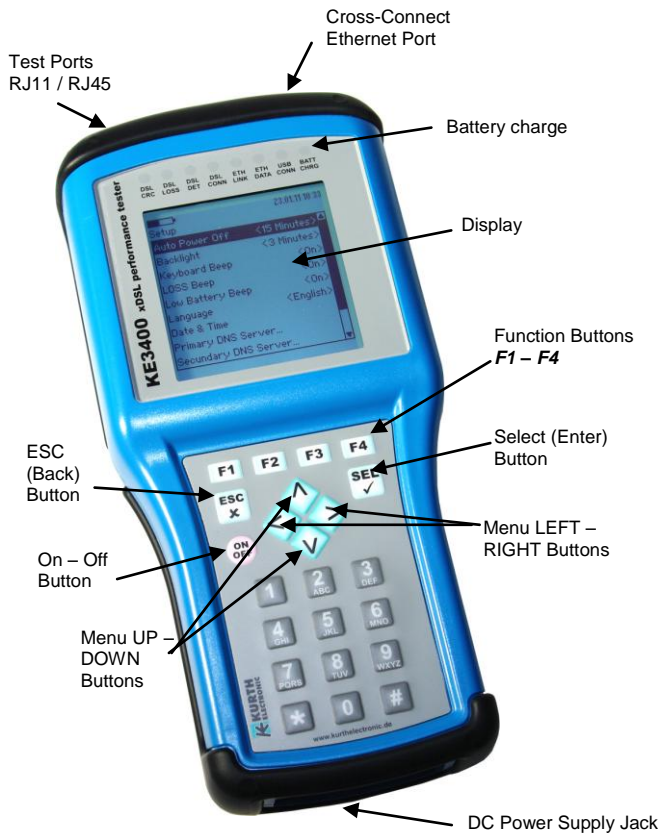


## Quick Reference

### xDSL Performance Tester **KE3400B**



For additional questions or suggestions, please contact:

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**05-11 Software version >4.0.0**

#### Calibrating the Battery Display

The battery capacity display must be calibrated before the unit will operate. See the attachment and detailed operating manual.

#### Keypad

- F1 - F4 *Menu-related function buttons*
- ESC *Press to undo the last step (back)*
- ON/OFF *Press and hold to turn tester on and off*
- Arrows *Menu controls - UP/DOWN and LEFT/RIGHT*
- SEL *Press to Select an item from the menu (Enter)*
- 0-9, \*, # *Alphanumeric keyboard*

#### TEST Port

RJ11 and RJ45 jack

#### ETHERNET Port

RJ45 jack

#### Information LEDs

- DSL CRC – orange**  
ON = CRC error
- DSL LOSS – orange**  
ON = Loss of DSL sync (plus beep when Resync is Off)
- DSL DET – green**  
ON = DSL signal detected
- DSL CONN – green**  
ON = DSL sync established
- ETH LINK – orange**  
ON = Ethernet connection successful
- ETH DATA – green**  
ON = Ethernet data send/receive
- USB Conn – green**  
ON = USB connection detected
- BATT CHR**  
OFF = No AC power connected, RED = battery charging in progress, GREEN = charge complete, AC power supply on.

#### Main Menu:

**ATU-R (Modem) Tests**  
**ATU-C (DSLAM) Emulation**  
**Load & Save Profile**  
**Setup**

#### Automatic Off

Automatic shutoff after the last button is pushed. Possible settings: Always on, 5 minutes, 30 minutes, 60 minutes  
When a test is running (DSL DET is on), the KE3400B does not shut off even after the time has elapsed.

#### Backlight

Possible settings: Always on, always off, 3 minutes  
When the power supply of the KE3400B is plugged in, the automatic shutoff and the LCD illumination are set to "Always on". The AC power supply can be plugged in while the device is in operation.

#### Language

Menu languages: German, English, French, Spanish, Portuguese, Italian, Dutch. German is the default.

#### Date & Time

Time and date setting: 12 or 24 hour format  
Format DD.MM.YY HH:MM = 21.12.07 13:14

#### Primary / Secondary DNS Server

IP address for DNS server

#### Software Update

Displays the hardware ID, software version and loaded updates  
Start an update

#### Ignore Low Battery

On or Off

#### Signaling and Display < submenu >

#### Keyboard Beep

Possible setting: keypress beeps On or Off

#### Loss Beep

Possible setting: warning beep On or Off (only with Resync Off)

#### Low Battery Beep

Possible setting: On or Off

**Contrast / Brightness (LCD)**

Brightness has 7 levels. We recommend 4 as default brightness level.  
Contrast has 64 levels. We recommend 14 as default contrast level.

**Resync Function in ATU-R and ATU-C Tests**

Select Resync On or Off to determine if the KE3400B automatically resynchronizes (e.g. after DSL loss), or if the user has to manually cause resynchronization.

When testing Resync On, there is no alarm when there is a DSL Loss; the Resync counter is merely incremented. In Resync Off, there is a visual and acoustic alarm for 10 seconds when there is a DSL loss until the user resets the test. The DSL CONN LED remains on, and test data continues to be displayed. You can then reset the device with ESC and restart the test.

**ATU-R (Modem) Mode**

**1. Link/Ping Test** - Select **Link/Ping Test** from **ATU-R (Modem) Test** menu. In this mode the KE3400B xDSL tester acts both as a modem and router for primary service and performance testing at the subscriber end. A complete suite of ADSL and VDSL service types can be selected from the menu, including chip sets. There are two levels of testing available in this mode:

**Sync Only Mode:** This is the primary service test mode. It is entered by selecting **Mode: Sync Only** in the **Link/Ping Options** menu with a L/R arrow key. While running it provides a complete display of DSL service performance parameters as listed below and test results can be seen via the Ethernet port on the tester. Begin testing by selecting **Auto Sync On** or **Off** and pressing **Start**.

**Link/Ping Mode:** Entered by selecting **Mode: Link/Ping** on the menu with a L/R arrow key. This test option allows more extensive services testing upward into the network, and once it is completed the KE3400B can be used to access the network via the Ethernet port. When Link/Ping is selected a variety of service type parameters appear in the **Link/Ping Options** menu that can be selected to exercise a broadband service:

**Encapsulation**

Ethernet/LLC  
PPPoE/LLC  
PPPoA/LLC

**VPI and VCI**

Virtual Path and Channel Identifiers will depend on the Internet Service Provider (ISP). e.g., For Deutsche Telekom: VPI/VCI = 1 / 32 (Not used or displayed when VDSL2 has been selected).

**VLAN Tagging**

On or Off  
**VLAN ID**

The ID number setting appears only if VLAN Tagging is selected On.

**Destination IP**

Target IP address, numeric or name

**Auth(entication) Type**

Set to None, PAP, CHAP or PAP+CHAP

**Username...**

The username is shown in text.

**Password...**

The password is displayed once when it is entered; after it is saved, the same number of asterisks is displayed as characters and spaces. It can only be changed by entering a new password.

Note: Enter both the Username and Password in the Entry menu by selecting the position for the first character in the entry line with SEL; then select the desired characters for the following positions. The numeric keyboard can be used for numbers only. Spaces before and after the password are deleted when saving. Save by selecting the 'check mark' character .

**2. Modem Mode**

Enter **Modem Mode** by selecting it from the **ATU-R (Modem) Test** menu. In this mode the KE3400B tester is used to replace the subscriber modem -- connect the tester Ethernet port to a customer's router or data port and the tester's Test Port to the DSL service line. This allows viewing of DSL performance while the line is in live service. Once you have connected the cables begin testing by selecting **Auto Sync On** or

Off and pressing **Start** in the **Modem Mode Options** menu. (For ADSL service a VCI and VPI value must also be set in the **Link/Ping Option** menu.)

KE3400B automatically identifies which DSL service is found. This is displayed in the top left status bar together with the DSLAM Vendor -- if available. The sequence will be:

*Load Profile*  
*Initializing*  
*Reset*  
*Ready*

**Viewing and Controlling the Display for a Link Test (ADSL 1/2/2+ Annex x and VDSL2)**

Top status line      ITU version of the ATU-C and DSLAM Vendor

**Actl**                  Current up/downstream in Kb/sec  
**Max**                    Maximum up/downstream  
**Noise margin**        Difference between actual and required SNR (dB)  
**Interleave**            Delay in ms or zero for Fast Path  
**Tx Pwr**                Transmission power in dBm  
**Line Attn**             Line attenuation in dB  
**Sig Attn**                Signal attenuation in dB

**F1**    Reserved for help function  
**F2**    For error menu; this shows errors and error corrections for the near and far end.

**CRC**                  **Checksum error**  
**FEC**                  **Performed error corrections**  
**HEC**                  **ATM - Header Error Check**  
**Resync**                **Performed resynchronizations**

**F3**    Opens the BANDS table. In the BANDS display, the noise margin, signal and line attenuation are clearly shown separately by band.

**F4**    Opens the SNR per tone and Bit per tone display. Both are graphically displayed and can provide data about disturbances.

**ATU-C (DSLAM) Mode**

In this mode, the KE3400B works as a DSLAM.

**ATTENTION!**

**Never** use the ATU-C mode toward the network from the subscriber. Other active DSL connections will be disturbed by the interfering power level of the upstream and downstream bands.

After you select ATU-C, a submenu opens with two selections:

**ATU-C ADSL Tests**  
**ATU-C VDSL Tests**

When you select **ATU-C ADSL Tests**, a menu opens with the entry:

**ADSL 1/2/2+ Annex x**      Various annexes are available

This is followed by selecting Resync On or Off.

When you select **ATU-C VDSL Tests**, a menu opens with the entry:

**VDSL2 PTM**    VDSL2 Packet Transfer Mode - Standard  
Various bandplans are available

Then select Resync On or Off.

ATU-C always works with the maximum possible upstream and downstream rate. No setting changes are necessary.