GRAPHIC UTILITY
FP-290GF
OPERATION MANUAL

CASIO®

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INTRODUCTION

Thank you for purchasing this CASIO FP-200 software package.

This graphic utility program is intended to enhance the efficiency of the FP-200, providing state-of-the-art software that prints out the data created by CETL into four types of graphs.

Please read this manual carefully before use in order to fully understand the operational procedure. Happy computing!
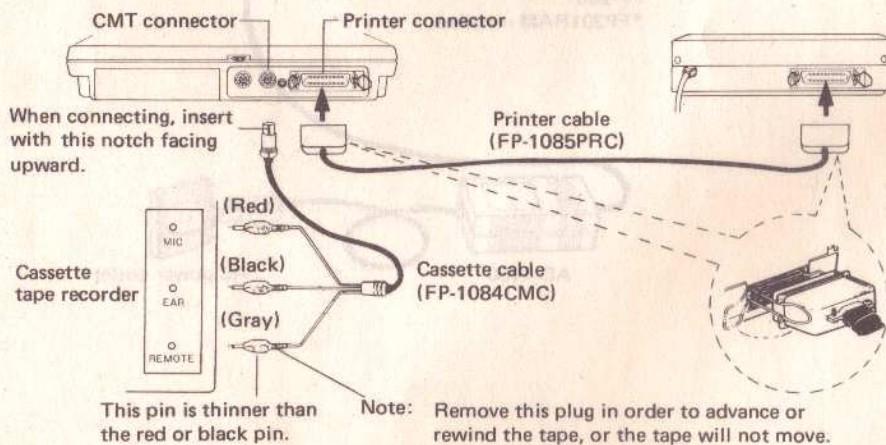
1. FP-200
2. FP-201RAM pack(s) (More than or equal to one)
3. FP-1011PL mini plotter-printer
4. FP-1085PRC printer cable
5. FP-1084CMC cassette cable
6. AD-4180 AC adaptor for FP-200
7. Cassette tape recorder (Needs to comply with the FP-200 specifications.)

FP-1085PRC

FP-1084CMC

FP-1011PL

Tape recorder

FP-200
*FP201RAM installed

AD-4180

AC power outlet
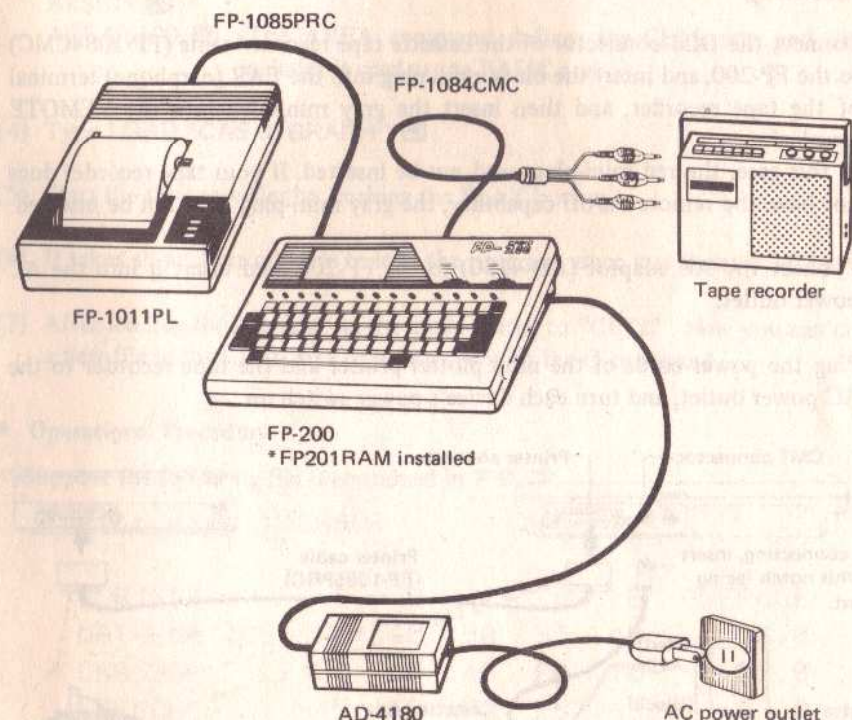
Before connecting, read the FP-200 Operation Manual (P. 127 - 142).

(1) Remove the battery, the back-up battery and the AC adaptor from the FP-200, and then install the FP-201 RAM packs. To do so, remove the pack cover on the rear side of the computer, and install them one by one from the left.

*As for the detailed installation procedure and remarks, refer to the FP-201RAM manual. Incidentally, if your computer already has more than or equal to one FP-201RAM and more than 6.5K bytes of the BASIC area, no more RAMs are needed.

(2) Connect the FP-1011PL printer to the FP-200 by using the printer cable (FP-1085PRC).

(3) Connect the DIM connector of the cassette tape recorder cable (FP-1084CMC) to the FP-200, and insert the black mini-plug into the EAR (earphone) terminal of the tape recorder, and then insert the gray mini-plug into the REMOTE terminal.

*In this case, the red mini-plug need not be inserted. If your tape recorder does not have the remote on/off capability, the gray mini-plug need not be inserted.

(4) Connect the AC adaptor (AD-4180) to the FP-200, and insert it into the AC power outlet.

(5) Plug the power cords of the mini plotter-printer and the tape recorder to the AC power outlet, and turn each device's power switch on.

CMT connector — Printer connector

When connecting, insert with this notch facing upward.

Printer cable (FP-1085PRC)

Cassette tape recorder

(Red)
(Black)
(Gray)

Cassette cable (FP-1084CMC)

This pin is thinner than the red or black pin.

Note: Remove this plug in order to advance or rewind the tape, or the tape will not move.

(1) Insert the graphic utility tape in the recorder and set the recorder's output volume to a maximum or near maximum level.

(2) Set the mode switch on the upper right portion of the FP-200 to the BASIC mode. Then turn on the remote switch at its left.

(3) Use the AREA command to reserve more than 6.5K bytes of memory for the BASIC area. When any additional RAM pack is installed into the computer, the message "Memory Illegal" is displayed on the screen. In this case, type RESET ⏎ .

For example, if one RAM pack is installed additionally, type:
RESET ⏎
AREA 6500 ⏎ (The AREA command defines the CETL area and the remainder is used as the BASIC area.)

(4) Type LOAD "CAS∅:GRAPH" ⏎ .

(5) Start the tape recorder by pushing the PLAY button.

(6) It takes about four minutes to load the program, since it is about 6.5K bytes.

(7) After loading the program, set the mode switch to "CETL". Now you can create a new file in the CETL area or load a file with the G command.

● **Operational Procedure**

< Suppose the following file is contained in F∅. >

```
File name : GRADE
```

SUBJECT	A	B	C	D	E	AVERAGE
MATHEMATICS	75	60	50	55	40	56.0
ENGLISH	50	55	40	80	70	59.0
FRENCH	45	60	70	75	65	63.0
SCIENCE	80	65	55	40	70	62.0
SOCIAL	50	40	65	80	30	53.0
TOTAL	300	280	280	330	275	293.0

Let's create graphs by using the contents of this file.

Note: This program can process up to 8 data records (or items).

In this example, we are going to create a bar graph for the record TOTAL.

(1) Make sure that the plotter-printer is powered up and is set to ON LINE.

(2) Turn the mode switch to BASIC.

(3) Type RUN ⏎ to start the graphic utility program.

(4)
```
File?_
```

When this is displayed, enter the file name or file area number (0 ~ 9).
Example: 0 ⏎

(5)
```
Key Rec/Item(R/I)?_
```

When this is displayed, enter R or I according to whether you want the processing to be performed in records or items.
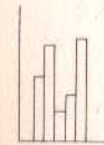Example: R ⏎

(6)
```
Key Rec?_
```

When this is displayed, enter the record number or the contents of item 1.
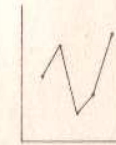Example: 6 ⏎

(7)
```
Item Area?_
```

When this is displayed, specify from which item to which item of the record specified at (6) should be made into the graph (be sure to delimit them with a comma).
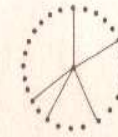Example: 2, 6 ⏎

(8)
```
Data1=300
Data2=280
Data3=280
Data4=330
Data5=275
     :
```
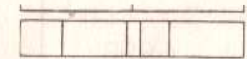

| 1 | 2 | 3 | 4 |

```
No.?_
```

The data contents will be output to the printer and display. Specify one from the four types of graphs.
Example: 1 ⏎
After the graph is printed, the program returns to (4) and processing will be continued.

```
File name: GRADE
DATA 1= 300
DATA 2= 280
DATA 3= 280
DATA 4= 330
DATA 5= 275
```
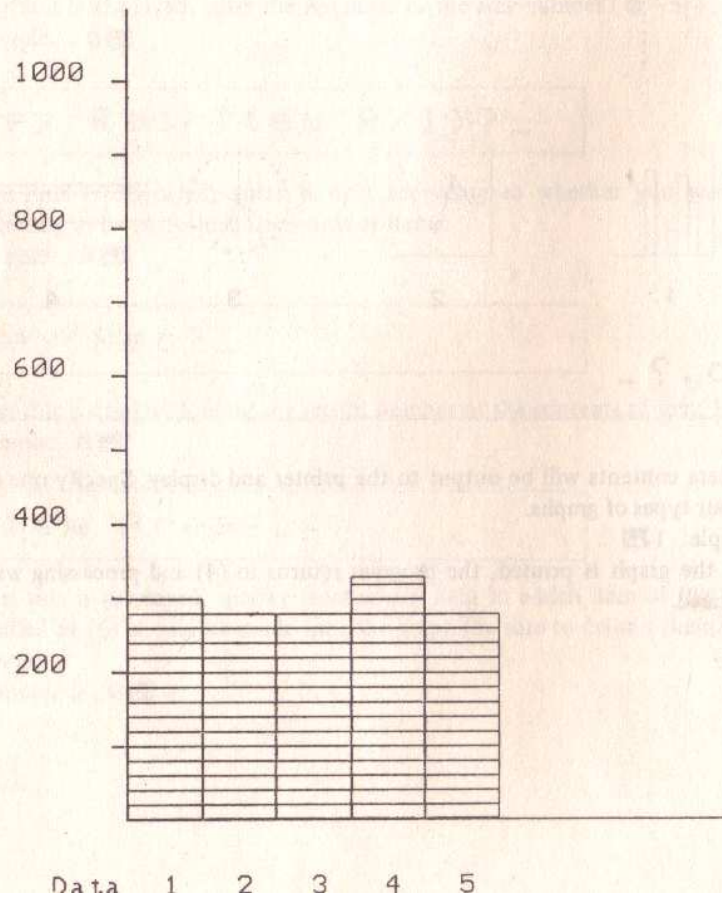
- An error occurs if the data to be processed is of character type. If negative, it is assumed to be 0.

- Once loaded into the computer, the graphic utility program is stored in the memory. Therefore, you do not need to load it again unless the program is cleared or the Back-up batteries are exchanged.

- When you get an "NR Error" even when the printer is properly powered on and set to ON LINE, turn the FP-200's power off and then on again.

```
                    ( Start )
                        │
                        ▼
        ┌───────────────────────────────┐
        │  Enter the file name or        │
        │  file number                   │
        └───────────────────────────────┘
                        │
                        ▼
                  ╱─────────────╲
                 ╱ Specify the    ╲
                ╱  record          ╲
                ╲  number or item  ╱
                 ╲────────────────╱
When record is      │         │      When item is
specified:          │         │      specified:
          ┌─────────┘         └─────────┐
          ▼                             ▼
┌─────────────────────┐     ┌─────────────────────┐
│ Enter the record    │     │ Enter the item      │
│ number or record    │     │ number or item name │
│ name                │     │                     │
└─────────────────────┘     └─────────────────────┘
          │                             │
          ▼                             ▼
┌─────────────────────┐     ┌─────────────────────┐
│ Enter the range of  │     │ Enter the range of  │
│ items               │     │ records             │
└─────────────────────┘     └─────────────────────┘
          │                             │
          └──────────────┬──────────────┘
                         ▼
              ┌────────────────────┐
              │   Select a graph   │
              └────────────────────┘
                         │
                         ▼
              ┌────────────────────┐
              │  Output the graph  │
              └────────────────────┘
```
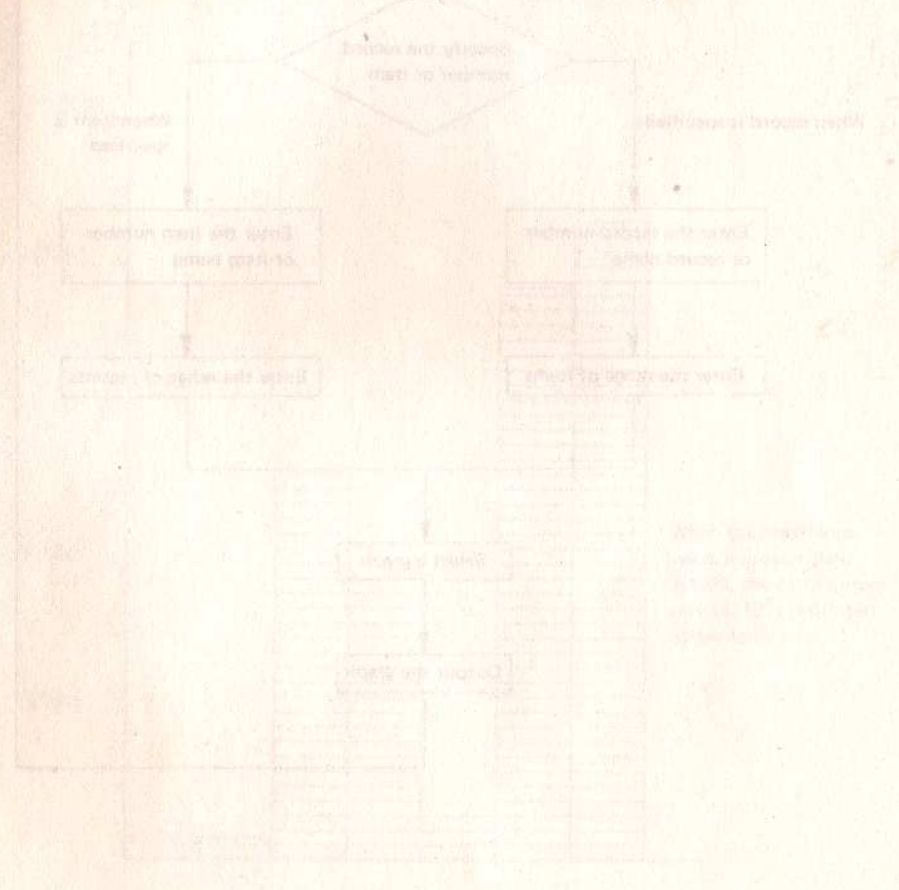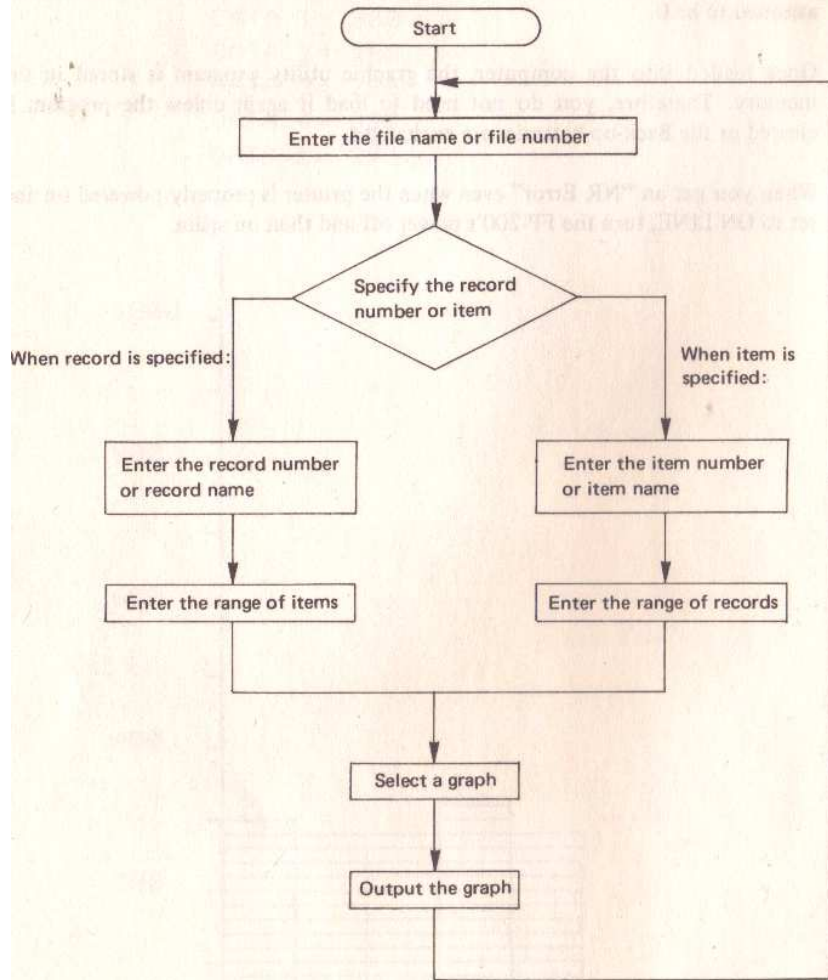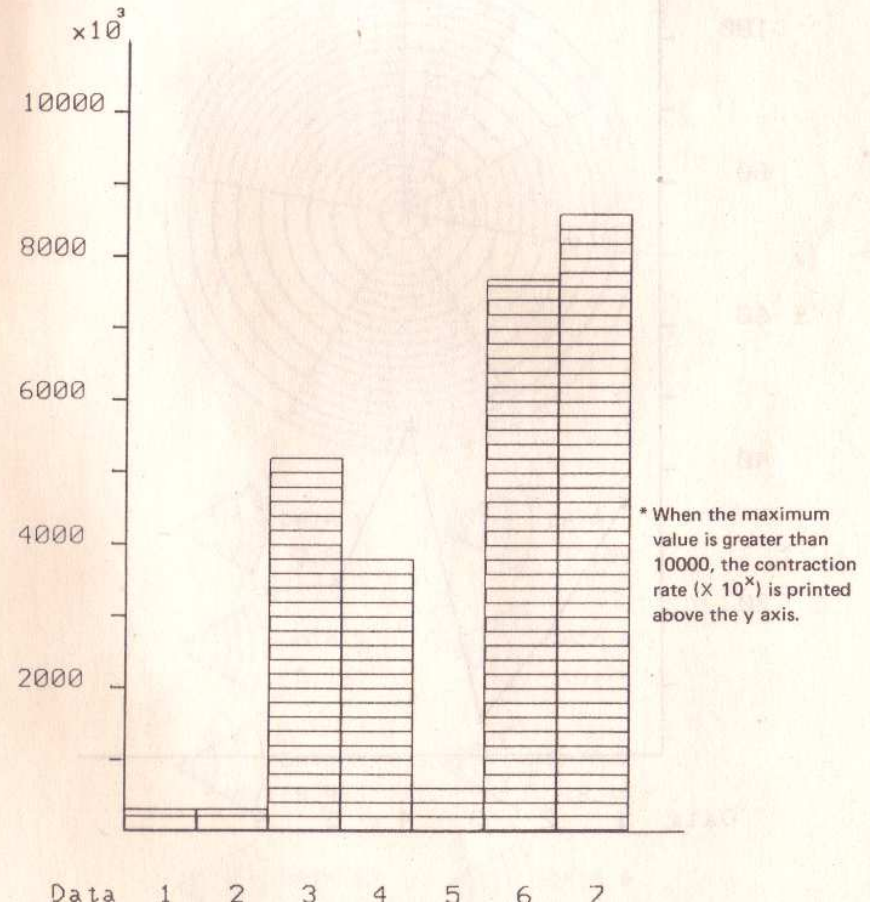
- **Bar Graph**

```
File name: TEST
DATA 1= 2.54704E+06
DATA 2= 2.8386E+06
DATA 3= 5.18279E+07
DATA 4= 3.82958E+07
DATA 5= 6.15911E+06
DATA 6= 7.65165E+07
DATA 7= 8.59633E+07
```
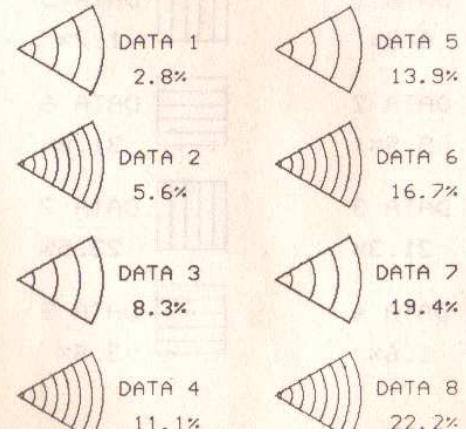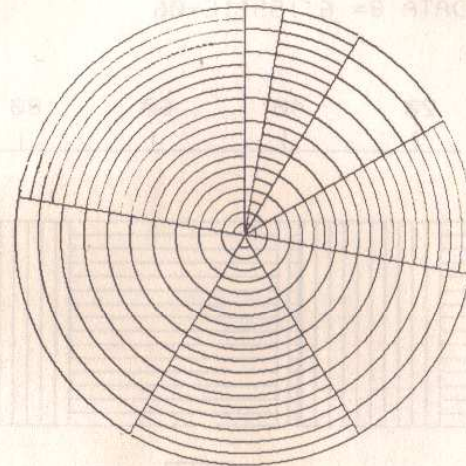
$\times 10^{3}$

```
10000 ─

 8000 ─

 6000 ─

 4000 ─

 2000 ─

       Data   1    2    3    4    5    6    7
```

* When the maximum
value is greater than
10000, the contraction
rate ($\times 10^{x}$) is printed
above the y axis.

● Line Graph

File name:F1
DATA 1= 34.5663
DATA 2= 17.5416
DATA 3= 4.53736
DATA 4= 45.977
DATA 5= 23.7464
DATA 6= 23.3964
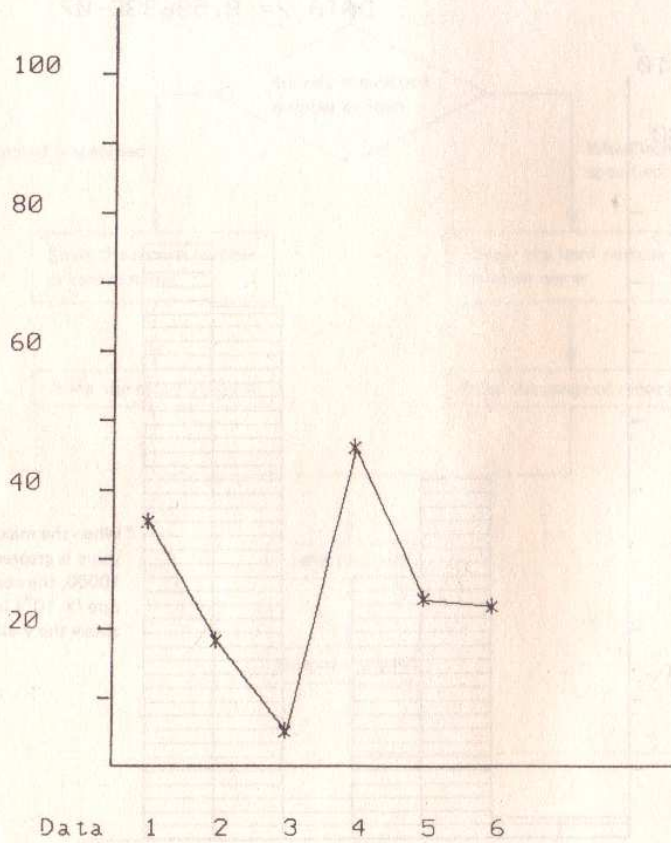
● Pie Chart

File name:CHECK
DATA 1= 1
DATA 2= 2
DATA 3= 3
DATA 4= 4
DATA 5= 5
DATA 6= 6
DATA 7= 7
DATA 8= 8

DATA 1 2.8%
DATA 5 13.9%
DATA 2 5.6%
DATA 6 16.7%
DATA 3 8.3%
DATA 7 19.4%
DATA 4 11.1%
DATA 8 22.2%

● Band Graph

```
File name:TEST
DATA 1= 1.12089E+07
DATA 2= 1.55366E+07
DATA 3= 3.47535E+07
DATA 4= 2.54704E+06
DATA 5= 2.8386E+06
DATA 6= 5.18279E+07
DATA 7= 3.82958E+07
DATA 8= 6.15911E+06
```

```
0      20      40      60      80     100
```

DATA 1	6.9%	DATA 5	1.7%
DATA 2	9.5%	DATA 6	31.8%
DATA 3	21.3%	DATA 7	23.5%
DATA 4	1.6%	DATA 8	3.8%