**Appendix_8**

FZ760_Local Address & Target Address Details

Version 0.1.0

Data 2009-06-10

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## 1. Local Address and Target Address

Local Address is an address included in the data packet when the device transmits data wirelessly and it shows the starting point for the data packet.

Target Address is an address included in the data packet when the device transmits data wirelessly and it shows the ending point for the data packet.

If a device is used without any setting change, the Local Address of the device is 0000.

If a device is used without any setting change, the Target Address of the device is FFFF.

## 2. ACK: Receiving Confirmation of Transmitted Data

Wireless communication devices use the ACK function to confirm if the data transmitted wirelessly is received normally.

To use the ACK function, users need the Local Address and the Target Address of the device.

To use the ACK function to check the normal reception of wireless data, a unique (only one) Local Address and unique (only one) Target Address in the wireless communication network have to be used.

If devices are used without any setting change, Local Addresses of all devices are 0000 and Target Addresses are FFFF, which disables the use of the ACK function.
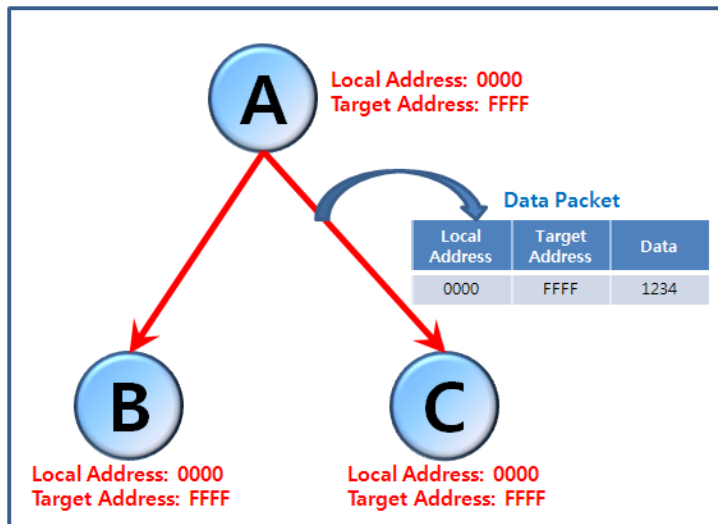
FFFF is the broadcast address.

The broadcast address is the address which all devices accept.

## 3. Data Transmission and Reception

### 3-1. Data Transmission and Reception with No Setting Change

(1) Data Transmitted by Device A and Received by Device B and C

The data packet transmitted by Device A is received by Device B and C.

Device B recognizes the data packet as its own data and accepts it since the Target Address of the data packet is FFFF.
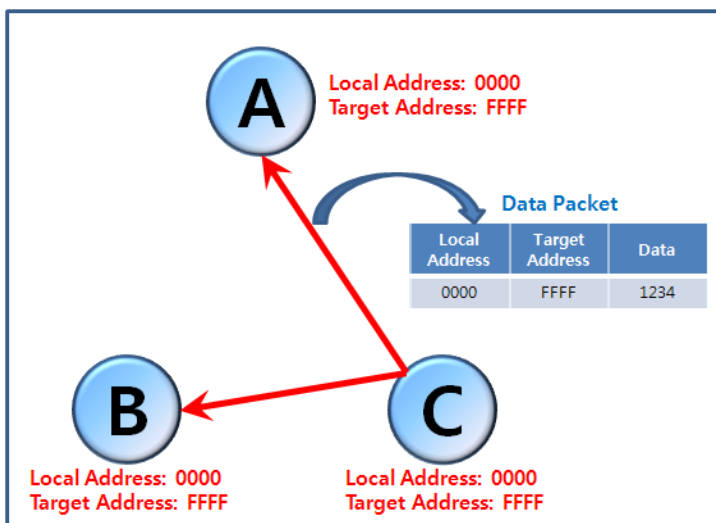Device B does not transmit ACK.

Device C recognizes the data packet as its own data and accepts it since the Target Address of the packet data is FFFF
Device C does not transmit ACK.

**Local Address: 0000**
**Target Address: FFFF**

**Data Packet**

| Local Address | Target Address | Data |
|---|---|---|
| 0000 | FFFF | 1234 |

**Local Address: 0000**
**Target Address: FFFF**

**Local Address: 0000**
**Target Address: FFFF**

(2) Data Transmitted by Device C and Received by Device A and B

The data packet transmitted by Device C is received by Device A and B.

Device A recognizes the data packet as its own data and accepts it since the Target Address of the data packet is FFFF.
Device A does not transmit ACK.

Device B recognizes the data packet as its own data and accepts it since the Target Address of the packet data is FFFF
Device B does not transmit ACK.

**Local Address: 0000**
**Target Address: FFFF**

**Data Packet**

| Local Address | Target Address | Data |
|---|---|---|
| 0000 | FFFF | 1234 |

**Local Address: 0000**
**Target Address: FFFF**
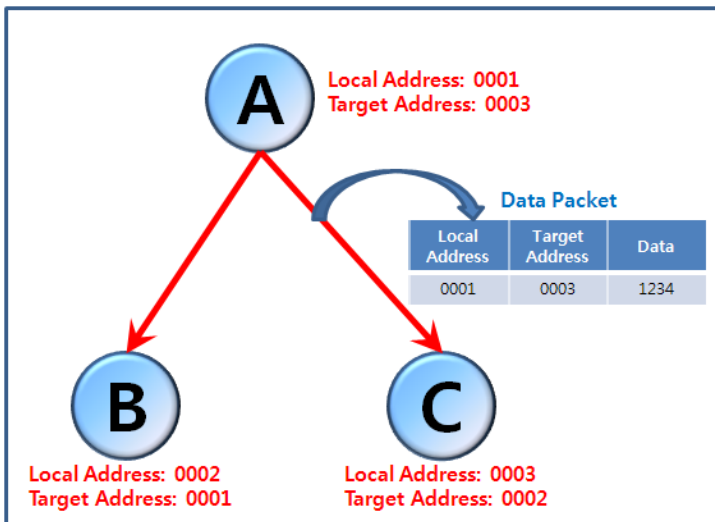
**Local Address: 0000**
**Target Address: FFFF**

## 3-2. Data Transmission and Reception after Setup of Unique Address

Set the Local Addresses and Target Addresses of Device A, B and C as below.



(1) Data Transmitted by Device A and Received by Device B and C

The data packet transmitted by Device A is received by Device B and C.



Device B does not recognize the data packet as its own data since the Target Address of the data packet is 0003 and ignores it.
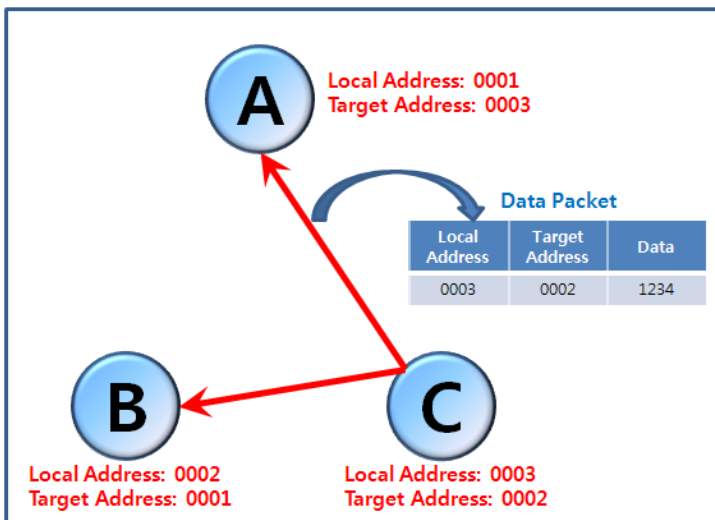
Device C recognizes the data packet as its own data and accepts it since the Target Address of the packet data is 0003.
Device C transmits ACK to Device A.

Device A that receives the ACK acknowledges that the data was transmitted normally.

(2) Data Transmitted by Device C and Received by Device A and B

The data packet transmitted by Device C is received by Device A and B.



Device A does not recognize the data packet as its own data since the Target Address of the data packet is 0002 and ignores it.

Device B recognizes the data packet as its own data and accepts it since the Target Address of the packet data is 0003.
Device B transmits ACK to Device C.

Device C that receives the ACK acknowledges that the data was transmitted normally.

## 3-3. Use of the ACK Function

If the Target Address of the device is a Unique Address when it sends data, it uses the ACK function automatically.

If the Target Address of the device is the broadcast address (FFFF), it does not use the ACK function.

The Local Address and Target Address are unique in the wireless network and the device processes an OK (change of OK Status port) when it receives ACK from the target device after sending the data.

The Local Address and Target Address are unique in a wireless network and the device resends the data when it does not receive ACK from the target device after sending the data.

The device automatically resends the data up to nine times.

If the device does not receive ACK after resending the data nine times, it processes an ERROR (change of ERROR Status port).

When the ACK function is used, it allows more stable data transmission and reception but it increases the traffic in the wireless communication network.