

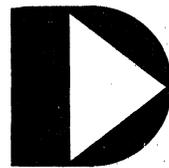
# **CASSETTE SORT CASORT User's Guide**

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**DATAPOINT CORPORATION**



**The Leader in  
Dispersed Data Processing**

## **PREFACE**

CASORT is an extremely versatile program which allows the sorting of data stored on cassette tapes many different useful ways. CASORT allows for WRITE-EDIT formatted output and is also compatible on ECMA format decks.

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## CHAPTER 1. INTRODUCTION

The purpose of CASORT is to provide a cassette sort utility for the DATAPOINT 1100/2200 STAND-ALONE SYSTEM. CASORT allows the CTOS and DATABUS 1-6 user to sort data stored on cassette tapes in either ascending or descending order, using any of the characters of the data to sort upon, and also allows a WRITE-EDIT formatted output. CASORT also allows a limited output which consists of the portion of the sorted data wanted and any sentence typed in by the user. The requirement for CASORT is an 8K machine, but it will check for both a 12K and a 16K machine, which will allow higher performance. CASORT is also compatible with use on the ECMA format deck.

All field requirements are optional, and the default values are stated later in the manual.

**CAUTION:** The user should be aware of the fact that CASORT will only allow a maximum of 249 characters in one line, and will neither accept nor write out any data longer than 249 characters.

## **CHAPTER 2. OPERATION**

### **2.1 PREPARATION**

Before CASORT is used, the user should know how he wants his data to be sorted. This includes knowing:

- (1) What the maximum data line length is.
- (2) If the output file is to be in a WRITE-EDIT format.
- (3) If the output file is to be space compressed.
- (4) Which characters are to be used to sort upon.
- (5) The sequence of the sort.
- (6) If the output file is to be a limited output.

### **2.2 USAGE**

To use CASORT, all the user must do is place the cassette tape of CASORT in the rear deck of the 1100/2200 and press 'RESTART'. This loads CASORT into the machine and begins execution of the program.

### **2.3 EXECUTION**

When CASORT is loaded into the 1100/2200, it will ask for a scratch tape to be put into the rear deck. The user should take the cassette of CASORT out of the rear deck and replace it with a scratch tape. Then the user will be asked to place the cassette of the data to be sorted into the front deck. After placing the cassette of the input tape into the front deck, the user is ready to tell CASORT how to sort the input file.

### **2.3.1 MAXIMUM RECORD LENGTH**

The first question which will appear is

MAXIMUM RECORD LENGTH:

The user should type in the length of the longest data line, if he knows it. If the user does not know the length of the longest line, he should either type in some number which he is sure is greater than the longest data line, or he should type in 249, which is the maximum amount of characters allowed. Lines which are shorter than the maximum record length will be made the same length as the maximum record length by blank filling the end of the line. Lines which are longer than the maximum record length will be truncated at the maximum record length and will be displayed with the message

DATA LINE  
WAS TRUNCATED AT MAXIMUM RECORD LENGTH

The user should then either let the CASORT continue if he does not need the information that was truncated, or he should restart the CASORT and give a larger maximum record length. All output lines will be the length of the maximum record length unless spaced compressed output is asked for. The default value for the maximum record length is 79 characters.

### **2.3.2 WRITE-EDIT FORMAT**

The second question is

WRITE-EDIT FORMAT?

By default, the answer is NO, but if the user wants a WRITE-EDIT formatted output, which is non-record compressed and non-space compressed, he should type in a 'Y'. This will cause the output to have physical and logical records of the same length, and for there to be no space compression. If WRITE-EDIT format is wanted, the following question will not be asked.

### **2.3.3 SPACE COMPRESSION**

The third question is

SPACE COMPRESSION?

By default, the answer to this question is NO, but if the user wants space compression, he should type in a 'Y'. This will put spaces within the data into a space compressed format and chop off any spaces which are after the last data character.

### **2.3.4 KEYFIELD**

The fourth question is

KEYFIELD:

By default, CASORT will sort all data lines by starting at the beginning and continuing to the last character. If the user wants a specific format, he should type it in, in the format

<first character for sort>-<last character for sort>

CASORT will then sort all lines with the sort key, starting at the first character specified and continuing until the last character specified. If the user wants the output file sorted upon only one character, his input format should be

<character to sort upon>

All data lines will then be sorted only upon that one character. Keyfields can go in either a forwards or backwards direction and only one keyfield is allowed.

### **2.3.5 SEQUENCE**

The fifth question the user will be asked is

SEQUENCE:

If the user wants the input file to be sorted in ascending order (alphabetical order), he should type in an 'A'. If he wants the input file to be sorted in descending order, he should type in a 'D'. By default, the input file will be sorted in ascending order ('A' first, 'Z' last, see Appendix C).

### **2.3.6 LIMITED OUTPUT**

The final question is

LIMITED OUTPUT?

Limited output consists of parts of the input file and statements typed in by the user. If the user does not want a limited output, he should type in a 'N'. The sort will then begin. If the user wants a limited output, he should type in a 'Y'. The user will then be asked

## LIMITED OUTPUT FILE FORMAT:

All characters wanted from the input file should be in the format

<first character wanted>-<last character wanted>

or

<character wanted>

All characters which are to be included in the output file should be in the format

'<anything>'

If one of the characters to be included in the output file is an apostrophe ('), it should be preceded by a hash mark (#) and should look like #'. If one of the characters to be in the output file is a hash mark, it too should be preceded by a hash mark and should look like ##. All portions of the limited output file format should be separated by commas (,). An example of a limited output file format is

6-9,' are the first four characters of ',1-4,''

Note that if a space is wanted between input characters and quoted matter, it should be provided in the quotes. By default, there will be no limited output.

## APPENDIX A. SAMPLE SORT

Suppose you had a data tape which contained a list of the names of people who came to see you today. Since the people came in at random, your list is not in alphabetical order, but suppose you wanted it in alphabetical order. All you have to do is to obtain CASORT and run the program. You should place a scratch tape in the rear deck, the cassette with the list of names in the front deck, and press 'ENTER' for all the questions. This procedure would produce a list of name, in alphabetical order, on the cassette in the rear deck (some efficiency could be gained by answering some questions - see text).

### UNSORTED NAMES

BEZEK JOHN  
JONES GRACE  
GIANT JACK  
EDWARDS DONALD  
HEIGHT JACK  
INSCOE STATON  
BALL S H  
BOWDEN EDMOND  
IMPERIAL MIKE  
DOCKTON MARIE  
FANNELLI JOE  
JONES HARRY  
DIESEL BURTON  
CROMPTON SADIE  
GRAUER FRANKLIN  
HUMAN ALFRED  
HARRISON JOHN  
DUNCAN LATHAN  
JONES FLONNIE  
JOHNSON G E  
HIMMELL U W  
CHAPPELL LAURIE  
DEW RUTH  
HAYNES A M  
CHRISTMAS KENNET  
CREWS R B  
DAVIS DONALD  
HARVELL RAY  
BARNES HENRY  
BROUGHTON J E  
GLEEN M R  
ENGLISH HAL  
FRANKLIN JAMES

### SORTED NAMES

BALL S H  
BARNES HENRY  
BEZEK JOHN  
BISSETT OLLIE  
BOWDEN EDMOND  
BROUGHTON J E  
CHAPPELL LAURIE  
CHRISTMAS KENNET  
CREWS R B  
CROMPTON SADIE  
DAVIS DONALD  
DEW RUTH  
DIESEL BURTON  
DOCKTON MARIE  
DUNCAN LATHAN  
EDWARDS DONALD  
ENGLISH HAL  
FANNELLI JOE  
FRANKLIN JAMES  
GIANT JACK  
GLEEN M R  
GRAUER FRANKLIN  
HARRISON JOHN  
HARVELL RAY  
HAYNES A M  
HEIGHT JACK  
HIMMELL U W  
HUMAN ALFRED  
IMPERIAL MIKE  
INSCOE STATON  
JOHNSON G E  
JONES FLONNIE  
JONES GRACE

## APPENDIX B. SAMPLE SORT WITH LIMITED OUTPUT

Suppose you had a cassette tape which contained data about your employees, and suppose you wanted to make a telephone directory using some of the information on the cassette tape. By using the Limited output option of CASSORT, you can accomplish this. Suppose your cassette tape contained the following information:

NAME	SOCIAL SECURITY	EMP DEPT NUMB	SEX	STATUS	PHONE
McMahon Debbie	173-98-487045233814		Female	Single	829-0472
Herrmann Eugene P	447-78-500430891589		Male	Married	828-2535
Herdia Roger	483-39-143292892246		Male	Married	744-8214
Landers Dorothy Ford	341-29-135506593326		Female	Married	855-7264
Brigham Mary Jane	196-00-672424349522		Female	Married	815-8995
Leslie Frances	125-76-769884236830		Female	Married	700-8809
Hooper Ted	436-17-091906342050		Male	Single	899-6851
Teniente S G	389-12-597419907672		Male	Single	801-3144
Pfiester Chester M	514-61-716045895253		Male	Single	804-3601
Shipp R P	984-34-316322677588		Male	Married	894-4779

But you only want the name and phone numbers and in alphabetical order. This can be accomplished by running CASORT and answering the questions with the following replies:

```
MAXIMUM RECORD LENGTH: 'ENTER'  
WRITE-EDIT FORMAT? 'ENTER'  
SPACE COMPRESSION? 'ENTER'  
KEYFIELD: 1-20  
SEQUENCE: 'ENTER'  
LIMITED OUTPUT? Y LIMITED OUTPUT FILE FORMAT:  
'name: ',1-20,' phone: ',53-60
```

By following this format, you would get the following results:

name: Brigham Mary Jane	phone: 815-8995
name: Herdia Roger	phone: 744-8214
name: Herrmann Eugene P	phone: 828-2535
name: Hooper Ted	phone: 899-6851
name: Landers Dorothy Ford	phone: 855-7264
name: Leslie Frances	phone: 700-8809
name: McMahon Debbie	phone: 829-0472
name: Pfiester Chester M	phone: 804-3601
name: Shipp R P	phone: 894-4779
name: Teniente S G	phone: 801-3144

## APPENDIX C. COLLATION SEQUENCE (ASCII)

- 040	8 - 070	P - 120	h - 150
! - 041	9 - 071	Q - 121	i - 151
" - 042	: - 072	R - 122	j - 152
# - 043	; - 073	S - 123	k - 153
\$ - 044	< - 074	T - 124	l - 154
% - 045	= - 075	U - 125	m - 155
& - 046	> - 076	V - 126	n - 156
' - 047	? - 077	W - 127	o - 157
( - 050	@ - 100	X - 130	p - 160
) - 051	A - 101	Y - 131	q - 161
* - 052	B - 102	Z - 132	r - 162
+ - 053	C - 103	{ - 133	s - 163
, - 054	D - 104	\ - 134	t - 164
- - 055	E - 105	} - 135	u - 165
. - 056	F - 106	Δ - 136	v - 166
/ - 057	G - 107	— - 137	w - 167
0 - 060	H - 110	' - 140	x - 170
1 - 061	I - 111	a - 141	y - 171
2 - 062	J - 112	b - 142	z - 172
3 - 063	K - 113	c - 143	{ - 173
4 - 064	L - 114	d - 144	- 174

5 - 065

M - 115

e - 145

} - 175

6 - 066

N - 116

f - 146

~ - 176

7 - 067

O - 117

g - 147

DEL - 177