

Description Differences between CDT-TX/RX-02M-R 434 MHz and CDT-TX/RX-02M 426 MHz

For customers that would like to integrate the transmitter CDT-TX-02M and receiver CDT-RX-02M 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	CDT-TX-02M 426 MHz
10mW (10 dBm)	1mW (0 dBm)

2. Range

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

* LOS

3. Conformity

CDT-TX/RX-02M-R 434 MHz	CDT-TX-02M 426 MHz
EN 300 220	ARIB STD-T67 For Japan only

4. Frequency

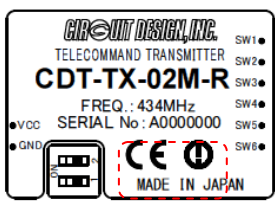
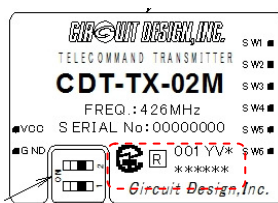
CDT-TX-02M-R 434 MHz	CDT-TX-02M 426 MHz
434.075/433.920/434.600/434.700 MHz	426.0250/426.0625/426.1125/426.1375 MHz

5. Operation Modes (see 10)

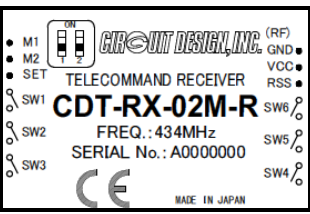
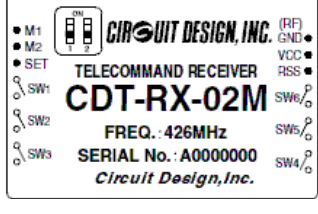
CDT-RX-02M-R 434 MHz	CDT-RX-02M 426 MHz
One-shot / Toggle / Switching / Continuous	One-shot / Toggle / Switching / Momentary

6. Front label

Transmitter

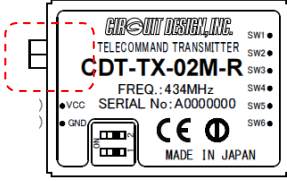
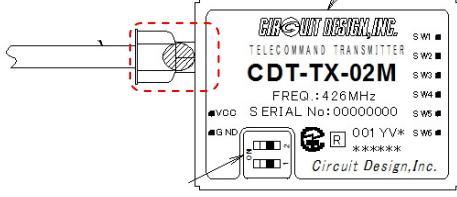
CDT-TX-02M-R 434 MHz	CDT-TX-02M 426 MHz
 <p>CE mark</p>	 <p>ARIB (Japanese) mark and identification number</p>

Receiver

CDT-RX-02M-R 434 MHz	CDT-RX-02M 426 MHz
	

7. Antenna

Transmitter

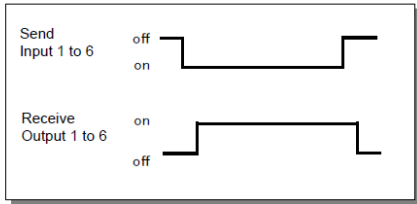
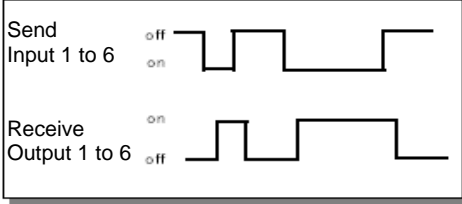
CDT-TX-02M-R 434 MHz	CDT-TX-02M 426 MHz
Antenna removable	Fixed (soldered)
 <p>Use the supplied ANT-LEA-01 or equivalent</p>	

9. DIP SW setting / Frequency table

SW2	SW1	CDT-TX/RX-02M-R 434 MHz	CDT-TX/RX-02M 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

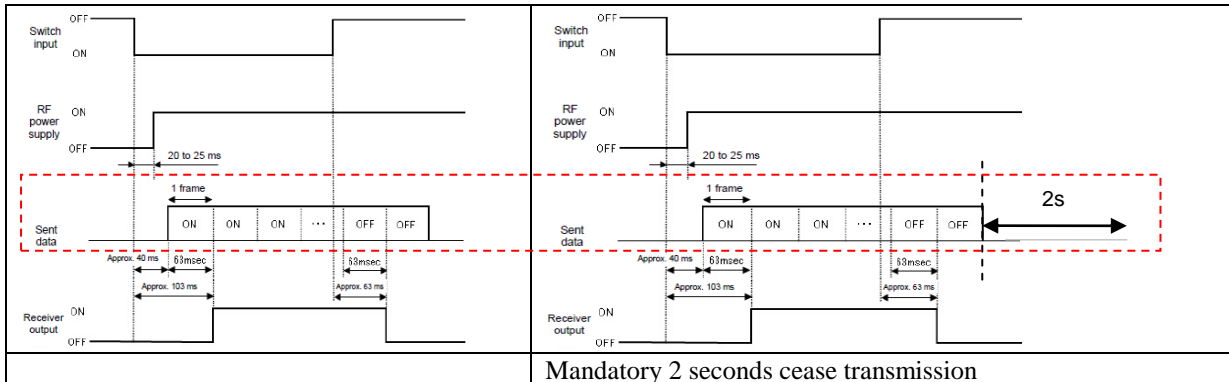
*- factory setting

10. Continuous and Momentary modes

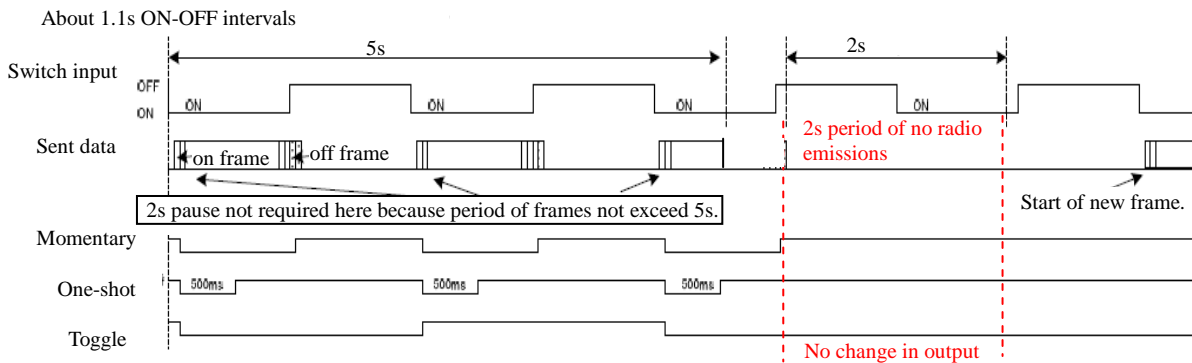
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11. The difference in transmission timing:

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.

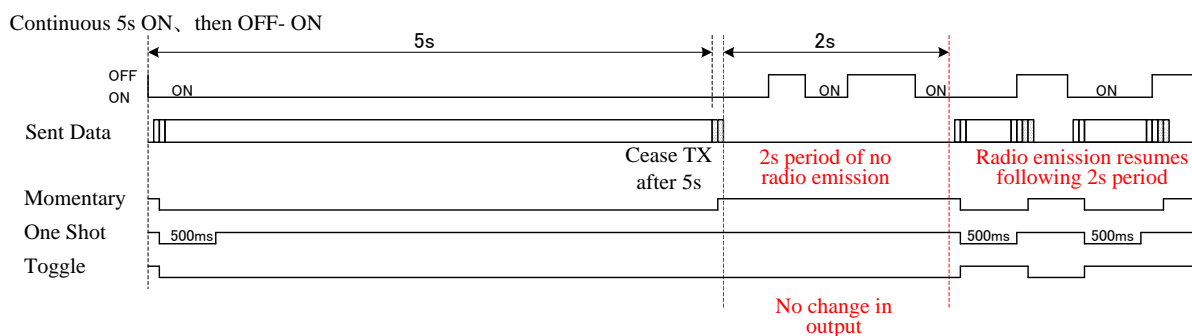


Example 1 :



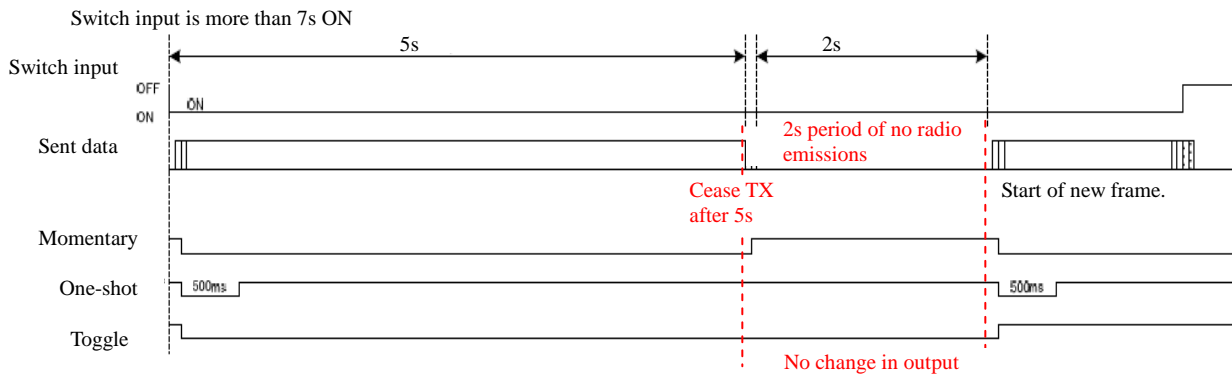
In the case where the switch is turned at on-off intervals, the 2 second rule means no radio transmissions allowed and therefore the switch coming ON during this time will not do anything. During the 2 sec pause, the receiver will search for a valid RF signal and when no RF is found, will default all 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	July.03, 2014	First edition	
1.1	Nov.24, 2015	Example 2 timing diagram correction / spelling error	

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