

# NAG Library Routine Document

## X04BBF

**Note:** before using this routine, please read the Users' Note for your implementation to check the interpretation of *bold italicised* terms and other implementation-dependent details.

### 1 Purpose

X04BBF reads a single formatted record from an external file.

### 2 Specification

```
SUBROUTINE X04BBF (NIN, RECIN, IFAIL)
INTEGER          NIN, IFAIL
CHARACTER(*)    RECIN
```

### 3 Description

X04BBF is used by NAG Library routines to read formatted records from an external file. All formatted input from an external file by NAG Library routines is performed by calls to X04BBF.

### 4 References

None.

### 5 Arguments

- 1: NIN – INTEGER *Input*  
*On entry:* the Fortran unit number which identifies the file to be read from. If  $NIN < 0$  (not a valid Fortran unit number), then no input occurs.
- 2: RECIN – CHARACTER(\*) *Output*  
*On exit:* the first  $LEN(RECIN)$  characters of the record read from unit NIN, padded with trailing blanks if the record was shorter than  $LEN(RECIN)$ .
- 3: IFAIL – INTEGER *Input/Output*  
*On entry:* IFAIL must be set to 0, -1 or 1. If you are unfamiliar with this argument you should refer to Section 3.4 in How to Use the NAG Library and its Documentation for details.  
For environments where it might be inappropriate to halt program execution when an error is detected, the value -1 or 1 is recommended. If the output of error messages is undesirable, then the value 1 is recommended. Otherwise, if you are not familiar with this argument, the recommended value is 0. **When the value -1 or 1 is used it is essential to test the value of IFAIL on exit.**  
*On exit:* IFAIL = 0 unless the routine detects an error or a warning has been flagged (see Section 6).

## 6 Error Indicators and Warnings

If on entry `IFAIL = 0` or `-1`, explanatory error messages are output on the current error message unit (as defined by `X04AAF`).

Errors or warnings detected by the routine:

`IFAIL = 1`

An end-of-file was detected by the `READ` statement.

System-dependent errors may also occur if the unit specified by `NIN` is not connected to an external file, or if a read error occurs.

`IFAIL = -99`

An unexpected error has been triggered by this routine. Please contact NAG.

See Section 3.9 in *How to Use the NAG Library and its Documentation* for further information.

`IFAIL = -399`

Your licence key may have expired or may not have been installed correctly.

See Section 3.8 in *How to Use the NAG Library and its Documentation* for further information.

`IFAIL = -999`

Dynamic memory allocation failed.

See Section 3.7 in *How to Use the NAG Library and its Documentation* for further information.

## 7 Accuracy

Not applicable.

## 8 Parallelism and Performance

`X04BBF` is not threaded in any implementation.

## 9 Further Comments

None.

## 10 Example

This example program simply illustrates how a formatted record is read from the NAG Library, by first reading it into the character-string `RECIN`, used as an internal file, by `X04BBF` and then reading the internal file.

### 10.1 Program Text

```

Program x04bbfe

!      X04BBF Example Program Text

!      Mark 26 Release. NAG Copyright 2016.

!      .. Use Statements ..
      Use nag_library, Only: nag_wp, x04bbf
!      .. Implicit None Statement ..
      Implicit None
!      .. Parameters ..
      Integer, Parameter          :: nin = 5, nout = 6
!      .. Local Scalars ..

```

```
      Real (Kind=nag_wp)          :: x
      Integer                    :: i, ifail
      Character (40)              :: recin
!      .. Executable Statements ..
      Write (nout,*) 'X04BBF Example Program Results'

!      Skip heading in data file
      Call x04bbf(nin,recin,ifail)

      Write (nout,*)

!      Read in values of I and X, then write them.

      Call x04bbf(nin,recin,ifail)

      Read (recin,99999) i, x

      Write (nout,99998) i, x

99999 Format (I3,F7.3)
99998 Format (1X,I5,F11.3)
      End Program x04bbfe
```

## 10.2 Program Data

```
X04BBF Example Program Data
 20  2.996
```

## 10.3 Program Results

```
X04BBF Example Program Results

 20      2.996
```

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