

OPERATION MANUAL

TestPhone 850



Main Features:

Digital Line Compatible (Integral ADSL Filter)
Two Way Hands Free
Eight Level Volume Control (Handset and Hands free)
Microphone Mute
Tone/Pulse Dial Selection with Indication
Ultra Hi-Z on/off-hook Line Polarity Indication
Hi- Z Speaker Monitor Mode with Four Volume Levels
Ultra Low Line Current with Over Current Protection
Low 0.1 REN (Ringer Equivalence Number)
Low Battery Indication
Full Telephone Parameter Set up via Keypad
Ten Ringer Melody's (5 x 3- Tone, 5 x 2- Tone)
Hands Free Background Noise Compensation
13 x 21 Digit Memories (1 Speed Dial Memory)
Configurable Key Beeps
Quick Change Battery
Quick Change Cords or RJ11 Lead
High Impact Resistance
Fully Sealed to IP67
Rugged Belt Clip
Two Year Warranty

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Introduction

The TestPhone 850 provides both handset and handsfree telephone communication. The product provides a standard Public Switched Telephone Networks (PSTN) interface, user interface and handset and/or handsfree vocal interface to allow the user to originate or answer standard PSTN calls on both Dual-tone Multi-frequency (DTMF - tone dialling) and Loop Disconnect (LD - pulse dialling) lines. In addition the product features on-hook audio line monitoring, PSTN line polarity indication, automatic on-hook/power-off and integral ADSL digital line filtering.

Dialling

DTMF dialling

To dial out press the **[HOOK]** button. Then enter a telephone number, press **[LNR]** to redial or dial a pre-stored number from memory and conduct a vocal call upon connection.

This mode is indicated by the **PL/TN** LED being Green.

LD dialling

To initiate a LD call, whilst on hook press **[PL/ER]** once, within 5 seconds press **[HOOK]** and proceed as above.

Upon terminating the call the telephone will revert to DTMF signalling.

This mode is indicated by the **PL/TN** LED being Red.

Handsfree Call

To transfer to handsfree mode (indicated by the **HF** LED being illuminated), press **[MON]** while off hook (tone will be heard through the loudspeaker).

Incoming Call

Incoming calls generate a ringing indication on speaker. To answer press **[HOOK]**, or **[MON]** for handsfree mode.

Terminating A Call

To terminate a call press **[HOOK]**.

Terminating A Handsfree Call

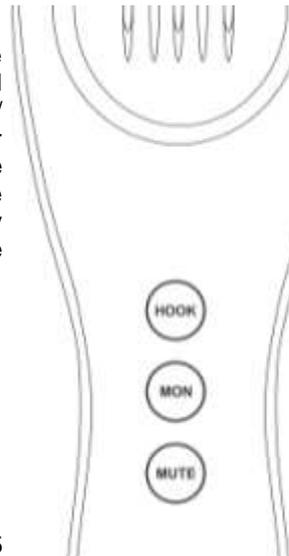
To terminate a handsfree call press **[MON]**, or press **[HOOK]** to switch to handset mode. In handsfree mode the call will automatically be terminated after 30 minutes.

Volume Adjustment

During a call the receive volume can be varied by pressing **[V+]** or **[V-]** as required. When the maximum adjustment has been reached, three short beeps will be heard.

Mute

To mute the telephone during a call, press **[MUTE]** (the **PLTN** LED will flash). A short burst of confidence tone will be heard. To initiate conversation, press **[MUTE]** again.



Last Number Redial (LNR)

Pressing [LNR] will initiate the Last Number Redial.

Timed Break Recall (TBR)

Pressing [TBR] will generate a Timed Break Recall. Duration may be configured.

Earth Recall (ER)

Pressing [PL/ER] will instigate an Earth Recall. This can only be carried out if the telephone has an earth connection.

Telephone Memory Store

The telephone has a 13 address memory store. 12 are accessed via [MR] and 1 number accessed via [M1].

Note: The telephone must be connected to a live telephone line before programming can be carried out.

To store a number:

- press [HOOK] to go `off hook` and pres [PG]
- press 1) [M1] or 2) [MR] followed by the memory location [0]-[9], [★] or [#]
- Enter the number on the numerical keypad (max 21 digits) pauses may be entered by pressing [LNR]
- to store the number press [PG]

To access the store press 1) [M1] or 2) [MR] followed by the store location [0]-[9], [★] or [#]

Polarity Indication

When `off hook` the relative polarity will be indicated - Green LED positive polarity on Line A, Red LED positive polarity on Line B.

Monitoring

High Impedance monitoring (indicated by the `HF` LED being illuminated) is carried out by connecting the telephone to line and pressing [MON]. Pressing the button 3 more times will increase the volume. The 4th press will terminate the monitoring.

Note: You must press [MON] 5 times before you can originate an outgoing call.

Should the user not deactivate monitor mode or press `MON` for 10 minutes then the testphone is automatically turned off.

Low Battery Warning

When the battery is low the `PL/TN` led will alternately flash Red/Green.

Field Repairs

Field repairs are limited to battery replacement or line cord replacement.

To replace **the battery**, with the telephone keypad uppermost remove the two screws in the centre of the body and remove the top moulding. Using a suitable tool remove the battery type PP3/6LR61/1604A. Replacement is a reversal of the operation.

To replace **the line cord**, additionally remove the two screws holding the line cord in position, remove the existing line cord. Replacement is a reversal of the operation.

Mode programming

Select TBR duration

The TBR [flash] duration may be configured as follows:

[PG] [2] [0] [PG] - 100mS duration (default)

[PG] [2] [1] [PG] - 285mS duration

Select Pause time

The Pause time [LNR] may be configured as follows:

[PG] [4] [0] [PG] - 1 second pause (default)

[PG] [4] [1] [PG] - 3 second pause

Easy keypad lock

The keypad may be quickly locked and unlocked as follows:

[PG] [5] [3] [9] [PG] - Toggles locked/unlocked state

Select Ringer volume

The Ringer output volume may be configured as follows:

[PG] [6] [0] [PG] - Low

[PG] [6] [1] [PG] - Medium

[PG] [6] [2] [PG] - High (default)

Select Ringer melody

The Ringer melody may be configured as follows:

[PG] [7] [n] [PG]

Where [n] is 0 (default) to 4.

Select Ringer ON/OFF

The Ringer may be turned OFF or ON as follows:

[PG] [8] [1] [PG] - ON (default)

[PG] [8] [0] [PG] - OFF

Connections

̀PSTN` line - RJ11 [FCC4/4] socket and 3 terminals, identified as 'LINE'.

Pin 1 - Line A; Pin 2 - Earth Recall; Pin 3 - NC; Pin 4 - Line B

Characteristics

DC Electrical Characteristics

PSTN idle current (on-hook)	< 1uA @ 50Vline
PSTN operational current (off-hook)	15 – 60mA nominal (60mA limited) 5 – 15mA reduced performance 0 – 5mA power-down
PSTN line protection	200V SAD + Dual 130mA PTC
Battery voltage	9V nominal (PP3/6LR61/1604A type)
Battery supply current	44uA (on-hook), 6-8mA (handset) 20-200mA (Handsfree/monitor)
Battery low voltage	7.5V

AC Electrical Characteristics

Speaker output power	0.25W into 8R @ 9V
Speaker total harmonic distortion	2% @ 0.25W
PSTN transmit gain (handset)	35.8dB typical
PSTN transmit gain (handsfree)	44.0dB typical
PSTN transmit soft clip level	2V typical
PSTN transmit soft clip attach	70uS/6dB
PSTN transmit soft clip decay	100mS/6dB
PSTN transmit mute attenuation	60dB
PSTN receive gain (handset)	-0.5dB typical
PSTN receive gain (handsfree)	27dB typical
PSTN receive volume range	15dB in 8 steps
PSTN receive soft clip level	1V typical
PSTN receive soft clip attach	70uS/6dB
PSTN receive soft clip decay	100mS/6dB

Default parameters

Earth Recall duration	250mS
Auto on-hook timer	30 minutes
Button de-bounce time	20mS
Inter-digit pause (Pulse[LD])	840mS

Tone [DTMF] tone duration	82mS
Tone [DTMF] tone pause	82mS
TBR duration	100mS
Pause duration	1 S
Pre-digit pause (Pulse[LD])	33mS
Post TBR pause	274mS
Handset TX gain	37dB
Handset RX gain	1dB
Handsfree TX gain	46dB
Handsfree RX gain	29dB
DTMF level (low group)	-6dBm
Tone [DTMF] comfort tone (handset)	-40dB
Tone [DTMF] comfort tone (handsfree)	-9dB
Pulse [LD] make/break ratio	2 : 3
Pulse [LD] dial rate	10 pulses a second
DC Mask	4.5V
Operating Environment	temperature -25°C - +70°C; humidity up to 80% non-condensing
Dimensions	24.5 x 8.0 x 6.5 (cm)
Weight	458 (g)

Supplied by: