

Communications Program Example

Program Example for RS-232C Communication

In this program, transmission data is input in command format from the computer keyboard. When the corresponding response data is returned from the Processor, it is displayed on the computer screen.

Input the data to be transmitted, beginning with the "unit number" and ending with the "number of elements." If this program is not executed correctly, there may be a transmission error; check the communications settings, cable connections, etc.

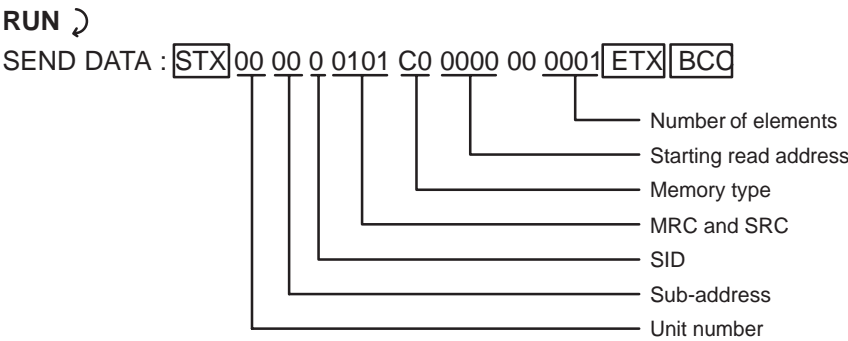
(This program is written in N88 BASIC. An NEC PC-9801 personal computer is used as the host system.)

```
1000
-----
1010 ' PROGRAM:K3N* Communication Sample Program(CompoWay/F)
1020 ' VERSION:1.00
1030 ' (C)Copyright OMRON Corporation 1997
1040 ' All Rights Reserved
1050
-----
1060 '
1070 ' ==== COM port settings (even parity, 7 data bits, 2 stop bits) ====
1080 OPEN"COM:E73"AS#1
1090 '
1100 *REPEAT
1110 ' ==== Transmission process ====
1120 ' --- Input transmission data. ---
1130 INPUT"SEND DATA:",SEND$
1140 '
1150 ' --- Jump to exit process if there is no input. ---
1160 IF SEND$="" THEN *EXIT
1170 '
1180 ' --- BCC calculation ---
1190 BCC=0:SEND$=SEND$+CHR$(3)
1200 FOR I=1 TO LEN(SEND$)
1210 BCC=BCC XOR ASC(MID$(SEND$,I,1))
1220 NEXT I
1230 BCC$=CHR$(BCC)
1240 '
1250 ' --- Transmission ---
1260 SDATA$=CHR$(2)+SEND$+BCC$
1270 PRINT#1,SDATA$;
1280 '
1290 ' ==== Reception process ====
1300 RDATA$="":TIMEOUT=0
1310 *LOOP
1320 ' --- No-response detection ---
1330 TIMEOUT=TIMEOUT+1
1340 IF TIMEOUT>20000 THEN RESP$="No Response":GOTO *REND
1350 IF LOC(1)=0 THEN *LOOP
1360 '
1370 ' --- End character discrimination (Read if it isn't end character.)
---
1380 RDATA$=RDATA$+INPUT$(LOC(1),#1)
1390 IF LEN(RDATA$)<2 THEN *LOOP
1400 IF MID$(RDATA@,2,LEN(RDATA$)-2)
1420 *REND
1430 '
1440 ' --- Display received data. ---
1450 PRINT"Response:";RESP$
1460 GOTO *REPEAT
1470 '
1480 *EXIT
1490 ' ==== Exit process ====
1500 CLOSE#1
1510 END
```

Operation Example

The following is an execution example of the previous program (read display data for Unit No. 00):

The “↵” symbol represents the Return Key. This program cannot execute transmission normally unless the initial transmission settings of the personal computer are: even parity, 7 data bits, 2 stop bits, and the computer’s baud rate is the same as the Processor’s. If the connectors are not properly connected, the program may stop midway.



The response is as follows:

