B$OPN – Open Speedbase Database

The B$OPN routine is used to open a Speedbase database.

1.   Invocation

To open a Speedbase database code:

```
CALL B$OPN USING db-name unit lock-flag
```

Where the PIC X(5) *db-name* is the name of the database to be opened, **without the preceding "DB";** the PIC X(3) *unit* is the unit on which the main index file resides; and *lock-flag* is a PIC 9 COMP variable with the value 0 to allow shared access or 1 to provide exclusive access to the database.

2.   STOP Codes and Exception Conditions

The following STOP codes may be generated by B$OPN:

STOP code	Description
25402	Unable to communicate with the Speedbase Gateway (only applies to Pervasive SQL or Microsoft SQL databases)
25403	Error returned by the Speedbase Gateway (only applies to Pervasive SQL or Microsoft SQL databases)

The following EXIT codes may be returned by B$OPN:

EXIT code	$$COND	Description
25521	21	An attempt has been made to open the same database twice.
25522	22	Database index or schema file not found, or invalid file-type.
25523	23	Database datafile(s) not found, or invalid file-type.
25524	24	Database is in use.
25525	25	I/O error opening database
25526	26	Obsolete – should never occur

25527	27	Obsolete – should never occur
25528	28	Obsolete – should never occur
25564	64	Obsolete – should never occur
25565	65	Obsolete – should never occur
25566	66	Unable to open BDCF file
25567	67	Obsolete – should never occur
25568	68	Unspecified error from Pervasive SQL
25569	69	Too many file handles open for Pervasive SQL

3.   Programming Notes

B$OPN is available for both non-DBX and DBX databases.

B$OPN is supported on both Pervasive SQL (Btrieve) and Microsoft SQL databases as well as Global-format databases.

Any databases opened using B$OPN may then be accessed by both the calling frame and/or subsequent frames. The only requirement is that the database must be open before the first I/O operation accessing it takes place. Databases remain open until specifically closed by a call to B$CDB or a STOP RUN condition occurs, when **all** opened databases are automatically closed.

The *db-name* parameter can be passed as a PIC X(5) field or as a literal. If a literal character string is passed any trailing SPACE characters must be supplied. Similarly, The *unit* parameter can be passed as a PIC X(3) field or as a literal. If a literal character string is passed any trailing SPACE characters must be supplied. For example:

```
CALL B$OPN USING "CL" "XXX"LOCK-FLAG        * Incorrect
CALL B$OPN USING "CL   " "XXX"LOCK-FLAG    * Correct
```

More subtly, the *lock-flag* parameter can be passed as a PIC 9 COMP field or as a literal. Care should be exercised if this parameter is passed as a literal because the compiler will generate an internal PIC 9(4) COMP field to hold the computational value. Passing a PIC 9(4) COMP parameter to a sub-routine (i.e. B$OPN) that is expecting a PIC 9 COMP parameter can cause unexpected results – specifically due to the Big-Endian nature of the Commercial Code language the high-order byte of the PIC 9(4) COMP field will be received by the sub-routine. For example, if attempting to pass the *lock-flag* value as a 1 to gain exclusive access to the database, then:

```
CALL B$OPN USING "DBASE" "XXX" 1
```

will not have the desired effect since the high-order byte of the value #0001 (i.e. 0) will be received by B$OPN which will result in the database being open shared.

To pass a value of 1 for the lock-flag either pass the parameter as an explicit PIC 9 COMP field:

```
77    LOCK-FLAG PIC 9 COMP
      VALUE 1
*
CALL B$OPN USING "DBASE" "XXX" LOCK-FLAG
```

or "force" the compiler to generate a **single-byte** parameter (i.e. thus agreeing with the single byte PIC 9 COMP that is expected) by specifying a hexadecimal literal. For example:

```
CALL B$OPN USING "DBASE" "XXX" #01
```

Important note: Because of this possibility for confusion B$OPN is only one of a few sub-routines that expects a computational parameter to be passed as anything other than a PIC 9(4) COMP field.

4.   Examples
[EXAMPLE REQUIRED]

5.   Copy-Books
None.

6.   See Also
B$CDB   Close Speedbase Database