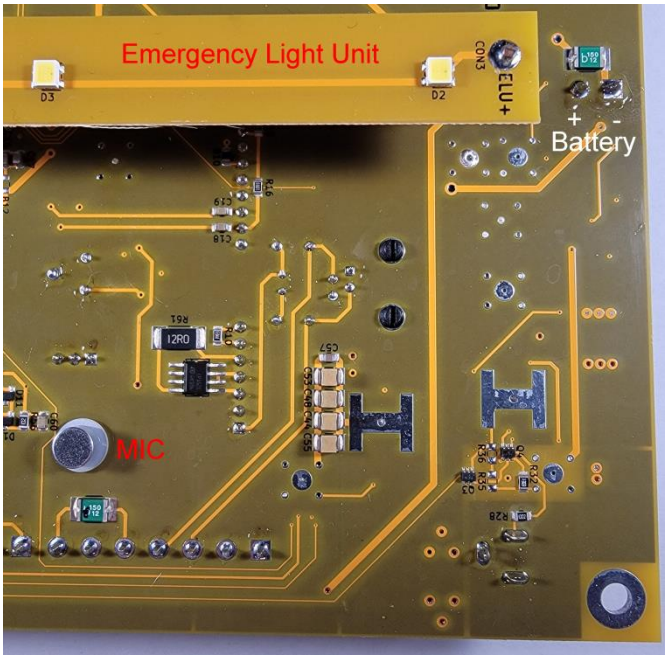
BATTERY ICON WILL NOT RESET UNTIL 3 AM THE NEXT DAY

The battery ICON, and the battery replacement message in elevator monitor mode, will not reset until the battery has passed a test at 3 a.m. or until a system RESET is performed. To RESET the system, simply remove the SD card then re-insert it.

EMERGENCY LIGHT UNIT TROUBLE SHOOTING

This procedure will determine if there is a problem with the DL-20-ASI-3 board, or if it is a wiring, Battery, or a FUSE issue.

1. Remove both DC Power and the Battery from DL-20-ASI-3.
2. Re-connect the Battery to the DL-20-ASI-3. (NO AC POWER!)
3. On the DL-20-ASI-3 PCB measure the DC voltage across TP3 and TP4 (Battery + and -). The voltage should be above 6V DC, anything less means the Battery does NOT have enough charge to operate the unit.
4. On the DL-20-ASI-3 PCB measure the voltage across the + and – Battery terminals as shown. If the Voltage is above 6V DC, then it indicates the resettable FUSE is blown. In this case the unit must be sent in for servicing.
5. Make SURE that there is a properly prepared DL-20-ASI-3 SD card installed in the DL-20-ASI-3 and apply DC power to the DL-20-ASI-3 power pack. The Emergency Light Unit will NOT function without a properly prepared SD card.
6. Once the DL-20-ASI-3 unit has finished powering UP, and ONLY after the display is showing the floor #1 graphics, remove the DC from the DL-20-ASI-3 and the emergency light unit should light; if it does not, then the DL-20-ASI-3 is defective.



THE EMERGENCY TELEPHONE DIALER

The Emergency telephone is designed to work with a single analog telephone line (POTS). This phone line should be dedicated for elevator use. Up to eight DL-20-ASI-3s can share a single analog telephone line. The emergency telephone portion has the following features:

- Hands free Speakerphone communications
- Four Hour Battery Backup (full Operation)
- Three Programmable Emergency Phone Numbers
- Variable length, Location Announcement up to 1 minute in length.
- Programmable Time Out.
- CPC Disconnect.
- Programmable Tone/Pulse Dialing
- Programmable Touch Tone Length (50ms to 1 second)
- Programmable Ring Delay (1 to 10)
- Programmable Auto talk on Ring Up
- Programmable Mute during Dialing
- Line Sharing capable- Up to 8 units on the same line
- Programmable Press Switch to Abort
- Remote Programmable.
- Daily Telephone Line Operability Verification (Uses EX-50/AD-12 Phone Line Verification Indicator)

Note: When the emergency phone is in use, the floor voice enunciator for the elevator will not function.

STAND ALONE OPERATION

If there is only one DL-20-ASI-3 connected to the phone line, the DL-20-ASI-3 extension number MUST be set to 0. This can only be changed in the E.C.C. Manager program.

LINE SHARING

The line sharing feature of the DL-20-ASI-3 allows up to eight DL-20-ASI-3 units to share a single telephone line. When multiple DL-20-ASI-3s are attached to a telephone line, each unit MUST be assigned a unique extension number from 1 to 8; 1 being the CONTROLLER phone. There MUST be a CONTROLLER PHONE (Ext 1) for proper Line Sharing operation. The following is an overview of this line sharing operation. When used as a single phone, the extension number will be 0. This can only be changed in the E.C.C. Manager program.

INBOUND CALLS

The CONTROLLER DL-20-ASI-3 (Ext 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 digit, the DL-20-ASI-3 will transfer the call to the corresponding elevator phone. If the dialed digit is an invalid extension number, the CONTROLLER will respond with:

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

When a valid extension number is entered, the CONTROLLER will transfer the call to the new extension and will disconnect from the line.

TRANSFERRING BETWEEN ELEVATORS (EXTENSIONS)

The operator can transfer to another extension by dialing the extension number followed by a POUND tone.

EXTENSION NUMBER [POUND]

When this happens the current DL-20-ASI-3 will say “Transferring.” When the new elevator answers, it will say ”Connected”, and it will pass control to the new elevator’s DL-20-ASI-3. If the extension number is not valid, it will state so.

OUTBOUND CALLS

Each phone MUST be programmed with the dial out numbers(s). Each unit will dial their own numbers. When the DIAL button is depressed, the unit will check "ON HOOK" status of the line, if line is "ON HOOK", dialer will seize the line and will start dialing.

CONFLICT CONDITION

Upon activation, if the line is BUSY, the unit will play a simulated phone call to the person(s) in the elevator. 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 “Extension 3 waiting” if extension 3 is the extension that is waiting. If other extensions are waiting, they will also notify the operator every 45 seconds. To answer the new call, the operator dials **3 #**. This will transfer the operator to extension 3.

If the Operator does not transfer, but hangs up on the first call, extension 3 will immediately seize the phone line and will start its true dialing sequence. If the operator stays on the initial call and does not answer the waiting call, the call will be automatically terminated after 4 minutes. In this case the person in the elevator MUST re-press the PHONE switch to initiate a new call.

The remote operator can switch between elevator cabs by simply dialing the desired extension number followed by **#**.

DAILY TELEPHONE LINE VERIFICATION

Starting in 2009, the ASME code, 17.1b, paragraph 2.27.1.1.6, requires that all emergency elevator phones must automatically daily test the phone line to verify that it is operational. If the phone line is NOT operational, an audible and visual signal must be activated next to the “FIRE RECALL” switch on the egress floor. The DL-20-ASI-3 has a 2-wire Phone Line Verification Output. This 2-wire output is connected to an external EX-50/AD-12 Phone Line Verification Indicator which is installed next to the fire recall switch. It requires 2 wires to be used from both the traveling and hoist way cables. The EX-50/AD-12 provides both the audible and visual indicators, and has a BEEP RESET function as well.

TESTING

- Make sure that the 10th digit in **Parameter Group A** is set to 1 (Enables Feature). You can use Telephone REMOTE MODE or E.C.C. Manager to change this.
- Disconnect the phone line from the DL-20-ASI-3 or place a short across it.
- The EX-50/AD-12 will light UP and start Beeping to indicate a BAD TELEPNONE LINE.
- To RESET the EX-50/AD-12, simply re-connect phone line, or remove SHORT from phone line.
- Within 10seconds the EX-50/AD-12 should automatically RESET.

The phone line Verification feature can be enabled or disabled on the DL-20-ASI-3 by setting the 10th digit of parameter Group A, 1=On and 0=OFF. When it is enabled, the DL-20-ASI-3 will continually monitor the phone line for voltage across it. It will also test the telephone line for Dial Tone every day at approximately 3 a.m. If the phone line fails either test, the DL-20-ASI-3 will activate the EX-50/AD-12 external Phone Line Verification indicator. Once activated, the EX-50/AD-12 will beep every 25 seconds and will continually flash the indicator light. The DL-20-ASI-3 will re-test the phone line every 10 seconds until the phone line passes both tests. Once the phone line has passed both the Line Voltage and Dial Tone test, the DL-20-ASI-3 will RESET the EX-50/AD-12.

RESETING THE AUDIBLE ALARM (EX-50/AD-12)

The audible alarm can be reset by performing the following action:

1. When the light goes off, press and hold the EX-50/AD-12 Push Button for 3 consecutive flashes.
2. After the 3rd flash, when the light goes off again, release the Push Button for 1 flash.
3. When the light goes off again, press and hold the EX-50/AD-12 and the unit should acknowledge the RESET by rapidly flashing.
4. The audible signal will be disabled until the next 3 a.m. phone test. If the phone line is still non-operational, the beep will start up again.

The Phone Line Verification Test is enabled/disabled by the 10th digit in Parameter Group A. When enabled, the DL-20-ASI-3 will test the phone line once each day, at 3:00 a.m. + (1minute*the DL-20-ASI-3s Extension Number). This way, the DL-20-ASI-3s that share a phone line will not interfere with each other. For the first test, the DL-20-ASI-3 checks for voltage across Ring and Tip. If No voltage is detected, the Phone Line is considered NON-OPERATIONAL without ever going to the OFF HOOK state. If the voltage test is passed, the DL-20-ASI-3 then checks for Dial Tone. The DL-20-ASI-3 goes OFF HOOK for a maximum of 2 seconds for this test. Once Dial Tone is detected, the DL-20-ASI-3 immediately returns to the ON HOOK state. If No Dial tone is detected, the Phone Line is considered NON-OPERATIONAL. Upon detection of a NON-OPERATIONAL phone line, the DL-20-ASI-3 repeatedly re-test the phone line at a rate of 10sec + (200ms*Extension Number). This is to avoid collisions with other DL-20-ASI-3 units when used in the line sharing mode, that is multiple DL-20-ASI-3 units on the same phone line. This is important because each DL-20-ASI-3, even though they share the phone line, code requires them to report to their own elevator host controller when the phone line is NON-OPERATIONAL.

Once the DL-20-ASI-3 detects that the phone line is OPERATIONAL again, the DL-20-ASI-3 resorts back to testing the phone line, once a day at 3 a.m.

THE EMERGENCY LIGHT UNIT

- Auto activation upon power failure.
- Programmable Activation on depression of Alarm Button.
- Programmable Light Brightness from 0-9.
- Four Hour Battery Backup

VOICE ENUNCIATOR FOR EACH FLOOR

The DL-20-ASI-3 has a High Quality Voice Enunciator that will announce each floor, which can be enabled or disabled on the DL-20-ASI-3. The DL-20-ASI-3 has an independent volume control for the Voice Enunciation. Custom Voices are also available from **E.C.C. at (818) 753-5669**. The DL-20-ASI-3 also provides the Floor Passing Chime. The enunciator and floor chime are disabled when the emergency phone and/or when the DL-20-ASI-3 is making outbound Notification calls.

LCD DISPLAY

The DL-20-ASI-3 has a state-of-the art High Quality 7" LCD TFT 640 x 384 Color Display (3.43”H x 6.1” W). As an option it is also available with a larger 10.2” display (5.0”H x 8.89”W). It also features back lighting so that the displayed image will be easily seen. The display is broken down into three specific areas: the AD Area, the PI Area, and the Logo Area.

THE AD SPACE (490 X 384 PIXELS)

The AD area is the largest area. It can be used as any one of the following:

- Display customized ADs, each for a fixed period, independent of the current floor position. The fixed period is programmable with E.C.C. Manager HRZ. Customers can easily change the ADs on site themselves. Custom files can be emailed directly to the customer and placed on a generic FLASH drive. The FLASH drive is then inserted into the DL-20-ASI-2s USB port for easy updates. Using E.C.C. Manager HRZ lets you update the files by updating the SD Card on the DL-20-ASI-2.
- Display a listing of the companies located on each floor. In this case the display changes at each floor.
- It can be used to display a fixed logo or graphic, with no changes.

The Ad Space will alternately show the Fire Service Icon (highest priority above all others) or Service Icons when indicated.

The E.C.C. Manager HRZ program can import any size Ad graphics in BMP, JPG, and PNG formats, then it will automatically resize them to 480x360 pixels at 24 bit color depth.

THE CLOCK AREA (490X34 PIXELS)

The CLOCK Area can be displayed by changing the option with E.C.C. Manager HRZ. Enabling the clock area will not block any Ad content.

THE LOGO AREA (150X116 PIXELS)

The LOGO Area is used to display a fixed Logo. This area will alternately show any currently processing icons. A graphic file must have the following format to be imported for this position: it must be a PNG file, it must have a color depth of 32 bits, it must have a size of 150 x 116 Pixels.

THE PI AREA (150X268 PIXELS)

The PI Area is used to display the current Floor Position, and direction. It can be customized using the E.C.C. Manager HRZ software. Custom PIs are available from **E.C.C. at (818) 753-5669**.

NUDGING AND FIRE BUZZER

The DL-20-ASI-3 can provide both the Fire Buzzer and the Nudging Indicator tones. These tones will be emitted even while the speakerphone is in operation. The Fire Buzzer will work for four hours with battery backup.

EMERGENCY ALARM BUTTON INPUT

When this button is pressed, the Alarm Bell on the top of the elevator car will sound. There is also a program option which allows the Emergency Light to come on whenever the button is pressed. The Bell should be a minimum of 80db to a maximum of 90 db. The battery backup will provide a minimum of one hour of bell operation during a power failure.

EMAIL NOTIFICATIONS AND GOOGLE VOICE

The DL-20-ASI-3 can place outbound calls to notify you when a problem is detected with the elevator. You can use standard Voice numbers where the unit will call them and play the alert message after 2 seconds of silence when the line is answered. If you use the "Google Voice" feature, you will instead receive an email notifying you of an existing problem with the elevator within a minute or so of when the elevator host controller detects the problem. The DL-20-ASI-3 will notify you when there is any one of the following: an Elevator Host Controller Alert condition, an Elevator Host Controller Fault condition, the DL-20-ASI-3 Backup Battery needs replacing, the elevator's Load Test is due now, or if the Elevator is placed in Fire Service mode. You can select which conditions that you wish to be notified on. After the voice message has been left, Google Voice will automatically email a message to your email account. Attached to the email will be a voice message of the DL-20-ASI-3's message stating the specific trouble, the current floor position that the elevator is on, and the location of the site. You can play this message directly on your computer, assuming it has speakers on it. All GOOGLE VOICE calls are disabled while the elevator is in any INSPECTION MODE.

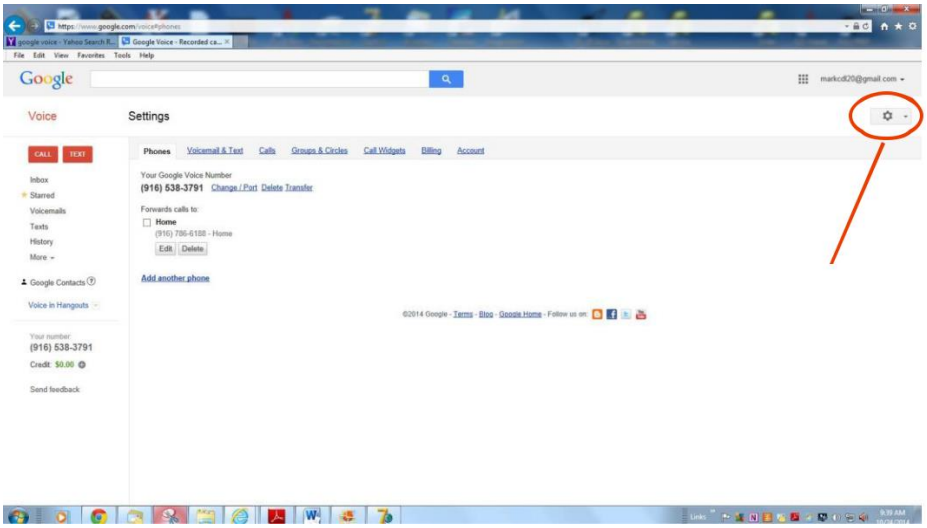
TO USE THIS FEATURE, THE FOLLOWING MUST BE DONE:

1. You must establish a Google Voice account.
2. The GV on Alarms, GV on Faults, GV on Bad Battery/Load Test Due, Fire Service parameter in Parameter Group 3, MUST be enabled.
3. The Google Voice Phone number 4 must have a valid GV phone number.
4. These parameters can be set up in REMOTE mode by calling the unit, or under the E.C.C. Manager program.

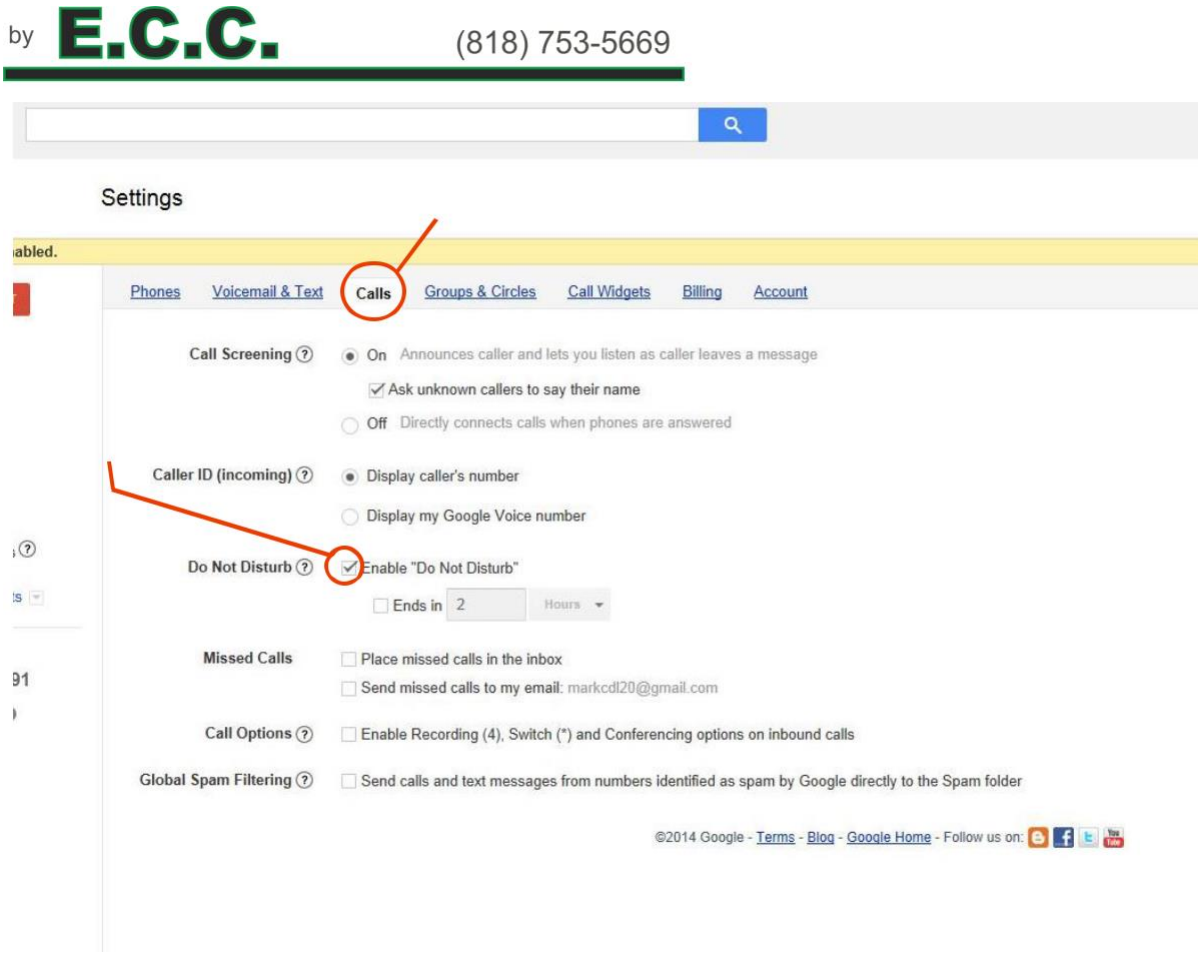
ESTABLISHING YOUR GOOGLE VOICE ACCOUNT

To use this powerful feature, you must establish a completely free Google Voice Account which will provide you with a new telephone number. All your DL-20-ASI-3s MUST be set to call this one telephone number. Simply go on the internet and search for Google Voice. Go to the site and click on "Create an account." When you establish a Google Voice account you will select your Google Voice phone number.

You will have to enter your personal information, your current phone number (only enter one), and agree to the terms. Make sure that you provide a phone number that you have immediate access to, because Google Voice will be calling you to verify the account.



Once you have created an account, go to SETTINGS from the main Google Voice page as show below:



Enable "**Do Not Disturb**" as follows (this allows all calls to go directly to your Voice Mail Box without being forwarded to your existing phone number first):

IMPORTANT NOTE ABOUT YOUR GOOGLE VOICE OUTGOING MESSAGE

You do NOT have to record a message for Google Voice. The default message will work fine. If you wish to record your own Outgoing Message, you MUST not have any silent gaps over 1 ½ seconds, in your personal greeting on Google Voice. Failure to do this will result the in incomplete trouble messages emailed to you.

LOAD TEST DUE NOTIFICATION

When enabled, this function will call your Google Voice number and leave a voice message stating that a LOAD TEST is due for the elevator. The DL-20-ASI-3 will only place one alert call when the Load Test is due. The Load Test will also be announced when checking the elevator status in REMOTE Mode. In this case it will indicate the load test is due during the entire month. The DL-20-ASI-3 will place the Load Test notification call at 3 a.m., on the first day of the month due. Removing the SD card will reset this feature and if the Load Test is due in the current month will cause another Load Test Notification call at 3am the next morning. Your Google Voice account will then send you an email, with the voice message attached. An example of the message is as follows:

"Elevator Trouble Call, Load Test Due Now. This elevator is located at 234 First Ave in Chico".

The GREEN portion of the message above is the actual Location Message that is recorded on the DL-20-ASI-3.

For this feature to work, four items must be programmed properly:

1. The Load Test Due MONTH must be programmed under the Parameters Group C.
2. The Load Test Due YEAR must be programmed under the Parameters Group C.
3. The GV Enable Parameter must be set to 1 in Parameters | CPC Disable | Group C - 0=CPC ON.
4. You must have your Google Voice phone number programmed for Phone Number 4.

WHAT DO I DO AFTER THE LOAD TEST HAS BEEN PERFORMED?

After the load test has been performed you must program the new Load Test Due date in the Parameter Group C. This can be done by phone or by removing the SD card and re-programming it with the E.C.C. Manager software.

DISABLING ONLY THE LOAD TEST DUE NOTIFICATION

If you wish to disable the Load Test Notification, simply re-program the Load Test Month and Year with ZEROs. This will completely disable this feature.

BATTERY REPLACEMENT NOTIFICATION

When enabled, this function will call your Google Voice number and leave a voice message stating that the Battery Needs Replacing for the elevator. You can also check the battery status in REMOTE mode by checking the elevator status. The DL-20-ASI-3 test the battery every day at 3 a.m. in the morning. If the battery fails the test, it will display the Battery Replace ICON on the display and it will place the notification call. The DL-20-ASI-3 will place a call every day until the battery has been replaced. The ICON will not REST until it passes a test. Your Google Voice account will then send you an email, with the voice message attached. An example of the message is as follows:

"Elevator Trouble Call, Battery Needs Replacing. The elevator is at 3rd Floor, This elevator is located at 234 First Ave in Chico."

The GREEN portion of the message is the actual Location Message that is recorded on the DL-20-ASI-3.

FOR THIS FEATURE TO WORK, TWO ITEMS MUST BE PROGRAMMED PROPERLY.

1. The GV Enable Parameter must be set to 1 in Parameters Group C.
2. You must have your Google Voice phone number programmed for Phone Number 4.
3. The Parameters Group C and Phone Number 4 can be programmed either remotely by calling the unit, or it can be set by removing the SD card and using the E.C.C. Manager software in a computer.

ELEVATOR HOST CONTROLLER ALERT NOTIFICATION

When enabled, this function will call your Google Voice number and leave a voice message stating the specific current elevator Alert Condition code and description. You may also check for real time Alert Conditions in REMOTE mode by checking the elevator status. The call will be placed at the time the

Alert Condition happens. It will only make one call per New Alert Condition. Alert conditions are not dialed out while the elevator is in any Inspection mode. An Alert triggered call will also report any FAULTS that may exist, even though the faults are disabled. If FAULTS are disabled, a FAULT alone, will NOT initiate a Google Voice call. Your Google Voice account will then send you an email, with the voice message attached. An example of the message is as follows:

> **"Elevator Trouble Call. A17- Door Stalled. The elevator is at 2nd Floor. This elevator is located at 234 First Ave in Chico."**

The GREEN portion of the message is the actual Location Message that is recorded on the DL-20-ASI-3.

FOR THIS FEATURE TO WORK, THREE ITEMS MUST BE PROGRAMMED PROPERLY.

1. The GV Enable Parameter must be set to 1 in Parameters Group C.
2. The GV on Alarms Parameter must be set to 1 in Parameters Group C.
3. You must have your Google Voice phone number programmed for Phone Number 4.

The Parameters Group C and Phone Number 4 can be programmed either remotely by calling the unit, or it can be set by removing the SD card and using the E.C.C. Manager software in a computer.

ELEVATOR HOST CONTROLLER FAULT NOTIFICATION

When enabled, this function will call your Google Voice number and leave a voice message stating the specific current elevator Fault Condition code and description. You may also check for real time Fault Conditions in REMOTE mode by checking the elevator status. The call will be placed at the time the Fault Condition happens. It will only make one call per new Fault Condition. Fault conditions are not dialed out while the elevator is in any Inspection mode. A Fault triggered call will also report any ALARMS that may exist, even though the alarms are disabled. If ALARMS are disabled, an Alarm alone, will NOT initiate a Google Voice call. Your Google Voice account will then send you an email, with the voice message attached. An example of the message is as follows:

> **"Elevator Trouble Call. F22-Gate Switch. The elevator is at 4th Floor. This elevator is located at 234 First Ave in Chico".**

The GREEN portion of the message is the actual Location Message that is recorded on the DL-20-ASI-3.

FOR THIS FEATURE TO WORK, THREE ITEMS MUST BE PROGRAMMED PROPERLY.

1. The GV Enable Parameter must be set to 1 in Parameters Group C.
2. The GV on Alarms Parameter must be set to 1 in Parameters Group C.
3. You must have your Google Voice phone number programmed for Phone Number 4.

NON-REGISTERED FAULTS AND ALARMS

If the elevator host controller issues either an Alarm or Fault that has not been identified by the Host Controller Manufacturer, it is **UN-REGISTERED**. The DL-20-ASI-3 will verbalize that the Alarm or Fault is **UN-REGISTERED** and will state the **INDEX** of the **NON-REGISTER** event. In this case you would have to contact the host controller manufacturer and provide them with the **INDEX** of the **UN-REGISTERED** Alarm or Fault, to find out what the Alarm or Fault is.

SCREEN SAVER OPTION

When enabled, this feature will shut off the display when there is no elevator activity for 5 minutes. The screen will stay ON whenever the DL-20-ASI-3 is in any inspection mode, including Fire Service mode, or if the telephone is IN-USE. Once the display has turned OFF, it will turn back ON when the door opens, or any other activity is detected. It takes approximately 2 seconds for the display to turn ON. The screen saver mode can greatly extend the life of the display. The following table shows the life expectancy of the display in relationship to the number of hours used per day.

ON Time/Day	Battery Life Expectancy (Minimum)
24 Hrs (Always On)	2 Yrs, 3 Months
18 Hrs	3 Yrs, 0 Months
14 Hrs	3 Yrs, 11 Months
12 Hrs	4 Yrs, 7 Months
10 Hrs	5 Yrs, 6 Months
8 Hrs	6 Yrs, 10 Months
6 Hrs	9 Yrs, 2 Months
4 Hrs	13 Yrs, 8 Months
3 Hrs	18 Yrs, 3 Months
2 Hrs	27 Yrs, 5 Months
1 Hr	54 Yrs, 9 Months

REMOTE PROGRAMMING (OVER PHONE)

The DL-20-ASI-3 allows you to change the Location Message, as well as System Parameters A, B, and C, along with the Emergency Phone Numbers. To make any changes remotely, do the following:

1. Call the DL-20-ASI-3.
2. After the unit answers, enter the **5 digit REMOTE Access Code**.
3. Enter the desired **Remote Mode Menu Selection**.
4. You can enter **#** at the **Selection Menu** to exit remote mode.
5. 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 Line REMOTE Instructions - V4.00

1. Call the DL-20.
2. After the DL-20 says "Connected", enter the 5 digit Remote Access Code, then #.
   NOTE: The default RAC is 35842.

Remote Mode Menu Selections

On entry, the DL-20 will play the controller status, any faults/alarms, floor number, and firmware version; then it allows the following menu options (# will exit remote mode):

0 = Location Message
1 = Phone Number 1 (16 digits Max)
2 = Phone Number 2 (16 digits Max)
3 = Phone Number 3 (16 digits Max)
4 = Google Voice Number (16 digits Max)
5 = Parameter Group A (10 digits)
6 = Parameter Group B (10 digits)
7 = Parameter Group C (10 digits)
8 = Parameter Group D (10 digits)

System Parameters A — Default Values Shown

5

5	3	20	1	1	1	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 then Flash LED 1=Dial, First Message, Flash LED after * 2=Don't Dial, Flash LED 3=Dial, Flash LED, play Location Message 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

System Parameters B — Default Values Shown

6

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

System Parameters C — Default Values Shown

7

Google Voice Options

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	Extension Number Set to 5 in Remote Program Mode to Change Load Date

System Parameters D — Default Values Shown

8

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

CHECKING FOR LOAD TEST DUE IN REMOTE MODE

1. On a telephone call the DL-20-ASI-3 telephone line.
2. After it has answered, enter the REMOTE MODE by entering the 5 digit REMOTE ACCESS code.
3. Press [8] for Elevator status. If the Load Test is due in the current month, it will state so.

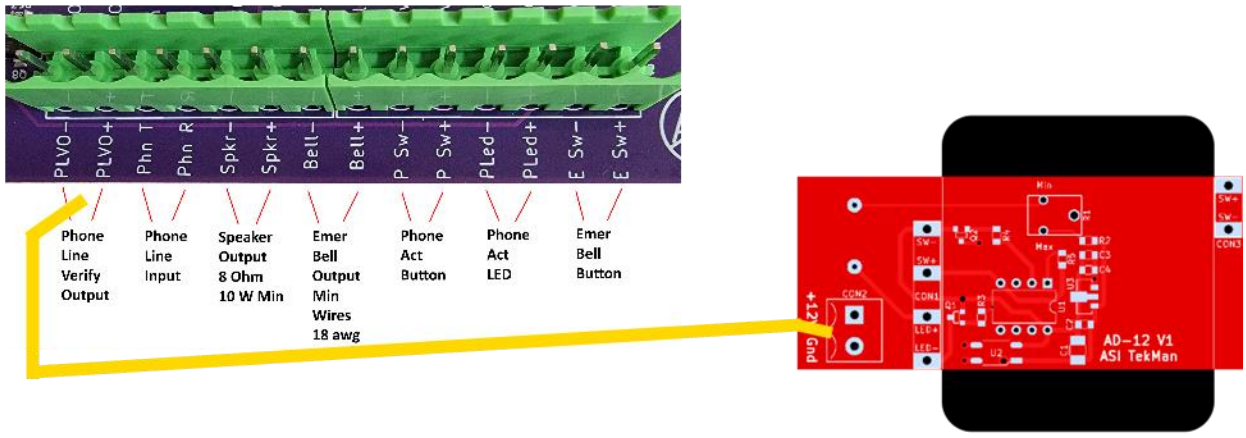
EX-50 PHONE LINE VERIFICATION INDICATOR

EX-50 FEATURES

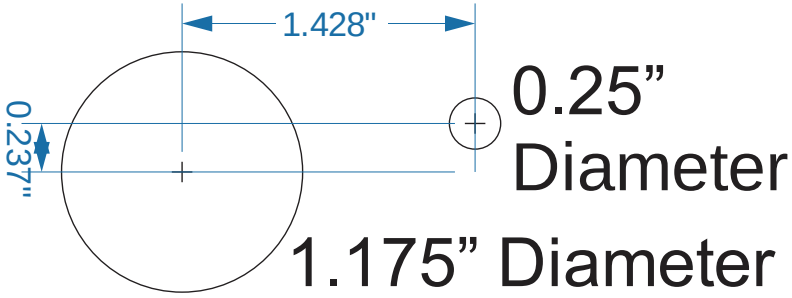
1. Two Wire Screw Terminal for easy installation.
2. Non-Polarized connection makes for a smoother installation.
3. Volume control for BEEP Volume. (Cannot be tuned all the OFF)
4. Combines RESET Switch and Flashing LED in same housing to provide a space saving design that saves valuable room in panel.

NOTE: To meet the ASME code requirements, the phrase, "**ELEVATOR COMMUNICATIONS FAILURE**" must be printed, in **RED** letters, no smaller than **1/4" high**, next to the indicator Light.

EX-50 CONNECTION TO DL-20-ASI-3



EX-50 PANEL MOUNTING DIMENSIONS



DL-20-ASI-3 PRECAUTIONS

DL-20

STATIC discharge will DAMAGE the board!

CAUTION:

Use ONLY 14awg or bigger wires for the Battery Cables. Connecting the Battery backwards WILL blow the 3A ATO BATTERY FUSE. Take your time and MAKE sure you get the Polarity correct the first time!

Only USE RHINO SLA4-6 Battery

Replacement Fuse = Automotive ATO 3A (Violet)

Items Needed for Installation:

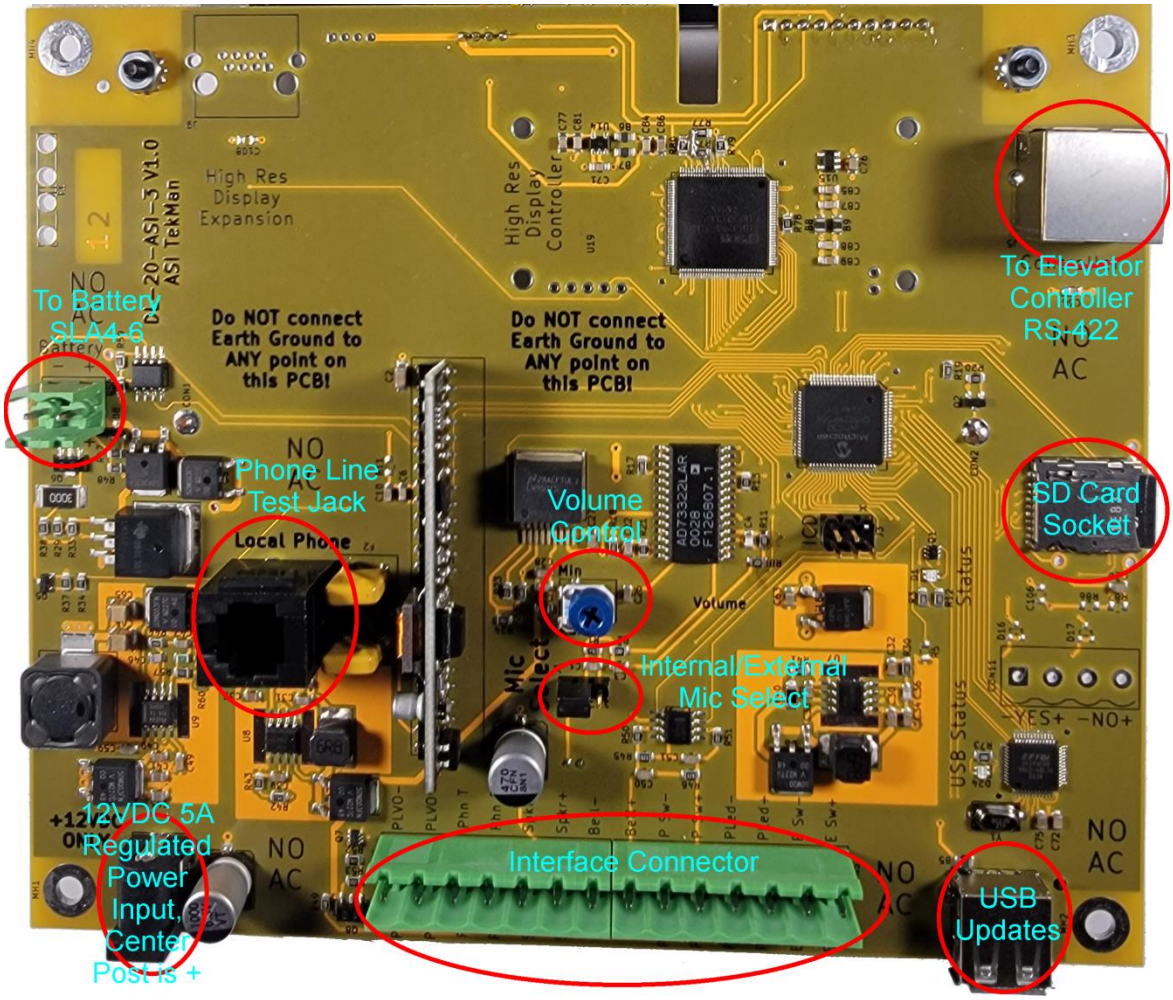
1- RHINO SLA4-6 SLA Battery.
2- 8 ohm, 10 Watt Speaker Quam 4C3Z8OT
3- 6V Bell (Edwards Signaling #55-6AM)
4- CAT 5 Cable to Elevator Controller
5- USB A Extension Cable.

CAUTION:

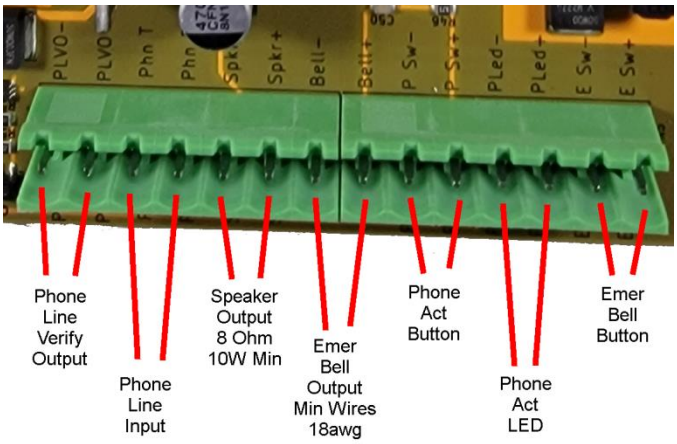
Connecting the 110V AC Power incorrectly to the DL-20 could damage the DL-20. Take your time and make SURE that it is connected as shown on the board. The power has it's own connector.

DL-20-ASI-3 FRONT LAYOUT

DL-20-ASI-3 PCB BACK SIDE CONNECTIONS



DL-20-ASI-3 INTERFACE CONNECTOR

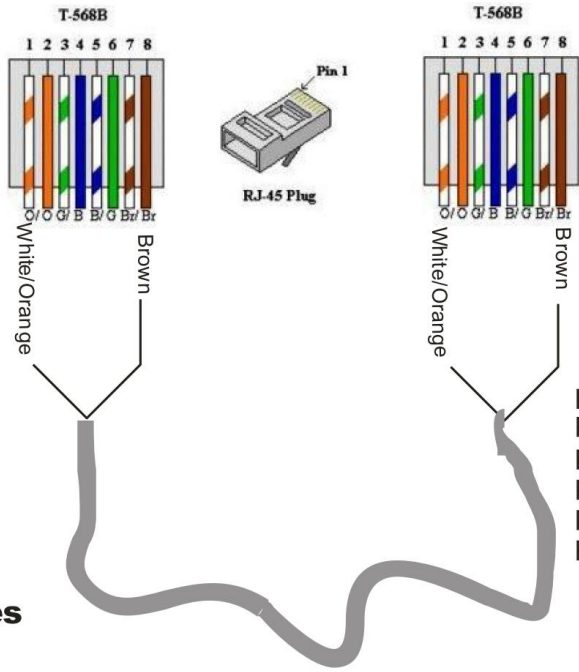


DL-20-ASI-3 CABLE SPECIFICATIONS

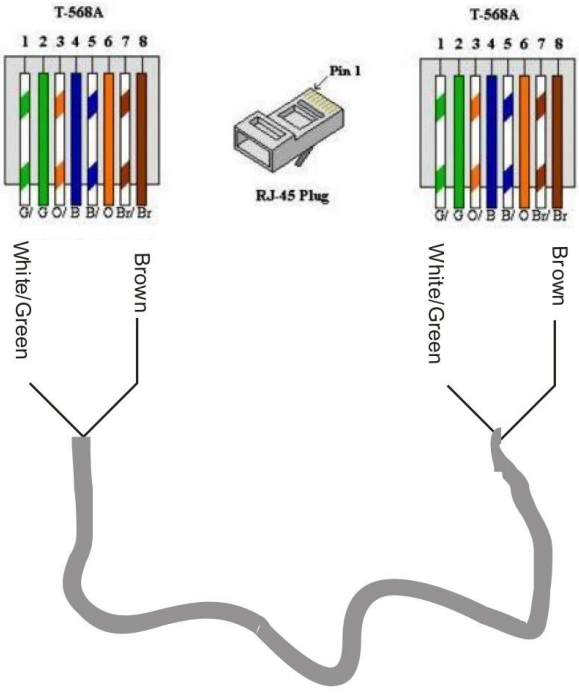
SRU to DL-20 Cable

1- MUST be a **STRAIGHT THROUGH** Cable
2- Can not use a **Cross-Over** Cable
3- Both ends MUST have the EXACT same wiring
4- Can be either a T-568-A (both ends) or T-568-B (both Ends)

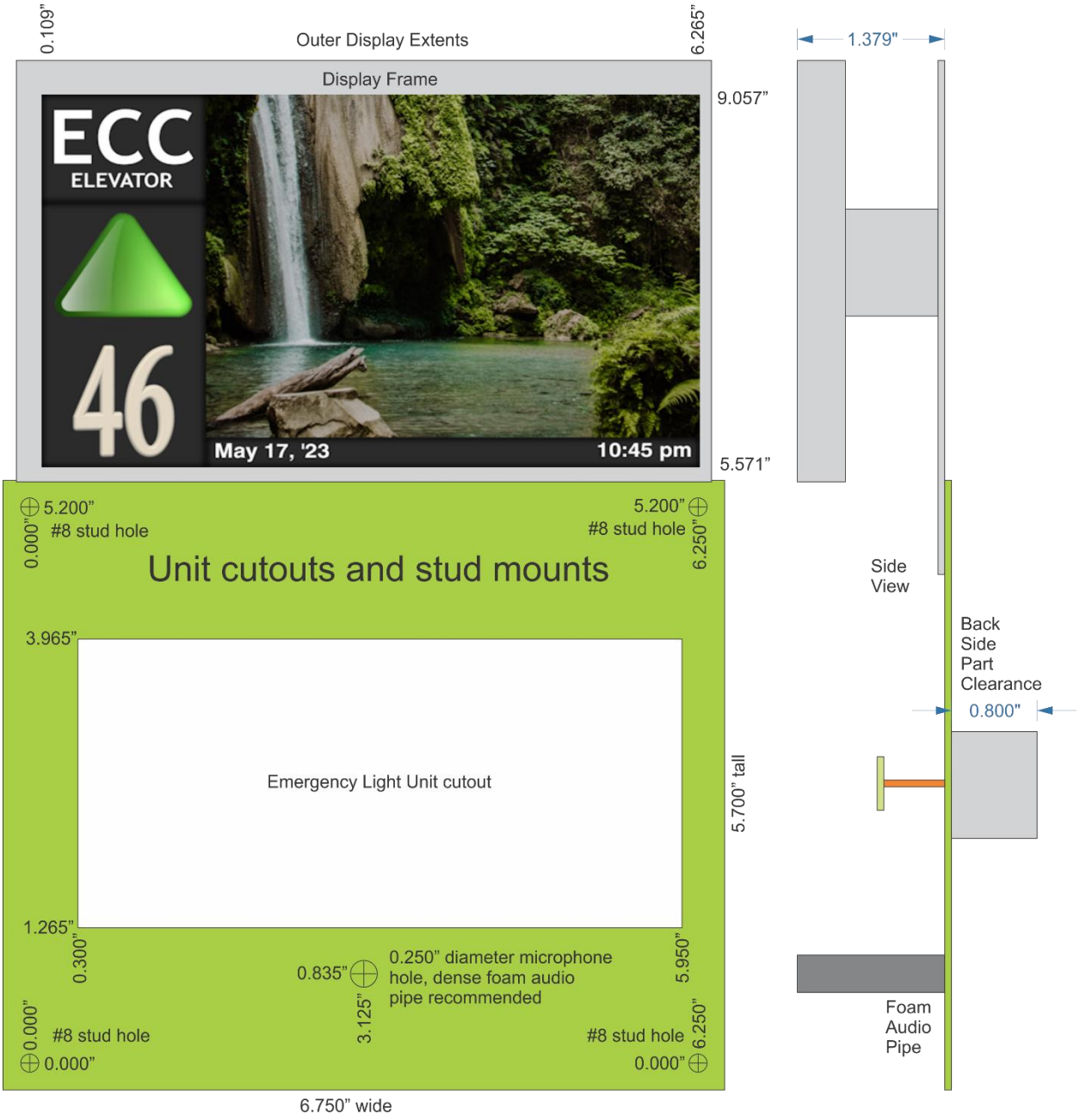
The 2 types of Correct Cables



Pin 1= R+ on DL-20 — Data from Controller
Pin 2= R- on DL-20 — Data from Controller
Pin 3= T+ on DL-20
Pin 6= T- on DL-20
Pin 5= Ground
Pin 8= Ground — Must Use Ground



DL-20-ASI-3 MOUNTING SPECIFICATIONS



TROUBLE SHOOTING

SHORT BEEP TONES

A short BEEP tone, 200 milli-seconds long at a frequency of 800Hz, will be played whenever the DL-20-ASI-3 is instructed to play a Voice file that is not on the SD Card. An example would be if you inserted an SD card that was configured for a 3 Stop Elevator and it was put in a DL-20-ASI-3 elevator with 5 Stops. The audio files for the 4th and 5th stops would not be on the SD Card. In this case when the enunciator attempts to play the 5th floor prompt, you would hear the short beep.

FLOOR POSITION INDICATOR IS BLANK ON SOME FLOORS

An example of this would be if you inserted an SD card that was configured for a **3 Stop Elevator** and it was put in a DL-20-ASI-3 elevator with **5 Stops**. The PI area would go blank when instructed to display the 4th and 5th floors. This PI blanking is because these video files are not on that 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-ASI-3 PCB serial number and site serial number, along with the Firmware version.

POWER REQUIREMENTS

POWER SPECIFICATIONS:

- Input Voltage= Regulated, 12V DC
- Max Current Draw = 3A @ 12V DC (36 Watts)
- Power Connector = 5.5mm (Outside Diameter) x 2.5mm (Inside Diameter) x 10mm (long)
- Barrel Plug, Center is Positive
- Supplied with 12V DC @ 5A, Regulated Power Supply with UL Listing and Class IV Power Efficiency Rating
- ACTA Certification (FCC Part 68) = AP4AL00BDL-20-ASI-3

MAXIMUM ELEVATOR SPEED

800 Feet per Minute (1309 Feet per minute with shorter Chime WAV file).

BATTERY SPECIFICATIONS

- Sealed Lead Acid Battery (SLA) 6V @ 5AH
- Fully Charged – 6.48V approximately when measured across the battery while fully powered up and charged
- Fully Discharged – 5.82V, battery backup drop out limit
- Acceptable (chargeable) but non-operational range – 5.50V to 5.81V, battery is still good but needs to be charged
- Defective battery limit – 5.49V and below means the battery is bad and needs replacement

- Life expectancy = 3 to 4 years
- Suggested model: PowerSonic PS-640 F1 6V/4.5AH
- Max charge current = 600ma @ 5.8V (lower current at higher battery voltages), single voltage charge method
- Time to Fully Charged for a Fully Discharged battery (installed on a DL-20-ASI-3) = 24 Hours
- Battery protection fuse = automotive ATC/ATO (standard blade) @ 3A (violet colored)
- Minimum battery wire gage = 14 gage stranded.
- Battery backup time was measured at 4.93 Hours when battery was at full charge, ELU was ON, the Display went into Sleep mode after 5 minutes, and NO phone use

DEFECTIVE BATTERY DETECTION

A fully discharged SLA battery voltage is 5.82 Volts. Battery voltages below 5.82 indicate a damaged battery. When the battery voltage, with the charger circuit attached, goes below 5.5 Volts, the DL-20-ASI-3 disconnects the charging circuit to prevent the DL-20-ASI-3 from generating excessive heat. This process continually tests for battery shorts. This test does NOT classify the battery as defective and does not display the REPLACE BATTERY ICON. The charger circuit will automatically be re-connected when a battery with an open terminal voltage of greater than 5.5v is connected.

The DL-20-ASI-3 performs an additional test every day at 3 a.m. The DL-20-ASI-3 will remove the battery from the circuit for 10 seconds and test the open circuit voltage on the battery. If the battery voltage is less than 5.5 Volts, it will display the Battery Low Icon on the display. It will also classify the battery as defective and will initiate a Google Voice trouble call if enabled. This will also cause the DL-20-ASI-3 to enunciate that the battery is defective when the elevator status is checked in the REMOTE mode. The Google Voice call will be made every day until the battery has passed the test. NOTE: If the battery is replaced, the Battery Low Icon will not be reset until it has passed the next 3 a.m. battery test or the DL-20-ASI-3 has been RESET by momentarily removing the SD Card.

BATTERY BACKUP CAPABILITIES

With the Emergency Light Unit ON at a brightness of 5 and Phone not being used = 7 Hours (640mA), With the Emergency Light Unit and the Phone IN-USE = 4 Hours (900mA), with the BELL ON constantly = 1 Hour.

STORING SLA BATTERIES

SLA Batteries should be stored at 70 degrees F. Batteries should not be stored in a discharged state or at elevated temperatures. If a battery has been discharged for some time, or the load was left on indefinitely, it may not readily take a charge. To overcome this, leave the charger connected and the battery should eventually begin to accept a charge.

FACTS ABOUT SEALED LEAD ACID BATTERIES (SLA)

You can determine the amount of charge on an SLA battery by measuring the voltage across the battery with nothing connected to it. The following table shows the Open Circuit Voltage as it relates to the charge on the battery.

Open Circuit Voltage	Percentage of Charge
6.48V	100
6.35V	80
6.18V	60
6.04V	40
5.89V	20
5.82V	0

Discharging the battery below the 5.82V point will damage the battery and drastically reduce the battery capacity which reduces your battery backup time and reduce the battery life. If you discharge an SLA battery all the way to 0V, it will be ruined. For this reason, it is important that you never let the open circuit voltage drop below 5.82V. During a power failure, the DL-20-ASI-3 will automatically disconnect the battery when the voltage goes below 5.82V to protect the battery.

CHARGE EVERY 6 MONTHS WHILE ON THE SHELF

SLA batteries will slowly discharge by just sitting on the shelf. If you have extra SLA Batteries in stock, make sure that you charge them at least every 6 months. If the Open Circuit Voltage is below 6.38V (80% Charge), make sure that you charge the battery before using it. The Leoch LC-2195 is a 6V 0.3A SLA battery charger that can be used keep your batteries charged and only costs about $15.00.

REPLACING THE BATTERY

The battery can be replaced while the DL-20-ASI-3 is still powered up. **CAUTION: If you connect the battery up backwards (reverse polarity) it WILL immediately blow the Battery FUSE and it MUST be replaced for proper operation.** The Battery Fuse is a standard 3A ATC/ATO automotive fuse (violet) which should be readily available at any auto parts stores.

PHONE LINE REQUIREMENTS

Uses a standard Analog (POTS) line. Can be installed behind a PBX or directly on a CO line. On hook voltage must be from 24V DC to 50V DC. Up to 8 DL-20-ASI-3 units can share a single telephone line. Not Polarity Sensitive.

PHONE NUMBER STORAGE

The DL-20-ASI-3 has 4 programmable phone numbers that can be from 1 to 16 digits in length. The STAR is used as a 1 second pause. Phone numbers 1 through 3 are for emergency calls from the DL-20-ASI-3. Phone number 4 is used only for the Google Voice function.

SPEAKER REQUIREMENTS

- 8 ohms @ 10 Watts minimum. Recommended speaker is the Quam 4C3Z80T
- Non-Polarized
- Suggested 3” Minimum Diameter speaker cone

AUDIO FILE SPECIFICATIONS

- They MUST be Windows PCM WAV File format (.WAV extension)
- They MUST be 16 bit samples
- The Sample Rate MUST be 16K samples per second
- They MUST be Mono (single channel)

BELL REQUIREMENTS

There are two recommended emergency bells:

Edwards Signaling Model 55-6AM, polarized (Ground is attached to case), 6” Diameter Bell (74db @ 10 Feet), 6V DC @ 800mA and

H.C. Model HC-1006 (6” Bell), polarized (Red + Blk -), 6” Diameter Bell (95 db @ 10 Feet), 6V DC @ 250mA.

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.

DL-20-ASI-3 HOST CONTROLLER COMMUNICATION PROTOCOL (V8.02)

Specifications:

1. Port Type: Standard RS-422 Port using separate Transmit and Receive pairs (**NOT an RS-485 port**).
2. Serial Format: 1 Start Bit, 8 data bits, 1 stop Bit, No Parity
3. Baud Rate: 19.2K
4. Received Data from Host Controller: a 26 byte string, no more than 1.04ms between bytes, **ONLY the Header and Checksum can be over a value of 127**, followed by a silence gap within **75ms to 410ms**, the Checksum is a sum of ALL the Data Bytes (02-25) and just use the last 8 bits (Byte) of the result (i.e. a value of 3048 would be 3048 [0xBE8] AND 255 = 232 [0xE8]).

RECEIVED DATA FROM HOST CONTROLLER

Byte 01	Byte 02	Byte 03	Byte 04	Byte 05	Byte 06	Byte 07	Byte 08	Byte 09	Byte 10	Byte 11	Byte 12	Byte 13
Header	FlrPos	Direction	StatusA	StatusB	Voice	Alarm1	Alarm2	Alarm3	Alarm4	Fault1	Fault2	Fault3
0xAA	0-99	1-3	0-127	0-127	0-13	0-100	0-100	0-100	0-100	0-127	0-127	0-127
Byte 14	**Byte 15**	**Byte 16**	**Byte 17**	**Byte 18**	**Byte 19**	**Byte 20**	**Byte 21**	**Byte 22**	**Byte 23**	**Byte 24**	**Byte 25**	**Byte 26**
Fault4	ClkMon	ClkDay	ClkYear	ClkHour	ClkMin	Res1	Res2	Res3	Res4	Res5	Res6	ChkSum
0-127	1-12	1-31	0-99	0-23	0-59	0	0	0	0	0	0	0-255

Byte Number **Byte Variable** **Acceptable Value Range**

5. Transmitted Data to Host Controller: two unique command chains continually repeated (Chain A, Chain B, Chain A, etc.), 3 bytes per Chain, no more than 1.04ms between bytes, **ONLY the Header will be over a value of 127**, followed by a silence gap of **75ms** for a total chain sequence (A then B) of **150ms**.

TRANSMITTED DATA TO HOST CONTROLLER

Chain A

Byte 01	Byte 02	Byte 03	
Header	ELState	Disabled	75ms gap
0xAA	20	0-1	

Byte Number **Byte Variable**

Chain B

Byte 01	Byte 02	Byte 03	
Header	PLState	Present	75ms gap
0xAA	21	0-1	

Acceptable Value Range

RECEIVED DATA FROM HOST CONTROLLER - DETAILED

Description	Byte Number	Value/Range
Header	01	**170**
FlrPos	02	**0-99, Current floor to display, 0=Lost PI**
Direction	03	**1-3, 1=Up, 2=Down, 3=End Of Call**

Description	Byte Number	Value/Range
Status A	04	**Bits:** **0. 1=In Car Inspection Active** **1. 1=Car Top Inspection Active** **2. 1=Machine Room Inspection Active** **3. 1=Hoistway Inspection Active** **4. 1=Medical Icon Active** **5. 1=Fire Service Active** **6. 1=Seismic Icon Active** **7. Bit 7 – Always 0**
Status B	05	**Bits:** **0. 1=Buzzer 1 Active** **1. 1=Buzzer 2 Active** **2. 1=Door Open/Opening** **3. 1=Overload Icon Active** **4. 1=Fire Service Icon Flashing** **5. Reserved** **6. Reserved** **7. Bit 7 – Always 0**
Voice	06	**0 – 13** **A Voice command should be output a minimum of 4 times before changing to a No Voice command.** **0 = No Voice** **1 = Announce Floor Number** **2 = Going Up.** **3 = Going Down.** **4 = Please stand clear of doors.** **5 = Fire alarm active. Please exit when the doors open.** **6 = Seismic sensor activated. Please exit when the doors open.** **7 = Medical emergency. Please exit when the doors open.** **8 = Car is overloaded.** **9 = Car is on emergency power.** **10 = Elevator is on emergency power. Please exit when the doors open.** **11 = Inspection service.** **12 = Independent service.** **13 = Floor Chime**

Description	Byte Number	Value/Range
Alarm 1	07	0-127,
Alarm 2	08	0-127,
Alarm 3	09	0-127,
Alarm 4	10	0-127,
Fault 1	11	0-127,
Fault 2	12	0-127,
Fault 3	13	0-127,
Fault 4	14	0-127,
Clock Month	15	1-12, January=1, February=2, etc.
Clock Day	16	1-31,
Clock Year	17	0-99, This is the Century year number and MUST NOT be over 99, i.e. for 2019 it is 19, for 2102 it is 2
Clock Hour	18	0-23, 24 hour format; 0=12am, 1=1am, 12=12pm, 23=11pm, etc.
Clock Minute	19	0-59,
Reserved 1	20	0, N/A
Reserved 2	21	0, N/A
Reserved 3	22	0, N/A
Reserved 4	23	0, N/A
Reserved 5	24	0, N/A
Reserved 6	25	0, N/A
Checksum	26	Add all the data bytes, 02-25, and just use the last 8 bits of the result, i.e. for 0xBE8 it is 0xE8

TRANSMITTED DATA TO HOST CONTROLLER – DETAILED

These commands are sent from the DL-20-ASI-3 to the host controller board, alternating every 75ms; i.e. Chain A, 75ms later Chain B, 75ms later Chain A again, 75ms later Chain B again and repeating endlessly.

CHAIN A

Description	Byte Number	Value/Range
Header	01	170
ELState	02	20 – Elevator Disabled Status
Disabled	03	0-1, 0 = Elevator Enabled 1 = Elevator Disabled

CHAIN B

Description	Byte Number	Value/Range
Header	01	**170**
PLState	02	**21 – Daily Phone Line Verified Status**
Present **Daily Phone Line Test** **ASME A17.1**	03	**0-1,** **0 = Phone Line Present** **1 = Phone Line Missing** **NOTE: The elevator host controller must activate an audible/visual unit, located next to the "Fire Recall" switch, when Phone Line Missing is signaled. See code for more information.**

ITEMS NEEDED FOR INSTALLATION

The following is a list of items, excluding tools, that are needed to install the DL-20-ASI-3:

1. A Sealed Lead Acid Battery, recommended model is the PowerSonic PS-640 F1 6V/4.5AH.
2. Speaker: 8 ohm/10 Watt, recommended model is the Quam P/N 4C3Z80T.
3. Emergency 6VDC Bell, recommended model is the Edwards Signaling Model 55-6AM.
4. CAT 5 Cable to connect the DL-20-ASI-3 to the Elevator Host Controller Board. Use standard UNSHIELDED. Do **NOT** use a **CROSSOVER** type.
5. USB "A" Extension Cable, Panel Mount, to extend the USB port to panel for updates.
6. Momentary Phone Activation Switch with LED. (Normally Open, 6V/12V LED light)
7. Momentary Emergency Bell Switch. (Normally Open)
8. Analog Telephone Line. (POTS Line)

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-ASI-3 via a screw terminal connector that is located directly on the printed circuit board of the DL-20-ASI-3. 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-ASI-3 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-ASI-3, 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-ASI-3 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-ASI-3 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.