

Dialer Buddy™

DTMF and Telephone Line Analyzer • Model DLM22-01



Dialer Buddy™ • Model DLM22-01 Users Manual • Firmware Revision 1.00

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Introduction

Dialer Buddy™

Thank you for purchasing the Dialer Buddy™. The Dialer Buddy makes an Excellent addition to the communication technicians tool box. The Dialer Buddy displays both pulse and dtmf digits for troubleshooting of customer premise equipment.

Features

- Detect and display dtmf digits and on/off timing.
- Detect and display pulse digits and break timing and interdigit.
- Detect and display hook flash interval.
- Detect CPC interval (zero voltage on phone line).
- Detect ringing and on/off timing.
- 2000 digit nonvolatile memory in normal mode.
- 400-digit nonvolatile memory in analyze mode.
- Send 1004hz tone.
- Adjustable on and off hook voltage threshold.
- Adjustable CPC detect sensitivity.
- Auto shut off feature after 10 minutes of no use. (can be enabled or disabled)
- 19200-baud serial output.

Important Information

Warranty

Telsoft warrants its products against defects in materials and workmanship for a period of 90 days.

If you discover a defect, Telsoft Inc. will, at its option, repair, replace or Refund the purchase price. You must contact us before shipping a return, as we must issue an RMA number for all repairs. After repairing or replacing your product, we will ship it back to you using the same method of shipment used to have the product delivered to Telsoft Inc. (For instance, if you ship your Product via overnight express, we will return ship the same).

This warranty does not apply if the product has been modified or damaged by accident, abuse or misuse.

Copyrights and Trademarks

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Disclaimer of Liability

Telsoft Inc. is not responsible for special, incidental or consequential damages resulting from any breach of warranty or under any legal theory, including lost profits, downtime, goodwill, damage to or replacement of equipment or Property.

Special Note about Reseller Sales

If you purchased your Telsoft product through a reseller, you need to contact the reseller if there is a problem.

Equipment Information

Power

The Dialer Buddy™ requires an internal 9-volt battery or external 9-volt dc power supply. The center pin on the external power connector is the positive (+) pin.

Packing List

If you purchased the Dialer Buddy™ package, you should have received the following items: *If any items are missing please let us or your distributor know.*

- Dialer Buddy™ unit
- 9 volt dc external power supply
- Telephone line test cable
- 9-Volt battery (installed)

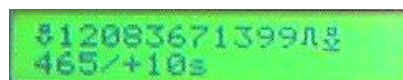
Display Symbol Definitions

0-9 - Dtmf and pulse digit characters.

*,#,A,B,C,D - Dtmf characters.

- - Ring detected symbol
- ∏ - Hook flash symbol
- ∏∏ - Pulse chatter symbol
- ∇ - CPC symbol (line at zero volts).

Analyze mode



In the analyze mode the display readings are as follows: (line 2 of the display)

DTMF	length of time digit is active / time elapsed between previous event
Hook Flash	length of time on hook / time elapsed between previous event
Pulse	pulse break time / time elapsed between previous event
Ring	ring on time / time elapsed between previous event

(When reading pulse digits time between pulses will have a **P** next to it indicating that number was a pulse digit.) Readings are for the digit or symbol above the Cursor on the top line of the display.

Dialer Buddy™ Model DLM22-01 Hardware

9VDC External Input

To be used when AC power is available. Plug the AC adapter (supplied with Dialer Buddy™ package) into this port.

Line Input

Plug the telephone test cable into this port and connect the other end of the cable to the circuit being tested.

RS232 Interface

Connect the serial port of your computer to this port to display digits on your computer using most any terminal program.

Dialer Buddy™ Keypad

← Scroll Left Key

Pressing this button scrolls the cursor left.

→ Scroll Right Key

Pressing this button scrolls the cursor left.

Tone Key

Pressing this button turns on 1004hz tone. To turn the tone off press any key.

Analyze Key

Press this key to turn analyze mode on or off.

****Important Note**** Changing modes will clear the nonvolatile digit memory.

Clear Key

Pressing this key will clear the nonvolatile digit memory.

↑ Volume Key

Pressing this key will increase the speaker volume.

↓ Volume Key

Pressing this key will decrease speaker volume.

- Lowest setting will turn speaker off.

ON/OFF Key

Press this key to turn unit on. To turn unit off press and hold the key for 2 seconds and release.

Menu Key

Press this key to access the DLM22 menu. To skip over a menu without changing setting press menu key again.

Dialer Buddy™ Menu

Auto Shut Down (default = on)

Press scroll right key to enable auto shut off. Press scroll left key to disable auto shut off. Press menu again to access next menu.

Off Hook VTT (Voltage Threshold Trigger) (default = 11-volts)

Press scroll right to increment voltage setting and scroll left to decrement setting. Press menu again to access next menu.

On Hook VTT (Voltage Threshold Trigger) (default = 17-volts)

Press scroll right to increment voltage setting and scroll left to decrement setting. Press menu again to access next menu.

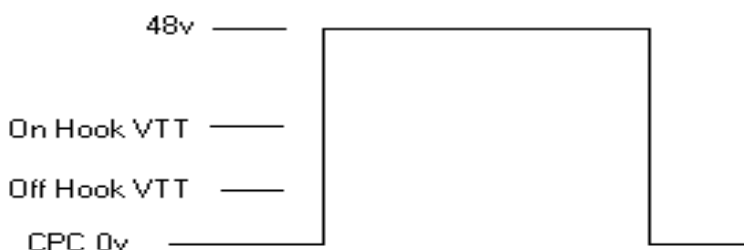
CPC Adjust (default = 4)

Press scroll right to increment sensitivity setting and scroll left to decrement setting. Press menu again return to operation mode.

On and Off Hook Voltage Diagram (Telephone line voltage)

Normally you will not have to adjust on hook VTT and off hook VTT. If you are working with telephone lines that have a very low voltage drop when off hook you may need to adjust these parameters.

When telephone line voltage is greater than **on hook vtt** the dialer buddy will display an on hook condition. When the telephone line voltage is less than **off hook vtt** the dialer buddy will display an off hook condition. When the telephone line is at 0 volts it will display a CPC condition. If you are working with telephone lines with a off hook voltage of 3 volts or below you should lower the CPC Adjust to 0 or you may experience 0volt symbols on the display when dialing.



DLM22 SERIAL PORT

Serial port should be set to (Baud Rate = 19200, Bits = 8, Parity = none, Handshaking = none, Stop bits = 1). Also DTR and RTS have to be set to a logic 1.

Dialer Buddy Applications

- Testing auto dialers
- Dtmf and pulse verification
- Speed dialer testing
- Direct inward dial line testing
- Phone system testing
- Voice mail testing
- Alarm system testing

These are just some of the applications that you can use the Dialer Buddy™ for.

WARNING

Do not attempt to connect hazardous voltages to the Dialer Buddy™ inputs, this may cause harmful effects to the user, computer and or Dialer Buddy™. The Dialer Buddy™ was designed for connection to the telephone line only.

Technical Specifications

Display Parameters:	Type	Min	Max	Unit
Display View Capacity		32		digits
Display Font	Alpha Numeric			
Display Type	Liquid Crystal Reflective			
Memory Parameters:				
DLM22-01	Nonvolatile	400	2000	Bytes
DTMF Input Parameters				
Typical		Min	Max	Unit
Valid Input Signal Levels (Each tone of composite signal)		-31	+1	dBm
Input Signal Reject		-37		dBm
Negative Twist Accept			8	dBm
Positive Twist Accept			8	dBm
Frequency Deviation Accept	+/-1.5% +/-2			Hz
Frequency Deviation Accept	+/-3.5%			Hz
Third Zone Tolerance	-18.5			dBm
Noise Tolerance	-12			dBm
Dial Tone Tolerance	+22			dBm
Tone Duration Accept			40	ms
Interdigit Pause Reject			40	ms
Characters Displayed	0-9,#,*,a,b,c,d,			Char
Input Impedance	120			Kohm
Pulse Input Parameters:				
Typical		Min	Max	Unit
Off Hook Voltage Threshold	Adjustable	0	52	Vdc
On Hook Voltage Threshold	Adjustable	0	52	Vdc
Break Cycle		25	65	ms
Make Cycle		20	150	ms
Interdigit Timer	255			ms
Hook Flash Timer		1	9999	ms
Characters Displayed	0-9			Char
General Specifications				
Unit				
Dimensions	Height 3.6", Length 5.7" Depth 1.3"			
Battery	9			Vdc
Battery Life	65			Hours
Serial Port	19200 Baud, 1 Stop bit, 8 bits, No parity			