

Display Screen Equipment Procedure

Procedure Title		Display Screen Equipment	
Ref Number	MLP-HSP-009	Pages	12
Written By	Rob Tyson	Authorised By	Mervyn Lambert
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1 Introduction

Mervyn Lambert Plant Ltd is committed to providing a safe, healthy and productive workplace for all employees. This Procedural document, as part of the Mervyn Lambert Plant Ltd Safety Management System will be instrumental in achieving these aims.

This document sets out the procedure to be adopted for users when working with Display Screen Equipment (DSE).

2 Scope

This procedure is applicable to all Mervyn Lambert Plant Ltd employees who use Display Screen Equipment

3 Legislation

Under the Health & Safety at Work Act etc.1974 (HASAWA) employers must make arrangements to ensure that all employees are given the necessary information, instruction, training and supervision at all times and ensure that these provisions are met.

The Health and Safety (Display Screen Equipment) Regulations 1992, as amended, place certain duties on employers to ensure the safe use of display screen equipment (DSE).

These duties include:

- Analysing (assessing) DSE workstations and ensuring any such workstations meet the minimum requirements laid down in the schedule
- Planning the work of "users" to ensure regular breaks away from the DSE work are taken
- Ensuring, if so requested, that people identified as "users" are provided with appropriate eye and eyesight tests, carried out by a competent person, prior to becoming "users"
- Ensuring that "users" and people intended to become "users" are provided with adequate health and safety training with regard to their workstations (also required after substantial changes or modifications are made to the workstation). For people intended to become "users" the training should be provided prior to them becoming "users"
- Ensuring "users" and "operators" are provided with adequate information regarding the health and safety aspects of their workstations, including any measures taken by the employer to meet the minimum workstation requirements and other duties under these Regulations.

Note: The requirements relating to work breaks, eyesight tests and training only apply to "users", they do not apply to "operators".

4 Policy Objectives

In respect of working with Display Screen Equipment Mervyn Lambert Plant Ltd will:

- Eliminate risk by suitable assessment and removal of hazard so far as is reasonably practicable
- Control risk at source
- Devise safe systems of work
- Provide adequate instruction, training and supervision
- Provide eye tests at cost to Mervyn Lambert Plant Ltd if the operative is identified as a user.

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5 Definitions

Display screen equipment

Any screen equipment displaying letters (text), numbers and/or graphics, regardless of the display process. The following display screen equipments **are excluded** from the Regulations:

Regulations:

- Vehicle or machinery cabs
- DSE on board means of transport
- DSE primarily intended for public use
- Portable systems not in prolonged use

Under the DSE Regulations an Operator is defined as a Self Employed User.

A DSE User under the DSE Regulations is defined as an employee who habitually uses display screen equipment as a significant part of their normal work.

Who is a DSE User?

Where it is clear that use of DSE is more or less continuous on most days, the individual concerned should be regarded as a user. Where such use is less continuous or frequent, it is sensible to assume that someone becomes a "user" where a majority of the following criteria apply.

- Work often requires the use of a display screen for a continuous or near continuous period of an hour or longer.
- The display screen is used on most days, or every day.
- The worker has to transfer information quickly to or from the DSE.
- The job could not be done without being dependent on the use of DSE.
- High levels of concentration and attention are required.
- The worker has little choice about using DSE.
- In situations where an individual is not a user, the employer should still ensure the protection of employees by assessing the risks and by taking the necessary control measures based upon the ergonomic factors applicable to the use of DSE.

For further help in defining a "User" refer to **Appendix A**

Workstation

The term workstation includes:

- Display screen equipment
- Keyboard (or other input device)
- Optional accessories
- Peripheral equipment such as disk drives, telephones, modems, printers, document holders, chair, desk, work surface, etc
- The immediate environment surrounding the display screen equipment.

Requirements for Workstations

Employers must comply with the schedule to the extent that:

- The requirements relate to a component that is present at the workstation (e.g. a requirement for an adjustable document holder does not mean that all workstations must be supplied with such equipment - however, where one has been supplied it must meet the criteria listed in the schedule)

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- Meeting the requirement will make a contribution to the health, safety and welfare of the worker (where it can be clearly demonstrated that there is no benefit to be gained, then the replacement of equipment solely to meet a requirement of the schedule, is not necessary - however some workers may require specially adapted furniture or equipment, e.g. those with disabilities. In these cases the individual's requirements always take priority)
- The characteristics of the task make compliance appropriate (if the demands of the task mean that the effectiveness or safety of the work may be adversely affected, the schedule need not be applied. For example, in the case of a bank of display screens used for security surveillance it may not be appropriate for them all to be capable of being tilted at different angles).

The schedule to the Regulations provides information for ensuring compliance with the minimum requirements for workstations. See **Appendix B**

Screen

The display screen must:

- Have well-defined characters of adequate size and adequate spacing
- Have a stable and flicker-free image (to 90% of users)
- Have controls for ensuring the brightness and the contrast between the characters and the background are easily adjustable - they must also be adjustable to suit ambient conditions
- Swivel and tilt freely to suit the needs of the "user" or "operator"
- Be at the appropriate height, either by use of a separate base or some other method to achieve the appropriate operating height
- Be free of reflections and glare that may cause discomfort to "users" or "operators".

Keyboard

The keyboard must:

- Be separate from the screen and be tiltable, to enable a comfortable position to be achieved
- Have enough space between the front of the keyboard and the edge of the work surface to provide hand/arm support (50mm) minimum.
- Have a matt surface to avoid reflective glare
- Have an appropriate arrangement of the keyboard and the function of the keys to facilitate its use
- Have adequately contrasted and visible key symbols for normal use.

Work surface

The work surface must:

- Be of low-reflectance
- Be large enough for the task and to accommodate a flexible arrangement of all necessary equipment and material upon it
- Have sufficient space to allow a comfortable working position to be achieved.

Note: Document holders must be stable and adjustable so as to minimise the need for awkward head/eye movements.

Chair

The chair must:

- Be stable and allow easy freedom of movement and a comfortable position
- Be adjustable in height

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- Have an adjustable backrest, both in height and angle of tilt.
- Have five legs with castors (which may be lockable)

Note: While good ergonomic practice is for adjustments to be independent of each other, the schedule does not require this. Therefore, where a tiltable backrest is fixed to the seat and can only be raised/lowered at the same time as the seat, it will comply. A risk assessment may, however, indicate a requirement for independent adjustability. Foot-rests must be made available to "users" or "operators" who require them subject to risk assessment.

Environment

Space

There must be sufficient space for workers to change position and to vary movements.

Lighting

Room lighting or task lighting (desk lamps, etc) must ensure:

- Satisfactory conditions and appropriate contrast, taking into account the type of work and the needs of the worker (the lighting level at the work surface should be between 300 and 500 lux for a combination of screen work and non-screen tasks)
- Glare and reflections on the screen or other equipment that may cause disturbance are prevented - prevention must be achieved by co-ordinating the layout of the workstation with that of the lighting.

Note: Regulation 8(2) of the Workplace (Health, Safety and Welfare) Regulations 1992 as amended requires lighting, so far as is reasonably practicable, to be by natural light.

Reflections and glare

The schedule states that:

- Workstations must be designed to prevent glare or reflections on the screen from windows, brightly coloured walls, etc
- Windows must be fitted with adjustable coverings to control daylight falling upon the workstation (window blinds).

Noise, heat and humidity

The schedule states that:

- Noise emitted by workstation equipment must be considered when the workstation is being equipped - noise should not distract attention nor disturb speech (this requirement would not apply, for example, the noise from an alarm bell on a display panel that is deliberately intended to distract attention)
- Workstation equipment must not produce excess heat liable to cause discomfort
- An adequate level of humidity must be maintained (40%-60% Relative Humidity).

Radiation

The schedule states that radiation (other than visible light) must be reduced to negligible levels from the point of view of health and safety.

Note: The HSE advises that it is unnecessary and highly complicated even to attempt to measure radiation from DSE, and that employers generally do not need to take any action to comply with this part of the schedule.

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Interface between DSE and "user"/"operator"

Employers must check that the:

- Software is suitable for the task
- Software is easy to use and where appropriate adaptable to the abilities of the worker
- Software does not measure workers' speed or accuracy of work without their knowledge
- System provides feedback on its own performance to those using or operating it
- Information is displayed in a format and at a pace that is suitable for users or operators
- Principles of software ergonomics are applied, particularly to human data processing.

Note: Compliance with BS EN 29241 will normally be sufficient to demonstrate compliance with the schedule.

6 Responsibilities

Under the HASAWA, the responsibility of the employer to ensure the safety of all employees and does not differ much from that of the responsibility to ensure the safety of employees working in a group or under close supervision.

The overall duty is contained in s.2 (1) of the HASAWA which places a duty on every employer to ensure, so far as is reasonably practicable, the health, safety and welfare at work of employees.

This duty applies, therefore, to all DSE users. It is necessary for the employer to consider in some depth the hazards and risks of the work involved and to take steps to minimise the hazards so as to reduce those risks, so far as is reasonably practicable.

For this purpose an electronic DSE self-assessment is available from the H&S Manager and must be completed annually or if the "user" is relocated to another workstation.

7 Health Issues

The introduction of DSE has been associated with a range of symptoms related to the visual system and working posture. These often reflect bodily fatigue. They can readily be prevented by applying ergonomic principles to the design, selection and installation of display screen equipment, the design of the workplace, and the organisation of the task.

Upper Limb Pains and Discomfort: A range of conditions of the arm, hand and shoulder areas linked to work activities are now described as work related upper limb disorders. These range from temporary fatigue or soreness in the limb to chronic soft tissue disorders like peritendinitis or carpal tunnel syndrome. Some keyboard operators have suffered occupational cramp.

Users and operators of DSE should report problems of this nature to the H&S Manager

The contribution to the onset of any disorder of individual risk factors (e.g. keying rates) is not clear. It is likely that a combination of factors are concerned. Prolonged static posture of the back, neck and head are known to cause musculo-skeletal problems. Awkward positioning of the hands and wrist (e.g. as a result of poor working technique or inappropriate work height) are further likely factors. Outbreaks of soft tissue disorders among keyboard workers have often been associated with high workloads combined with tight deadlines. This variety of factors contributing to display screen work risk requires a risk reduction strategy, which embraces proper equipment, furniture, training, job design and work planning.

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Eye and Eyesight Effects: Medical evidence shows that using display screen equipment is **not** associated with damage to eyes or eyesight, but it may make users with pre-existing vision defects more aware of them. Some workers may experience temporary visual fatigue, leading to a range of symptoms such as impaired visual performance, red or sore eyes and headaches, or the adoption of awkward posture, which can result in further discomfort in the limb. These may be caused by:

- Staying in the same position and concentrating for a long time;
- Poor positioning of the display screen equipment;
- Poor legibility of the screen or source documents;
- Poor lighting, including glare and reflections;
- A drifting, flickering or jittering image on the screen.

Mervyn Lambert Plant Ltd employees, who are defined as **users** or about to **become users**, can ask Mervyn Lambert Plant Ltd to organise, provide and pay for a eyesight test. This is a test by an optometrist or doctor with appropriate specialist training. These employees are also entitled to further tests at regular intervals - the optometrist doing the first test can recommend when the next should be. If, in the meantime, an individual has visual problems, which may be related to the work with DSE, Mervyn Lambert Plant Ltd **is required** to provide another test on request. See **Appendix C**.

Fatigue and Stress: Many symptoms described by display screen workers reflect stresses arising from their task. They may be secondary to upper limb or visual problems but they are more likely to be caused by poor job design or work organisation, particularly lack of sufficient control of the work by the user, under-utilisation of skills, high-speed repetitive working or social isolation. All these have been linked with stress in display screen work, although clearly they are not unique to it; but attributing individual symptoms to particular aspects of a job or workplace can be difficult. The taking of short regular breaks from DSE work, by changing activity, will assist in relieving visual fatigue. The risks of display screen workers experiencing physical fatigue and stress can also be minimised by:

- Careful design, selection and disposition of display screen equipment
- Good design of the users workplace, environment and task
- Training, consultation and involvement of the user.
- Other Concerns:
- Epilepsy

Display screen equipment does not induce seizures in people suffering with most types of epilepsy. People suffering from the very rare (1 in 10,000 population) photosensitive epilepsy who react adversely to flickering lights also find they can safely work with display screens provided the settings are correct. People with epilepsy who are concerned about display screen work can seek further advice from the H&S Manager or the local offices of the Employment Medical Manager Service.

Facial Dermatitis: Some DSE users have reported facial skin complaints such as occasional itching or reddened skin on the face and/or neck. These complaints are relatively rare and the limited evidence available suggests they may be associated with environmental factors, such as low relative humidity or static electricity near the DSE.

Electro-magnetic Radiation: Anxiety about radiation emissions from display screen equipment was widespread when it was first introduced. However, the levels of ionising and

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non-ionising electro-magnetic radiation which are likely to be generated by display screen equipment are well below those set out in international recommendations for limiting risk to human health. No special protective measures are therefore needed to protect the health of people from this radiation.

Effects on Pregnant Women: Similarly there was initially considerable public concern about reports of higher levels of miscarriage and birth defects among some groups of display screen equipment (DSE) workers. Many scientific studies have now been carried out and do not show any link between miscarriages or birth defects among pregnant women working with DSE. Pregnant women do not need to stop work with DSE but any woman who is pregnant or planning to have a family and expresses concerns should be referred to the H&S Manager and, without prejudice to their career, given the option of not using the equipment.

Control/Monitoring Procedures: It is important to be aware that the provision of an ergonomically 'correct' workstation will not eliminate injuries and consequent civil actions on its own. To achieve this requires the combination of control and monitoring measures.

Daily Work Routine and Rest Breaks: Managers and Supervisors must plan staff activities in such a way that daily work on DSE is periodically interrupted by breaks or changes in work activity. Any activity that would demand similar use of the arms or hands must be avoided during breaks.

Most jobs cover both DSE work and associated tasks, which mean natural breaks from the screen, occur. Certain Mervyn Lambert Plant Ltd work however, does not lend itself to "non-DSE tasks" (e.g. continued word processing and therefore deliberate Rest Breaks must be introduced to break concentration and prevent fatigue to the 'Intensive User' (note: this is in addition to the Working Time Directive requirement for rest periods i.e. tea and coffee breaks).

DSE Rest Breaks should be taken before fatigue sets in, when performance is at maximum and before productivity reduces. Generally, short frequent breaks are more satisfactory than occasional longer breaks, i.e. a 5-10 minute break is recommended after 50-60 minutes continuous screen and/or keyboard work, rather than 15 minutes every 2 hours.

Exercise routines, which include blinking, focusing the eyes on distant objects or stretching, can also be helpful in preventing fatigue.

8 Enquiries

For additional information regarding this document contact the Health & Safety Manager.

9 References

Health & Safety at Work etc. Act 1974

The Management of Health & Safety at Work Regulations 2003

Display Screen Regulations 1992 as amended

Control of Noise at Work Regulations 2006

BS EN 29241

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10 Appendix A: DEFINING A “USER” AND VISION TESTING ELIGIBILITY CHECKLIST
(To be completed by Line Managers with the employee)

Does the employee use any of the following display screen equipment ?

	Yes	No
Display Screen Equipment (displaying text or graphics)		
Portable or Lap Top Computer		

If the answer to all of these questions is “**No**,” the employee is not a “user” and is not eligible for an eye and eyesight test.

If the answer to any of the questions is “**Yes**,” then it is necessary to consider the type and amount of work undertaken on the equipment by answering the questions below.

	Yes	No
Does the employee use the equipment continuously for periods of more than an hour?		
Do they use the equipment more or less on a daily basis ?		
Are they dependent on display screen skills to do their job, no other means available?		
Does the system require high levels of attention and concentration ?		
Do they need particular display screen skills to do their job ?		
Is the fast transferring of information between the user and the screen an important part of the job ?		

If the answer to 3 or more of the questions is “Yes,” then the employee is a “user” and is eligible for an eye and eyesight test – Complete Appendix C

If you have any doubts about the definition of display screen equipment “Users,” contact the H & S Manager

Remember that if someone changes their job, then they may then become eligible for eyesight testing.

Employee _____

Line Manager _____ Sign _____

Date _____

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11 Appendix B

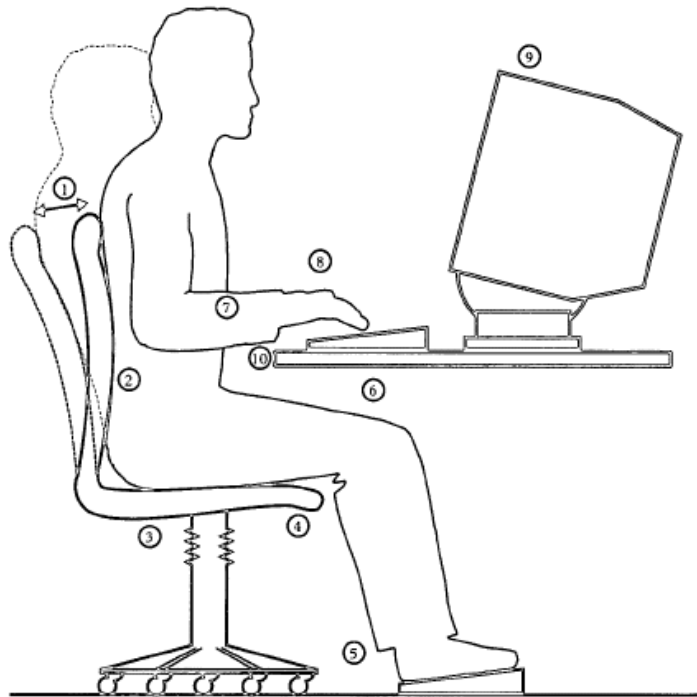


FIGURE 2

SEATING AND POSTURE FOR TYPICAL OFFICE TASKS

- ① SEAT BACK ADJUSTABILITY
- ② GOOD LUMBAR SUPPORT
- ③ SEAT HEIGHT ADJUSTABILITY
- ④ NO EXCESS PRESSURE ON UNDERSIDE OF THIGHS AND BACKS OF KNEES
- ⑤ FOOT SUPPORT IF NEEDED
- ⑥ SPACE FOR POSTURAL CHANGE, NO OBSTACLES UNDER DESK
- ⑦ FOREARMS APPROXIMATELY HORIZONTAL
- ⑧ MINIMAL EXTENSION, FLEXION OR DEVIATION OF WRISTS
- ⑨ SCREEN HEIGHT AND ANGLE SHOULD ALLOW COMFORTABLE HEAD POSITION
- ⑩ SPACE IN FRONT OF KEYBOARD TO SUPPORT HANDS/WRISTS DURING PAUSES IN KEYING

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12. Appendix C***CERTIFICATE OF EYE AND EYESIGHT TEST***

(To be completed by the optician)

Name of Employee:

Date of Eye Test:

I certify that the above named person has undergone an eye and eyesight test and I have made the following recommendations:

- ☐ No spectacles required for DSE operation *
- ☐ Spectacles required for use *solely* when operating DSE *
- ☐ Spectacles required for general use including DSE operation *

* Please delete as appropriate

Any Other Comments -

Optometrist/OMP Name:

Signature: _____ Date:

Branch Stamp

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