

Chapter 2

CODING

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Objectives

You will learn:

- Coding File-AID control cards.
- Dataset Identifier and its function.
- Components of location elements.
- Scanning parameters.

1 Coding Rules

The following conventions apply to coding control cards:

- Information can be contained in location 1 through location 80.
- A continuation line is specified by coding a comma after the last complete parameter entry on a control card.
- Continuation cards are coded by placing a blank in location 1 and have the next parameter entry start before location 26 of the card.
- Separate the function/dataset organization identifier and the parameter identifiers with at least one blank space.
- Do not split an individual parameter entry element between cards.
- More than one parameter identifier can be specified following a single function/dataset organization identifier. The order that parameters are coded determines the logic of the statement.
- Separate multiple parameter identifiers by commas.
- Multiple parameter identifiers can be coded on a continuation line.
- Abbreviations can be used instead of full function, function modifier, or parameter names.

2 Control Cards

Control cards are the main communication tool in File-AID/Batch.

Control cards serve to identify the functions to be performed on the input data, the method to use for record selection, and the specific changes to make to the data.

File-AID control cards can use four types of elements:

• Dataset identifier.	• Function/dataset organization identifier.
• Parameter identifiers.	• Comments.

The first two elements are required; the last two are optional.

2.1 Dataset Identifier

The first element on a File-AID control card is the dataset identifier. This identifier connects an input dataset to a function that you want to perform.

The dataset identifier begins with \$\$DD in location 1 of the control card as follows:

\$\$DDxx

where xx is a number from 00 to 99 that corresponds to a matching

//DDxx DD JCL statement.

The xx is also used to match other optional //DDxx DD JCL statements.

2.2 Function/Dataset Organization Identifier

The function/dataset organization identifier is used for defining the function to be performed on the input dataset.

The identifier is used for choosing the access method that File-AID uses to process the input dataset.

DSORG ID	Access Method
PS	QSAM
DA	BDAM
VS	VSAM
IS	ISAM
PO	BPAM

3 Parameter Identifier

Parameters define how to select and manipulate records.

- Parameter identifiers define parameters and consist of a parameter name and one or more elements.
- Elements define input data, output data, and data handling components of a parameter.

The four most common elements used in parameter identifiers are:

• Location	• Length
• Operator	• Data

3.1 Location Element

The location element defines where the desired data can be found in the record.

An actual or relative location can be specified.

Actual Location	<p>The actual location can be any number from 1 to 32,767 (32 KB), but it cannot exceed the record size.</p> <p>The Record Descriptor Word (RDW) can be used in locations 1 through 4 as the actual location in variable-length records. If the RDW is used as an actual location, the first valid data position is location 5.</p>
Relative Location	<p>Distinguish a relative location from an actual location by placing a plus sign (+) or a minus sign (-) before the value.</p>

File-AID has two types of relative locations:

- One references the input record;
- The other references the output record.

When File-AID retrieves an input record, the input relative location value is set to the beginning of the input record. This value is incremented by the IF, EDIT, and REPL scanning parameters. Subsequent relative location references are relative (+ or -) to this value.

3.2 Length Element

The length element sets the length of the field that File-AID must examine. It is used instead of the operator element when the specific location of the compare data is not known. A length element will change the IF, EDIT, and REPL parameters to scanning parameters.

The value of the length element may be any number from 0 (zero) through 255 (excluding one); but the length added to the current location cannot exceed the record size.

3.3 Operator Element

The operator element sets conditional tests on data in the location identified by the location element. Operator elements are used with the EDIT, IF, ORIF, REPL, and STOP parameters.

File-AID has two sets of operator elements:

- One set is for character, packed decimal, or hexadecimal data.
- The other set is for binary data.

```
$$DD01 COPY IF=(1,EQ,P'14553'),OUT=100
```

Operator elements for character, packed decimal, and hexadecimal data represent conditions that can occur after a compare instruction is applied to the input data using the data element specified.

Element	Condition
EQ	Equal to
NE	Not equal to
GT	Greater than
LT	Less than
GE	Greater than or equal to
LE	Less than or equal to
EQ	Bits are all ones
NE	Bits are all zeros
NO	Bits are not all binary ones - all zeros or mixed.
MX	Bits are mixed - ones and zeros.

3.4 Data Element

The data element provides the capability for specifying data to File-AID in three ways:

- As compare data in an IF, EDIT, or REPL parameter.
- As the data to be moved in a MOVE parameter.
- As replace data in a REPL or EDIT parameter.

Identifier	Data Type	Example
C	Character, alphanumeric	C'ABCD123'
T	Text, alphanumeric	T'ABC'
X	Hexadecimal	X'10CF00'
P	Packed	P'+1'
B	Binary mask	B'01001000'
B	Binary OR - REPL new-data only	B'01001000'
BM	Binary minus - REPL new-data only	BM'C8'
BS	Binary signed - ACCUM parameter only	BS'01001000'
BX	Binary exclusive OR - REPL new-data only	BX'C8'

3.5 Scanning Parameters

Scanning parameters can be used to search for a sequence of characters within a range of locations in a record. The scan length can be any number from 0 (zero) through 255 (excluding 1) as long as it is greater than the length of the data element.

If 0 (zero) is used, File-AID calculates a scan length from the specified location to the end of the record. Scanning repositions the input relative location pointer when the data value is found.

Examples:

```
$$DD01 DUMP IF=(22,10,C'CLIPS')
```

Generates a hexadecimal print of any record that contains the character string CLIPS in the scan field between locations 22 and 31.

```
$$DD01 COPYALL REPL=(6,50,C'TEST',C'PROD')
```

Copies the input dataset while locating any record that contains the character string TEST in the scan field between locations 6 and 55. When File-AID locates the string TEST, it is replaced with the string PROD.

4 Comments

Comments are used on control cards for documentation purposes.

Usage and Guidelines:

- Comments appear on the SYSPRINT output when all other control cards are printed.
- Code comments by leaving at least one blank position after the final parameter on a control card.
- A comment can be coded by itself on a control card by placing an asterisk (*) in location 1.
- Comments with an asterisk (*) in location 1 can also be written to the optional SYSTOTAL DD when it has been specified in the JCL.