

NAG Toolbox for MATLAB

e04ur

1 Purpose

To supply individual optional parameters to e04us.

2 Syntax

```
[lwsav, iwsav, rwsav, inform] = e04ur(str, lwsav, iwsav, rwsav)
```

3 Description

e04ur may be used to supply values for optional parameters to e04us. It is only necessary to call e04ur for those parameters whose values are to be different from their default values. One call to e04ur sets one parameter value.

Each optional parameter is defined by a single character string, of up to 72 characters, consisting of one or more items. The items associated with a given option must be separated by spaces, or equals signs [=]. Alphabetic characters may be upper or lower case. The string

```
Print Level = 1
```

is an example of a string used to set an optional parameter. For each option the string contains one or more of the following items:

- a mandatory keyword;
- a phrase that qualifies the keyword;
- a number that specifies an integer or double value. Such numbers may be up to 16 contiguous characters in Fortran's I, F, E or D formats, terminated by a space if this is not the last item on the line.

Blank strings and comments are ignored. A comment begins with an asterisk (*) and all subsequent characters in the string are regarded as part of the comment.

For e04ur, each user-specified option is normally printed as it is defined, on the current advisory message unit (see x04ab), but this printing may be suppressed using the keyword **Nolist**. Thus the statement

```
[lwsav, iwsav, rwsav, inform] = e04ur('Nolist', lwsav, iwsav, rwsav);
```

suppresses printing of this and subsequent options. Printing will automatically be turned on again after a call to e04us and may be turned on again at any time using the keyword **List**.

For e04ur printing is turned off by default, but may be turned on at any time using the keyword **List**.

Optional parameter settings are preserved following a call to e04us and so the keyword **Defaults** is provided to allow you to reset all the optional parameters to their default values before a subsequent call to e04us.

A complete list of optional parameters, their abbreviations, synonyms and default values is given in Section 11 of the document for e04us.

4 References

None.

5 Parameters

5.1 Compulsory Input Parameters

1: **str** – string

A single valid option string (as described in Section 3 and in Section 11 of the document for e04us).

2: **lwsav(120)** – logical array

3: **iwsav(610)** – int32 array

4: **rwsav(475)** – double array

The arrays **lwsav**, **iwsav** and **rwsav** **must not** be altered between calls to any of the functions e04wb, e04us or e04ur.

5.2 Optional Input Parameters

None.

5.3 Input Parameters Omitted from the MATLAB Interface

None.

5.4 Output Parameters

1: **lwsav(120)** – logical array

2: **iwsav(610)** – int32 array

3: **rwsav(475)** – double array

The arrays **lwsav**, **iwsav** and **rwsav** **must not** be altered between calls to any of the functions e04wb, e04us or e04ur.

4: **inform** – int32 scalar

Contains zero if a valid option string has been supplied and a value > 0 otherwise (see Section 6).

6 Error Indicators and Warnings

Errors or warnings detected by the function:

inform = 5

The supplied option is invalid. Check that the keywords are neither ambiguous nor misspelt.

7 Accuracy

Not applicable.

8 Further Comments

None.

9 Example

```
str = ' Infinite Bound Size = 1.0D+25 ';
[cwsav,lwsav,iwsav,rwsav,ifail] = e04wb('e04us');
[lwsavOut, iwsavOut, rwsavOut, inform] = e04ur(str, lwsav, iwsav, rwsav)

lwsavOut =
```

```
        array elided
iwsavOut =
        array elided
rwsavOut =
        array elided
inform =
        0
```
