

CODE-1 Plus™ International

Version 1.8.2

Working With Guide

For Open Systems



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CHAPTER 1

Working With CODE-1 Plus International in Dispatcher4

This chapter contains detailed information on all the options available for CODE-1 Plus International with Dispatcher4.

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Dialog Boxes by Parameter Records

The following table lists all parameter records associated with the CODE-1 Plus International GUI application, indicating through which dialog box each parameter record is configured. The “Menu” column lists the menu from which each dialog box can be accessed in the CODE-1 Plus International GUI.

Table 1-1: Dialog Boxes by Parameter Records (Part 1 of 2)

Parameter Record	Positions	Associated Dialog Box	Menu
AB OUT	11-13, 15-16, 18-20, 22-23, 25-27, 29-30, 32-34, 36-37, 39-41, 43-44, 46-48, 50-51, 53-55, 57-58, 60-62, 64-65, 67-69, 71-72	Primary Window	n/a
ADDRDF	8 10-12, 14-15, 17-19, 21-22, 24-26, 28-29, 31-33, 35-36	Address, City/State/ZIP Code Layout Primary Window	Data
AE OUT	8-10, 12-14, 16-18, 20-22, 24-25, 26-28, 30-31, 33-35, 37-39, 41-43, 45-46, 48-50, 52-54, 56-57	Primary Window	n/a
AM OUT	8-10, 12-14, 16-18, 24-26, 28-30	Primary Window	n/a
CNTRYI	8-10, 15-16	Default Country Name	Data
CONFIG	8, 10	Processing Options	Options
CONFRM	8-10 8-10, 22, 24-25, 27-65	Primary Window Confirm Without Matching	n/a Options
CONSxx	5-6, 7, 8-42	Constants List	Options
CS OUT	8-10, 12-13, 15-17, 19-20	Primary Window	n/a
CS PCD	8	Address, City/State/ZIP Code Layout	Data
CT OUT	8-10, 12-13, 15-17, 19-20, 22-24, 26-27, 29-31, 33-34, 36-38, 40-42	Primary Window	n/a
EXITIN	8-15, 18-80	Input Exit Routine	Options
EXITOP	8-15, 18-80	Output Exit Routine	Options
FILEDF	50-56, 58-64, 66-72	Limit Records	Options

Table 1-1: Dialog Boxes by Parameter Records (Part 2 of 2)

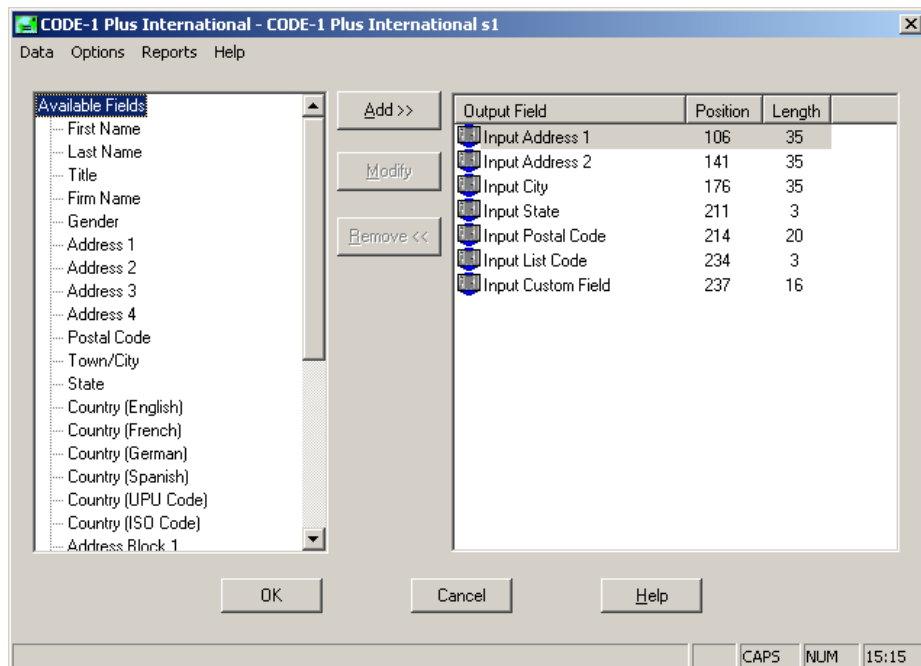
Parameter Record	Positions	Associated Dialog Box	Menu
FORMAT	10	Processing Options	Options
HEADER	8-17, 19-58	Headers and Footers	Reports
L CODE			
MOVE I	8-10, 12-13, 15-17	Rearrange Field Before Processing	Data
MOVE O	8-10, 12-13, 15-17	Rearrange Field After Processing	Data
NAMEDF	8	Processing Options	Options
NM OUT	8-10, 12-13, 15-17, 19-20, 22-24, 26-27, 29-31, 33-34	Primary Window	n/a
NTHSEL	8, 12	Limit Records	Options
PAGESZ	8-10, 12-13	Headers and Footers	Reports
PC OUT	8-10, 12-13	Primary Window	n/a
REPORT	8, 10, 12, 14, 16, 18, 20, 60-66	Choose Reports	Reports
SA OUT	36-38, 40-41, 72	Primary Window	n/a
SELECT	8-80	Countries	Options
SEQCHK	8, 10-12, 13, 14-15, 17-19, 20, 21-22, 24-26, 27, 28-29, 31-33, 34, 35-36, 38-40, 41, 42-43, 45-47, 48, 49-50, 52-54, 55, 56-57, 59-61, 62, 63-64, 66-68, 69, 70-71	Sequence Checking	Options
UFT xx	7-72	Headers and Footers	Reports
UHD xx	7-72	Headers and Footers	Reports

Configure the Options on the Primary Window

For an actual job, you do not have to configure every single option in the CODE-1 Plus International GUI. In this chapter, we will configure all of the options available in the GUI. Please refer to Chapter 3 of *Getting Started With CODE-1 Plus International* for a brief tutorial of how to use CODE-1 Plus International with Dispatcher 4.

When you don't make changes to a field, CODE-1 Plus International simply uses the default value.

In the layout area, double-click the **CODE-1 Plus International** step. This invokes the CODE-1 Plus International GUI. The first window that appears is the CODE-1 Plus International primary window:



The primary window is your base for defining your CODE-1 Plus International job. All functions of the GUI are accessed from this screen.

The list box on the left shows all the fields you can add to your output file, while the display field on the right shows the fields currently in your output file.

Non-Matched Posting Options

Non-matched posting options become available in the Add Field dialog box as you add various fields to the output file. These options allow you to determine how non-matched information should be stored in the output file, and are not available for every field.

- **Don't Post Anything:** If selected, CODE-1 Plus International posts no information when a non-matched item is found.
- **Post Blanks:** If selected, CODE-1 Plus International posts blanks when a non-matched item is found.
- **Post the Input:** If selected, CODE-1 Plus International posts the original input when a non-matched item is found.

- **Store, Regardless of Record Status:** If selected, CODE-1 Plus International will store the information as-is.

First Name Field

The Add Field dialog box allows you to set up the position and length for the First Name field on the output record. The storage options correspond to parameters as shown below:

Table 1-2: Storage Options for First Name Field

Field	Parameter Record	Position	Content
Don't Post Anything	NM OUT	72	x
Post Blanks	NM OUT	72	B
Post the Input	NM OUT	72	I

Last Name Field

The Add Field dialog box allows you to set up the position and length for the Last Name field on the output record. The storage options correspond to parameters as shown below:

Table 1-3: Storage Options for the Last Name Field

Field	Parameter Record	Position	Content
Don't Post Anything	NM OUT	72	X
Post Blanks	NM OUT	72	B
Post the Input	NM OUT	72	I

Title Field

The Add Field dialog box allows you to set up the position and length for the Title field on the output record. The Title field has no non-matched posting options.

Firm Name Field

The Add Field dialog box allows you to set up the position and length for the Firm Name field on the output record. The storage options correspond to parameters as shown below:

Table 1-4: Storage Options for Firm Name Field

Field	Parameter Record	Position	Content
Don't Post Anything	NM OUT	72	X
Post Blanks	NM OUT	72	B
Post the Input	NM OUT	72	I

Gender Field

The Add Field dialog box allows you to set up the position and length for the Gender field on the output record. The Gender field has no non-matched posting options.

Address Fields

This information pertains to the Address 1, Address 2, Address 3, and Address 4 fields. The Add Field dialog box allows you to set up the position and length for these fields on the output record. The storage options correspond to parameters as shown below:

Table 1-5: Storage Options for Address Fields

Field	Parameter Record	Position	Content
Don't Post Anything	SA OUT	72	X
Post Blanks	SA OUT	72	B
Post the Input	SA OUT	72	I
Store, Regardless of Record Status	SA OUT	72	S

Postal Code Field

The Add Field dialog box allows you to set up the position and length for the Postal Code field on the output record. The storage options correspond to parameters as shown below:

Table 1-6: Storage Options for Postal Code Field

Field	Parameter Record	Position	Content
Don't Post Anything	PC OUT	72	X
Post Blanks	PC OUT	72	B
Post the Input	PC OUT	72	I
Store, Regardless of Record Status	PC OUT	72	S

Town/City Field

The Add Field dialog box allows you to set up the position and length for the Town/City field on the output record. The storage options correspond to parameters as shown below:

Table 1-7: Storage Options for Town/City Field

Field	Parameter Record	Position	Content
Don't Post Anything	CS OUT	72	X
Post Blanks	CS OUT	72	B
Post the Input	CS OUT	72	I
Store, Regardless of Record Status	CS OUT	72	S

State Field

The Add Field dialog box allows you to set up the position and length for the State field on the output record. The storage options correspond to parameters as shown below:

Table 1-8: Storage Options for State Field

Field	Parameter Record	Position	Content
Don't Post Anything	CS OUT	72	X
Post Blanks	CS OUT	72	B
Post the Input	CS OUT	72	I
Store, Regardless of Record Status	CS OUT	72	S

Country Fields

This information pertains to the Country (English), Country (French), Country (German), Country (Spanish), Country (UPU), and Country (ISO) fields. The Add Field dialog box allows you to set up the position and length for these fields on the output record. The storage options correspond to parameters as shown below:

Table 1-9: Storage Options for Country Fields

Field	Parameter Record	Position	Content
Don't Post Anything	CT OUT	72	X
Post Blanks	CT OUT	72	B
Post the Input	CT OUT	72	I
Store, Regardless of Record Status	CT OUT	72	S

Address Block Fields

This information pertains to the Address Block 1, Address Block 2, Address Block 3, Address Block 4, Address Block 5, Address Block 6, Address Block 7, Address Block 8, and Address Block 9 fields. The Add Field dialog box allows you to set up the position and length for these fields on the output record. The storage options correspond to parameters as shown below:

Table 1-10: Storage Options for Address Block Fields

Field	Parameter Record	Position	Content
Don't Post Anything	AB OUT	74	X
Post Blanks	AB OUT	74	B
Post the Input	AB OUT	74	I
Store, Regardless of Record Status	AB OUT	74	S
Language Code - French	AB OUT	8-9	FR
Language Code - English	AB OUT	8-9	EN
Language Code - German	AB OUT	8-9	GR
Language Code - Spanish	AB OUT	8-9	SP

Output Status Return Code Field

The Add Field dialog box allows you to set up the position and length for the Output Status Return Code field on the output record. The Output Status Return Code field has no non-matched posting options.

Confirmation Reason Code Field

The Add Field dialog box allows you to set up the position and length for the Confirmation Reason Code field on the output record. The Confirmation Reason Code field has no non-matched posting options.

Country Category Field

The Add Field dialog box allows you to set up the position and length for the Country Category field on the output record. The Country Category field has no non-matched posting options.

Parsed Information Fields

The Add Field dialog box allows you to specify where individual address elements should be stored in the output record. The parsed information fields include the following:

- Parsed House Number
- Parsed Directional Leading
- Parsed Directional Trailing
- Parsed Street Name
- Parsed Street Type
- Parsed Unit/Apartment Identifier
- Parsed Unit/Apartment Number
- Parsed Post Box Identifier
- Parsed Post Box Number
- Parsed Grammar

The storage options correspond to parameters as shown below:

Table 1-11: Storage Options for Parsed Information Fields

Field	Parameter Record	Position	Content
Don't Post Anything	AE OUT	63	X
Post Blanks	AE OUT	63	B

Parsed AE Return Codes

The Add Field dialog box allows you to set up the position and length for the individual address element return codes on the output record. The Parsed AE Return Codes field has no non-matched posting options.

Extra Information

The Add Field dialog box allows you to set up the position and length for extra or non-matched information on the output record. The storage options correspond to parameters as shown below:

Table 1-12: Storage Options for Extra Information

Field	Parameter Record	Position	Content
Don't Post Anything	SA OUT	72	X
Post Blanks	SA OUT	72	B
Post the Input	SA OUT	72	I
Store, Regardless of Record Status	SA OUT	72	S

Extra Information Return Codes

The Add Field dialog box allows you to set up the position and length for the extra information return codes on the output record. The Extra Information Return Codes field has no non-matched posting options.

Configure the Options on the Data Menu

Again, for an actual job, you do not have to configure every single option in this menu. However, in this chapter, we will configure all of the available options.

Default Country Name

- 1 Define the default country name by selecting **Data > Default Country Name**. This option allows you to define which country should be used as the default when no country name is provided on the input file.

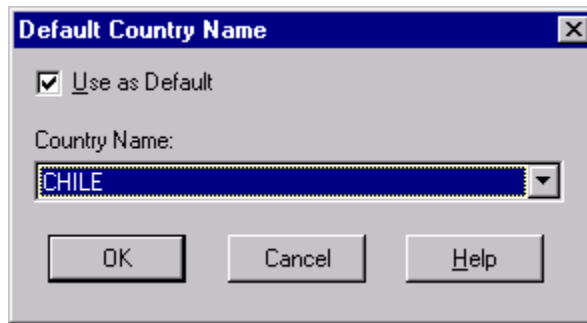


Figure 1-1: Default Country Name Dialog Box

- 2 Select the country you want to use as the default and click [OK] to save the definition.

Table 1-13: Default Country Name Dialog Box Definitions

This field...	Performs this function...	Requires this action...	And maps to this parameter record...
Country Name	Defines the default country	Choose one of the countries in the list as the default.	SELECT columns 8-80

Input Address Format

- 1 Define the input address format by selecting **Data > Input Address Format**. This option allows you to define the layout of the address, the city, the state/province, and the postal code.

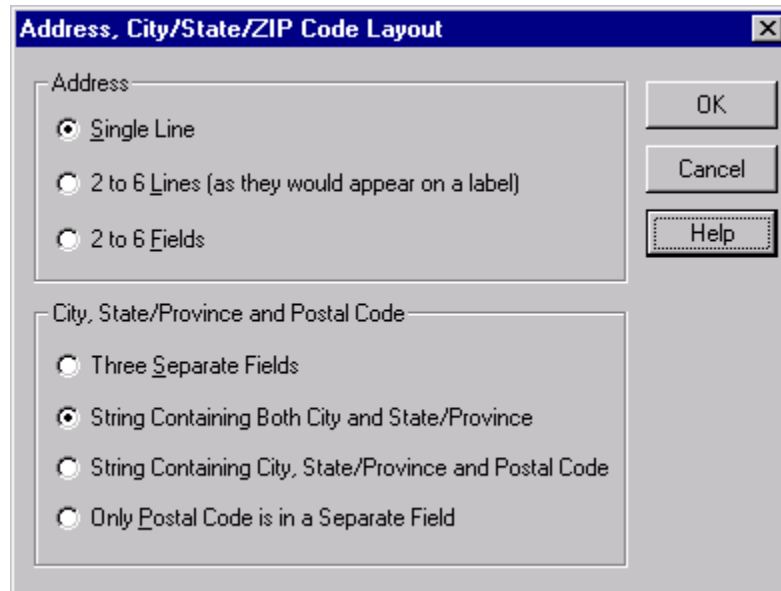


Figure 1-2: Address, City/State/ZIP Code Layout Dialog Box

- 2 Select the radio buttons that best match the way your input address is formatted and click **[OK]** to save the definition.

Table 1-14: Address, City/State/ZIP Code Layout Dialog Box Definitions

This field...	Performs this function...	Requires this action...	And maps to this parameter record...
Address	Defines the layout of the input address	Choose one of the following: <ul style="list-style-type: none"> • Single Line: Use this option if your input is a single-line street address. • 2 to 6 Lines: Select this option for up to 6 address lines. Appearing as a mailing label, it may or may not include the city, province, and postal code. • 2 to 6 Fields: Select this option for up to 6 street address fields, which can be joined together to build one good street address. 	ADDRDF column 8
City, State/Province, and Postal Code	Defines the layout of the input city, state/province, and postal code	Choose one of the following: <ul style="list-style-type: none"> • Three Separate Fields: City, state/province, and postal code are located in three separate fields. • String Containing Both City and State/Province: City and state/province are located in a single field separate from the address. • String Containing Both City, State/Province and Postal Code: City, state/province, and postal code are located in a single field separate from the address. • Only Postal Code is in a Separate Field: All address elements except the postal code are in a single field. 	CS PCD column 8

Rearrange Before Processing

- 1 Define the default country name by selecting **Data > Rearrange Before Processing**. This option allows you to change the order of your fields in your file before processing.

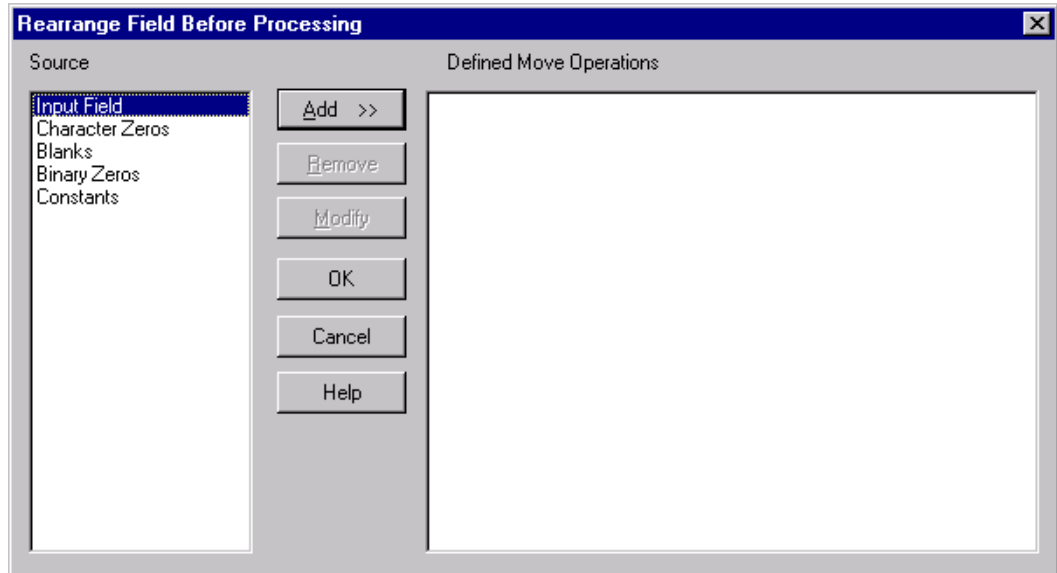


Figure 1-3: Rearrange Field Before Processing Dialog Box

- 2 Enter the information for each field and click [OK] to save the definitions.

Table 1-15: Rearrange Fields Before Processing Dialog Box Definitions

This field...	Performs this function...	Requires this action...	And maps to this parameter record...
Source	Defines the sources you want to rearrange before processing	Choose one or more sources to rearrange before processing.	MOVE I columns 8-10

Rearrange After Processing

- 1 Define the default country name by selecting **Data > Rearrange After Processing**. This option allows you to change the order of your fields in your file after processing.

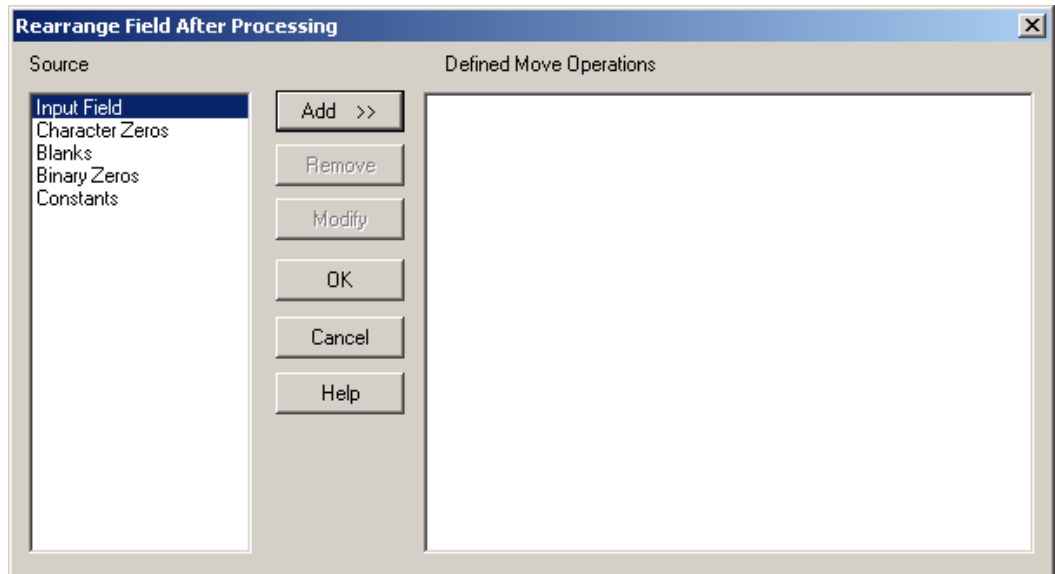


Figure 1-4: Rearrange Field After Processing Dialog Box

- 2 Enter the information for each field and click [OK] to save the definitions.

Table 1-16: Rearrange Fields After Processing Dialog Box Definitions

This field...	Performs this function...	Requires this action...	And maps to this parameter record...
Source	Defines the sources you want to rearrange after processing	Choose one or more sources to rearrange after processing.	MOVE 0 columns 8-10

Configure the Options on the Options Menu

Again, for an actual job, you do not have to configure every single option in this menu. However, in this chapter, we will configure all of the available options.

Country Selection

- 1 Define the default country name by selecting **Options > Country Selection**. This option allows you to select which countries are processed by CODE-1 Plus International's batch system.

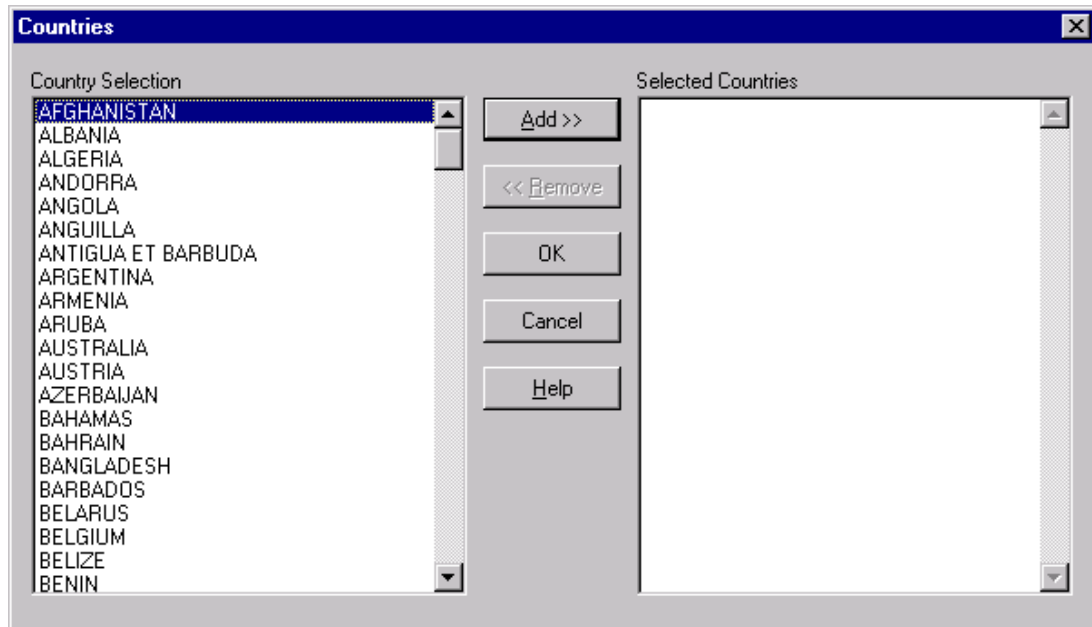


Figure 1-5: Countries Dialog Box

- 2 Select the country or countries you want CODE-1 Plus International to process and click [Add]. Then click [OK] to save the definition.

Table 1-17: Countries Dialog Box Definitions

This field...	Performs this function...	Requires this action...	And maps to this parameter record...
Country Selection	Defines the countries you want CODE-1 Plus International to process	Select the countries you want to be processed.	SELECT columns 8-80

Processing Options

- 1 Define the default country name by selecting **Options > Processing Options**. This option allows you to specify how the system should convert the output records of your Code-1 Plus International job.

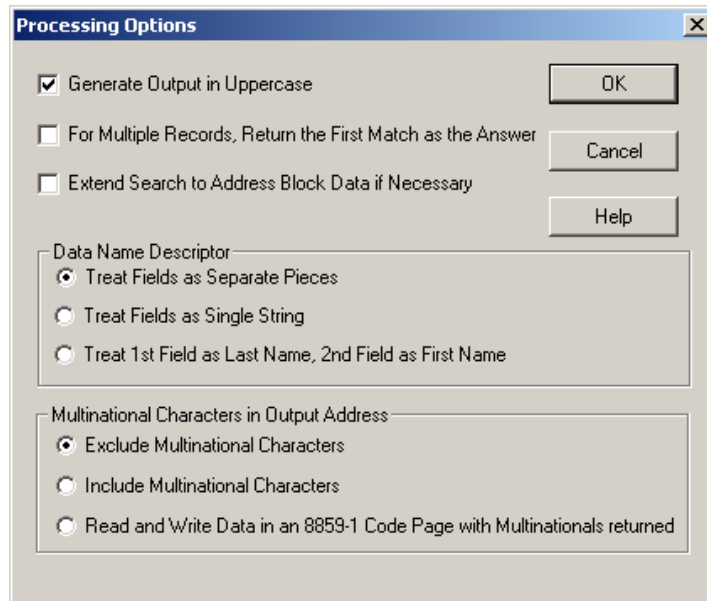


Figure 1-6: Processing Options Dialog Box

2 Enter the information for each field and click [OK] to save the definitions.

Table 1-18: Processing Options Dialog Box Definitions

This field...	Performs this function...	Requires this action...	And maps to this parameter record...
Generate Output in Uppercase	Causes the output records to be printed in all uppercase letters.	Check this box to print output records in all uppercase letters.	FORMAT column 10
For Multiple Records, Return the First Match as the Answer	Uses the first entry in the list of multiples as the answer	Check this box to use the first entry in the list of multiples as the answer.	CONFIG column 8
Extend Search to Address Block Data if Necessary	Indicates that you want the address field data to be processed first. If a match is not found, the data will be looked for in the defined address block.	Check this box to process the address field data first.	CONFIG column 10
Data Name Descriptor	Allows you to determine how CODE-1 Plus International should treat name fields	Check the radio button that best describes how you want CODE-1 Plus International to treat name fields.	NAMEDF column 8
Multinational Characters in Output Address	Allows you to determine how CODE-1 Plus International should treat multinational characters	Check the radio button that best describes how you want CODE-1 Plus International to treat multinational characters.	FORMAT column 8

Limit Records

- 1 Define the records to limit by selecting **Options > Limit Records**. This option allows you to limit the number of input records processed by your job.



Figure 1-7: Limit Records Dialog Box

- 2 Enter the information for each field and click [OK] to save the definitions.

Table 1-19: Limit Records Dialog Box Definitions

This field...	Performs this function...	Requires this action...	And maps to this parameter record...
Number of Records to Skip	Displays the number of records to be skipped before starting to process records.	Enter the number of records you want to skip.	FILEDF columns 50-56
Max. Number of Records to Process	Displays the maximum number of records you want CODE-1 Plus International to process.	Enter the maximum number of records to process.	FILEDF columns 66-72
Include	Indicates that you want the Nth record to be included when the records are processed.	Check this box to include the Nth record.	NTHSEL column 12
Exclude	Indicates that you do not want the Nth record to be included when the records are processed	Check this box to exclude the Nth record.	NTHSEL column 12
Every ___th Record	Displays the number of records at which you want CODE-1 Plus International to extract for sampling (e.g., every 10th record, every 50th record, etc.).	Enter the number of records you want to extract for sampling.	NTHSEL column 8
Total Number of Records in File	Displays the total number of records in the input file	Enter the total number of records in the input file.	N/A
Number of Records to Process	Displays the total number of records you want CODE-1 Plus International to process	Enter the total number of records you want processed.	FILEDF column 58-64

Define Constant List

- 1 Define constants by selecting **Options > Define Constant List**. This option allows you to define up to 99 constants, C01 through C99, to use with the MOVE I and MOVE O parameter records. The data will be stored as CONSxx parameter records, where “xx” is a number 01 through 99.

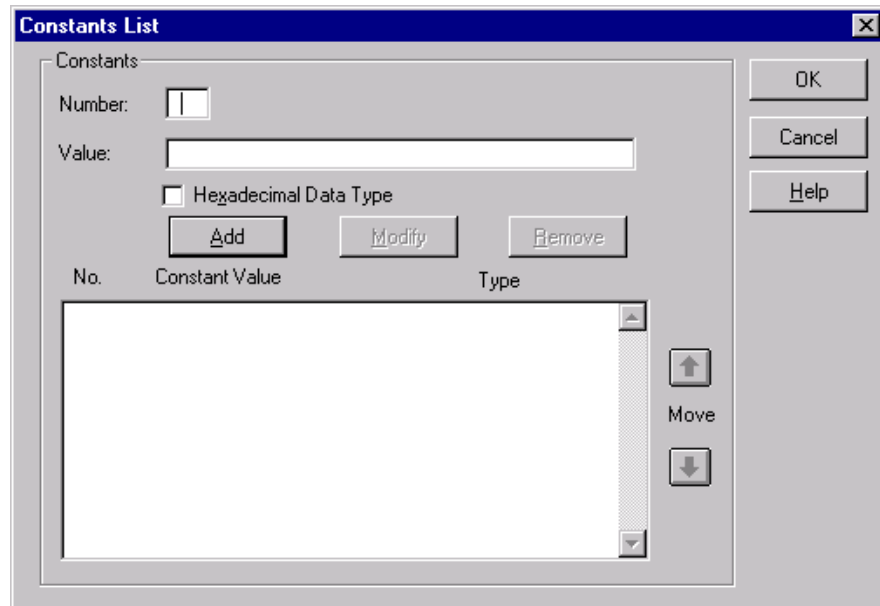


Figure 1-8: Constants List Dialog Box

- 2 Enter the information for each field and click [OK] to save the definitions.

Table 1-20: Constants List Dialog Box Definitions

This field...	Performs this function...	Requires this action...	And maps to this parameter record...
Number	Assigns a two-character number, from 01 to 99, to the constant you are adding.	Enter the number of the constant you are adding.	CONSxx columns 5-6
Value	Displays the constant's value.	Enter the value of the constant.	CONSxx columns 8-42
Hexadecimal Data Type	Ensures that the number of characters in the Value field is an even number. The default is unchecked	Check this box to ensure that the number of characters in the Value field is even, as required by hex.	CONSxx column 7
Constants List Box	Displays the list of constants defined for your Code-1 Plus International job, including the constant number, the constant value, and the type of constant ("H" for hexadecimal and "C" for character). A maximum of 99 constants can be defined per job	None.	n/a

Confirm Without Matching

- 1 Confirm records without matching by selecting **Options > Confirm Without Matching**. This option allows you to confirm a record on the input file without matching it to a record on the Code-1 Plus International database.

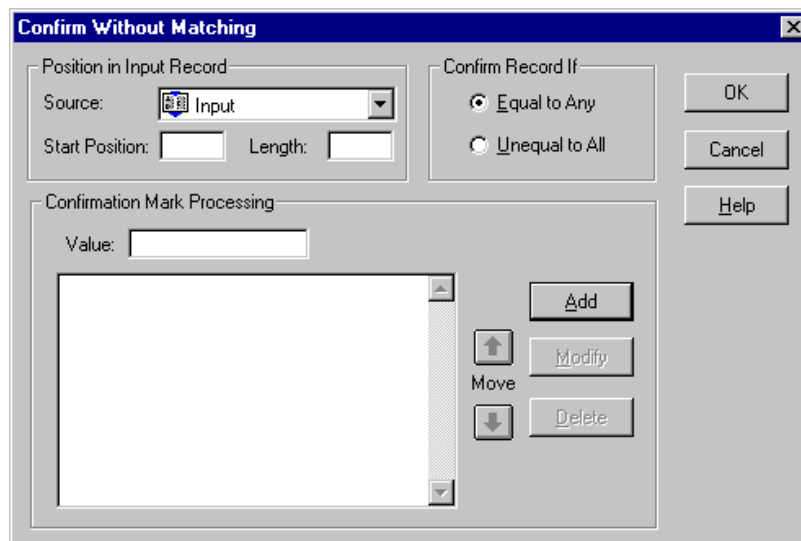


Figure 1-9: Confirm Without Matching Dialog Box

2 Enter the information for each field and click [OK] to save the definitions.

Table 1-21: Confirm Without Matching Dialog Box Definitions

This field...	Performs this function...	Requires this action...	And maps to this parameter record...
Source	Assigns the field you want CODE-1 Plus International to confirm without matching	Enter the field you want to be confirmed and not matched.	n/a
Start Position	Displays the start position of the field you want to confirm without matching.	Enter the starting position of the field you want to be confirmed and not matched.	CONFIRM columns 18-20
Length	Displays the length of the field you want to confirm without matching.	Enter the length of the field you want to be confirmed and not matched.	CONFIRM columns 22
Confirm Record If	Determines if you want to confirm a record that is equal to any or unequal to all.	Select Equal to Any to confirm the record if it is equal to any other record. Select Unequal to All to confirm the record if it is unequal to every other record.	CONFIRM columns 24-25
Value	Displays the value of the confirmation mark.	Enter a value of the confirmation mark. This figure can be any value up to 9 characters.	CONFIRM columns 27-65
Confirmation Mark List Box	Displays a list of confirmation marks	None.	n/a

Input Record Sequence

- 1 Activate sequence checking by selecting **Options > Input Record Sequence**. This option 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 dialog box to define a sequence control field that consists of up to nine segments.

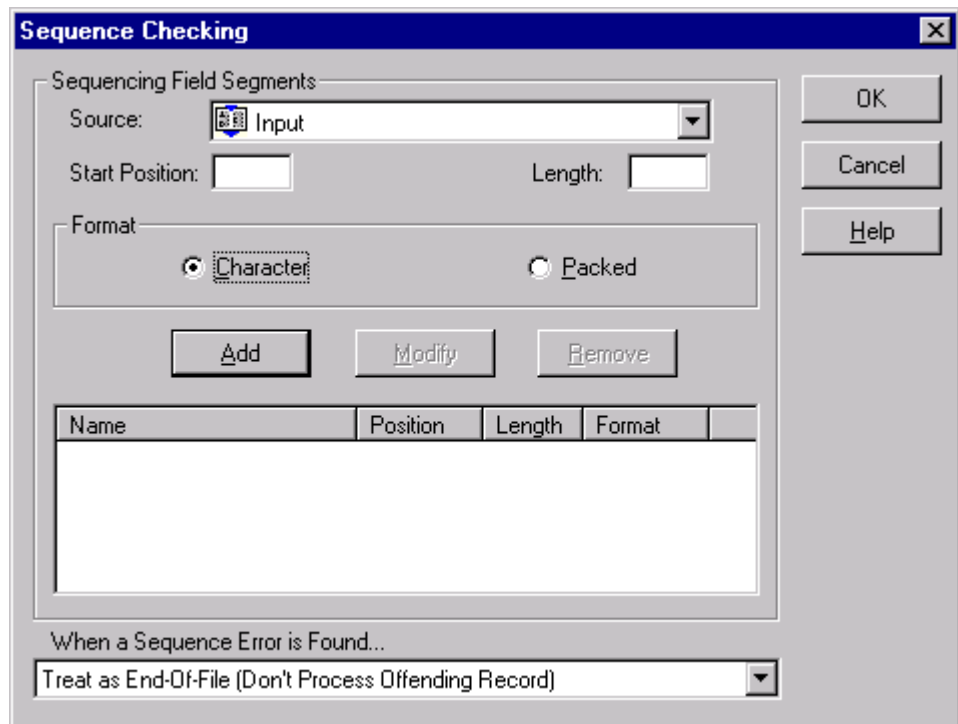


Figure 1-10: Sequence Checking Dialog Box

2 Enter the information for each field and click [OK] to save the definitions.

Table 1-22: Sequence Checking Dialog Box Definitions (Part 1 of 2)

This field...	Performs this function...	Requires this action...	And maps to this parameter record...
Source	Assigns the field on which you want CODE-1 Plus International to perform sequence checking	Enter the field on which you want sequence checking performed	n/a
Start Position	Displays the start position of the field on which you want CODE-1 Plus International to perform sequence checking	Enter the starting position of the field on which you want sequence checking performed	SEQCHK columns 10-12, 17-19, 24-26, 31-33, 38-40, 45-47, 52-54, 59-61, 66-68
Length	Displays the length of the field on which you want CODE-1 Plus International to perform sequence checking	Enter the length of the field on which you want sequence checking performed	SEQCHK columns 14-15, 21-22, 28-29, 35-36, 42-43, 49-50, 56-57, 63-64, 70-71
Format	Assigns the format of the field on which you want sequence checking performed	Select Character or Packed	Character: SEQCHK columns 13, 20, 27, 34, 41, 48, 55, 62, 69 Packed: SEQCHK columns 13, 20, 27, 34, 41, 48, 55, 62, 69

Table 1-22: Sequence Checking Dialog Box Definitions (Part 2 of 2)

This field...	Performs this function...	Requires this action...	And maps to this parameter record...
Sequence Check List Box	Displays a list of sequence check fields	None.	n/a
When a Sequence Error is Found...	Assigns the action taken when a sequence error is found	Choose one of the following: Treat as End Of File: Halts sequence checking after bypassing the offending record and tells CODE-1 Plus International to treat the process as if the end of the input file had been reached. Bypass Offending Record: Bypasses the offending record and continues checking the sequence. Continue Processing Offending Record; Continue Sequence Check: Continue processing the offending record and continue sequence checking. Continue Processing the Offending Record; Discontinue Sequence Check: Continue processing the offending record, but abandon any further sequence checking.	SEQCHK column 8

Input Exit Routine

- 1 Use an input exit routine by selecting **Options > Input Exit Routine**. This option allows you to designate the name and fields of an input exit routine, which is called after the record has been read but before it has been processed.

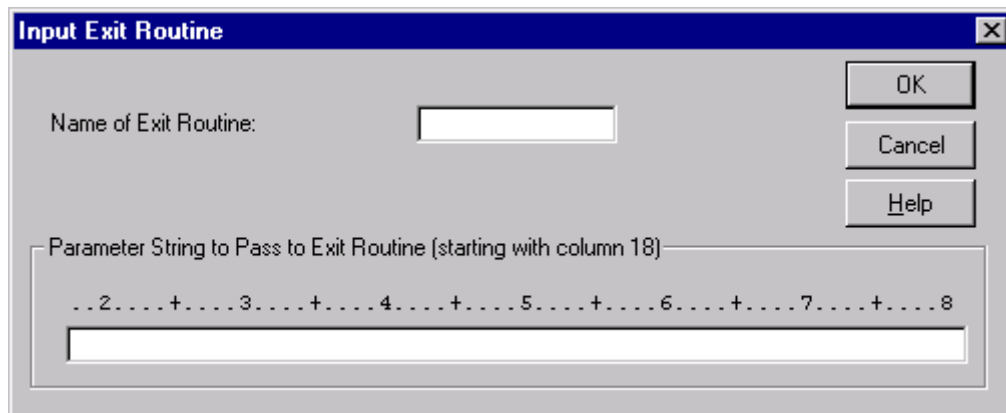


Figure 1-11: Input Exit Routine Dialog Box

- 2 Enter the information for each field and click [OK] to save the definitions.

Table 1-23: Input Exit Routine Dialog Box Definitions

This field...	Performs this function...	Requires this action...	And maps to this parameter record...
Name of Exit Routine	Contains the name, up to eight characters, of the exit routine you are assigning	Enter the name of the exit routine you are assigning.	EXITIN columns 8-15
Parameter String to Pass to Exit Routine	Contains the parameters, up to 50 characters, of the exit routine you are assigning	Enter the parameters of the exit routine you are assigning.	EXITIN columns 18-80

Output Exit Routine

- 1 Use an input exit routine by selecting **Options > Output Exit Routine**. This option allows you to designate the name and fields of an input exit routine, which is called after the record has been read but before it has been processed.

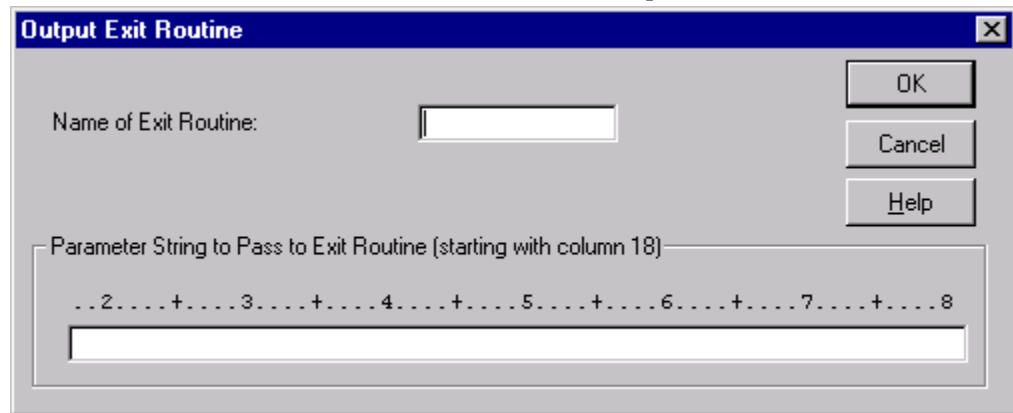


Figure 1-12: Output Exit Routine Dialog Box

- 2 Enter the information for each field and click [OK] to save the definitions.

Table 1-24: Output Exit Routine Dialog Box Definitions

This field...	Performs this function...	Requires this action...	And maps to this parameter record...
Name of Exit Routine	Contains the name, up to eight characters, of the exit routine you are assigning	Enter the name of the exit routine you are assigning.	EXITOP columns 8-15
Parameter String to Pass to Exit Routine	Contains the parameters, up to 50 characters, of the exit routine you are assigning	Enter the parameters of the exit routine you are assigning.	EXITOP columns 18-80

Job Summary

View your job summary by selecting **Options > Job Summary**. This option displays an overview of the selections you made in setting up your job.

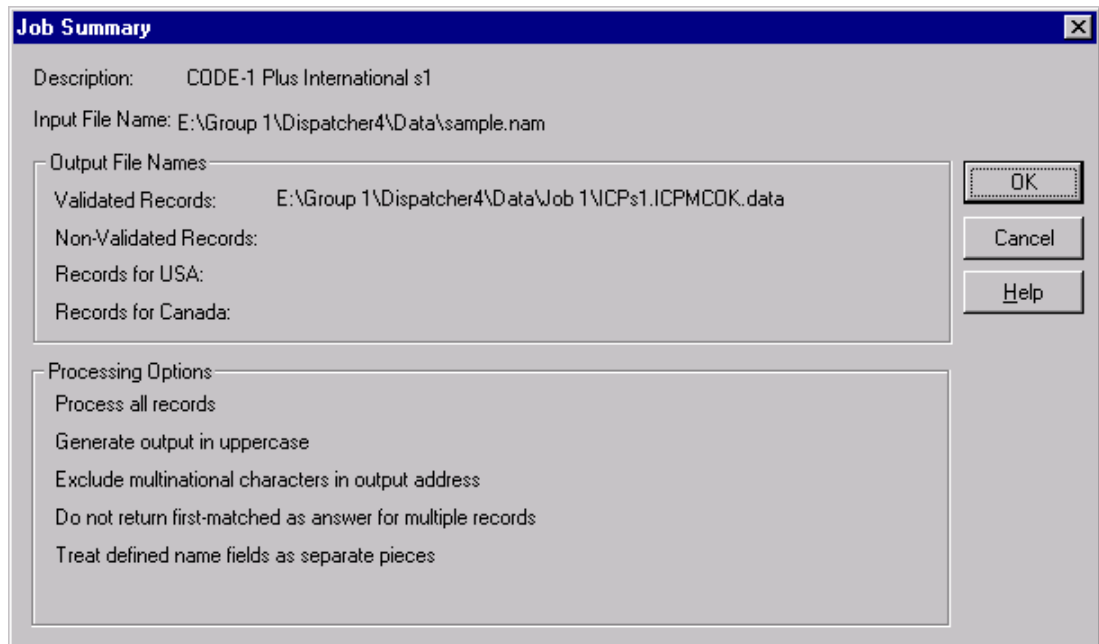


Figure 1-13: Job Summary Display Box

The summary dialog box contains no fields for entering information.

Configure the Options on the Reports Menu

Again, for an actual job, you do not have to configure every single option in this menu. However, in this chapter, we will configure all of the available options.

Choose Reports

- 1 Choose reports by selecting **Reports > Choose Reports**. This option allows you to select which reports you want CODE-1 Plus International to create when it runs a job.

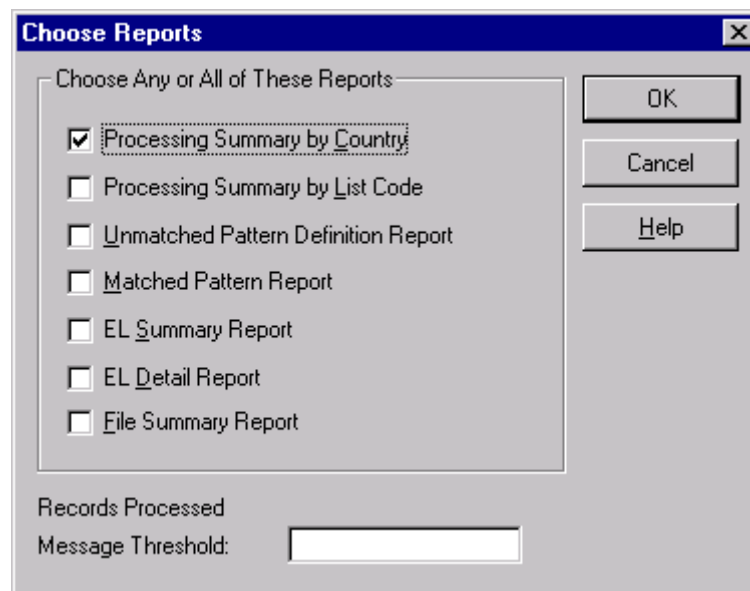


Figure 1-14: Choose Reports Dialog Box

- 1 Enter the information for each field and click **[OK]** to save the definitions.

Table 1-25: Choose Reports Dialog Box Definitions

This field...	Performs this function...	Requires this action...	And maps to this parameter record...
Choose Any or All of These Reports	Defines the reports you want CODE-1 Plus International to generate	Select the reports you want to generate.	REPORT columns 8, 10, 12, 14, 16, 18, 20
Records Processed Message Threshold	Displays the number of records to pass before processing	Enter the number of records to pass before processing. For instance, if you enter "10" in this field, every 10th record will be processed. A processing entry will be made to the Execution Log.	REPORT columns 60-66

Headers and Footers

- 1 Generate headers and footers by selecting **Reports > Headers and Footers**. This option allows you to designate headers and footers you want printed on CODE-1 Plus International reports.

Figure 1-15: Headers and Footers Dialog Box

- 2 Select the reports you want CODE-1 Plus International to generate and click [OK] to save the definitions.

Table 1-26: Headers and Footers Dialog Box Definitions

This field...	Performs this function...	Requires this action...	And maps to this parameter record...
Main Header	Contains the main report header	Enter the main header you want to print on reports, up to 40 characters.	HEADER columns 19-58
Date	Contains the date you want the report to reflect	Enter the date you want to print on reports. NOTE: If you leave this field blank, the system date will appear on reports.	HEADER columns 8-17
Header Lines	Contains the report's header	Enter the you want to print on reports, up to 132 characters on four separate lines.	UHDxx columns 7-72
Footer Lines	Contains the report's footer	Enter the footer you want to print on reports, up to 132 characters on four separate lines.	UFTxx columns 7-72
Lines Per Page - Ex. Log	Contains the number of lines to print on each page of the Execution Log	Enter the number of lines you want to print on each page of the Execution Log, with a minimum of 25 and a maximum of 225.	PAGESZ columns 8-10, 12-13
Lines Per Page - Reports	Contains the number of lines to print on each page of the reports (other than the Execution Log)	Enter the number of lines you want to print on each page of other reports; with a minimum of 25 and a maximum of 225. NOTE: The default is 60 lines per page.	PAGESZ columns 8-10, 12-13

CHAPTER 2

Using Different Environments

This chapter provides processing information and step-by-step instructions for running CODE-1 Plus International batch jobs under each of the supported platforms. This chapter does not contain entire script/JCL examples, so please refer to your installation media for complete examples and templates. You may also view JCL and script examples on the Pitney Bowes Web site at www.g1.com.

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Unix

This section assumes you are familiar with the installation instructions for your platform and that the components of the product were installed on your system. The Pitney Bowes products for the Unix environment are designed so you can set up and run a job with a minimum amount of typing. Information that does not change from job to job is stored in files that you can edit via a text editor. This section describes how to:

- Edit/Save job files
- Edit/Save parameter record files
- Run a CODE-1 Plus International batch job.

Customization Issues

If you need to modify the CODE-1 Plus International components to suit your needs, be prepared to add your modifications again when you receive a product update. When a new product update is installed, the new job scripts will be saved with a .new extension. Compare the .new file to your existing job file to see if there are any new processing changes.

In CODE-1 Plus International, the bin/setup file defines the environment variables needed for any invocations of CODE-1 Plus International functions. You should review bin/setup for any customization that is necessary for your system.

Step 1. Edit/Save Job Files

This section describes important job file commands, how to create a new job file, and how to edit an existing job file. A job file is a batch command file that runs one of the CODE-1 Plus International programs, including configuring the program's environment to define the files the program will use. Pitney Bowes provides two jobs in the /bin directory that are used to test the product while serving as examples and templates for you to create your own job files.

The first job is called SAMPLE, and it runs the batch driver program (ICPM00), which uses input and output files in the data subdirectory named in the format *jobname.icpnam*. If your job needs different files, create a new job file from /bin/sample as described below.

The second job is called RUNG1G001, and it runs the Generalized Report Writer to test the installation of this function. Use it in conjunction with data/samgrw.prn as the template for your own Generalized Report Writer Jobs.

Creating a New Job File

The easiest way to create a new job file is to modify an existing one, such as the SAMPLE file provided on your installation CD-ROM. To create a new job file, you can use the following method:

- `cp bin/sample /bin/myjob`

When you create a new job by modifying an existing job, it is always a good idea to change the opening comments to describe the batch job.

Editing a Job File

You can edit job files by using any text editor, such as vi editor:

- `vi bin/myjob`

Step 2. Edit/Save Parameter Record Files

Parameter record files use the .icpmprm extension. Pitney Bowes provides a sample parameter record file, which is called `sample.icpmprm`. This contains the parameters for the batch driver program of the Installation Verification Procedure (IVP). This section describes how to create a new parameter record file and edit an existing one.

Creating a New Parameter Record File

The easiest way to create a new parameter record file is to modify an existing one, such as the file `sample.icpmprm`, provided on your installation CD-ROM. To create a new parameter record file, you can use the following method:

- `cp data/sample.icpmprm /data/myjob.icpmprm`

Editing a Parameter Record File

You can edit parameter record files by using any text editor, such as vi editor:

- `vi data/myjob.icpmprm`

Step 3. Run a Job

To run CODE-1 Plus International under Unix, you must complete three steps:

- 1 Source the Setup script to set up the CODE-1 Plus International environment variables.
- 2 Source the job script to set up the CODE-1 Plus International job variables.
- 3 Execute the runicp script to execute the CODE-1 Plus International batch driver.

Step 1. Source the setup Script

The following setup script sets all the CODE-1 Plus International environment variables. The setup script resides in `$g1icp/bin`. You may need to modify the paths and file names appearing in lowercase, bold type. For example:

- `./setup` for Bourne shell
- `source ./setup.csh` for C shell.

For more information on the `bin/setup` file, see your installation instructions.

Step 2. Source the Job (sample) Script

The sample job script, named *sample*, assigns file names to all the CODE-1 Plus International file variables. The script *sample* resides in `$g1icp/bin`. You need to modify the paths and file names appearing in lowercase, bold type. For example:

- `./sample` for Bourne shell
- `source ./sample.csh` for C shell.

Step 3. Execute the runicp Script

The runicp script, which resides in `$g1icp/bin`, executes the CODE-1 Plus International batch driver (ICPM00). The script references the job variables sourced in Step 2. To execute this script, type **runicp**, followed by the job name. For example:

- `runicp sample`

Except for the interactive matcher, you must supply the name of the job you want executed. Type in the appropriate driver command followed by the actual job name (e.g., `sample`) and press the Enter key. The process then runs to completion without any further involvement on your part. Submitted jobs run in the background. To confirm that jobs are still processing, use the `ps -f` command.

Windows

This section assumes you are familiar with your platform installation instructions and that the components of the product were installed on your system. The Pitney Bowes products for the Windows environment are designed so you can set up and run a job with a minimum amount of typing. Information that does not change from job to job is stored in files that you can edit via the provided icons using your preferred text editor. This section describes how to:

- Edit/Save job files
- Edit/Save parameter record files
- Run a CODE-1 Plus International batch job.

Customization Issues

If you need to modify the CODE-1 Plus International components to suit your needs, be prepared to add your modifications again when you receive a product update. Record the modifications you make, so if you need to call Technical Support, Pitney Bowes can duplicate your problem.

In CODE-1 Plus International, the `BIN\SETUP.BAT` file defines the environment variables needed for any invocations of CODE-1 Plus International functions. You should review `BIN\SETUP.BAT` for any customization that is necessary for your system.

Step 1. Edit/Save Job Files

This section describes important job file commands, how to create a new job file, and how to edit an existing job file. A job file is a batch command file (.BAT extension) that runs one of the CODE-1 Plus International programs, including configuring the program's environment to define the files the program will use. Pitney Bowes provides two jobs in the BIN directory that are used to test the product while serving as examples and templates for you to create your own job files.

The first job is called SAMPLE, and it runs the batch driver program (ICPM00), which uses input and output files in the DATA subdirectory named in the format *jobname.ext*. If your job needs different files, create a new job file from SAMPLE.BAT as described below.

The second job is called SAMGRW, and it runs the Generalized Report Writer to test the installation of this facility. Use it as the template for your own Generalized Report Writer Jobs.

Creating a New Job File

The easiest way to create a new job file is to modify an existing one, such as the SAMPLE.BAT file provided on your installation CD-ROM. To create a new job file, you can use the following two methods:

- 1 Use **Windows Explorer** to copy BI N\SAMPLE. BAT to BI N\MYJOB. BAT.
- 2 Select the **Edit Job File** icon and specify MYJOB as the file to edit.

OR

- 1 Select the **Edit Job File** icon.
- 2 Specify the name of a new job file.
- 3 Paste in BI N\SAMPLE. BAT.

When you create a new job by modifying an existing job, it is always a good idea to change the opening comments to describe the batch job.

Editing a Job File

You can edit job files by double-clicking on the **Edit CODE-1 Plus Int'l Job File** icon or by going to your text editor and modifying the job file in the BIN directory. Ensure that the job file has the extension .BAT and the job name is unique among the batch files in the directory.

NOTE: The program launched by the Edit Job File icon accepts the G1EDIT environment variable as the name of the editor you prefer to use. If G1EDIT is not defined, NOTEPAD is used as the editor.

Step 2. Edit/Save Parameter Record Files

Parameter record files use the .PRM extension. Pitney Bowes provides a sample parameter record file, which is called `SAMPLE.PRM`. This contains the parameters for the batch driver program of the Installation Verification Procedure (IVP). This section describes how to create a new parameter record file and edit an existing one.

Creating a New Parameter Record File

The easiest way to create a new parameter record file is to modify an existing one, such as the file `SAMPLE.PRM`, provided on your installation CD-ROM. To create a new parameter record file, you can use either of the following two methods:

- 1 Use **Windows Explorer** to copy `DATA\SAMPLE.PRM` to `DATA\MYJOB.PRM`.
- 2 Select the **Edit Parm File** icon, and specify `MYJOB` as the file to edit.

OR

- 1 Select the **Edit Parm File** icon.
- 2 Specify the name of a new job file.
- 3 Paste in `DATA\SAMPLE.PRM`.

Editing a Parameter Record File

You can edit parameter record files by double-clicking the **Edit CODE-1 Plus Int'l Parm File** icon or by going to your text editor and modifying the parameter record file in the `DATA` directory. Ensure the parameter record file has the extension `.PRM` and the job name is unique among the batch files in the directory.

NOTE: The program launched by the Edit Parm File icon accepts the `G1EDIT` environment variable as the name of the editor you prefer to use. If `G1EDIT` is not defined, `NOTEPAD` is used as the editor.

Step 3. Run a Job

The ICPM00 program is invoked via the **Run CODE-1 Plus Int'l Job** icon. You are prompted by the process launched to enter the name of the batch job you want to run. At the conclusion, you are prompted either to press a key to continue or respond Yes or No so you may read any messages generated.

To run a job, you must have previously prepared all required program input files and, if necessary, a customized batch file. When all is ready, double click on the appropriate icon:

- **Run CODE-1 Plus Int'l Job** executes ICPM00, the batch matcher
- **Run CODE-1 Plus Int'l Matcher** executes ICSCR10, the interactive matcher
- **Run Generalized Report Writer** executes G1G001, the Pitney Bowes GRW in the CODE-1 Plus International Program Group.

Except for the interactive matcher, you will then be prompted to enter the name of the job you want executed. Type in the name of the job (e.g., SAMPLE) and press the Enter key. The process then runs to completion without any further involvement on your part except for possibly pausing at the very end as described in the first paragraph.

ICPM00 — The Batch Matcher

For computers with Windows Scripting Host installed by Internet Explorer or Windows 2000: The Run CODE-1 Plus Int'l Job icon invokes `BIN\ICPrun.vbs`. This script prompts you for the job name and then creates a temporary batch job in the BIN directory. It then executes the temporary batch job, which in turn calls `BIN\SETUP.BAT`, then `BIN\jobname.BAT`. After `jobname.BAT` finishes execution, the script deletes the temporary batch file and prompts you to view the results.

NOTE: The CODE-1 Plus International execution procedure does not appear in a window by default. If you want to view the execution results in a window, you must modify `ICPrun.vbs`. The script includes instructions regarding which lines to modify. See the `WshShell.Run` method in the script for details.

For computers without Windows Scripting Host: The Run CODE-1 Plus Int'l Job icon invokes `BIN\ICPRUN.BAT`, which runs the QBASIC program `ICPRUN.BAS`. This program prompts you for the job name, then creates a temporary batch job, `ICPRUNXX.BAT`, in the working directory, and ends, returning control back to the `ICPRUN.BAT` job.

It then calls the temporary batch job, which in turn calls `BIN \SETUP .BAT`, then `BIN\jobname .BAT` and ends, returning control one last time to `ICPRUN .BAT`. It deletes the temporary batch file and pauses before ending.

ICPCR00 — The Interactive Matcher

The Run CODE-1 Plus Int'l Matcher icon invokes `BIN\ICPINQ .BAT`, which calls `BIN\SETUP .BAT`, then runs the `DLL\ICSCR10 .EXE` program, and pauses before ending.

G1G001 — The Generalized Report Writer

For computers with Windows Scripting Host installed by Internet Explorer or Windows 2000: The Run Generalized Report Writer invokes `BIN\ICPGRW .vbs`. This script prompts you for the job name, then creates a temporary batch job in the `BIN` directory. It then executes the temporary batch job, which in turn calls `BIN\SETUP .BAT`, then `BIN\jobname .BAT`. After `jobname .BAT` finishes execution, the script deletes the temporary batch file and prompts you to view the results. If you would like the execution results to appear in a window, see the note in above in the section entitled “`ICPM00 — The Batch Matcher`.”

For computers without Windows Scripting Host: The Run Generalized Report Writer icon invokes `BIN\ICPGRW .BAT`, which runs the QBASIC program `BIN\ICPGRW .BAS`. This program prompts you for the job name, then creates a temporary batch job, `ICPGRWXX .BAT`, in the working directory, and ends, returning control back to the `ICPRUN .BAT` job. It then calls the temporary batch job, which in turn calls `BIN\SETUP .BAT`, then `BIN\jobname .BAT`, and ends, returning control to `ICPGRW .BAT`. It deletes the temporary batch file and pauses before ending.

MVS and IMS JCL

The sample MVS and IMS JCL assigns the input and output datasets and runs the CODE-1 Plus International driver (`ICPM00`). You can find this file in the `IVPFILE` member of the `INSTALIB` (installation) library.

CHAPTER 3

CODE-1 Plus International Callable Routines

This chapter describes how to call the CODE-1 Plus International program modules that match input addresses and add postal codes to your records, or parse your input addresses. Use these calling instructions to incorporate CODE-1 Plus International into your own applications.

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CODE-1 Plus International Callable Modules

Callable modules are those that CODE-1 Plus International uses to analyze your input addresses and attempt to match the address to the database. These modules are designed so that you can call them from your own applications, thereby enabling you to tailor CODE-1 Plus International to meet very specific processing needs.

There are three callable modules available in the CODE-1 Plus International system:

- **ICMATCHN**—matches your input data against the International Postal Database, stores the results, and collects statistics that reflect the results of the ICMATCHN calls.
- **ICPRPT**—formats the statistics from ICMATCHN into reports.
- **ICFORMAT**—formats previously posted fix-fielded address information into an address label format. This callable requires that the ISO country code was posted out with the previous ICMATCHN processing.

The CODE-1 Plus International Matching Module

ICMATCHN is the CODE-1 Plus International Matching Module. It takes input address information and the processing instructions you specify, matches the input data against the International Postal Database, and stores the results.

ICMATCHN also collects statistics that reflect the results of the ICMATCHN calls. These statistics can be formatted into reports by using the ICPRPT module.

How Does ICMATCHN Work?

When you call ICMATCHN, you must pass, as parameters, the name of a pre-defined *call area*. This call area is a block of memory containing data that is used by both your driver program and the callable module.

This call area has a specific *map* associated with it. This map describes the data that is stored in each byte in the call area. Because this map is so specific, both the callable module and the driver program “know” where each piece of data is stored in the call area. Therefore, instead of passing all of the data between the driver and the callable module, you pass only the name of the call area between the two programs.

The ICMATCHN matching module takes, as parameters, the name of the ICMATCHN call area (ICMATPRN). ICMATCHN has a 6118-character call area, which contains the input addressing information, processing requirements, address match results, and return codes.

There are two types of calls for ICMATCHN. The first uses the 6144-byte matching call area (ICMATPRN) mentioned above, which performs a matching function against the database for an international address. The second uses the 65,536-byte audit call area (ICMAAPRM) that retrieves statistical information accumulated by the ICMATCHN routine and returns that information for reporting, which is performed at the end of a batch run.

The ICMATCHN Call Areas

The following tables map the ICMATCHN call areas, which vary by platform. Refer to Chapter 1, Parameter Records in the *ICP Reference Guide* for detailed information regarding the parameters listed in the right column.

NOTE: A copybook called ICMATPRN of this area is provided on your installation media.

The ICMATCHN Application Match Call Area (ICPATPRN)

*Please go to www.g1.com/support for the most current documentation.

Table 3-1: The ICMATCHN Match Call Area (ICPATPRN) (Part 1 of 13)

Position	Name	Length	Contents	Parameter/ Comments
1	MCA-FUNCTION-REQ	1	Matcher control parameters that are established the first time the matcher is called. Changes to this area after the first call are ignored. B Calling from a batch process C Return country audit stats E Close files, end program O Calling from an online process.	Default is B.
2-3	MCA-NUM-PARSER-ATT	2	Reserved. Maximum number of parser calls for each address element.	
4	MCA-USE-DEFAULT-PAT	1	Reserved. Use default parser pattern tables.	
5	MCA-USE-DB	1	Reserved. Use CODE-1 Plus International database.	
6-10	MCA-NUM-IO-ATT	5	Reserved. Max I/Os.	

Table 3-1: The ICMATCHN Match Call Area (ICPATPRN) (Part 2 of 13)

Position	Name	Length	Contents	Parameter/ Comments
11	MCA-USE-ADR-BLK	1	Reserved. Use Address block for fixed location.	
12	MCA-REMOVE-AB-DATA	1	Reserved. Remove address elements from address block.	
13	MCA-OUTPUT-AB-DATA	1	Return output address elements in output address block format using the address block formatting subroutine: Y Return output in the address block format described in the AB OUT parameter N Do not return data in the address block format.	AB OUT Default is N.
14	MCA-MULTIPLE-OK	1	Treatment of multiple match conditions: Y Ignore/accept multiple match conditions N Determine when multiple match conditions exist and return multiple return codes when found.	CONFIG Default is N.
15		1	Reserved.	
16-515	MCA-SELECT-CNTRY	500	List of ISO country codes that have been specified as valid for this execution of the matcher. Up to 250 codes can be used. NOTE: Blanks will be interpreted as all countries.	SELECT
516-516	MCA-OAMULCHAR	1	Treatment of output area multinational (diacritical) characters: Y Include multinational characters in the output address fields N Exclude multinational characters in the output address fields. 1 Read and write Data in an 8859-1 code page with multinationals returned.	FORMAT Default is N.
517-517	MCA-SEPFN	1	Separate first and last names: W Separate addressee's first and last name O Do not separate addressee's first and last name.	FORMAT Default is O.
518-518	MCA-GENDER	1	Determine gender from name: Y Gender code the records based on first name N Do not gender code records.	AM OUT Default is N.

Table 3-1: The ICMATCHN Match Call Area (ICPATPRN) (Part 3 of 13)

Position	Name	Length	Contents	Parameter/ Comments
519-519	MCA-UPPERCASE	1	Determine uppercase/lowercase output: U Return fixed-fielded address elements in upper case M Return the fixed-fielded address elements in mixed case.	FORMAT Default is M.
520	MCA-ADDRESS-ELEMENTS	1	Determine whether or not address element parsing will take place: Y Perform parsing N Do not perform parsing.	AM OUT Defaults is N.
521	MCA-PRINT-MATCHED	1	Reserved.	
522	MCA-PRINT-UNMATCHED	1	Reserved.	
523	MCA-WRITE-UNMATCHED	1	Reserved.	
524	MCA-WRITE-AUDIT	1	Reserved.	
525	MCA-PRINT-EL-ID-SUMMARY	1	Reserved.	
526	MCA-PRINT-EL-ID-DETAIL	1	Reserved.	
527-534	MCA-IO-MODULE-NAME	8	The name of the routine used to regulate the I/O that reads the International Postal Database. By default, the name is GENIOBAT for processing VSAM/KEYED file; GENIOIMS must be specified for processing an IMS database; GENIOINT must be specified for processing under a CICS umbrella.	
535-536	MCA-ENTRY-COUNTRY	2	Two-character code that represents the language in which the output country name in the address block should be returned. FR French EN English GR German SP Spanish	AB OUT
537	MCA-BUILD-TBL-FILE	1	Reserved. Pre-loaded memory file.	

Table 3-1: The ICMATCHN Match Call Area (ICPATPRN) (Part 4 of 13)

Position	Name	Length	Contents	Parameter/ Comments
538	FIX-FIELD- CNTRY	1	<p>A code indicating whether only the fixed location should be checked for the country or if the search should be continued to the address block data.</p> <p>Y Country is in a fixed location</p> <p>N Country is not in a fixed location; continue search to address block.</p> <p>NOTE: Any value other than Y is treated as N.</p>	CONFIG
539	FIX-FIELD-PC	1	<p>A code indicating whether only the fixed location should be checked for the postal code or if the search should be continued to the address block data.</p> <p>Y Postal code is in a fixed location</p> <p>N Postal code is not in a fixed location; continue search to address block.</p> <p>NOTE: Any value other than Y is treated as N.</p>	CONFIG
540	FIX-FIELD- CITY	1	<p>A code indicating whether only the fixed location should be checked for the city or if the search should be continued to the address block data.</p> <p>Y City is in a fixed location</p> <p>N City is not in a fixed location; continue search to address block.</p> <p>NOTE: Any value other than Y is treated as N.</p>	CONFIG
541	FIX-FIELD- STATE	1	<p>A code indicating whether only the fixed location should be checked for the state or if the search should be continued to the address block data.</p> <p>Y State is in a fixed location</p> <p>N State is not in a fixed location; continue search to address block.</p> <p>NOTE: Any value other than Y is treated as N.</p>	CONFIG
542	FIX-FIELD- ADDR	1	<p>A code indicating whether only the fixed location should be checked for the street address or if the search should be continued to the address block data.</p> <p>Y Street address is in a fixed location</p> <p>N Street address is not in a fixed location; continue search to address block.</p> <p>NOTE: Any value other than Y is treated as N.</p>	CONFIG

Table 3-1: The ICMATCHN Match Call Area (ICPATPRN) (Part 5 of 13)

Position	Name	Length	Contents	Parameter/ Comments
543	MCA-ALT-CITY-FLAG	1	Alternate city flag. This field should always be set to Y.	CONTRL
544	MCA-ICP-PROD-FLAG	1	This field should always be set to Y.	
545	MCA-C6P-PROD-FLAG	1	This field should be set to Y if you own and are calling the Canadian CODE-1 Plus International matcher from the same runtime unit as you are the CODE-1 Plus International matcher. If you do not own Canadian CODE-1 Plus, you will receive an error message if this field is set to "Y."	
546	MCA-C6P-PROD-FLAG	1	Reserved.	
547	MCA-REQ-FIRM	1	This field should be set to "Y" if you want the system to perform Firm Name match. For countries with firm names, CODE-1 Plus International will return the firm name from the database files only if the input firm name (MIA-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. NOTE: Any other value in this field will not return a firm name.	FIRMNM
548-566	FILLER	19	Reserved (Filler).	
567-576	MCA-DB-LIB	10	Database library override library name. NOTE: This field is for the iSeries platform only. All other platforms are reserved through and including position 576.	
577-626	MIA-CNTRY	50	Input country name or blanks.	CNTRYI
627-636	MIA-PC	10	Input postal code or blanks.	CS PCD
637-686	MIA-CITY	50	Input city or blanks.	CS PCD
687-736	MIA-STATE	50	Input state or blanks.	CS PCD
737-786	MIA-FIRM-NAME	50	Input firm name or blanks.	NAMEDF
787-886	MIA-LAST-NAME	100	Last name or blanks.	NAMEDF
887-986	MIA-STREET-1	100	First address line or blanks.	ADDRDF

Table 3-1: The ICMATCHN Match Call Area (ICPATPRN) (Part 6 of 13)

Position	Name	Length	Contents	Parameter/ Comments
987-1086	MIA-STREET-2	100	Second address line or blanks.	ADDRDF
1087-1186	MIA-STREET-3	100	Third address line or blanks.	ADDRDF
1187-1286	MIA-STREET-4	100	Fourth address line or blanks.	ADDRDF
1287-1386	MIA-ADR-BLK-1	100	This area is used to define information that is floating and was not defined in the previous 11 fields. The program will search this area for any missing address element(s) if the fixed-fielded areas were set to "Y."	AB INP
1387-1486	MIA-ADR-BLK-2	100	This area is used to define information that is floating and was not defined in the previous fixed fields. The program will search this area for any missing address element(s).	AB INP
1487-1586	MIA-ADR-BLK-3	100	This area is used to define information that is floating and was not defined in the previous fixed fields. The program will search this area for any missing address element(s).	AB INP
1587-1686	MIA-ADR-BLK-4	100	This area is used to define information that is floating and was not defined in the previous fixed fields. The program will search this area for any missing address element(s).	AB INP
1687-1786	MIA-ADR-BLK-5	100	This area is used to define information that is floating and was not defined in the previous fixed fields. The program will search this area for any missing address element(s).	AB INP
1787-1886	MIA-ADR-BLK-6	100	This area is used to define information that is floating and was not defined in the previous fixed fields. The program will search this area for any missing address element(s).	AB INP
1887-1986	MIA-ADR-BLK-7	100	This area is used to define information that is floating and was not defined in the previous fixed fields. The program will search this area for any missing address element(s).	AB INP
1987-2086	MIA-ADR-BLK-8	100	This area is used to define information that is floating and was not defined in the previous fixed fields. The program will search this area for any missing address element(s).	AB INP
2087-2186	MIA-ADR-BLK-9	100	This area is used to define information that is floating and was not defined in the previous fixed fields. The program will search this area for any missing address element(s).	AB INP

Table 3-1: The ICMATCHN Match Call Area (ICPATPRN) (Part 7 of 13)

Position	Name	Length	Contents	Parameter/ Comments
2187- 2195	MAX-CITY-ST- IO	9	Reserved.	
2196	MIA-PARSE- FLAG	1	Reserved. Parse flag.	
2197- 2296	MIA-STREET-5	100	Fifth address line or blanks.	ADDRDF
2297- 2386	FILLER	90	Reserved (Filler).	
2387- 2388	MOA-ABEND- RC	2	Return area for abnormal termination of the matcher: blanks Normal termination P? Parser abend D? ICDBMAT abend L? ICDBLIO abend G? GENIOXXX abend MC Invalid country level found for input country.	
2389- 2468	MOA-ABEND- TXT	80	Text that explains the abend return code in 2387-2388 .	
2469- 2470	MOA-WARN- RC	2	Return area for warning(s) of the matcher.	
2471- 2550	MOA-WARN- TXT	80	Text that explains the warning return code in 2568-2569 .	
2551- 2558	MOA- RELEASE- MOD-NUM	8	Software release number and modification level. RxxxxMxx	
2559- 2608	FILLER	50	Reserved (Filler).	
2609	MOA-CNTRY-I- RC	1	Reserved.	
2610	MOA-CITY-I- RC	1	Reserved.	

Table 3-1: The ICMATCHN Match Call Area (ICPATPRN) (Part 8 of 13)

Position	Name	Length	Contents	Parameter/ Comments
2611	MOA-STATE-I-RC	1	Reserved.	
2612	MOA-PC-I-RC	1	Reserved.	
2613	MOA-STREET-I-RC	1	Reserved.	
2614	MOA-PC-CITY-I-RC	1	Reserved.	
2615	MOA-REC-O-RC	1	Output overall record return code: 1 Confirmed 2 Corrected 3 Indeterminate 6 Multiple.	AM OUT
2616	MOA-CNTRY-O-RC	1	Output country return code: 1 Confirmed 2 Corrected 3 Indeterminate 6 Multiple.	AM OUT
2617	MOA-CITY-O-RC	1	Output city return code: 1 Confirmed 2 Corrected 3 Indeterminate 5 Postal data unavailable 6 Multiple.	AM OUT
2618	MOA-STATE-O-RC	1	Output state return code: 1 Confirmed 2 Corrected 3 Indeterminate 5 Postal data unavailable.	AM OUT
2619	MOA-PC-O-RC	1	Output postal code return code: 1 Confirmed 2 Corrected 3 Indeterminate 4 Confirmed/reformatted 5 Postal data unavailable 6 Multiple.	AM OUT

Table 3-1: The ICMATCHN Match Call Area (ICPATPRN) (Part 9 of 13)

Position	Name	Length	Contents	Parameter/ Comments	
2620	MOA-STREET- O-RC	1	Output street return code:	AM OUT	
			1		Confirmed
			2		Corrected
			3		Indeterminate
			4		Street confirmed or corrected, but house number is out of range. Applies to France, UK, and Japan only.
			5		Postal data unavailable
2621	MOA-PC-CITY- O-RC	1	Output city return code:	AM OUT	
			1		Confirmed
			2		Corrected
			3		Indeterminate
2622	MOA-HOUSE- NUM-O-RC	1	Reserved.		
2623	MOA-EXTRA- INFO-O-RC	1	Extra information return code:		
			1		No extra information present
			2		Extra information present
2624	MOA-ICP-RC- HOUSE-NUM	1	House number return code:	AE OUT	
			1		Parsed
			5		Not parsed.
2625	MOA-ICP-RC- STREET	1	Street name return code:	AE OUT	
			1		Parsed
2626	MOA-ICP-RC- STREET-TYPE	1	Street type return code:	AE OUT	
			1		Parsed and validated.
			3		Parsed.
2627	MOA-ICP-RC- STREET-DIR-L	1	Leading directional return code:	AE OUT	
			1		Parsed and validated.
			3		Parsed.
			5	Not parsed.	

Table 3-1: The ICMATCHN Match Call Area (ICPATPRN) (Part 10 of 13)

Position	Name	Length	Contents	Parameter/ Comments
2628	MOA-ICP-RC- STREET-DIR-T	1	Trailing directional return code: 1 Parsed and validated. 3 Parsed. 5 Not parsed.	AE OUT
2629	MOA-ICP-RC- UNIT-NUM	1	Unit number return code: 1 Parsed 5 Not parsed.	AE OUT
2630	MOA-ICP-RC- UNIT- KEYWORD	1	Unit identifier return code: 1 Parsed and validated. 3 Parsed. 5 Not parsed.	AE OUT
2631	MOA-ICP-RC- BOX-NUM	1	PO Box number return code: 1 Parsed 5 Not parsed.	AE OUT
2632	MOA-ICP-RC- BOX- KEYWORD	1	PO Box identifier return code: 1 Parsed and validated. 3 Parsed. 5 Not parsed.	AE OUT
2633	MOA-ICP-RC- GRAMMAR	1	Grammar return code: 1 Parsed and validated. 3 Parsed. 5 Not parsed.	AE OUT
2634- 2643	FILLER	10	Reserved (Filler).	
2644- 2648	MOA-MATCH- SCORE	5	Reserved.	
2649	MOA-CNTRY- LEVEL	1	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.	AM OUT
2650- 2652	MOA-CNTRY- NUM	3	Reserved.	

Table 3-1: The ICMATCHN Match Call Area (ICPATPRN) (Part 11 of 13)

Position	Name	Length	Contents	Parameter/ Comments
2653	MOA-STREET- PAT-TYPE	1	Reserved.	
2654	MOA-DB-MAT- TYPE	1	Reserved.	
2655- 2704	FILLER	50	Reserved (Filler).	
2705- 2754	MOA-CNTRY- ENGLISH	50	Output country name in English.	CT OUT
2755- 2804	MOA-CNTRY- FRENCH	50	Output country name in French.	CT OUT
2805- 2854	MOA-CNTRY- SPANISH	50	Output country name in Spanish.	CT OUT
2855- 2904	MOA-CNTRY- GERMAN	50	Output country name in German.	CT OUT
2905- 2907	MOA-CNTRY- UPU	3	Output Country UPU code.	CT OUT
2908- 2909	MOA-CNTRY- ISO	2	Output Country ISO code. Must be stored if ICFORMAT routine is to be used at a later date.	CT OUT
2910- 2919	MOA-PC	10	Output postal code.	PC OUT
2920- 2969	MOA-CITY	50	Output city.	CS OUT
2970- 3019	MOA-STATE	50	Output state.	CS OUT
3020- 3051	MOA-FIRM- NAME	32	Output firm name.	NM OUT
3052- 3086	MOA-TITLE	35	Output title of respect.	NM OUT
3087- 3136	MOA-FIRST- NAME	50	Output first name.	NM OUT
3137- 3186	MOA-MIDDLE- NAME	50	Output middle name. NOTE: Reserved for future use.	NM OUT
3187- 3236	MOA-LAST- NAME	50	Output last name.	NM OUT
3237- 3251	MOA- MATURITY	15	Output maturity suffix. NOTE: Reserved for future use.	NM OUT

Table 3-1: The ICMATCHN Match Call Area (ICPATPRN) (Part 12 of 13)

Position	Name	Length	Contents	Parameter/ Comments
3252	MOA GENDER	1	Output gender code.	AM OUT
3253- 3352	MOA-STREET- 1	100	Output address line 1.	SA OUT
3353- 3452	MOA-STREET- 2	100	Output address line 2.	SA OUT
3453- 3552	MOA-STREET- 3	100	Output address line 3.	SA OUT
3553- 3652	MOA-STREET- 4	100	Output address line 4.	SA OUT
3653- 3752	MOA-ADR- BLK-1	100	Address block line 1.	AB OUT
3753- 3852	MOA-ADR- BLK-2	100	Address block line 2.	AB OUT
3853- 3952	MOA-ADR- BLK-3	100	Address block line 3.	AB OUT
3953- 4052	MOA-ADR- BLK-4	100	Address block line 4.	AB OUT
4053- 4152	MOA-ADR- BLK-5	100	Address block line 5.	AB OUT
4153- 4252	MOA-ADR- BLK-6	100	Address block line 6.	AB OUT
4253- 4352	MOA-ADR- BLK-7	100	Address block line 7.	AB OUT
4353- 4452	MOA-ADR- BLK-8	100	Address block line 8.	AB OUT
4453- 4552	MOA-ADR- BLK-9	100	Address block line 9.	AB OUT
4553- 4652	MOA-EXTRA- INFO	100	Extra information for the match street address.	
4653- 4656	MOA-ICP-REL	4	Database release number	
4657- 4658	MOA-ICP-MOD	2	Database release modification number	
4659- 4662	MOA-ICP- UPU-YEAR	4	UPU data year	
4663	MOA-ICP- UPU-QTR	1	UPU data quarter	

Table 3-1: The ICMATCHN Match Call Area (ICPATPRN) (Part 13 of 13)

Position	Name	Length	Contents	Parameter/ Comments
4664- 4671	MOA-ICP- CREATION- DATE	8	Database release number	
4672- 4701	Filler	30		
4702- 4751	MOA-STREET- 5	50	Output address line 5.	
4752- 4761	MOA-ICP- PARSE- HOUSE-NUM	10	Output parsed house number.	AE OUT
4762- 4860	MOA-ICP- PARSE- STREET	99	Output parsed street name.	AE OUT
4861- 4880	MOA-ICP- PARSE- STREET-TYPE	20	Output parsed street type.	AE OUT
4881- 4890	MOA-ICP- PARSE- STREET-DIR-L	10	Output parsed leading directional.	AE OUT
4891- 4900	MOA-ICP- PARSE- STREET-DIR-T	10	Output parsed trailing directional.	AE OUT
4901- 4910	MOA-ICP- PARSE-UNIT- NUM	10	Output parsed apartment number.	AE OUT
4911- 4920	MOA-ICP- PARSE-UNIT- KEYWORD	10	Output parsed unit keyword.	AE OUT
4921- 4930	MOA-ICP- PARSE-BOX- NUM	10	Output parsed box number.	AE OUT
4931- 4950	MOA-ICP- PARSE-BOX- KEYWORD	20	Output parsed box keyword.	AE OUT
4951- 4990	MOA-ICP- PARSE- GRAMMAR	40	Output parsed grammatical words.	AE OUT
4991- 6243	Reserved.	1253		

The ICMATCHN Audit Call Area

NOTE: A copybook called ICMAAPRM of this area is provided on your installation tape.

Table 3-2: The ICMATCHN Audit Area

Position	Name	Length	Contents	Parameter/ Comments
1	MCA-FUNCTION-REQ	1	E	Close files, end program
2-32,751	MAA-CNTRY-STAT-P1	32,750		Page 1 audit counts.
32752-65,501	MAA-CNTRY-STAT-P2	32,750		Page 2 audit counts.
65,502-65,536	Reserved	35		

Calling ICMATCHN for Unix, Windows, or VMS Using Matcher Parameters

The COBOL syntax for calling ICMATCHN on Unix, Windows, or VMS using matcher parameters is as follows:

Call ICMATCHN using `MATCHER-PARAMETERS` (see Table 3-1).

At the end of the batch run, you should call ICMATCHN as follows:

Call ICMATCHN using `COUNTRY-AUDIT-STATS` (see Table 3-2).

Calling ICMATCHN for Mainframe

When calling ICMATCHN from a mainframe environment, there are distinctions between COBOL II and other programming languages. If you are using a programming language other than COBOL II with the COBOL II version of CODE-1 Plus International, the COBOL II run-time environment must be initialized before the first call to CODE-1 Plus International. You can do this by using either the COB2STUB or the COB2INI program as described below.

The sections below explain how to initialize the COBOL II run-time environment from programs written in languages other than COBOL II.

Using COB2STUB to Initialize the COBOL II Run-Time Environment from Batch

If the non-COBOL II user-written program that calls CODE-1 Plus International is a batch program, you can use the COB2STUB program, which is shipped with CODE-1 Plus International, to initialize the COBOL II run-time environment. This method is easier to use than the COB2INI method described below. Using the COB2STUB method, the name of the user-written program is passed as a parameter through JCL or other means to the COB2STUB program. (COB2STUB is a stub program written in COBOL II, hence the name COB2STUB.) COB2STUB becomes the top program in the calling stack and as such, it causes the COBOL II run time environment to be initialized before the user written program is executed. It is recommended that the user written program perform a dynamic call of the CODE-1 Plus International matcher.

NOTE: Sample JCL is provided in the sample library on your installation media.

Using COB2INI to Initialize the COBOL II Run-Time Environment

If you are using an older version of COBOL (pre-COBOL II), follow the steps below to initialize the COBOL II run-time libraries:

- 1 Add the following to the WORKING_STORAGE SECTION:

```
10 COB2-RETURN-CODE    PIC S9 (9) COMP VALUE ZERO
   88 COB2INI-OK              VALUE ZERO
   88 COB2TRM-OK              VALUE ZERO
```

- 2 Add the following to the PROCEDURE DIVISION to execute once before the first call to ICMATCHN:

```
CALL 'COB2INI' USING COB2-RETURN-CODE.
IF NOT COB2INI-OK
    (handle error-condition and abend)
```

- 3 After the last call to ICMATCHN, you can optionally add the following:

```
CALL 'COB2TRM' USING COB2-RETURN-CODE.
IF NOT COB2TRM-OK
    (handle error-condition and abend)
```

- 4 Compile the COBOL and link with the COBOL II static link library. If you use another language besides COBOL, you can apply the same techniques described above, but you must convert the COBOL language syntax into the syntax of the programming language that you use.

Using Assembler to Initialize the COBOL II Run-Time Libraries

If you are using Assembler, follow the steps below to initialize the COBOL II run-time libraries.

- 1 Add the following constants:

```
COB2INIT DC F'0' COB2INI RETURN CODE INITIALIZE
COB2TERM DC F'0' COB2INI RETURN CODE TERMINATE
```

- 2 Add the following to execute once before the first call to ICMATCHN:

```
CALL COB2INI,(COB2INIT) COBOL II INITIALIZATION
L    15,COB2INIT
C    15,=F'4' CHECK RETURN CODE
BNH  INITOK
.
.
```

(Handle bad return-code from COBOL II initialization)

- 3 After the last call to ICMATCHN, you can optionally add the following:

```
CALL COB2INI, (COB2TERM)      COBOL II TERMINATION
L   15, COB2TERM
LTR 15, 15                    CHECK RETURN CODE
BZ  TERMOK
C   15, =F'16'                CHECK RETURN CODE
BE  TERMOK
Handle bad return-code from COBOL II termination
```

- 4 Assemble the program and link with the COBOL II static Link library from the distribution media.

Calling ICMATCHN on a Mainframe Platform for a Matching Call

Call ICMATCHN using

```
DFHEIBLK
DFHCOMMAREA
MATCHER-PARAMETERS
G1ICLIC-PCB
G1ICGDR-PCB
G1ICDBI-PCB
G1ICPCC-PCB
G1ICCTY-PCB
G1ICPCS-PCB
G1ICGPR-PCB
G1ICGLU-PCB
G1ICUPR-PCB
G1ICULU-PCB
G1ICTBL-PCB
```

Calling ICMATCHN on a Mainframe Platform at End-of-File

Call ICMATCHN using

```
DFHEIBLK
DFHCOMMAREA
COUNTRY-AUDIT-STATS
G1ICLIC-PCB
G1ICGDR-PCB
G1ICDBI-PCB
G1ICPCC-PCB
G1ICCTY-PCB
G1ICPCS-PCB
G1ICGPR-PCB
G1ICGLU-PCB
```

G1ICUPR-PCB
 G1ICULU-PCB
 G1ICTBL-PCB

DFHEIBLK and DFHCOMMAREA

For non-CICS calls, use the following to map the first two call areas:

```
01 DFHEIBLK                PIC(X).
01 DFHCOMMAREA            PIC(X).
```

For CICS calls, use the standard CICS definitions for these two areas.

Remaining Parameter Areas

For non-IMS calls, use the following to map the remaining call areas:

```
01 G1ICLIC-PCB    PIC (X) .
01 G1ICGDR-PCB   PIC (X) .
01 G1ICVIL-PCB   PIC (X) .
01 G1ICDBI-PCB   PIC (X) .
01 G1ICPCC-PCB   PIC (X) .
01 G1ICCTY-PCB   PIC (X) .
01 G1ICPCS-PCB   PIC (X) .
01 G1ICGPR-PCB   PIC (X) .
01 G1ICGLU-PCB   PIC (X) .
01 G1ICUPR-PCB   PIC (X) .
01 G1ICULU-PCB   PIC (X) .
01 G1ICULU-PCB   PIC (X) .
```

For IMS calls, you must also include Program Control Blocks (PCBs) in your 01-level linkage section. When you call any matcher module, you must include the International Postal Database PCBs that are coded in all of the PCBs distributed with the CODE-1 Plus International IMS system installation/software tape. The PCB is listed below for your convenience; replace “xxx” with the appropriate file designator (“LIC,” “GDR,” etc.).

```
01 G1ICxxx-PCB .
05 G1ICxxx-DBD-NAME-PCB    PIC X(8) .
05 G1ICxxx-SEG-LEVEL-PCB   PIC X(2) .
05 G1ICxxx-STATUS-CODE-PCB PIC X(2) .
05 G1ICxxx-PROC-OPTS-PCB   PIC X(4) .
05 G1ICxxx-RSV-DLI-PCB     PIC S9(9) BINARY .
05 G1ICxxx-SEGNAME-PCB     PIC X(8) .
05 G1ICxxx-KFB-LENGTH-PCB  PIC S9(9) BINARY .
05 G1ICxxx-SENS-SEG-PCB    PIC S9(9) BINARY .
05 G1ICxxx-KEY-FEEDBACK-PCB PIC X(50) .
```

Calling the Reporting Function

CODE-1 Plus International's reporting function, ICPRPT, produces several reports from the audit data in the ICMATCHN program.

The COBOL syntax for calling ICPRPT is as follows:

Call ICPRPT using **ICPRPT-PARMS** (see Table 3-3).

COUNTRY-AUDIT-STATS ICMAAPRM (see Table 3-2).

The ICPRPT Application Call Area

The following table maps the ICPRPT call area. Refer to Appendix A for detailed information regarding the parameters listed in the right column.

NOTE: A copybook called ICRPTPRM of this area is provided on your installation tape.

Table 3-3: The ICPRPT Call Area (Part 1 of 2)

Position	Name	Length	Contents	Parameter/ Comments
1	ICPRPT-RC	1	Return Code: E Error(s) found blank No error found.	
2	ICPRPT-CNTRY- STATS	1	Indicator determining whether to print Country Statistics Report: Y Print the report N Do not print the report.	REPORT Default is N.
3	ICPRPT-CNTRY- SUMMARY	1	Indicator determining whether to print Country Summary Report: Y Print the report N Do not print the report.	REPORT Default is N.
4-51	Reserved.	48		
52-61	ICPRPT-DATE	10	Date processed (MM/DD/YYYY)	HEADER
62-101	ICPRPT- HEADER	40	Page header	HEADER

Table 3-3: The ICPRPT Call Area (Part 2 of 2)

Position	Name	Length	Contents	Parameter/ Comments
102-233	ICPRPT- UHDTAB-1	132	Report header line 1.	UHDxx
234-365	ICPRPT- UHDTAB-2	132	Report header line 2.	UHDxx
366-497	ICPRPT- UHDTAB-3	132	Report header line 3.	UHDxx
498-629	ICPRPT- UHDTAB-4	132	Report header line 4.	UHDxx
630-761	ICPRPT- UFTTAB-1	132	Report footer line 1.	UFTxx
762-893	ICPRPT- UFTTAB-2	132	Report footer line 2.	UFTxx
894- 1025	ICPRPT- UFTTAB-3	132	Report footer line 3.	UFTxx
1026- 1157	ICPRPT- UFTTAB-4	132	Report footer line 4.	UFTxx
1158- 2048	Reserved.	891		

Calling the Formatting Function

CODE-1 Plus International's formatting function, ICFORMAT, will format previously posted fix-fielded address information into the correct label format for that country. The input for ICFORMAT *must* be the output of a previously run CODE-1 Plus International job or call to ICMATCHN.

NOTE: This routine requires the G1ICDBI database file to run.

Calling ICFORMAT for Unix, Windows, or VMS Using Matcher Parameters

The COBOL syntax for calling ICFORMAT on Unix, Windows, or VMS using The COBOL syntax for calling ICFORMAT is as follows:

Call ICFORMAT using FORMATTER-PARAMETERS (see Table 3-4).

Calling ICFORMAT for Mainframe

Call ICFORMAT using

DFHEIBLK
 DFHCOMMAREA
 FORMATTER-PARAMETERS
 G1ICLIC-PCB
 G1ICGDR-PCB
 G1ICDBI-PCB
 G1ICPCC-PCB
 G1ICCTY-PCB
 G1ICPCS-PCB
 G1ICGPR-PCB
 G1ICGLU-PCB
 G1ICUPR-PCB
 G1ICULU-PCB
 G1ICTBL-PCB

DFHEIBLK and DFHCOMMAREA

For non-CICS calls, use the following to map the first two call areas:

01 DFHEIBLK PIC(X).

01 DFHCOMMAREA PIC(X).

For CICS calls, use the standard CICS definitions for these two areas.

Remaining Parameter Areas

For non-IMS calls, use the following to map the remaining call areas:

01 G1ICLIC-PCB PIC(X).
 01 G1ICGDR-PCB PIC(X).
 01 G1ICVIL-PCB PIC(X).
 01 G1ICDBI-PCB PIC(X).
 01 G1ICPCC-PCB PIC(X).
 01 G1ICCTY-PCB PIC(X).
 01 G1ICPCS-PCB PIC(X).
 01 G1ICGPR-PCB PIC(X).
 01 G1ICGLU-PCB PIC(X).
 01 G1ICUPR-PCB PIC(X).
 01 G1ICULU-PCB PIC(X).

For IMS calls, you must also include Program Control Blocks (PCBs) in your 01-level linkage section. When you call any matcher module, you must include the International Postal Database PCBs that are coded in all of the PCBs distributed with the CODE-1 Plus International IMS system installation/software tape. The PCB is listed below for your convenience; replace “xxx” with the appropriate file designator (“LIC,” “GDR,” etc.).

```

01 G1ICxxx-PCB.
05 G1ICxxx-DBD-NAME-PCB PIC X(8).
05 G1ICxxx-SEG-LEVEL-PCB PIC X(2).
05 G1ICxxx-STATUS-CODE-PCB PIC X(2).
05 G1ICxxx-PROC-OPTS-PCB PIC X(4).
05 G1ICxxx-RSV-DLI-PCB PIC S9(9) BINARY.
05 G1ICxxx-SEGNAME-PCB PIC X(8).
05 G1ICxxx-KFB-LENGTH-PCB PIC S9(9) BINARY.
05 G1ICxxx-SENS-SEG-PCB PIC S9(9) BINARY.
05 G1ICxxx-KEY-FEEDBACK-PCB PIC X(50).

```

The ICFORMAT Application Call Area

The following table maps the ICFORMAT call area. Refer to Appendix A for detailed information regarding the parameters listed in the right column.

NOTE: A copybook called ICFMTPRM of this area is provided on your installation tape.

Table 3-4: The ICFORMAT Call Area (Part 1 of 4)

Position	Name	Length	Contents	Parameter/ Comments
1-8	FCA-IO-MODULE-NAME	8	The name of the routine used to regulate the I/O that reads the International Postal Database. By default, the name is GENIOBAT for processing VSAM/KEYED file; GENIOIMS must be specified for processing an IMS database; GENIOINT must be specified for processing under a CICS umbrella.	
9	FCA-OAMULCHAR	1	The treatment of output area multinational (diacritical) characters: Y Include multinational characters in output areas N Exclude multinational characters in output areas 1 Read and write data in an 8859-1 code page with multinationals returned. Default N	FORMAT

Table 3-4: The ICFORMAT Call Area (Part 2 of 4)

Position	Name	Length	Contents	Parameter/ Comments
10	FCA-UPPERCASE	1	Upper/lower case output: U Provide uppercase only M Provide mixed-case (upper and lower) Default M	FORMAT
11	FCA-FILES-OPEN	1	Files already open: Y CODE-1 Plus International files are already open. If ICMATCHN was already called by the program that calls ICFORMAT then this will be true. Trying to open files that are already open will cause ICFORMAT to fail. N Files are not already open. ICFORMAT must open them. Default N	
12-46	Reserved	35		
47-48	FIA-CNTRY-ISO	2	Primary input country number	
49-98	FIA-CNTRY	50	Primary input country name	
99-108	FIA-PC	10	Primary input postal code	
109-158	FIA-CITY	50	Primary input city name	
159-208	FIA-STATE	50	Primary input state/county name	
209-458	Reserved	250	Reserved for future use.	
459-558	FIA-STREET-1	100	Input street address 1	
559-658	FIA-STREET-2	100	Input street address 2	
659-758	FIA-STREET-3	100	Input street address 3	
759-858	FIA-STREET-4	100	Input street address 4	
859	FIA-FUNCTION-REQ	1	Method of calling program: B Calling from a batch process O Calling from an online process.	
860-893	Reserved	34		

Table 3-4: The ICFORMAT Call Area (Part 3 of 4)

Position	Name	Length	Contents	Parameter/ Comments
894-895	FOA-ABEND-RC	2	Formatter abnormal termination return code: " " Formatter terminated normally P? Parser abended - ? = parser abend code D? Database formatter (ICDBMAT) abend code L? Logical I/O program (ICDBLIO) abend code G? Generic I/O program (GENIOXXX) abend code MC Unable to read from G1ICTBF file MW Unable to write to G1ICTBF file	
896-975	FOA-ABEND-TXT	80	Text description of formatter abnormal termination	
976-977	FOA-WARN-RC	2	Warning return code: " " No warnings issued P? Parser abended - ? = parser abend code D? Database formatter (ICDBMAT) abend code L? Logical I/O program (ICDBLIO) abend code G? Generic I/O program (GENIOXXX) abend code MC Unable to read from G1ICTBF file MW Unable to write to G1ICTBF file	
978-1057	FOA-WARN-TXT	80	Text description of warning return code	
1058-1065	FOA-RELEASE-MOD-NUM	8	Matching software release number and modification level	
1066-1165	FOA-ADR-BLK-1	100	Address block 1	
1166-1265	FOA-ADR-BLK-2	100	Address block 2	
1266-1365	FOA-ADR-BLK-3	100	Address block 3	
1366-1465	FOA-ADR-BLK-4	100	Address block 4	
1466-1565	FOA-ADR-BLK-5	100	Address block 5	

Table 3-4: The ICFORMAT Call Area (Part 4 of 4)

Position	Name	Length	Contents	Parameter/ Comments
1566- 1665	FOA-ADR-BLK-6	100	Address block 6	
1666- 1765	FOA-ADR-BLK-7	100	Address block 7	
1766- 1865	FOA-ADR-BLK-8	100	Address block 8	
1866- 1965	FOA-ADR-BLK-9	100	Address block 9	
1966- 2048	Reserved.	83		

CHAPTER 4

Using G1G001

This chapter discusses the executable routine G1G001, which enables you to print detailed reports using your coded records output file. The module is explained, along with each of the parameter records used to execute the module. Additionally, sample control language is included.

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What Is G1G001?

G1G001 is a program that you can use to print customized reports of records from the CODE-1 Plus International output files (the CODE-1 Plus International output file becomes the G1G001 input file). You can define which record elements to print on the report, and you can format those input elements with constant data. G1G001 can print multiple 132-character print lines per input record.

Additionally, G1G001 enables you to print a main header and a date on your reports, as well as up to three lines of additional header.

You can select or reject records to print based on a list code or a mismatch reason code. If you use a mismatch reason code, you also have the option of printing a 20-character reason (derived from the reason code). Another way G1G001 enables you to select records is by comparing pairs of fields in a single record: if the value of the first field is different from the value of the second field, the record will print. You can also include or exclude a specific number of records. Further, you can limit the report to a specific number of pages.

Using G1G001

To use G1G001, define parameter records to perform the following functions:

- Identify your input file
- Print Header information on your report
- Identify the content and layout of your print lines
- Select or reject records for processing.

Once you have defined your parameter records, you will write control language and submit the job.

NOTE: When printing multiple print lines for each input record, the order of the parameter records makes a difference. Parameters that affect a print line should be grouped together.

Input File and Header/Footer Parameter Records

The following parameter records are used to define your input file and the header and footer lines that are to print on your reports:

- FILEDF
- HEADER
- HEADxx
- UFTxx
- UHDxx

This section describes these parameter records in detail.

FILEDF

The **required** FILEDF parameter record enables you to define the input file for the G1G001 program.

Field-by-Field

The following table covers each field on the FILEDF parameter record.

Table 4-1: FILEDF Parameter Record Fields (Part 1 of 2)

Position	Field Name	Description	Comments
1-6	KEYWORD	FILEDF is the only acceptable entry.	Required.
8-15	FILE NAME	Name of the input or output file. Enter the following name: G1GNAM Input file	Required. No default.
17	RECORD FORMAT	Code indicating whether the records in the file are fixed-length. F Records are fixed-length.	Required. Default is F.
19-22	RECORD LENGTH	The length, in bytes, of the records in the file.	Required. No default.
24-28	BLOCK SIZE	The size, in bytes, of the blocks in the file.	Required. No default.
39-46	EXIT ROUTINE NAME	Name of the input exit routine that should be called when CODE-1 Plus International is ready to read a record from this file, or the name of the output exit routine that should be called when CODE-1 Plus International is ready to write a record to the file.	Optional. No default. Name must be entered left-justified.

Table 4-1: FILEDF Parameter Record Fields (Part 2 of 2)

Position	Field Name	Description	Comments
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	MAXIMUM NUMBER OF RECORDS	Maximum number of records CODE-1 Plus International should read from or write to this file.	Optional. No default.

HEADER

The **required** HEADER parameter record enables you to define a date and header text that identifies the report.

Field-by-Field

The following table covers each field on the HEADER parameter record.

Table 4-2: HEADER Parameter Record Fields

Position	Field Name	Description	Comments
1-6	KEYWORD	HEADER is the only acceptable entry.	Required.
8-17	DATE	The date that G1G001 was executed. If you leave this field blank, the current system date will be printed on your report.	Optional. Default is current system date.
19-58	HEADER TEXT	Any text that identifies the report.	Optional. No default.

HEADxx

The **optional** HEADxx parameter record enables you to define up to three additional header lines to print at the top of the report. You can define up to six HEADxx parameter records (two for each line).

Field-by-Field

The following table covers each field on the HEADxx parameter record.

Table 4-3: HEADxx Parameter Record Fields

Position	Field Name	Description	Comments
1-4	KEYWORD	HEAD is the only acceptable entry.	Required.
5-6	HEADING LINE DESIGNATOR	One of the following codes to determine the line number and line side on which this header text should be printed: 1A Left side, line 1 1B Right side, line 1 2A Left side, line 2 2B Right side, line 2 3A Left side, line 3 3B Right side, line 3. The left side refers to positions 1-66, the right side refers to positions 67-132.	Required. No default.
7	SPACE BEFORE HEADER (for this heading print line)	Enter one of the following codes to tell CODE-1 Plus International how many blank lines should be printed before this header line: S Single space (no blank lines) D Double space (one blank line) T Triple space (two blank lines).	Optional. Default is S.
8-73	HEADER TEXT	Any text that you want printed on the top of your report. If you include the string "MM/DD/YY" in this field, G1G001 will print the date specified in columns 8-15 of the HEADER parameter record in your header text. If columns 8-15 on the HEADER record are blank, the current system date will be used.	Optional. No default.

UFTxx

The **optional** UFTxx parameter record enables you to specify any text to print at the bottom of every page of each report. You can specify up to four footer lines.

Field-by-Field

The following table covers each field on the UFTxx parameter record.

Table 4-4: UFTxx Parameter Record Fields

Position	Field Name	Description	Comments
1-3	KEYWORD	UFT is the only acceptable entry.	Required.
4	LINE NUMBER	The footer line number. Enter 1, 2, 3, or 4.	Required. No default.
5	LINE SIDE	The side of the footer line on which this text should appear. Enter 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.

UHDxx

The **optional** UHDxx parameter record enables you to specify any additional text to print at the top of each page of each report. You can specify up to four additional header lines.

Field-by-Field

The following table covers each field on the UHDxx parameter record.

Table 4-5: UHDxx Parameter Record Fields

Position	Field Name	Description	Comments
1-3	KEYWORD	UHD is the only acceptable entry.	Required.
4	LINE NUMBER	The header line number. Enter 1, 2, 3, or 4.	Required. No default.
5	LINE SIDE	The side of the header line on which this text should appear. Enter 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.

Report Layout and Content Parameter Records

The following parameter records define how the report lines look and what data prints on them:

- CONTRL
- CONSTANT
- FORMAT
- MOVE
- PAGESZ
- TESTIT
- UNPK.

NOTE: G1G001 does not generate the Execution Log.

This section describes these parameter records in detail.

CONTRL

The **required** CONTRL parameter record enables you to define the following information:

- Location and length of the key code in the input records (this key code will be compared to the value entered on the SELECT parameter record, explained later in this chapter, to determine if the record is to be printed)
- Number of pages that are to be printed
- Whether or not page numbers are to be printed on the report
- Location of the mismatch reason code in the input record, and the location on the print line for the mismatch reason
- Whether to print the report in mixed case or upper case.

Field-by-Field

The following table covers each field on the CONTRL parameter record.

NOTE: All input record position fields can be extended one column to the left to accommodate 4-byte positions, if necessary.

Table 4-6: CONTRL Parameter Record Fields (Part 1 of 2)

Position	Field Name	Description	Comments
1-6	KEYWORD	CONTRL is the only acceptable entry.	Required.
8-10	KEY CODE LOCATION	The starting position in the input record of the key code.	Required. No default.
12	LENGTH OF KEY CODE	The length of the key code in the input record.	Required. No default.
14-16	NUMBER OF PAGES	The maximum number of pages of the report that are to be printed.	Optional. Default is to print the entire file.
18	PAGE NUMBERS	Enter a "P" in this column if you want page numbers printed on your report. These page numbers will be printed in positions 125-132 of the first header line.	Optional. No default.

Table 4-6: CONTRL Parameter Record Fields (Part 2 of 2)

Position	Field Name	Description	Comments
20-22	MISMATCH REASON CODE LOCATION	The position in the input record of the 1-byte mismatch reason code. Only records with a non-blank character in this position will be eligible for printing. If you do not enter a location, all records will be eligible for printing.	Optional. No default.
24-26	MISMATCH REASON PRINT POSITION	The position on the print line for the 20-character mismatch reason (derived from the mismatch reason code).	Optional. No default.
28	PRINT UPPER/ LOWER CASE	Enter one of the following codes to specify whether your report is to be printed in all upper case or in mixed case. N Print in mixed case Y Print in all upper case.	Optional. Default is Y.

CONSTANT

The **optional** CONSTANT parameter record enables you to define constants to print on the reports. With the CONSTANT parameter record, you can define the data that is the constant, but not where on the report line that constant is to be printed. You can use MOVE and FORMAT parameter records to specify where to print the constants on the report line. There are up to eight CONSTANT parameter records available, each specifying a single constant.

Field-by-Field

The following table covers each field on the CONSTANT parameter record.

Table 4-7: CONSTANT Parameter Record Fields

Position	Field Name	Description	Comments
1-8	KEYWORD	CONSTANT is the only acceptable entry.	Required.
9-10	CONSTANT ID NUMBER	The number that identifies this constant: 01 - 08. The constant will later be referenced by C01-C08.	Required. No default.
12-21	CONSTANT DATA	The data string that is to be associated with this CONSTANT ID NUMBER. You can use leading and trailing blanks. However, depending on the length you specify for printing the constant on the MOVE or FORMAT parameter records, trailing blanks can be truncated.	Required. No default.

FORMAT

The **optional** FORMAT parameter record specifies print line locations for several elements of your input file and/or constants. G1G001 will concatenate these fields and constants according to the following rules:

- FORMAT parameters are executed in the order in which they are defined.
- The first field to be formatted must not be a constant.
- There must be at least two fields to be formatted.
- Two consecutive non-constant fields (i.e., input record elements) automatically have a space between them.
- All leading blanks of non-constant fields (i.e., input record elements) are suppressed and are not printed on the print line.
- No spaces print between constants and input record elements unless enabled for in the length of the constant. (In other words, if there is a 2-byte constant, and you want to print a space between the constant and the input record element that follows it, define a length of 3 for the constant.)

Field-by-Field

The following table covers each field on the FORMAT parameter record.

NOTE: All input record position fields can be extended one column to the left to accommodate 4-byte positions, if necessary.

Table 4-8: FORMAT Parameter Record Fields (Part 1 of 2)

Position	Field Name	Description	Comments
1-6	KEYWORD	FORMAT is the only acceptable entry.	Required.
7-8	COMMENT	You can enter any value you wish here to identify this format operation; G1G001 will ignore this field.	Optional. No default.
10-12	PRINT LOCATION	The location on the print line to which you want the input record elements or constants moved.	Required. No default.
14-15	TOTAL LENGTH	The length the data concatenated with this format is to occupy on the print line. You can enter a number between 1 and 99.	Required. No default.

Table 4-8: FORMAT Parameter Record Fields (Part 2 of 2)

Position	Field Name	Description	Comments
17-19 25-27 33-35 41-43 49-51 57-59 65-67 73-75	LOCATION OF FIELDS TO BE FORMATTED	The starting position in the input record for the data that is to be printed on the print line, or the constant ID number. You can enter an input position or C01-C08 for each of these LOCATION fields. You must enter at least 2 fields, and no more than 8. The first blank field will terminate the processing of this line.	Required. No default.
20 28 36 44 52 60 68 76	CONSTANT TREATMENT	A code controlling the formatting of the constant (this is only valid if the corresponding LOCATION field is a constant): * Do not print this constant if the preceding field contains only blanks. blank Do not print this constant if the succeeding field contains only blanks.	Required. No default.
21-22 29-30 37-38 45-46 53-54 61-62 69-70 77-78	LENGTH OF FIELDS TO BE FORMATTED	The length of each of the input record elements or constants defined in the LOCATION fields.	Required. No default.
23 31 39 47 55 63 71 79	ZERO SUPPRESSION	A code indicating whether or not leading zeros should be suppressed from the corresponding input record element or constant. Enter a Z if leading zeros should be suppressed.	Optional. Default is to not print leading zeros.
80	FORCE PRINT OF CURRENT LINE	Enter one of the following codes to indicate whether or not you want to force the current line to be printed: P Print the current line blank Do not print the current line.	Optional. Default is to not print the current line.

MOVE

The **optional** MOVE parameter record enables you to specify locations on the print line for input file elements or constants defined with the CONSTANT parameter record. You can define up to 100 MOVE parameter records.

Field-by-Field

The following table covers each field on the MOVE parameter record.

NOTE: All input record position fields can be extended one column to the left to accommodate 4-byte positions, if necessary.

Table 4-9: MOVE Parameter Record Fields

Position	Field Name	Description	Comments
1-4	KEYWORD	MOVE is the only acceptable entry.	Required.
5-6	COMMENT	You can enter any value you wish here to identify this move operation; G1G001 will ignore this field.	Optional. No default.
8-10	DESTINATION	The location on the print line to which you want the input record element or constant moved.	Required. No default.
12-13	LENGTH	The length this data is to occupy on the print line. You can enter a number between 1 and 99.	Required. No default.
15-17	SOURCE	The starting position in the input record for the data that is to be printed on the print line, or the constant ID number. You can enter an input position or C01-C08.	Required. No default.
19	FORCE PRINT OF CURRENT LINE	Enter one of the following codes to indicate whether or not you want to force the current line to be printed: blank Do not print the current line P Print the current line.	Optional. Default is to not print the current line.

PAGESZ

The **optional** PAGESZ parameter record enables you to specify how many lines to print on each page of the report.

Field-by-Field

The following table covers each field on the PAGESZ parameter record.

Table 4-10: PAGESZ Parameter Record 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 report.	Required. Default is 60. Minimum is 25; maximum is 255.
12-14	REPORT	Code indicating whether the specified line number applies to the reports. Enter the following code: RPT Reports.	Required. Default is RPT.

TESTIT

The optional TESTIT parameter record enables you to check the syntax of the parameter records before running the entire job. This parameter record has no fields.

If you have this parameter record in your job, CODE-1 Plus International will check the syntax of your parameter records, and print a parameter record report so that you can check that the information stored on the parameter records is really what you intended to store. Then, if all looks good and there are no errors, you can remove this parameter record and submit the job to run.

Field-by-Field

As shown in the table below, the keyword is the only field on the TESTIT parameter record.

Table 4-11: TESTIT Parameter Record Fields

Position	Field Name	Description	Comments
1-6	KEYWORD	TESTIT is the only acceptable entry.	Required.

UNPK

The **optional** UNPK parameter record enables you to print, in an unpacked format, data that is in the input record in packed format. You can enter up to 100 UNPK parameter records.

Field-by-Field

The following table covers each field on the UNPK parameter record.

NOTE: All input record position fields can be extended one column to the left to accommodate 4-byte positions, if necessary.

Table 4-12: UNPK Parameter Record Fields

Position	Field Name	Description	Comments
1-4	KEYWORD	UNPK is the only acceptable entry.	Required.
5-6	COMMENT	You can enter any value you wish here to identify this unpack operation; G1G001 will ignore this field.	Optional. No default.
8-10	DESTINATION	The location on the print line to which you want the input record element printed in unpacked format.	Required. No default.
12-13	DESTINATION LENGTH	The length this unpacked data is to occupy on the print line. This number can not exceed 18.	Required. No default.
15-17	SOURCE	The starting position in the input record of the packed data that is to be unpacked and printed.	Required. No default.
19-20	SOURCE LENGTH	The length this packed data occupies in the input record. This length must not exceed 10.	Required. No default.

Record Selection Parameter Records

The following parameter records are used to select or reject records to be printed, or limit the number of records that are to be printed:

- SELECT
- CHANGE

This section describes these parameter records in detail.

SELECT

The **required** SELECT parameter record enables you to specify a value in the input record key code field that is to be used to select records for printing. If the value in the input record matches the value you specify on the SELECT parameter record, the record will be selected for printing. If the value in the record is different than the value on the SELECT parameter record, the record will not be selected. You can also choose to select all records, regardless of the value in the key code field, or you can choose to select all records that do not contain blanks in the key code field.

NOTE: The key code location and length are specified on the CONTRL parameter record.

You can define up to 200 SELECT parameter records.

Field-by-Field

The following table covers each field on the SELECT parameter record.

Table 4-13: SELECT Parameter Record Fields

Position	Field Name	Description	Comments
1-6	KEYWORD	SELECT is the only acceptable entry.	Required.
8-16	KEY CODE COMPARISON VALUE	<p>The value that should be compared to the key code in the input record. Or, you can enter one of the following special values:</p> <p>ALLKEYS—Every record will be selected, regardless of the data that is in the input record key code.</p> <p>NON BLANK—Only records with non-blank key codes will be selected.</p> <p>NOTE: If you enter one of these special values, you can only define one SELECT parameter record.</p>	Required. No default.

CHANGE

The **optional** CHANGE parameter record enables you to specify a pair of fields that should be used to determine if a record is to be selected for printing. For each record, the data in the first field will be compared to the data in the second field. If the data in the two fields is different, the record will be selected for printing. If the data is identical, the record will not be selected for printing. You can enter up to 10 CHANGE parameter records.

Field-by-Field

The following table covers each field on the CHANGE parameter record.

NOTE: All input record position fields can be extended one column to the left to accommodate 4-byte positions, if necessary.

Table 4-14: CHANGE Parameter Record Fields

Position	Field Name	Description	Comments
1-6	KEYWORD	CHANGE is the only acceptable entry.	Required.
8-10	FIRST COMPARISON FIELD	The location in the input record of the first field that is to be used for comparison.	Required. No default.
12-13	LENGTH	The length of the two fields that are to be used for comparison.	Required. No default.
15-17	SECOND COMPARISON FIELD	The location in the input record for the second field that is to be used for comparison.	Required. No default.

Sample Control Language

This section lists the file names used in your platform control language to run G1G001. Each platform section lists the file(s) (JCL, BAT, CMD, and so on) in your product directories that you should modify according to your site and any procedures to follow to run G1G001. To minimize maintenance, the files are not listed.

File Names

Regardless of the environment in which you are running CODE-1 Plus International, the following file assignments are used for executing the G1G001 program:

Table 4-15: File Names Used for Executing Program G1G001

File Name	Description
G1GPRM	The input parameter file
PRNTRPT	The output printer file
G1GNAM	The input file

UNIX Environment

To run G1G001 under UNIX, you must complete three steps:

- 1 Edit the /data/samgrw.prm file.
- 2 Source the setup script to setup the CODE-1 Plus International environment variables:

```
. ./setup for Bourne shell, or  
source ./setup for C shell
```
- 3 Source ./run.
- 4 Execute rung1g001.

Step 1. Edit the /data/samprt.g1prm File

The /data/samgrw.prm file contains parameters that you can edit for your G1G001 job.

Step 2. Source the setup Script

The setup script sets all the CODE-1 Plus International environment variables. This script is shown in [Chapter 2](#) and is not repeated here. The setup script is in your product \$g1c1p\bin directory.

Step 3. Execute the rung1g001 Script

The rung1g001 script executes the G1G001 batch driver. The rung1g001 script is in your product \$g1c1p\bin.

Windows Environment

To run the G1G001 program in the Windows environment, you will perform the following steps:

- 1 Edit the SAMGRW.BAT file to create your own job file.
- 2 Edit the SAMGRW.PRM parameter file.
- 3 Run the Generalized Report Writer job.

Step 1. Edit the SAMGRW.BAT file to Create Your Job

Pitney Bowes Inc. provides the SAMGRW.BAT file in your BIN directory. Copy and modify this file to meet your needs. To edit this file, click on the Edit Job File icon and specify SAMGRW as the job to edit.

Step 2. Edit the SAMGRW.PRM Parameter File

Pitney Bowes Inc. provides the SAMGRW.PRM file in your DATA directory. Copy and modify this file to meet your needs. To edit this file, click on the Edit Parm File icon and specify SAMGRW as the file to edit.

Step 3. Run the Job

To run your job, click on the Generalized Report Writer icon. When prompted for the name of the job to run, enter SAMGRW, (or the name under which you saved your job file). When the job completes running, you are prompted to press a key to continue so that the window is not refreshed before you read any error messages.

IMS JCL

To run G1G001 in an IMS environment, modify the EXG1G001 member in the SAMPJCL library according to your site's needs.

MVS JCL

To run G1G001 in an MVS environment, modify the EXG1G001 member in the SAMPLIB library according to your site's needs.

CHAPTER 5

Performing Database Reduction

This chapter discusses the EXTFILE batch program within CODE-1 Plus International. This program allows you to load a reduced database. This will allow you to minimize the space necessary to store the database if you are not processing all of the supported countries. Once you use EXTFILE to create a reduced version of the database, you can run your input name-and-address files against it.

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Database Reduction

The EXTFILE program normally unloads complete database files during installation and refreshes of the database. You can optionally use the instructions in this chapter to create a reduced database directly from the delivery media.

If you process name-and-address list records in a limited geographic area, building and using a reduced database can save you disk space. Be aware that the amount of data associated with a particular country can vary greatly. Reducing the number of level-C countries will have no effect on the database size, and reducing the number of level-B countries will have a much smaller effect than reducing the number of level-A countries. Some Level-A countries have comparatively little data associated with them and others have large amounts of associated data.

To reduce the database:

- 1 Define the parameter records used by EXTFILE to specify what countries to include in the reduced database.
- 2 Execute the EXTFILE program using the modified parameters.
- 3 EXTFILE will produce a parameter record listing and Processing Summary.

This chapter presents the parameter record layouts needed to use EXTFILE.

Using EXTFILE

To create a reduced database, you must define the parameter records described below. The presence of this parameter record file will cause the EXTFILE program to load only the data associated with the requested countries.

- G1ICLIC (required) tells the EXTFILE program to load the license file.
- ALL (required) tells the EXTFILE to load all the required database files.
- SELECT (optional) is used to limit the countries that are to be processed.

The following sections present detailed parameter record layouts and examples of the Processing Summary and Parameter Record Listing reports.

G1ICLIC

The **required** G1ICLIC parameter record tells the EXTFILE program to load the license file.

Field-by-Field

The following table covers each field on the G1ICLIC parameter record.

Table 5-1: G1ICLIC Parameter Record Fields

Position	Field Name	Description	Comments
1-6	KEYWORD	G1ICLIC is the only acceptable entry.	Required.

ALL

The **required** ALL parameter record tells the EXTFILE to load all the required database files.

Field-by-Field

The following table covers each field on the ALL parameter record.

Table 5-2: ALL Parameter Record Fields

Position	Field Name	Description	Comments
1-6	KEYWORD	ALL is the only acceptable entry.	Required.

HEADER

The **required** HEADER parameter record allows you to define a date and header text that identifies the report.

Field-by-Field

The following table covers each field on the HEADER parameter record.

Table 5-3: HEADER Parameter Record Fields

Position	Field Name	Description	Comments
1-6	KEYWORD	HEADER is the only acceptable entry.	Required.
8-17	DATE	The date that prints on the top of the report. If you leave this field blank, the current system date is printed on your report.	Optional. Default is current system date.
19-58	HEADER TEXT	Any text that identifies the report.	Optional. No default.

SELECT

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 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 covers each field on the SELECT parameter record.

Table 5-4: SELECT Parameter Record 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 you want to load to your database. Type the 2-character country code, delimited by commas.	Required. No default.

Please refer to Appendix A of *CODE-1 Plus International Reference* for a list of country codes to enter in bytes 8-80.

Example SELECT Parameter

In the following example parameter record, we specify that CODE-1 International should load only database records associated with France.

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

PAGESZ

The **optional** PAGESZ parameter record indicates how many lines to print on each page of the report.

Field-by-Field

The following table covers each field on the PAGESZ parameter record.

Table 5-5: PAGESZ Parameter Record 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 report.	Optional. Default is 60. Minimum is 25. Maximum is 255.
12-14	REPORT	Code indicating whether the specified line number applies to the reports. Enter the following code: RPT Reports.	Optional. Default is RPT.

UFTxx

The **optional** UFTxx parameter record specifies any text that you want printed at the bottom of every page of each report. You can specify up to four footer lines.

Field-by-Field

The following table covers each field on the UFTxx parameter record.

Table 5-6: UFTxx Parameter Record Fields

Position	Field Name	Description	Comments
1-3	KEYWORD	UFT is the only acceptable entry.	Required.
4	LINE NUMBER	The footer line number. Enter 1, 2, 3, or 4.	Required. No default.
5	LINE SIDE	The side of the footer line on which this text should appear. Enter 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.

UHDxx

The **optional** UHDxx parameter record specifies any additional text that you want printed at the top of each page of each report. You can specify up to four additional header lines.

Field-by-Field

The following table covers each field on the UHDxx parameter record.

Table 5-7: UHDxx Parameter Record Fields

Position	Field Name	Description	Comments
1-3	KEYWORD	UHD is the only acceptable entry.	Required.
4	LINE NUMBER	The header line number. Enter 1, 2, 3, or 4.	Required. No default.
5	LINE SIDE	The side of the header line on which this text should appear. Enter 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.

Reports Produced by EXTFILE

The EXTFILE database reduction program produces three reports:

- **Parameter Record Listing Report**—shows all of the parameter records that were in file EXTFPRM for the database reduction operation.
- **Processing Summary** —shows the number of records per file in the reduced database.
- **Execution Log**—shows the steps that CODE-1 Plus International executes when processing the reduced install.

Executing EXTFILE

This section lists the file names used in your platform control language to run EXTFILE. Each platform section lists the file(s) (JCL, BAT, CMD, and so on) in your product directories that you should modify according to your site and any procedures to follow to run EXTFILE. To minimize maintenance, the files are not listed.

File Names

The following table lists the file names that you need to use when you execute the EXTFILE program.

Table 5-8: File Names for Executing the EXTFILE Program

File Name	Description
G1ICLIF	Input License File
G1FILE	Input Media Image 1
G2FILE	Input Media Image 2
G3FILE	Input Media Image 3
G4FILE	Input Media Image 4
G5FILE	Input Media Image 5
G6FILE	Input Media Image 6
G7FILE	Input Media Image 7
G8FILE	Input Media Image 8

IMS JCL

To run EXTFILE in an IMS environment, complete the following steps:

- 1 Modify the ICPDBINS member according to your site's needs by selecting/removing the appropriate files you wish to load.
- 2 Submit the job.

MVS JCL

To run EXTFILE in an MVS environment, complete the following steps:

- 1 Modify the ICPDBINS member according to your site's needs by selecting/removing the appropriate files you wish to load.
- 2 Submit the job.

UNIX Environment

To run EXTFILE in a UNIX environment, complete the following steps:

- 1 Modify the data/extfile.prm file according to your site's needs by adding the appropriate SELECT parameter(s).
- 2 Run the installdb script found in the BIN directory to execute the EXTFILE batch driver.

Windows Environment

To run the EXTFILE program in the Windows environment, you will perform the following steps:

- Modify the EXTFILE.PRM file in the DATA subdirectory according to your site's needs by adding the appropriate SELECT parameter(s). To edit this file, click on the Edit File icon and specify EXTFILE as the file to edit.

Run the load database job by clicking on the **Database Load** icon. When the job completes running, you are prompted to press a key to continue so that the window is not refreshed before you read any error messages.

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