

Description	Differences between CDT-TX-02M-R, CDT-RX-03M 434 MHz and CDT-TX-02M, CDT-RX-03M 426 MHz
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For customers that would like to integrate the transmitter CDT-TX-02M and receiver CDT-RX-03M 426 MHz modules into their products for exporting to the Japanese market needs to read this guide and be aware of the differences in operation as follows:

1. Power

CDT-TX-02M-R 434 MHz 10mW (10 dBm)	CDT-TX-02M 426 MHz 1mW (0 dBm)
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2. Range

CDT-TX-02M-R 434 MHz 1km or more*	CDT-TX-02M 426 MHz 500-800m*
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* LOS

3. Conformity

CDT-TX-02M-R, CDT-RX-03M 434 MHz RED EN 300 220	CDT-TX-02M, CDT-RX-03M 426 MHz ARIB STD-T67 For Japan only
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4. Frequency

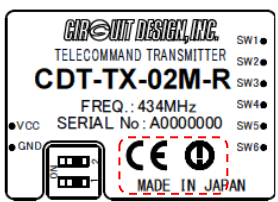
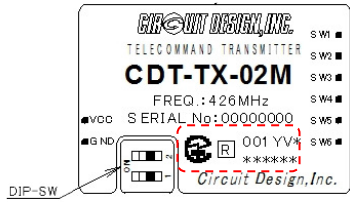
CDT-TX-02M-R 434 MHz 434.075/433.920/434.600/434.700 MHz	CDT-TX-02M 426 MHz 426.0250/426.0625/426.1125/426.1375 MHz
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5. Operation Modes (see 10)

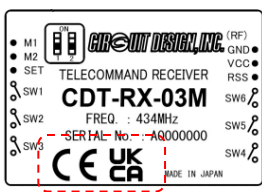

CDT-RX-03M 434 MHz One-shot / Toggle / Switching / Continuous	CDT-RX-03M 426 MHz One-shot / Toggle / Switching / Momentary
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6. Front label

Transmitter

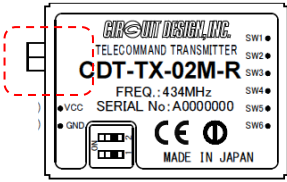
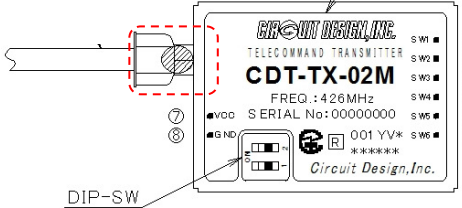
CDT-TX-02M-R 434 MHz	CDT-TX-02M 426 MHz
 <p>CE mark</p>	 <p>Technical Regulations Conformity Certification mark and identification number</p>

Receiver

CDT-RX-03M 434 MHz	CDT-RX-03M 426 MHz
 <p>UKCA mark CE mark</p>	

7. Antenna

Transmitter

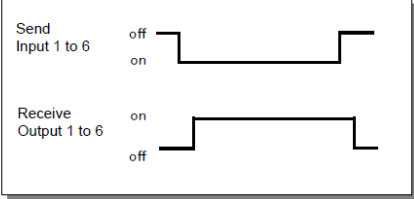
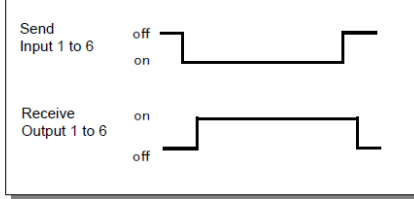
CDT-TX-02M-R 434 MHz	CDT-TX-02M 426 MHz
Antenna removable	Fixed (soldered)
 <p>Use the supplied ANT-LEA-01 or equivalent</p>	 <p>DIP-SW</p>

9. DIP SW setting / Frequency table

SW2	SW1	CDT-TX-02M-R, CDT-RX-03M 434 MHz	CDT-TX-02M, CDT-RX-03M 426 MHz
OFF	OFF	434.075*	426.0250*
OFF	ON	433.920	426.0625
ON	OFF	434.600	426.1125
ON	ON	434.700	426.1375

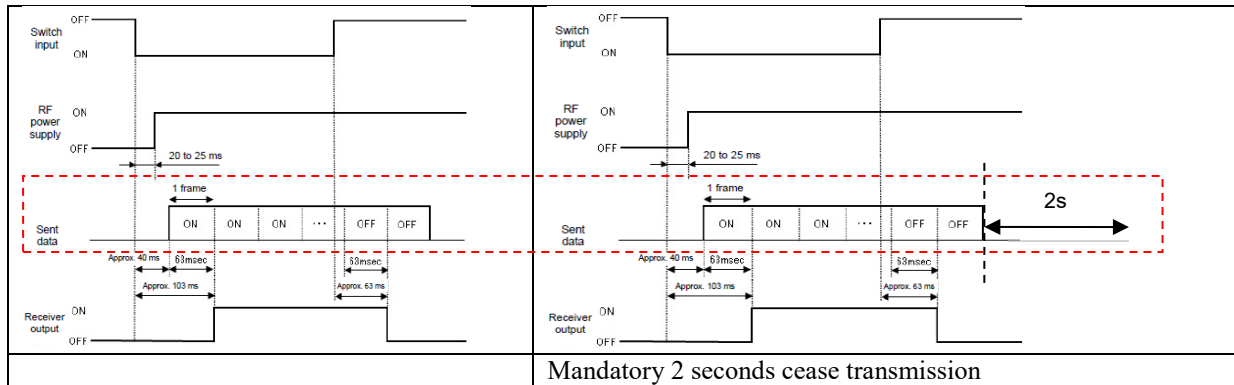
*- factory setting

10. Continuous and Momentary modes

CDT-RX-03M 434 MHz		CDT-RX-03M 426 MHz																													
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<table border="1"> <thead> <tr> <th>Transmitter SW input</th> <th>Receiver Contact output</th> </tr> </thead> <tbody> <tr> <td>SW1</td> <td>SW1 output Continuously on</td> </tr> <tr> <td>SW2</td> <td>SW2 output Continuously on</td> </tr> <tr> <td>SW3</td> <td>SW3 output Continuously on</td> </tr> <tr> <td>SW4</td> <td>SW4 output Continuously on</td> </tr> <tr> <td>SW5</td> <td>SW5 output Continuously on</td> </tr> <tr> <td>SW 6</td> <td>SW6 output Continuously on</td> </tr> </tbody> </table>	Transmitter SW input	Receiver Contact output	SW1	SW1 output Continuously on	SW2	SW2 output Continuously on	SW3	SW3 output Continuously on	SW4	SW4 output Continuously on	SW5	SW5 output Continuously on	SW 6	SW6 output Continuously on		<table border="1"> <thead> <tr> <th>Transmitter SW input</th> <th>Receiver Contact output</th> </tr> </thead> <tbody> <tr> <td>SW1</td> <td>SW1 output Continuously on</td> </tr> <tr> <td>SW2</td> <td>SW2 output Continuously on</td> </tr> <tr> <td>SW3</td> <td>SW3 output Continuously on</td> </tr> <tr> <td>SW4</td> <td>SW4 output Continuously on</td> </tr> <tr> <td>SW5</td> <td>SW5 output Continuously on</td> </tr> <tr> <td>SW 6</td> <td>SW6 output Continuously on</td> </tr> </tbody> </table>	Transmitter SW input	Receiver Contact output	SW1	SW1 output Continuously on	SW2	SW2 output Continuously on	SW3	SW3 output Continuously on	SW4	SW4 output Continuously on	SW5	SW5 output Continuously on	SW 6	SW6 output Continuously on	
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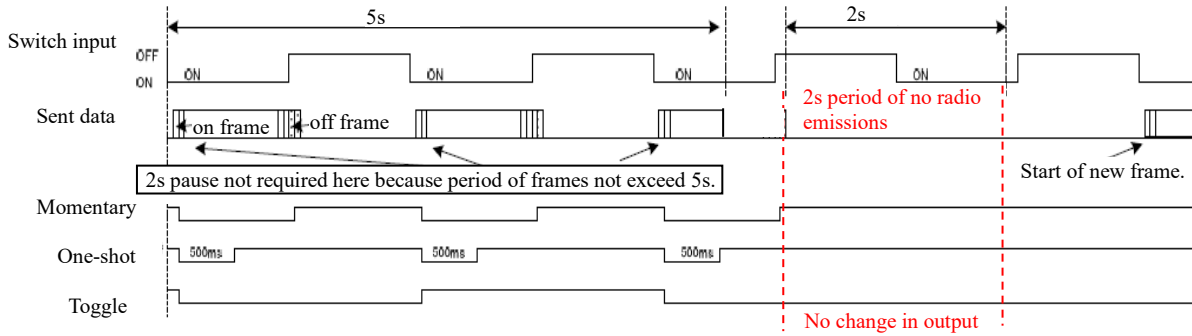
11. The difference in transmission timing:

ARIB STD-T67 states that for the 426 MHz (Japanese) module, a maximum transmission period of 5 sec, followed by a pause (no RF transmission) period of 2s must be applied.



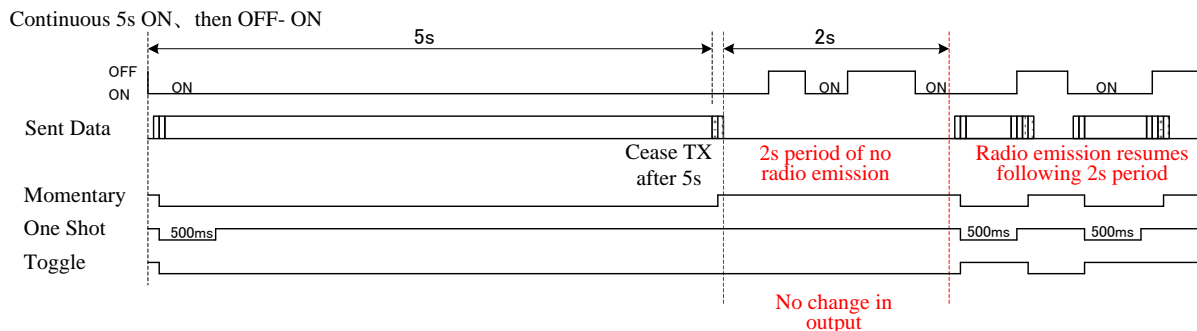
Example 1 :

About 1.1s ON-OFF intervals



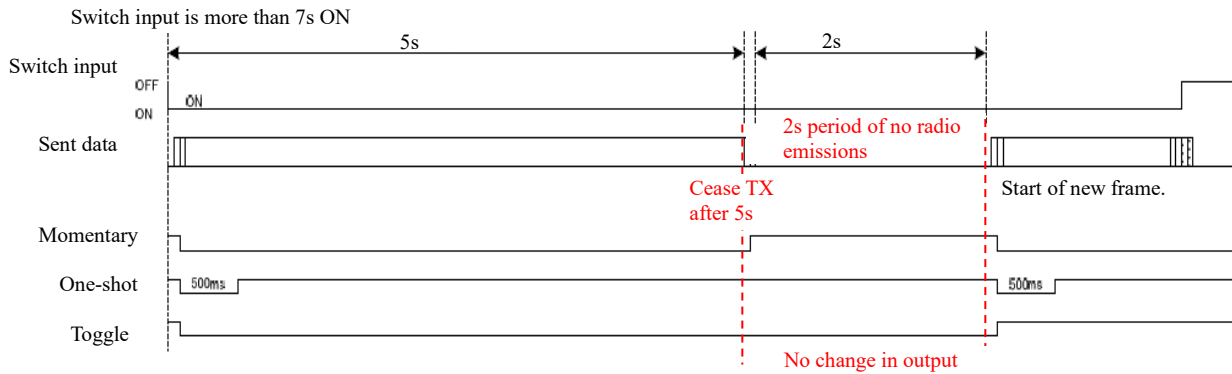
In the case where the switch is turned on-off intervals, the 2 second rule means no radio transmissions allowed and therefore the switch coming ON during this time will not do anything. During the 2 sec pause, the receiver will search for a valid RF signal and when no RF is found, will default all the receiver outputs to OFF.

Example 2:



The SW ON frames are sent as the SW is pressed. At the 5 second limit, radio ceases transmission and during the 2 second period, any changes to the sw input does not affect the receiver output.

Example 3



The switch input is pressed continuously for than 7 seconds.

Notes: Modes

One-shot:

During the 2 second pause period, any change in the switch input will not change the current receiver output state.

Be aware that if the switch input is pressed continuously, a 500ms pulse will always appear at every 7th second following the 2 second pause period.

Toggle:

Operating the switch within the 5sec transmission period, the receiver will also change its output. However, during the 2 second pause period, no toggle in the receiver output will occur.

To avoid problems:

- From power ON and operating the SW input continuously, toggling the switch again just before the 5 sec limit has elapsed will cause the receiver output to revert to the previous state.
- Operating the switch input continuously and then by toggling another switch input will cause the receiver output to revert.

Momentary:

During the 2 second pause period, operating the switch input will not affect the receiver output.

At the 2 second pause period and without radio transmission, the output of the receiver will always turn OFF by default.

To avoid problems:

- When operating the switch input in a continuous manner, have it for 5 sec ON, then 2 sec OFF and repeat.

Switching:

Depending on which switches turns receiver output ON or OFF, operating these switches during the 2 second pause period will not affect the receiver output.

Revision history

Version	Date	Description	Remark
1.0	Nov. 07, 2022	First edition	

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