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You can read the recommendations in the user guide, the technical guide or the installation guide for ICOM IC-F5022. You'll find the answers to all your questions on the ICOM IC-F5022 in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

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INSTRUCTION MANUAL

VHF MOBILE TRANSCEIVER
IC-F5022
UHF MOBILE TRANSCEIVER
IC-F6022

MDC 1200
Compatible



icom Inc.



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Manual abstract:

If disregarded, inconvenience only. @@@@NEVER connect the transceiver to an AC outlet. This may pose a fire hazard or result in an electric shock. **WARNING!** NEVER connect the transceiver to a power source of more than 16 V DC such as a 24 V battery. This connection will run the transceiver. **DO NOT** operate the transceiver without running the vehicle's engine. The vehicle's battery will quickly run out when the transceiver transmits while the vehicle's engine is OFF.

DO NOT place the transceiver in excessively dusty environments. **WARNING!** NEVER cut the DC power cable between the DC plug and fuse holder. If an incorrect connection is made after cutting, the transceiver might be damaged.

WARNING! NEVER place the transceiver where normal operation of the vehicle may be hindered or where it could cause bodily injury. **DO NOT** place the transceiver against walls. This will obstruct heat dissipation. **DO NOT** use chemical agents such as benzene or alcohol when cleaning, as they damage the transceiver surfaces. **BE CAREFUL!** The transceiver will become hot when operating continuously for long periods.

CAUTION! NEVER allow children to touch the transceiver. **CAUTION!** NEVER expose the transceiver to rain, snow or any liquids. **USE** the specified microphone only. Other microphones have different pin assignments and may damage the transceiver. Approved Icom optional equipment is designed for optimal performance when used with an Icom transceiver.

Icom is not responsible for the destruction or damage to an Icom transceiver in the event the Icom transceiver is used with equipment that is not manufactured or approved by Icom. **DO NOT** use or place the transceiver in areas with temperatures below 25°C or above +55°C, or in areas subject to direct sunlight, such as the dashboard. **TABLE OF CONTENTS IMPORTANT**

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9 .ANEL DESCRIPTION Front panel q Function display (p. 2) w e Speaker 1 1. 2 3 4 5 6 7 8 9 1.0 1.1. 1.2 1.3 1.4 1.5 1.6 t r q AF VOLUME CONTROL KNOB [VOL] Rotate the knob to adjust the desired audio output level. - Minimum audio level is pre-set. (p. 11) w U./DOWN KEYS [CH Up]/[CH Down] Push to select an operating channel, etc. * The desired function can be assigned by your dealer. (p. 3) t MICROPHONE CONNECTOR Connect the supplied or optional microphone. NEVER connect non-specified microphones. The pin assignments may be different and the transceiver may be damaged. D MICROPHONE The supplied or optional microphone has a PTT switch and a hanger hook. The following functions are available when the microphone is on or off hook (depending on the setting): - Automatic scan starts when it is on hook. - Scan is cancelled when it is off hook. - Scan is paused when it is off hook. - Automatic priority channel selection is available when it is off hook. - Sets to 'Inaudible' condition (mute condition) when it is on hook.

- Sets to 'Audible' condition (unmute condition) when it is off hook. e .OWER KEY [] Push to turn the power ON and OFF. The following functions are available at power ON as options: - Automatic scan start - Password prompt - Set mode r DEALER-PROGRAMMABLE KEYS Desired functions can be programmed independently by your dealer. (p. 3) 1 1 PANEL DESCRIPTION Function display q w e r t y u i y SCRAMBLER INDICATOR Appears when the voice scrambler function is activated. u BELL INDICATOR Appears/blinks when the specific 2/5-tone/MDC* code is received, according to the pre-programming. i SCAN INDICATOR Blinks during scan. o q TRANSMIT INDICATOR Appears while transmitting.

w BUSY INDICATOR Appears while the channel is busy. e SIGNAL STRENGTH INDICATOR Indicates relative signal strength level as below. Weak Receive Signal level Strong o ALPHANUMERIC DISPLAY Displays an operating channel number, channel name, Set mode contents, DTMF code, etc.

* MDC operator only (p. 13) r LOW POWER INDICATOR Appears when low output power is selected. t AUDIBLE INDICATOR Appears when the channel is in the 'Audible' (unmute) condition. Appears when the specific 2/5-tone/MDC* code is received.

2 PANEL DESCRIPTION 1 1. 2 3 4 5 6 7 8 9 1.0 1.1. 1.2 1.3 1.4 1.5 1.6 .

programmable function keys The following functions can be assigned to [U.], [DOWN], [0], [1.], [2] and [3] programmable function keys. Consult your Icom dealer or system operator for details concerning your transceivers programming. If the programmable function names are bracketed in the following explanations, the specific key is used to activate the function depends on the programming. CH UP AND DOWN KEYS Push to select an operating channel. Push to select a transmit code channel after pushing [TX Code CH Select]. Push to select a DTMF channel after pushing [DTMF Autodial]. Push to select a scan group after pushing and holding [Scan A Start/Stop]/[Scan B Start/Stop] for 1 sec. ZONE KEY Push this key, then select the desired zone using [CH Up]/[CH Down]. What is "zone"?-- Selected channels are assigned to a zone according to how they are to be used in a group. For example, 'Staff A' and 'Staff B' are assigned into a "Business" zone, and 'John' and 'Cindy' are assigned into a "Private" zone. SCAN A START/STOP KEY Push to start and cancel scanning operation. When Power ON Scan function is activated, push to pause the scanning operation. And the paused scan resumes after the specified time period has passed. Push and hold this key for 1 sec. to indicate the scan list, then push [CH Up] or [CH Down] to select the desired list. SCAN B START/STOP KEY Push to start and cancel scanning operation. The scan restarts after the specified time period has passed when the scan (started with this key) is cancelled by except for this key operation. Push and hold this key for 1 sec. to indicate the scan list, then push [CH Up] or [CH Down] to select the desired list. SCAN ADD/DEL (TAG) KEY Push to add/delete the selected channel to/from the scan list. 1. Push to indicate the scan group, then push [CH Up] or [CH Down] to select the desired list. 2. Push to add or delete the channel to/from the selected scan list.

3. Push and hold for 1 sec. to exit the scan list selection mode. Push this key while scan is paused (a signal is detected) on a channel (except for priority channel), the channel is cleared from the scan list. Depending on the setting, the cleared channel is added to the scan list again after the scan is cancelled. 3 1 PANEL DESCRIPTION LOCK KEY Push and hold to electronically lock all programmable keys except the following: [Mon(Aud)], [Lock], [Call] (incl. Call A and Call B), [Emergency], [Surveillance], [Sren], [Lone Worker] and [OPT 1/2/3].



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PRIO A/B KEYS Push to select Prorty A or Prorty B channel. Push and hold [Pro A (Rewrte)] or [Pro B (Rewrte)] for 1 sec. to rewrte the operatng channel as the Prorty A or Prorty B channel.

MR-CH 1/2/3/4 KEYS Push to select the memory channel 1 to 4 drectly. **MONI (AUDI) KEY** Push to mute and release the CTCSS (DTCS) or 2-tone squelch mute. Open any squelch/deactivate any mute whle pushng and holdng ths key. (LMR operation only) Actvates one of (or two of) the followng functons on each channel ndependently: (PMR operation only) · Push and hold to unmute the channel (audio s emtted; 'Audble' condton). · Push to mute the channel (sets to 'Inaudble' only).

· Push after the communicaton s finshed to send a 'reset code'. (5-tone operation only) **LONE WORKER KEY** Push to turn the Lone Worker functon ON or OFF. · If the Lone Worker functon s actvated, Emergency functon s automaticly turned ON after the specified tme perod has passed with no operaton s performed. **HIGH/LOW KEY** Push to select the transmt output power temporarily or permanently, dependng on the pre-setting. · Ask your dealer for the output power level for each selecton.

NOTE: The un-mute condton ('Audble' condton) may automaticly return to the mute condton ('Inaudble' condton) after a specfed perod dependng on programng. **C.TONE CH ENT KEY** Push to enter the continuous tone channel selection mode. Then, push [CH Up]/[CH Down] to change the tone frequency/ code setting. The selected channel remans set as the continuous tone channel until another channel s desgnated as such. **TALK AROUND KEY** Push to turn the talk around functon ON and OFF. · The talk around functon equalizes the transmt frequency to the receive frequency for transceiver-to-transceiver communicaton. **4 PANEL DESCRIPTION WIDE/NARROW KEY** Push to toggle the IF bandwidth between wde and narrow. · The wde passband wth can be selected from 25.0 or 20.

0 kHz usng the CS-F3020/F5020 cloning software. (PMR operation only) Ask your dealer for details. 1 1. **EMERGENCY KEY** Push and hold ths for specified perod to transmt an emergency call. · The emergency call transmits with beeps; the dsplay does not change. @@@@ Ask your dealer for details. @@@@ And then select the desred DTMF channel usng [CH Up]/ [CH Down]. @@@@ When ths functon s turned ON, the beep s not emtted and the LCD backlght does not lght when a sgnal s received or a kng level. @@@@* Dependng on the pre-setting. @@@@r Release [PTT] to return to receive.

IM.ORTANT: To maxmze the readably of your sgnal; 1. Pause brefly after pushng [PTT]. 2. @2 3 4 5 6 7 8 9 1.

0 1.1. @@@@w Push [CH Up] or [CH Down] to select the desred TX code channel. @@@@PTTID call s also available with the MDC 1200 sgnalng system. (p.

13) r Push [Call] to transmt the selected TX code. @e Push [CH Up] or [CH Down] to select the desred dgt. r Push [TX Code Enter] to set. The dgt to the rght will blnk automaticly. t Repeat e and r to edt all allowable dgts. y After edng, push [TX Code Enter] to set. · Return to the stand-by mode. w Push [TX Code CH Select] for 1 sec. to enter the TX code edt mode. · The dgt to be edted blnks.

u Push [Call] to transmt. e Push [TX Code CH Select] to select the desred dgt to be edted. r Push [CH Up] or [CH Down] to select the desred dgt. t Push [TX Code CH Select] to set. The dgt to the rght will blnk automaticly. y Repeat r and t to edt all allowable dgts. u After edng, push [TX Code CH Select] to set. · Return to the stand-by mode. If the transceiver has [DTMF Autodal] assigned to t, the automatic DTMF transmsson functon s available. Up to 8 DTMF channels are available.

q Push [DTMF Autodal]-- a DTMF channel appears. w Push [CH Up] or [CH Down] to select the desred DTMF channel. e Push [DTMF Autodal] to transmt the DTMF code. D DTMF transmission i Push [Call] to transmt. 10 BASIC OPERATION 2 2 User set mode User set mode can be accessed with Power ON' functon.

In ths case, all set mode tems are available. User set mode allows you to set seldom-changed settings and you can "customize" the transceiver operaton to sut your preferences and operatng style. Entering the user set mode: q While pushng and holdng [P1] and [P2], push [the power ON.] to turn e Push [P0] several tmes to select the appropriate tem. Then, push [Up] or [Down] to set the desred level/condton. · Available set mode functons are Backlight, Beep, Beep Level, SQL Level, AF Min Level, Mic Gain, Horn, Battery Voltage, Signal Moni and Lone Worker. · Turn power OFF n advance. · Push and hold [P1] and [P2] continuously until "SET MODE" appears on the dsplay. [P0] [Up]/[Down] r Push and hold [] for 1 sec. to turn power OFF, then ON agan to ext set mode. [P1] [P2] [] [] w Push and hold [P0] for 1 sec. to enter user set mode. [P0] User set mode s also available usng a programmable key. Please refer to p. 6 [User Set Mode] secton for nstructons regardng usng the key assigned for user set mode.

[User Set Mode] s allowed for the quck tem selecton. Set "Enable" for the often used tems with the CS-F3020/F5020 cloning software. 11 2 BASIC OPERATION Scrambler functon The voce scrambler functon provides prvate communicaton between statons. The optional Rolling or Non-rolling type can be available. q Push [Scrambler] to turn the scrambler functon ON. ." " (Scrambler ndicator) appears. Stun functon When the specified ID, set as a stun ID or kll ID, s received, the stun functon s actvated. When the stun ID s received, the transceiver becomes unusable. Enterng of the password (p. 8) or receiveg a specified ID, set as a revve ID, s necessary to operate the transceiver agan n ths case.

When the kll ID s received, the transceiver swtches to the cloning required condton. Clonng the transceiver s necessary to operate the transceiver agan n ths case. Stun functon s also available with the MDC 1200 sgnalng system. (p. 13) w Push [Scrambler] agan to turn the scrambler functon OFF.

." " dsappears. Emergency transmission The emergency call can be performed usng [Emergency]. (p. 5) When [Emergency] s pushed for the specified tme perod, the DTMF or 5-tone emergency sgnal s transmtted once or repeatedly on the emergency channel dependng on the channel. However, when no emergency channel s specified, the sgnal s transmtted on the previously selected channel.

If you want to cancel the emergency call, push and hold the key agan before transmtng the call. Emergency call s also available with the MDC 1200 sgnalng system. (p. 13) .riority A channel selection When one of the followng operatons s performed, the transceiver selects the Prorty A channel automaticly. · Turnng the power ON The Prorty A channel s selected each tme the transceiver power s turned ON. · Off hook. The Prorty A channel s selected when the microphone s took off from ts hanger. 12 BASIC OPERATION 2 1. 2 3 4 5 6 7 8 9 1.

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2 1.3 1.4 1.5 1.6 MDC 1200 system operation The MDC 1200 signaling system enhances your transceiver's capabilities. It allows PTT ID*, Emergency signaling, and receive Rado Check.

Also, the dispatcher can stun and revive transceivers on the system. An additional feature of MDC 1200 system found in Icom transceivers is called Alasng. Each transceiver on the system has a unique ID number. Alasng allows the substitution of an alphanumeric name for this ID number. For transmit, you can use this Alasng to select a transceiver to call.

For receive, the Alasng of the calling station is displayed instead of the ID. *When [PTT] is pushed and/or released, the transceiver transmits your own station ID. The MDC 1200 system Emergency feature can be accessed using the [Emergency] key (p. 5). The transceiver will send an Emergency MDC 1200 system command once or repeatedly for a programmed number of times until it receives the acknowledgement signal.

The emergency call can be transmitted without a beep emission, and the LCD indication change depends on how emergency is programmed. Ask your dealer for details. D Transmitting an Emergency Call D Receiving an Emergency Call q When an emergency call is received; · Beeps sound. · The calling station ID (or Alasng) and "EMG EMG" are displayed alternately. The dispatcher can send MDC 1200 system signals that will stun or revive your transceiver. If a Stun command is received that matches your station ID, the transceiver will display "SORRY" (default) and you can not receive or transmit. When a Revive command is received that matches your station ID, normal operation is restored. D Receiving a Stun and Revive w Turn power OFF, change the channel, push [PTT] for replying the call, etc. @@Contact your dealer about antenna selection and placement. w EXTERNAL S.

EAKER JACK Connect a 48 ϕ external speaker. @@(See p. 1) Optional speaker q w e R WARNING! NEVER remove the fuse-holder from the DC power cable. @@t DC .OWER RECE.TACLE Connects to a 12 V DC battery. Pay attention to polarities. R WARNING! NEVER connect to a 24 V battery. @@Crmp Solder CONNECTION AND MAINTENANCE 3 1. 2 3 4 5 6 7 8 9 1.

0 1.1. 1.2 1.3 1.

4 1.5 1.6 Supplied Accessories Microphone Microphone hanger and screw set Microphone hanger cable Mounting the transceiver The universal mounting bracket supplied with your transceiver allows overhead mounting. · Mount the transceiver securely with the 4 supplied screws to a thick surface which can support more than 1.5 kg.

Flat washer DC power cable Function name stickers* Mounting bracket Felt* Spring washer Flat washers Nuts Mounting screws (M5 \times 12) Spring washers Bracket bolts Self-tapping screws (M5 \times 20) Felt* When using self-tapping screws *Felts reduce the vibration effects. * Used for labelling the programmable function keys according to their assigned functions. 15 3 CONNECTION AND MAINTENANCE Antenna A key element in the performance of any communication systems is an antenna. Contact your dealer for more information regarding antennas and how to install them. Options · O.C-1.1.32A/O.C-347 dc power cable 2 fuse holders are attached. USE the 20 A fuse only.

OPC-1132A : 3 m (9.8 ft) OPC-347 : 7 m (23 ft) · O.C-1.939 acc cable Allows you to connect to an external terminal. ·

HM-1.52/HM-1.52T/HM-1.48G/HM-1.48T hand microphone HM-152 : Hand microphone HM-152T : DTMF microphone HM-148G : Self ground heavy duty microphone HM-148T : Self ground heavy duty microphone with 10-keypad The 10-keypad of this microphone can be used for the DTMF code transmission only. · SM-25 desktop microphone · S.

-5/S.-1.0/S.-22 external speaker Input impedance : 4 ϕ Max. nput power : 5 W SP-5 : Large speaker for good audio quality.

SP-10 : For all-round mobile operation. SP-22 : Compact and easy-to-install. · UT-1.08R dmf decoder unit Provides pager and code squelch capabilities. · UT-1.09R/UT-1.1.0R scrambler units Non-rolling type (UT-109R)/Rolling type (UT-110R) voice scrambler unit provides higher communication security. Fuse replacement A fuse is installed in the supplied DC power cable. If a fuse blows or the transceiver stops functioning, track down the source of the problem if possible, and then replace the damaged fuse with a new rated one. Fuse rating: 10 A USE the 10 A fuse only. Cleaning If the transceiver becomes dusty or dirty, wipe it clean with a soft, dry cloth. AVOID the use of solvents such as benzene or alcohol, as they may damage the transceiver surfaces. 16 DOC DECLARATION OF CONFORMITY We Icom Inc. Japan 1-1-32, Kamiminami, Hirano-ku Osaka 547-0003, Japan 4 1.

2 3 4 5 6 7 8 9 1.0 1.1. 1.2 1.3 1.4 1.5 1.6 0168 Düsseldorf 15th Jan. 2009 Place and date of issue Declare on our sole responsibility that this equipment complies with the essential requirements of the Radio and Telecommunications Terminal Equipment Directive, 1999/5/EC, and that any applicable Essential Test Suite measurements have been performed.

Kind of equipment: Type-designation: VHF TRANSCEIVER iC-f5022 136174 MHz 12.5 kHz/25 kHz 136174 MHz 12.5 kHz/20 kHz Authorized representative name Version (where applicable): This compliance is based on conformity with the following harmonised standards, specifications or documents: i) EN 301 489-1 v1.6.1 (September 2005) ii) EN 301 489-5 v1.

3.1 (August 2002) iii) EN 300 086-2 v1.1.1 (March 2001) iv) EN 300 219-2 v1.1.

1 (March 2001) v) EN 300 113-2 v1.3.1 (December 2003) vi) EN 60950-1: 2001 vii) viii) Y. Furukawa General Manager Signature CE Versions of the IC-F5022 and the IC-F6022 which display the "CE" symbol on the serial number label, comply with the essential requirements of the European Radio and Telecommunication Terminal Directive 1999/5/EC. This warning symbol indicates that this equipment operates in non-harmonised frequency bands and/or may be subject to licensing conditions in the country of use. Be sure to check that you have the correct version of this radio or the correct programming of this radio, to comply with national licensing requirements. 17 4 DOC DECLARATION OF CONFORMITY We Icom Inc. Japan 1-1-32, Kamiminami, Hirano-ku Osaka 547-0003, Japan 0168 Düsseldorf 13th Mar. 2009 Place and date of issue Declare on our sole responsibility that this equipment complies with the essential requirements of the Radio and Telecommunications Terminal Equipment Directive, 1999/5/EC, and that any applicable Essential Test Suite measurements have been performed. Kind of equipment: Type-designation: UHF TRANSCEIVER iC-f6022 400470 MHz 12.

5 kHz/25 kHz 400470 MHz 12.5 kHz/20 kHz Authorized representative name Version (where applicable): This compliance is based on conformity with the following harmonised standards, specifications or documents: i) EN 301 489-1 v1.6.1 (September 2005) ii) EN 301 489-5 v1.3.1 (August 2002) iii) EN 300 086-2 v1.1.1 (March 2001) iv) EN 300 219-2 v1.1.1 (March 2001) v) EN 300 113-2 v1.

3.1 (December 2003) vi) EN 60950-1: 2001 vii) viii) Y. Furukawa General Manager Signature 18 DOC · List of Country codes (ISO 31.



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66-1.) Country 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 Austria Belgium Bulgaria Croatia Czech Republic Cyprus Denmark Estonia Finland France Germany Greece Hungary Iceland Ireland Italy Latvia Codes AT BE BG HR CZ CY DK EE FI FR DE GR HU IS IE IT LV 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 Country Liechtenstein Lithuania Luxembourg Malta Netherlands Norway Poland Portugal Romania Slovakia Slovenia Spain Sweden Switzerland Turkey United Kingdom Codes LI LT LU MT NL NO PL PT RO SK SI ES SE CH TR GB 4 1.

2 3 4 5 6 7 8 9 1.0 1.1. 1.2 1.

3 1.4 1.5 1.6 About e-marking: Detailed installation notes for Icom mobile transceivers to be fitted into vehicles are available. Please contact your Icom dealer or distributor. 19 AT FI IT PL GB RO < Intended Country of Use > BE FR LV PT IS TR CY DE LT SK LI HR CZ GR LU SI NO DK HU MT ES CH EE IE NL SE BG A-6732D-1EU-w Printed in Japan © 2009 Icom Inc. Printed on recycled paper with soy ink. 1-1-32 Kamman, Hrano-ku, Osaka 547-0003, Japan .



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