EXHIBIT C

User Manual

TELEDEX --- CL9010

Hotel 2 Line 900MHz Cordless Speakerphone Telephone

Product Specification and Operation Manual

Introduction

This document describes the product **Teledex –CL9010**. It is an analog cordless phone operated at the 902-928MHz ISM band, with the major features of 2-Line speakerphone telephone communication and speakerphone operation on Base.

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1 Product Feature & Specification

1.1   Feature List

- 902-928MHz, 160 channels
- 2-Line telephone
- Numeric keys and functional keys on both handset and base.
- Ringer Volume Control on Base (Options: Hi/Mi/Low)
- Lighted Handset DTMF Key Pad For Evening Use.
- Tone Dialing
- Handset Receiving Volume Control (4 Levels)
- Auto-off When H/S put on Cradle
- 3 Way Conference Call
- Hearing Aid Compatible
- 10 One-Touch Hotel Service keys on base.
- One Touch Redial (32 digits maximum)
- Pause (3.6s) and Flash (600ms)
- Key Tone Confirmation
- Message-Waiting LED Indication on both Base and Handset

- Handset Message-Waiting LED indicator.
- Data port Socket on Base
- Speakerphone with electronic volume control (8 steps) on Base
- Full dialing capability on Base.
- Page /Handset Locator
- 65536 random security code
- Security Code check every 30 seconds
- Hold with beep reminder

1.2   Specifications

- Handset Transmitting Frequencies : 902 to 906MHz
- Handset Receiving Frequencies : 924 to 928 MHz
- Base Transmit Frequencies : 924 -to 928MHz
- Base Receiving Frequencies : 902 to 906MHz
- Number of Channels :160
- Channel Spacing : 25KHz
- Acoustic and Line Interface Specification according to EIA470B
- FCC Part 15 and Part 68 Compliance
- ETL Compliance

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2. Visual Indicators(Keys/Buttons Description)

2.1   Visual Indicators

2.1.1 Handset LEDs

2.1.1.1   Line 1
This LED is under L1 key, it turns on steadily when handset is using the line-1.
If putting line-1 on hold from handset, L1 LED will flash slowly.

2.1.1.2   Line 2
This LED is under L2 key, it turns on steadily when handset is using the line-2.
If putting line-2 on hold from handset, L2 LED will flash slowly.

2.1.1.3   Conference
This LED is under CONF key, it turns on while it is in conference mode.

2.1.1.4   Message LED
This LED flashes rapidly when there is Message-Waiting received.

2.1.2 Base LEDs

There are 7 LEDs on the Base to indicate all operating status:
2.1.2.1 CHARGE —Red
Indicates that the handset is on the cradle and being charged.
2.1.2.2 MUTE —Red
Indicates while Speakerphone is being put on mute
2.1.2.3 CONFERENCE —Red
Indicates that the telephone is in conference mode
2.1.2.4 LINE 1 —Red
Indicates the status of line-1.
Steady on when base is using line-1.
Slow blink when handset or base put line-1 on hold.
Rapid flash when handset or parallel extension is using line-1.
2.1.2.5 LINE 2 —Red
Indicates the status of line-2.
Steady on when base is using line-2.
Slow blink when handset or base put line-2 on hold.
Rapid flash when handset or parallel extension is using line-2.
2.1.2.6 MESSAGE —Red
At the right upper corner of the Base, it will flash rapidly when there is Message-waiting received.
2.1.2.6 Speaker LED —Red
It turns on when speakerphone is activated.

2.2   Description of Keys and Buttons
2.2.1 Handset Keys)

2.2.1.1 Line Keys <Line 1> and <Line 2>
The Line 1 and Line 2 keys are used in a customary fashion to engage or disengage the line. The L1/L2 LED under the line key is illuminated to inform the user which lines are in use. If one or both of the lines are on hold the LED that refers to that line will flash slowly to inform the user that this is the case.

2.2.1.2   Conference Key <Conf>

When both lines are in use the conference key may be used to execute three way conversation. From this point it is then possible to put one or both lines on hold by either pressing the desired line key, in which case the other line is automatically placed on hold or pressing hold key places both lines on hold. It is possible to re-execute the conference call by once again pressing the conference key.

2.2.1.3 Numeric Key Pad <1.2 .... 0, *, #>
Numeric keys are used in the conventional manner for dialing. A number can be pre-dialed or dialed after going off-hook.

2.2.1.4 Hold Key <Hold>
The Hold key is used to put an engaged line on hold.   If a single line is already on hold, pressing hold has no action, the line key will release from hold.   If both lines are on hold, pressing hold has no action.
Hold will release the line automatically if handset or base turns on the line or any other extension phone is picked up on the same line.

2.2.1.5 Redial/Pause Key <Redial>
If this key is the first press of the key after off-hook, it functions as Redial. the last numbers dialed will be recalled.
Redial does nothing if the previous call exceeded the redial buffer memory.
The pause key can be used to enter a silence of 3.6 seconds into a dialing sequence that is being entered from the off-hook dialing.
If this key is not the first press of the key either pre-dial or off-hook, it functions as Pause, can be used to enter a silence of 3.6 seconds into a dialing sequence that is being entered from the off-hook dialing.

2.2.1.7 Volume UP/DOWN Key < / >
While off-hook, the volume key control receiver audio level with 4 steps over a 12 dB range.
While idle state,

2.2.1.8 Channel Change Key <Channel>
Enables the user to make a selection from 160 channels to provide the user with the best possible reception while off-hook.

2.2.2 Base

2.2.2.1 Page Key <Page >
Press this key to initiate a handset paging. Handset will beep for 10 seconds. It stops beeping If answered by pressing any key on the handset or pressing PAGE or line keys on the base.

2.2.2.2 Numeric Key Pad <1.2....0, *, #>
Numeric keys are used in the conventional manner for hand free dialing.

2.2.2.3 Flash Key <Flash> (hidden underneath overlay)
The FLASH key is dedicated to perform a timed loop break (600ms) while off-hook. Flashes can be stored in memory dial sequences. Flash will do nothing if the line is on hold or in conference mode.

2.2.2.4 Hold Key <Hold>
The Hold key is used to put an engaged line on hold.   If a single line is already on hold, pressing hold has no action, the LINE key will release line from hold.   If both lines are on hold, pressing hold has no action.
Hold will release the line automatically if any other extension phone is picked up on the same line, or handset or base re-engage the line .
Hold will release the line if the line is not picked up by the Handset/base or other extension within 10 minutes.

2.2.2.5 Line Keys <Line 1> and <Line 2>

The Line 1 and Line 2 keys are used in a customary fashion to engage /disengage a line with speakerphone on the base. The line 1/2 LEDs are illuminated to inform user which lines are in use.

2.2.2.6 Conference Key <Conf.>
When both lines are in use the conference key may be used to execute three way conversation. From this point it is then possible to put one or both lines on hold by either pressing the desired line key, in which case the other line is automatically placed on hold or pressing hold key places both lines on hold.

2.2.2.7 Pause/Redial Key <Redial>
If this key is pressed first after speakerphone turns on. The last numbers dialed from the Base will be recalled.
Redial does nothing if the previous call exceeded the redial buffer memory.
If this key is not the first pressed after Speakerphone turns on, it will become a pause function. Every press of PAUSE will gives a 3.6 second silence interval during the dialing.
Pause can be stored into the memory (Direct Service keys).

2.2.2.8 Mute Key <Mute>
In the off-hook condition, the MUTE key mutes Speakerphone microphone but continues to allow receive voice to be heard at speaker. Press MUTE again to disable muting.

2.2.2.9 Volume Up/Down Keys /
These keys control speaker volume over a 15dB range with 8 steps.

2.2.2.10 Store key <Store> (hidden key underneath overlay)
This key is to store numbers into the memory on Base for Hotel service access dialing.

2.2.2.11 Hotel service direct access keys.
There are 10 one touch memory keys to access hotel services. For example, Front-Desk, Wake Up, Information, House Keeping, Voice Mail.....etc.

2.2.2.12 Speakerphone key <Speaker>
Press this key while on hook will activate speakerphone and auto select the available line and engage it. Press again will turn the speakerphone off.

2.2.2.2 Rear Panel Switches

Two Ringer switches, one for line-1 and one for line-2 provide three different settings for each line:
————→ Hi/Mid/Low

.2.3   Audio Alerts
2.3.1   Table of Summary of the Audio and Visual Alerts

STATUS	HANDSET	BASE
Battery Low	Two beeps	None
Key press	50ms beep	50ms beep
Invalid Entry	None	None
Timeout	50ms beep	None
Power on	50ms beep	50ms beep

2.3.2 Base Ringer
The base ringer operates identically to the handset ringer except that it is defeated using a mechanical switch and it does not change behavior if a line engaged.

3 Operation

3.1   Charging

The handset is charged by placing on the cradle with face-down position.

3.1.1 Charging Indication

An indicator LED in the base illuminates when the handset is put on cradle for charging.

3.1.2 Battery Life

The battery on handset is a Ni-Cd rechargeable type. It will last approximately one and half day for stand-by mode. The channel scanning algorithm is purposely designed for intensive use in the hotel which lots of phones are being used at the same time. So the unit wakes up longer to get clean channels and ensure the voice quality. Also a House-keeping people may put handset back on cradle for charging every day.

3.1.3 Low Battery Warnings

When the capacity of the handset battery is low, the handset indicates this by flashing the CONF LED. In addition, a periodic (15 sec) audio beep can be heard from the handset.

3.1.4 Handset Put On Cradle for Registration

A security code is sent by a handset to the Base at the beginning of any request for service.   If the handset code does not match the base code, access will be denied.   This system meets FCC requirements for security of phone line access.

3.1.5 Registering/Re-Registering the Handset

Whenever a handset is placed in the base, an acceptance beep is sounded by the handset upon successful registration.

A previously registered handset can be registered to another bases, simply by placing the handset on the cradle of the base.

3.1.6 Security Code Check every 30 seconds

To ensure customer's privacy will not be violated over the phone, CL9010 will check security code every 30 seconds during the off-hook.   A very short period of muting may be heard during the conversation. If an error security code is continuously detected twice, that means some is using the same channel, in this case, no more communication between handset and base is reliable.   CL9010 will disconnect the line immediately.

3.2   Idle

During the Idle Stand-by mode, the CL9010 will indicate the status of the lines. (line in use, hold mute, message-waiting......etc).

3.3   Incoming Calls

3.3.1 Ringing

The handset ringer will sound, except if defeated by the user whenever ring energy is detected and validated by the base.

Base will ring but handset will not if handset is engaged in a call to reduce conversation disruption. Both corresponding line LEDs on Handset and Base will flash while the ring burst.

3.3.1.1 Ringing Cadence

The system will follow overall ringing cadence, except for deliberate sound interruptions intended for line differentiation.

3.3.1.2 Ringing Gate Decision

The system is assumed to be in the ringing state whenever validated ring energy is detected by the base and for 5 seconds thereafter. All handsets remain out of sleep mode during the ringing state.

3.3.2 Answering
If handset is out of the base cradle, a ringing line is picked up by pressing the appropriate line which will be flashing on the handset except the key for a non-ringing line.

4.0 Line Control

4.1. Line Button Pickup/Originate.
Pressing a line key causes that line to be engaged if the line is not being used by the base. The line LED indicator goes on steadily once the line is engaged. This indicator goes on when the base has acknowledged the pickup request, not when the button is pressed.
If the line you intended to use is being used by the Handset/Base, press that line key will result a double beeps warning tone.
If the line key you press is a on-hold line, it will release the hold and engage the line.

4.1.1 Hold Initiation
Any lines that are engaged by the handset are placed on hold if the hold button is pressed. If both lines are in a conference, then both lines go on hold. Lines that have an extension in use are not put on hold by pressing the hold button.
There is no checking for dialing before allowing hold. It is possible to put a call on hold immediately after engaging it. The dial keys are disabled while it is on hold. The channel change still remains active.

4.1.2. Mute
Mute is a toggle key and mutes transmission whilst allowing receiving audio signals to be received. A Mute LED indicating mute condition is also turned on.

4.1.3 Hold Release
A line on hold is re-engaged if its line key is pressed. Any lines that are on hold remain in that condition when replaced to the base until either an extension picks up the line or 10 minutes pass. The base will also beep to remind the user that the telephone is still on hold. If handset is off cradle the same conditions apply except that the base will not beep.
Hold will release the line automatically if any other extension phone is picked up on the same line, or the handset or base re-engage the line.

4.2 Out of Range Hang-up
If the base has detected that the handset has been out of range for 15 continuous seconds, then it will release any lines that are engaged. This does not affect hold. In a similar way if the handset is out of range for 15 continuous seconds, then it will also return to the idle state. An out of range accompanied with an error beep will sound at an increasing rate towards the hang up point.

4.3 Conference

4.3.1 Initiation

Conferencing can be initiated whenever one line is engaged and the other is on hold, or both lines are on hold. This is accomplished by pressing the CONF key. Once the conference key entry has been validated, an acceptance tone is output to make it clear to the user that they have been successful. Both line indicators turn on steady and Speaker LED will also turn on if conference is initiated from the base.
A further press of the conference key, whilst in conference mode will release both lines.

4.3.2 Reversion to Private Call
To break up the conference and speak to one party alone, the user presses the desired line key. The conference message disappears. The user can alternate between the two callers by pressing the desired line buttons.

4.3.3 Individual Termination

To drop one participant in a conference, the user must first engage that line privately, by pressing the line button. They can then press the line button again to hang it up in the usual fashion.

4.3.4 Complete Termination

Returning the telephone to its on hook state results in both lines being dropped. Unless the line or lines are on hold, this case is described in more detail in hold release section .

4.3.5 Hold.

If hold is pressed during a conference, both parties are placed on hold. The user can then pick up either line by pressing its Line key.

4.4 Hold release

while line(s) are on hold on base, press line keys (L1/L2) on handset or Line key again on base will automatically release the line. If the telephone is placed back on the charge cradle with one or both lines on hold the base will beep periodically to remind the user that the line has not been hung up. Or if the phone has been placed on hold for more than 10 minutes the line is also released.

5.0 Dialing

5.1 Off Hook Manual Dial

In Off-hook mode, Dial a number, a key tone will be heard once the valid key entry is detected.
If more than 32 digits are dialed, then the redial buffer shall be disabled, and any subsequent redial attempt will recall a blank number.

5.2 Buffering of key entry

Digits shall always be dialed out in accordance with EIA dialing timing limits regardless of how fast the user presses keys. Continuous tone for extended key press is available on base but not on handset.

5.3 Off Hook Redial

Pressing the Redial key in the off-hook state, dials the last number dialed. Last number dialed is defined as the dialing from accessing a line to either accessing a new line or hang up. If the last call If the dialing sequence exceeds 32 digits, then redial does nothing.

5.4 Pause

Pauses can be entered during off-hook manual dialing and chain dialing. This is a means of allowing a complex number to be redialed. A pause lasts 3.6 seconds.
Pause can be stored into the memory(Hotel service keys).

5.5 Memory Buffer Overflow

If the total number of dialing digits or commands exceeds 32, then the redial buffer is cleared and any redial attempts immediately afterward do nothing.

5.6 Direct service dialing

There are 10 one touch keys provide direct access to hotel services such as Front-Desk, Wake Up, Information, House Keeping, Voice Mail.....etc.

5.6.1 Inter-digit Timing

Inter-digit timing shall meet EIA-470B minimum standards, but does not necessarily need to be completely consistent in case processor loading causes timing difficulties.

5.7   Page
Page/Locator enables the base to send a signal to page handset.
The handset will ring a short double beeps if handset is in use.
The handset will beep slowly for 10 seconds if the handset is not in use, and no key is pressed on the handset/base.

6.0 Volume Control
6.1. Handset Receive Volume
At any time that the handset is engaged on an active line, the volume keys shall allow adjustment of the receiver audio over a 15 dB logarithmic range. Volume control is also available during mute.

6.1.1 Setting Receive Volume
The receive volume control resets to normal after 10 seconds on-hook. Factory default setting is normal.

6.1.3 Mute
Pressing the MUTE key during a call defeats the microphone and provides at least 50 dB of muting. Pressing mute again releases mute to the same volume level present when mute was first initiated. The Mute LED will also turn on.
Mute is cleared if the call that was muted is disengaged.

6.2   Base Speakerphone volume control
When Speakerphone is in use, press UP/Down key on Base to adjust receive volume over 12dB with 8 steps. Will not reset back to normal until 10 seconds On-Hook.

6.2.1   Selecting Ringer Volume
Select the ringer volume Hi/Low/Off. Factory preset is high.

7.0 Message Waiting (VMWI)
When a Voice Message-waiting is received, the Message LED on the top of   handset   will flash rapidly.
The Message LED on base will flash rapidly as well.   Both LEDs will turn off once message has been retrieved.

8.0 Factory Reset
At the discretion of software developers, some non-obvious multi-key combination, which held down during power up, causes re-initialization of all programmable states to a factory default condition *.
Additional special modes are allowed for test and software debug purposes, but these must be extremely unlikely to be accidentally triggered by users including small children *.

8.1 Power failure
If AC power failed and only telephone lines are connected, all functions from the handset are disabled. But user still can:
. Receive ring of line-1 on the base.
. Use Speakerphone on the base to receive/initiate a call on Line-1.
. Use 10 one-touch hotel service keys.