# 10.7MHz Communication Device

## User Manual
### （ EFC-TIDA-R1 ）

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# ■ About This Manual

This document is the user manual for "10.7MHz Communication Device", which consists of the RF transmitter and the RF receiver.
The following items are described in the document.
- System configuration
- How to operate
- Communication Interface

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received,
Including interference that may cause undesired operation.

FCC CAUTION
Changes or modifications not expressly approved by the party responsible for compliance could void the user's
authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to
part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in
a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed
and used in accordance with the instructions, may cause harmful interference to radio communications. However,
there is no guarantee that interference will not occur in a particular installation. If this equipment does cause
harmful interference to radio or television reception, which can be determined by turning the equipment off and on,
the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

-RF exposure warning

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this
transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or
operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation
instructions and transmitter operating conditions for satisfying RF exposure compliance.

# ■ System Configuration

The configuration of this system is shown in Figure 1.
Turn on the both device;
The "Master" sends the ID request at a fixed interval.
When the "Slave" receives the ID request from the "Master", The "Slave" will reply its own ID.
Besides  When the user presses the button or touches the Master,
the Master receives the signal from the Slave.
You can get the ID and other data by using external equipment(PC/Tablet).

The "Master" can communicate the external equipment(PC/Tablet) via the Serial Communication.
The ID of the connected the "Slave" will be output on the terminal software (Teraterm etc.).



10.7MHz

Slave

Master

Serial /BLE

OR

Tablet

PC

Fig.1

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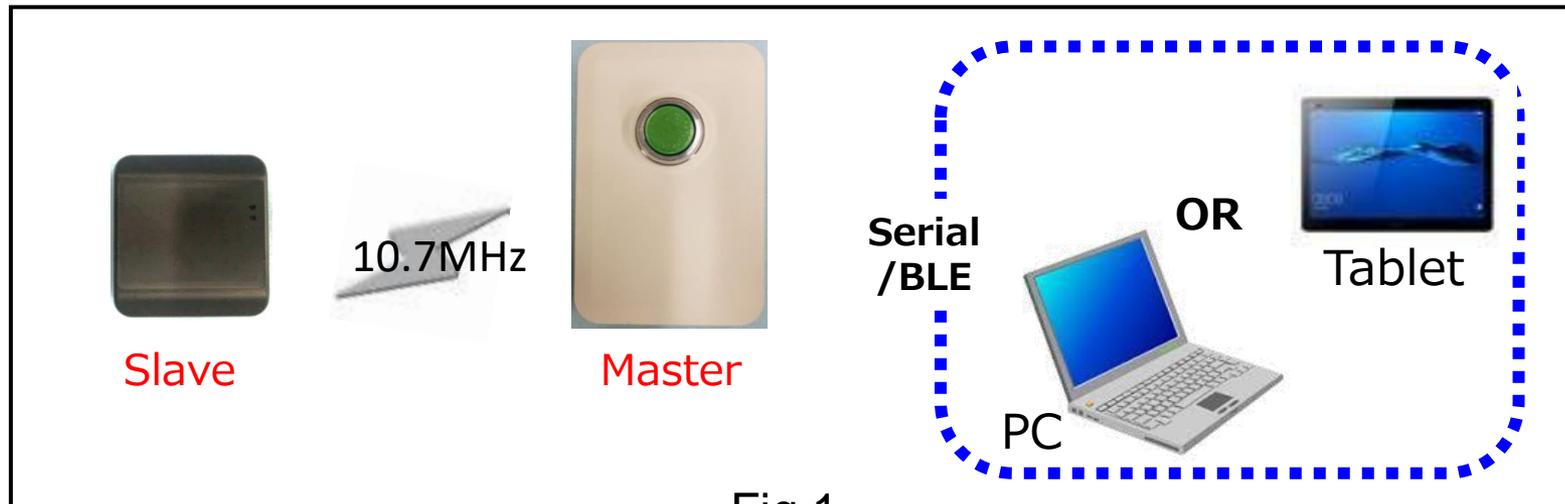
# Sequence Between Master And Slave

The sequence between "Master" and "Slave" is shown in Figure 2.
The "Master" sends the ID request at a fixed interval.
When the "Slave" receives the ID request from the "Master", The "Slave" will reply its own ID.
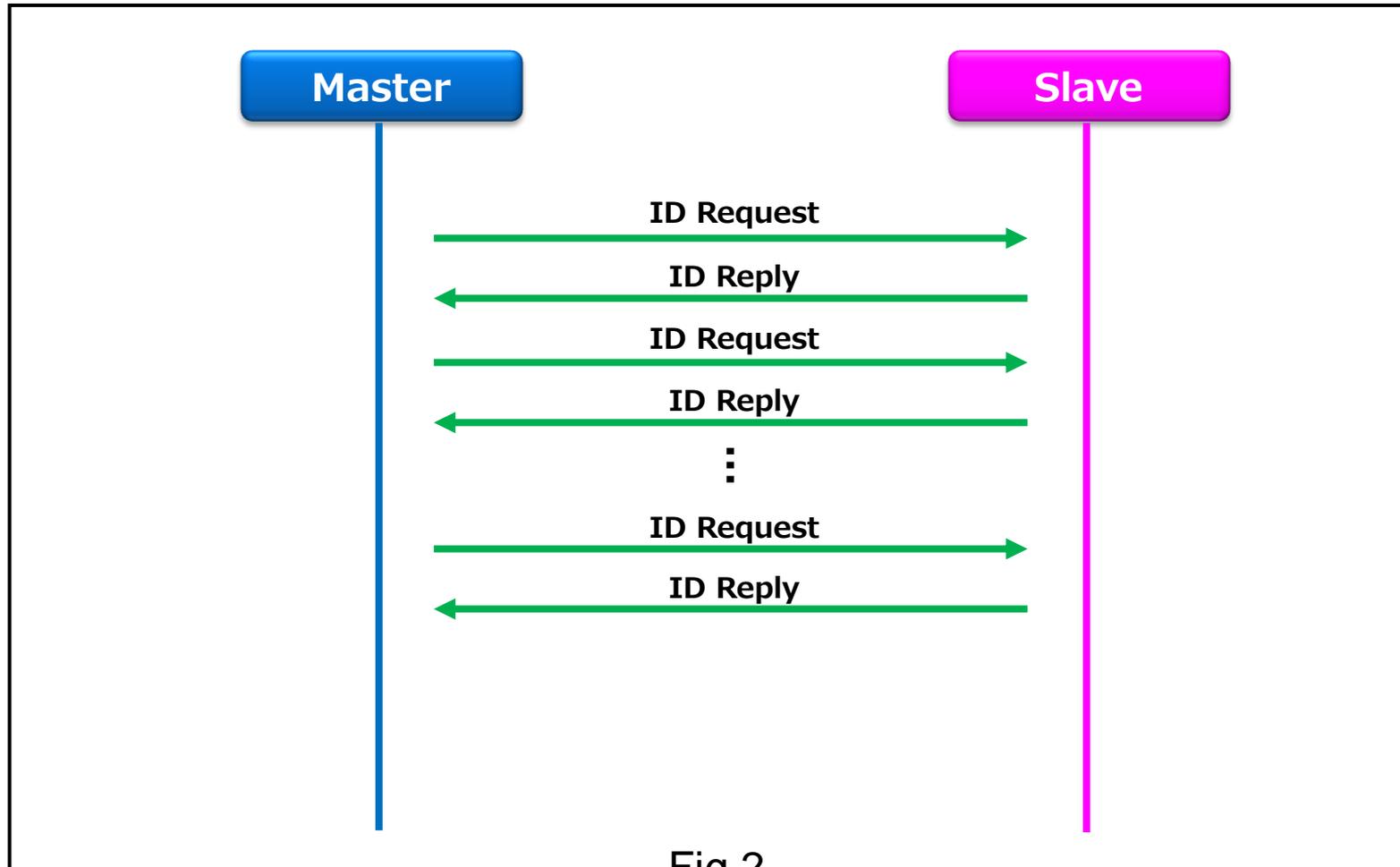Both devices communicate using the frequency of 10.7 MHz.



Fig.2

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# Communication I/F in External Equipment

Serial port settings :

| | | |
|---|---|---|
| Speed | :19200 | [bps] |
| Data bits | :8 | [bits] |
| Stop bits | :1 | [bit] |
| Parity | :None | |
| Flow control | :None | |

Setting example (Teraterm):



Fig.3

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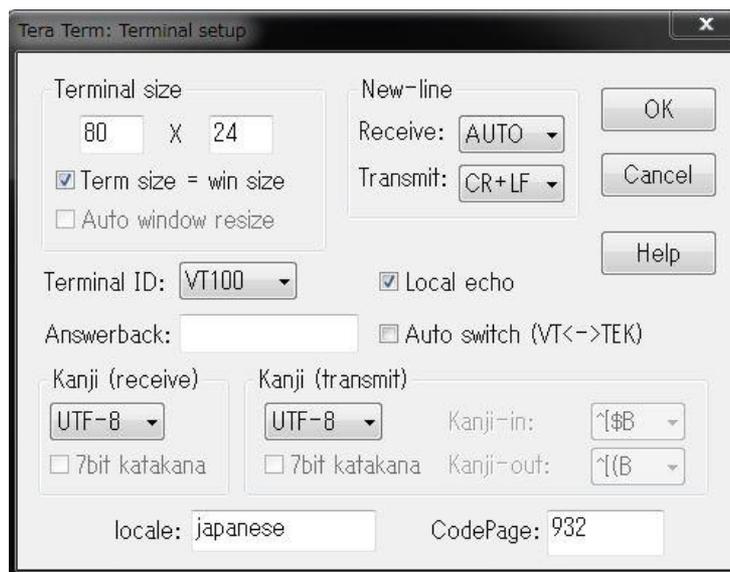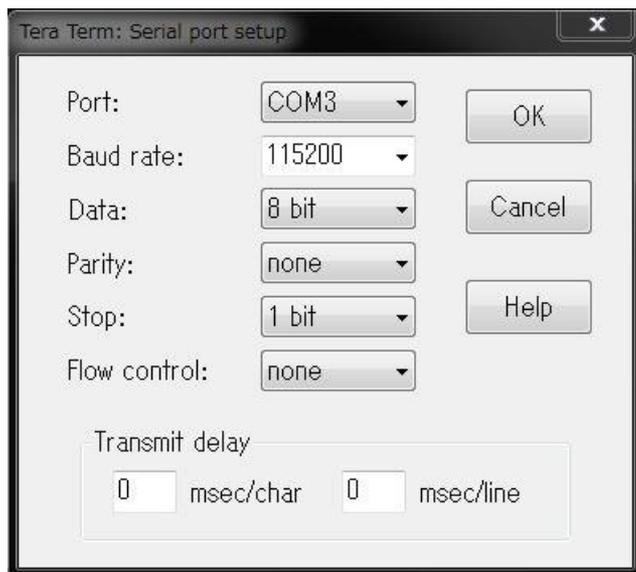
# ■ Communication I/F in External Equipment

Command execution examples :



⇒ID information, etc.

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# Disclaimer

Please note that the information or the program it in this document may be changed or updated without notice. For any damages caused by these changes and updates, we are not responsible.

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