

Recommendations

Display Screen Equipment

1. Does the screen give a clear, sharp and steady image?

● Recommendation

- 1(a) Clean the screen if necessary.
- 1(b) If the software application allows, turn the display to light characters on a dark background to make the flicker less perceptible.
- 1(c) When the colour blurs or the image deteriorates, try to relocate the screen away from any source of strong electromagnetic fields, e.g. high power speakers, or vice versa.
- 1(d) In avoiding image deterioration caused by external electromagnetic fields, a LCD monitor may be chosen.
- 1(e) Users who are susceptible to the flickering effect should look for other screen models which produce a more stable display.
- 1(f) Replace aging monitors or repair defective ones.

2. Are the characters readable?

● Recommendation

- 2(a) Use a monitor of adequate screen size. A standard monitor has 14" screen size.
- 2(b) Adjust the image size, font size and spacing by software control. e.g. use 12 font size and 1.5 spacing.

3. Are the brightness and contrast adjustable?

● Recommendation

- 3(a) Choose a screen with brightness and contrast controls.
- 3(b) Always set the brightness and contrast to a comfortable level.



Recommendations

4. Does the screen swivel and tilt?

- **Recommendation**

4(a) A screen with swivel and tilt adjustment is preferable.

4(b) Adjust the screen to make viewing comfortable.

5. Is the screen positioned in front of the user?

- **Recommendation**

5(a) If the work surface is limited, try to reorganize the surface layout.

6. Is the screen positioned at about or slightly below the eye level?

- **Recommendation**

6(a) For optimal screen positioning, place the screen in front of the user. The first line of screen display should preferably be at or slightly below the eye level.

6(b) The screen height may be adjusted simply by placing the monitor on a stable object, e.g. the computer case. Other options like using height adjustable monitor arms can also be considered.

7. Is the screen kept a distance away from you (e.g. 35 –60cm)?

- **Recommendation**

7(a) Adopt a viewing distance where the image can be comfortably read. A distance of 35-60cm would be appropriate for text of normal font size such as 12-14 font size.



Recommendations

8. Is the screen free from reflections and glare?

● **Recommendation**

- 8(a) Avoid placing the screen under rows of light fittings to eliminate light images.
- 8(b) Turn the screen display to dark characters on a light background to make reflections less perceptible.
- 8(a) Using a screen glare filter is another way of reducing screen reflections. In general, screen glare filters reduce the brightness of the image. Therefore the user should ensure that the image's brightness can be adjusted to an acceptable level if a filter is to be added. Nowadays the screens of some monitors are anti-reflective and do not need filter at all. Using a screen filter is not a substitute for proper lighting, but a supplementary solution only.

Input Devices (keyboard, mouse, numeric pad, etc.)

9. Is the keyboard tiltable and detached from the display screen?

● **Recommendation**

- 9(a) The keyboard should be tiltable and detachable from the display screen so that the user may adopt a comfortable working posture.

10. Are the characters on the keys of the keyboard/numeric pad readable?

● **Recommendation**

- 10(a) The surfaces of the keyboard and key tops should be non-reflective. The letters and symbols on the key tops should be clear and easily recognizable. Clean the keyboard. Replace aging keyboards or repair defective ones if necessary.



Recommendations

11. Is the keyboard/numeric pad glare free?

- **Recommendation**

11(a) The surfaces of the keyboard and key tops should be non-reflective. The letters and symbols on the key tops should be clear and easily recognizable. Clean the keyboard. Replace aging keyboards or repair defective ones if necessary.

12. Are the input devices positioned at about the elbow level?

- **Recommendation**

12(a) The keyboard and the mouse should be positioned at a height that allows the user to adopt a natural hand-arm posture, i.e. the upper arms held vertical and the forearms approximately horizontal.

13. Is there enough space to rest hands in front of the input devices?

- **Recommendation**

13(a) There should be sufficient space in front of the keyboard to provide support for the hands

13(b) The table edge should preferably be rounded.

13(c) A wrist support pad may be considered if the user finds it more comfortable.



Recommendations

14. While keying, do you keep your wrists in neutral position (not bending upward or downward)?

● **Recommendation**

14(a) A height adjustable desk should be used to support the keyboard, the mouse or other input devices, and use a chair that is adjustable in height as well so that the natural hand-arm posture can be adopted. i.e. the upper arms held vertical and the forearms approximately horizontal.

15. While maneuvering the mouse, do you keep your wrists in neutral position (no deviation from two sides)?

● **Recommendation**

15(a) A height adjustable desk should be used to support the keyboard, the mouse or other input devices, and use a chair that is adjustable in height as well so that the natural hand-arm posture can be adopted. i.e. the upper arms held vertical and the forearms approximately horizontal.

Recommendations

Work Desk

16. Is the desk surface large enough for the screen, input devices and documents?

- **Recommendation**

- 16(a) If the mouse is used intensively, the work surface of the keyboard shelf, if provided, should be large enough to hold the mouse as well. This allows the mouse to be within easy reach.
- 16(b) If the work surface is limited, try to reorganize the surface layout. Less frequently used items may be taken away.
- 16(c) Try to use compact equipment.
- 16(d) Before new DSE is installed, it is desirable to anticipate the space allocation for the workstations.

17. Is there adequate leg-room below the desk (depth, width and height)?

- **Recommendation**

- 17(a) Ensure that the workstation has sufficient legroom so that the user may stretch his legs or change posture.
- 17(b) Clear any obstructing materials beneath the work surface.

Chair

18. Is the base of the chair stable?

- **Recommendation**

- 18(a) The chair should have a stable base. Smooth castors should be provided at its base to allow easy movement if mobility is required.

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19. Does the chair come with a stable 5-pronged base?

- **Recommendation**

19(a) A five-pronged base is generally recommended to prevent the chair from toppling over.

20. Do the casters allow easy movement of the chair?

- **Recommendation**

20(a) The type of castor should suit the properties of the floor surface.

21. Is the seat height adjustable to suit the body size of the user?

- **Recommendation**

21(a) The chair should be so adjusted that the user can sit with thighs in a horizontal position when the lower legs are vertical and the feet are resting firmly on the floor. In general, the seat height should be adjustable in the range of 40-50cm from the floor.

21(b) The seat height control should preferably be operable from the normal sitting position, and excessive force or tools should not be required.

22. Is the backrest adjustable in both height and tilt to provide adequate support to the lower back?

- **Recommendation**

22(a) The backrest should be easily adjustable in both height and tilt to provide adequate support to the lower back.

Recommendations

23. Is the seat pan padded and free from sharp edges?

● **Recommendation**

23(a) The seat pan should be of appropriate hardness and the front edge should be scrolled.

24. Do the armrests, if any, allow the user to get close enough to key comfortably?

● **Recommendation**

24(a) Armrests, if provided, should not interfere with keyboard operation.

Document Holder

25. Is the document holder, if provided, properly positioned to avoid awkward neck posture and movement?

● **Recommendation**

25(a) A document holder, if provided, should be stable and preferably be adjustable, and be properly positioned to avoid awkward neck posture and movement.

26. Is the document holder stable enough to hold document?

● **Recommendation**

26(a) A document holder, if provided, should be stable and preferably be adjustable, and be properly positioned to avoid awkward neck posture and movement.

Recommendations

Footrest

27. Is the footrest, if required, stable?

- **Recommendation**

27(a) You may raise the chair to suit the height of the table and provide a suitable footrest to compensate for the raised seat height.

28. Is the footrest with a non-slip surface?

- **Recommendation**

28(a) The footrest should be stable, should have a non-slip surface and be of sufficient size to allow some freedom of movement. The inclination of the support surface should preferably be adjustable.

Illumination

29. Is the lighting level suitable for the work?

- **Recommendation**

29(a) The wall, ceiling and floor surfaces should be of medium reflectance to avoid gloom or glare.

29(b) When documents are read in conjunction with computer work, it is best to use low lighting for the surrounding and a desk lamp for reading the documents. If task lighting is not provided, the illuminance level of the work area should be 300-500lux.

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30. Are there blinds or curtains available to block excessive sunlight through windows?

● **Recommendation**

- 30(a) Re-position the screen and/or control the light sources appropriately to prevent glare and reflections.
- 30(b) The finishes of walls and furniture located near the workstation should not be highly reflective. Walls can be painted in subdued colours.
- 30(c) The work area should preferably be located away from windows, and the screen be placed at right angle to windows. Sunlight through windows can be screened by blinds.
- 30(d) Light fixtures can be equipped with diffusers or louvers to control distribution of light.

31. Is anti-glare filter used to reduce the glare on screen?

● **Recommendation**

- 31(a) Avoid placing the screen under rows of light fittings to eliminate light images.
- 31(b) Turn the screen display to dark characters on a light background to make reflections less perceptible.
- 31(c) Using a screen glare filter is another way of reducing screen reflections. In general, screen glare filters reduce the brightness of the image. Therefore the user should ensure that the image's brightness can be adjusted to an acceptable level if a filter is to be added. Nowadays the screens of some monitors are anti-reflective and do not need filter at all. Using a screen filter is not a substitute for proper lighting, but a supplementary solution only.



Recommendations

Temperature

32. Is the temperature at workplace comfortable?

- **Recommendation**

31(a) **In a normal air-conditioned workplace, temperature and humidity can be controlled – the optimum temperature range is 20°C - 26°C and relative humidity 40% - 70%.**

Noise

33. Is the noise produced by the workstation acceptable? (e.g. noise from printer, scanner etc.)

- **Recommendation**

33(a) For general computer work, a noise level below 60dB(A) is optimal.