

User Manual for DSF-214P

Secure TAG
FSY-171 920MHz Band Active Tag System
DSF-214 Series

Ueda Japan Radio Co., Ltd.

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1. Introduction

[FCC Part 15]

- This device complies with Part 15 of the FCC Rules and Industry Canada licence-exempt RSS standard(s). 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.



Please be sure to read before use (Important safety instructions)

- Please read this manual carefully before using this equipment.
- Specifications, designs, and other contents are subject to change without notice.
- About picture indications

The following marks are indication for using this equipment correctly and preventing a damage to humans and properties. Please read this manual after understanding contents well.

 **WARNING** This indicates an extent for which user death or severe injury are assumed when handling is mistaken.

 **CAUTION** This indicates an extent for which user injury is assumed or an occurrence of physical damage is assumed when handling is mistaken.

-  Such a kind of indications are “prohibited” contents which must not be done.
-  Such a kind of indications are “compulsory” contents which must be kept.


Please be sure to confirm

- In the following usage environments, a communication range may become short or the equipment may not operate.
 - When the barrier which hardly passes a radio wave such as metals or reinforced-concretes are between this equipment and receiver at the time of communication.
 - When using this equipment at a place which is surrounded with metals.
 - When it is in strong electric field area near the transmitting station of television or radio, or when it is near the various radio stations.


- Please note that there is a weak place of radio waves under the influence of the reflected wave.

Please be sure to read (Important safety instructions)


 **WARNING**

-  ● Do not wet this equipment with water.


There is a danger of a fire, an electric shock, or a failure of the equipment. If water went into inside, remove a battery immediately, and stop using the equipment.

-  ● Do not give a strong vibration, a shock or rapid temperature change.


There is a danger of a failure of the equipment.

-  ● Do not use a battery that are not specified in this manual.

There is a danger of a fire or a failure of the equipment.


-  ● Do not use this product with wet hands.


There is a danger of an electric shock or a failure of the equipment.

-  ● If you felt abnormalities (such as smoke, smell), remove a battery immediately and stop using this equipment.


Please be sure to read (Precautions for use)


 **CAUTION**


 ● Ueda Japan Radio Co., Ltd. assumes no responsibility for injuries or damages which occurred when using this equipment.


 ● Avoid use of this equipment to the following uses for which reservation of high reliability or safety is needed.


- various safety equipment or safety devices
- systems to affect a human life, or medical equipment
- security devices or emergency devices


 ● Do not use this equipment in a humid place.
It may cause a fire, an electric shock or a failure of the equipment.


 ● Do not install this equipment in an unstable place or a place with much vibration. It may cause an injury or a failure of the equipment if it falls. If a failure of the equipment occurs, remove the battery and contact us.


 ● When using this equipment in intense temperature difference, it may dew, if temperature changes rapidly and it may cause a malfunction or a failure of the equipment.

 ● When you insert a battery at the time of a first time setup and battery exchange, please carry out after checking the attachment direction of the battery.
If direction of the battery is wrong, it may cause a fire or a failure of the equipment.

 ● Do not thrust a nail into a switch when using the push-button switch of this equipment. It may cause a failure of the equipment or a performance degradation.

 ● This equipment has electrostatic protection circuit, but be careful of static electricity enough when handling this equipment.

 ● This equipment is designed for consumer and industrial use.
Do not use to the purpose which does not suit the use of equipment.

 ● Be careful enough of a storage place of a battery in order that a small child may not swallow a battery accidentally

⊘ ● This equipment performs communication by a radio wave.
Avoid using this equipment in the vicinity of a medical device such as pacemaker.

⊘ ● Be sure to remove a battery from this equipment and to stop transmission of a radio wave within an airplane, by the aviation act.

⚠ ● When you replace a battery, please be sure to be in the state which extracted the battery, and to insert a battery, after turning off the safety switch once and turning it ON again.

⊘ ● Do not use or store this equipment in a place with the noise which has on this equipment or a place which a strong magnetic field generates. It may cause a rapid consumption of a battery, a fire, a short circuit or a failure of the equipment. Especially, avoid using in the vicinity of electrical appliance such as a television or a personal computer.

⊘ ● Do not use or store this equipment in a dusty place or a smoky place.
It may cause a fire, a short circuit or a failure of the equipment.

⊘ ● Do not use or store this equipment in a place where the equipment is affected by a corrosive gas and an organic solvent.

⚠ ● A battery life changes according to a use mode, a surrounding environment, a surrounding temperature and a transmission interval. Please use the remaining battery capacity value as a rough indication.

⚠ ● If this equipment will not be used, remove a battery before storage.

⚠ ● Before using this equipment, set a transmitter and a receiver and check that a radio wave arrives surely.

2. Overview

This equipment is active tag with a data communication function by short range device.

When insert the battery, the equipment will begin to operate with the default value of the factory.

The equipment has functions of a fixed time transmission, a vibration detection transmission, a push-button switch transmission, a transmission by the release of push-button switch transmission and a safety switch release transmission.

Also the equipment checks a remaining battery capacity at once in every 24 hours and transmits a result when the battery voltage is low.

3. Specifications

● Radio section

① Technical standard compliance

FCC Part 15.249

② Frequency

923.6 ~ 927.4 MHz (20 waves, 200 kHz intervals)

③ Transmit power

1mW

● Transmitter function

Fixed time transmission, Vibration detection transmission,

Push-button switch transmission, Battery life transmission, and the others

● Battery life

More than 3 years (at transmit once per 20 minutes)

● Operating temperature range

-10°C ~ 50°C

● Dimensions

Body: 65mm × 36mm × 9.5mm

Mass: about 20g (contains battery)

● Power source

CR-2032 (Coin type lithium battery) × 1

4. Functions

(1) Standby mode

Except the time of data transmission and reception, the equipment operates in standby mode, in order to prevent consumption of the battery.

(2) Transmit mode

The equipment has the following transmission modes. (Setting change can be performed about ①~④ by LF equipment. Please confirm to a system administrator about an actual setting mode.)

① Fixed time

The equipment transmits a data at set-up interval.

② Vibration detection

The equipment transmits a data when the equipment detects a vibration. If a detection interval is set, the equipment detects a vibration at set-up interval and transmits a data.

③ Push-button switch

The equipment starts transmission when the push-button switch is pushed 0.5 seconds or more. It becomes continuation transmission in this state, and the LED blinks in order to indicate that the push-button switch was pushed. All other functions will be invalid.

Transmission interval: about 1 second at first to 10th

about 2.5 seconds at 11th and after

④ Push-button switch transmission release

In case of continuation transmission operation in ③, continuation transmission can be terminated by pushing the button again. In that case, transmission which tells that this continuation transmission was completed is performed at the time of an end.

⑤ Battery capacity is empty

The equipment checks remaining battery capacity (battery voltage) at once in every 24 hours. The results are judged on a scale of 0 to 3 shown below, and in case of "CODE: 0", the equipment performs transmission to tell that the battery is being discharged.

CODE:3 (full) → CODE:2 → CODE:1 → CODE:0 (empty)

⑥ Safety switch

Stop the transmission by ON→OFF. It uses to stop transmission compulsory. It becomes the normal mode by OFF→ON and starts operation according to a preset value. In that case, the equipment performs the transmission to tell that the switch was canceled.

⑦ Check and change settings

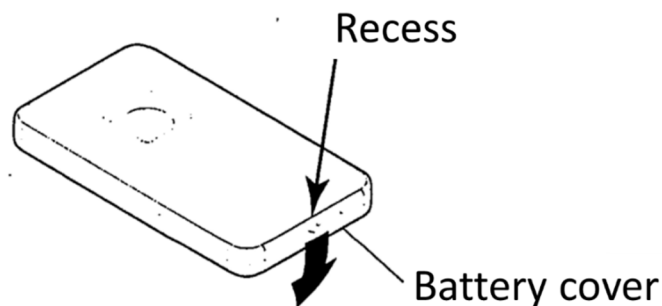
The current settings can be checked and changed by receive a signal from LF equipment which selling separately. If the equipment has received a signal from the LF equipment, the equipment transmits a data which newest contents of the setting is put.

5. How to Use

●Initial setting

Please set up in the following procedure.

- Put your nails on the recess and remove the battery cover of the reverse side in the direction of the arrow.
- Pull out a red sheet caught between the battery and the holder. The battery will be connected, and the equipment starts operation in this state.
- LED blinks at a start-up. (The number of times of blinking of the beginning means the remaining battery capacity. 4 times: full ~ 1time: empty)
- The equipment begins to operate with the default value of the factory in this state.(924.6MHz) The equipment enters the standby mode when not transmitting, and it becomes a state that waits for transmission or waits for receiving a signal from LF equipment.
- Attach the battery cover which has been removed prior.

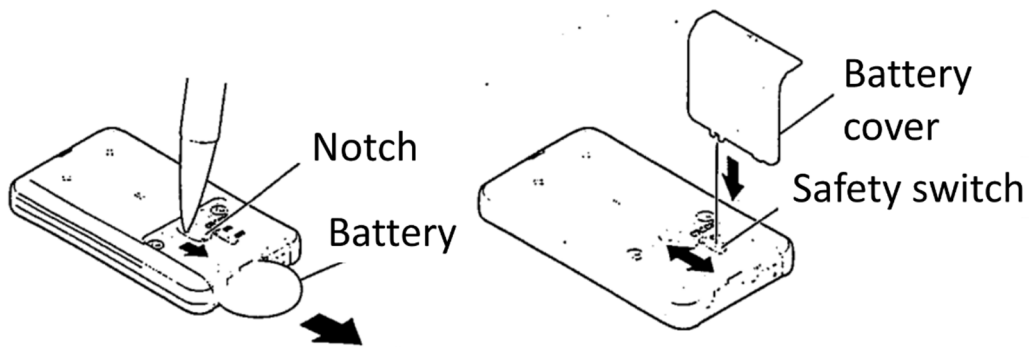


●Change settings

- When you make a setting change, use LF equipment and transmit the new set value. (Please read the instruction manual of LF equipment for details.)
- When the equipment succeeds in receiving a LF signal from the LF equipment, LED blinks once. Preset value is stored to the internal memory in this state.
- The equipment transmits the set value for a confirmation.
- The equipment begins to operate with the set condition.

● Battery Replacement

- Put your nails on the recess and remove the battery cover of the reverse side.
- Insert an object with a fine point such as a ballpoint pen into the notch of the reverse side and remove the battery by shifting.
- Turn off the safety switch once in the state after removing the battery, turn on the switch again after wait 5 seconds.
- Insert a new battery according to the figure of the reverse side of the battery cover while being careful about direction of a battery.
- LED lights up. (Remaining battery capacity information is indicated in the same manner as described above.)
- The equipment begins to operate with the condition set before replacing the battery.



● Notification (LED)

- LED is just a notification function. At the time of the LF signal reception and the push-button switch transmission, there is a case where the transmission is not performed by the use environment even if the LED is flashing.

● FCC ID

- FCC ID can be found inside of the Battery cover.

● The others

- In low battery voltage environment, the preset data which will be stored on internal memory of this equipment at the time of settings may not be successfully stored. Please check store result by transmit data, and replace the battery when the data cannot be stored normally.

6. Name of each part

The name and function of each part

- ① String through hole
- ② LED
- ③ Push-button switch
- ④ Battery cover : the cover for battery fixation
- ⑤ Recess for put nails

Package contents

- DSF-214P
- Battery (CR-2032)
- User manual (this manual)

