

# NAG Toolbox for MATLAB

## e04wg

### 1 Purpose

e04wg may be used to supply individual integer optional parameters to e04wd. The initialization function e04wc **must** have been called before calling e04wg.

### 2 Syntax

```
[iw, rw, ifail] = e04wg(string, ivalue, iw, rw)
```

### 3 Description

e04wg may be used to supply values for integer optional parameters to e04wd. It is only necessary to call e04wg for those parameters whose values are to be different from their default values. One call to e04wg sets one parameter value.

Each integer optional parameter is defined by a single character string in **string** and the corresponding value in **ivalue**. For example, the following allows the iteration limit to be defined:

```
itnlim = 1000;  
if (m > 500)  
    itnlim = 500;  
end  
[iw, rw, ifail] = e04wg('Iterations', itnlim, iw, rw);
```

Optional parameter settings are preserved following a call to e04wd 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 e04wd.

A complete list of optional parameters, their abbreviations, synonyms and default values is given in Section 11 of the document for e04wd.

### 4 References

None.

### 5 Parameters

#### 5.1 Compulsory Input Parameters

1: **string – string**

A single valid keyword of an integer optional parameter (as described in Section 11 of the document for e04wd).

2: **ivalue – int32 scalar**

An integer value associated with the keyword in **string**.

3: **iw(\*) – int32 array**

**Note:** the dimension of the array **iw** must be at least **leniw** (see e04wc).

4: **rw(\*) – double array**

**Note:** the dimension of the array **rw** must be at least **lenrw** (see e04wc).

## 5.2 Optional Input Parameters

None.

## 5.3 Input Parameters Omitted from the MATLAB Interface

None.

## 5.4 Output Parameters

1: **iw(\*) – int32 array**

**Note:** the dimension of the array **iw** must be at least **leniw** (see e04wc).

2: **rw(\*) – double array**

**Note:** the dimension of the array **rw** must be at least **lenrw** (see e04wc).

3: **ifail – int32 scalar**

0 unless the function detects an error (see Section 6).

## 6 Error Indicators and Warnings

Errors or warnings detected by the function:

**ifail = 1**

The initialization function e04wc has not been called.

**ifail = 2**

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

## 7 Accuracy

Not applicable.

## 8 Further Comments

e04wf may also be used to supply integer optional parameters to e04wd.

## 9 Example

```
string = 'Print file';
ivalue = int32(6);
[iw, rw, ifail] = e04wc();
[iw, rw, ifail] = e04wg(string, ivalue, iw, rw);
[ivalueOut, iw, rw, ifail] = e04wk(string, iw, rw)

ivalueOut =
        6
```

```
iw =  
    array elided  
rw =  
    array elided  
ifail =  
        0
```

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