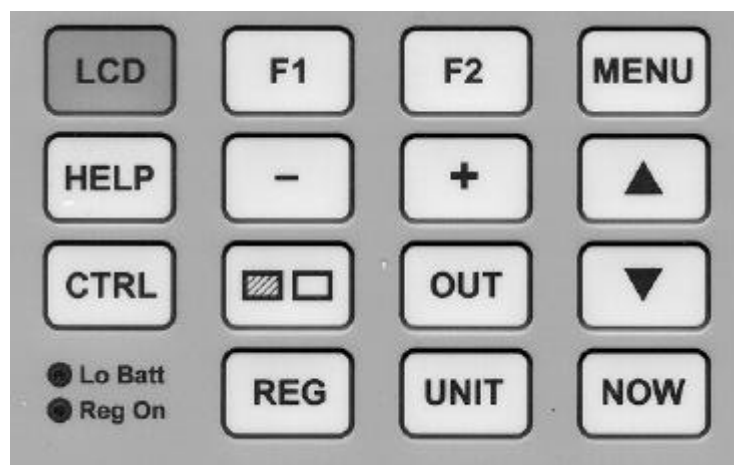


UVS 600

1-Channel Vibration Monitor

User's Manual

Software version 1.1.6 and later



ABEM

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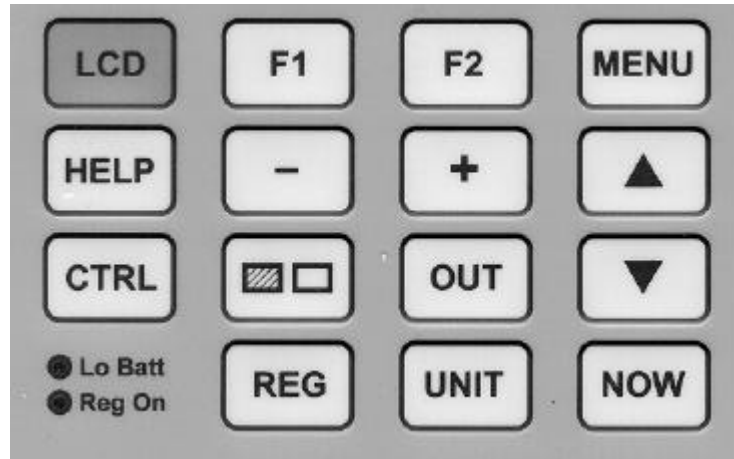
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Activating the LCD

The LCD of the UVS 600 is normally shut down (dark). To activate the LCD, press the green **LCD** button on the keyboard.

To shut down the LCD, press the green **LCD** button once more. The LCD also shuts down automatically 1 minute after the latest pressing of any key.



When the LCD lights up, the text below appears for a short while. You will see:

- The serial number of the instrument.
- Version and date of the instrument software.
- Date of calibration.

```
*** UVS601--0123 ***  
Ver: 1.1.6 19990204  
Cal: 12 Sep 1998  
F1=Continue
```

After a few seconds it is replaced with the following screen, which is the normal presentation of vibration data.

Normal Presentation

```
Mo 22 Feb 1999 16:51  
On BI * 12.7 mm/s  
LIVE  
Threshold 2.0 mm/s
```

On the first line you will see date and time for the last (presented) recording exceeding the threshold (see below).

On the second line the peak particle velocity for the actual 2-minute period is presented in mm/s. The indicated minute is the one “in the middle” of the period, i.e. 16:51 means the period 16:50:00-16:51:59. By pressing the **UNIT** button it is possible to read the corresponding values for peak particle displacement (in μm) and peak particle acceleration (in m/s^2).

Presentation of Recorded Data

It is possible to study data recorded in the memory at any time by using the **ARROW UP** and **ARROW DOWN** buttons, even when registration is in progress (you do not have to turn the recording off).

Only values above the selected threshold are presented, but you can change the threshold at any time as described below.

If you hold down **CTRL** while pressing **ARROW UP** the presentation will leap 2 hours at a time, in this case without applying the threshold.

By pressing the **UNIT** button it is possible to read the maximum displacement and the maximum acceleration.

All Reg Ons and Reg Offs are indicated with “On” and “Off” at the corresponding time.

By pressing the **NOW** button, the latest recording with a peak value exceeding the threshold is presented. This is indicated with a * sign and (in Reg On only) the word “LAST” on the LCD.

In Reg On, if you hold down the **NOW** button for a few seconds, the instrument will enter into the Live mode where the current 2-minute peak value is presented, even if below the threshold. This is indicated by a flashing * sign and the word “LIVE” on the LCD. Press **NOW** or **ARROW UP** once again to return to “LAST”.

Input Test and Battery Status

The input test is continuously active. If the geophone has not been properly connected *during the presented 2-minute period*, this is indicated with a capital **I** before the measured value. In the corresponding manner, a capital **B** indicates that battery voltage has been low.

To check the *current* input status, go to LIVE mode as described above.

Battery Indicator

If the battery voltage is low, the amber **Lo Batt** LED flashes.

Normally this LED starts flashing when there is remaining battery capacity for one week of recording.

However, it is advisable to change the batteries as soon as the amber LED starts flashing.

Note 1: Do always change both batteries.

Note 1: Do always use alkaline batteries.

Settings

To check and adjust the instrument settings, press the **MENU** button when the instrument is in normal presentation mode.

Some adjustments can only be carried out when the registration is turned off.

The following menus are shown in consecutive order. By pressing **MENU** the next menu is shown. By pressing **LCD** (in any situation) the UVS 600 returns to normal presentation.

The Threshold Menu

Threshold: 1.2 mm/s F1=Edit

The UVS 600 records peak particle values in 2-minutes intervals.

It is possible to set the threshold for presentation of data on the LCD. Only intervals with a value above the threshold are presented. However, the peak value of each 2-minute period is always recorded, even if below the threshold.

You can change the threshold both in Reg On and Reg Off mode.

To change the threshold, press **F1** (Edit). The threshold value will start to flash and you can change it by pressing the **+** or **-** buttons. It is possible to set the threshold in OFF position, whereby no threshold is used and all recorded data is displayed.

By pressing **F2** (Save) the new setting is stored.

To exit without saving the change press **F1** (Exit).

By pressing **UNIT** it is possible to set a threshold for the other two units (μm and m/s^2).

Note 1: The recording of data is not affected by the setting of the threshold. Only the presentation is affected.

Note 2: When scanning the memory, only the threshold of the currently presented value is applied.

The Battery Menus

```
Main Battery:
```

```
2.79 v
```

The instrument is powered by two LR20 alkaline cells (1.5 volt each). This means that with new batteries you should read a battery voltage around 3 volts.

The batteries will provide sufficient power for at least 1 month of continuous operation.

When the battery voltage goes below 2.2 volts, the backlight of the LCD is turned off. This is indicated by the message “Backlight disabled”. The backlight will remain off until the voltage exceeds 2.7 volts.

When the battery voltage goes below 1.9 volts, a “LOW” indication appears on the LCD and the amber “Lo Batt” LED flashes. This indication will remain until the voltage exceeds 2.5 volts.

When the battery voltage goes below 1.8 volts, the RS232 port is disabled. This is shown by an automatic change of display mode to:

```
Warning-!  
Low battery  
RS232 disabled  
F1=Back      F2=Back
```

To revert to previous mode press **F1**, **F2**, **LCD** or **MENU**.

If the UVS 600 is in REG ON mode, it will continue to record data until the voltage has dropped to 1.65 volts. Then it is automatically turned off, and will not start automatically again even if the voltage rises again.

The next **MENU** provides the backup battery voltage. The backup battery is used to supply memory and real time clock with power when the main batteries are removed.

```
Backup Battery:
```

```
2.90 v
```

If the backup battery voltage goes below 2.70 volts, the the message <<REPLACE>> appears on the second line. The instrument should then be sent in for checking and battery replacement.

The life of the backup battery is ≥ 10 years if the main batteries are installed at all times; otherwise <4 years.

Date & Time

```
Clock:  
Date: 1999 Feb 26 Fr  
Time: 12:34.38  
F1=Edit
```

Current date and time are presented. If the instrument is in Reg Off, it is possible to change date and time.

To adjust the clock press **F1** (Edit). Use the **+** or **-** buttons to change and **ARROW DOWN** to move the flashing cursor.

The Info Menu

```
S/N: UVS601-0102  
Ver: 1.1.6 19990204  
Cal: 12 Sep 1998  
Rev: 35
```

The serial number of the instrument, software version, calibration date and hardware revision number are shown in this menu.

LCD Backlight

```
Backlight:  
  
ON
```

By using the **+** and **-** buttons it is possible to turn the yellow-green LCD backlight on and off. The backlight can also go out automatically if the voltage drops below a certain level (see the Battery Menu section).

Please note that the backlight is power-consuming and will shorten the battery lifetime. However, the intensity is limited and temperature dependant in order to minimize power consumption.

LCD Contrast

```
Contrast:
                20 %
```

The contrast of the LCD can be changed by pressing **F1** (Edit) and using the **+** and **-** buttons.

The contrast can also be changed in any situation by holding down the button with the contrast symbol and pressing the **+** and **-** buttons.

This is the last menu in the list and by pressing **MENU** once again, the UVS 600 returns to normal presentation.

In any situation you can return to normal presentation by pressing the **LCD** button.

Start/Stop of Registration.

Registration is started and stopped by simultaneously pressing the **CTRL** and **REG** buttons.

The red **Reg On** LED (Light Emitting Diode) lights up. After a short initiation period it changes to flashing, indicating that recording is in progress.

During initiation the LCD presents data for a short while:

```
Regon:  #12
Mo 28 Sep 1998 19:31
Input:  OK
        Initiating
```

Line one shows a recording period number. This number is incremented by one (up to 999, whereafter it starts from 0 again) at each Reg On.

On the next line the Reg On time is presented.

An input test is made at Reg On and the result is presented on line three as OK or FAILURE. In case of FAILURE, check the cable and geophone connections.

After a short while the presentation returns to the previous mode.

The **Reg On** LED keeps flashing as long as recording is in progress.

Printout

A printer can be connected to the UVS 600 instrument using the UVS modular cable and a printer connector (in the case of a serial RS-232 interface printer) or a serial/parallel converter (if the printer has only a parallel port).

It is possible to print a table with all peak values exceeding the current threshold.

Any standard printer accepting ASCII-characters can be used. There is no need for graphical mode, only alphanumeric data is printed.

When the printer is connected, press the **OUT** button. The display reads:

```
Out:
  
F1=Disk      F2=Print
```

Press **F2** (Print).

```
Print:
Shown Registration
(Arrow down=Change)
F1=Go        F2=Exit
```

One of three alternative printouts is presented on line two. To see the next alternative press **ARROW DOWN**:

- Shown Registration: The whole recording period presented when the **OUT** button was pressed is printed from start to stop.
- Shown Day to Regoff: The printout starts from 00:01 hours of the date shown on the LCD prior to the **OUT** command until Reg Off of that registration.
- Shown Day: Only the shown day from 00:01 to 23:59 hours is printed.

Data Transfer to PC

There are two ways to transfer data from the instrument to your PC. You can connect your PC to directly the instrument, or you can use a portable UVS Disk Drive to store data on a 3.5" diskette.

Via the Disk Drive

To transfer data to the UVS Disk Drive, connect the drive and press **OUT** followed by **F1** (Disk). The LCD screen shows:

Disk:	
F1=Exit	F2=Go

If the UVS Disk Drive is properly connected just press **F2** (Go) and the whole UVS 600 memory is copied to a file on the diskette.

The progress of the data transfer is indicated by a count-down on the LCD, as well as any errors. A message appears when copying is complete. Press F1 to exit the data transfer mode.

Directly to PC

The UVS 600 can communicate with your PC using the UVSR600 Windows Null Modem software (see separate manual).

With this program it is possible to:

- Copy data from the instrument memory to a data file on your PC (as an alternative to the Disk Drive).
- Load new instrument software from your PC to the instrument (which can not be done with the Disk Drive).

In this case the UVS 600 acts as a slave to the PC, on which all actions shall be carried out.

The memory in your UVS 600 is used in the standard UVS-manner. When new data are recorded the oldest data are deleted from memory. The memory capacity corresponds to 32 days of continous monitoring.

Data transfer to UVS Disk Drive or PC means that the content of the instrument memory is copied, why the data in the instrument is not affected. In no case is the whole memory erased.