INSTRUCTION MANUAL
FOR

MC SERIES

COMMUNICATION (Options C, C5)

... Objective Models ...

MCD-130 SERIES, MCD-150 SERIES
MCD-530 SERIES, MCD-550 SERIES
MCR-100 SERIES, MCR-200 SERIES

This manual describes the communications of MC series (Option: C and C5).
See each instruction manual for the operations besides the communication.

● MCD-130, MCD-530 series

《 Setting command 》

《 Changing command 》

《 Reading command 》

《 Action status reading command 》

- MCD-150, MCD-550 series

《 Setting command 》

《 Changing command 》

《 Reading command 》

《 Action status reading command 》

● MCR-100, MCR-200 series

《 Setting command 》

《 Changing command 》

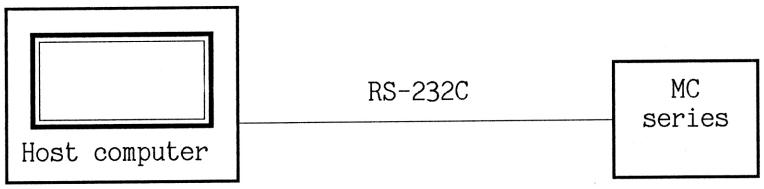
《 Reading command 》

《 Action status reading command 》

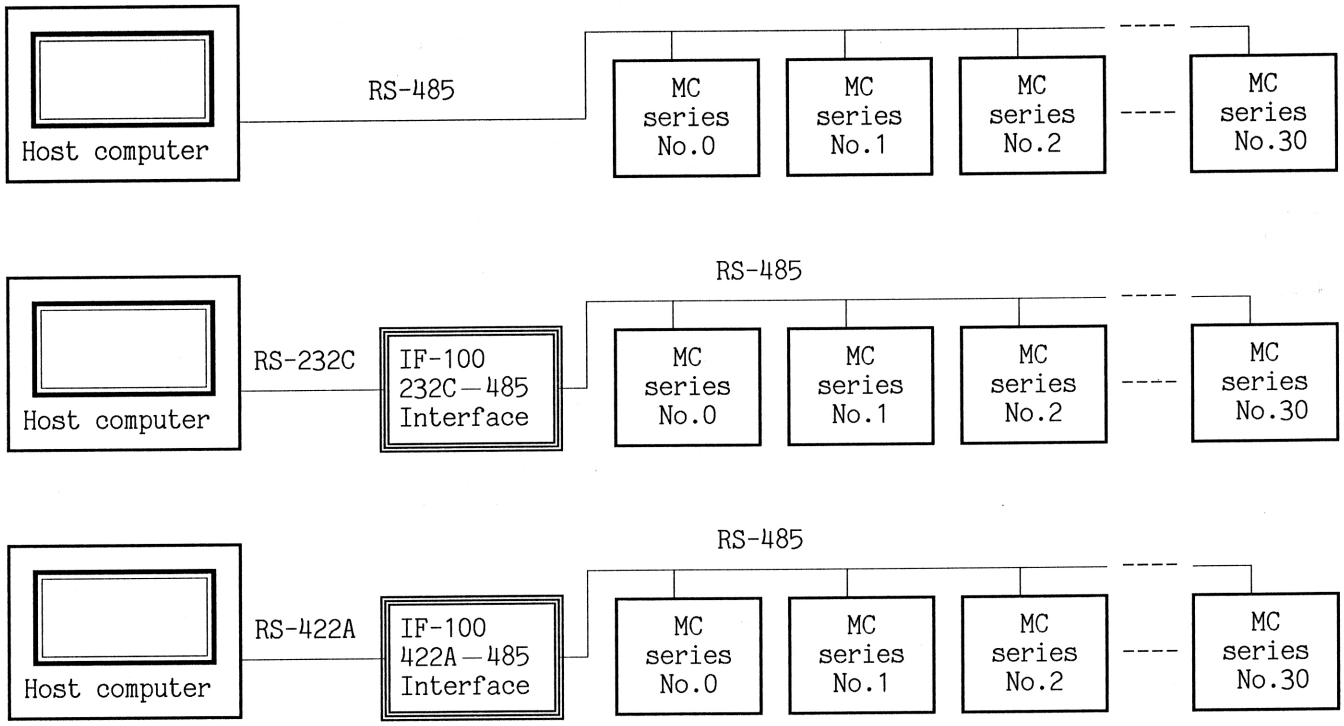
1. System configuration and specifications

1.1 System configuration

(1) RS-232C [Option code: C] Option C is not available to the MCR-100, 200 series.



(2) RS-485 Multi-drop connection [Option code: C5]



1.2 Specifications

Communication system	Half-duplex
Data transfer rate	2400bps (300, 600, 1200 and 4800bps) selectable by changing the pin position at the internal assembly
Synchronous system	Start-stop
Code form	ASCII
Error detection	Parity check, Checksum
Error correction	Command request repeat system
Data format	Start bit : 1 Data bit : 7 Parity bit: Even parity Stop bit : 1

Start bit	Data bit	Parity bit	Stop bit

1.3 Communication interface

(1) RS-232C (Option code: C)

Connection example between the host computer and the MCD-100 series is as follows:

- Characteristic, Based on EIA RS-232C

Connection

Signal	Abbreviation	Direction	Terminal No.
Transmit data	Tx	Output	34
Receive data	Rx	Input	35
Signal ground or Common return	COM	——	36

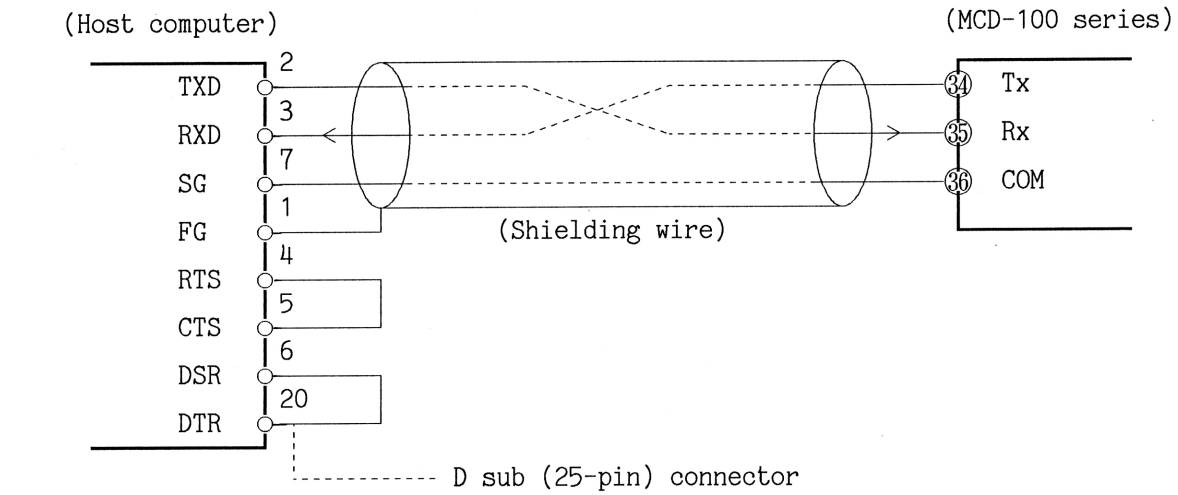
Cable length, maximum 10m

Adaptable connector and cable (below table or the equivalent)

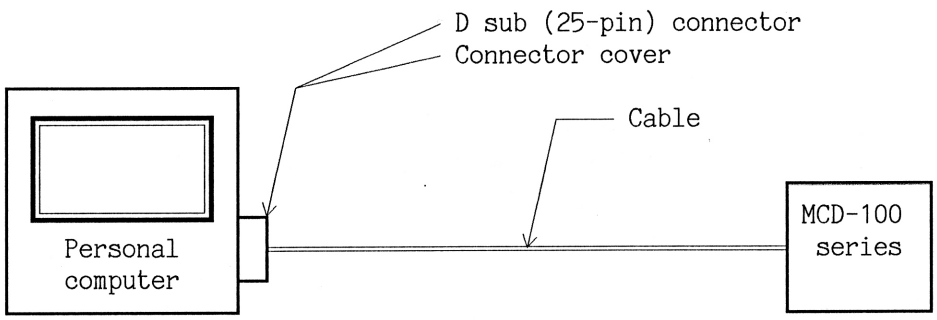
Parts	Maker	Model
D sub-connector	Japan Aviation Electronics	DB-25PFT-N
Connector cover	Ind. Ltd.	DB-C2-J9
Cable	Onamba Co., Ltd.	OTSC-2PVB-7/0.32TA

Connectable unit: 1

Connection method



- In case of the MCD-500 series, the terminal numbers are as follows:
  ㉛ for Tx (Y_A), ㉜ for Rx (Y_B) and ㉝ for COM (COM).
  Refer to the Instruction manual in detail.
- Option C is not available to the MCR series.



(2) RS-485 (Option code: C5)

Connection example to the host computer, IF-100-C5 and the MCD-100 series is as follows:

- Characteristic, Based on EIA RS-485

Connection

Signal	Abbreviation	Direction	Terminal No.
Inverted output	Y_A	Input, Output	38
Ainverted output	Y_B	Input, Output	39
Signal ground or Common return	COM	——	40

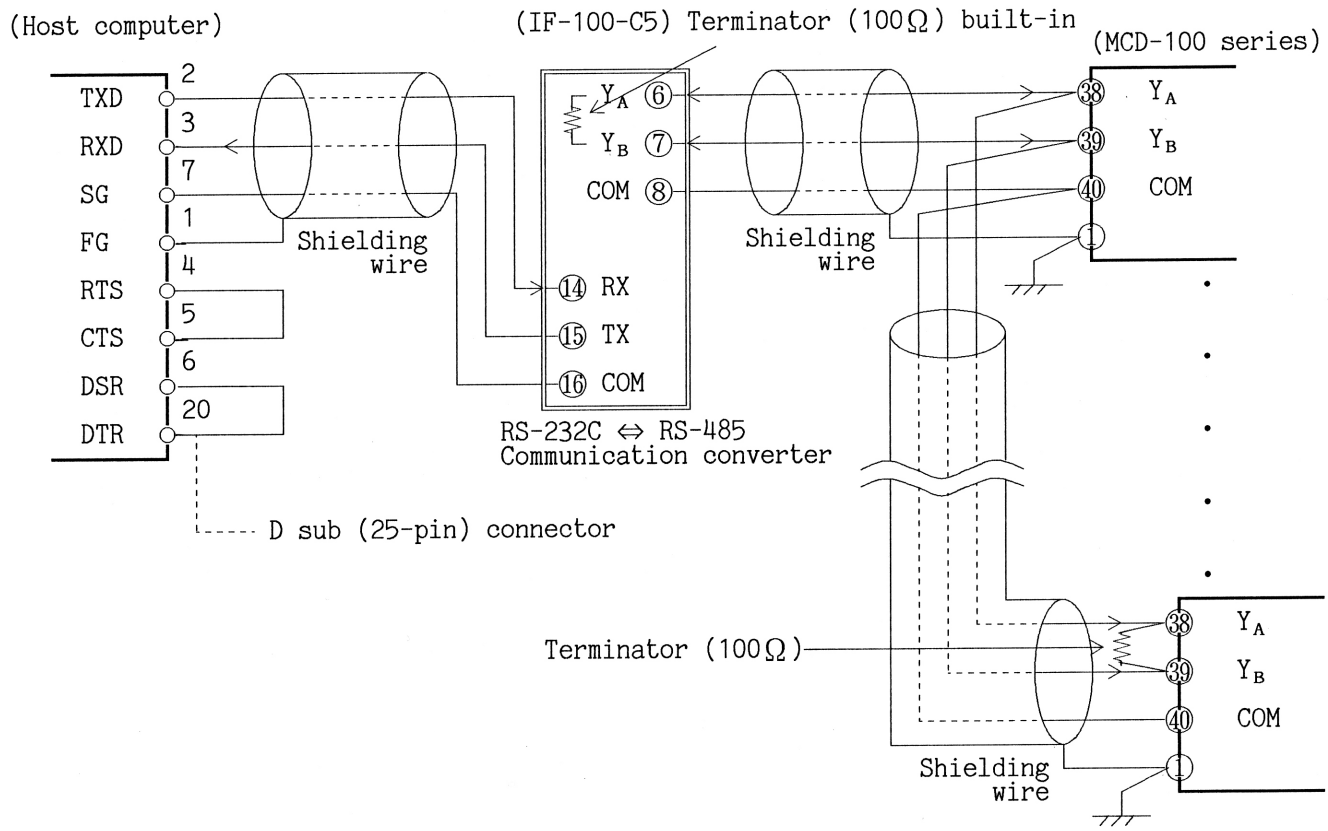
Cable length, RS-232C, maximum 10m
RS-422A, maximum 1km
RS-485, maximum 1km

Adaptable connector and cable (below table or the equivalent)

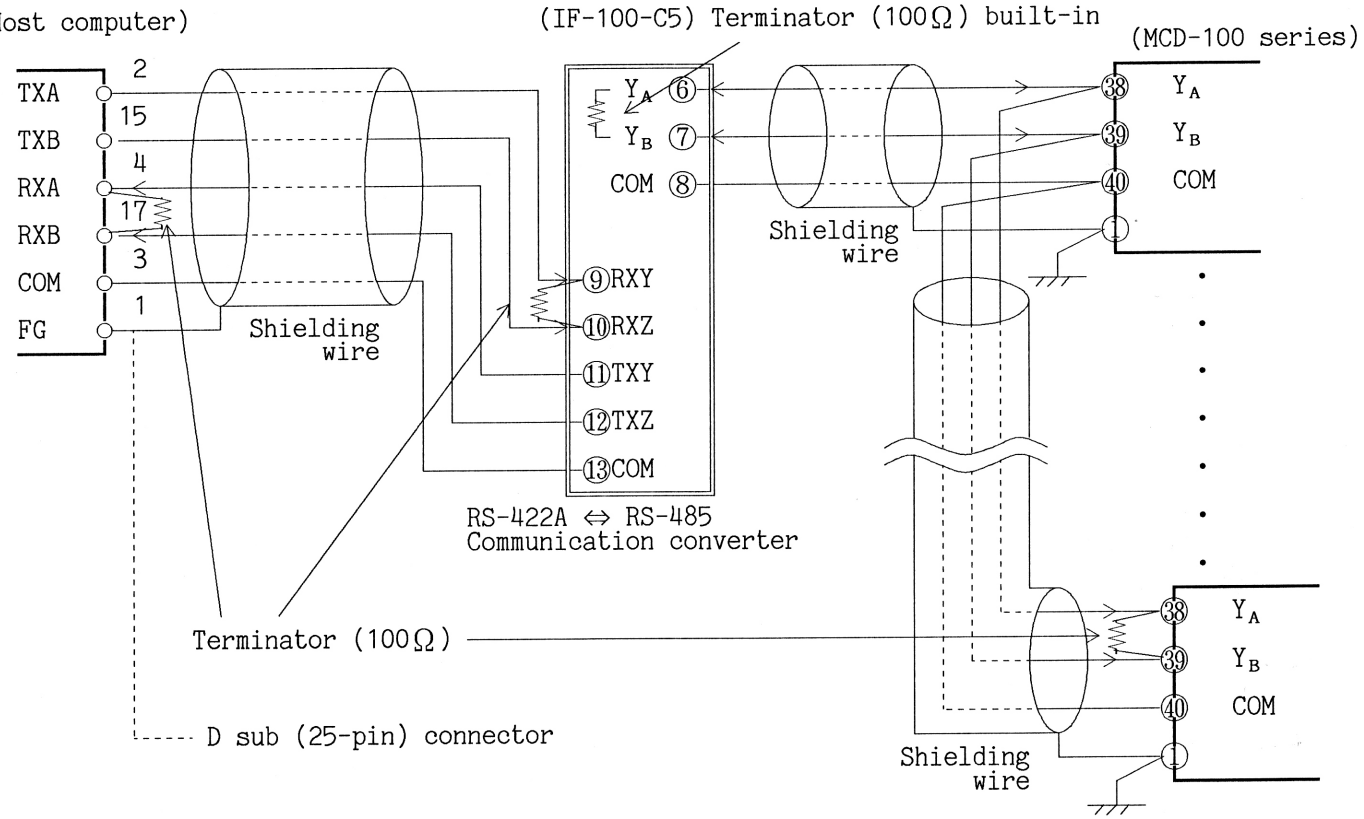
Parts	Maker	Model
D sub-connector	Japan Aviation Electronics Ind. Ltd.	DB-25PFT-N
Connector cover		DB-C2-J9
Cable	Onamba Co., Ltd.	OTSC-2PVB-7/0.32TA

Connectable units 31

Connection method [RS-232C ⇔ RS-485]



Connection method [RS-422A ⇔ RS-485]



- In case of the MCD-500 series, the terminal numbers are as follows:
  ㉛ for Tx (Y_A), ㉜ for Rx (Y_B) and ㉝ for COM (COM).
- In case of the MCR-100, 200 series, the terminal numbers are as follows:
  ⑰ for Y_A, ⑱ for Y_B and ⑲ for COM.

  Refer to each Instruction manual in detail.

● As for the shielding wire

- Connect the shielding wire **only one side** to FG or ground terminal so as not to flow the current into the shielding wire.
- The FG or ground terminal must be grounded.
- If both sides of the wire are connected to the FG or ground terminal, the circuit is made between the wire and ground, and the **noise may easily occur by the current.**

● As for the terminator (terminal resistor)

- The more the communication line becomes long, sometimes, the less communication performs since the transfer waveform becomes wrong owing to the echo. To prevent this, connect the terminator.
- The place to connect should be the physical terminal of the communication cable.

● Our made Communication converter [IF-100-C5] is to be provided on separately sold.