

comma piece of the lookup value "J" and looks for partial matches to "J" on the second or any other piece of the value on the entry being examined. It uses any punctuation or space for a delimiter.

The default, without passing C in the FLAGS parameter, will look for partial matches ONLY on the second piece, thus in our example, finding "Smith,John" but not "Smiley,Bob J.". The old style of comma-piece processing can be quite slow, especially with common names like "Smith".

K Primary **K**ey used for starting index. If no index is specified in the INDEXES parameter, this flag causes the Finder to use the Uniqueness index for the Primary Key as the starting index for the search. Without the K flag, or if there is no Primary Key for this file (in the KEY file), the Finder defaults to the "B" index.

M Multiple index lookup allowed. If more than one index is passed in the INDEXES parameter, all indexes in the list are searched. Otherwise, the M flag causes the Finder to search the starting index and all indexes that alphabetically follow it. This includes both indexes from the traditional location in the data dictionary, as well as lookup indexes defined on the INDEX file that have an "L" (for LOOKUP) in the new "Use" field.

The starting index is taken from the INDEXES parameter. If that is null, the search begins with the default starting Index (see K flag description above).

NOTE: If the first index passed in the INDEXES parameter is a compound index, the M flag is removed and only that one index is searched. See "Lookup Index" in the Details and Features section for more information.

O Only find an exact match if possible. The Finder first searches for an exact match on the requested Index(es); if one is found, it is returned. Only if it does not find one in the file does it search for a partial match. For example, if the lookup value is "EINSTEIN" and the file contains entries "EINSTEIN" and "EINSTEIN,ALBERT", only the first record is returned. If the first record did not exist, the Finder would return "EINSTEIN,ALBERT" as a match.

NOTE: The presence of a partial match does not constitute an error condition, because a single exact match is present. If the FLAGS parameter does not contain O (or an X, see below), the presence of both partial and exact matches is treated as an error condition.

If the lookup is done on a compound index, exact matches must be made for every data value subscript in the index in order to consider the entry to be an exact match.

Q Quick lookup. If this flag is passed, the Finder assumes the passed value is in internal format. The Finder performs NO transforms of the input value, but only tries to find the value in the specified lookup indexes. Therefore, when the Q flag is passed, the lookup is much more efficient. If the FLAGS parameter does not contain a Q, the Finder assumes the lookup value is an external or user-entered value and performs all normal transforms as documented below.

U Unscreened lookup. This flag makes the Finder ignore any whole file screen (stored at ^DD(file#,0,"SCR")) on the file specified in the FILE parameter. **NOTE:** Passing this flag does not make the Finder ignore the SCREEN parameter.

X **EX**act match only. The Finder returns only an exact match to the lookup value on the requested Index(es). Any partial matches present in the file are ignored, and transforms, such as changing the lookup value to uppercase, are not performed. For example, in the scenarios described under the O flag, the Finder behaves identically in the first situation, but under the second it returns no match, since "EINSTEIN, ALBERT" is not an exact match to "EINSTEIN". If both the O and X flags are passed, the O flag is ignored. If the lookup is done on a compound index, exact matches must be made for every data value subscript in the index.

[.]VALUE

(Required) The lookup value(s). These should be in external format as they would be entered by an end-user, unless the Q flag is used. Except for special lookup values listed below, the lookup value is matched to entries on the lookup INDEXES specified in the call. If the lookup index is compound, then lookup values can be provided for each of the data value subscripts in the index. In that case, VALUE is passed by reference as an array where VALUE(n) represents the lookup value to be matched to the nth subscript in the index. If only one lookup value is passed in VALUE, it is assumed to apply to the first data value subscript in the index.

In addition, certain values generate special behavior by the Finder as follows:

1. **Control characters.** This value always results in no matches. Control characters are not permitted in the database.
2. **^ (Up-arrow [shift-6]).** This value always results in no matches. This single character value signifies to VA FileMan that the current activity should be stopped.
3. **"" (The empty string).** On single field indexes, this value always results in no matches. The empty string, used by VA FileMan to designate fields that have no value, cannot be found in FileMan indexes. However, if the lookup uses a compound index, VALUE(n) can be null for any of the lookup values as long as at least one of them is non-null. If VALUE(1) is null, it may make the lookup slower. If VALUE(n) is null, all non-null values for that subscript position will be returned.

4. **" " (The space character).** This value indicates that the Finder should return the current user's previous selection from this file. This corresponds to the "space-bar-recall" feature of VA FileMan's user interface. If FileMan has no such previous selection for this user, or if this selection is now prohibited from selection somehow (see discussions of SCREEN, below), then the Finder returns no matches. The Finder itself never preserves its found values for this recall; applications wishing to preserve found values should call RECALL^DILFD. The special lookup characters should appear either in VALUE or in VALUE(1).
5. **"'-Number (accent-grave followed by a number).** This indicates that the Finder should select the entry whose internal entry number equals the number following the accent-grave character. This corresponds to an equivalent feature of FileMan's user interface. If this entry is prohibited from selection, the Finder returns no match. The use of '-number input does not require passing A in the FLAGS parameter. The special lookup characters should appear either in VALUE or in VALUE(1).
6. **Numbers.** The Finder tries strictly numeric input as an IEN under any of the following four conditions: 1) The caller passes A in the FLAGS parameter, 2) the file has a .001 field, 3) the file's .01 field is not numeric and the file has no lookup index, or 4) the INDEXES parameter contains "#" as one of its index names. In all cases, the lookup value is expected to be in either VALUE or VALUE(1). In condition 4, if the "#" is the only INDEX, and if the lookup value does not match an IEN, the lookup fails, otherwise, the Finder continues the search using the other indexes.

In conditions 1, 2 and 3, strictly numeric input differs from '-numeric input in that whether or not a record corresponding to this IEN exists or is selectable, the Finder proceeds with a regular lookup, using the numeric value to find matches in the file's indexes. Even used this way, however, numeric input has the following special restriction: it is not used as a lookup value in any indexed pointer or variable pointer field (unless Q is passed in the FLAGS parameter).

For example, suppose an application performs a Finder call on the EMPLOYEE file, passing a lookup value of 12; that