



Your Computer Workstation Should Include the Right Keyboard for You

FACT SHEET 88-015-0311

Your keyboard should:

- Be detached from the display screen (if a laptop is used long-term, attach a regular keyboard).
- Have independent angle adjustment and positioning.
- Have a thin profile to minimize wrist extension.
- Have individual keys that are easy to depress.

All keyboards come with a tilt adjustment toward you. If you feel more comfortable with the keyboard tilting away from you, prop the front end of the keyboard up to create a negative tilt. The keyboard should be flat or tilted away but never towards the user.



The height of your keyboard depends on the height of your work surface and chair. To reduce tension in your shoulder muscles, the keyboard should be low enough so your upper arms are relaxed at your sides. Place your keyboard so the angle between your upper arm and forearm is in the range of 70° to 135°, and your wrists are bent no more than 5° to the right or left and no more than 15° up or down.

- If your keyboard is not adjustable or is too low, use a pad of paper or some books to raise it up as a quick, temporary fix.
- If it is too high, raise your chair or place some padding under your wrists to keep them from drooping. Your hands should be able to move easily and be in a reasonably straight line with your forearms.

Keep your wrists floating while you type, but support your elbows (e.g., on your armrest). Lack of forearm support creates constant shoulder and neck tension and may produce shoulder or neck discomfort or headaches.

Key layout: QWERTY layout is not the most efficient, but is the standard format. Software is available for modifying layout. The DVORAK layout is an alternative keyboard layout that has the most-used consonants on the right side of the home row, and the vowels on the left side of the home row.

Other alternative keyboards or input devices include: split keyboards, tented keyboards (split and tilted like a tent), key position variations (straight, concave, or curved), and voice recognition.

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Wrist and Palm Rests

A wrist or palm rest should be at least as wide as the usable portions of the keyboard and should match the shape and the height of the keyboard.

- A keyboard fitted with a palm rest supports the heel of your hand and minimizes hand contact with sharp table edges.
- A padded wrist rest provides either a rest for your wrist during breaks from typing, or a reminder to keep your wrist straight or only slightly bent.
- Avoid harsh contact between your wrist and the work surface.

Alternative Keyboards

Conventional rectangular keyboards place your hands much closer together than your elbows, causing wrist deviation. Alternative keyboards reduce ulnar deviation (bending the wrist sideways toward the little finger). Split keyboards can be difficult or slower to use for “hunt and peck” typists. Alternative keyboards are usually easier for touch typists.



- Some of these keyboards are split horizontally to reduce the ulnar deviation.
- Others are split with two halves of the keyboard in a "tower" arrangement to allow wrists to be in a completely neutral posture.
- The vertical split keyboard eliminates the ulnar deviation but may cause some shoulder discomfort. Scooped key arrangements bring the keys slightly closer together requiring less reaching and reducing fatigue.
- Keyboards are not “one size fits all.” Although split keyboards improve posture, problems may still exist because of keyboard location, repetition, forceful typing, etc.