OPERATION MANUAL

TestPhone 295B

Main Features:
Digital Line Compatible (Integral ADSL Filter)
Tone/Pulse Dial Selection with Indication
Ultra Hi-Z on/off-hook Line Polarity Indication
Hi-Z Monitoring
Ultra Low Line Current with Over Current Protection
Three Ringer Melody's (3 x 3- Tone)
Five Level Volume Control
Microphone Mute
12 x 21 Digit Memories
Quick Change Battery
Quick Change Cords or RJ11 Lead
High Impact Resistance
Fully Sealed to IP67
CE & Rohs Approved
Rugged Belt Clip
Two Year Warranty

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Introduction

The Testphone 295B is a test telephone designed for use on Public Switched Telephone Networks (PSTN). It is designed for use on both Dual-tone Multi-frequency (DTMF - tone dialling) and Loop Disconnect (LD - pulse dialling) lines. Fitted with an integral ADSL filter, the telephone will not cause interference when connected to ADSL/Broadband lines in either `on hook` or `off hook` mode.

Dialling
`DTMF` dialling

To dial out press the **[HK TN]** button located on the underside of the handset. Then enter a telephone number, press [LNR] to redial or dial a pre-stored number from memory and conduct a vocal call upon connection.

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

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

`LD` dialling

To dial out press **[HK PL]** and proceed as above.

The revised state will be indicated by the `**PL/TN**` LED being Red.

Terminating A Call

To terminate a call press either **[HK TN]** or **[HK PL]**. Should the call not be manually terminated it will automatically be terminated after 30 minutes.
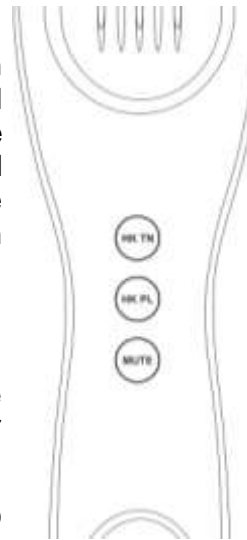
Volume Adjustment

During a call the receive volume can be varied by pressing **[V+]** or **[V-]** as required.

Mute

To mute the telephone during a call, press **[MUTE]** A short burst of confidence tone will be heard. While Mute mode is in operation the `**PG/ MT**` LED will flash. 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 initiate a 100 millisecond timed break recall.

Earth Recall (ER)
Pressing **[ER]** will instigate an earth looped recall. This can only be carried out if the telephone has an earth connection.

Incoming Ring
Incoming calls ring the internal tone caller. To answer the call press either the **[HK TN]** or **[HK PL]**.

Telephone Memory Store
The telephone has a 12 address memory store.

Note: Programming the memory locations can only be carried out when the telephone is connected to an active telephone line.

To store a number:
- go `off hook` by pressing **[HK TN]** or **[HK LD]**
- press **[PG]** (yellow `**PG/MT**` LED will flash)
- press **[MR]** followed by the memory location **[0]-[9], [✳] or [#]**
- enter the required number (max 21 digits) on the numerical keypad (enter pauses by pressing **[LNR]**)
- press **[PG]** to store the number
- press **[HK TN]** to go 'on hook'

To access the store:
- press **[MR]** followed by the store location **[0]-[9], [✳] or [#]**

⚠️ If `**LNR**` or `**MR**` retrieval becomes difficult, it is likely that the battery needs replacing.

Note: The unit should not be operated without a battery in place. To avoid loss of memory the battery should be replaced while the telephone line is connected. If used without a battery then errors will occur when used in `PL` mode.

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 is carried out by connecting the telephone to a line and monitoring the line.

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 CR 2032 (or pattern) battery. Replacement is a reversal of this 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 this operation.

Tone ringer (Melody/Volume)
The tone ringer melody repetition rate/volume may be configured as follows:
[PG] [#] [0] [PG] - Ringer off
[PG] [#] [1] [PG] - 1 time @ -16dB
[PG] [#] [2] [PG] - 1 time @ -7dB
[PG] [#] [3] [PG] - 1 time @ 0dB [max]
[PG] [#] [4] [PG] - 4 times @ -16dB
[PG] [#] [5] [PG] - 4 times @ -7dB
[PG] [#] [6] [PG] - 4 times @ 0dB [max. default]
[PG] [#] [7] [PG] - 10 times @ -16dB
[PG] [#] [8] [PG] - 10 times @ -7dB
[PG] [#] [9] [PG] - 10 times @ 0dB [max]

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)	< 40uA @ 50Vline
PSTN operational current (off-hook)	13 – 60mA nominal (60mA limited)
	5 – 13mA reduced performance
	0 – 5mA power-down
PSTN line protection	200V SAD + Dual 130mA PTC
Battery voltage	3V nominal (CR2032 type)
Battery supply current	5uA typical (no line connected)

AC Electrical Characteristics

PSTN transmit gain	36.6dB typical
PSTN transmit soft clip level	2V typical
PSTN transmit soft clip attach	30uS/6dB
PSTN transmit soft clip decay	20mS/6dB
PSTN transmit mute attenuation	60dB
PSTN receive gain	3dB typical
PSTN receive volume range	-5.4/+8.1dB in 5 steps
PSTN receive soft clip level	1V typical
PSTN receive soft clip attach	30uS/6dB
PSTN receive soft clip decay	20mS/6dB

Default parameters

Earth Recall duration	ER button press time
Auto on-hook timer	30 minutes
Button de-bounce time	20mS
Pulse [LD] Make period	33mS

Pulse [LD] Break period	66mS
Pulse [LD] dial rate	10pps
Inter-digit pause (Pulse[LD])	790mS
Tone [DTMF] tone duration	82mS
Tone [DTMF] tone pause	82mS
TBR duration	101mS
Pause duration	2 S
Pre-digit pause (Pulse[LD])	35mS
Post TBR pause	274mS
Line Loss Compensation (LLC)	Off default, 20-50mA
DTMF level (low group)	-4dBm
Tone [DTMF] comfort tone	-30dBr
Operating Environment temperature	-25°C - +70°C;
humidity	up to 80% non-condensing
Dimensions	24.5 x 8.0 x 6.5 (cm)
Weight	414 (g)