

IC-38A

220MHz FM TRANSCEIVER

INSTRUCTION MANUAL



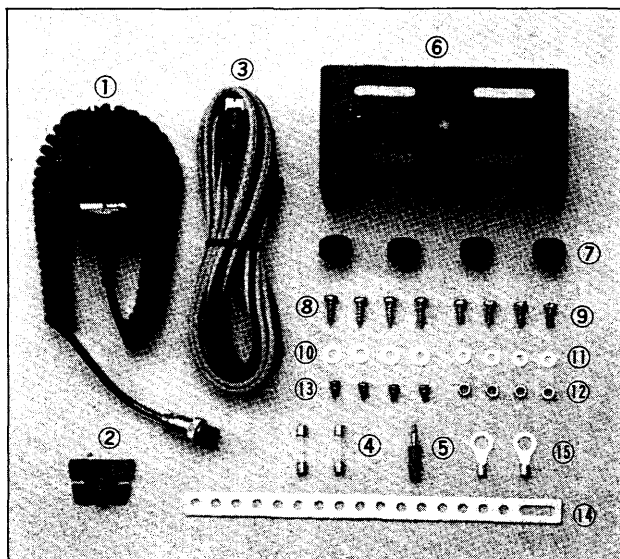
FOREWORD

Congratulations for choosing this technically-advanced ICOM product.

The IC-38A VHF FM transceiver is the latest addition to the ICOM system of Amateur radio equipment. Included in the IC-38A design is provision for use of the newly developed Digital Code Squelch System. Digital Code Squelch uses the latest digital techniques to create a communications system capable of dramatically reducing the inconvenience of heavily populated Amateur bands.

Use the IC-38A with the knowledge that this transceiver, and every ICOM product, is supported by a world-wide network of authorized service centers and dealers ready to provide assistance efficiently.

UNPACKING



IC-38A ACCESSORIES SUPPLIED	QTY.
1. Microphone (HM-12)	1
2. Microphone hanger	1
3. Power cable	1
4. Fuses (15A)	2
5. External speaker plug.	1
6. Mounting bracket	1
7. Mounting bracket knobs	4
8. Mounting screws (self-tapping)	4
9. Mounting screws	4
10. Flat washers (large)	4
11. Flat washers (small).	4
12. Nuts	4
13. Screws/spring washers	4
14. Support bracket.	1
15. Cable lugs	2

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SECTION 1 SPECIFICATIONS

1 - 1 GENERAL

Frequency coverage	:	GUARANTEED RANGE		OPERATION RANGE	
		TRANSCEIVER		RECEIVER	TRANSMITTER
		220 ~ 225MHz		215 ~ 230MHz	220 ~ 225MHz
Frequency resolution	:	5, 10, 15, 20 or 25kHz (programmable)			
Frequency control	:	CPU based 5kHz Simplex and semi-duplex capability (programmable offset)			
Memory channels	:	21 channels			
Usable temperature range	:	-10°C ~ +60°C (+14°F ~ +140°F)			
Power supply requirement	:	13.8V DC ±15% (negative ground) AC power supply is available for AC operation.			
Current drain (at 13.8V DC)	:	Transmit			
		HIGH (25W)	Maximum	6.5A	
		LOW (5W)	Approx.	3.0A	
		Receive			
		Max. audio output	Approx.	800mA	
		Squelched	Approx.	450mA	
Antenna impedance	:	50 ohms unbalanced			
Dimensions	:	140(140)mm(W) x 50(50)mm(H) x 155(171)mm(D) Bracketed values include projections.			
Weight	:	1.2kg			

1 - 2 TRANSMITTER

Output power	:	HIGH 25W	LOW 5W
Emission mode	:	16K0F3E (16K0F2D: When operating with an optional UT-28)	
Modulation system	:	Variable reactance frequency modulation	
Max. frequency deviation	:	±5.0kHz	
Spurious emission	:	More than 60dB below carrier	
Microphone	:	600 ohm electret condenser with push-to-talk and scanning switches	

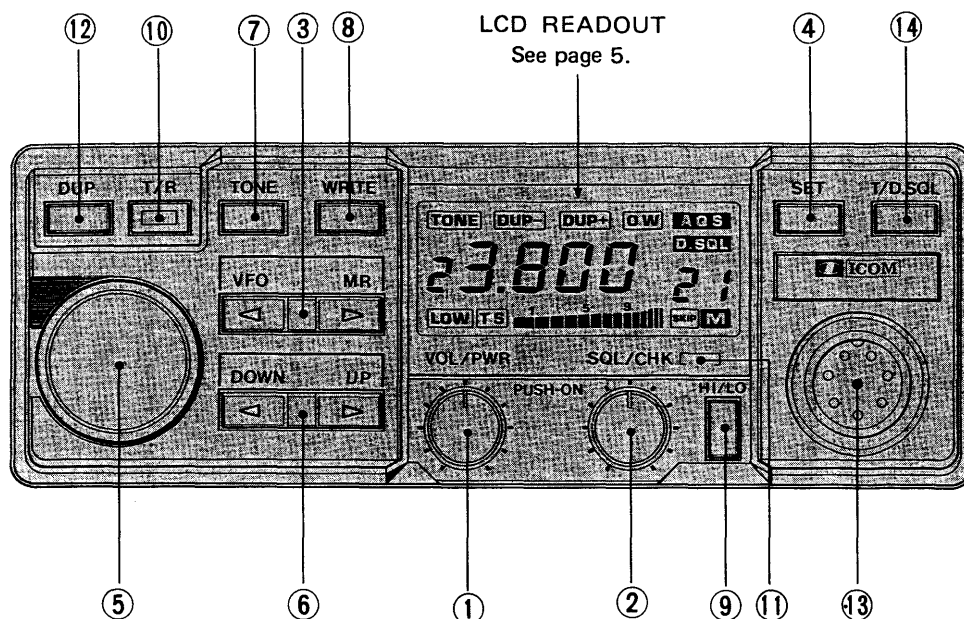
1 - 3 RECEIVER

Receive system	:	Double-conversion superheterodyne	
Modulation acceptance	:	16K0F3E	
Intermediate frequencies	:	1st 17.2MHz	2nd 455kHz
Selectivity	:	More than 12.5kHz at -6dB Less than 25.0kHz at -60dB	
Sensitivity	:	Less than 0.18μV for 12dB SINAD	
Audio output	:	More than 2.4 watts at 10% distortion with 8 ohm load	
Audio output impedance	:	4 ~ 8 ohms	

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

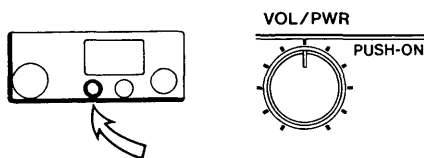
SECTION 2 CONTROL FUNCTIONS

2-1 FRONT PANEL



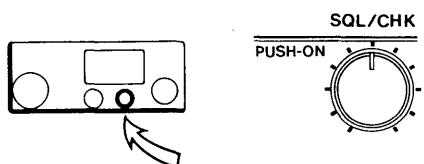
① VOLUME CONTROL/POWER SWITCH [VOL/PWR]

Push this control to turn the power ON and OFF. Turn the control clockwise to increase the audio level.



② SQUELCH CONTROL/CHECK SWITCH [SQL/CHK]

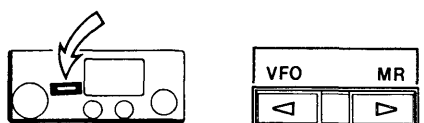
The squelch circuit quiets the noise from the transceiver while no signals are being received. While monitoring a vacant channel, turn the control clockwise until the green [T/R] LED goes out.



A second function of this control is to allow the operator to monitor the transmit frequency when the duplex mode is selected. Push the control to use the CHECK function. The receive frequency is restored when the control is released. See page 19 for more information.

③ VFO/MEMORY READ SWITCH [VFO/MR]

Push to select either the VFO mode or the MEMORY mode of operation. When the MEMORY mode is selected, the letter "M" appears under the memory channel number on the LCD readout.





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