

NHSBT

Health and Safety

Display Screen Equipment (DSE) Risk Assessment Manual

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1.0 Introduction

The Health and Safety (Display Screen Equipment) Regulations 1992, enacts into UK law a European Directive designed to reduce the risks to persons using Display Screen Equipment (DSE) at work. The possible risks associated with DSE use are principally related to three areas of potential harm:

- Physical (Musculoskeletal) problems;
- Visual fatigue;
- Mental stress.

These problems are not restricted to the use of DSE and may occur in many other situations where there is a person machine interface e.g. when individuals load or unload machinery. Additionally, the use of DSE will not cause these problems if poor work organisation, working environment, job design, and posture are avoided. This Manual aims to give Managers the necessary information to identify individuals who need further training to minimise the risk of any associated health problems.

2.0 Definition of Display Screen Equipment (DSE)

The Regulations define DSE as:

“any alphanumeric or graphic display screen, regardless of the display process involved.”

This covers cathode ray tubes and liquid crystal displays. Where the main use is to display television or films these items of equipment are not included. Other specific exemptions are detailed below:

1. Drivers' cabs or control cabs for vehicles or machinery;
2. Display screen equipment on board a means of transport;
3. Equipment mainly intended for public operation e.g. interactive screens at bus terminals;
4. Portable systems not in prolonged use;
5. Calculators, cash registers, or any equipment having a small data or measurement display required for direct use of the equipment; or
6. Window type writers.

3.0 Users of DSE

The Directorate Senior Management teams (SMT's) identify and approving DSE user matrix in consultation with their H&S Business Partner. The matrix is a list of job titles where users have been identified by managers in the process description below.

Managers must identify users of DSE and staff who are to become users using DAT426 DSE manual and [FRM830](#) identification of DSE users. Users are those members of staff where the following features apply:

1. they use DSE for continuous spells of an hour or more at a time (or near continuous) which means using the mouse and key board not just viewing e-mails and;
2. they use DSE in this way more or less daily (or pro-rata for part-time staff); and
3. have to transfer information quickly to or from DSE; and
4. also need to apply high levels of attention and concentration; or
5. are highly dependent on DSE or
6. have little choice about using it or
7. need special training or skills to use the DSE

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Managers must answer yes to all questions: 1, 2 and 3 and in addition yes to one of questions: 4, 5, 6, and 7 to make any grade of staff a DSE User in NHSBT.

3.1 User Criteria

3.1.1 Dependence

This will be where there is no reasonable alternative means for an individual to do their job, i.e. computer inputting, writing reports, etc. Where there is not an alternative this criteria is fulfilled.

3.1.2 Discretion

Discretion means that an individual can exercise a choice to use DSE or not, where there is no choice this criteria is fulfilled.

3.1.3 Skill/training

If training in IT applications is a required part of the job and individuals need to be shown how to use software which is complex and requires in depth knowledge to affect the right result this criteria is met.

3.1.4 Continuous

Continuous spells of up to an hour or more involving no changes of activity and frequent keyboard / mouse activation is when this criteria is met.

3.1.5 Daily

Daily use of DSE in the ways described above will make the individual a DSE user.

3.1.6 Fast Transfer

Where information is expected to be quickly input from paper copy to the screen this criteria is met.

3.1.7 Performance/Concentration

If high levels of concentration is required to affect the correct outcome from a system this criteria is met. Additionally, where this is critical to the outcome of the job this criteria should be emphasised.

3.2 Temporary Workers

Temporary workers who are employed through Agencies must be treated as Users if the requirements identified above are met. A risk assessment will have to be completed, any actions identified to reduce the risk implemented and the individual must receive training. The provision of an eye sight test and any special corrective appliances (spectacles) will be the responsibility of their Employers.

3.3 Examples of occupations where the term "User" of DSE does, does not, or may apply.

Definite Display Screen Users

Word processing pool worker employed on full time text input using dedicated display screen equipment. A mix of checking from screen, keyboard input and formatting. Some change of posture involved in collecting work, operating printer, etc. Often five hours in total on work itself with a lunch break and at least two breaks morning and afternoon. Part-time workers, required to work fewer hours but spending all or most of their working time on this kind of work would also be included.

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Secretary or typist who uses a dedicated word processing system and laser printer. Word processing of reports, memos, letters from manuscript and dictation, combined with electronic mail. Some variation in workload with a concomitant degree of control over scheduling throughout the day. Typically around two or three hours daily.

Data Input Operator employed full time on continuous processing of invoices. Predominantly numeric input using a numeric key pad. Other keystroke monitoring with associated bonus system. Part-timers, or other staff temporarily assigned to this work to deal with peak workloads, would be definite "users" while spending all or most of their working time on these duties.

Tele-Sales/customer complaints/accounts enquiry/directory enquiry operator employed on mainly full time display screen use while taking telephone enquiries from customers/public.

Graphic designer working on multimedia applications. Intensive scrutiny of images at high resolution. Large screens. Page make-up. Multiple input devices. Colour systems critical.

Possible Display Screen Users - Depending on the Circumstances

Scientist/technical adviser having use of dedicated display screen equipment. Word processing of a few letters/memos per day. Monitoring of electronic mail for a short period, average 10 minutes, on most days. At irregular intervals, uses display screen equipment intensively for data analysis of research results.

Discussion: This scientist's daily use of display screen equipment is relatively brief, non-intense and he or she would have a good deal of discretion over when and how the equipment was used. Judged against this daily use, he or she would not be a "user". However, this decision might be reversed if the periods of use for analysis of research results were at all frequent, of long duration and intensive.

Client manager in a large management accounting consultancy. Dedicated display screen equipment on desk. Daily scanning and transmitting of electronic mail. Typically 1½ - 2 hours daily.

Discussion: Whether or not this manager is a user will depend on the extent and nature of his or her use of electronic mail. For example, how continuous is use of the screen and/or keyboard during each period of use; is there discretion as to the extent of use of electronic mail; how long is the total daily use?

Receptionist whose job involves frequent use of display screen equipment, for example to check or enter details of each visitor and/or provide them with information.

Discussion: The nature, frequency and duration of periods of display screen work need to be assessed. Some, perhaps most, receptionists would not be users, if most of their work consists of face to face contact and/or phone calls, with a display screen only being used occasionally - see below.

Definitely Not Display Screen Users

Senior manager in a large organisation using display screen for occasional monitoring of state or markets or other data, or more frequent but brief enquiries. Low dependency, high control.

Senior manager using display screen equipment at month end for generation/manipulation of financial statistics for board presentation.

Receptionist if work is mainly concerned with customer/public interaction, with the possibilities of interrogating display screen occasionally for limited purposes such as obtaining details of the organisation (telephone numbers, location, etc.).

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4.0 Eye Sight Test

The Regulations provide that employers have to supply their DSE Users with an eye sight test on request, before an individual becomes a User and at appropriate intervals thereafter. Users may exercise this right at any time on request to their Manager who will contact HR Direct to apply for a voucher on their behalf. Appropriate intervals will be in accordance with the advice given by the qualified optician; usually this will be every four years unless medical reasons indicate more frequent eye tests. This right only accrues when an individual becomes a User as defined above.

An eye exam voucher will be issued, which can be redeemed at most opticians, providing that the mandatory DSE for Users training and a DSE risk assessment ([FRM828](#)) has been completed. Should the optician confirm that an individual requires corrective appliances for their work with DSE (this requirement needs to be in writing on the prescription or via a 'certificate of recommendation'), they should let their Manager know before ordering or making any payment for corrective appliances so that a request for an eye care voucher can be made to HR Direct.

5.0 Corrective Appliances

Managers will be responsible for providing to their staff an eye care voucher for special corrective appliances (usually spectacles) when the following criteria are met:

- They are a User of DSE;
- They have been to an Optician; and
- They need corrective appliances (usually spectacles) specifically, but not exclusively, for their work on DSE.

The voucher may only be obtained through application to HR Direct and sending a copy of the optician prescription. The voucher is a contribution towards the cost of corrective appliances, the current sum is set at £55 and is subject to review and change as appropriate (please refer to [MPD342](#) Display Screen Equipment for an indication of any change in value). The cost of the voucher will then be recharged to the Manager's Departmental Budget.

Only corrective appliances necessary for middle distance vision issues will be approved. Individuals who already use spectacles or contact lenses for middle distances will still be able to claim a contribution to a new pair.

6.0 User Training

Every user is required to have been given adequate health and safety training in the harm and risk of using DSE. To comply with this requirement mandatory training will be provided for managers to enable them to identify Users within their Departments. Once trained they will fill in Identification of DSE Users form ([FRM830](#)) and forward this to the local Health and Safety Advisor [DAT434](#). The identified users can access training in the following areas on Shine Academy:

- How to recognise DSE hazards and risks
- The causes of potential harm
- User actions that can control the risks
 - Comfort, posture and postural changes
 - Adjusting mechanisms on equipment
 - Arranging the workstation to suit the user
 - Need for cleaning of DSE
 - Changes of activity and breaks

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- Organisational procedures for reporting symptoms
- Information on the Regulations covering DSE

The Users will be trained in how to fill out the appropriate part A of the DSE Risk Assessment Form ([FRM828](#)). Once Users have completed part A the form will be forwarded to their manager who will fill in part B. This will then identify any further actions required to reduce the risk of injury.

7.0 Analysis of Workstations

7.1 Introduction

All applicable Display Screen Equipment workstations now have to be risk assessed and conform to the minimum requirements set out in the schedule to the regulations (See section 8.0).

7.2 Analysis of Workstations not utilised by a DSE User

For each workstation not used by a DSE User a general risk assessment must be completed in line with the risk assessment MPD ([MPD377](#)). A workstation checklist has been developed ([FRM1390](#)) to aid the risk assessor and must be completed and attached to the general risk assessment form ([FRM871](#)). The workstation checklist contains sections on the following:

- Space
- Lighting
- Temperature / Humidity
- Noise
- Chair
- Desk
- Foot Rest
- Document Holder
- Screen / monitor
- Keyboard

7.3 Analysis of Workstations utilised by a DSE User

Each User, for each workstation that they regularly utilise will complete part A of the DSE Risk Assessment Form ([FRM828](#)). Part A contains a list of questions for the User to evaluate their workstation on and contains sections on the following:

- Space
- Lighting
- Temperature / Humidity
- Noise
- Chair
- Desk
- Foot Rest
- Document Holder
- Screen / monitor
- Keyboard
- Information / Instruction
- Job Design
- Training

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8.0 Reducing the risk

8.1 Identification and Calculation of Risk

For each negative aspect given in the checklist an action must be put in place by the manager to rectify it. The manager will score the risk by marking the checklist above using the following guidelines:

Likelihood Calculation

- If one adverse answer to sections on space, lighting, temperature, humidity and noise then the likelihood is unlikely. If more than one adverse answer in these sections then likelihood likely.
- If any adverse answers to sections on chair, desk, screen / monitor, keyboard then the user should not be allowed to use this workstation until improvements are made.
- If any adverse answers to sections on footrest, document holder, information / instruction, job design, training then these should be immediately rectified by the manager.

Severity Calculation

- If there are no adverse answers to the checklist then the severity is minor. If there are outstanding adverse answers then the severity is significant.

Risk Action Level

- By using the following matrix the risk action level can therefore be identified as follows:

Risk Action Level	Likelihood	Severity
Low	Improbable	Minor
Medium	Unlikely	Significant
High	Likely	Significant

For every adverse answer in the checklist there should be an appropriate action put in place by the manager and recorded at the end of the assessment form. The risk action level will indicate the priority required.

8.2 Review of Assessment

Assessments must be reviewed annually or when there is reason to believe that the assessment is invalid. This will normally be required when there are organisational changes, changes of equipment, and changes to the working environment or a report of symptoms from an individual.

8.3 Display Screen Equipment Users Log

Each Department will then fill out a Display Screen Equipment Users Log ([FRM832](#)) detailing the Department, the user, date of sight test, date of user evaluation, and date checklist evaluated by Manager.

8.4 Requirements for Workstations

Minimum workstation requirements are:

Equipment

The display screen

- Must be well defined and of an adequate size
- The image must be stable without flicker

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- The brightness and contrast must be adjustable by the operator
- Must swivel and tilt
- Possible to use a separate base
- Free of reflective glare and reflections liable to cause discomfort

Keyboard

- Must be tiltable and separate from the screen
- Must have sufficient space in front to allow the arms to be supported
- Must have a matt surface so not to cause reflections
- Symbols must be legible and contrasted and able to be used efficiently

Work desk

- Must be of sufficient size to allow flexibility of arrangement and be non reflective
- A document holder if provided must be adjustable and stable

Work chair

- Must be stable and allow freedom of movement
- Must be adjustable in height
- The chair back must be adjustable in height and tilt
- A foot rest must be provided to any operator who requests one

Environment

Space

- Must be sufficient space for the operator to change position

Lighting

- Must be satisfactory with appropriate contrast to the screen

Reflections and glare

- Light sources, windows, transparent or translucent walls, coloured fixtures and fittings must be designed to avoid reflections and glare
- Windows must be fitted with appropriate blinds

Noise

- Noise will be reduced to stop distractions and any disturbance of speech

Heat

- Equipment must not produce excessive heat

Radiation

- All radiation except from the visible part of the spectrum must be negligible

Humidity

- Must be adequate

Interface between computer and user

The following must be taken into account when designing, commissioning or modifying software:

- Suitable for the task
- Easy to use, adaptable to level of skill of operator, no checking facility may be used without the knowledge of the operator

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- System must provide information on its performance
- Information must be displayed in a format and pace adaptable to the user
- Principles of software ergonomics must be applied

8.5 Daily Work Routine

In most jobs natural breaks or changes of activity occur which breaks up the time spent on the DSE. Non-screen work allows postural changes and decreases the build up of fatigue both muscular and visual. Where work involves long periods of work at a display screen, where possible changes of activity should be built in to the daily work routine. Alternative work should be non-intensive and non-display screen.

Breaks or changes of activity should be taken before fatigue is realised, short frequent ones are better than long infrequent changes i.e. 5-10 minutes after 1 hour working on DSE is better than 15 minutes after 2 hours. Individuals should ideally be able to manage changes of activity themselves.

9.0 Home Working

Users who have been identified as such by managers who are also expected to undertake DSE work at home must also have risk assessments completed for this work. The user must complete the checklist and provide this to their manager; an action plan to reduce any risks identified must then be implemented. The rectification of the minimum work station requirements will be at the expense of the Department, therefore, consideration should first be given to organisational factors in the work to avoid DSE home working.

For home workers where staff are not Users a Homeworking Self Assessment Checklist ([FRM1380](#)) must be filled in as required by the Homeworking MPD ([MPD361](#)).