

CODE-1 Plus™ International

Version 1.8.1

Reference Guide



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CHAPTER 1

Parameter Records

This chapter is a comprehensive technical reference for CODE-1 Plus International parameter records. For each parameter record, we include the function, a picture, a table of all of the fields and possible values, and an example.

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AB INP Parameter Record

The **optional** AB INP parameter is used to specify the location and lengths of data fields making up an address block. This parameter is used to define the input address when the data is floating in a series of fields in the order that they would appear on an address label. It can be used in conjunction with other parameters for defining input data fields. If a necessary element of the address is not defined in one of the following parameters, it will be looked for in the areas defined in the AB INP parameter: CNTRYI, CS PCD, ADDRDF.

This parameter comprises the following:

- Location and length for the first line of the address block
- Location and length for the second line of the address block
- Location and length for the third line of the address block
- Location and length for the fourth line of the address block
- Location and length for the fifth line of the address block
- Location and length for the sixth line of the address block
- Location and length for the seventh line of the address block
- Location and length for the eighth line of the address block
- Location and length for the ninth line of the address block.

Field-by-Field

The following table is an overview of each field on the AB INP parameter record.

Table 1-1: AB INP Fields (Part 1 of 2)

Position	Field Name	Description	Comments
1-6	KEYWORD	AB INP is the only acceptable entry.	Required.
8-10	Location of address block line 1	Location of the first line in the address block.	Required. No default.
12-13	Length of address block line 1	Length of the first line in the address block.	Required. No default.
15-17	Location of address block line 2	Location of the second line in the address block.	Optional. No default.
19-20	Length of address block line 2	Length of the second line in the address block.	Optional. No default.

Table 1-1: AB INP Fields (Part 2 of 2)

Position	Field Name	Description	Comments
22-24	Location of address block line 3	Location of the third line in the address block.	Optional. No default.
26-27	Length of address block line 3	Length of the third line in the address block.	Optional. No default.
29-31	Location of address block line 4	Location of the fourth line in the address block.	Optional. No default.
33-34	Length of address block line 4	Length of the fourth line in the address block.	Optional. No default.
36-38	Location of address block line 5	Location of the fifth line in the address block.	Optional. No default.
40-41	Length of address block line 5	Length of the fifth line in the address block.	Optional. No default.
43-45	Location of address block line 6	Location of the sixth line in the address block.	Optional. No default.
47-48	Length of address block line 6	Length of the sixth line in the address block.	Optional. No default.
50-52	Location of address block line 7	Location of the seventh line in the address block.	Optional. No default.
54-55	Length of address block line 7	Length of the seventh line in the address block.	Optional. No default.
57-59	Location of address block line 8	Location of the eighth line in the address block.	Optional. No default.
61-62	Length of address block line 8	Length of the eighth line in the address block.	Optional. No default.
64-66	Location of address block line 9	Location of the ninth line in the address block.	Optional. No default.
68-69	Length of address block line 9	Length of the ninth line in the address block.	Optional. No default.

Example

In the example parameter record below, we specify the following input storage locations for the address components:

- The first line in the address block to be stored starting in position 120
- The first line in the address block to have a length of 50
- The second line in the address block to be stored starting in position 170
- The second line in the address block to have a length of 50
- The third line in the address block to be stored starting in position 220
- The third line in the address block to have a length of 50.

.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
AB INP. 120. 50. 170. 50. 220. 50

AB OUT Parameter Record

The **optional** AB OUT parameter is used to specify where in the output file the completed address block should be stored. This data will be formatted according to the entry country standards for the last lines and country-specific standards for the body of the address. This formatting includes casing the data correctly. The use of multi-national characters with this information is controlled by your entry in column 8 of the FORMAT parameter.

The ninth field may contain any unmatched data found defined in the either the fixed street lines or in the address block input. If extra information is present, byte 99 will contain low values, a hex '00'.

NOTE: The extra information flag will be written out only to byte 99 of the Address Block Line 9. If positions 71-72 of the AB OUT parameter are set to a number less than 99, the extra information flag will NOT be posted.

This parameter comprises the following:

- Language code that indicates the language in which the output country name will be returned
- Location and length for the first line in the output address block
- Location and length for the second line in the output address block
- Location and length for the third line in the output address block
- Location and length for the fourth line in the output address block
- Location and length for the fifth line in the output address block
- Location and length for the sixth line in the output address block
- Location and length for the seventh line in the output address block
- Location and length for the eighth line in the output address block
- Location and length for the ninth line in the output address block
- Non-matched posting option that defines what should be posted to the records when the overall record status is 3 or 6.

Field-by-Field

The following table is an overview of each field on the AB OUT parameter record.

Table 1-2: AB OUT Fields (Part 1 of 2)

Position	Field Name	Description	Comments
1-6	KEYWORD	AB OUT is the only acceptable entry.	Required.
8-9	Language Code	Specifies the language in which the output country name will be returned. FR French EN English GR German SP Spanish NOTE: The remainder of the address block will be returned as it was in the input or as it was found in the database.	Required. Default is EN.
11-13	Location of address block line 1	Location of the first line in the address block.	Required. No default.
15-16	Length of address block line 1	Length of the first line in the address block.	Required. No default.
18-20	Location of address block line 2	Location of the second line in the address block.	Optional. No default.
22-23	Length of address block line 2	Length of the second line in the address block.	Optional. No default.
25-27	Location of address block line 3	Location of the third line in the address block.	Optional. No default.
29-30	Length of address block line 3	Length of the third line in the address block.	Optional. No default.
32-34	Location of address block line 4	Location of the fourth line in the address block.	Optional. No default.
36-37	Length of address block line 4	Length of the fourth line in the address block.	Optional. No default.
39-41	Location of address block line 5	Location of the fifth line in the address block.	Optional. No default.
43-44	Length of address block line 5	Length of the fifth line in the address block.	Optional. No default.
46-48	Location of address block line 6	Location of the sixth line in the address block.	Optional. No default.
50-51	Length of address block line 6	Length of the sixth line in the address block.	Optional. No default.

Table 1-2: AB OUT Fields (Part 2 of 2)

Position	Field Name	Description	Comments
53-55	Location of address block line 7	Location of the seventh line in the address block.	Optional. No default.
57-58	Length of address block line 7	Length of the seventh line in the address block.	Optional. No default.
60-62	Location of address block line 8	Location of the eighth line in the address block.	Optional. No default.
64-65	Length of address block line 8	Length of the eighth line in the address block.	Optional No default.
67-69	Location of address block line 9	Location of the ninth line in the address block.	Optional. No default.
71-72	Length of address block line 9	Length of the ninth line in the address block.	Optional No default.
74	Non-Matched Posting Option	<p>What should be posted to the records when the overall record status is a 3 or a 6.</p> <p>X Don't post anything</p> <p>B Post blanks</p> <p>I Post the input</p> <p>S Store the information regardless of record status. This refers to when part, but not all, of a record has passed or been corrected. Therefore, some of the information is correct but some is not.</p>	Optional. Default is B.

Example

In the example parameter record below, we specify the following output storage locations for the address components:

- French as the language code
- The first line in the address block to be stored starting in position 130
- The first line in the address block to have a length of 50
- The second line in the address block to be stored starting in position 180
- The second line in the address block to have a length of 50
- The third line in the address block to be stored starting in position 230
- The third line in the address block to have a length of 50
- The fourth line in the address block to be stored starting in position 280
- The fourth line in the address block to have a length of 50
- The input should be posted when the overall record status is a 3 or 6.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6..
...+.....7.....
AB
OUT. FR. 130. 50. 180. 50. 230. 50. 280. 50. ....
.....I
```

Samples

Below are some sample address after they have been run through CODE-1 Plus International. They are correctly capitalized, punctuated, and formatted as per their nation's postal regulations.

Vestergade 26

8600 Silkeborg

DENMARK

SCOTLAND

20 Castle Terrace

EDINBURGH

EH1 2ES

UNITED KINGDOM

1502 Sinochem Building

A2 Fuxingmenwai Dajie

100045 BEIJING

CHINA

1 Raffles Place #20-00

Oub Centre

SINGAPORE 048616

REPUBLIC OF SINGAPORE

321 KENT STREET

SYDNEY CITY NSW 2000

AUSTRALIA

ADDRDF Parameter Record

The **optional** ADDRDF parameter record is used to define the location, length, and format of the data fields making up an address field in the input record.

In this context, the term “field” means any continuous series of characters in the input file. You can define a field to start at any position in the input file and extend fields for any length you choose. For example, you could specify that positions 100-140 in the input file make up one field.

NOTE: If this parameter is not used, an AB INP parameter must be defined that shows where in the record the address line can be found.

This parameter comprises the following:

- Format of address information
- Location and length of Address 1
- Location and length of Address 2
- Location and length of Address 3
- Location and length of Address 4
- Location and length of Address 5
- Location and length of Address 6.

Field-by-Field

The following table is an overview of each field on the ADDRDF parameter record.

Table 1-3: ADDRDF Fields

Position	Field Name	Description	Comments
1-6	KEYWORD	ADDRDF is the only acceptable entry.	Required.
8	Format of address information.	Format of the address information. One of the following codes is stored: L Multiple lines F Elements will be concatenated to create a single address line M A single line. NOTE: When M is selected, only the location for address line 1 may be used.	Required.
10-12	Location of Address 1	Location of the first field or line.	Required. No default.
14-15	Length of Address 1	Length of the first field or line.	Required. No default.
17-19	Location of Address 2	Location of the second field or line.	Optional. No default.
21-22	Length of Address 2	Length of the second field or line.	Optional. No default.
24-26	Location of Address 3	Location of the third field or line.	Optional. No default.
28-29	Length of Address 3	Length of the third field or line.	Optional. No default.
31-33	Location of Address 4	Location of the fourth field or line.	Optional. No default.
35-36	Length of Address 4	Length of the fourth field or line.	Optional. No default.
38-40	Location of Address 5	Location of the fifth field or line.	Optional. No default.
42-43	Length of Address 5	Length of the fifth field or line.	Optional. No default.
45-47	Location of Address 6	Location of the sixth field or line.	Optional. No default.
49-50	Length of Address 6.	Length of the sixth field or line.	Optional. No default.

Example

In the following example parameter record, we specify the following input storage locations of the address elements:

- The input street address is found in 2 lines
- The first line begins in position 51 and is 40 bytes long
- The second line begins in position 91 and is also 40 bytes long.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6..
.+.....7..
ADDRDF. L. 051. 40. 091. 40
```

AE OUT Parameter Record

The **optional** AE OUT parameter is used to specify where in the output file individual address elements should be stored. This parameter comprises the following:

- Location for house number.
- Location for leading street directional.
- Location for trailing street directional.
- Location and length for street name.
- Location and length for street type.
- Location for unit keyword and unit identifier.
- Location and length for P.O. Box designator.
- Location for P.O. Box number.
- Location and length for grammar.
- Storage directions when address elements are unavailable.

Field-by-Field

The following table is an overview of each field on the AE OUT parameter record.

Table 1-4: AE OUT Fields (Part 1 of 2)

Position	Field Name	Description	Comments
1-6	KEYWORD	AE OUT is the only acceptable entry.	Required.
8-10	Location for House Number	Location on the output record for the right-justified 10-byte house number.	Optional. No default.
12-14	Location for Leading Street Directional	Location for the 2-byte pre-directional.	Optional. No default.
16-18	Location for Trailing Street Directional	Location for the 2-byte post-directional.	Optional. No default.
20-22	Location for Street Name	Location for the street name.	Optional. No default.
24-25	Length of Street Name	Length of the street name on the output record. Max 99	Optional. No default.
27-29	Location for Street Type	Location for the street type.	Optional. No default.

Table 1-4: AE OUT Fields (Part 2 of 2)

Position	Field Name	Description	Comments
31-32	Length of for the Street Type	Length for the Street Type. Max 20.	Optional. No default.
34-36	Location for Unit Keyword	Location for the 10-byte unit keyword.	Optional. No default.
38-40	Location for Unit Identifier	Location for the 10-byte unit identifier.	Optional. No default.
42-44	Location for PO Box Designator	Location for the 20-byte PO Box Designator.	Optional. No default.
46-47	Length of PO Box Designator	Length of the PO Box indicator. Max 20.	Optional. No default.
49-51	Location for PO BOX number	Location for the 10-byte PO Box number.	Optional. No default.
53-55	Location for the Grammar	Location for the Grammar.	Optional. No default.
57-58	Length of the Grammar	Length of the Grammar. Max 40.	Optional. No default.
63	Treatment when Address elements are not available	Code indicating what should be stored when address elements are not available. B Store Blanks X Store nothing (nothing will be moved to the output record)	Optional. Default is B.

Example

In the example parameter record below, we specify the following output storage locations for the address components:

- The house number is in position 10
- The street name is in position 20 and is 50 bytes long.
- The grammar is in position 75 and is 40 bytes long.
- When address elements are not available, blanks should be stored.

```

.....+..... 1.....+..... 2.....+..... 3.....+..... 4.....+..... 5.....+..... 6.....+..... 7..
AE OUT.. 010..... 021. 50... 20..... 075. 090.. 35.... B

```

AM OUT Parameter Record

The **optional** AM OUT parameter is used to specify where in the output file return code information should be stored. This parameter comprises the following:

- Location and length for the output status return code
- Location and length for the gender code
- Country category
- Input record status.

Field-by-Field

The following table is an overview of each field on the AM OUT parameter record.

Table 1-5: AM OUT Fields (Part 1 of 4)

Position	Field Name	Description	Comments
1-6	KEYWORD	AM OUT is the only acceptable entry.	Required.
8-10	Location of Output Status Return Code	<p>Location of the seven-character output status return code. Valid return codes include the following:</p> <p><i>Record Status Return Code:</i></p> <p>1 Validated or corrected for level A and B countries</p> <p>2 Validated without street match of level A countries and validated or corrected the country name for level C countries</p> <p>3 Unable to validate or correct</p> <p>6 Multiple choices available.</p> <p><i>Country Status Return Code:</i></p> <p>1 Confirmed</p> <p>2 Corrected</p> <p>3 Indeterminate</p> <p>4 Not licensed.</p> <p><i>(continued on next page)</i></p>	Optional. No default.

Table 1-5: AM OUT Fields (Part 2 of 4)

Position	Field Name	Description	Comments
8-10	Location of Output Status Return Code, <i>con't.</i>	<p><i>City Status Return Code:</i></p> <p>1 Confirmed 2 Corrected 3 Indeterminate 5 Postal data not available 6 Multiple choices available.</p> <p><i>Province/State Status Return Code:</i></p> <p>1 Confirmed 2 Corrected 3 Indeterminate 5 Postal data not available.</p> <p><i>Postal Code Status Return Code:</i></p> <p>1 Confirmed 2 Corrected 3 Indeterminate 4 Reformatted* 5 Postal data not available 6 Multiple choices available.</p> <p>*When the product does not have Postal Code Data but we do know that the country in question has a postal code and we know the pattern of that postal code, CODE-1 Plus International will validate the pattern of the postal code. If a valid pattern match is made then the return codes are set. Only countries where we do not have postal code data and there is no postal code pattern will the post code be set to a 5.</p> <p><i>Street Status Return Code:</i></p> <p>1 Confirmed 2 Corrected 3 Indeterminate 4 Street confirmed or corrected, but house number is out of range. Applies to UK and Japan only. 5 Postal data not available 6 Multiple choices available.</p> <p><i>PC/City Status Return Code:</i></p> <p>1 Confirmed 2 Corrected 3 Indeterminate 5 Postal data not available 6 Multiple choices available.</p>	Optional. No default.
12-14	Location of Gender Code	<p>Location of the gender code. Valid return codes include the following:</p> <p>F Female M Male A Ambiguous.</p>	Optional. No default.

Table 1-5: AM OUT Fields (Part 3 of 4)

Position	Field Name	Description	Comments
16-18	Location of Country Category	Location of the country category. Valid return codes include the following: A Country can validate/correct to the street level B Country can correct/validate all but street C Country has no data base. Performs format validation only.	Optional. No default.
20-22	Reserved		
24-26	Location of Address Elements Return Codes	Location of the 10-byte Address Elements Return Code. Valid codes include the following: <i>House Number Return Code</i> 1 Parsed 5 Not parsed <i>Street Name Return Code</i> 1 Parsed 5 Not Parsed <i>Street Type Return Code</i> 1 Parsed and validated 3 Parsed 5 Not parsed <i>Leading Directional Return Code</i> 1 Parsed and validated 3 Parsed 5 Not parsed <i>Trailing Directional Return Code</i> 1 Parsed and validated 3 Parsed 5 Not parsed (Con't.)	Optional. No default.

Table 1-5: AM OUT Fields (Part 4 of 4)

Position	Field Name	Description	Comments	
24-26	Location of Address Elements Return Codes, (Con't.)	<i>Unit Number Return Code</i>		Optional. No default.
		1	Parsed and validated	
		3	Parsed	
		5	Not parsed	
		<i>Unit Identifier Return Code</i>		
		1	Parsed and validated	
		3	Parsed	
		5	Not parsed	
		<i>PO Box Number Return Code</i>		
		1	Parsed	
		5	Not parsed	
		<i>P O Box Identifier Return Code</i>		
		1	Parsed and validated	
		3	Parsed	
		5	Not parsed	
<i>Grammar Return Code</i>				
1	Parsed and validated			
3	Parsed			
5	Not parsed			
28-30	Location of Extra Information Return Code	Location of the Extra Information return code. Valid return codes include the following:		Optional. No default.
		1	No extra data found in the address	
		2	Extra data present	
		5	No street data present in the database to create extra information	

Example

In the example parameter record below, we specify the following output storage locations for the address components:

- 200 as the Output Status Return Code location
- 250 as the Gender Code location
- 260 as the Country Category location
- 270 as the Address Elements Return Codes location.
- 280 as the Extra Information Return Code location.

```

.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7...
AM OUT 200 250 260      270 280

```


CNTRYI Parameter Record

The **optional** CNTRYI parameter record is used to specify the location and lengths of the country name data on the input record.

NOTE: If this parameter is not used, an AB INP parameter must be defined that shows where to locate the country information.

This parameter record comprises the following:

- Primary location and length for the country name **or**
- The word “DEF” and the ISO code for the default country.

Field-by-Field

The following table is an overview of each field on the CNTRYI parameter record.

Table 1-6: CNTRYI Fields

Position	Field Name	Description	Comments
1-6	KEYWORD	CNTRYI is the only acceptable entry.	Required.
8-10	Location of Country Name	Location on the input record for the country name in the record. NOTE: “DEF” can be used when no country name is specified on the file and you wish to use a default country.	Required.
12-13	Length of Country Name	Length of the country name in the primary location on the input record. NOTE: If you entered “DEF” in bytes 8-10, leave these bytes blank.	Required. No default.
15-16	ISO Code for the default country	ISO Code for the country indicated as default on the record. See SELECT Parameter for list of codes.	Optional. No default.

Example

In the following example parameter record, we specify the following information:

- The location for the country name on the input record is in position 200, and the field is 20 bytes long.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
CNTRYI.200.20
```

In the following example parameter record, we specify the following information:

- There is no country code/name in the records and all the records are for France.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
CNTRYI DEF.....FR
```

CONFIG Parameter Record

The **optional** CONFIG parameter is used to modify the configuration of the system. The configuration controls affect the matching and amount of processing time. You need the matcher to determine which functions may be incorporated or controlled with this parameter. This parameter comprises the following:

- Whether or not to return the first match as the answer when multiple records are returned
- Whether or not to search address block data.

Field-by-Field

The following table is an overview of each field on the CONFIG parameter record.

Table 1-7: CONFIG Fields

Position	Field Name	Description	Comments
1-6	KEYWORD	CONFIG is the only acceptable entry.	Required.
8	Return First Match	For multiple records, return first match as answer: Y Return first match as answer N Do not return first match as answer.	Optional. Default is N.
10	Continue search through Block Data?	When using fixed-fielded input definitions, the process will not “look” at the address block data for these elements if the fixed-fielded element is incorrect or blank. Y The fixed-fielded data element will be processed first; if the element is not matched, the process will then search for data in the defined address block data N Only the fixed-field data elements will be processed (when they are defined).	Optional. Default is N.

Example

In the following parameter record, we specify the following information:

- Return the first match from the list of several possible hits as the answer.
- Search the defined address block fields for missing data.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
CONFIG.Y.Y
```

CONFIRM Parameter Record

The **optional** CONFIRM parameter is used to specify that records containing “confirmation flag values” should be confirmed without undergoing the matching process. This parameter comprises the following:

- Location in output record for confirmation reason code
- Location in input record of confirmation code
- Length in input record of confirmation code
- Confirmation code conditional
- Values for confirmation.

Field-by-Field

The following table is an overview of each field on the CONFIRM parameter record.

Table 1-8: CONFIRM Fields (Part 1 of 2)

Position	Field Name	Description	Comments
1-6	KEYWORD	CONFIRM is the only acceptable entry.	Required.
8-10	Location for Confirmation Return Code	Location for the code indicating whether or not the record was confirmed without processing, and if so, why. One of the following codes will be stored: blank Not confirmed (record was address matched) V Confirmed by comparison to an input confirmation flag value.	Optional. No default.
18-20	Location for Confirmation Mark	Location in the input record of the confirmation flag.	Required. No default.
22-22	Length of Confirmation Mark	Length of the confirmation flag in the input record. Must be 9 bytes or less.	Required. No default.
24-25	Comparison Type	Code indicating whether the confirmation flag in the records should be equal to or not equal to the confirmation value(s) on this parameter record: EQ The confirmation flag in the record must be equal to one of the confirmation values on this parameter record for the record to be confirmed automatically NE The confirmation flag in the record must not be equal to any of the confirmation values on this parameter record for the record to be confirmed automatically.	Required. No default.

Table 1-8: CONFIRM Fields (Part 2 of 2)

Position	Field Name	Description	Comments
27-35 37-45 47-55 57-65	Values	The values to which the confirmation flag in the input record is compared. If positions 24-25 above are EQ, and the confirmation flag in the record is equal to one of these values, the record will be confirmed. Conversely, if positions 24-25 above are NE, and the confirmation flag in the record is not equal to any of these values, the record will be confirmed.	Positions 27-35 are Required; all others are optional. No default.

Example

In the following parameter record, we specify the following information:

- The location on the output record for the confirmation reason code is 145
- The location on the input record for the confirmation mark is 150
- The length on the input record of the confirmation mark is 9 bytes
- The confirmation conditional is equal
- The values for comparison are Monaco and Greenland.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
CONFIRM.145.....150.9.EQ.MONACO.....GREENLAND
```

CONSxx Parameter Record

The **optional** CONSxx parameter is used to define up to 99 constants that you can use with the MOVE x parameter records as C01 through C99. This parameter comprises the following:

- Constant number being defined
- Type of constant being defined
- Value for the constant.

Field-by-Field

The following table is an overview of each field on the CONSxx parameter record.

Table 1-9: CONSxx Fields

Position	Field Name	Description	Comments
1-4	KEYWORD	CONS is the only acceptable entry.	Required.
5-6	Constant Number	Specify the constant number being defined (C01-C99).	Required. No default.
7	Constant Type	Specify the type of constant being defined: H Hex value — every two bytes represents a hexadecimal value (e.g., FF, 0F) C Character value — enter normal character data byte for byte.	Required. No default.
8-42	Constant Value	Specify the constant for the value.	Required. No default.

Example

In the following parameter record, we specify the following information:

- The constant number being defined is C01
- The type of constant type being defined is character value
- The value for the constant is Run1.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
CONS01C.RUN1
```

CS OUT Parameter Record

The **optional** CS OUT parameter record is used to specify the location and lengths of the city and state/province data in the output record. The casing of this information is controlled by your entry in column 10 of the FORMAT parameter.

NOTE: Not all countries use state/province data; therefore, some countries may not return state data.

This parameter record comprises the following:

- Location and length of the city
- Location and length for the state/province
- Non-matched posting option that defines what should be posted to the records when the overall record status is 3 or 6.

Field-by-Field

The following table is an overview of each field on the CS OUT parameter record.

Table 1-10: CS OUT Fields (Part 1 of 2)

Position	Field Name	Description	Comments
1-6	KEYWORD	CS OUT is the only acceptable entry.	Required.
8-10	Location of City	Location of the city.	Required. No default.
12-13	Length of City	Length of the city.	Required. No default.
15-17	Location of the State/Province	Location of the state or province.	Required. No default.
19-20	Length of the State/Province	Length of the state or province.	Required. No default.

Table 1-10: CS OUT Fields (Part 2 of 2)

Position	Field Name	Description	Comments
72	Non-Matched Posting Option	<p>Non-matched posting option that defines what should be posted to the records when the overall record status is 3 or 6.</p> <p>X Post nothing</p> <p>B Post blanks</p> <p>I Post the input</p> <p>S Store the information regardless of record status.</p>	Optional. Default is B.

Example

In the following parameter record, we specify the following information:

- The location for the city on the output record is in position 130, and the field is 25 bytes long
- The location for the state/province on the output record is in position 160, and the field is 20 bytes long
- Post the input when the overall record status is 3 or 6.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
CS OUT.130.25.160.20.....I
```


CS PCD Parameter Record

The **optional** CS PCD parameter record is used to specify the location and lengths of the city, state/province and postal code data in the input record. This parameter record comprises the following:

- Format of city, state/province, and postal code information
- Location and length of the postal code
- Location and length of the city name or the start of the string containing the city information
- Location and length of the state/province name if separate from city information.

NOTE: If this parameter is not used, an AB INP parameter must be defined that shows where in the record the city, state/province, and postal code information can be found.

Field-by-Field

The following table is an overview of each field on the CS PCD parameter record.

Table 1-11: CS PCD Fields (Part 1 of 2)

Position	Field Name	Description	Comments
1-6	KEYWORD	CS PCD is the only acceptable entry.	Required.
8-8	City and State/ Province Format	Format of the city and state/province information: S City, state/province, and postal code are all in separate fields M A string containing both city and state/province information X A string containing city, state/province and postal code information P Postal code only is in a separate field.	Required. No default.
10-12	Location of Postal Code	Location of the postal code. NOTE: Not used with option X in position 8.	Required if S or P is entered in position 8. Optional if M is entered in position 8. No default.

Table 1-11: CS PCD Fields (Part 2 of 2)

Position	Field Name	Description	Comments
14-15	Length of Postal Code	Length of the postal code. NOTE: Not used with option X in position 8 or with blanks in positions 10-12.	Required if S or P is entered in position 8. Optional if M is entered in position 8. No default.
17-19	Location of City Name	Location of the city name or the start of the string containing the city information. NOTE: Not used with option P in position 8.	Required. No default.
21-22	Length of City Name	Length of the city name or string. NOTE: Not used with option P in position 8.	Required. No default.
24-26	Location of State/Province Name	Location of the state or province name if in separate location from city information. NOTE: Not allowed if M, X, or P is entered in position 8.	Optional if S is entered in position 8. No default.
28-29	Length of the State/Province Name	Length of the state or province name if in separate location from city information. NOTE: Not allowed if M, X, or P is entered in position 8.	Optional if S is entered in position 8. No default.

Example

In the following parameter record, we specify the following information:

- The city, state/province, and postal code are all in separate fields
- The location for the postal code on the input record is in position 120, and the field is 10 bytes long
- The location for the city name on the input record is in position 131, and the field is 25 bytes long
- The location for the state/province name on the input record is in position 160, and the field is 25 bytes long.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
CS PCD.S.120.10.131.25.160.25
```

CT OUT Parameter Record

The **optional** CT OUT parameter record is used to specify the location and length of the country name on the output record. The use of multi-national characters with this information is controlled by your entry in column 8 of the FORMAT parameter, and casing of this information is controlled by your entry in column 10 of the FORMAT parameter.

This parameter record comprises the following:

- Location and length for the country name in English
- Location and length for the country name in French
- Location and length for the country name in Spanish
- Location and length for the country name in German
- Location for the country name UPU code
- Location for the country name ISO code
- Non-matched posting option that defines what should be posted when the overall record status is 3 or 6.

Field-by-Field

The following table is an overview of each field on the CT OUT parameter record.

Table 1-12: CT OUT Fields (Part 1 of 2)

Position	Field Name	Description	Comments
1-6	KEYWORD	CT OUT is the only acceptable entry.	Required.
8-10	Location of Country Name in English	Location on the output record for the country name in English.	Optional. No default.
12-13	Length of Country Name in English	Length on the output record of the country name in English.	Optional. No default.
15-17	Location of Country Name in French	Location on the output record for the country name in French.	Optional. No default.
19-20	Length of Country Name in French	Length on the output record of the country name in French.	Optional. No default.
22-24	Location of Country Name in Spanish	Location on the output record for the country name in Spanish.	Optional. No default.
26-27	Length of Country Name in Spanish	Length on the output record of the country name in Spanish.	Optional. No default.

Table 1-12: CT OUT Fields (Part 2 of 2)

Position	Field Name	Description	Comments
29-31	Location of Country Name in German	Location on the output record for the country name in German.	Optional. No default.
33-34	Length of Country Name in German	Length on the output record of the country name in German.	Optional. No default.
36-38	Location of the Country Name UPU Code	Location on the output record for the country name three-character UPU code.	Optional. No default.
40-42	Location of the Country Name ISO Code	Location on the output record for the country name two-character ISO code.	Optional. No default.
72	Non-Matched Posting Option	<p>Non-matched posting option that defines what should be posted to the output records when the overall record status is 3 or 6.</p> <p>X Don't post anything</p> <p>B Post blanks</p> <p>I Post the input</p> <p>S Store the information regardless of record status.</p>	Optional. Default is B.

Example

In the following example parameter record, we specify the following information:

- Location for the country name in English on the output record is in position 100, and the field is 30 bytes long
- Location for the country name in French on the output record is in position 150, and the field is 30 bytes long
- Location for the country name in Spanish on the output record is in position 200, and the field is 30 bytes long
- Location for the country name in German on the output record is in position 250, and the field is 30 bytes long
- Location for the country name UPU code is 300
- Location for the country name ISO code is 305
- Do not post anything to the records when the overall record status is 3 or 6.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
CT OUT.100.30.150.30.200.30.250.30.300.305.....X
```

EXITIN Parameter Record

The **optional** EXITIN parameter record names an operation exit routine that you want to call after the record has been read from the input file but before it has been processed. The only reserved positions on this parameter record contain the name of the operating exit routine. You can use the remaining 63 characters to specify information that your exit routine needs.

Note that if you have also specified an *input* exit routine on a FILEDF parameter record, the *operating* exit routine specified on the EXITIN parameter record is called after the input routine. CODE-1 Plus International would call the FILEDF input exit routine to read the record, then pass the record to the EXITIN operating exit routine. The operating exit routine performs its processing and passes the record back to CODE-1 Plus International. CODE-1 Plus International then puts the record through the batch matching process.

This parameter record comprises the following:

- Name of the operating exit routine
- User-defined fields for the user exit.

Field-by-Field

The following table is an overview of each field on the EXITIN parameter record.

Table 1-13: EXITIN Fields (Part 1 of 2)

Position	Field Name	Description	Comments
1-6	KEYWORD	EXITIN is the only acceptable entry.	Required.
8-15	Exit Routine Name	Name of the exit routine that you want CODE-1 Plus International to call after reading each record from the input file (or after calling an input exit routine).	Required. No Default. Name must be left-justified.

Table 1-13: EXITIN Fields (Part 2 of 2)

Position	Field Name	Description	Comments
18-80	User-defined fields	<p>These columns allow you to pass parameters to your exit routine so a single exit may be used to accommodate more than one situation or file format. You may use this area in any way useful to your exit routine.</p> <p>Parameters for calling your own exit routine include the following:</p> <p>Parameter 1:Input area containing the next input record</p> <p>Parameter 2:Single character that the exit routine may set to bypass subsequent processing of the record, as follows:</p> <p>B The record will be processed normally, except it will be treated as if it had a blank street address, regardless of the actual address in the record.</p> <p>R The record will be written to TAPEOR and then dropped</p> <p>X The record will be dropped immediately.</p> <p>Any other value causes the record to be processed normally.</p> <p>Parameter 3:The EXITIN parameter</p>	Optional. No Default.

Example

In the following example parameter record, we specify the following information:

- The name of the operating exit routine is Job 1.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
EXITIN.JOB 1
```

EXITOP Parameter Record

The **optional** EXITOP parameter record names an operating exit routine that you want CODE-1 Plus International to call after the record has been processed but before it is written to an output file. The only reserved positions on this parameter record contain the name of the operating exit routine. You can use the remaining 63 characters to specify information that your exit routine needs.

Note that if you have also specified an output exit routine, the operating exit routine specified on the EXITOP parameter record is called first. The operating exit routine then does its processing and passes the record back to CODE-1 Plus International. CODE-1 Plus International then passes the same record to the output exit routine that you have specified for that specific output file.

CODE-1 Plus International will call your exit routine with the following four parameters in the linkage section.

- **PARM1:** This parameter is 1-byte, which will contain one of the following codes to tell your program what type of processing is to be performed:
 - **O** for open the output file
 - **W** for write a record to the output file
 - **C** for close the output file.

- **PARM2:** This parameter is the output file indicator.

One of the following 7-byte file identifiers will be passed: ICPMCOK, ICPMNCO, ICPMUSA, or ICPMCAN.

- **PARM3:** This parameter contains the output record to be passed from CODE-1 Plus International to your program. The length of this parameter will be the length of the output record as defined on the FILEDF parameter record for the output file named in PARM2, above. This parameter is only valid when PARM1 is set to “W” in order to write a record to the output file.
- **PARM4:** This parameter contains the image of your EXITOP parameter record, and is 80 bytes in length.

This parameter record comprises the following:

- Name of the operating exit routine
- User-defined fields for the user exit.

Field-by-Field

The following table is an overview of each field on the EXITOP parameter record.

Table 1-14: EXITOP Fields

Position	Field Name	Description	Comments
1-6	KEYWORD	EXITOP is the only acceptable entry.	Required.
8-15	EXIT ROUTINE NAME	Name of the exit routine that you want CODE-1 Plus International to call before writing each record to an output file (or before calling an output exit routine).	Required. No Default. Name must be left-justified.
17-80	User-defined fields	Enter any information that you need CODE-1 Plus International to pass to your exit routine.	Optional. No default.

Example

In the following example parameter record, we specify the following information:

- The name of the operating exit routine is Job 1.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
EXITOP.JOB 1
```


FILEDF Parameter Record

The required FILEDF parameter record is used to identify your input and output file structures. This parameter record comprises the following information:

- Name of the file
- Record format (fixed-length or variable-length)
- Record length (up to 32,760)
- Block size (IBM Mainframe only)
- Device type (IBM Mainframe only)
- Label type (IBM Mainframe only)
- Number of records to skip before beginning processing
- Cross-sectional sampling
- Maximum number of records to process.

This information identifies to CODE-1 Plus International what files you will be using.

Limiting Processing with FILEDF

There are three ways to limit the number of records CODE-1 Plus International processes:

- You can skip a portion of the file before any records are selected
- You can enter a cross sectional sampling number to select a portion of the records evenly spaced throughout the file
- You can specify a maximum number of records that should be processed; in this case CODE-1 Plus International will start at the beginning of the file and process every record until the maximum number is reached.

You may use these fields in conjunction with each other. For example, you could enter a number of records to skip and a maximum number of records to read if you wanted to process the middle of the file, but not the beginning or the end.

Cross-Sectional Sampling

The cross-sectional sampling feature allows you to sample records throughout the file from beginning to end without processing consecutive records. To determine the number to enter in this 7-byte field, divide the number of records you want to process by the number of records in the file. This will give you a decimal number. Drop the decimal, and enter the first 7 digits of the number. For example, you have a file with 102986 records and you want to process 2000

records. You would divide 2000 by 102986 and get .0194201153. Dropping the decimal, you would enter 0194201 in the cross-sectional sampling field. This will ensure that the 2000 records processed are evenly distributed throughout the file.

NOTE: Limiting the number of records to process (by skipping records, specifying a maximum, or sampling the file) should be done on the input FILEDF parameter record. If you limit processing on an output FILEDF parameter record, CODE-1 Plus International will process all of your input records, but will limit the number of records written to the output file.

Field-by-Field

The following table is an overview of each field on the FILEDF parameter record.

Table 1-15: FILEDF Fields (Part 1 of 3)

Position	Field Name	Description	Comments
1-6	KEYWORD	FILEDF is the only acceptable entry.	Required.
8-15	File Name	Type the name of the input or output file: ICPMNAM Input file ICPMCOK Matched records output file ICPMNCO Unmatched records output file ICPMUSA United States of America records ICPMCAN Canada records.	Required. No default.
17	Record Format	Code indicating whether the records in the file are fixed-length or variable-length. Type one of the following codes: F Records are fixed-length, byte-stream V Records are variable-length, byte-stream L Records are fixed-length, line-sequential (Unix and NT only) U Records are variable-length, line-sequential. (Unix and NT only)	Required. Default is F.

Table 1-15: FILEDF Fields (Part 2 of 3)

Position	Field Name	Description	Comments
19-22	Record Length	The length, in bytes, of the records in the file. For variable-length records, this is the maximum record length. NOTE: If you need to enter a 5-digit number, use columns 18-22.	Required. No default. Maximum is 32,760.
24-28	Block Size	The size, in bytes, of the blocks in the file.	Not required for MVS, Open VMS, Unix, or NT. No default.
Columns 30 - 35 apply to mainframe users only.			
30-33	Device Type	The type of device on which this file resides. Enter one of the following codes: TAPE 3350 2311 3370 2314 3375 3310 3380 3330 FBA 3340	Default is TAPE. Used for VSE only.
34	Tape Reel Handling	Code indicating how to handle tape reels. Enter one of the following codes: blank Tape reels will be rewound at open or close operations. For non-labeled tapes, this will be changed to "U" if a multi-reel situation is detected. M Tape input file consists of more than one standard-label file. The operator will be queried for EOF/EOV at the end of each of the input files. U Tape reels will be rewound at open operations and unloaded at close operations X Tape reels will not be repositioned at either open or close operations. In general, use blank for intermediate references to a single-reel file; "U" for multi-reel files and for the final reference to a single-reel file; and "X" for files that require non-standard positioning of tape reel (which can be accomplished via MTC commands or the equivalent).	Optional. Default is blank.
35	Label Type	Code indicating whether the records on the file have standard or omitted labels. Enter one of the following codes: N No labels S Standard labels.	Optional. Default is S.

Table 1-15: FILEDF Fields (Part 3 of 3)

Position	Field Name	Description	Comments
37	Field Delimiter Code	Code indicating if a field delimiter is to be used and if the delimiter is defined as a character or as a hex representation. C Character X Hex.	Required if processing delimited files; otherwise, must be blank. No default.
39-40	Field Delimiter or Hex character	The delimiter character or the Hex representation of the character.	
42	Second Field Delimiter Code	Code indicating if a second field delimiter is to be used and if the delimiter is defined as a character or as a hex representation. C Character X Hex.	Optional. No default.
44-45	Second Field Delimiter or Hex character	The delimiter character or the Hex representation of the second character.	
47	Data Delimiter Code	Code indicating if a data delimiter is to be used and if the delimiter is defined as a character or as a hex representation. C Character X Hex.	Optional.
49-50	Data Delimiter or Hex character	The delimiter character or the Hex representation of the second character.	
50-56	Number of Records to Skip	Number of records CODE-1 Plus International should skip before selecting the first record.	Optional. No default.
58-64	Cross-Sectional Sampling	Number indicating the portion of the records in the file that should be processed. CODE-1 Plus International assumes a decimal point before the first digit.	Optional. No default.
66-72	Record Limit	Maximum number of records CODE-1 Plus International should read from or write to this file.	Optional. No default.

Example

In the following example parameter record, we specify that:

- This is the input file
- The records are fixed-length, byte-stream
- We want to skip the first 100 records
- A maximum of 1000 records should be read from the input file.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..  
FILEDF.ICPMNAM..F.....0000100.....0001000
```

FIRMNM Parameter Record

The **optional** FIRMNM parameter record is used to specify the location and length of a firm name (company name) in the input record. This parameter record comprises the following:

- Location of the firm name
- Length of the firm name.

If the FIRMNM parameter record is used for a country with firm names, CODE-1 Plus International will return the firm name from the database files only if the input firm name match score is greater than the matching threshold, which is a fixed value at 70. If the firm name match score is equal to or less than 70, the input firm name will be returned instead. If the FIRMNM parameter record is not included in the parameter file, no firm name will be returned.

Field-by-Field

The following table is an overview of each field on the FIRMNM parameter record.

Table 1-16: FIRMNM Fields

Position	Field Name	Description	Comments
1-6	KEYWORD	FIRMNM is the only acceptable entry.	Required.
8-10	Location of Firm Name	Location on the input record of the firm name.	Required. No default.
12-13	Length of Firm Name	Length of the firm name in the input record. NOTE: The maximum length allowed by CODE-1 Plus International is 40.	Required. No default.

Example

In the following example parameter record, we specify that the firm names are 15 bytes long and begin in position 26 on the input record.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
FIRMNM.026.15
```

FORMAT Parameter Record

The **optional** FORMAT parameter record is used to define the characteristics of the output data posted to the records. This parameter record comprises the following:

- Multinational characters in the output address data
- Upper- or mixed-case fixed-field output.

Field-by-Field

The following table is an overview of each field on the FORMAT parameter record.

Table 1-17: FORMAT Fields

Position	Field Name	Description	Comments
1-6	KEYWORD	FORMAT is the only acceptable entry.	Required.
8-8	Multinational Characters	<p>Whether or not to include multinational characters in the output. This option applies to all the output name and address fields.</p> <p>Y Include multinational characters</p> <p>N Do not include multinational characters</p> <p>1 For UNIX and Windows only: Read and write data in an 8859-1 code page with multinationals returned.</p> <p>NOTE: This field affects all output parameters: AB OUT, CS OUT, CT OUT, NM OUT, PC OUT, and SA OUT.</p>	Optional. Default is N.
10-10	Upper- or Mixed-Case for Fixed-Field Output	<p>Whether to use upper-case or mixed-case letters in the fixed-field output. This option applies to all the output name and address fields.</p> <p>U Use upper-case letters</p> <p>M User mixed-case letters.</p> <p>NOTE: This field affects all output parameters <i>except</i> AB OUT.</p>	Optional. Default is U.

Example

In the following example parameter record, we specify that multinational and mixed-case characters should be included in the output address data.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
FORMAT.Y.M
```

HEADER Parameter Record

The **required** HEADER parameter record is used to specify a date and text to be printed at the top of the first page of each report. This parameter record comprises the following:

- Date
- Text heading.

NOTE: Any date or text heading you specify prints at the top of the first page of each report.

Field-by-Field

The following table is an overview of each field on the HEADER parameter record.

Table 1-18: HEADER Fields

Position	Field Name	Description	Comments
1-6	KEYWORD	HEADER is the only acceptable entry.	Required.
8-17	Date	The date that you want printed at the top line of the first page of each report.	Optional. Default is to print the system date.
19-58	Heading	The text you want to be printed on the top line of the first page of each report.	Optional. No default.

Example

In the following example parameter record, we specify to print the date 5/1/1998 on the top line of the first page of each of the reports. Further, we want CODE-1 Plus International to print the text “Customers Since April 1999” on the top line of the first page of each of the reports.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7.
HEADER.5/1/1998...CUSTOMERS SINCE APRIL 1999
```


L CODE Parameter Record

The **optional** L CODE parameter record is used to specify the location and length of a list code in the input name-and-address records. The list codes will be used for reporting purposes. Each coding results report will be broken down by list code. If this parameter is not used, only the Country Statistics for Entire File report will be produced. This parameter record comprises the following:

- Location and length for the list code in the record.

Field-by-Field

The following table is an overview of each field on the L CODE parameter record.

Table 1-19: L CODE Fields

Position	Field Name	Description	Comments
1-6	KEYWORD	L CODE is the only acceptable entry.	Required.
8-10	Location of List Code	Location of the list code on the input record.	Required. No default.
12-13	Length of List Code	Length of the list code on the input record.	Required. No default.

Example

In the following example parameter record, we specify that the list code begins in position 120 and is 2 bytes long.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
L CODE.120.02
```

MOVE I Parameter Record

The **optional** MOVE I parameter record is used to rearrange the pieces of the input record before the record is processed. This parameter record comprises the following:

- Starting location and length for the information that is being moved
- Ending location for the information that is being moved.

Field-by-Field

The following table is an overview of each field on the MOVE I parameter record.

Table 1-20: MOVE I Fields

Position	Field Name	Description	Comments
1-6	KEYWORD	MOVE I is the only acceptable entry.	Required.
8-10	Starting Location of Information Being Moved	Starting location of the information that is being moved or one of the following data types that can be moved to the coding location: SPC Move spaces X00 Move binary zeros ZRO Move character zeros Cxx Move a constant defined with a CONS parameter.	Required. No default.
12-13	Length of Information Being Moved	Length of the information that is being moved. NOTE: Position 11 can be used if you need lengths greater than 99 bytes, up to 999 bytes.	Required. No default.
15-17	Ending Location of Information Being Moved	Ending location of the information that is being moved.	Required. No default.

Example

In the following example parameter record, we specify that the starting location for the information that is being moved begins in position 200 and is 25 bytes long, and the first ending location for the information being moved is in position 400.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
MOVE I.200.25.400
```

MOVE O Parameter Record

The **optional** MOVE O parameter record is used to rearrange the pieces of the output record before the record is written to the output file. This parameter record comprises the following:

- Starting location and length for the information that is being moved
- Ending location for the information that is being moved.

Field-by-Field

The following table is an overview of each field on the MOVE O parameter record.

Table 1-21: MOVE O Fields

Position	Field Name	Description	Comments
1-6	KEYWORD	MOVE O is the only acceptable entry.	Required.
8-10	Starting Location of Information Being Moved	Starting location of the information that is being moved or one of the following data types that can be moved to the coding location: SPC Move spaces X00 Move binary zeros ZRO Move character zeros Cxx Move a constant defined with a CONS parameter.	Required. No default.
12-13	Length of Information Being Moved	Length of the information that is being moved. NOTE: Position 11 can be used if you need lengths greater than 99 bytes, up to 999 bytes.	Required. No default.
15-17	Ending Location of Information Being Moved	Ending location of the information that is being moved.	Required. No default.

Example

In the following example parameter record, we specify that the starting location for the information that is being moved begins in position 200 and is 25 bytes long, and the first ending location for the information being moved is in position 400.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
MOVE O.200.25.400
```

NAMEDF Parameter Record

The **optional** NAMEDF parameter record is used to specify the location and length of the name information in the input records. The name extracted by this parameter record will be used as the basis for any name comparisons. This parameter record comprises the following:

- Name data descriptor
- Location and length for the first or only element in the name
- Location and length for the second element in the name
- Location and length for the third element in the name
- Location and length for the fourth element in the name
- Location and length for the fifth element in the name
- Location and length for the sixth element in the name.

Field-by-Field

The following table is an overview of each field on the NAMEDF parameter record.

Table 1-22: NAMEDF Fields (Part 1 of 2)

Position	Field Name	Description	Comments
1-6	KEYWORD	NAME I is the only acceptable entry.	Required.
8-8	Name Data Descriptor	How to treat the fields. F Treat the fields as separate pieces of one name S Treat each field as a single string containing the name X Treat the first defined field as the last name and the second defined field as the first name NOTE: Do not define positions 24-26, 28-29, 31-33, 35-36, 38-40, 42-43, 45-47, or 49-50 if you select X for this position.	Required. No default.
10-12	Location of First or Only Element	Location of the first or only element in the name.	Required. No default.
14-15	Length of First or Only Element	Length of the first or only element in the name.	Required. No default.
17-19	Location of Second Element	Location of the second element in the name.	Optional. No default.
21-22	Length of Second Element	Length of the second element in the name.	Optional. No default.

Table 1-22: NAMEDF Fields (Part 2 of 2)

Position	Field Name	Description	Comments
24-26	Location of Third Element	Location of the third element in the name.	Optional. No default.
28-29	Length of Third Element	Length of the third element in the name.	Optional. No default.
31-33	Location of Fourth Element	Location of the fourth element in the name.	Optional. No default.
35-36	Length of Fourth Element	Length of the fourth element in the name.	Optional. No default.
38-40	Location of Fifth Element	Location of the fifth element in the name.	Optional. No default.
42-43	Length of Fifth Element	Length of the fifth element in the name.	Optional. No default.
45-47	Location of Sixth Element	Location of the sixth element in the name.	Optional. No default.
49-50	Length of Sixth Element	Length of the sixth element in the name.	Optional. No default.

Example 1

In the following example parameter record, we specify the following:

- The fields should be treated as separate pieces of one name
- The first element in the name begins in position 100 and is 15 bytes long
- The second element in the name begins in position 116 and is 15 bytes long
- The third element in the name begins in position 127 and is 15 bytes long.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
NAMEDF.F.100.15.116.15.127.15
```

These fields will be concatenated to create a name line:

Input example --> Example of how CODE-1 Plus International will read it:
MR JOHN SMITH --> MR JOHN SMITH

Example 2

In the following example parameter record, we specify the following:

- Each field should be treated as a single string containing the name
- The first element in the name begins in position 100 and is 30 bytes long.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
NAMEDEF.S.100.30
```

Input Example **and** example of how CODE-1 Plus International will read it:
MR JOHN SMITH --> MR JOHN SMITH

Example 3

In the following example parameter record, we specify the following:

- The first defined field should be treated as the last name and the second defined field as the first name
- The first element (last name) begins in position 100 and is 20 bytes long
- The second element (first name) begins in position 130 and is 20 bytes long.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
NAMEDEF.X.100.20.130.20
```

Input Example --> Example of how CODE-1 Plus International will read it:
SMITH JOHN --> JOHN SMITH

NM OUT Parameter Record

The **optional** NM OUT parameter record is used to specify where in the output file the addressee and company name information is to be stored. This parameter record comprises the following:

- Location and length for the company name
- Location and length for the first name
- Location and length for the last name
- Non-matched posting option that defines what should be posted to the records when the overall record status is 3 or 6.

Field-by-Field

The following table is an overview of each field on the NM OUT parameter record.

Table 1-23: NM OUT Fields (Part 1 of 2)

Position	Field Name	Description	Comments
1-6	KEYWORD	NM OUT is the only acceptable entry.	Required.
8-10	Location for Company Name	Location for the company name on the output record.	Optional. No default.
12-13	Length of Company Name	Length of the company name on the output record.	Optional. No default.
15-17	Location for First Name	Location for the first name on the output record.	Optional. No default.
19-20	Length of First Name	Length of the first name on the output record.	Optional. No default.
22-24	Location for Last Name	Location for the last name on the output record.	Optional. No default.
26-27	Length of Last Name	Length of the last name on the output record.	Optional. No default.
29-31	Location of title.	Location for the title on the output record.	Optional. No default.
33-34	Length of title.	Length of the title on the output record.	Optional. No default.

Table 1-23: NM OUT Fields (Part 2 of 2)

Position	Field Name	Description	Comments
72	Non-matched posting option.	<p>Non-matched posting option that should be posted to the records when the overall record status is 3 or 6.</p> <p>X Don't post anything.</p> <p>B Post blanks.</p> <p>I Post the input.</p>	Optional. Default is B.

Example

In the following example parameter record, we specify the following output storage locations for the addressee and company name information:

- 50-byte company name is to be stored starting in position 51
- 30-byte first name is to be stored starting in position 120
- 30-byte last name is to be stored starting in position 175
- 25-byte title is to be stored starting in position 210
- Post blanks to the records when the overall record status is 3 or 6.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
NM OUT..051.50.120.30.175.30.210.25.....B
```


NTHSEL Parameter Record

The **optional** NTHSEL parameter specifies that when you run your job, CODE-1 Plus International will process a fraction of your input records or every *n*th input record and ignore the others. This parameter comprises the following:

- Number indicating to process a fraction of the input records
- Option indicating whether to include for processing or exclude from processing every *n*th record.
- Number defining the *n*th value to be included or excluded.

NOTE: You can define one NTHSEL parameter per job. You can use the NTHSEL parameter in conjunction with the fractional sampling option on the FILEDF parameter.

Field-by-Field

The following table is an overview of each field on the NTHSEL parameter.

Table 1-24: Fields on the NTHSEL Parameter Record (Part 1 of 2)

Position	Field Name	Description	Comments
1-6	KEYWORD	Must be NTHSEL.	Required.
8-14 Sampling Method 1 — Including or Excluding Nth Number of Input Records			
8-10	<i>n</i> th NUMBER	The <i>n</i> th number of records the user wants to either include or exclude from the input records to be read. Valid numbers include 002 through 999.	Required if you do not use Sampling Method 2.
12-14	INCLUDE/ EXCLUDE OPTION	An option indicating whether to include or exclude the specified <i>n</i> th number of input records for processing: INC Include the <i>n</i> th number of input records EXC Exclude the <i>n</i> th number of input records.	Required if you do not use Sampling Method 2. No default.

Table 1-24: Fields on the NTHSEL Parameter Record (Part 2 of 2)

Position	Field Name	Description	Comments
16-22 Sampling Method 2 ~ Selection a Fraction of Input Records			
16-22	FRACTION OF RECORDS	A 7-digit positive number specifying the fraction of total input records to process. A decimal point is implied before the first digit. If FILEDF fractional processing is also defined, CODE-1 Plus International will select a fraction (defined by FILEDF) of a fraction (defined by NTHSEL).	Required if you do not use Sampling Method 1.

Include Example

The following example parameter specifies to

- Include for processing (INC) every 20th record in the input file.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6..
NTHSEL.020.INC
```

Fractional Example

We want to process 5,000 records in an input file that contains 120,000 records. To do this, we divide 120,000 into 5,000 and the answer is 0.0416666. The following example parameter example specifies to process the input file according to our specifications. 4.16666 percent of the input file will be processed which is 5,000 records out of 120,000.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6..
NTHSEL.....0416666
```

Performing Cross-Sectional Sampling

Cross-sectional sampling allows you to sample records throughout the file, from beginning to end. You can specify cross-sectional sampling for the input name-and-address file using a FILEDF parameter. With the NTHSEL parameter, you can specify cross-sectional for the input name-and-address file only.

NOTE: If you specify cross-sectional sampling for the input name-and-address file on the FILEDF and the NTHSEL parameter, a fraction of a fraction of the file will be selected for processing.

To determine the number to enter in the FILEDF 7-character DECIMAL FRACTION field, divide the number of records you want to process by the number of records in the file. This gives you a decimal number. Drop the decimal, and type the first 7 digits of the number. For example, suppose you wanted to process 2,000 records from a file containing 102,986 records. To select 2,000 records for processing, divide 102,986 into 2,000. The answer is .0194201153. Drop the decimal and keep 7 digits (0194201) to type in the DECIMAL FRACTION field. This ensures that the 2,000 records processed are evenly distributed throughout the file. You can use this sampling with the NTHSEL parameter as well.

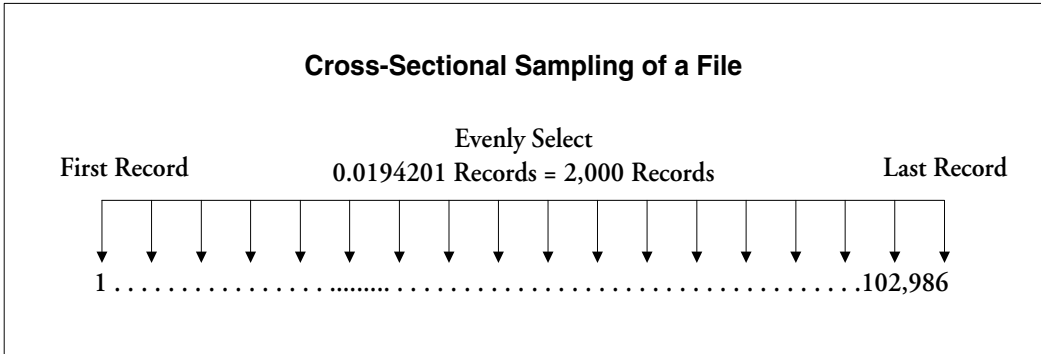


Figure 1-1: Skipping and Limiting Record Example

Including/Excluding *M*th Records

Including or excluding every *n*th record in the input name-and-address file allows you to process or bypass every user-specified number of records in the file. For example, we want to specify to process every third record in the input file.

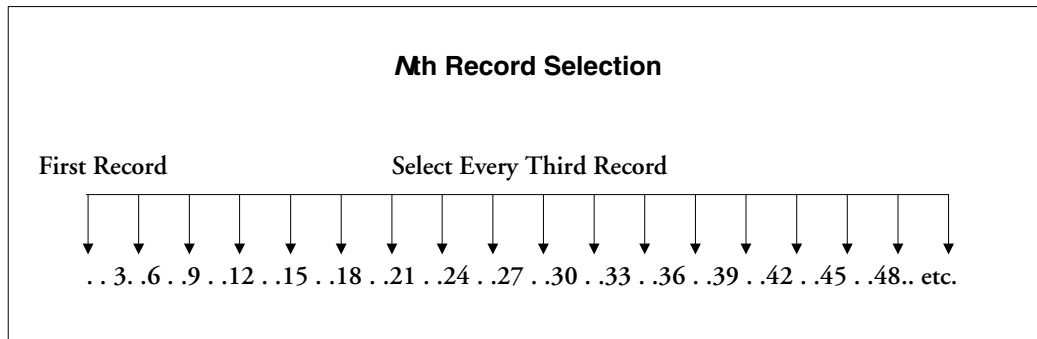


Figure 1-2: Including Every Third Record Example

PAGESZ Parameter Record

The **optional** PAGESZ parameter record indicates how many lines to print on each page of either the Execution Log or the reports in the reports file. This parameter record comprises the following:

- Number of lines to print
- Code indicating whether this number of lines corresponds to the Execution Log or to the report file reports.

NOTE: If you want to specify the number of lines to print on each page for the Execution Log and all other reports, you must include two PAGESZ parameter records in your job.

Field-by-Field

The following table is an overview of each field on the PAGESZ parameter record.

Table 1-25: PAGESZ Fields

Position	Field Name	Description	Comments
1-6	KEYWORD	PAGESZ is the only acceptable entry.	Required.
8-10	LINES-PER-PAGE	The number of lines you want printed on each page of the Execution Log or the other reports.	Required if PAGESZ parameter record is being used. Default is 60. Minimum is 25; maximum is 225.
12-14	REPORT	Code indicating whether the specified line number applies to the Execution Log or to all of the other reports. Enter one of the following: RPT Reports XLG Execution Log.	Default is RPT.

Example

In the following example, we specify that we want CODE-1 Plus International to print 100 lines-per-page on the Execution Log.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7
PAGESZ.100.XLG
```

PC OUT Parameter Record

The **optional** PC OUT parameter record is used to specify where in the output file the postal code is to be stored. The maximum value posted can be up to 10 characters; if a value of 1-9 is used, data can be truncated.

This parameter record comprises the following:

- Location and length for the output postal code
- Non-matched posting option that defines what is posted to the records when the overall record status is 3 or 6.

Field-by-Field

The following table is an overview of each field on the PC OUT parameter record.

Table 1-26: PC OUT Fields

Position	Field Name	Description	Comments
1-6	KEYWORD	PC OUT is the only acceptable entry.	Required.
8-10	Location of Postal Code	Location for the postal code on the output record.	Required.
12-13	Length of Postal Code	Length of the postal code on the output record.	Required. No default.
72	Non-matched posting option.	Non-matched posting option that should be posted to the records when the overall record status is 3 or 6. X Don't post anything B Post blanks I Post the input S Store the information regardless of record status.	Optional. Default is B.

Example

In the following example parameter record, we specify the following information:

- The starting location for the 10-byte postal code on the output record is position 150.
- Post the postal code to the records when the overall record status is 3 or 6.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
PC OUT.150.10.....I
```

REPORT Parameter Record

The **optional** REPORT parameter record is used to control the reports from the CODE-1 Plus International system. This parameter record comprises the following:

- Whether or not to print the Processing Summary by Country report
- Whether or not to print the Processing Summary by List Code report
- Whether or not to print the Unmatched Pattern Definition report
- Whether or not to print the Matched Pattern report
- Whether or not to print the Element Table ID Summary report
- Whether or not to print the Element Table ID Detail report
- Whether or not to print the Country Summary report
- The number of records processed message threshold.

Field-by-Field

The following table is an overview of each field on the REPORT parameter record.

Table 1-27: REPORT Fields (Part 1 of 2)

Position	Field Name	Description	Comments
1-6	KEYWORD	REPORT is the only acceptable entry.	Required.
8	Print Processing Summary by Country?	Print the Processing Summary by Country report? Y Do print the Processing Summary by Country report N Do not print the Processing Summary by Country report.	Optional. Default is Y.
10	Print Processing Summary by List Code?	Print the Processing Summary by List Code report? Y Do print the Processing Summary by List Code report N Do not print the Processing Summary by List Code report.	Optional. Default is N.
Positions 12 - 18 should be used only upon request from Pitney Bowes.			
12	Print Unmatched Pattern Definition?	Print the Unmatched Pattern Definition report? Y Do print the Unmatched Pattern Definition report N Do not print the Unmatched Pattern Definition report.	Optional. Default is N.

Table 1-27: REPORT Fields (Part 2 of 2)

Position	Field Name	Description	Comments
14	Print Matched Pattern?	Print the matched Pattern Definition report?	Optional. Default is N.
		Y Do print the Matched Pattern Definition report	
		N Do not print the Matched Pattern Definition report.	
16	Print Element Table ID Summary (EL Summary) Report?	Print the EL Summary report?	Optional. Default is N.
		Y Do print the EL Summary report	
		N Do not print the EL Summary report.	
18	Print Element Table ID Detail (EL Detail) Report?	Print the EL Detail report?	Optional. Default is N.
		Y Do print the EL Detail report	
		N Do not print the EL Detail report.	
20	Print Country Summary Report?	Print the Country Summary report?	Optional. Default is N.
		Y Do print the Country Summary Report	
		N Do not print the Country Summary report.	
60-66	Records Processed Message Threshold	Threshold of records processed messages. NOTE: The minimum value allowed by CODE-1 Plus International is 1; the maximum is 9999999.	Optional. Default is 50,000.

Example

In the following example parameter record, we specify the following:

- To print the Processing Summary by Country report
- To print the Processing Summary by List Code report
- To print the Country Summary report
- To print the process message every 10,000 records.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
REPORT.Y.Y.N.N.N.N.Y.....0010000
```


SA OUT Parameter Record

The **optional** SA OUT parameter record is used to specify where in the output file the standardized address components are to be stored. The use of multi-national characters with this information is controlled by your entry in column 8 of the FORMAT parameter, and casing of this information is controlled by your entry in column 10 of the FORMAT parameter.

The fourth field may contain any unmatched data found defined in the either the fixed street lines or in the address block input.

This parameter record comprises the following:

- Location and length for line 1 of the address
- Location and length for line 2 of the address
- Location and length for line 3 of the address
- Location and length for line 4 of the address
- Non-matched posting option.

Field-by-Field

The following table is an overview of each field on the SA OUT parameter record.

Table 1-28: SA OUT Fields (Part 1 of 2)

Position	Field Name	Description	Comments
1-6	KEYWORD	SA OUT is the only acceptable entry.	Required.
8-10	Address Line 1 Location	Location of line 1 of the address line data.	Optional. No default.
12-13	Address Line 1 Length	Length of line 1 of the address line data.	Optional. No default.
15-17	Address Line 2 Location	Location of line 2 of the address line data.	Optional. No default.
19-20	Address Line 2 Length	Length of line 2 of the address line data.	Optional. No default.
22-24	Address Line 3 Location	Location of line 3 of the address line data.	Optional. No default.
26-27	Address Line 3 Length	Length of line 3 of the address line data.	Optional. No default.
29-31	Address Line 4 Location	Location of line 4 of the address line data.	Optional. No default.

Table 1-28: SA OUT Fields (Part 2 of 2)

Position	Field Name	Description	Comments
33-34	Address Line 4 Length	Length of line 4 of the address line data.	Optional. No default.
36-38	Extra Information Location	Location of the Extra Information Data in the output record.	Optional. No default.
40-41	Extra Information Length	Length of the Extra Information Data in the output record.	Optional. No default.
72	Non-Matched Posting Option	<p>Non-matched posting option that defines what should be posted to the records when the overall record status is 3 or 6.</p> <p>X Don't post anything</p> <p>B Post blanks</p> <p>I Post the input</p> <p>S Store the information regardless of record status.</p>	Optional. Default is B.

Example

In the following example parameter record, we specify the following:

- The location for address line 1 is in position 100 with a length of 50
- The location for address line 2 is in position 200 with a length of 50
- The location for address line 3 is in position 300 with a length of 50
- The location for address line 4 is in position 400 with a length of 50
- The location for extra information is 500 with a length of 50.
- The input should be posted when the overall record status is 3 or 6.

```

.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
SA OUT.100.50.200.50.300.50.400.50.500.50.....I

```

SELECT Parameter Record

The **optional** SELECT parameter record is used to limit the countries that are to be processed by CODE-1 Plus International. This parameter record comprises the following:

- A two-character country code list, each code separated by commas.

NOTE: If this parameter is omitted, all countries will be processed by default.

Field-by-Field

The following table is an overview of each field on the SELECT parameter record.

Table 1-29: SELECT Fields

Position	Field Name	Description	Comments
1-6	KEYWORD	SELECT is the only acceptable entry.	Required.
8-80	Countries to Select	Specify the countries' data to which you want to match your input file. Type the 2 character country code, as shown in Table 1-30 on page 68 , delimited by commas. To match your input file against the entire database, type an asterisk (*).	Required. No default.

Example

In the following example parameter record, we specify that CODE-1 International should match only French records; all others should be processed as confirmed.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
SELECT.FR
```

Table 1-30: Code Listing by Country (Part 1 of 9)

Country	Code
Afghanistan	AF
Albania	AL
Algeria	DZ
American Samoa	AS
Andorra	AD
Angola	AO
Anguilla	AI
Antigua and Barbuda	AG
Argentina	AR
Armenia	AM
Aruba	AW
Australia	AU
Austria	AT
Azerbaijan	AZ
Bahamas	BS
Bahrain	BH
Bangladesh	BD
Barbados	BB
Belarus	BY
Belgium	BE
Belize	BZ
Benin	BJ
Bermuda	BM
Bhutan	BT
Bolivia	BO
Bosnia and Herzegovina	BA
Botswana	BW

Table 1-30: Code Listing by Country (Part 2 of 9)

Country	Code
Brazil	BR
British Indian Ocean Territory	IO
British Virgin Islands	VG
Brunei Darussalam	BN
Bulgaria	BG
Burkina Faso	BF
Burundi	BI
Cambodia	KH
Cameroon	CM
Canada	CA
Cape Verde	CV
Cayman Islands	KY
Central African Republic	CF
Chad	TD
Chile	CL
China	CN
Colombia	CO
Comoros Islands	KM
Congo, Dem. People's Republic of the	CD
Congo, Republic of the	CG
Cook Islands	CK
Costa Rica	CR
Cote D'Ivoire (Ivory Coast)	CI
Croatia	HR
Cuba	CU
Cyprus	CY
Czech Republic	CZ
Denmark	DK

Table 1-30: Code Listing by Country (Part 3 of 9)

Country	Code
Djibouti	DJ
Dominica	DM
Dominican Republic	DO
East Timor	TP
Ecuador	EC
Egypt	EG
El Salvador	SV
Equatorial Guinea	GQ
Eritrea	ER
Estonia	EE
Ethiopia	ET
Falkland Islands	FK
Faroe Islands	FO
Fiji	FJ
Finland	FI
France	FR
French Guiana	GF
French Polynesia	PF
Gabon	GA
Gambia	GM
Gaza Strip	GZ
Guadeloupe	GP
Georgia	GE
Germany	DE
Ghana	GH
Gibraltar	GI
Greece	GR
Greenland	GL

Table 1-30: Code Listing by Country (Part 4 of 9)

Country	Code
Grenada	GD
Guam	GU
Guatemala	GT
Guinea	GN
Guinea Bissau	GW
Guyana	GY
Haiti	HT
Holy See	VA
Honduras	HN
Hong Kong	HK
Hungary	HU
Iceland	IS
India	IN
Indonesia	ID
Iran	IR
Iraq	IQ
Ireland	IE
Israel	IL
Italy	IT
Jamaica	JM
Japan	JP
Jordan	JO
Kazakhstan	KZ
Kenya	KE
Kiribati	KI
Kuwait	KW
Kyrgyzstan	KG
Laos	LA

Table 1-30: Code Listing by Country (Part 5 of 9)

Country	Code
Latvia	LV
Lebanon	LB
Lesotho	LS
Liberia	LR
Libya	LY
Liechtenstein	LI
Lithuania	LT
Luxembourg	LU
Macao	MO
Macedonia	MK
Madagascar	MG
Malawi	MW
Malaysia	MY
Maldives	MV
Mali	ML
Malta	MT
Marshall Islands	MH
Martinique	MQ
Mauritania	MR
Mauritius	MU
Mayotte	YT
Mexico	MX
Micronesia, Federated States of	FM
Moldova	MD
Monaco	MC
Mongolia	MN
Montenegro	ME
Montserrat	MS

Table 1-30: Code Listing by Country (Part 6 of 9)

Country	Code
Morocco	MA
Mozambique	MZ
Myanmar	MM
Namibia	NA
Nauru	NR
Nepal	NP
Netherlands	NL
Netherlands Antilles	AN
New Caledonia	NC
New Zealand	NZ
Nicaragua	NI
Niue	NU
Niger	NE
Nigeria	NG
North Korea, Dem. People's Rep. of	KP
Norway	NO
Oman	OM
Pakistan	PK
Palua	PW
Panama	PA
Papua New Guinea	PG
Paraguay	PY
Peru	PE
Philippines	PH
Pitcairn Islands	PN
Poland	PL
Portugal	PT
Puerto Rico	PR

Table 1-30: Code Listing by Country (Part 7 of 9)

Country	Code
Qatar	QA
Reunion	RE
Romania	RO
Russian Federation	RU
Rwanda	RW
Saint Helena	SH
Saint Kitts and Nevis Islands	KN
Saint Lucia	LC
Saint Pierre and Miquelon	PM
Saint Vincent and the Grenadines	VC
Samoa	WS
San Marino	SM
Sao Tome and Principe	ST
Saudi Arabia	SA
Senegal	SN
Serbia and Montenegro	CS
Seychelles	SC
Sierra Leone	SL
Singapore	SG
Slovak Republic	SK
Slovenia	SI
Solomon Islands	SB
Somalia	SO
South Africa	ZA
South Korea, Republic of	KR
Spain	ES
Sri Lanka	LK
Sudan	SD

Table 1-30: Code Listing by Country (Part 8 of 9)

Country	Code
Suriname	SR
Swaziland	SZ
Sweden	SE
Switzerland	CH
Syria	SY
Taiwan	TW
Tajikistan	TJ
Tanzania	TZ
Thailand	TH
Togo	TG
Tonga	TO
Trinidad and Tobago	TT
Tunisia	TN
Turkey	TR
Turkmenistan	TM
Turks and Caicos	TC
Tuvalu	TV
Uganda	UG
Ukraine	UA
United Arab Emirates	AE
United Kingdom	GB
United States of America	US
Uruguay	UY
Uzbekistan	UZ
Vanuatu	VU
Venezuela	VE
Vietnam	VN
Virgin Islands	VI

Table 1-30: Code Listing by Country (Part 9 of 9)

Country	Code
Wallis and Futuna Islands	WF
Western Sahara	EH
Yemen	YE
Zambia	ZM
Zimbabwe	ZW

Table 1-31: Country Listing by Code (Part 1 of 9)

Code	Country
AD	Andorra
AE	United Arab Emirates
AG	Antigua and Barbuda
AF	Afghanistan
AI	Anguilla
AL	Albania
AM	Armenia
AN	Netherlands Antilles
AO	Angola
AR	Argentina
AS	American Samoa
AT	Austria
AU	Australia
AW	Aruba
AZ	Azerbaijan
BA	Bosnia and Herzegovina
BB	Barbados
BD	Bangladesh
BE	Belgium

Table 1-31: Country Listing by Code (Part 2 of 9)

Code	Country
BF	Burkina Faso
BG	Bulgaria
BH	Bahrain
BI	Burundi
BJ	Benin
BM	Bermuda
BN	Brunei Darussalam
BO	Bolivia
BR	Brazil
BS	Bahamas
BT	Bhutan
BW	Botswana
BY	Belarus
BZ	Belize
CA	Canada
CD	Congo, Dem. People's Republic of the
CF	Central African Republic
CG	Congo, Republic of the
CH	Switzerland
CI	Cote D'Ivoire (Ivory Coast)
CK	Cook Islands
CL	Chile
CM	Cameroon
CN	China
CO	Colombia
CR	Costa Rica
CS	Serbia and Montenegro
CU	Cuba

Table 1-31: Country Listing by Code (Part 3 of 9)

Code	Country
CV	Cape Verde
CY	Cyprus
CZ	Czech Republic
DE	Germany
DJ	Djibouti
DK	Denmark
DM	Dominica
DO	Dominican Republic
DZ	Algeria
EC	Ecuador
EE	Estonia
EG	Egypt
EH	Western Sahara
ER	Eritrea
ES	Spain
ET	Ethiopia
FI	Finland
FJ	Fiji
FK	Falkland Islands
FM	Micronesia, Federated States of
FO	Faroe Islands
FR	France
GA	Gabon
GB	United Kingdom
GD	Grenada
GE	Georgia
GF	French Guiana
GH	Ghana

Table 1-31: Country Listing by Code (Part 4 of 9)

Code	Country
GI	Gibraltar
GL	Greenland
GM	Gambia
GN	Guinea
GP	Guadeloupe
GQ	Equatorial Guinea
GR	Greece
GT	Guatemala
GU	Guam
GW	Guinea Bissau
GY	Guyana
GZ	Gaza Strip
HK	Hong Kong
HN	Honduras
HR	Croatia
HT	Haiti
HU	Hungary
ID	Indonesia
IE	Ireland
IL	Israel
IN	India
IO	British Indian Ocean Territory
IQ	Iraq
IR	Iran
IS	Iceland
IT	Italy
JM	Jamaica
JO	Jordan

Table 1-31: Country Listing by Code (Part 5 of 9)

Code	Country
JP	Japan
KE	Kenya
KG	Kyrgyzstan
KH	Cambodia
KI	Kiribati
KM	Comoros Islands
KN	Saint Kitts and Nevis Islands
KP	North Korea, Dem. People's Rep. of
KR	South Korea, Republic of
KW	Kuwait
KY	Cayman Islands
KZ	Kazakhstan
LA	Laos
LB	Lebanon
LC	Saint Lucia
LI	Liechtenstein
LK	Sri Lanka
LR	Liberia
LS	Lesotho
LT	Lithuania
LU	Luxembourg
LV	Latvia
LY	Libya
MA	Morocco
MC	Monaco
MD	Moldova
ME	Montenegro
MG	Madagascar

Table 1-31: Country Listing by Code (Part 6 of 9)

Code	Country
MH	Marshall Islands
MK	Macedonia
ML	Mali
MM	Myanmar
MN	Mongolia
MO	Macao
MQ	Martinique
MR	Mauritania
MS	Montserrat
MT	Malta
MU	Mauritius
MV	Maldives
MW	Malawi
MX	Mexico
MY	Malaysia
MZ	Mozambique
NA	Namibia
NC	New Caledonia
NE	Niger
NG	Nigeria
NI	Nicaragua
NL	Netherlands
NP	Nepal
NO	Norway
NR	Nauru
NU	Niue
NZ	New Zealand
OM	Oman

Table 1-31: Country Listing by Code (Part 7 of 9)

Code	Country
PA	Panama
PE	Peru
PF	French Polynesia
PG	Papua New Guinea
PH	Philippines
PK	Pakistan
PL	Poland
PM	Saint Pierre and Miquelon
PN	Pitcairn Islands
PR	Puerto Rico
PT	Portugal
PW	Palau
PY	Paraguay
QA	Qatar
RE	Reunion
RO	Romania
RU	Russian Federation
RW	Rwanda
SA	Saudi Arabia
SB	Solomon Islands
SC	Seychelles
SD	Sudan
SE	Sweden
SG	Singapore
SH	Saint Helena
SI	Slovenia
SK	Slovak Republic
SL	Sierra Leone

Table 1-31: Country Listing by Code (Part 8 of 9)

Code	Country
SM	San Marino
SN	Senegal
SO	Somalia
SR	Suriname
ST	Sao Tome and Principe
SV	El Salvador
SY	Syria
SZ	Swaziland
TC	Turks and Caicos
TD	Chad
TG	Togo
TH	Thailand
TJ	Tajikistan
TM	Turkmenistan
TN	Tunisia
TO	Tonga
TP	East Timor
TR	Turkey
TT	Trinidad and Tobago
TV	Tuvalu
TW	Taiwan
TZ	Tanzania
UA	Ukraine
UG	Uganda
US	United States of America
UY	Uruguay
UZ	Uzbekistan
VA	Holy See

Table 1-31: Country Listing by Code (Part 9 of 9)

Code	Country
VC	Saint Vincent and the Grenadines
VE	Venezuela
VG	British Virgin Islands
VI	Virgin Islands
VN	Vietnam
VU	Vanuatu
WF	Wallis and Futuna Islands
WS	Samoa
YE	Yemen
YT	Mayotte
ZA	South Africa
ZM	Zambia
ZW	Zimbabwe

SEQCHK Parameter Record

The **optional** SEQCHK parameter record allows you to activate sequence checking of your input file, and to specify the action to be taken when a sequence error is detected. You will also use this parameter record to define a sequence control field that consists of up to nine segments.

The sequence check occurs immediately after a record is read, before any EXITIN routine is process, and before any MOVE I parameter records are performed.

Field-by-Field

The following table is an overview of each field on the SEQCHK parameter record.

Table 1-32: SEQCHK Fields (Part 1 of 2)

Position	Field Name	Description	Comments
1-6	Keyword	SEQCHK is the only acceptable entry.	Required. No default.
8	Error Treatment Option	A code indicating what action should be taken when a sequence error is detected. Enter one of the following codes: E End processing. Bypass the offending record and terminate Processing as if the end of the input file was reached, but report the error. B Bypass the offending record. Continue processing the file and continue sequence checking. C Continue processing the offending record. Continue processing the file and continue sequence checking. I Continue processing the offending record. Continue processing the file but discontinue sequence checking.	Required. No default.
10-12 17-19 24-26 31-33 38-40 45-47 52-54 59-61 66-68	Sequence Field Segment Location	The starting location in the input record of the segments that are to make up the sequence field. You may define up to 9 segments; only one is required.	First one is required; remaining are optional. No default.

Table 1-32: SEQCHK Fields (Part 2 of 2)

Position	Field Name	Description	Comments
13 20 27 34 41 48 55 62 69	Packed Segment Indicator	A code indicating whether the sequence field segment is packed or unpacked. Note that if the segment is packed, the unpacked length of the segment will be $2n-1$, where n is the length of the packed segment that you enter in the next field. P The segment is packed and must be unpacked prior to use blank The segment is unpacked.	Optional. Default is blank.
14-15 21-22 28-29 35-36 42-43 49-50 56-57 63-64 70-71	Sequence Field Segment Length	The length of the segments that are to make up the sequence field. You may define up to 9 segments; only one is required. The total unpacked length of all segments may not exceed 255.	Required for each segment for which you entered a location. No default.

Example

In the following example parameter record, we specify the following:

- CODE-1 Plus International should bypass the offending record when a sequence error is detected. It should continue processing the file and continue sequence checking.
- The starting location of the first segment that makes up the sequence field is in byte 123.
- The sequence field is packed and must be unpacked prior to use.
- The sequence field segment is 10 bytes long.
- The starting location of the second segment that makes up the sequence field is in byte 150.
- The sequence field is packed and must be unpacked prior to use.
- The sequence field segment is 10 bytes long.

```
....+....1....+....2....+....3....+....4....+....5....+....6....+....7..
SEQCHK.B.123P10.150P10
```

UFT xx Parameter Record

The **optional** UFTxx parameter record allows you to specify any text that you want printed at the bottom of every page of each report. This parameter record comprises the following information:

- Line number on which to print the text
- Side of the line on which to print the text
- Text to be printed.

NOTE: Any footer you specify is printed at the bottom of every page of each report. You may specify up to four footer lines.

Field-by-Field

The following table is an overview of each field on the UFTxx parameter record.

Table 1-33: UFTxx Fields

Position	Field Name	Description	Comments
1-3	KEYWORD	UFT is the only acceptable entry.	Required.
4	Line Number	The footer line number. Type 1, 2, 3, or 4.	Required. No default.
5	Line Side	The side of the footer line on which this text should appear. Type one of the following codes: A Left side of the line B Right side of the line.	Required. No default.
7-72	Footer Text	The text that you want to appear at the bottom of every page of each report.	Required. No Default.

Example

In the following example, we specify that we want the phrase “THE ACME MAILING CORPORATION” printed right-justified on the bottom of each page of every report.

```

.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
UFT1B.THE.ACME.MAILING.CORPORATION

```

UHDxx Parameter Record

The **optional** UHDxx parameter record is used to specify any additional text that you want printed at the top of each page of each report. This parameter record comprises the following information:

- Line number on which to print the text
- Side of the line on which to print the text
- Text to be printed.

NOTE: Any heading you specify is printed at the top of every page of each report. You may specify up to four header lines.

Field-by-Field

The following table is an overview of each field on the UHDxx parameter record.

Table 1-34: UHDxx Fields

Position	Field Name	Description	Comments
1-3	KEYWORD	UHD is the only acceptable entry.	Required.
4	Line Number	The header line number. Type 1, 2, 3, or 4.	Required. No default.
5	Line Side	The side of the header line on which this text should appear. Type one of the following codes: A Left side of the line B Right side of the line.	Required. No default.
7-72	Header Text	The text that you want to appear at the top of each page of every report.	Required. No Default.

Example

In the following example, we specify that we want the phrase “EXCELLENCE IN CUSTOMER SERVICE” printed on the top left side of each page of every report.

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....6.....+.....7..
UHD1A.EXCELLENCE.IN.CUSTOMER.SERVICE
```


CHAPTER 2

CODE-1 Plus International Reports

This chapter describes the reports printed by CODE-1 Plus International.

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Component Overview

CODE-1 Plus International generates the following reports for all jobs:

- Parameter Record Listing
- Control Totals
- Country Statistics for Entire File
- Processing Summary by Country
- Execution Log
- File Summary Report.

We provide descriptions of each of these reports in this chapter.

Parameter Record Listing Report

This report shows all of the parameter lines that are used to define a particular job. This report is printed automatically when you run a job. If you need to call Pitney Bowes Customer Support about a problem with any of your jobs, please have this report available for reference.

Control Totals Report

The Control Totals Report shows you statistics about processed, matched, and unmatched records for a job. If you need to call Customer Support about a problem with any of your jobs, please have this report available for reference. Counts and percentages are listed for the following:

- **Name/Address Records Processed** —The number of records processed from your input file.
- **Total Records for Which Address Match Attempted** — The number of records from your input file for which a match was attempted.
- **Matched Level A Country** — The number of records that match a level-A country.
- **Not Gender Coded** — The number of records for which a gender code could not be recorded.
- **Total Records Written, File ICPMCOK** — The number of records that CODE-1 Plus International matched against its database and then verified and corrected.
- **Total Records Written, File ICPMNCO** — The number of records that did not match against the International Postal Database for some reason.

NOTE: If you have chosen to generate only the validated records output file (ICBMCOK) and not the non-validated records output file (ICBMNCO), all records will be written to the ICBMCOK file.

Country Statistics for Entire File Report

The Country Statistics for Entire File Report shows you statistics about confirmed and corrected records in your job broken down by address component. If the input file contains data from a single country, you will receive the overall statistical report and the country statistics report for that one country. For multi-national files, a statistical report page will be generated for the overall file statistics and will be followed by a statistical report page for each country found in the input file. Counts and percentages are listed for the following:

- **Record Status** — Statistics for the number of records in your job, the number of quality level 1 and quality level 2 records, and the number of records that were not validated.
- **Country Status** — Statistics for the number of records for which the country component in the records was confirmed, corrected, and indeterminate.
- **City Status** — Statistics for the number of records for which the city component in the records was confirmed, corrected, and indeterminate, and for which postal data was not available (because it is not on the country's postal address file).
- **State/Province Status** — Statistics for the number of records for which the state/province component in the records was confirmed, corrected, and indeterminate, and for which postal data was not available (because it is not on the country's postal address file).
- **Postal Code Status** — Statistics for the number of records for which the postal code component in the records was confirmed, corrected, and indeterminate, and for which postal data was not available (because it is not on the country's postal address file).
- **PCD/City Status** — Statistics for the number of records for which the PCD/city component in the records was confirmed, corrected, indeterminate, confirmed/reformatted, and for which postal data was not available (because it is not on the country's postal address file).
- **Street Status** — Statistics for the number of records for which the street component in the records was confirmed, corrected, and indeterminate, and for which postal data was not available (because it is not on the country's postal address file). Also returns U.K. address where street name returns as confirmed or corrected and the house number is out of range.
- **Matched to Country Level Pattern** — Parser audit information; for Pitney Bowes use only.

- **Matched to Generic Level Pattern** — Parser audit information; for Pitney Bowes use only.
- **Matched Using Default Pattern** — Parser audit information; for Pitney Bowes use only.

Processing Summary by Country Report

The Processing Summary by Country Report shows you statistics for a specific country about confirmed and corrected records destined for that country broken down by address component. Counts and percentages are listed for the following:

Record Status

This section of the report shows statistics about the levels of address matching obtained. Statistics are reported for the following categories:

- **Number of Records Processed** — Total number of input records read.
- **Quality Level 1** — Number of category 'A' and 'B' addresses that obtained the highest level/quality possible for their country. Postal data used in matching can consist of street, street type, house number/range, town/city, locality, state, province, county, postal code/ZIP, and country. This may or may not require a street level match, depending on the country and/or city/postal code involved in the record matching process.
- **Quality Level 2** — Number of category 'A' address which required, but did not obtain a street level match and achieved matches for country, city/town, postal code/ZIP, and locality/state/province/county, as required for the country. This is also the highest quality level obtainable for category 'C' country address data that validate on country and postal code format.
- **Not Validated 3** — Number of records that could not be matched against the postal address file.
- **Multiple Match** — Number of records for which multiple matches were found.

Country Status

This section provides statistics that explain the results achieved while processing the country name data components in the file. If more than one search location is specified in the job, each location will be searched in the sequence specified on the CNTRYI parameter record until a valid country name is found or until the last provided search location has been processed. Statistics are reported for the following categories:

- **Confirmed** — Total number of input country names that matched to the licensed country list without requiring correction or modification.
- **Corrected** — Total number of input country names that required corrections in order to match the licensed country list. The names were corrected to the valid country name (minor punctuation changes will not be included in this category).
- **Indeterminate** — Total number of input country names that could not be matched to the licensed country list due to a non-correctable error, or not found within the specified search locations.
- **Not Licensed** — Total number of records from countries not selected when running a reduced masterfile.

City Status

This section of the report shows statistics that describe the results obtained from the city name matching process. If more than one search location is specified in the job, each location will be searched in the sequence specified in the CTY IN parameter record until a valid city name is found or until the last provided search location has been searched. This section includes statistics on the following:

- **Confirmed** — Total number of input city names that matched to the postal address file without requiring correction or modification.
- **Corrected** — Total number of city names that were corrected to a different value. This could be due to a spelling error or to an address match to the postal address file. Minor punctuation changes will not be included in this category.
- **Indeterminate** — Total number of records for which the input city name was not found in the postal address file and could not be corrected by postal code/street matching. This return code will also appear when the city name could not be matched.
- **Postal Data Unavailable** — The number of records containing a city name and that are in countries for which no city name matching is performed.
- **Multiple Match** — Number of records for which multiple matches were found.

State/Province Status

This section of the report shows statistics that explain the results achieved by the state/province matching process. Statistics are provided for the following categories:

- **Confirmed** — Total number of state/province names matched in the postal address file.
- **Corrected** — Total number of state/province names that were corrected to a different value. This could be due to a spelling error or to a city/postal code/address match to the postal address file. Minor punctuation changes will not be included in this category.
- **Indeterminate** — Total number of records for which the state/province name was not found in the postal address file and could not be corrected by city/postal code/street matching. This return code will also appear when the country name could not be matched.
- **Postal Data Unavailable** — The number of records containing a state/province name and that are in countries for which no state province name matching is performed.
- **Multiple Match** — Number of records for which multiple matches were found.

Postal Code Status

This section of the report shows statistics that explain the results achieved by the postal code matching process. If more than one search location is specified, each location will be searched in the sequence specified in the CS PCD or the AB INP parameter record until a valid postal code/city is found or until the last provided search location has been searched. Statistics are provided for the following categories:

- **Confirmed** — Total postal codes matched to the postal address file without needing to be corrected.
- **Corrected** — Number of postal codes corrected or provided by the matching process.
- **Indeterminate** — Total number of records for which the input postal code was not found in the postal address file and could not be corrected by city/street matching. This included records for which the country name could not be matched.
- **Confirmed/Reformatted** — Number of postal codes that were matched after physical reformatting.

- **Postal Data Unavailable** — Number of records that contained postal codes but are in countries for which no postal code matching is performed.
- **Multiple Match** — Number of records for which multiple matches were found.

PCD/City Status

This section of the report shows statistics that explain the results achieved by the postal code/city matching process. If more than one search location is specified, each location will be searched in the sequence specified in the CS PCD or the AB INP parameter record until a valid postal code/city is found or until the last provided search location has been searched.

Statistics are provided for the following categories:

- **Confirmed** — Total postal codes/cities matched to the postal address file without needing to be corrected.
- **Corrected** — Number of postal codes/cities corrected or provided by the matching process.
- **Indeterminate** — Total number of records for which the input postal code/city was not found in the postal address file and could not be corrected by city/street matching. This included records for which the country name could not be matched.
- **Confirmed/Reformatted** — Number of postal codes/cities that were matched after physical reformatting.
- **Postal Data Unavailable** — Number of records that contained postal codes/cities but are in countries for which no postal code matching is performed.
- **Multiple Match** — Number of records for which multiple matches were found.

Street Status

This section provides statistics that explain the results accomplished by the street matching process. Statistics are provided for the following categories:

- **Confirmed** — Total number of street addresses which were found in the postal address file without needing to be corrected.
- **Corrected** — Number of street addresses that required address data corrections or that had the sequence of address lines altered.

- **Indeterminate** — Total number of records for which the input street address data was not found in the postal address file and could not be corrected by city/postal code matching. This category includes records for which the country name could not be matched.
- **U.K. Address** — Address is from U.K. with a return code of confirmed or corrected and house number is out of range.
- **Postal Data Unavailable** — The number of records containing a street address that are in countries for which no street address matching is performed.
- **Multiple Match** — Number of records for which multiple matches were found.

Remaining Fields

The three remaining fields on this report—Matched to Country Level Pattern, Matched to Generic Level Pattern, and Matched Using Default Pattern are used only for troubleshooting purposes when requested by Pitney Bowes Customer Support.

Execution Log

The Execution Log shows you the programs that CODE-1 Plus International executes when processing your name-and-address file. The Execution Log Report is helpful if your job terminates unexpectedly, because it tells you how far the job got before it terminated. If you call Pitney Bowes Customer Support, have this report handy for reference.

File Summary Report

The File Summary Report shows the number of records and the overall result codes for each country on a line-by-line basis. It includes the parameters as you completed them, a processing summary by country, a summary by country level, and a summary by output record.

CHAPTER 3

Interactive Screen Reference

This chapter provides a complete reference for each screen within the CODE-1 Plus International Interactive system. Each screen is presented, along with a description of its fields and function keys.

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Address Verification Screens

The Address Verification Screen has multiple options. Each of these options is discussed in the following pages.

NOTE: Use Shift-Tab to return to prior fields within each screen.

Standard Screen

The *CODE-1 Plus International Address Verification* screen has the address matching function. The different parts of the screen are shown as follows:

The screenshot shows the following screen content:

```

R01.6M02                ** CODE-1 PLUS INTERNATIONAL ***    09/16/2003 16:18:48
-----ADDRESS VERIFICATION-----
  FIRST NAME:
  LAST/FULL NAME:
  FIRM NAME:
  1ST ADDR LINE:
  2ND ADDR LINE:
  3RD ADDR LINE:
  4TH ADDR LINE:
  CITY:
  POST CODE:
  COUNTRY:
  STATE:
  USE ADDR BLK?:
  GENDER CHK?:
  SEPARATE?:
  MULTI NAT?:
  CASE?:

-----VERIFICATION RESULTS-----
  GENDER:   ADDR_BLK L1:
  ADDRESS:  L2:
  CITY:     L3:
  POST CODE: L4:
  STATE:    L5:
  COUNTRY:  L6:
  CATEGORY: L7:
  L8:

  ENTER AN ADDRESS TO BE VERIFIED AND PRESS ENTER
  F2=NEW ADDR  F3=QUIT  F4=REVERIFY  ENTER=VERIFY
  
```

Annotations on the left side of the screenshot:

- Fixed Field Input Fields/ Match Results:** Points to the address input fields (1ST ADDR LINE through COUNTRY).
- Return Codes:** Points to the GENDER and POST CODE fields.
- Address Block Input Fields/ Match Results:** Points to the ADDR_BLK L1 through L8 fields.
- Status Line:** Points to the instruction "ENTER AN ADDRESS TO BE VERIFIED AND PRESS ENTER".
- Function Keys:** Points to the footer "F2=NEW ADDR F3=QUIT F4=REVERIFY ENTER=VERIFY".

From this screen, you can enter an address and attempt a match.

- **Input Fields** — Enter the address that you want to match.
- **Format Options** — Enter the format options to be used for the returned output fields.
- **Match Results** — CODE-1 Plus International returns the completed address.
- **Return Codes** — CODE-1 Plus International returns codes that indicate the success or reason for failure of the match attempt.

- **Status Line** — CODE-1 Plus International displays command and error messages.
- **Function Keys**—Execute commands.

Fields

The following table presents a description of, and acceptable values for, each field on the *CODE-1 Plus International Address Verification* screen.

Table 3-35: Fields on the Address Verification Screen (Part 1 of 4)

Field Name	Description
<p>The fields below are used if you select “S” or “N” for “Use Addr Blk”. Type your input address in the following fields. After you have pressed <Enter> to attempt a match, CODE-1 Plus International’s interactive matching function displays the verified/corrected address in the same fields.</p>	
First Name	Type the first name of the addressee.
Last/Full Name	Type the last or full name of the addressee.
Firm Name	Type the name of the company/firm.
1st Addr Line	Type the first line of the street address.
2nd Addr Line	Type the second line of the street address.
3rd Addr Line	Type the third line of the street address.
4th Addr Line	Type the fourth line of the street address.
City	Type the city name.
Post Code	Type the postal code.
State	Type the state/province name.
Country	Type the country name.
<p>The fields below are used if you select “Y” for “Use Addr Blk”. Type your input address in the following fields. After you have pressed <Enter> to attempt a match, CODE-1 Plus International’s interactive matching function displays the verified/corrected address in the same fields.</p>	
L1	Type line 1 of the address.
L2	Type line 2 of the address.
L3	Type line 3 of the address.
L4	Type line 4 of the address.
L5	Type line 5 of the address.
L6	Type line 6 of the address.

Table 3-35: Fields on the Address Verification Screen (Part 2 of 4)

Field Name	Description
L7	Type line 7 of the address.
L8	Type line 8 of the address.
Complete the following fields to define processing options.	
Use Addr Blk?	<p>Specify whether to use the address block, which defines where address information should be entered and where to expect returned output. This allows you the flexibility to enter, and have returned, data in the format in which it would appear on a mailing label. For instance, in Canada, the city/province information appears on a mailing label as: "Saskatoon SK S7N 0B3", and this is how the information should be entered/returned if using Address Block processing. Conversely, if you choose fixed-fielded processing We might want to define the term of 'Address Block'. The intent of which is to allow users the flexibility to enter, and have returned, data in the format in which it would appear on a mailing label. For instance in Canada, the city/province information appears on a mailing label as: 'Saskatoon SK S7N 0B3' and this is how the information should be entered/returned if using Address Block processing. Conversely, this same information should be entered/returned as: City = 'Saskatoon', State = 'SK', Post Code = 'S7N 0B3' had the user chosen fixed-fielded processing by putting N in the "Use Addr Blk?" option, this same information should be entered/returned as: City = 'Saskatoon', State = 'SK', Post Code = 'S7N 0B3'.</p> <p>Y Use address block for input and output (complete address information in bottom half of screen); output will overwrite input</p> <p>N Use fixed-fielded (complete address information in top half of screen); output will overwrite input</p> <p>S (default) Use fix-fielded (complete address information in top-half of screen); output will be displayed in the bottom half of the screen.</p>
Gender Chk?	<p>Specify whether CODE-1 Plus International should determine the most likely gender of a first name in a given country. Type one of the following:</p> <p>Y Provide gender code.</p> <p>N (default) Do not provide gender code.</p>
Separate?	<p>Specify whether CODE-1 Plus International should separate the first and last name in the "Last/Full Name" field. Type one of the following:</p> <p>Y Separate first and last name of the addressee</p> <p>NOTE: This function will not overwrite an entry in the "First Name" field.</p> <p>N (default) Do not separate first and last name of the addressee.</p>
Multi Nat?	<p>Specify whether CODE-1 Plus International should include or exclude multinational characters in address. Type one of the following:</p> <p>Y Include multinational characters</p> <p>N (default) Exclude multinational characters.</p>
Case?	<p>Specify whether CODE-1 Plus International should return characters in upper case or mixed case.</p> <p>U Provide characters in upper case only</p> <p>M (default) Provide characters in mixed case.</p>
The following fields contain possible return codes.	

Table 3-35: Fields on the Address Verification Screen (Part 3 of 4)

Field Name	Description
Gender	<p>If you typed a "Y" in the Gender Chk? field, CODE-1 Plus International returns one of the following:</p> <p>F The first name most likely belongs to a female</p> <p>M The first name most likely belongs to a male</p> <p>A The gender is ambiguous.</p>
Address	<p>Street address status code. One of the following will be displayed:</p> <p>1 Confirmed</p> <p>2 Corrected</p> <p>3 Indeterminate</p> <p>5 Postal data not available*</p> <p>6 Multiple choices available.</p>
City	<p>City status code. One of the following codes is stored:</p> <p>1 Confirmed</p> <p>2 Corrected</p> <p>3 Indeterminate</p> <p>5 Postal data not available*</p> <p>6 Multiple choices available.</p>
Post Code	<p>Postal code status code. One of the following is returned:</p> <p>1 Confirmed</p> <p>2 Corrected</p> <p>3 Indeterminate</p> <p>4 Reformatted</p> <p>5 Postal data not available*</p> <p>6 Multiple choices available.</p>
State	<p>Street address status code. One of the following is returned:</p> <p>1 Confirmed</p> <p>2 Corrected</p> <p>3 Indeterminate</p> <p>5 Postal data not available.*</p>

Table 3-35: Fields on the Address Verification Screen (Part 4 of 4)

Field Name	Description
Country	Country status code. One of the following is returned: 1 Confirmed 2 Corrected 3 Indeterminate 4 Not licensed.
Category	Country match level. One of the following is returned: A Country has street data B Country has city or postal code data only C Country name only is on database.

* “Postal Data Unavailable” means that the country’s postal address file does not contain the address component in question.

Function Keys

The following table describes the function keys on the *CODE-1 Plus International Address Verification* screen.

NOTE: In Unix, the function keys **may** be set differently or not set at all. Typically, to use an F-key on Unix, you should press **<Esc>**, followed by the number of the function.

Table 3-36: Function Keys on the Address Verification Screen

Function Key	Description
F2 (New Addr)	Press <F2> to clear the <i>CODE-1 Plus International Address Verification</i> screen and enter a new address.
F3 (Quit)	Press <F3> to exit the <i>CODE-1 Plus International</i> interactive address matching function.
F4 (Reverify)	Press <F4> to override some <i>CODE-1 Plus International Address Verification</i> screen error messages and attempt a match.
Enter (Verify)	Press <Enter> to attempt an address match.

Navigation Keys

The following table describes how to move around the *CODE-1 Plus International Address Verification* screen.

Table 3-37: Navigation Keys on the Address Verification Screen

Navigation Key	Description
right arrow or <Tab>	Move cursor to next field.
left arrow or <Shift-Tab>	Move cursor to previous field.
up arrow	Move cursor to above field.
down arrow	Move cursor to below field.

Standard Processing Output Option

The standard processing output option is accessed by entering an address and putting **S** in the Use Addr Blk? field as shown below:

```

R01.6M02                ** CODE-1 PLUS INTERNATIONAL ***    09/16/2003 16:18:48
-----ADDRESS VERIFICATION-----
FIRST NAME:                                     USE ADDR BLK?:S
LAST/FULL NAME:                                 GENDER CHK?:N
FIRM NAME:                                     SEPARATE?:N
1ST ADDR LINE: 123 MAIN ST                     MULTI NAT?:N
2ND ADDR LINE:                                 CASE?:N
3RD ADDR LINE:
4TH ADDR LINE:
CITY: SASKATOON
POST CODE: S7N0B3          STATE: SK
COUNTRY: CANADA

-----VERIFICATION RESULTS-----
GENDER:          ADDR BLK L1:
ADDRESS:         L2:
CITY:           L3:
POST CODE:      L4:
STATE:         L5:
COUNTRY:       L6:
CATEGORY:      L7:
               L8:
ENTER AN ADDRESS TO BE VERIFIED AND PRESS ENTER
F2=NEW ADDR F3=QUIT F4=REVERIFY ENTER=VERIFY

```

The output from this entry is shown below:

```
R01.6M02          ** CODE-1 PLUS INTERNATIONAL ***    09/16/2003 16:18:48
-----ADDRESS VERIFICATION-----
FIRST NAME:
LAST/FULL NAME:
FIRM NAME:
1ST ADDR LINE: 123 MAIN ST
2ND ADDR LINE:
3RD ADDR LINE:
4TH ADDR LINE:
CITY: SASKATOON
POST CODE: S7N0B3      STATE: SK
COUNTRY: CANADA
USE ADDR BLK?:S
GENDER CHK?:N
SEPARATE?:N
MULTI NAT?:N
CASE?:N

-----VERIFICATION RESULTS-----
GENDER:          ADDR BLK L1: 123 MAIN ST
ADDRESS:5        L2: SASKATOON SK S7N0B3
CITY:5           L3: CANADA
POST CODE:1      L4:
STATE:5          L5:
COUNTRY:1        L6:
CATEGORY:C       L7:
L8:
THIS ADDRESS WAS PARTIALLY VERIFIED
F2=NEW ADDR F3=QUIT F4=REVERIFY ENTER=VERIFY
```


Address Block Option

The address block option is accessed by entering an address as you think it would appear on an address label and putting **Y** in the Use Addr Blk? field as shown below:

```

R01.6M02          ** CODE-1 PLUS INTERNATIONAL *** 09/16/2003 16:18:48
-----ADDRESS VERIFICATION-----
FIRST NAME:                               USE ADDR BLK?:Y
LAST/FULL NAME:                             GENDER CHK?:N
FIRM NAME:                                  SEPARATE?:N
1ST ADDR LINE:                              MULTI NAT?:N
2ND ADDR LINE:                              CASE?:N
3RD ADDR LINE:
4TH ADDR LINE:
CITY:
POST CODE:          STATE:
COUNTRY:

-----VERIFICATION RESULTS-----
GENDER:          ADDR BLK L1: 123 MAIN ST
ADDRESS:         L2: SASKATOON SK S7N0B3 CANADA
CITY:            L3:
POST CODE:      L4:
STATE:          L5:
COUNTRY:        L6:
CATEGORY:       L7:
                L8:
THIS ADDRESS WAS PARTIALLY VERIFIED
F2=NEW ADDR F3=QUIT F4=REVERIFY ENTER=VERIFY

```

The output from this entry is shown below.

```

R01.6M02          ** CODE-1 PLUS INTERNATIONAL *** 09/16/2003 16:18:48
-----ADDRESS VERIFICATION-----
FIRST NAME:                               USE ADDR BLK?:Y
LAST/FULL NAME:                             GENDER CHK?:N
FIRM NAME:                                  SEPARATE?:N
1ST ADDR LINE:                              MULTI NAT?:N
2ND ADDR LINE:                              CASE?:N
3RD ADDR LINE:
4TH ADDR LINE:
CITY:
POST CODE:          STATE:
COUNTRY:

-----VERIFICATION RESULTS-----
GENDER:          ADDR BLK L1: 123 MAIN ST
ADDRESS:5        L2: SASKATOON SK S7N0B3
CITY:5           L3: CANADA
POST CODE:1      L4:
STATE:5          L5:
COUNTRY:1        L6:
CATEGORY:C       L7:
                L8:
THIS ADDRESS WAS PARTIALLY VERIFIED
F2=NEW ADDR F3=QUIT F4=REVERIFY ENTER=VERIFY

```

Fixed-Fielded Option

The fixed-fielded option is accessed by entering an address and putting N in the Use Addr Blk? field as shown below:

```

R01.6M02          ** CODE-1 PLUS INTERNATIONAL *** 09/16/2003 16:18:48
-----ADDRESS VERIFICATION-----
FIRST NAME:
LAST/FULL NAME:
FIRM NAME:
1ST ADDR LINE: 123 MAIN ST
2ND ADDR LINE:
3RD ADDR LINE:
4TH ADDR LINE:
                CITY: SASKATOON
                POST CODE: S7N0B3      STATE: SK
                COUNTRY: CANADA
                USE ADDR BLK?:N
                GENDER CHK?:N
                SEPARATE?:N
                MULTI NAT?:N
                CASE?:N

-----VERIFICATION RESULTS-----
GENDER:          ADDR BLK L1:
ADDRESS:         L2:
CITY:            L3:
POST CODE:       L4:
STATE:           L5:
COUNTRY:         L6:
CATEGORY:        L7:
                L8:
ENTER AN ADDRESS TO BE VERIFIED AND PRESS ENTER
                F2=NEW ADDR F3=QUIT F4=REVERIFY ENTER=VERIFY

```

The output from this entry is shown below.

```

R01.6M02          ** CODE-1 PLUS INTERNATIONAL *** 09/16/2003 16:18:48
-----ADDRESS VERIFICATION-----
FIRST NAME:
LAST/FULL NAME:
FIRM NAME:
1ST ADDR LINE: 123 MAIN ST
2ND ADDR LINE:
3RD ADDR LINE:
4TH ADDR LINE:
                CITY: SASKATOON
                POST CODE: S7N0B3      STATE: SK
                COUNTRY: CANADA
                USE ADDR BLK?:N
                GENDER CHK?:N
                SEPARATE?:N
                MULTI NAT?:N
                CASE?:N

-----VERIFICATION RESULTS-----
GENDER:          ADDR BLK L1:
ADDRESS:5        L2:
CITY:5           L3:
POST CODE:1      L4:
STATE:5          L5:
COUNTRY:1        L6:
CATEGORY:C       L7:
                L8:
THIS ADDRESS WAS PARTIALLY VERIFIED
                F2=NEW ADDR F3=QUIT F4=REVERIFY ENTER=VERIFY

```

Gender Checking Option

The gender checking option is accessed by entering an address and putting Y in the Gender Chk? field as shown below:

```

R01.6M02          ** CODE-1 PLUS INTERNATIONAL *** 09/16/2003 16:18:48
-----ADDRESS VERIFICATION-----
      FIRST NAME:                                USE ADDR BLK?:N
LAST/FULL NAME: CATHERINE JONES                  GENDER CHK?:Y
      FIRM NAME:                                SEPARATE?:N
1ST ADDR LINE: 123 MAIN ST                       MULTI NAT?:N
2ND ADDR LINE:                                    CASE?:N
3RD ADDR LINE:
4TH ADDR LINE:
      CITY: SASKATOON
      POST CODE: S7N0B3          STATE: SK
      COUNTRY: CANADA

-----VERIFICATION RESULTS-----
      GENDER:          ADDR BLK L1:
      ADDRESS:          L2:
      CITY:            L3:
POST CODE:            L4:
      STATE:           L5:
      COUNTRY:         L6:
      CATEGORY:        L7:
                          L8:
ENTER AN ADDRESS TO BE VERIFIED AND PRESS ENTER
      F2=NEW ADDR F3=QUIT F4=REVERIFY ENTER=VERIFY

```

The output from this entry is shown below. Note the “F” in the Gender verification result.

```

R01.6M02          ** CODE-1 PLUS INTERNATIONAL *** 09/16/2003 16:18:48
-----ADDRESS VERIFICATION-----
      FIRST NAME:                                USE ADDR BLK?:N
LAST/FULL NAME: CATHERINE JONES                  GENDER CHK?:Y
      FIRM NAME:                                SEPARATE?:N
1ST ADDR LINE: 123 MAIN ST                       MULTI NAT?:N
2ND ADDR LINE:                                    CASE?:N
3RD ADDR LINE:
4TH ADDR LINE:
      CITY: SASKATOON
      POST CODE: S7N0B3          STATE: SK
      COUNTRY: CANADA

-----VERIFICATION RESULTS-----
      GENDER:F          ADDR BLK L1:
      ADDRESS:5          L2:
      CITY:5            L3:
POST CODE:1            L4:
      STATE:5           L5:
      COUNTRY:1         L6:
      CATEGORY:C        L7:
                          L8:
THIS ADDRESS WAS PARTIALLY VERIFIED
      F2=NEW ADDR F3=QUIT F4=REVERIFY ENTER=VERIFY

```

Separate Names Option

The separate names option is accessed by entering an address and putting Y in the Separate? field as shown below:

```

R01.6M02          ** CODE-1 PLUS INTERNATIONAL *** 09/16/2003 16:18:48
-----ADDRESS VERIFICATION-----
FIRST NAME:
LAST/FULL NAME: CATHERINE JONES          USE ADDR BLK?:N
FIRM NAME:                               GENDER CHK?:N
1ST ADDR LINE: 123 MAIN ST              SEPARATE?:Y
2ND ADDR LINE:                          MULTI NAT?:N
3RD ADDR LINE:                          CASE?:N
4TH ADDR LINE:
CITY: SASKATOON
POST CODE: S7N0B3      STATE: SK
COUNTRY: CANADA

-----VERIFICATION RESULTS-----
GENDER:      ADDR BLK L1:
ADDRESS:     L2:
CITY:        L3:
POST CODE:   L4:
STATE:       L5:
COUNTRY:     L6:
CATEGORY:    L7:
              L8:
ENTER AN ADDRESS TO BE VERIFIED AND PRESS ENTER
F2=NEW ADDR F3=QUIT F4=REVERIFY ENTER=VERIFY

```

The output from this entry is shown below. Note how the name is now entered on two lines in the address verification portion of the screen.

```

R01.6M02          ** CODE-1 PLUS INTERNATIONAL *** 09/16/2003 16:18:48
-----ADDRESS VERIFICATION-----
FIRST NAME: CATHERINE          USE ADDR BLK?:N
LAST/FULL NAME: JONES         GENDER CHK?:N
FIRM NAME:                    SEPARATE?:Y
1ST ADDR LINE: 123 MAIN ST    MULTI NAT?:N
2ND ADDR LINE:                CASE?:N
3RD ADDR LINE:
4TH ADDR LINE:
CITY: SASKATOON
POST CODE: S7N0B3      STATE: SK
COUNTRY: CANADA

-----VERIFICATION RESULTS-----
GENDER:F      ADDR BLK L1:
ADDRESS:5     L2:
CITY:5        L3:
POST CODE:1   L4:
STATE:5       L5:
COUNTRY:1     L6:
CATEGORY:C    L7:
              L8:
THIS ADDRESS WAS PARTIALLY VERIFIED
F2=NEW ADDR F3=QUIT F4=REVERIFY ENTER=VERIFY

```

Multinational Characters Option

The multinational characters option is accessed by entering an address and putting **Y** in the Multi Nat? field as shown below:

```

R01.6M02          ** CODE-1 PLUS INTERNATIONAL *** 09/16/2003 16:18:48
-----ADDRESS VERIFICATION-----
      FIRST NAME:                                USE ADDR BLK?:N
LAST/FULL NAME:                                GENDER CHK?:N
      FIRM NAME:                                SEPARATE?:N
1ST ADDR LINE: GEISSELSTR 95                   MULTI NAT?:Y
2ND ADDR LINE:                                CASE?:N
3RD ADDR LINE:
4TH ADDR LINE:
      CITY: KOELN
      POST CODE: 50823          STATE:
      COUNTRY: GERMANY

-----VERIFICATION RESULTS-----
      GENDER:          ADDR BLK L1:
      ADDRESS:          L2:
      CITY:            L3:
POST CODE:          L4:
      STATE:          L5:
      COUNTRY:        L6:
      CATEGORY:       L7:
                        L8:
ENTER AN ADDRESS TO BE VERIFIED AND PRESS ENTER
      F2=NEW ADDR  F3=QUIT  F4=REVERIFY  ENTER=VERIFY

```

The output from this entry is shown below. Note how the city name has an umlaut over the “O” in the address verification portion of the screen.

```

R01.6M02          ** CODE-1 PLUS INTERNATIONAL *** 09/16/2003 16:18:48
-----ADDRESS VERIFICATION-----
      FIRST NAME:                                USE ADDR BLK?:N
LAST/FULL NAME:                                GENDER CHK?:N
      FIRM NAME:                                SEPARATE?:N
1ST ADDR LINE: GEISSELSTR. 95                   MULTI NAT?:Y
2ND ADDR LINE:                                CASE?:N
3RD ADDR LINE:
4TH ADDR LINE:
      CITY: KÖLN
      POST CODE: 50823          STATE:
      COUNTRY: GERMANY

-----VERIFICATION RESULTS-----
      GENDER:F          ADDR BLK L1:
      ADDRESS:5          L2:
      CITY:5            L3:
POST CODE:1            L4:
      STATE:5           L5:
      COUNTRY:1         L6:
      CATEGORY:C        L7:
                        L8:
THIS ADDRESS WAS PARTIALLY CONFIRMED
      F2=NEW ADDR  F3=QUIT  F4=REVERIFY  ENTER=VERIFY

```

Casing Option

The casing option is accessed by entering an address and putting **U** in the Case? field as shown below.

NOTE: On your Interactive System, the text should appear in lower case.

```

R01.6M02                ** CODE-1 PLUS INTERNATIONAL *** 09/16/2003 16:18:48
-----ADDRESS VERIFICATION-----
  FIRST NAME:                                USE ADDR BLK?:N
LAST/FULL NAME:                             GENDER CHK?:N
  FIRM NAME:                                SEPARATE?:N
1ST ADDR LINE: 123 MAIN ST                   MULTI NAT?:N
2ND ADDR LINE:                                CASE?:U
3RD ADDR LINE:
4TH ADDR LINE:
  CITY: SASKATOON
  POST CODE: S7N0B3      STATE: SK
  COUNTRY: CANADA

-----VERIFICATION RESULTS-----
  GENDER:      ADDR BLK L1:
  ADDRESS:     L2:
  CITY:        L3:
POST CODE:    L4:
  STATE:      L5:
  COUNTRY:    L6:
  CATEGORY:   L7:
              L8:
ENTER AN ADDRESS TO BE VERIFIED AND PRESS ENTER
      F2=NEW ADDR F3=QUIT F4=REVERIFY ENTER=VERIFY

```

The output from this entry is shown below. Note how the text is now all uppercase in the address verification portion of the screen.

```
R01.6M02          ** CODE-1 PLUS INTERNATIONAL *** 09/16/2003 16:18:48
-----ADDRESS VERIFICATION-----
FIRST NAME:
LAST/FULL NAME:
FIRM NAME:
1ST ADDR LINE: 123 MAIN ST
2ND ADDR LINE:
3RD ADDR LINE:
4TH ADDR LINE:
CITY: SASKATOON
POST CODE: S7N0B3      STATE: SK
COUNTRY: CANADA
USE ADDR BLK?:N
GENDER CHK?:N
SEPARATE?:N
MULTI NAT?:N
CASE?:U

-----VERIFICATION RESULTS-----
GENDER:F      ADDR BLK L1:
ADDRESS:5     L2:
CITY:5        L3:
POST CODE:1   L4:
STATE:5       L5:
COUNTRY:1    L6:
CATEGORY:C    L7:
L8:
THIS ADDRESS WAS PARTIALLY VERIFIED
F2=NEW ADDR F3=QUIT F4=REVERIFY ENTER=VERIFY
```


CHAPTER 4

Error Conditions

This chapter describes error conditions that can occur during CODE-1 Plus International batch processing. A list of condition codes is also provided.

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Parameter Record Errors

When CODE-1 Plus International detects an error in your parameter records, your job terminates. To determine the error(s) CODE-1 Plus International detected, follow the steps below:

- 1 Open the output file containing the reports, and review the Parameter Record Listing.
- 2 Scroll to the right in the Parameter Record Listing, past the 80th column in the report, and look for *ERROR* printed in the file.
- 3 Scroll back to the left to positions 1 through 80, and look at the line directly below the parameter record with the error. The line where the *ERROR* message occurs is the parameter line containing the error.

For example, if our CS PCD parameter record is supposed to be as follows:

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....
CS PCD S 163 C 141 20 161 02
```

...but, we inadvertently typed:

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....
CS PCD Sa163nC 141 20 161 02
```

...the Parameter Record Listing, CODE-1 Plus International places *ERROR* past the 80th position on the line containing the CS PCD parameter record and asterisks beneath positions 9 through 12, as follows:

```
.....+.....1.....+.....2.....+.....3.....+.....4.....+.....5.....+.....
CS PCD Sa163nC 141 20 161 02      023 C 027
      *****
```

Condition Codes

The following table lists all of the condition codes that are possible when executing a CODE-1 Plus International program.

Table 4-38: CODE-1 Plus International Program Condition Codes

Condition Code	Code Description
Program ICPM00	
0	Normal completion
12	Parameter record error
99	International Postal Database and software not compatible or a file I/O error. See output from job for specific message.
EXTFILE	
0	Normal completion
99	International Postal Database and software not compatible or a file I/O error. See output from job for specific message.
G1G001	
0	Normal completion
99	Error opening or reading parameter record file

NOTE: If you receive any other error conditions when you are running CODE-1 Plus International, please call Pitney Bowes Inc. Customer Support at 800-367-6950.

CHAPTER 5

Sample Library Member Reference

This chapter describes the sample library members that are included with your software. Pitney Bowes is not responsible for any changes you make to the sample members.

NOTE: Not all members are available on all platforms.

Sample Library Members

Table 5-39: Sample Library Members

Member	Description of Contents
\$\$READSM	An index, along with an associated definition/usage, of each member in the sample library. NOTE: This member is for MVS and IMS only.
ICSMCOP	A COBOL program that illustrates how to code a user exit routine.
ICSMPLDR	Sample call to ICMATCHN and ICFORMAT.
ICFMTPRM	ICFORMAT COBOL call area copybook.
ICMAAPRM	Audit COBOL call area copybook.
ICMATPRM	ICMATCHN COBOL call area copybook.

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