

- ◇ This application is designed for Android™ devices.
- ◇ With the RS-MS1A, you can use the extended D-STAR functions to exchange images or messages, or display received D-PRS station data on a map application.

System requirements

The following system is required to use the RS-MS1A. (As of October 2020)

- Android version 5.0 or later
The RS-MS1A has been tested with the Android 5.x.x, 6.x.x, 7.x.x, 8.x.x, 9.0, and 10.0.
 - ① If your device is Android version 4.x.x, you can use RS-MS1A version 1.2.5, but cannot update RS-MS1A.
- USB host function on the Android device
or
Bluetooth function on the Android device
- ① Depending on the software status or the capacity of your device, some functions may not work correctly.
- ① This instruction manual is based on RS-MS1A version 1.3.3 and Android 7.0.
Display indications may differ depending on the Android version or connecting transceiver.
- ① This application is only set to fit on a vertical screen.

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Compatible transceivers

The following list shows the transceivers that are compatible with the RS-MS1A, and their compatible functions.

	ID-31A/E PLUS	ID-4100A ID-4100E	ID-51A/E (PLUS2, PLUS, 50th Anniversary model)	ID-52A ID-52E	ID-5100A ID-5100E	IC-705	IC-9700	ID-51A/E ID-31A/E	IC-7100
DV Fast Data	✓	✓	✓	✓	✓*1	✓	✓	—	—
DR function	✓	✓	✓	✓*2	✓	✓*3	✓*4	—	—
Share Pictures	✓	✓	✓	✓	✓	✓	✓	✓	✓
Text Messaging	✓	✓	✓	✓	✓	✓	✓	✓	✓
Map	✓	✓	✓	✓*2	✓	✓*3	✓*4	—	—
Offline Map	✓	✓	✓	✓*2	✓	✓*3	✓*4	—	—
RX History	✓	✓	✓	✓*2	✓	✓*3	✓*4	—	—
Your Call sign	✓	✓	✓	✓	✓	✓	✓	✓	✓
Repeater list	✓	✓	✓	✓	✓	✓	✓	✓	✓
Transceiver Setting	✓	✓	✓	✓*2	✓	✓*3	✓*4	—	—
Application Setting	✓	✓	✓	✓	✓	✓	✓	✓	✓
Import	✓	✓	✓	✓	✓	✓	✓	✓	✓
Export	✓	✓	✓	✓	✓	✓	✓	✓	✓
USB Connection	✓	—	✓	✓*5	—	✓*5	✓	✓	✓
Data cable for USB connection	OPC-2350LU*5 DATA CABLE	—	OPC-2350LU*5 DATA CABLE	OPC-2417 (USB Micro-B/Micro-B) DATA CABLE or OPC-2418 (USB Micro-B/Type-C) DATA CABLE	—	OPC-2417 (USB Micro-B/Micro-B) DATA CABLE or OPC-2418 (USB Micro-B/Type-C) DATA CABLE	OPC-2350LU*6 DATA CABLE	OPC-2350LU*6 DATA CABLE	OPC-2350LU*6 DATA CABLE
Bluetooth Connection	—	Requires UT-137 Bluetooth® UNIT	—	✓	Requires UT-133 Bluetooth® UNIT	✓	—	—	—

*1 Usable only with the transceiver firmware versions CPU M 1.10, S 1.00, C 1.10, and DSP 1.10 or later installed.

*2 Supported only on RS-MS1A versions 1.3.3 and later. For versions earlier than 1.3.3, you can use the other functions by selecting “Others (Bluetooth)” on the “Select Transceiver Model” screen.

*3 Supported only on RS-MS1A versions 1.3.2 and later. For versions earlier than 1.3.2, you can use the other functions by selecting “Others (Bluetooth)” on the “Select Transceiver Model” screen.

*4 Supported only on RS-MS1A versions 1.3.0 and later. For versions earlier than 1.3.0, you can use the other functions by selecting “Others (USB)” on the “Select Transceiver Model” screen.

*5 Supported only on RS-MS1A versions 1.3.2 and later.

*6 When connecting the OPC-2350LU to an Android device with a USB Type-C port, A USB On-The-Go (OTG) adapter to convert to USB Type-C is required (user supplied).

Menu item description

This section describes the Menu items.

① [DR]

Sets the DR function's [FROM] and [TO] settings.

② [Share Pictures]

- Transmits an image using the data communication function.
- Displays the received or transmitted images.

① When using the ID-4100A/E, ID-5100A/E*¹, ID-31A/E PLUS, ID-51A/E (PLUS2, PLUS, or 50th Anniversary model), ID-52A/E, IC-9700, or IC-705, you can transmit the image using DV Fast Data*².

③ [Text Messaging]

- Transmits message using the data communication function.
- Displays the received or transmitted message.

① When using the ID-4100A/E, ID-5100A/E*¹, ID-31A/E PLUS, ID-51A/E (PLUS2, PLUS, or 50th Anniversary model), ID-52A/E, IC-9700, or IC-705, you can transmit a message using DV Fast Data*².

*¹ Usable only when firmware versions CPU M 1.10, S 1.00, C 1.10, and DSP 1.10 or later are installed.

*² The DV Fast Data function uses the data and the audio frames to send data approximately 3.5 times faster than the normal speed. While holding down [PTT], audio can also be sent with an image or message, but only at the normal speed.

④ [Map]

- Displays the location of the caller or repeater on a map.
- Sets the [FROM] or [TO] settings from the data displayed on the map.

⑤ [Offline Map]

Displays the location of the caller or your station on a map, even if your Android device is offline using your own maps.

⑥ [RX History]

- Displays the received DV call information.
- Accesses the transceiver's information site.

⑦ [Your Call sign]

Adds or edits Your (UR) call signs used in the DV mode.

⑧ [Repeater list]

Displays the Repeater List contents.

NOTE: The Repeater List is not synchronized with the transceiver's list. Before using this program, import the same list as your transceiver.

Menu indication icon



⑨ [Transceiver Setting]

Sets certain transceiver's settings.
The RS-MS1A does not enable you to set all transceiver's settings.

⑩ [Application Setting]

Sets the RS-MS1A settings, such as the display unit of measure.

⑪ [Import]

Imports the Repeater List and Your Call Sign Memory.

⑫ [Export]

Exports the Repeater List, Your Call Sign Memory, and RX History.

⑬ Displays either the Bluetooth or USB connection, depending on the connection status.

[Bluetooth Connection]

Connects to the transceiver using Bluetooth.

[USB Connection]

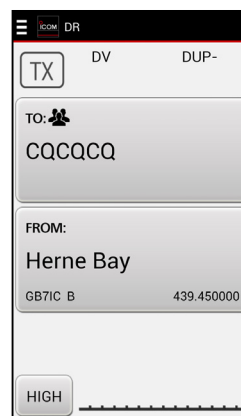
Connects to the transceiver using a USB cable.

⑭ [Exit Application]

Exits the RS-MS1A program.

DR

You can set the [FROM] and [TO] settings for the DR function.
Call signs and other various parameters can be set in this screen.



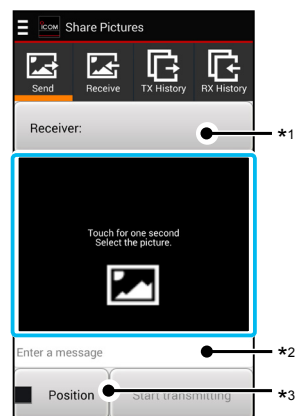
Share Pictures

[Send]

You can transmit an image that you took or saved, through the transceiver.

- Touch the black area for 1 second to open the “Select the picture” window to select the option where the picture you want to send is stored.
- *1 Tap [Receiver], and then select a receiver’s call sign to let all stations that receive the image know the image’s intended destination. All stations that receive the signal can see the image, even if they are not set as the receiver.
- *2 You can transmit the message entered on this field.
- *3 To send position data, tap [Position], and then select a desired option to enter the position.

[Send]

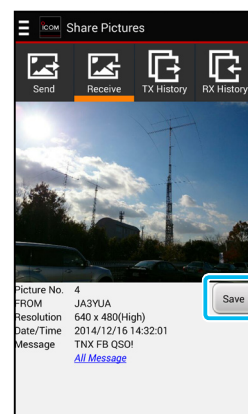


[Receive]

You can view the received image.

- Tap [Save] to save the received image on the Android device.
- ① The image is automatically saved in the “Pictures” folder in the Android device.
(icom > RsMs1a > **Pictures**)
The root folder “icom” is automatically created. The folder location may differ on the SD card and in the internal memory, depending on your Android device.

[Receive]

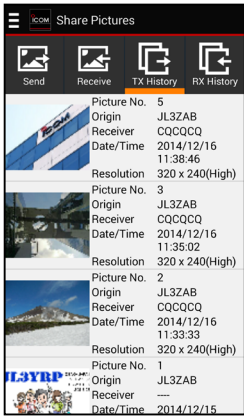


[TX History]

View the transmitted image list.
 Up to 500 files can be stored.
 When you transmit the 501st image, the oldest file will automatically be deleted.

- Tap a file to retransmit from TX History.
- Touch a file for 1 second to delete it from TX History.

[TX History]



[RX History]

View the received image list.
 Up to 500 files can be stored.
 When you receive the 501st image, the oldest file will automatically be deleted.

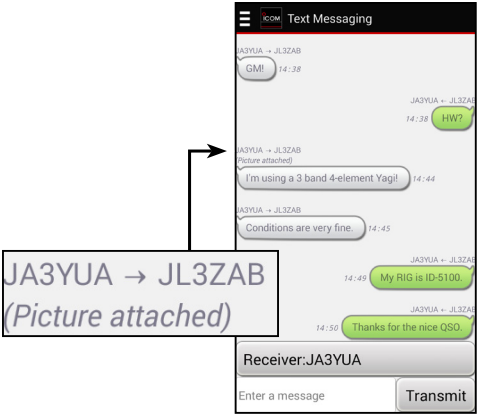
- Tap a record to save.
- Touch a record for 1 second to delete it from RX History.

[RX History]



Text Messaging

You can transmit the entered message from the transceiver.
 After transmitting, the sent message is displayed on the right side of the display.
 If you set "Receiver," the name of the receiver is displayed instead of "----."
 After reception, the received message is displayed on the left side of the display.
 ① "(Picture attached)" is displayed under the call sign when an image is transmitted with the message.



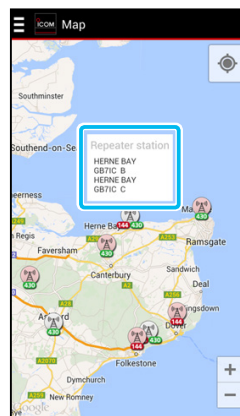
Map

The map screen displays the location of the DV repeater, FM repeater or the caller with an icon, if the repeater or the caller's signal contains position data.

- Tap the icon to display the information window.
- Tap the information window to set [FROM] or [TO] for the DR function.

NOTE: When you import the repeater list, update the repeaters on the map:

1. Tap the Menu button on your Android device, and then tap "DV Repeater station OFF" or "FM Repeater station OFF."
2. After loading, tap the Menu button again, and then tap "DV Repeater station ON" or "FM Repeater station ON."



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Offline Map

The Offline map screen displays the location of the caller or you, even if your Android device is offline using your own maps.

- ① Before using, prepare a map picture.
- ① You can find information about the offline map settings on the Icom website.
<https://www.icomjapan.com/lineup/options/RS-MS1A/>



RX History

View the Received History list.

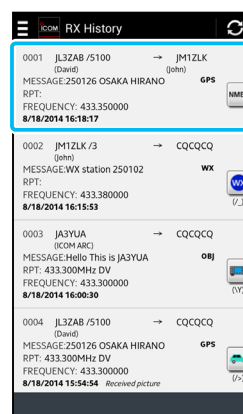
Up to 10000 records can be stored.

When you receive the 10001st DV call, the oldest record will be automatically deleted.

- Tap a record to display the detailed information.
- ①

NOTE:

- If "RX History Log" is set to "ON" on the Application Settings screen, automatically saves the RX History Log in the DV mode. The RX record file is saved in the "RXHistoryLog" folder in the Android device, in the "csv" format. (icom > RsMs1a > **RXHistoryLog**) The root folder "icom" is automatically created. The folder location may differ on the SD card and in the internal memory, depending on your Android device.
- You can search or delete an RX history entry by tapping the Menu button on your Android device.



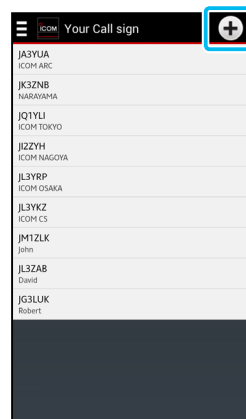
Your Call sign

View the Your (UR) call sign list.

You can enter up to 500 Your (UR) call signs.

- Tap “+” to display the “Add to the Call sign List” window.

NOTE: When you add the 501st call sign, a warning message is displayed. In that case, delete an already-entered call sign, and then try again.

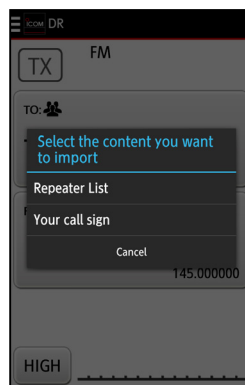


Import

You can import the Repeater List or Your Call Sign Memory in the “csv” format.

NOTE:

- You can download the latest repeater list from the Icom website by tapping “Repeater List,” and then “Download from Internet.”
<https://www.icomjapan.com/lineup/options/RS-MS1A/>
- You can import the Your Call Sign Memory from the transceiver’s SD card.
- You cannot import the DD repeater information and the DD simplex information.



Export

You can export the Repeater List, Your Call Sign Memory or RX History.

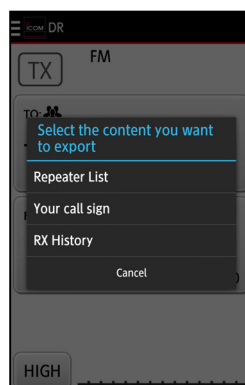
The exported data is automatically saved in the “Export” folder in the Android device, in the “csv” format.

(icom > RsMs1a > **Export**)

The files names are automatically created in the format show below.

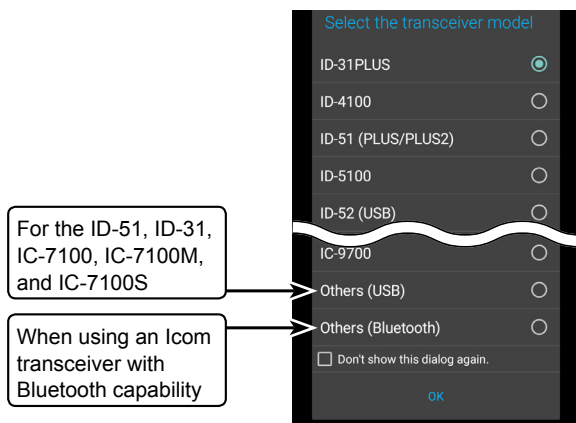
- Your Call Sign: YourCallSignList_date.csv
- Repeater list: RepeaterList_date.csv
- RX History: RXHistoryList_date.csv
-

NOTE: The root folder “icom” is automatically created. The folder location may differ on the SD card and in the internal memory, depending on your Android device.

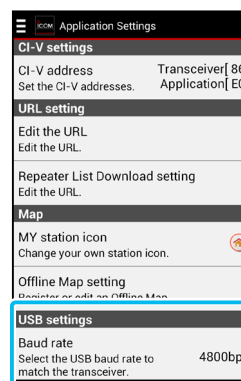


Operating notes

- Disconnect the OPC-2350LU or a USB cable when it is not in use. Connecting a cable increases the power consumption of your Android device.
- The RS-MS1A program may lock up when transmitting some high-quality or large size images, or continuously operated for a long time. In this case, restart the program.
- Depending on the Android device, the power supply to the USB terminal may be disabled while in the display sleep mode or power-saving mode. If you have such a device, check the “Screen timeout” check box on the Application Setting screen of the RS-MS1A.
- When starting the RS-MS1A program, select a transceiver to connect to.



- When you transmit an image with the baud rate set at 4800bps, some of that data may be lost. In this case, set the baud rate to over 9600bps in “Baud rate” on the Application Setting screen of the RS-MS1A to match the transceiver’s setting.



- If the Menu item does not fit into your Android device screen, change the font or font size.
- When using ID-31A PLUS/ID-31E PLUS, ID-51A (PLUS2)/ID-51E (PLUS2), or IC-9700, you cannot use the RS-MS1A and RS-MS3A at the same time.
- If the application requires some permissions, you need to grant permissions to use some functions. For operations of the Android device, read the Android device’s instruction manual.