

Version

1

DL643 ALARM COMMUNICATOR

Programming & Operation Manual

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DL643 ALARM COMMUNICATOR

Programming & Operation Manual

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SYSTEM TESTING AND LIMITATIONS OF USE

THE DL643 IS A UNIQUE CELLULAR ALARM-COMMUNICATION SYSTEM. THE DL643 DOES NOT OFFER GUARANTEED PROTECTION AGAINST BURGLARY AND FIRE. ANY ALARM COMMUNICATION SYSTEM IS SUBJECT TO COMPROMISE OR FAILURE. THE DL643 WILL NOT OPERATE WITHOUT POWER. SYSTEMS RELYING ON ELECTRICAL POWER WILL NOT WORK IF THE POWER SUPPLY IS OFF FOR ANY REASON; THIS INCLUDES BRIEF POWER LOSSES. THE CELLULAR RADIO NETWORK REQUIRED TO TRANSMIT ALARM SIGNALS FROM A SECURED PREMISES TO A CENTRAL MONITORING STATION, MAY BE RENDERED INOPERABLE OR TEMPORARILY OUT OF SERVICE AT ANYTIME. CELLULAR RADIO NETWORKS CAN ALSO BE SUBJECT TO COMPROMISE BY SOPHISTICATED METHODS OF ATTACK.

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Table of Contents

Section 1

Introduction To DL643:	1
DL643 Features:	1
Pre-Installation Notes:.....	2
DL643 Hardware:.....	2
Battery Switch.....	3
Back Up Battery.....	3
SIM Card/Holder.....	4
Antenna	4
Installation & Wiring:	5
Installing The DL643 For Use With A Security Alarm Panel	6
Installing The DL643 For Use With A PERS System.....	7

Section 2

Initial Start & RSSI Signal:	8
Table 1 – RSSI Read Out.....	8
Table 2 – Diagnostic And Status LED Table.....	8

Section 3

Programmable Command Options & Definitions:	9
Table 3 – Command Options & Definitions.....	9

Section 4

Programming DL643 For Use With Security Alarm Communicator:	12
Central Station Is Equipped With A DL643 Central Station Receiver Software:.....	12
Central Station Is NOT Equipped With A DL643 Central Station Receiver Software:	13

Section 5

Programming DL643 For Use With PERS System:	14
Central Station CS Account Is A 2-WAY VOICE PERS Account.	14

INTRODUCTION TO DL643:

The DL643 is a patented, easy to install alarm communicator that provides direct wireless connectivity between virtually any alarm panel and the central station of your choice. The DL643 supports both data and two-way voice communication.

The DL643 provides full event reporting for traditional security alarm panels as well as PERS (Personal Emergency Reporting System).

DL643 Features: (The DL643 currently supports the Contact ID format)

- Programmable via SMS or using DTMF with standard phone
- Delivery of signal(s) to up to 2 data receivers
- Delivery of signal(s) to up to 2 PSTN receivers
- 2-Way Voice Capabilities direct to PSTN receiver
- Remotely programmable via SMS
- Programmable test frequency
- Tamper Switch
- Up to 6 digit account number
- Remote reset via SMS
- Suppress delivery of Contact ID codes to Central Station
- 10 ft. coaxial antenna (included)
- RJ11 and screw terminal TELCO connections
- 12 VDC AUX power input from panel or standalone power supply (included)
- Built in 2600 mAh backup battery

PRE-INSTALLION NOTES:

! **IMPORTANT:** Use caution when installing the DL643 as incorrect connections may damage the unit.

INSTALLATION TIP: As with any radio product check the RSSI (signal strength LEDs located under battery) at the location where you want to install the DL643 before permanently mounting to ensure optimal signal strength and performance. Insert a functioning SIM card and connect the supplied 12 VDC power supply. Check the LED (table 1) read out to confirm adequate signal strength. You should also consult your SIM provider or carrier for coverage.

DL643 Hardware:

Figure 1 represents the key components of the DL643 module.

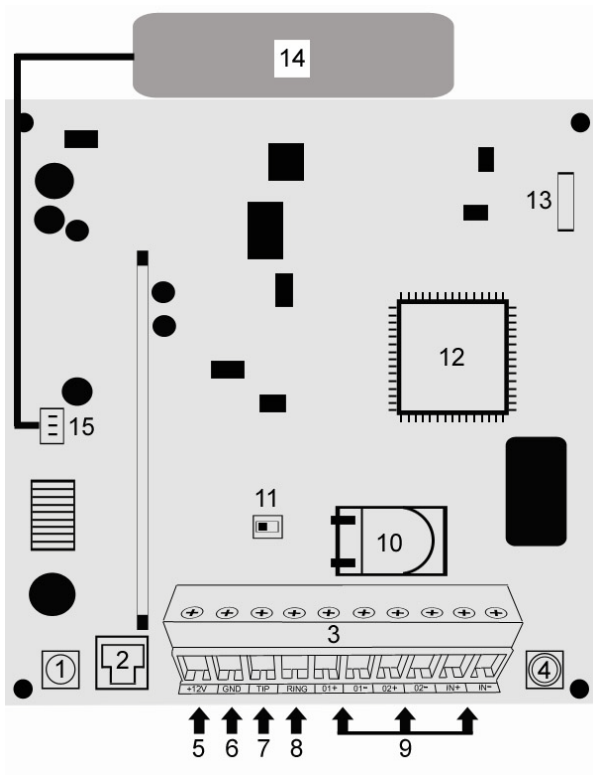


Figure 1

Description of PCB Components:

1. DCV Power IN
2. RJ11 – Telco IN
3. Terminal Block
4. Antenna Coaxial
5. Power
6. Ground
7. Tip
8. Ring
9. I/O Ports (Future)*
10. SIM Card Cradle
11. Backup Battery On/Off Switch
12. GSM Radio
13. Tamper Switch
14. Backup Battery
15. Battery Jack

! *Note: Item 9. “I/O Ports” marked “Future”. These connection points are currently inactive, and will be activated in future models.

Battery Switch

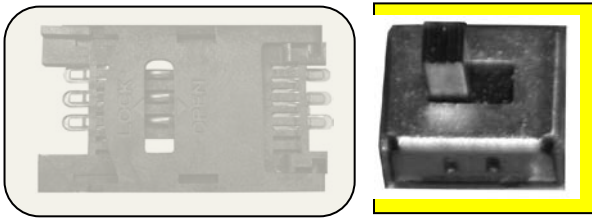


Figure 2 (size is not to scale)

The backup battery has an On/Off switch that is located on the PC board next to the SIM card cradle. See Figure 1, item 11. Moving the switch towards the SIM card cradle (ON position) allows the backup battery to be charged. Moving the switch away from the SIM card cradle (OFF position) disconnects the battery. The battery should be turned OFF during system wiring, as well as when the system is being shipped.

⚠ IMPORTANT!

If the backup battery switch is not placed into the “ON” position during operation and the DL643 is being powered by the AC power adapter (DL643 is not being powered from the security panel or PERS console) and a AC power failure occurs the DL643 will be inoperative.

Rechargeable Backup Battery



Figure 3

The DL643 comes with a pre-installed rechargeable backup battery. In addition the system

Battery Specifications: Sanyo 1s1p, Rechargeable Li-Io Soft Pack Model #18650

Part #: CP-1S1P-2600JM

Diameter: 18.0+/-0.7mm (0.71”) per cell, Weight: 47g (1.66oz) per cell

Environmental Conditions: When Battery is charged: 0 to +40C. When battery is discharged -20 to +60C

Rated Capacity: 2600 mAh, Under 20+/-, 65+/-RH, Standard Charging & Discharging.

Cycle Life: After 300 cycles of complete charge and discharge at 0.5C until the Voltage reaches 3.0V and measured for the duration time. Estimated life of battery is 2 to 3 years under normal use. Charging Time: 3 Hours

Backup Battery Replacement:

⚠ If you continue to see LED #3 flash slowly on the DL643, and primary power has been present for a full (24) hours, this will indicate that you will most likely need to replace your backup battery. You can check the voltage of the rechargeable battery by metering across the (2) battery terminals with the battery disconnected from the charging circuit. A battery with adequate voltage will give you a reading above 6V.

⚠ To avoid damage to the unit or potential unit failure, it is essential that the backup battery is replaced with the same type and model that comes installed in the DL643. The DL643 uses a 3.7V / 2600 mAh back up battery. The correct replacement battery is a 1s1p Soft Pack, Model 18650, Part # CP-1S1P-2600JM

⚠ Precautions to avoid premature battery failure

While it is expected that the DL643 will be located at or near the security panel or PERS console it is important to note that any unnecessary exposure to extreme temperatures or high humidity can cause the backup battery to fail prematurely.

SIM Card/Holder

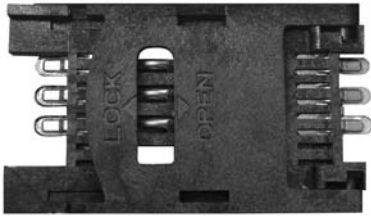


Figure 4

The DL643 is a PTCRB certified; AT&T approved 3G Cellular Communicator. The unit requires an activated GSM cellular SIM card to perform communication functionality.

- ⚠ If a SIM card is not installed, LED 1 will flash as a warning until condition is corrected.
- ⚠ If a SIM card is installed, but the card has not been “Activated”, LED 2 will flash as a warning until condition is corrected. (See Figure 8 Diagnostic & Status LED Signal Table)

Antenna



Figure 5

The DL643 comes equipped with an external antenna that can extended up to 10 feet.. The antenna provides the ability to locate the optimum location for added signal performance.

Frequency Bands 800/900/1800/1900/2170MHz

Normal Impedance: 50 ohm

Polarization: Vertical

Antenna Height: 96mm +/- 3mm (approx. 3.75 inches)

Operating Temperature Range -20°C~+60°C

Storage Temperature Range -30°C~+70°C

INSTALLATION & WIRING:

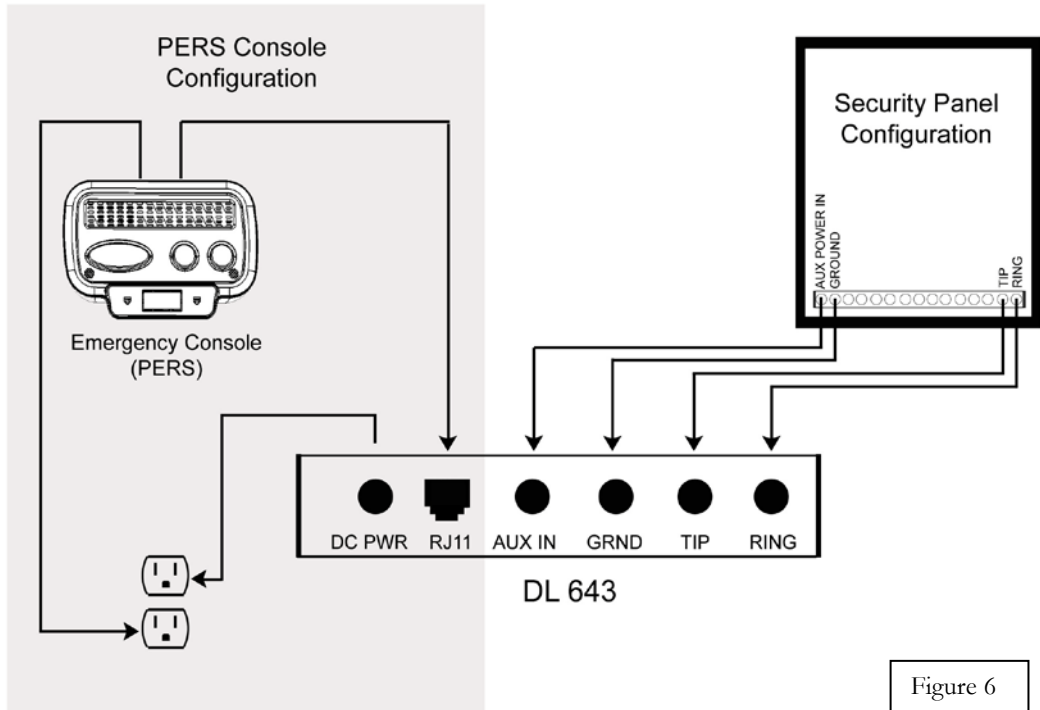


Figure 6

The DL643 delivers the unique ability to provide wireless alarm reporting for both Security Alarm Panels as well as Personal Emergency Response Systems. Figure 3. Provides a visual reference for installing the DL643 with both types of systems.

For security panel connectivity, the DL643 provides screw terminal connections for quick installation. The DL643 is clearly marked to allow connectivity of the Auxiliary Power (+12V) and Ground (GND) to the Auxiliary Power and Ground on the panel to establish power. The DL643 also provides clearly marked Tip and Ring connections to allow Tip and Ring to be connected between the unit and the Tip and Ring on the security panel to establish phone line communication.

For PERS systems, the DL643 provides a DC power supply to establish direct power to the unit from a standard power outlet, as well as an RJ11 jack for easy telephone line connectivity.

⚠ When powering the DL643 using a standard AC outlet it is important not to connect the unit to a receptacle controlled by a switch.

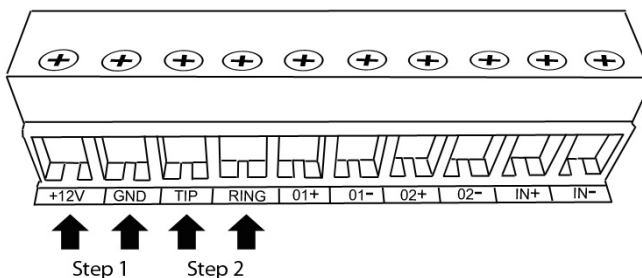


Figure 7


Installing the DL643 for use with a Security Alarm Panel

NOTE: Before connecting the DL643 to the security alarm panel.

1. Disconnect the panel from its AC power source.
2. Disconnect the panel's backup battery connections.
3. Disconnect panel TELCO source.

To Install:

1. Separate the enclosure top & bottom by removing the 2 screws found at the bottom of the unit and removing the cover to expose the circuit board.
2. Locate the Terminal Block (see figure 1); using 18 to 14 gauge copper insulated wire for wire lengths of 10 to 25 feet respectively (*See the UL compliance sections for additional details.*) Connect the +12V and ground GND wires to the corresponding screw terminals on the DL643.
3. Next connect the opposite ends to the +12V and ground GND terminals on the security panel Aux Power and Ground.
4. Connect the stripped ends of a standard phone line to the Tip and Ring screw terminals on the DL643.
5. Connect the opposite ends of phone line to the Tip and Ring on the panel.
6. Connect the Antenna (see figure 1). The DL643 comes with a 10 ft extension antenna that allows you to improve reception by moving the antenna to an optimum signal strength location. The antenna coaxial connector is located at the lower right corner of the unit

 **REMINDER:** Check RSSI (signal strength LEDs located under battery) before permanently mounting the unit by inserting a functioning SIM card and connecting the supplied 12 VDC power supply. Check the LED (table 1) read out to confirm adequate signal strength.


INSTALLATION TIP: If you have adequate signal strength you may proceed with mounting the radio. Be sure to turn off the DL643 while mounting. If you are mounting DL643 inside the panel, you can use the control panels AUX (12 VDC) output to supply power to the DL643 described as Step 1. You can also use the terminal block for wiring in the control panels TELCO wiring described as Step 2. The DL643 has an optional RJ11 jack for TELCO wiring. See Figure 6 diagram for wiring.

Mounting inside control panel

Separate the enclosure top and bottom by unscrewing the 2 screws found at the bottom of the unit and lifting the plastic top up.

With PCB exposed remove the 4 screws located at each corner of the PCB.
Follow steps 2-6 above

Installing the DL643 for use with a PERS System

 **REMINDER:** Check RSSI (signal strength LEDs located under battery) before permanently locating the unit by inserting a functioning SIM card and connecting the supplied 12 VDC power supply. Check the RSSI Read Out (LED Chart, figure 8) to confirm adequate signal strength. Be sure to keep the supplied antenna & the DL643 several feet away from the PERS System as it may cause audio interference.

NOTE: Before connecting the DL643 to the PERS System

1. Disconnect the PERS System from its AC power source.
2. Disengage the PERS battery or switch the PERS system off.
3. Disconnect the PERS System from its telephone source.

The DL643 is housed in a simple yet uniquely designed plastic enclosure that can be placed flat on a tabletop when connecting to a Personal Emergency Response System (PERS).

To Install:

1. Separate the enclosure top and bottom by unscrewing the four screws found at the bottom of the unit. Lift up the plastic top to expose the PCB.
2. Locate the Terminal Block (see figure 1). Locate the RJ11 (Phone line jack) at the left bottom corner of PCB. Connect a standard phone line to the DL643 phone line jack. Connect the opposite end into the phone line “IN” jack on the PERS system.
3. Locate the 12V DC “IN” jack located at the bottom left corner of the PCB. Connect the 12V DC power supply (included). Plug the transformer into a 120 VAC non-switched outlet.
4. Connect the Antenna. The DL643 comes with a 10 ft. extension antenna that allows you to improve reception by moving the antenna to an optimum signal strength location. The antenna coaxial connector is located at the lower right corner of the unit

Initial Start & RSSI Signal:

Tables 1 & 2 below defines the RSSI LEDs on the DL643. The RSSI LEDs are located under backup battery.

NOTE: It is recommended to have at least a minimum of 2 LEDs (-91dBm to -82dBm) for adequate signal. Check you SIM provider for coverage area.

Table 1 – RSSI Read Out

No LED	NO SIGNAL
1 LED	-101 dBm to -92 dBm
2 LEDs	-91 dBm to -82 dBm
3 LEDs	-81 dBm to -72 dBm
4 LEDs	-71 dBm to -62 dBm
5 LEDs	-61dBm and above

Figure 8

Table 2 – Diagnostic & Status LED

System Operation						
	LED1	LED2	LED3	LED4	LED5	PWR
Standby	Signal Level					ON
Dial Out	Waiting Answer SLOW FLASH	Handshake Detect 1400Hz ON	Handshake Detect 2300Hz ON	Send Contact ID ON	Kiss-off Detect 2300Hz ON	ON
Main Pwr OFF Back up Battery ON	OFF	OFF	OFF	OFF	OFF	ON
System Trouble						
No SIM	SLOW FLASH	OFF	OFF	OFF	OFF	ON
SIM Not Valid	ON	SLOW FLASH	OFF	OFF	OFF	ON
Line Fault	FAST FLASH	Signal Level			OFF	ON
Low Battery	OFF	OFF	SLOW FLASH	OFF	OFF	ON
AC Power Loss	OFF	OFF	OFF	SLOW FLASH	OFF	ON
Data Connect Fail	OFF	OFF	OFF	OFF	Fast Flash	ON

Figure 9

Programmable Command Options & Definitions:

The DL643 alarm communicator is programmed via SMS.

Table 2 lists and defines each of the programmable command options available with the DL643.

When using SMS commands the DL643 will send back an echo or “ACK” of the values programmed. You can program multiple command options at once via SMS but it is recommended not to exceed 120 characters per message.

The COMMAND options must be preceded by entering the access code followed by a # symbol. Next the COMMAND option is entered followed by a # symbol. A VALUE is then entered followed by a # symbol to complete the entry. (Figure 10) below demonstrates setting COMMAND option 01# to report to a DL643 receiver at the phone number 2225551234.

1111#03#2225551234#

Access Code = 1111#

Command Option = 03#

Value = 2225551234#

When programming the DL643 remotely via SMS you can combine COMMAND options into a single message as follows. A single entry for the access code begins the message and the COMMAND options are separated by a (,) *COMMA*.

1111#03#2225551234#,04#2225555678#

Figure 10

Table 3 – Command Options & Definitions

The following is a list of the standard programmable commands.

Command	Definition	Terminator	Default Value	Programmable Values
01#	DL643 Receiver 1	#	None	Data only (3 retries)
02#	DL643 Receiver 2	#	None	Data only (3 retries)
<p>Commands 01# & 02# are used to report alarm signals to the DL643 receiver software. If your Central Station is equipped with an IPC running DL643 receiver software, you can transmit your alarm events to either of the above addresses. The entries for these two commands require IP addresses. <i>Example: 1111#01#10.1.1.21#</i></p>				
03#	PSTN Receiver 1	#	None	Voice only (2 retried alternate with Line 4)
04#	PSTN Receiver 2	#	None	Voice only (2 retried alternate with Line 3)
<p>If your Central Station is not equipped with an IPC running DL 643 receiver software, use option 03# & 04# to have the DL 643 Alarm Transmitter report alarm messages to a standard PSTN receiver in case of rollover. <i>Example: 1111#03#18881234567# or 1111#04#18887654321#</i></p>				
05#	Access Code	#	1111	4-6 digits/Char
<p>Command 05# is used to set the installer Access Code. This field is used to program the DL 643 locally or remotely via SMS. <i>Example: 1111#05#1234#</i> the code has been changed to 1234</p>				
07#	Test Frequency	#	15	0-30; 0-off (days)
<p>Command option 07# is used to program the DL 643 Automatic Test Frequency. The DL 643 will send an E602 to the receiver(s) programmed in COMMANDS 01#, 02#, 03#, and/or 04#. <i>Example: 1111#07#7#</i> The DL 643 will send an E602 Test report every 7 days.</p>				
09#	Tamper Switch Detect	#	0	0-Off, 1-On
<p>Command option 09# is used to enable or disable the DL 643 tamper switch. When the cover is removed the DL 643 will transmit and TAMPER message to the Central Station. <i>Example: 1111#09#0#</i> The TAMPER switch is disabled.</p>				
10#	Unit Account Number	#	None	Fixed 6 digits/Char, fill '0' up 4 digits.
<p>Command option 10# sets the DL 643 Central Station account number. If your Alarm Communicator is transmitting Contact ID you do not have to change any of its programming to send signals to a DL 643 Receiver or PSTN receiver. The DL 643 Transmitter will ignore the CS Account number in the panel. <i>Example: 1111#10#9876#</i> The Central Station will receive CS Account Number 9876.</p>				
11#	Unit Line Card No.	#	1	1-4 digits/Char
<p>Command option 11# can be used to avoid the 9999 account number limit when used with a DL 643 Central Station Receiver. This option will expand the account limit exponentially or can be used to separate dealers or account portfolios. The DL 643 Central Station Receiver ID is static but the LINE CARD number is programmed at the Transmitter. <i>Example: 1111#11#2#</i> The DL 643 Transmitter will send LINE CARD # 2 and the Central Station Automation system can separate the 9999 accounts on LINE 2 from all others.</p>				

13#	Replace Panel Account	#	1	0-No; 1-Yes
<p>Command option 13# can be used to allow the DL 643 to transmit the Security Alarm Communicators existing CS Account Number or Replace it (default) when communicating with the Central Station. For example, if you are taking over an existing panel and do not wish or cannot program new settings you can control the CS Account number using this Command. <i>Example: 1111#13#0#</i> The DL 643 Transmitter will now send the existing panel CS Account number.</p>				
15#	Unit Reset Code	#	73738	4-6 digits/Char
<p>Command option 15# is used to set the unit reset code. This can be used to reset the unit remotely or locally. The unit will retain its programming and will simply reboot. <i>Example: 1111#15#098765#</i> If the unit is sent a message 1111#098765#, it will cause the DL 643 to reset itself.</p>				
16#	Ignore Event Code List 1	#	None	3-digit, 3-digit, 3-digit
17#	Ignore Event Code List 2	#	None	3-digit, 3-digit, 3-digit
18#	Ignore Event Code List 3	#	None	3-digit, 3-digit, 3-digit
19#	Ignore Event Code List 4	#	None	3-digit, 3-digit, 3-digit
<p>Command options 16# through 19# are used to avoid the Central Station from receiving specific Contact ID messages. This option is useful to prevent Open/Close or other non-essential codes to be sent and reduce cellular usage or avoid additional charges from the Central Station if applicable. <i>Example: 1111#16#401,441,570#</i> The DL 643 will not transmit 401-Open/Close, 441-Arm Stay,570-Bypass signals to the Central Station.</p>				
20#	Retrieve Configuration	#		Via SMS only
<p>Command option 20# is used to retrieve the values programmed to the DL 643. This option can only be used via SMS. Useful after completing installation and for diagnostic purposes. <i>Example: 1111#20#ALL#</i> The sender will receive an SMS message listing all the values set in the DL 643. For a single option use: <i>1111#20#01#</i> To retrieve only the value set in option 01#.</p>				
24#	Nurse Tel. Number	#	None	Enter matching Nurse number with PERS.
<p>Command option 24# is used if the DL 643 is being used with the Instant Care PERS + NURSE product. The number set in this option will be dialed when the Instant Care unit dials the matching telephone number and connect the client to the Nurse Triage Facility. <i>Example: 1111#24#18662715821#</i> When the Instant Care PERS system dials the NURSE Line, the DL 643 will sense these digits and contact the NURSE Line instead of calling the Central Station.</p>				
25#	2-Way PSTN Tel. Number	#	None	Enter to replace console's Emergency No. (4 retries)

Command option 25# is used for PERS or Security Alarm Systems with 2-Way Voice capabilities. The DL 643 will detect the digits being dialed by the PERS System or Alarm System, if they match the value programmed in this option the DL 643 will switch to PSTN mode and dial that number allowing for a DIRECT 2-way voice call. *Example: 1111#25#18889990123#* If the PERS System or Alarm System dials 1-888-999-0123 the DL 643 will dial this number and transmit the Contact ID alarm and wait for a 2-Way audio connection from the Central Station. The DL 643 stays on-line with the PSTN receiver like most 2-way voice PERS & Security Systems.

26#	DTMF after E606	#	None	Up to 5 DTMF digits at 1 sec apart. Send before LF
Command options 26# is used to have the DL 643 send a specific digit after it hears the E606 (Listen-in to Follow) Contact ID message. This is useful if you want to put the panel in Listen Mode or if the panel requires 2-Way activation. <i>Example: 1111#26#**3#</i> In this example, the DL 643 will send in DTMF a * twice followed by 3 which in some PERS and Security Systems will be used for Activating (*) the 2-way feature and toggling to LISTEN mode (3). NOTE: For a # use digit 9.				
31#	Service port for Line 1	#	2020	100-65535
Command option 31# is used to establish which service port that Command 01, (Line 1 data line) uses to direct data signals to the data receiver at the monitoring center.				
32#	Service port for Line 2	#	2020	100-65535
Command option 32# is used to establish which service port that Command 02, (Line 2 data line) uses to direct data signals to the data receiver at the monitoring center.				
33#	APN (Access Point Name)	#	internet	IP Address
Command option 33# An Access Point Name is the name of a gateway between a GPRS, 3G, or 4G mobile network and another computer network, frequently the public Internet. A mobile device making a data connection must be configured with an APN to present to the carrier.				
80#	Signal Scan Time	#	None	0-180 sec. (i.e. 1111#80#30#) scan for 30 sec.
Command option 80# is used to change the Cellular NETWORK scan time. In most cases this will not be necessary but may be used in areas where coverage is poor. <i>Example:1111#80#30#</i> will force the DL 643 to scan for a NETWORK every 30 seconds.				
98#	Factory Reset (Press **)	#		
Command option 98# is used to default the DL 643 back to its factory settings. <i>Example: via SMS 1111#98#</i> for Local Programming use: <i>1111#98#**#</i>				

Programming DL643 radios to communicate with DL643 Receiver Software and PSTN receivers:

The following are examples of programming of the DL643 radio being used with a traditional security panel as well as a two-way voice capable panel or PERS System.

Central Station is equipped with DL643 Central Station Receiver Software:

1. **01# and/or 02#** should be set to the destination number for the Central Station DL643 receiver software. **02#** should be used if they have backup receiver software in place.
2. **10#** should be set to the CS Account number assigned to you by the Central Station.
3. **11#** should be set the **LINE CARD** value assigned to you by the Central Station.
4. Command **#31** and **#32** should be set to the Com Port being used by the Central Station. A Com Port is the service port that commands **#1** & **#2** uses to direct data signals to the data receiver at the monitoring center.
5. Command **#33** is used to set the APN or Access Point Name. This is the gateway between a GPRS, 3G or 4G mobile network and another computer network, frequently the public internet. A mobile device making a data connection must be configured with an APN to present to the carrier.

Adding 2-WAY VOICE to the example above.

- a. **OPTIONAL: 13#** can be set to a **VALUE** of **0** (zero) and the CS Account number programmed in the Security System will be transmitted to the Central Station PSTN receiver. (Otherwise see next step **(B)**)
- b. **10#** should be set the CS Account number assigned to you by the Central Station.
- c. **25#** should be programmed to match the PSTN Central Station receiver phone number programmed in the Security System.
- d. **OPTIONAL: 26#** should be set to the DTMF digits which are used for Activating 2-Way if applicable, setting 2-WAY TALK mode or 2-WAY LISTEN mode. *NOTE: Entering a 9 in this field will send a DTMF #. The disconnect can only be performed by the Central Station.*

NOTE: If your 2-WAY Voice Security System allows for NON-Emergency signals to report to alternate PSTN Receivers and your Central Station is equipped with the DL643 Central Station Receiver you can program

COMMAND Options 01# & 02#. The DL643 will only call the 2-WAY PSTN Receiver when the PSTN Receiver telephone number matches.

Central Station is **NOT** equipped with DL643 Central Station Receiver software:

PSTN Digital ONLY:

1. 03# and/or 04# should be set to the PSTN telephone number that the security system would normally dial.
2. To enter an account number it should be placed in Command Field 10. This account number will be sent to the central station during all reporting. Example: 1111#10#1234# (send)
3. To allow the panel or device to pass through an existing account number (previously set in a panel or device) to the central station set command field 13 to a VALUE of 0 (zero). Example: 1111#13#0# (send)

While item 3 is used for take over's when the account number in the panel is unknown, it is always recommend to generate a new account number and place it in Command Field 10 whenever possible.


Programming DL643 for use with PERS System:

The following are some examples of programming scenarios for the DL643 being used with a PERS (Personal Emergency Response System). This guide assumes your PERS System will be using the 2-WAY Voice option.

Central Station CS Account is a 2-WAY VOICE PERS Account.

1. **01# and/or 02#** should be set to the destination number for the Central Station DL643 receiver software. **02#** should be used if they have backup receiver software in place.
2. **03# and/or 04#** should be set to the PSTN telephone number that the Security System would normally dial.
3. **10#** should be set the CS Account number assigned to you by the Central Station.
4. **OPTIONAL: 13#** can be set to a VALUE of 0 (zero) and the CS Account number programmed into the PERS System will be transmitted to the Central Station PSTN receiver. (Otherwise see next step (4))
5. Command option **24#** is used if the DL643 is coupled with an Instant Care PERS + NURSE product. Set the command as follows, *Example: 1111#24#18001234567#*
6. **25#** should be programmed to match the PSTN Central Station receiver phone number programmed in the PERS system.
7. **OPTIONAL: 26#** should be set to the DTMF digits which are used for Activating 2-Way if applicable, setting 2-WAY TALK mode or 2-WAY LISTEN mode. *NOTE: Entering a 9 in this field will send a DTMF #; this disconnect can only be performed by the Central Station.*
8. Command **#31** and **#32** should be set to the Com Port being used by the Central Station. A Com Port is the service port that commands **#1** & **#2** uses to direct data signals to the data receiver at the monitoring center.
9. Command **#33** is used to set the APN or Access Point Name. This is the gateway between a GPRS, 3G or 4G mobile network and another computer network, frequently the public internet. A mobile device making a data connection must be configured with an APN to present to the carrier.

NOTE: If your 2-WAY Voice PERS allows for NON-Emergency signals to report to alternate PSTN Receivers and your Central Station is equipped with the DL643 central station receiver software you can program COMMAND Options 01# & 02#.

 **IMPORTANT!** The DL643 will only call the 2-WAY PSTN Receiver when the PSTN Receiver number programmed into the security system and the DL643 radio matches.