



VHF/UHF DUAL BAND DIGITAL TRANSCEIVER

# ID-5100A

## Innovation and Mobility Taken to the Next Level



Touch Screen Operation  
DV/DV Dualwatch  
Integrated GPS Receiver

DV/FM Repeater List

D-STAR DV Mode

Bluetooth®

Android™

**D-STAR**

# Innovation and Mobility Taken to the Next Level



\* Above photo shown with optional MBF-1 mount base and MBA-2 controller bracket. Some photos (screen shots) shown with optional UT-133/A Bluetooth® unit installed.

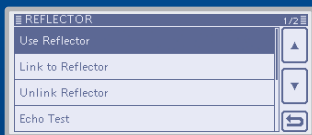
## DV/FM Repeater List Function

The DV/FM repeater list function assists you accessing nearby repeaters, even in areas you are visiting for the first time. The function searches for a nearby repeater using the repeater memories with the GPS position information.

\* To use the automatic repeater list function, the position data of the repeater is required. The ID-5100A will be shipped with a limited number of repeater memories preprogrammed.

## Dplus Reflector Linking

Dplus reflector link commands are added to the DR function to allow easy reflector operation. Use Reflector, link/unlink to Reflector, echo test and repeater information commands are selectable.



Reflector commands example

## SD Card Slot for Voice and Data Storage

When used with an SD card, the SD card can store various contents including voice memory, DV auto reply message, TX voice message, QSO log, RX history log and GPS log data. Memory channels, repeater memories and other personal settings can be saved to the SD card and can be loaded to the transceiver.

## VS-3 Bluetooth® Headset

The optional Bluetooth® headset, VS-3 provides hands-free communication and can remotely control the ID-5100A with three programmable buttons. Providing you with convenient communication in a vehicle.

\* Optional UT-133/A Bluetooth® unit must be installed in the ID-5100A.

Bluetooth® application image



Bluetooth® headset, VS-3 (option)



Bluetooth® unit, UT-133/A (option)

# Intuitive Touch Screen Operation

The intuitive touch screen interface provides quick and smooth operation. The large 5.5 inch display (320 x 128 pixels) responds naturally to the touch allowing you to change settings, enter frequencies, edit memory channels with ease.



Qwerty keyboard example



Vehicle installation example  
(Using optional MBF-1 mount base and MBA-2 controller bracket)

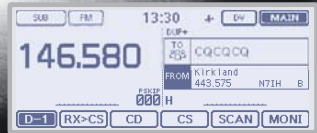
# DV/DV Dualwatch

The ID-5100A can receive both FM/FM and FM/DV mode signals simultaneously. Two DV mode signals can be monitored for receive on either channel. You can check other repeaters or other channel activities while waiting for the main repeater.

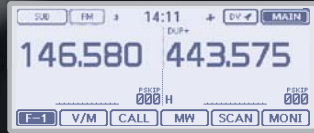
\* Main band audio has priority, if two DV signals come in at the same time.



DV/DV dualwatch (DR function) example



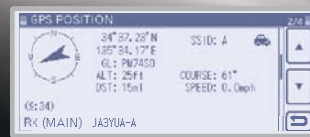
FM/DV dualwatch (DR function) example



FM/DV dualwatch example

# Integrated GPS Receiver

The ID-5100A has an integrated GPS receiver in the controller and shows own position, course, speed and altitude on the display. The GPS position information can be used for exchanging position reports, tracing the GPS log and searching for nearby repeater sites.

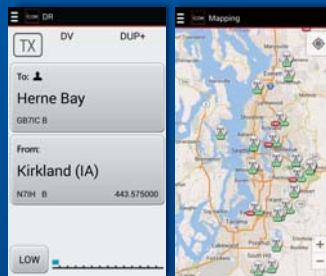


Received position information example

# RS-MS1A Android™ Application (Free download application from Google Play™)

The RS-MS1A allows you wirelessly connect to the ID-5100A and remotely set DR functions, link with a map application and send/receive messages over the DV mode. In addition, pictures taken by the Android™ device can be transmitted in the DV Fast Data mode or DV mode.

\* Optional UT-133/A Bluetooth® unit must be installed in the ID-5100A.  
\* Some functions may not work properly, depending on Android™ phones and devices used.



DR function setting example    Repeater map example  
© Google

# DV Fast Data Mode\*

By using data in place of voice frames, the ID-5100A can transfer data 3.5 times faster (3480 bps) than in the conventional DV mode (with voice).

\* The DV Fast Data mode is not compatible with the DV mode low-speed data communication.

## Steps to send a picture over the DV Fast Data mode



# Other Features

- Enhanced D-PRS functions with object, position, items and weather formats
- Convenient memory contents management using CSV format
- Speech function announces operating frequency, mode and received callsign (DV mode)
- Independent main, volume and SQL knobs for A/B bands
- AM airband dualwatch
- CS-5100, programming software supplied
- 50W output power on both VHF and UHF bands
- Weather channel with weather alert function (USA version only)
- Auto repeater function (USA version only)
- 1500 (50 groups) repeater list entries, 300 call sign memories and 300 GPS memories
- Split tone functions in the analog mode



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# ID-5100A



## SPECIFICATIONS

GENERAL			
Frequency coverage	Version Transmit Receiver		
	USA	144-148, 430-450MHz <sup>1</sup>	118-174, 375-550MHz <sup>1</sup>
	EXP	137-174, 400-470MHz <sup>2</sup>	118-174, 375-550MHz <sup>2</sup>
	Guaranteed range: <sup>1</sup> 144-148, 440-450MHz; <sup>2</sup> 144-148, 430-440MHz.		
Type of emission	F2D, F3E, F7W		
Mode	DV, FM, FM-N AM (RX only), AM-N (RX only)* <sup>1</sup> Depending on version		
Operating temperature range	-10°C to +60°C; +14°F to +140°F		
Frequency stability	±2.5ppm (-10°C to +60°C on the basis of 25°C)		
Digital TX speed	4.8kbps		
Voice coding speed	2.4kbps		
Antenna impedance	50Ω (SO-239)		
Number of memory channels	1000 regular channels, 4 call channels, 50 program scan edges and 1500 repeater memories		
Power supply requirements	13.8V DC ±15%		
Current drain	RX Stand-by	1.2A	
	Max. audio	1.8A (Dualwatch, with Ext. SP 8Ω load)	
	TX	13.0A	
Dimensions (WxHxD, projections not included)	Main unit	150 × 40 × 172.6 mm; 5.91 × 1.57 × 6.8 in	
	Controller	182.2 × 81.5 × 24.7 mm; 7.17 × 3.21 × 0.97 in	
Weight (approx.)	Main unit	1.3kg; 2.87 lb	
	Controller	260g; 9.17 oz	
TRANSMITTER			
Output power	50W, 15W, 5W		
Modulation system	FM, FM-N	FM reactance modulation	
	DV	GMSK reactance modulation	
Max. frequency deviation	±5.0kHz/±2.5kHz (FM/FM-N)		
Spurious emissions	Less than -60dBc		
Microphone impedance	600Ω (8-pin modular jack)		
RECEIVER			
Intermediate frequencies	A band	38.85MHz/450kHz (1st/2nd)	
	B band	46.35MHz/450kHz (1st/2nd)	
Sensitivity	FM/FM-N (12dB SINAD)	Less than 0.18μV (amateur bands only)	
	DV (1% BER)	Less than 0.28μV	
Receiver sensitivity (Not guaranteed, for your reference only. Except amateur bands.)	FM/FM-N (12dB SINAD)	137-159.995MHz	Less than 0.32μV
		160-174.000MHz	Less than 0.56μV
		375-399.995MHz	Less than 0.56μV
		400-499.995MHz	Less than 0.32μV
		500-550.000MHz	Less than 0.56μV
AM (10dB S/N)	118-136.9916MHz Less than 1μV		
Squelch sensitivity	Less than 0.13μV (at threshold)		
Selectivity	FM	More than 60dB	
	FM-N	More than 55dB	
	DV	More than 50dB	
Spurious and image rejections	A band	More than 60/55dB (VHF/UHF)	
	B band	More than 60/60dB (VHF/UHF)	
Audio output power	More than 2.0W (with 8Ω load, 10% distortion)		
External speaker connector	2-conductor 3.5 (d) mm (1/8")/8Ω		

All stated specifications are subject to change without notice or obligation.

- Supplied accessories** (\* Not supplied or may differ, depending on version)
- Hand microphone, HM-207
  - DC power cable, OPC-1132
  - Controller cable, OPC-837 (3.5 m; 11.4 ft)
  - Controller bracket, MBA-2\*
  - CD (CS-5100 and instruction handbook PDF)
  - Microphone hanger
  - Spare fuse

For ID-5100A owners, the latest firmware and CS-5100 software can be download free from:

<http://www.icom.co.jp/world/support/index.html>

D-STAR (Digital Smart Technology for Amateur Radio) is a digital radio protocol developed by JARL (Japan Amateur Radio League).

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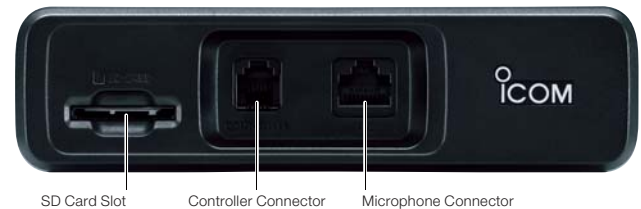
## OPTIONS

Some options may not be available in some countries. Please ask your dealer for details.

<p><b>HAND MICROPHONES</b></p> <p><b>HM-209</b> Active noise canceling. <b>HM-207</b> Same as supplied. <b>HM-154</b></p>	<p><b>EXTERNAL SPEAKERS</b></p> <p><b>SP-35:</b> 2m (6.5ft) cable, <b>SP-35L:</b> 6m (19.6ft) cable <b>SP-30</b> 4 inch (102.5mm) diameter speaker</p>	
<p><b>MOUNTING BASE &amp; CONTROLLER BRACKET</b></p> <p><b>MBF-1</b> Suction cup mounting base. MBA-2 is required. <b>MBA-2</b></p>	<p><b>MOUNTING BRACKET</b></p> <p><b>MBF-4</b> For mounting the main unit.</p>	<p><b>Bluetooth® UNIT &amp; Bluetooth® HEADSET</b></p> <p><b>UT-133/A</b> <b>VS-3</b> Use with UT-133/A in a pair</p>
<p><b>CI-V LEVEL CONVERTER</b></p> <p><b>CT-17</b></p>	<p><b>CONTROLLER EXTENSION CABLE</b></p> <p><b>OPC-1156</b> 3.5m (11.4ft) cable. A modular connector is supplied.</p>	<p><b>MICROPHONE ADAPTER CABLE</b></p> <p><b>OPC-589</b> For use with an 8-pin microphone</p>
<p><b>MICROPHONE EXTENSION CABLES</b></p> <p><b>OPC-440:</b> 5m (16.4ft) <b>OPC-647:</b> 2.5m (8.2ft)</p>	<p><b>DATA COMMUNICATION CABLES</b></p> <p><b>OPC-2350LU:</b> USB cable for connection with an Android™ device or a PC.</p>	<p><b>PROGRAMMING CABLE</b></p> <p><b>OPC-478UC:</b> USB type</p>

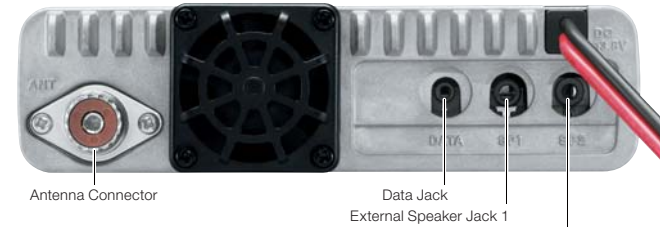
- **RS-MS1A** Android™ APPLICATION Free download software. Download from Google Play™
- **CS-5100** PROGRAMMING SOFTWARE Same as supplied.
- **OPC-1529R** DATA COMMUNICATION CABLE RS-232C cable for connection with a PC.

### Main unit (Front panel)



SD Card Slot Controller Connector Microphone Connector

### (Rear panel)



Antenna Connector Data Jack External Speaker Jack 1 External Speaker Jack 2

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