



## VHF AND UHF TRANSCEIVERS

### IC-F3162DT

(IDAS digital VHF transceiver with 10-keypad)

### IC-F3162T

(VHF transceiver with 10-keypad)

### IC-F3162DS

(IDAS digital VHF transceiver without 10-keypad)

### IC-F3162S

(VHF transceiver without 10-keypad)

### IC-F4162DT

(IDAS digital UHF transceiver with 10-keypad)

### IC-F4162T

(UHF transceiver with 10-keypad)

### IC-F4162DS

(IDAS digital UHF transceiver without 10-keypad)

### IC-F4162S

(UHF transceiver without 10-keypad)



# IDAS™

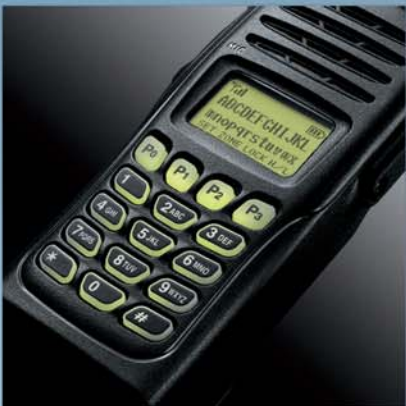
ICOM DIGITAL ADVANCED SYSTEM



## Analogue

## IDAS™ dPMR™

## IDAS™ NXDN™



- 512 ch / 128 zones
- Conventional/BIIS 1200 mode
- IDAS™ dPMR™  
IDAS™ NXDN™
- 2-Tone, 5-Tone CTCSS, DTCS
- VHF 5W, UHF 5W output
- 14 hrs. operating time with BP-232H
- Full dot-matrix LCD

# Digital\*/Analogue Multi-Mode Pro

\* With IC-F3162D/F4162D "D" version.



▲ IC-F3162DT/T

▲ IC-F4162DS/S

## IP55 Dust-protection and water jet resistance

The IC-F3162/D series meets IP55 requirements for dust-protection and water jet resistance. Its durable construction is backed up by the aluminum die-cast chassis and polycarbonate casing, allowing reliable operation under harsh weather and environmental conditions.

## Lithium-ion battery pack

The 2300mAh Li-Ion battery pack, BP-232H, provides 14 hours\* of operating time. Icom's rugged dual-rail guide securely locks the battery to the radio. The optional battery case BP-240 provides a convenient back up and great reassurance in an emergency.

\* Typical operation Tx:Rx:Stand-by=5:5:90, power save on

## Most popular signalings built-in

The 2-Tone, 5-Tone, CTCSS, DTCS and BISS signaling capabilities are built-in for group communication or selective calling. Also, the IC-F3162/D series can decode ten 2-Tone codes or eight 5-Tone codes on a channel. When a matched tone is received, the following actions are programmable for each code.

- Beep sound
- Bell icon
- Auto TX
- Answer back call
- Scan
- Radio stun/kill/revive

## Wide frequency range and large channel capacity

The IC-F3162/D series covers a wide frequency range in one version (VHF 136–174 MHz, UHF 400–470MHz). The 512 memory channel capacity with 128 zones allows you to divide and store a variety of flexible channel groupings. Memory channel selection can be made with a simple rotation of the rotary channel knob. Wide, middle and narrow channel bandwidth (25/20/12.5kHz)\* is also programmable.

\* Programmable 25/12.5kHz or 20/12.5kHz

## Voting operation (Analogue mode only)

The voting mode scanning detects the signal strength level of repeater stations and automatically selects the strongest station, useful for roaming between 2 or more repeater sites. Once you program the voting mode to a memory zone, you can easily start voting mode operation by changing the zone setting.

## VHF TRANSCEIVERS

### IC-F3162DT/T

IDAS digital/analogue FM with 10-keypad

### IC-F3162DS/S

IDAS digital/analogue FM without 10-keypad

## UHF TRANSCEIVERS

### IC-F4162DT/T

IDAS digital/analogue FM with 10-keypad

### IC-F4162DS/S

IDAS digital/analogue FM without 10-keypad

# Professional

## Full dot-matrix LCD

Using a large full dot-matrix LCD (32 × 18 mm), the IC-F3162/D series shows upper and lower case characters clearly. The display setting is selectable from 1 line, 12 characters or 2 lines 24 characters via programming. The bottom row shows assigned functions to the [P0] to [P3] buttons.



## Enhanced audio

The IC-F3162/D series employs a BTL amplifier that increases the audio output and the built-in audio compander provides clear, low noise communications.

## Built-in inversion-type voice scrambler

The built-in inversion type analogue voice scrambler\* provides secure conversation as standard. When a more secure system is required, optional voice scrambler UT-109R or UT-110R are available.

\* Inversion type voice scrambler is not compatible with UT-109R/UT-110R voice scrambler.

## BIIS 1200 compatible

The following selective calling and data features are available with the built-in BIIS system.

- 32 abbreviated call memories
- 7 group IDs
- 24-status Messages
- Send 12-character SDM (Short Data Message)
- Receive up to 95 characters of free text
- GPS position reporting function with optional HM-170GP

## Other features

- Built-in LTR™ trunking and MDC 1200 capability\* (\* Depending on version)
- 8 DTMF autodial memories
- 2 step reduced power setting
- Power on password
- Busy, repeater lockout functions
- Surveillance function temporarily turns off the LED backlight and beep sound
- Powerful 5W output and more...

## OPTIONS

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

### BATTERY PACKS AND CASE



Battery packs	Type and capacity	Operating time*	Output power
BP-230N	Li-Ion 7.4V/980mAh	5.5 hours	5W
BP-232N	Li-Ion 7.4V/2000mAh	12 hours	5W
BP-232H	Li-Ion 7.4V/2300mAh	14 hours	5W
BP-240	AAA (LR03) batteries × 6	–	1W

\* Operating time is approximate time (at 20°C). Tx: Rx: standby=5:5:90. Power save on.

### REGULAR CHARGER



BC-147S\*1

BC-171

Charges the BP-232N in 10 hours. (approx.).

### RAPID CHARGER



BC-145S\*1

BC-160

Charges the BP-232N in 3 hours. (approx.).

### RAPID CHARGER



BC-145S\*1

BC-119N

Charges the BP-232N in 3 hours. (approx.).

\*1 BC-145/BC-147SA for 120V AC. SE for 230V AC. SV for 240V AC. BC-145SUK for 230V AC.

### MULTI-CHARGER



BC-197\*2

BC-157S

\*2 Charger adapter AD-122 is supplied with the BC-197.

### INTERNAL UNITS



UT-109R

Non-rolling type  
voice scrambler

UT-110R

Rolling type  
voice scrambler

UT-124R

Man down  
unit

UT-126H

NXDN CAI-based  
IDAS digital unit

### SPEAKER-MICROPHONES



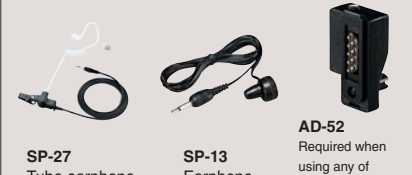
HM-168

HM-169

HM-170GP

HM-159SC

### EARPHONES



SP-27  
Tube earphone

SP-13  
Earphone

AD-52  
Required when  
using any of  
these earphones

### HEADSETS AND PTT/VOX UNIT



HS-94  
Earhook type

HS-95  
Behind-the-head  
type

HS-97  
Throat type

VS-1SC

Required when  
using any of these  
headsets

### POWER SUPPLY CABLES



CP-23L  
For use with  
BC-119N

OPC-515L  
For use with  
BC-119N

OPC-656  
For use with  
BC-197

### BELT CLIPS



MB-93  
Swivel type

MB-94  
Alligator type  
Same as supplied.

MB-94R  
Alligator type

### LEATHER BELT HANGERS



MB-96N

MB-96F

### STUBBY ANTENNAS

- FA-SC56VS: 150–162MHz
- FA-SC57VS: 160–174MHz
- FA-SC73US: 450–490MHz

### CUT ANTENNAS

- FA-SC61VC: 136–174MHz
- FA-SC61UC: 380–520MHz

### HIGH GAIN ANTENNAS

- FA-SC62V: 150–160MHz
- FA-SC63V: 155–165MHz

### ANTENNAS

- FA-SC25V: 136–150MHz
- FA-SC55V: 150–174MHz
- FA-SC25U: 400–430MHz
- FA-SC57U: 430–470MHz

## IDAS digital mode ready

IDAS (Icom Digital Advanced System) is Icom's digital land mobile system using the 6.25kHz narrowband FDMA technology. IDAS has choice of an NXDN™ protocol or an ETSI dPMR™ protocol. See the IDAS and dPMR brochures for details.

## DIGITAL



## SPECIFICATIONS

	IC-F3162DT/DS IC-F3162T/S	IC-F4162DT/DS IC-F4162T/S
<b>GENERAL</b>		
Frequency coverage	136–174MHz	400–470MHz
Number of channels	512 channels/128 zones	
Channel spacing	25/20/12.5kHz	
	6.25kHz (Digital version)	
Type of emission	16K0F3E, 14K0F3E, 8K50F3E, 4K00F1E/F1D (Digital version)	
Frequency stability	±1.0ppm	
Antenna impedance	50Ω	
Operating temperature range	–25°C to +55°C	
Power supply voltage	7.2V DC nominal	
Current drain (at 7.2V DC)		
TX 5W	1.5A	1.8A
RX Stand-by	100mA	100mA
Digital	150mA	140mA
Rated output	600mA	600mA
Dimensions (W×H×D) (Projections not included)	53×136×38.5 mm (with BP-232N)	
Weight (approx.)	340g (with BP-232N)	

### TRANSMITTER

Output power	5W, 2W, 1W (Hi, L2, L1)	
Max. frequency deviation	±5.0kHz/±4.0kHz/±2.5kHz (W/M/N)	
Spurious emissions	0.25μW (≤1GHz) 1.0μW (>1GHz)	
Audio harmonic distortion	3% typ. (AF 1kHz, 40% deviation)	
FSK error (Digital)	5% Max.	
Modulation limiting	60–100% of max. deviation	
Ext. microphone connector	9-pin multi connector/2.2kΩ	

### RECEIVER

Sensitivity 20dB SINAD	–4dBμV typ. (emf)	
5% BER	–8dBμV typ. (emf)	
Adjacent channel selectivity	75/75/68dB typ. (W/M/N)	
Spurious response	70dB min.	
Intermodulation rejection	67dB typ.	
Hum and noise ratio	55/53/50dB typ. (W/M/N)	
Audio output power	500mW typ. at 5% distortion with an 8Ω load	
Ext. speaker connector	9-pin multi connector/8Ω	

Measurements made in accordance with EN 300-086.

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

### Applicable U.S. Military Specifications & IP Rating

Icom makes rugged products that have been tested to and passed the following MIL-STD requirements and Ingress Protection standards.

Standard	MIL 810F	
	Method	Procedure
Low Pressure	500.4	I, II
High Temperature	501.4	I, II
Low Temperature	502.4	I, II
Temperature Shock	503.4	I
Solar Radiation	505.4	I
Rain Blowing/Drip	506.4	I, III
Humidity	507.4	–
Salt Fog	509.4	–
Dust Blowing	510.4	I
Vibration	514.5	I
Shock	516.5	I, IV

Also meets equivalent MIL-STD-810-C, -D and -E.

### Ingress Protection Standard

Dust & Water	IP55 (Dust-protection and water jet resistance)
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## VERSION COMPARISON

	IC-F3162DT/DS IC-F4162DT/DS (IDAS dPMR version)	IC-F3162DT/DS IC-F4162DT/DS (IDAS NXDN version)	IC-F3162T/S IC-F4162T/S (FM version)
CTCSS/DTCS (Analogue)	✓	✓	✓
5-Tone enc/dec (Analogue)	✓	✓	✓
2-Tone enc/dec (Analogue)	✓	✓	✓
DTMF autodial (Analogue)	✓	✓	✓
DTMF decoder (Analogue)	✓	✓	✓
BIIS 1200 (Analogue)	✓	✓	✓
MDC 1200 (Analogue)	–	✓	✓
LTR trunking (Analogue)	–	✓	✓
Voice scrambler (Analogue)			
Inversion	✓	✓	✓
Non-Rolling	UT-109R	UT-109R	UT-109R
Rolling	UT-110R	UT-110R	UT-110R
Man Down Function	UT-124R	UT-124R	UT-124R
IDAS dPMR			
Mode 1/2	✓	–	–
Mode 3	Planned	–	–
IDAS NXDN			
Conventional mode	–	✓*	UT-126H
Single-site type D trunking	–	✓*	UT-126H
Multi-site type D trunking	–	✓*	UT-126H

\* UT-126H is already installed in the IDAS NXDN version.

## SUPPLIED ACCESSORIES

(May differ according to version)



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