



HF/VHF/UHF ALL MODE TRANSCEIVER

IC-706MKIIIG



The amazing evolution of the '706' series...

The IC-706MKIIIG carries on the '706' series tradition of base station performance and features in a mobile reg-sized package. Building on this legacy, frequency coverage is expanded to the 70 cm band and output power is increased for the 2 m band. A long list of enhancements, both to usability and performance, as well as added features and functions have produced the latest in the evolution of the '706' series.

HF to 70 cm band coverage

Operating frequency range has been expanded to the 70 cm band. Of course, all mode operation (SSB, CW, RTTY, AM and FM) is possible and a full 100W of output power is available for HF and 6 m operation; 50 W for 2 m and 20 W for 70 cm operation.

High stability transmitter

MOS-FET power amplifiers are employed at the PA unit for all HF, 6 m, 2 m and 70 cm bands. And, a one piece aluminum, diecast chassis with a large cooling fan is employed. This combination provides stable, high quality output with low IMD and low spurious emissions even during full duty cycle and extended operation.

Illuminated keys and switches

Backlighting of keys and switches is a great help during nighttime operation – the intensity is even adjustable!

Tone squelch standard

Tone squelch operation is available in FM mode for basic signaling and quiet standby. Tone frequencies can be set independently for tone squelch (Tx/Rx) and repeater tones, and a range of 50 frequencies is available. A tone scan function is available to search for a repeater's access tone quickly and easily.

DSP features

DSP capabilities are available*. These include noise reduction and auto notch functions. Superior receive

quality in your shack, vehicle or during DX'peditions.

*AF DSP; UT-106 DSP UNIT required for some versions.

Compact with detachable panel*¹

The IC-706MKIIG is very compact at 167 (W) x 58 (H) x 200 (D) mm*² and weighs a mere 2.5 kg*³, making it ideal for DX'peditions, etc. A detachable front panel allows easy installation in your shack or in a wide variety of mobile applications.

*¹ An optional separation cable is required; *² 6 9/16 (W) x 2 9/32 (H) x 7 7/8 (D) in; *³5.5 lb.

Automatic repeater function*

An automatic repeater function is available and repeater frequencies can be programmed via a special operation. This eliminates the need for repeater settings for 6 m, 2 m or 70 cm repeater operation.

*Standard for USA version; programming required for others.

Optional high frequency stability

±0.5 ppm of high frequency stability is provided when an optional CR-282 HIGH STABILITY CRYSTAL UNIT is installed.

Simple operation

The individual band change key, a sub dial and quick band change capability provide simple operation.

The individual band change key allows quick and easy QSY, the sub dial enhances mobile and memory operation, and the quick band change capability selects pre-set frequency bands with the last-used frequency and mode. Also, each band can store preamplifier/attenuator and tuner on/off settings.

Simple band scope function

This function sweeps ±14 steps from the displayed frequency and plots received signal strength on the function display. This function is useful not only for checking HF band conditions, but also seeking vacant frequencies during VHF or UHF FM operation.

Narrow FM capability

For FM operation on the 10 m or the 2 m (where narrow FM is required) bands, the IC-706MKIIG has narrow FM capability that allows you to take advantage of this operating mode.

107 memory channels with alphanumeric name capability

99 channels can memorize both transmit and receive frequencies separately; 6 channels are for programmed scan edges; and 2 channels are for call memory for the 2 m and 70 cm bands. And, up to 9-character alphanumeric names can be programmed into each memory channel.



And more...

- ▶ Up to 3 selectable passband widths
- ▶ Built-in electronic keyer ▶ CW reserve function
- ▶ Adjustable CW pitch ▶ Full break-in (QSK)
- ▶ IF shift interference rejection
- ▶ Superior audio characteristics
- ▶ Continuously adjustable RF output power ▶ VOX
- ▶ AF speech compressor
- ▶ RF gain control ▶ Adjustable SSB carrier point ▶ 4 scan types
- ▶ Noise blanker ▶ Receiver protection circuit ▶ RIT ▶ Selectable AGC time constant
- ▶ Optional voice synthesizer ▶ CI-V capability ▶ Digital, multi-function S/RF meter
- ▶ Optional antenna tuners (control circuit built-in)

SPECIFICATIONS

General			
Frequency coverage	Receive	0.300 – 199.999 MHz*	400 – 470.000 MHz*
	Transmit	1.8 – 1.999 MHz*	3.5 – 3.999 MHz*
		7.0 – 7.300 MHz	10.1 – 10.150 MHz
		14.0 – 14.350 MHz	18.068 – 18.168 MHz
		21.0 – 21.450 MHz	24.89 – 24.990 MHz
		28.0 – 29.700 MHz	50.0 – 54.000 MHz*
		144.0 – 148.000 MHz*	430.0 – 450.000 MHz*
		*Varies according to version.	
Mode	USB, LSB, CW, RTTY (FSK), AM, FM, WFM (Rx only)		
No. of memory Ch.	107 (99 regular, 6 scan edges, 2 call channels)		
Antenna connector	SO-239X2 (for HF/50 MHz and 144/430 MHz)/50Ω		
Power supply requirement (negative ground)	13.8 V ± 15% (negative ground)		
Frequency stability	Less than 7 ppm from 1 min. to 60 min. after power on. After that rate of stability less than 1 ppm/hr. at ± 5°C (+77°F). Temperature fluctuations 0°C to +50°C (+32°F to + 122°F) less than 5 ppm.		
Current drain	Transmit	Max. power	20 A
	Receive	Standby	1.8 A
		Max. audio	2.0 A
Usable temperature range	-10°C to +60°C; -14°F to + 140°F		
Dimensions (projections not included)	167 (W) x 58 (H) x 200 (D) mm; 6 9/16 (W) x 2 9/32 (H) x 7 7/8 (D) in		
Weight (approx.)	2.45 kg (5 lb 6 oz)		
CI-V connector	2-conductor 3.5 (d) mm (1/8")		
ACC connector	13-pin		

Transmitter				
Output power		SSB/CW/RTTY/FM		AM
		HF/50 MHz	5 - 100 W	2 - 40 W
144 MHz	5 - 50 W	2 - 20 W		
440 MHz	2 - 20 W	2 - 8 W		
Modulation system	SSB	Balanced modulation		
	AM	Low level modulation		
	FM	Variable reactance modulation		
Spurious emissions	-50dB typ. (HF bands)	-60 dB (other bands)		
Carrier suppression	More than 40 dB			
Unwanted sideband	More than 50 dB			
Microphone connector	8-pin modular jack (600 Ω)			
KEY connector	3-conductor 6.35 (d) mm (1/4")			
RTTY connector	3-conductor 3.5 (d) mm (1/8")			

Receiver					
Receive system	SSB/CW/AM/WFM	Double superheterodyne			
	FM	Triple superheterodyne			
Intermediate frequencies (Unit: MHz/ *FM only)		1 st	2 nd	3 rd	
	SSB/AM-N/FM	69.0115	9.0115	0.455*	
	CW	69.0106	9.0106	-	
	RTTY	69.0105	9.0105	-	
	AM/FM-N	69.0100	9.0100	0.455*	
	WFM	70.7000	10.7000	-	
Receive sensitivity		SSB/CW	AM	FM	WFM
	1.8–28 MHz	-	13 μV	-	-
	28-29.7 MHz	0.15 μV	2.0 μV	0.5 μV	-
	50 MHz band	0.12 μV	1.0 μV	0.25 μV	-
	76-108 MHz	-	-	-	10.0 μV

	144/440 MHz	0.11 μ V	1.0 μ V	0.18 μ V	-
Squelch sensitivity (threshold)	SSB	Less than 5.6 μ V			
	FM	Less than 0.3 μ V			
Selectivity (normal setting)	SSB, CW, RTTY	More than 2.4 kHz/ -6 dB			
		Less than 4.8 kHz/ -60 dB			
	AM/FM-N	More than 8.0 kHz/ -6 dB			
		Less than 30 kHz/ -36 dB			
	FM	More than 12 kHz/ -6 dB			
		Less than 30 kHz/ -50 dB			
Spurious and image rejection ratio	HF bands	More than 70 dB			
	50 MHz	More than 65 dB (except IF through)			
	144/430 (440) MHz	More than 65 dB			
Audio output power	More than 2.0 W (at 13.8 V DC)				
RIT variable range	\pm 9.9 kHz				
PHONES connector	3-conductor 3.5 (d) mm (1/8")				
EXT SP connector	2-conductor 3.5 (d) mm (1/8") / 8 Ω				

Supplied accessories:

- ▶ Hand microphone ▶ DC power cable ▶ Spare fuses
- ▶ RTTY key plug ▶ Electric key plug ▶ ACC cable

OPTIONS



IC-PW1 HF+50 MHz 1kW HF LINEAR AMPLIFIER

Covers all HF and 50 MHz bands, provides clean, stable 1kW output. Automatic antenna tuner and compact detachable controller are standard. 2 exciter inputs are available. (An optional OPC-599 is required.)



AH-2b ANTENNA ELEMENT

For mobile operation with the AH-4.
All bands between 7-54 MHz can be matched.



AH-4 HF+50 MHz AUTOMATIC ANTENNA TUNER

Covers 3.5-54 MHz with a 7 m (23 ft) or longer wire antenna.



AT-180 HF+50 MHz AUTOMATIC ANTENNA TUNER

Style and size are matched to the IC-706MKIIG



PS-85 DC POWER SUPPLY

Output: 13.8 V DC(20 A max.)



MB-62 MOBILE MOUNTING BRACKET

For mounting the IC-706MKIIG main unit or the AT-180.

MB-63 MOBILE MOUNTING BRACKET

For mounting the detached front panel.



MB-65 MOUNTING BASE

For mounting the detached front panel in a vehicle.

The MB-63 is required.



OPC-581/OPC-587 SEPARATION CABLES

Provides separate operation.

OPC-581: 3.5 M (11 ft) OPC-587: 5 M (16 ft)



SM-20 DESKTOP MICROPHONE

High quality desktop microphone.

(An optional OPC-599 is required.)



SM-8 DESKTOP MICROPHONE

Equipped with 2 connection cables.

(An optional OPC-599 is required.)



UT-106 DSP UNIT

Provides AF DSP functions such as noise reduction and auto notch.

Built-in to some versions.



9 HMz FILTERS

Have good shape factor and provide you with better reception.

FL-100 500 Hz/ -6dB (CW/RTTY nar.)

FL-101 250 Hz/ -6dB (CW nar.)

FL-103 2.8 kHz/ -6dB (SSB wide)

FL-223 1.9 kHz/ -6dB (SSB nar.)

FL-232 350 Hz/ -6dB (CW/RTTY nar.)



MB-72 CARRYING HANDLE

Convenient when for DX'peditions, operating in the field, etc.



CR-282 HIGH STABILITY CRYSTAL UNIT
CT-16 SATELLITE INTERFACE UNIT
CT-17 CI-V LEVEL CONVERTER
HM-103 HAND MICROPHONE (same as supplied)
OPC-589 MODULAR 8-PIN CABLE ADAPTER
OPC-598 ACC 13 PIN CABLE FOR AT-180
OPC-599 ACC 13 PIN CABLE ADAPATER
OPC-742 ACC 13 PIN CABLES
SP-7 EXTERNAL SPEAKER
SP-10 EXTERNAL SPEAKER
SP-12 EXTERNAL SPEAKER
UT-102 VOICE SYNTHESIZER UNIT

Icom Australia Pty Ltd (ACN 006 092 575)

290-294 Albert Street, Brunswick, VICTORIA, 3056, AUSTRALIA

Phone: 03 9387 0666 Fax: 03 9387 0022

URL: <http://www.icom.net.au>