

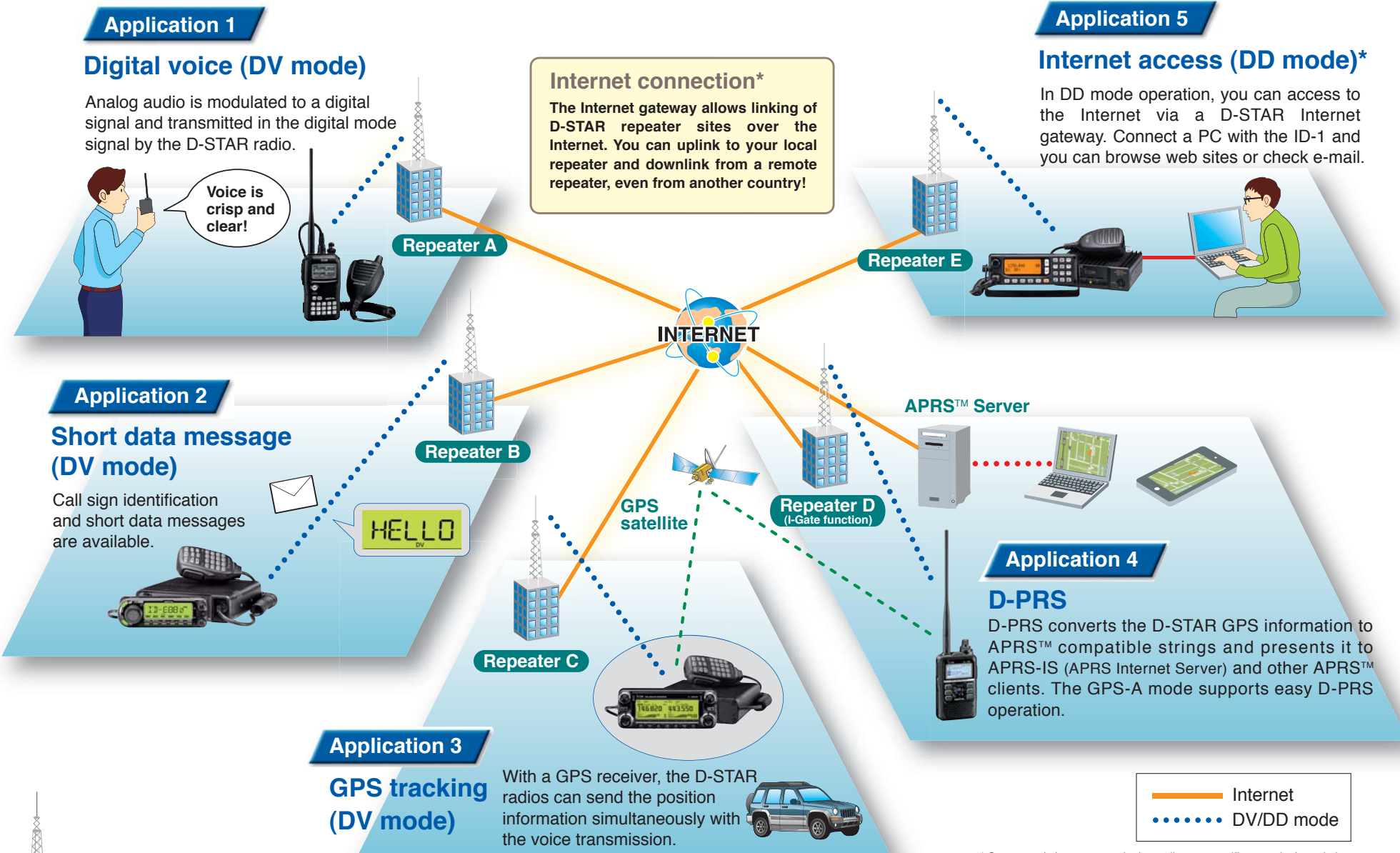
D-STAR System Introduction

DIGITAL



Five Examples of Having Fun with D-STAR

Have you ever thought about if you could access the Internet from ham radios?
 Or have you ever thought if you could communicate with a friend in another city or country using a simple handheld radio?
 Or want to send a simple text message, or know the call sign of whom is on the air right now?
 The D-STAR (Digital Smart Technology for Amateur Radio) system is such a system where you can easily do these functions without using a tricky gadget or complicated facilities.



D-STAR repeater



ID-RP2C:
Repeater controller

One unit is required for each repeater station and connects up to 4 RF modules. Transfers the received signal to the specified RF module or the Internet gateway server.



ID-RP2D:
1.2GHz DD mode RF module

The ID-RP2D is the DD mode RF module for 1.2GHz. It provides 128kbps high speed data communication.



ID-RP2V: 1.2GHz DV mode RF module
ID-RP2000V: 144MHz DV mode RF module
ID-RP4000V: 430MHz DV mode RF module

These are DV (digital voice) mode RF modules for the respective bands. With a combination of these RF modules, cross band operation with 144/430/1200MHz bands is available.

Photo shows ID-RP2V.



RS-RP2C:
Internet gateway software

The Internet gateway (GW) connects the D-STAR repeater station to the Internet and links multiple D-STAR repeater stations via the Internet.

* Some restrictions may apply depending on specific countries' regulations.

Q & A Frequently Asked Questions About D-STAR

Q What does "D-STAR" stand for?

A The "D-STAR" stands for Digital Smart Technology for Amateur Radio. It is an open standard digital communication protocol established by JARL*. Please refer to <http://www.jarl.com/d-star/shogen.pdf> for technical details. * Japan Amateur Radio League

Q What can I do with the D-STAR radio?

A 4.8kbps digital voice (DV) mode and 128kbps data* (DD) mode communications are available. When using DD mode with a PC and the D-STAR radio, high speed data communication is possible. * DD mode is available with ID-1 only.

Q Can I send data with a voice transmission? **DV mode only**

A Yes, you can. In DV mode operation, you can simultaneously send up to 950bps of data, such as call sign, short data message or GPS position with a voice transmission.

Q Can I use the D-STAR repeater without connecting to the Internet?

A Yes, you can use a D-STAR repeater as a local repeater. Simplex mode communication in DV or DD mode is also available without requiring a D-STAR repeater.

Q Can I make a call with other countries?

A Yes, you can*. The Internet gateway allows you to relay your call to a remote D-STAR repeater over the Internet. The D-STAR repeater call sign and IP address must be registered to the gateway server. * Some restrictions may apply depending on specific countries' regulations.

Q Can I receive a call only when the call is intended for me?

A Yes, you can. The call sign squelch function opens the squelch only when your call sign is received.

Q How do I set call signs to make a call in DV mode?

A The latest ID-31E has the DR (D-STAR Repeater) mode operation and makes it easier to transmit a call using a D-STAR repeater.

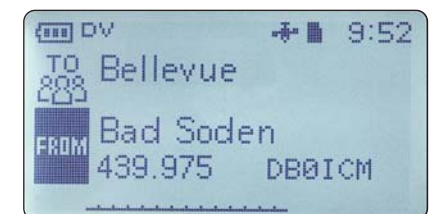
When using the ID-31E, you need just three steps.

Step 1. MY call sign
Register your own call sign.

Step 2. FROM field
Select your access repeater to the FROM field.

Step 3. TO field
Select the destination repeater or the destination call sign to the TO field.

Then push the PTT button to transmit.



Setting example for from Bad soden, Germany to Bellevue, WA, U.S.A.

Icom's D-STAR Compatible Transceiver Line-up



HF/VHF/UHF Transceiver
IC-9100

- 100W on 28/50/144MHz and 75W on 430MHz
- D-STAR DV mode and DR mode operation (UT-121 required)
- 10W on 1200MHz band (UT-121 and UX-9100 required)



1.2GHz Transceiver
ID-1

- Both DV and DD modes available
- PC remote control software included
- Separate remote controller and speaker



144/430MHz Dual Band Transceiver
IC-E2820 + UT-123

- 50W output power (VHF/UHF)
- Wideband receiver with dualwatch capability
- D-STAR + GPS receiver capability (UT-123 required)



144/430MHz Dual Band Transceiver
ID-E880

- 50W output power (VHF/UHF)
- D-STAR repeater (DR) mode operation
- Free download cloning software, CS-80/880
- Detachable front panel



Built-in GPS receiver

5W **430MHz Transceiver**
ID-31E

- 5W output power
- IPX7 submersible protection
- Built-in GPS receiver
- Ultra compact and lightweight



5W **144/430MHz Dual Band Transceiver**
IC-E92D

- 5W (typ.) output power (VHF/UHF)
- Waterproof protection equivalent to IPX7 protection. (1m depth for 30 minutes.)
- Optional HM-175GPS GPS Speaker Microphone.



HM-175GPS



5W **144/430MHz Dual Band Transceiver**
IC-E80D

- 5W (typ.) output power (VHF/UHF)
- D-STAR repeater (DR) mode operation
- Optional HM-189GPS GPS Speaker-Mic.
- Free download cloning software, CS-80/880



HM-189GPS

Repeater compatibility chart with ICOM digital transceivers

| | IC-9100 +UT-121 | ID-1 | IC-E2820 +UT-123 | ID-E880 | ID-31E | IC-E92D | IC-E80D |
|-------------------|-----------------|------|------------------|---------|--------|---------|---------|
| ID-RP2000V | ✓ | — | ✓ | ✓ | — | ✓ | ✓ |
| ID-RP4000V | ✓ | — | ✓ | ✓ | ✓ | ✓ | ✓ |
| ID-RP2V | ✓ *1 | ✓ | — | — | — | — | — |
| ID-RP2D | — | ✓ | — | — | — | — | — |

*1 Optional UX-9100 and UT-121 are required.

* Repeater access using radio frequency. Cross band operation between ID-RP2000V/RP4000V/RP2V is also possible.

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