

HF/VHF/UHF ALL MODE TRANSCEIVER IC - 7100

Intuitive Touch Screen, Quick Response, Multi-band Radio

> HF/50/144/440MHz **Controls at Your Fingertips** with an Angled Display

OCOM

9COM

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SHARE

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· .400%

DEF

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100%



STAR

Intuitive Touch Screen, Quick Response, Multi-band Radio

Fingertip Controls

Intuitive Touch Screen Interface

The innovative touch screen interface provides quick and smooth operation for setting and editing various functions and memories.





Straight Forward Operation

Just tap the mode, filter, function etc, you need to change. The touch screen responds naturally, changing your settings.



Software Keypad

Entering frequency, callsign or editing memory channels has never been this easy. The software keypad on the touch screen allows you to input alphanumeric characters incredibly quickly.

H:64 mm;

2.52 in

One Touch Selection

For example, if you want to change the operating band, tap the frequency on the display. The band keys will be shown to select the operating band. Touching the multi-function meter indicator for 1 second will quickly change the transmit meter functions.

Angled Display

Touch Screen Control Portal

The radio control head features a large, multi-function, "touch screen" dot-matrix LCD display that is positioned for easy view and operation. The controller is compact in size, making it ideal for limited vehicle or desktop space.

Resistive Touch Screen

The 48.6×75.9 mm; 1.91×2.99 in large resistive touch screen display can be operated while wearing gloves.



Controller Mounted Speaker and Jacks

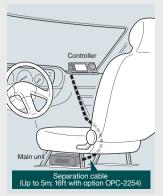
The unique remote head design is perfect for providing loud, clear audio as well as jacks for an external speaker/headphones as well as a key and microphone.

Controller Rear Panel View

W: 165 mm; 6.5 in



ELEC-KEY MAIN UNIT SPEAKER



D:78.5 mm; 3.09 in



HF/50/144/430/440MHz Multi-band, Multi-mode

The IC-7100 fully covers the HF, 50, 144, 430/440 MHz amateur bands in multiple modes, providing 100W on HF/50MHz bands, 50W on 144MHz band and 35W on 430/440MHz band.

Digital Features Controlled by the IF DSP

A high-performance 32-bit floating point IF DSP delivers rich digital signal processing features, including digital IF filter, digital twin PBT, noise reduction, CW auto tune, etc. Those digital features work on all bands from HF to V/UHF bands.

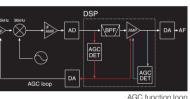


32-bit floating point IF DSF

DSP Controlled AGC Function Loop

The digital signal processing is incorporated into the AGC function loop. The results of signal processing provide feedback to the AGC function.

The AGC function works on the intended signal and produces a constant audio output. The AGC time constants are flexibly adjustable from slow, middle, fast (or AGC off) for each operating mode.



AGC IUNCTION 100

FILS

Near repeater function

DR mode display

D-STAR DV Mode (Digital Voice + Data)

The IC-7100 provides D-STAR DV mode digital voice and low speed data communication.

DR (D-STAR Repeater) Mode Operation

The DR mode operation makes the D-STAR operation simple and straight forward, even if you are new to D-STAR operation.

Near Repeater Function

With an external, 3rd party GPS*, search the internal database based on your location.

* External GPS receiver or manual data input required.

| INEAR REPEATER 1/51 | | |
|---------------------|-----------|-----|
| Bellevue K7LVH B | (i) 0.3ml | |
| Bellevue K7LWH C | (2) 0.3ml | E |
| Bellevue | (#) 1.5ml | ۳ |
| Bellevue | (#) 1.6ml | (†) |

SD Memory Card Slot for Saving Data

When used with an SD card, the SD card can store various contents including voice memory, memory channels, D-STAR repeater memories and other personal settings can be saved to the SD card and can be loaded to the transceiver.



SD memory card slot

HF/VHF/UHF ALL MODE TRANSCEIVER

Easy Vehicle Mounting with Optional MBF-1

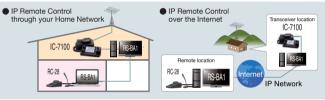
The combination of the optional MBF-1 suction cup mounting base and MBA-1 controller bracket provides easy tilt and swivel adjustments for mobile operation. The large suction cup can mount to dashboards or other flat surfaces and can be removed easily.



Optional RS-BA1 IP Remote Control Software

The optional RS-BA1 software allows you to operate the IC-7100 from a remote PC over the Internet or local home network.





Built-in RTTY Functions

The built-in RTTY decoder allows you to instantly read an RTTY message on the display. No external TNC or PC required for reading. The eight RTTY memories can memorize and transmit often used RTTY sentences. The RTTY memory is 70 character per memory channel.

Other Features

● CW full break-in, CW receive reverse, CW auto tuning ● Optional multi-function microphone, HM-I51 ● Band scope and SWR graphic display ● RF speech compressor controlled by the DSP ● Voice memory function ● Multi-function Meter ● 495 regular, 4 call, 6 scan edge and 900 DR mode repeater channels ● 4 channels TX voice memories ● ±0.5ppm frequency stability ● Auto reply function* ● Digital callsign squelch and digital code squelch* ● 12.5kHz IF output for DRM (Digital Radio Mondiale) receive

* D-STAR DV mode only



IC-7100

SPECIFICATIONS

| | GENERAL | | |
|---|---|--|--|
| Frequency coverage*1 | (Unit: MHz) | | |
| Receiver | 0.030-199.999*2 400.000-470.000*2 | | |
| | 1.800-1.999 3.500-3.999 5.255-5.405*2 7.000-7.300 | | |
| Transmit | 10.100-10.150 14.000-14.350 18.068-18.168 21.000-21.450 24.890-24.990 28.000-29.700 50.000-54.000 144.000-148.000 430.000-450.000 | | |
| | *1 Showing USA version. Varies according to version. *2 Some frequency bands are not guaranteed. | | |
| Mode | USB, LSB, CW, RTTY, AM, DV, FM, WFM (Rx only) | | |
| No of memory channels | 495 regular, 4 call, 6 scan edges, 900 D-STAR repeater channels | | |
| Antenna connector | SO-239×2 (one each for HF/50MHz and 144/430/440MHz, 50Ω) | | |
| Operating Temp. range | -10°C to +60°C; +14°F to +140°F | | |
| Frequency stability | ±0.5ppm (0°C to +50°C @ 430MHz) | | |
| Power supply requirement | 13.8V DC ±15% | | |
| Current drain | TX (Max. power): 22A (HF/50MHz), 16A (144/440MHz) | | |
| (at 13.8V DC) Dimensions (W×H×D. | RX (Max. audio/standby): 1.2A/0.9A Main unit 167×58×225 mm; 6.57×2.28×8.86 in | | |
| projections not included) | Controller 165×64×78.5 mm; 6.5×2.52×3.09 in | | |
| Weight (approx.) | Main unit 2.3 kg; 5.1 lb Controller 0.5 kg; 1.1 lb | | |
| <u> </u> | TRANSMITTER | | |
| Output power (at 13.8V DC) | | | |
| | HF/50MHz 144MHz 430/440MHz | | |
| | | | |
| SSB/CW/RTTY/FM/DV | | | |
| AM | | | |
| Modulation system | SSB : Digital P.S.N. modulation, AM : Digital low power modulation | | |
| Spurious emissions | FM : Digital phase modulation, DV : GMSK digital phase modulation | | |
| 0001000 01110010110 | Less than -50dB (HF bands), Less than -63dB (50MHz) Less than -60dB (144/430/440MHz) | | |
| Carrier suppression | More than 50dB | | |
| Unwanted sideband | More than 50dB | | |
| | RECEIVER | | |
| Intermediate frequencies | | | |
| SSB/CW/AM/FM/RTTY/DV | 124.487MHz, 455kHz, 36kHz | | |
| WFM | 134.732MHz, 10.700MHz | | |
| Sensitivity | (HF: Preamp-1 ON, 50MHz: Preamp-2 ON, 144/430/440MHz: Preamp ON) | | |
| SSB/CW | 0.5–1.8MHz 1.8–29.9MHz 50–54MHz 144/430/440MHz | | |
| AM | <u>– 0.15μV 0.12μV 0.11μV</u> 13μV 2μV 1μV 1μV | | |
| FM | 0.5µV (28–29.7MHz) 0.25µV 0.18µV | | |
| DV | 1µV (28–29.7MHz) 0.63µV 0.35µV | | |
| WFM | = 10μV (76–108MHz) | | |
| Selectivity | Mara than Lass than | | |
| SSB (BW=2.4kHz, sharp) | More than Less than 2.4kHz/-6dB 3.4kHz/-40dB | | |
| CW (BW=500Hz, sharp) | 500Hz/-6dB 700Hz/-40dB | | |
| RTTY (BW=500Hz) | 500Hz/-6dB 800Hz/-40dB | | |
| AM (BW=6kHz) FM (BW=15kHz) | 6.0kHz/-6dB 10kHz/-40dB 12kHz/-6dB 22kHz/-40dB | | |
| DV (12.5kHz spacing) | -50dB - | | |
| Spurious and image | More than 70dB (HF/ 50MHz), More than 65dB (144/430/440MHz | | |
| rejection ratio | (except 1/2 IF through on 50MHz, IF through on 144MHz) | | |
| Audio output power | More than 2.0W (10% distortion, 8Ω load, 13.8V DC) | | |
| All stated specifications are su | bject to change without notice or obligation. | | |
| Rear Panel View | Antennna connector ACC socket DC power socket | | |
| (Main unit) | for HF/50MHz GND Tuner socket | | |
| <u> </u> | | | |
| Antennna connector | | | |
| | | | |
| for 144/430/440MHz | | | |
| | | | |
| for 144/430/440MHz | | | |
| for 144/430/440MHz Microphone | | | |
| for 144/430/440MHz | | | |
| for 144/430/440MHz Microphone connector | | | |
| for 144/430/440MHz Microphone | Data2 jack Data1 jack Controller | | |
| for 144/430/440MHz Microphone connector | Data2 jack Data1 jack Controller CI-V remote jack Keyer jack connector | | |

OPTIONS Some options may not be available in some countries. Please ask your dealer for details. PS-126 DC POWER SUPPLY AH-4 HF+50MHz AUTO-AH-2b ANTENNA MATIC ANTENNA TUNER **FI EMENT** Covers 3.5-54MHz with a 7m 13.8V DC. 25A max (23ft) or longer wire antenna Covers 7-54MHz, Use with AH-4 AT-180 HF+50MHz AH-5NV NVIS KIT AH-740 AUTOMATIC TUNING AUTOMATIC ANTENNA TUNER ANTENNA Fiberglass mobile mounting antenna element for use with AH-740. Covers 2.2-30MHz (amateur band) with AH-740. Covers 2.5-30MHz (amateur band) OPC-2321 is required. HAND MICROPHONES SP-35 EXTERNAL SPEAKER HM-36 HM-151 Remote-HM-103 HM-198 OPC-589 is required. Compact type control microphone Same as supplied DESKTOP MICROPHONES IC-PW1 HF+50MHz 1kW HF LINEAR AMPLIFIER Ø Æ SM-50 Dynar SM-30 OPC-599 is required. OPC-589 is required OPC-589 is required RC-28 USB REMOTE MOUNTING BRACKETS **RS-BA1** IP REMOTE CONTROL SOFTWARE ENCODER MBF-1 Mounting MB-62 Mobile MBA-1 mounting bracket for the main unit. base for the controller. MBA-1 is required. Controll bracket For use with RS-BA1 • CS-7100 CLONING SOFTWARE OPC-599 CABLE ADAPTER CT-17 CI-V LEVEL CONVERTER Converts 13-pin ACC connector to 7-pin + 8-pin • OPC-2253 SEPARATION CABLE 3.5m (11ft) ACC connector for connection with IC-PW1. • OPC-2254 SEPARATION CABLE 5m (16ft) OPC-1529R DATA CABLE for DV mode • OPC-2321 CONTROL CABLE FOR AH-740 Data 1 Jack (IC-7100) to RS-232C cable. • OPC-589 MODULAR 8-PIN CABLE ADAPTER OPC-2218LU DATA CABLE for DV mode Data 1 Jack (IC-7100) to USB cable.

 Supplied accessories:
 (* May differ depending on version)

 • Hand microphone, HM-198
 • DC power cable
 • CW keyer plug
 • Spare fuses

 • Separation cable, OPC-2253
 • 13-pin plug ACC cable
 • USB cable
 • Ferrite bead*

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