Your PDF Guides

You can read the recommendations in the user guide, the technical guide or the installation guide for ICOM IC-V82. You'll find the answers to all your questions on the ICOM IC-V82 in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual ICOM IC-V82
User guide ICOM IC-V82
Operating instructions ICOM IC-V82
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Instruction manual ICOM IC-V82

ICOM®

INSTRUCTION MANUAL

VHF TRANSCEIVER
IC-V82

UHF TRANSCEIVER
IC-U82

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Icom Inc.

IC-V82   IC-U82

Manual abstract:

" Many hours of research and development went into the design of your IC-V82/U82. IMPORTANT READ ALL INSTRUCTIONS carefully and completely before using the transceiver. SAVE THIS INSTRUCTION MANUAL-- This instruction manual contains important operating instructions for the IC-V82/U82. EXPLICIT DEFINITIONS DEFINITION Personal injury, fire hazard or electric shock R WARNING! may occur. CAUTION NOTE Equipment damage may occur. Recommended for optimum use. No risk of personal injury, fire or electric shock. WORD D FEATURES 7 W*-- high transmit output power (*IC-V82, 5 W for IC-U82) CTCSS and DTCS encoder/decoder standard Optional digital modulator/demodulator Optional DTMF decoder Icom, Icom Inc. and the logo are registered trademarks of Icom Incorporated (Japan) in the United States, the United Kingdom, Germany, France, Spain, Russia and/or other countries. i PRECAUTIONS RWARNING! NEVER hold the transceiver so that the antenna is very close to, or touching exposed parts of the body, especially the face or eyes, while transmitting.

The transceiver will perform best if the microphone is 5 to 10 cm (2 to 4 inches) away from the lips and the transceiver is vertical. Place the unit in a secure place to avoid inadvertent use by children. DO NOT operate the transceiver near unshielded electrical blasting caps or in an explosive atmosphere. AVOID using or placing the transceiver in direct sunlight or in areas with temperatures below 10°C (+14°F) or above +60°C (+140°F). The use of non-Icom battery packs/chargers may impair transceiver performance and invalidate the warranty.

Even when the transceiver power is OFF, a slight current still flows in the circuits. Remove the battery pack or case from the transceiver when not using it for a long time. Otherwise, the battery pack or installed rechargeable batteries (Ni-Cd: BP-222N, BP-209N, Ni-MH: BP-210N, Li-Ion: BP-211N) will become exhausted. For USA only: Caution: Changes or modifications to this transceiver, not expressly approved by Icom Inc., could void your authority to operate this transceiver under FCC regulations.

RWARNING! NEVER operate the transceiver with a headset or other audio accessories at high volume levels. Hearing experts advise against continuous high volume operation. If you experience a ringing in your ears, reduce the volume or discontinue use. NEVER connect the transceiver to a power source that is DC fused at more than 5 A. Accidental reverse connection will be protected by this fuse, but higher fuse values will not give any protection against such accidents and the transceiver will be ruined. NEVER attempt to charge alkaline or dry cell batteries. Be aware that external DC power connections will charge batteries inside the battery case. This will damage not only the battery case but also the transceiver. DO NOT push the PTT when not actually desiring to transmit. ii SUPPLIED ACCESSORIES Supplied Accessories q Antenna* .

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. . . . .
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. . . . . . 1 w Belt clip (with screws) . . . .
. . . . .
. . . . .
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. . . 1 e AC Adapter* . . . .
. . . . .
. . . . .
. . . .

. . . . 1 r Battery pack*/Battery case* . .
. . . . .
. . . . .
. . . .

1 t Battery charger* . . . .
. . . . .
. . . . .
. . . . 1 set *Not supplied with some versions.

e q w for IC-V82 for IC-U82 t r iii SAFETY TRAINING INFORMATION CAUTION To ensure that your exposure to RF electromagnetic energy is within the FCC allowable limits, always adhere to the following guidelines: · DO NOT operate the radio without a proper antenna attached, as this may damage the radio and may also cause you to exceed FCC RF exposure limits. A proper antenna is the antenna supplied with this radio by the manufacturer or an antenna specifically authorized by the manufacturer for use with this radio. · DO NOT transmit for more than 50% of total radio use time ("50% duty cycle"). Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded. The radio is transmitting when the "Tx indicator" appears. You can cause the radio to transmit by pressing the "PTT" switch. · ALWAYS use Icom authorized accessories (antennas, batteries, belt clips, speaker/mics, etc.). Use of unauthorized accessories can cause the FCC RF exposure compliance requirements to be exceeded. · ALWAYS keep the antenna at least 2.

5 cm (1 inch) away from the body when transmitting, and only use the Icom belt-clips which are listed in this manual when attaching the radio to your belt, etc. To provide the recipients of your transmission the best sound quality, hold the transceiver at least 5 cm (2 inches) from your mouth, and turned slightly to one side. The information listed above provides the user with the information needed to make him or her aware of RF exposure, and what to do to assure that this radio operates within the FCC RF exposure limits of this radio. Electromagnetic Interference/Compatibility During transmissions, your Icom radio generates RF energy that can possibly cause interference with other devices or systems. To avoid such interference, turn off the radio in areas where signs are posted to do so.

DO NOT operate the transmitter in areas that are sensitive to electromagnetic radiation such as hospitals, aircraft, and blasting sites. iv TABLE OF CONTENTS FOREWORD . . . .
. . . .

REFERENCE GUIDE

Your first contact

Now that you have your IC-V82/U82 ready, you are excited to get on the air. We would like to walk you through a few basic operational steps to make your first "On The Air" use an enjoyable experience.

2. Adjusting audio output level

Rotate [VOL] to set the desired audio level.

[VOL]

3. Adjusting the squelch level

D About default setting YZ
The [VOL] control function can be exchanged with [Y]/[Z] keys function in INITIAL SET MODE. However, in this QUICK REFERENCE, the factory default setting ([VOL] controls audio output level) is used to simplify instructions.

While pushing and holding Y Z [MONI], push [Y] or [Z] to set the squelch level.

MONI

D Basic operation

1. Turning ON the transceiver

Although you have purchased a brand new transceiver, some settings may be changed from the factory defaults because of the Quality Control process. Resetting the CPU is necessary to start from factory default.

While pushing [MONI] and [D·CLR], push and hold [PWR] for 1 sec.

to reset the CPU and turn power ON. MONI PWR D CLR 4. Tune the desired frequency YZ The up/down keys, [Y]/[Z], will allow you to tune to the frequency that you want to operate on. Page 14 will instruct you on how to adjust the tuning step size. Y Z Push [Y] or [Z] to adjust the frequency.

III QUICK REFERENCE GUIDE Direct frequency input from the keypad is also available. To enter the desired frequency, enter 6 digits starting from the 100 MHz digit. · Entering three* to five digits then pushing [·ENT] will also set the frequency. (*Some versions only requires two digits.) · When a digit is mistakenly input, push [D.CLR] to abort input. D CLR 1. Setting duplex Push [A·FUNC], then [4·DUP] several times to select minus duplex or plus duplex. · The USA/CSA versions have an auto repeater function, therefore, setting duplex is not required. ENT A FUNC Keypad DUP 4 · Example 1-- when entering 145.

525 MHz Push TONE 1 DUP 4 SCAN 5 SCAN 5 P.BEEP 2 SCAN 5 2. Repeater tone Push [A·FUNC], then [1·TONE] several times until " " appears, if required. · Example 2-- when entering 144.800 MHz Push TONE 1 DUP 4 DUP 4 SET 8 OPT 0 ENT A FUNC TONE 1 5. Transmit and receive Push and hold [PTT] to transmit, then speak into the microphone; release to receive. IV Quick reference guide Repeater operation QUICK REFERENCE GUIDE Programming memory channels The IC-V82/U82 has a total of 207 memory channels (including 6 scan edges and 1 call channel) for storing often used operating frequency, repeater settings, etc. 3. Writing a memory channel Push [A·FUNC], then push and hold [C·MR] for 1 sec. to program. · 3 beeps sound. 1. Setting frequency In VFO mode, set the desired operating frequency with other desired settings, such as repeater and subaudible tone. C MR 2. Selecting a memory channel Push [A·FUNC] and [C·MR] then Y Z push [Y] or [Z] several times to select the desired memory channel. · "X" indicator and memory channel number blink. C MR A FUNC A FUNC · Continue to push and hold [C·MR] for 1 sec. after 3 beeps are emitted, to increment the displayed memory channel number. V ACCESSORIES Accessory attachment D Antenna Attach the antenna to the transceiver as illustrated below. 1 1 Keep the [SP/MIC] cap (SP/MIC jack cover) attached when jacks are not in use to keep the contacts clean.

Attach the [SP/MIC] cap. [SP/MIC] cap 1 1 ACCESSORIES D Belt clip Conveniently attaches to your belt. Attach the belt clip with the supplied screws using a phillips screwdriver. To attach the belt clip D Handstrap (Not supplied) Slide the hand strap through the loop on the top of the rear panel as illustrated below. Facilitates carrying. 2 PANEL DESCRIPTION Switches, controls, keys and connectors q CONTROL DIAL [VOL] *Rotate to adjust the volume level. q t 2 1 2 w PTT SWITCH [PTT] Push and hold to transmit; release to receive. YZ e UP/DOWN KEYS [Y]/[Z] *Selects the operating frequency. Speaker w y Microphone e MONI PWR r KEYPAD (pgs. 4, 5) Used to enter operating frequency, the DTMF codes, etc.

t ANTENNA CONNECTOR (p. 1) Connects the supplied antenna. y [SP]/[MIC] JACK Connect an optional speaker-microphone or headset, if desired. The internal microphone and speaker will not function when a connector is inserted. u FUNCTION DISPLAY (pgs. 6, 7) i SQUELCH/MONITOR SWITCH [MONI] Push and hold to force the squelch open, and set the squelch level, if required. o POWER SWITCH [PWR] Push and hold for 1 sec. to turn the power ON and OFF. YZ *The assigned function for [VOL] and [Y]/[Z] can be exchanged in INITIAL SET MODE (pgs. 14, 65).

3 u i o A FUNC B CALL C MR D CLR r TONE 1 P.BEEP 2 T.SCAN 3 BANK DUP 4 SCAN 5 SKIP 6 OPT 0 PRIO 7 SET 8 H/M/L 9 ENT !0 2 PANEL DESCRIPTION D Keypad A FUNC !0 [DATA] JACK Connect to a PC or GPS receiver via the RS-232 cable (Dsub 9 pin) for data communication in the RS-232 format. Pin 2 (RxD), Pin 3 (TxD), Pin 5 (GND) to [DATA] jack TxD GND RxD 2.5(d) mm 5 1 [A·FUNC] Access to secondary function. [B·CALL] Selects the call channel. (p. 21) [C·MR] Selects a memory mode. (p. 21) After pushing [A·FUNC], enter into memory programming/editing mode. (pgs. 2224) After pushing [A·FUNC], programs/transfers VFO/memory or call channel contents into memory channel/VFO when pushed and held for 1 sec. (pgs. 2224) [D·CLR] Selects VFO mode, aborts direct frequency input, or cancels scanning, etc. (pgs. 13, 30) [1·TONE] Input digit "1" during frequency input, memory channel selection, etc. (pgs. 13, 21) After pushing [A·FUNC], selects the subaudible tone function. (pgs. 17, 34) [2·P.

BEEP] Input digit "2" during frequency input, memory channel selection, etc. (pgs. 13, 21) After pushing [A·FUNC], turns the pocket beep function ON and OFF. (p. 36) B CALL C MR Less than 10(d) mm 9 6 RS-232 (DB-9 female) When making the connection between your transceiver and PC or other device, ensure that the correct connections are made otherwise data communications may fail. D CLR TONE 1 P.BEEP 2 4 PANEL DESCRIPTION [3·T.SCAN] Input digit "3" during frequency input, memory channel selection, etc.

(pgs. 13, 21) After pushing [A·FUNC], starts tone scanning.
(pgs. 19, 37) [4·DUP] Input digit "4" during frequency input, memory channel selection, etc. (pgs. 13, 21) After pushing [A·FUNC], selects duplex function (-duplex, +duplex, simplex). (p.
17) [5·SCAN] Input digit "5" during frequency input, memory channel selection, etc. (pgs. 13, 21) After pushing [A·FUNC], starts scanning. (p. 30) [6·SKIP] Input digit "6" during frequency input, memory channel selection, etc.
(pgs. 13, 21) After pushing [A·FUNC], sets and cancels skip setting for memory scan during memory mode. (p. 32) [7·PRIO] Input digit "7" during frequency input, memory channel selection, etc. (pgs. 13, 21) After pushing [A·FUNC], starts priority watch. (p. 32) [8·SET] 2 T.SCAN 3 SET 8 Input digit "8" during frequency input, memory channel selection, etc. (pgs.

13, 21) After pushing [A·FUNC], enters into SET MODE. (p. 59) [9·H/M/L] Input digit "9" during frequency input, memory channel selection, etc. (pgs. 13, 21) After pushing [A·FUNC], switches transmit power between high, middle and low output power. (p. 15) [0·OPT] Input digit "0" during frequency input, memory channel selection, etc. (pgs. 13, 21) After pushing [A·FUNC], selects an optional function mode, such as pager, code squelch or digital operation. (pgs.
40, 42) [#·BANK] After pushing [A·FUNC], enters a memory bank selection. (p. 25) [·ENT] Sets the frequency even if the full 6 digits of frequency have not been entered. (p. 13) After pushing [A·FUNC], switches key lock function ON and OFF when pushed and held for 1 sec.
Lock all keys, except [PWR], [PTT], [MONI] and audio level adjustment. (p. 16) 2 DUP 4 H/M/L 9 SCAN 5 OPT 0 SKIP 6 BANK PRIO 7 ENT 5 2 PANEL DESCRIPTION Function display q q w q e r q t q y !5 !4 u !3 !2 !1 !0 oi q FUNCTION INDICATOR Appears while a secondary function is being accessed. w KEY LOCK INDICATOR (p. 16) Appears when the key lock function is ON.
e AUTO POWER OFF INDICATOR (p. 64) Appears while the auto power OFF function is activated. r DUPLEX INDICATOR (p. 17) Either "" or "+" appears during repeater operation. t TONE INDICATOR While in the analog (FM) mode operation " " appears while the subaudible tone encoder is in use. (p. 17) " " appears while the tone (CTCSS) squelch function is in use. (p. 34) " " appears while the tone (DTCS) squelch function is in use. (p.

34) " " appears with the " " or " " indicator while the pocket beep function (CTCSS or DTCS) is in use. (p. 36) 6 PANEL DESCRIPTION While in the digital (DV) mode operation with an optional UT-118 DIGITAL UNIT installed. " " appears while the digital code (CSQL) squelch function is in use. (p. 49) " " appears while the call sign (DSQL) squelch function is in use. (p. 49) " " appears with the " " or " " indicator while the pocket beep function (CSQL or DSQL) is in use. (p. 48) y TRANSMIT INDICATOR (p.
15) Appears during transmit. u FREQUENCY READOUT Shows operating frequency, channel number or channel names, depending on display type (p. 16). i SIGNAL INDICATOR Shows receiving signal strength as below. 2 o BUSY INDICATOR Appears when a signal is being received or the squelch is open. Blinks while the monitor function is activated. (pgs. 15, 49) !0 PAGER CALL INDICATOR (p. 41) Blinks when a pager call is received. (This indicator appears only when an optional UT-108 DTMF DECODER UNIT is installed.
) !1 DIGITAL MODE INDICATOR (p. 45) Appears when digital mode is selected. (This indicator appears only when an optional UT-118 DIGITAL UNIT is installed.) !2 LOW/MIDDLE POWER INDICATOR (p. 15) "L" or "M" appears when the low or middle output power is selected, respectively. No indicator appears when high output power is selected. !3 SKIP CHANNEL INDICATOR (p. 32) Appears when the selected memory channel is specified as a skip channel. !4 MEMORY MODE INDICATOR (p. 21) Appears while in memory mode or channel number indication mode.

!5 MEMORY CHANNEL INDICATOR (p. 21) Shows the selected memory channel number. "C" appears when the call channel is selected. 2 Weak RX Signal level Strong Shows the output power level while transmitting. Low Middle High 7 3 BATTERY PACKS D BATTERY PACKS Battery Voltage Capacity pack BP-208N BP-209N BP-210N PWR Battery pack replacement q Before replacing the battery pack, push and hold [PWR] for 1 sec. to turn the power OFF. Battery life*1 IC-V82 --*2 IC-U82 Battery case for AA (LR6)×6 alkaline 7.2 V 7.2 V 7.4 V 7.
2 V 1650 mAh 6 hrs. 1100 mAh 3 hrs. 20 min. 3 hrs. 40 min.
7 hrs. 1800 mAh 6 hrs. 10 min. 8 hrs. 15 min.
600 mAh 2 hrs. 15 min. 2 hrs. 50 min. BP-211N BP-222N Push and hold for 1 sec. w Slide the battery release forward, then pull the battery pack upward with the transceiver facing away from you. *1 Operating periods are calculated under the following conditions; Tx : Rx : standby =1 : 1 : 8, power save function: auto setting is activated *2 Operating period depends on the alkaline cells used. 8 BATTERY PACKS 3 Battery caution RDANGER! Use/Charge the specified Icom batteries only. Only tested and approved for use with genuine Icom batteries. Fire and/or explosion may occur when a third party battery pack or counterfeit product is used/charged.

· CAUTION! NEVER short the terminals of the battery pack (or charging terminals of the transceiver). Also, current may flow into nearby metal objects such as a necklace, so be careful when placing battery packs (or the transceiver) in handbags, etc. Simply carrying with or placing near metal objects such as a necklace, etc. causes shorting. This will damage not only the battery pack, but also the transceiver. · NEVER incinerate used battery packs. Internal battery gas may cause an explosion. · NEVER immerse the battery pack in water. If the battery pack becomes wet, be sure to wipe it dry BEFORE attaching it to the transceiver. · Clean the battery terminals to avoid rust or poor contact.
· Keep battery contacts clean. It's a good idea to clean battery terminals once a week. If your battery pack seems to have no capacity even after being charged, completely discharge it by leaving the power ON overnight. Then, fully charge the battery pack again. If the battery pack still does not retain a charge (or only very little charge), a new battery pack must be purchased (p.
77). Charging NOTE Prior to using the transceiver for the first time, the battery pack must be fully charged for optimum life and operation. · Recommended temperature range for charging: +10°C to +40°C (; +50°F to 140°F) · Use the supplied charger or optional charger (BC-119N/121N/144N for rapid charging, BC-146 for regular charging) only.

NEVER use other manufacturers' chargers. 3 The optional BP-222N, BP-209N, BP-210N or BP-211N battery packs include rechargeable batteries (Ni-Cd: BP-222N, BP-209N, Ni-MH: BP-210N, Li-Ion: BP-211N) and can be charged approx.

300 times. Charge the battery pack before first operating the transceiver or when the battery pack becomes exhausted. If you want to charge the battery pack more than 300 times, the following points should be observed: ·Avoid over charging. The charging period should be less than 24 hours. · Use the battery until it becomes almost completely exhausted under normal conditions. We recommend battery charging after transmitting becomes impossible. D Battery pack life When the operating period becomes extremely short even after charging the battery pack fully, a new battery pack is needed. 9 3 BATTERY PACKS D About AD-99N The adapter (Spacer A) only is required for IC-V82/U82 series. When removing the spacer (Spacer B/C), push the latch carefully with your finger to remove the spacer (Spacer B/C) from the adapter (Spacer A). Remove the spacer (Spacer B/C) from the adapter.

Push the latch carefully. Battery charging Recommendation: Charge the BP-211N (Li-Ion) by BC-119N (or BC-121N) for a maximum of 2.5 hours. Li-Ion batteries are different from Ni-Cd batteries in that it is not necessary to completely charge and discharge them to prolong the battery life. Therefore, charging the battery in intervals, and not for extended periods is recommended. D Regular charging with the BC-146 The optional BC-146 provides regular charging of an optional battery pack with or without a transceiver attached. The following is additionally required: · An optional AC adapter. (An AD-99N is supplied with BC-146.) Turn power OFF. Check orientation for correct charging.

(Insert together with AD-99N.) R CAUTION! · DO NOT push or force the latch with a screw driver, etc., to remove it. · DO NOT bend the latch when the adapter and spacer are not joined together. This will cause weakening of the latch plastic.

· Both cases may break the latch and it may not be able to be reattached. · Chargeable battery BP-210N (Ni-MH battery) BP-209N, BP-222N (Ni-Cd batteries) BC-146+AD-99N 10 BATTERY PACKS D Rapid charging with the BC-144N The optional BC-144N provides rapid charging of optional battery packs. The following are additionally required: · An AC adapter (may be supplied with the BC-144N depending on version). Turn power OFF. 3 D Rapid charging with the BC-119N+AD-101 The optional BC-119N provides rapid charging of battery packs.

The following items are additionally required. · AD-101 (Charger Adapter). · An AC adapter (may be supplied with the BC-119N depending on version) or the DC power cable (OPC-515L/CP-17L). Turn power OFF. 3 Check orientation for correct charging. (Insert together with AD-99N.) BC-144N+AD-99N DC power cable (OPC-515L) (Connect with the DC power supply; 13.8 V/at least 2 A) · Chargeable battery BP-210N (Ni-MH battery) BP-209N, BP-222N (Ni-Cd batteries) · Chargeable battery BP-210N (Ni-MH battery) BP-209N, BP-222N (Ni-Cd batteries) BP-211N (Li-Ion battery) 11 3 BATTERY PACKS D Rapid charging with the BC-121N+AD-101 The optional BC-121N allows up to 6 battery packs to be charged simultaneously. The following items are additionally required. · Six AD-101 (Charger Adapter).

· An AC adapter (BC-124; may be supplied with the BC-121N depending on version) or the DC power cable (OPC-656). Turn power OFF. Battery case (optional for some versions) When using a BP-208N BATTERY CASE attached to the transceiver, install 6 AA (LR6) size alkaline batteries as illustrated below. AC adapter (purchased separately) D CAUTION Charge indicator (each indicator functions independently) DC power cable (OPC-656) (Connect with the DC power supply; 13.8 V/at least 7 A) · Chargeable battery BP-210N (Ni-MH battery) BP-209N, BP-222N (Ni-Cd batteries) BP-211N (Li-Ion battery) 12 · Use ALKALINE batteries only. · Make sure all battery cells are the same brand, type and capacity. Never mix old and new batteries. Either of the above may cause a fire hazard or damage the transceiver if neglected. ·Never incinerate used battery cells since internal battery gas may cause them to rupture. · Never expose a detached battery case to water.

If the battery case gets wet, be sure to wipe it dry before use. BASIC OPERATION Power ON Push and hold [PWR] for 1 sec. to turn power ON. 4 3 4 Setting a frequency D Via the keypad q Push [D·CLR] to select VFO mode, if necessary. w To enter the desired frequency, enter 6 digits starting from the 100 MHz digit.

· Entering three* to five digits then pushing [·ENT] will also set the frequency. (*Some versions only requires two digits.) · When a digit is mistakenly input, push [D.CLR] to abort input. PWR Push and hold for 1 sec.

· Example 1-- when entering 145.525 MHz Push TONE 1 DUP 4 SCAN 5 SCAN 5 P.BEEP 2 SCAN 5 VFO mode selection The transceiver has 2 basic operating modes: VFO mode and memory mode. · Example 2-- when entering 144.800 MHz Push TONE 1 DUP 4 DUP 4 SET 8 OPT 0 ENT Push [D·CLR] to select VFO mode. D CLR 13 4 BASIC OPERATION D By other methods YZ Via the [Y]/[Z] keys Y Z Push [Y] or [Z] several times to set the desired frequency. · Each push increases/decreases the frequency by the selected tuning step. See next set of instructions for setting tuning step size. For your information-- [VOL] function assignment The [VOL] control can be used as a tuning dial for frequency tuning YZ instead of [Y]/[Z] keys. However, when [VOL] functions as tuning YZ dial, [Y]/[Z] keys functions as volume control.

Y Z qWhile pushing [Y] and [Z], turn power ON to enter INITIAL SET MODE. [VOL] D Tuning step selection The IC-V82/U82 has 8 tuning steps-- 5, 10, 12.5, 15, 20, 25, 30 and 50 kHz. The tuning step is selectable in SET MODE. qPush [A·FUNC] then [8·SET] to enter SET MODE. Y Z wPush [Y] or [Z] several times to select the tuning step item. [VOL] PWR Y Z w Push [Y] or [Z] several times to select the dial assignment item, "tOP." e Rotate [VOL] to select the condition. A FUNC ENT ENT SET 8 [VOL] is assigned as AF volume control. [VOL] is assigned as tuning dial. eRotate [VOL] to select the desired tuning step. r Push [·ENT] to exit SET MODE. r To exit SET MODE, push [·ENT]. 14 BASIC OPERATION 4 Setting audio/squelch level D To set the audio level Rotate [VOL] to set the desired audio level while receiving a signal. · When no signal is received, push and hold [MONI] while setting the audio level.

· When [VOL] is assigned as tuning YZ dial, push [Y]/[Z] to adjust the audio output level.

(pgs. 14, 65) [VOL] Receive and transmit q Push and hold [PWR] for 1 sec. to turn the power ON. w Adjust audio volume to the desired level.
e Set the frequency. When a signal is received: · Squelch opens and audio is emitted from the speaker. · Signal indicator shows the relative signal strength level. rPush [A·FUNC], then [9·H/M/L] to select output power between high, middle and low. · "L" appears when low power is selected. · "M" appears when middle power is selected. · No indication appears when high power is selected. t Push and hold [PTT] to transmit, then speak into the microphone. · "$" appears. · Do not hold the microphone too close to your mouth or speak too loudly.

This may distort the signal. y Release [PTT] to receive. For your information-- Monitor function: 4 D To set the squelch level While pushing [MONI], push YZ [Y]/[Z] to set the squelch level. · The squelch level "1" is loose squelch, "10" is tight squelch. · When [VOL] is assigned as tuning dial, rotate [VOL] while pressing [MONI]. (pgs. 14, 65) MONI Push and hold [MONI] to listen to weak signals that do not open the squelch. 15 4 BASIC OPERATION Display type USING INITIAL SET MODE "Channel Name Indication" type The transceiver has 3 display types to suit your operating style during memory mode operation. The display type is selected in INITIAL SET MODE (p. 65).
"Frequency Indication" type Displays memory channel name you have assigned. In this display pre-programmed memory channel names are displayed. VFO mode is selectable. Displays operating frequency. "Channel Number Indication" type · Programmed frequencies are indicated when you have not preprogrammed the channel names in the selected memory channel.
· Push and hold [MONI] to display the operating frequency. Key lock function Displays memory channel number. In this type only preprogrammed memory channel numbers are displayed. VFO mode cannot be selected. · When the channel indication type is selected, only the following functions can be performed. - Scan function (p. 30) - Output power setting (p. 15) - DTMF memory function (p. 27) - Key lock function (see next set of instructions) - Scan pause timer setting, function key timer setting and LCD backlight setting in SET MODE (p. 61) The key lock function prevents accidental frequency changes and function activation. Push [A·FUNC] then push and hold [·ENT] for 1 sec. to toggle the function ON and OFF. · " " appears while the lock function is activated. · [PWR], [PTT], [VOL] and [MONI] can be operated regardless of this setting. A FUNC ENT 16 REPEATER OPERATION General When using a repeater, the transmit frequency is shifted from the receive frequency by the offset frequency.

It is convenient to program repeater information into memory channels. q Set the receive frequency (repeater output frequency). w Push [A·FUNC] and [4·DUP] several times to select "" or "+." · "" indicates the transmit frequency is shifted down; "+" indicates the transmit frequency is shifted up. · Blinking "" or "+" indicates the reversed duplex mode is selected in SET MODE (p. 58). 5 SET MODE Reversed duplex mode USING When the reversed duplex mode is selected, the receive frequency shifts. (Transmit frequency shifts in normal duplex mode.) Each receive and transmit frequency is shown in the table below with the following conditions; IC-V82 Input frequency Direction Offset frequency IC-U82 Input frequency Direction Offset frequency : 145.30 MHz : (negative) : 0.
6 MHz : 439.80 MHz : (negative) : 5 MHz 4 5 ePush [A·FUNC] and [1·TONE] several times to activate the subaudible tone encoder, if required. · " " appears. · Select the desired subaudible tone frequency, if necessary. (p.
18) r Push and hold [PTT] to transmit. · The displayed frequency automatically changes to the transmit frequency (repeater input frequency). · If "OFF" appears, check the offset frequency (see next page for details) and direction. IC-V82 IC-U82 Reversed OFF ON OFF ON Rx freq. 145.
30 MHz 144.70 MHz 439.80 MHz 434.80 MHz Tx freq. 144.70 MHz 145.30 MHz 434.80 MHz 439.80 MHz t Release [PTT] to receive. yPush and hold [MONI] to check whether the other station's transmit signal can be directly received.

q Push [A·FUNC], then push [8·SET] to enter SET MODE. Y Z w Push [Y] or [Z] several times until "REV" appears. e Rotate [VOL] to turn the reversed duplex mode ON or OFF. r Push [·ENT] (or [D·CLR]) to exit SET MODE. 17 5 REPEATER OPERATION Offset frequency USING SET MODE Subaudible tones USING SET MODE When communicating through a repeater, the transmit frequency is shifted from the receive frequency by an amount determined by the offset frequency. q Push [A·FUNC], then push [8·SET] to enter SET MODE. Y Z wPush [Y] or [Z] several times until "±" and offset frequency appear. Some repeaters require subaudible tones to be accessed. Subaudible tones are added to your normal signal and must be set in advance. qPush [A·FUNC], then push [8·SET] to enter SET MODE.
Y Z wPush [Y] or [Z] one or more times until "rt" appears. eRotate [VOL] to select the desired offset frequency. · Selectable steps are the same as the pre-set tuning steps. · The unit of the displayed offset frequency is "MHz." e Rotate [VOL] to select the desired subaudible tone.
rPush [·ENT] (or [D·CLR]) to set the selected tone and exit SET MODE. · Available subaudible tone frequencies 67.0 69.3 71.9 74.
4 77.0 79.7 82.5 85.4 88.5 91.5 94.8 97.4 100.0 103.

5 107.2 110.9 114.8 118.8 123.0 127.3 131.8 136.5 141.3 146.
2 151.4 156.7 159.8 162.2 165.
5 167.9 171.3 173.8 177.3 179.
9 183.5 186.2 189.9 192.8 196.6 199.5 203.5 206.5 rPush [·ENT] (or [D·CLR]) to set the offset frequency and exit SET MODE. (unit: Hz) 210.

7 218.1 225.7 229.1 233.6 241.8 250.3 254.1 18 REPEATER OPERATION D Tone information Some repeaters require different tone system to be accessed. DTMF TONES While pushing [PTT], push the desired DTMF keys (09, [A·FUNC], [B·CALL], [C·MR], [D·CLR], [#·BANK] and [·ENT]) to transmit DTMF tones. · [ENT] transmits tone "E," [#·BANK] transmits tone "F.
" · The transceiver has 16 DTMF memory channels (p. 27). 5 Repeater lockout USING INITIAL SET MODE This function helps prevent interference to other stations by inhibiting your transmission when a signal is received. The transceiver has two inhibiting conditions, repeater and busy. Y Z q While pushing and holding [Y] and [Z], turn the power ON to enter INITIAL SET MODE.

Y Z w Push [Y] or [Z] several times until "RLO" appears. e Rotate [VOL] to select the repeater lockout function to "RP," "bU" or OFF. · "RP": Transmit is inhibited when a signal with un-matched subaudible tone is received. · "bU": Transmit is inhibited when a signal is received. 5 1750 Hz TONE Y Z While pushing [PTT], push [Y] or [Z] to transmit a 1750 Hz tone signal.

Convenient Tone scan function: When you don't know the subaudible tone used for a repeater, the tone scan is convenient for detecting the tone frequency. Push [A·FUNC], then push [3·T.SCAN] to start the tone scan. · Push [D·CLR] to cancel the scan. · When the required tone frequency is detected, the scan pauses. r Push [·ENT] (or [D·CLR]) to exit INITIAL SET MODE. 19 5 REPEATER OPERATION Auto repeater function (USA/CSA versions only) The USA/CSA versions automatically activate the repeater settings (duplex ON/OFF, duplex direction, tone encoder ON/OFF) when the operating frequency falls within or outside of the general repeater output frequency range. The offset and repeater tone frequencies are not changed by the auto repeater function. Reset these frequencies, if necessary. Y Z q While pushing and holding [Y] and [Z], turn the power ON to enter INITIAL SET MODE.

Y Z w Push [Y] or [Z] several times until "RPt" appears. e Rotate [VOL] to select the desired condition. · "OF"-- the auto repeater function is turned OFF; · "R1"-- the auto repeater function activates duplex only; · "R2"-- the auto repeater function activates duplex and tone. USING INITIAL SET MODE · Frequency range and offset direction Frequency range 145.200145.495 MHz 146.610146.995 MHz 147.000147.395 MHz 442. 000444.995 MHz 447.000449.995 MHz Duplex direction "" appears "+" appears "+" appears "" appears r Push [·ENT] (or [D·CLR]) to exit INITIAL SET MODE. 20 MEMORY/CALL OPERATION General description The transceiver has 207 memory channels including 6 scan edge memory channels (3 pairs), and 1 call channel.

Each of these channels can be individually programmed with operating frequency (pgs. 13, 14), duplex direction (p. 17) and offset (p. 18), subaudible tone encoder or tone squelch and its tone frequency (pgs. 18, 35) and skip information* (p. 32). *except for scan edge memory channels. 6 In addition, a total of 10 memory banks, A to J, are available for usage by group, etc. 5 6 Selecting a memory channel q Push [C·MR] to select memory mode. · "X" appears. Push C MR Selecting the call channel Push [B·CALL] to select the call channel. · "C" is displayed instead of the memory channel number. · Push [D·CLR] or [C·MR] to select VFO or memory mode, respectively. Push B CALL wEnter 2 digits to select the desired memory channel (or YZ push the [Y]/[Z] keys). · The memory channels 09 are proceeded by a "0.

" · When [VOL] is assigned as tuning dial, rotate [VOL] to select the memory channel. (pgs. 14, 65) Push "C" appears TONE 1 P.BEEP 2 21 6 MEMORY/CALL OPERATION Programming the memory/call channels qPush [D·CLR] to select VFO mode, if necessary. w Set the desired frequency. eSet other information, such as tone, duplex, as desired. rPush [A·FUNC], then [C·MR] momentarily. · "X" and memory channel number blink. MONI PWR yPush [A·FUNC], then push and hold [C·MR] for 1 sec., when 3 beeps will sound to program the information into the selected memory channel and return to VFO. MONI PWR A FUNC B CALL C MR D CLR A FUNC C MR A FUNC B CALL C MR D CLR A FUNC C MR TONE 1 P.BEEP 2 T.SCAN 3 BANK DUP 4 SCAN 5 SKIP 6 OPT 0 TONE 1 P.BEEP 2 T.SCAN 3 BANK PRIO 7 SET 8 H/M/L 9 ENT DUP 4 SCAN 5 SKIP 6 OPT 0 PRIO 7 SET 8 H/M/L 9 ENT · After 3 beeps are emitted, continue to hold [C·MR] to increment the displayed memory channel number. Y Z tPush [Y] or [Z] to select the desired memory channel. · When programming the call channel, select "C." · When [VOL] is assigned as tuning dial, rotate [VOL] to select the memory channel. (pgs. 14, 65) MONI PWR A FUNC B CALL C MR D CLR TONE 1 P. BEEP 2 T.SCAN 3 BANK DUP 4 SCAN 5 SKIP 6 OPT 0 PRIO 7 SET 8 H/M/L 9 ENT MONI PWR A FUNC B CALL C MR D CLR TONE 1 P.BEEP 2 T.SCAN 3 BANK DUP 4 SCAN 5 SKIP 6 OPT 0 PRIO 7 SET 8 H/M/L 9 ENT 22 MEMORY/CALL OPERATION 6 Channel name programming qSelect a "Channel Name Indication" type in MODE (p. 65). wPush [C·MR] to select memory mode, if necessary. ePush [A·FUNC], then push [8·SET] to enter into the channel name programming mode. · The character to be edited blinks. INITIAL SET Memory transfers This function transfers a memory channel's contents to VFO (or another memory/call channel). This is useful when searching for signals around a memory channel frequency and for recalling the offset frequency, subaudible tone frequency etc.

[VOL] D Memory/call VFO C MR A FUNC rRotate [VOL] to select a character. ENT SET 8 qSelect the memory (call) channel to be transferred: Push [C·MR] (or [B·CALL]) to select memory (call) mode. Y Z Push [Y] or [Z] to select the memory channel. · When [VOL] is assigned as tuning dial, rotate [VOL] to select the memory channel. (pgs. 14, 65) C MR B CALL A FUNC 6 Y Z tPush [Y] to move the cursor to right, [Z] to move the cursor to left. · Up to 5 characters can be used for channel name. · Usable characters are AZ, 09, "space," +, , =, , /, [,] and :. y Push [·ENT] (or [D·CLR]) to set the name and exit the channel name programming mode. wPush [A·FUNC], then push and hold [C·MR] for 1 sec. to transfer the selected memory contents to the VFO. · VFO mode is selected automatically. 23 6 MEMORY/CALL OPERATION D Clearing a memory qPush [A·FUNC], then push [C·MR] to enter the memory transfer mode. · "X" and a memory channel number blink. C MR B CALL A FUNC D Memory/call memory/call qSelect the memory (call) channel to be transferred: Push [C·MR] (or [B·CALL]) to select the memory (call) mode. Y Z Push [Y] or [Z] to select the memory channel. · When [VOL] is assigned as tuning dial, rotate [VOL] to select the memory channel.

(pgs. 14, 65) Y Z wPush [Y] or [Z] to select the memory channel to be cleared. · When [VOL] is assigned as tuning dial, rotate [VOL] to select the memory channel.

(pgs. 14, 65) · The call channel cannot be cleared. C MR A FUNC wPush [A·FUNC], then push [C·MR] momentarily. · "--" and "X" blink. Y Z ePush [Y] or [Z] to select the target memory. · When [VOL] is assigned as tuning dial, rotate [VOL] to select the target channel. (pgs. 14, 65) r Push [A·FUNC], then push and hold [C·MR] for 1 sec. · Memory mode is selected and the contents are transferred to the target memory. ePerform the following operation within 1.

5 sec, otherwise the transceiver returns to the memory mode without clearing the memory. - Push [A·FUNC], then push [C·MR] momentarily. - Push [A·FUNC], then push and hold [C·MR] for 1 sec. · The contents of the selected memory are cleared. r Push [D·CLR] to return to regular operation. 24 MEMORY/CALL OPERATION 6 Memory bank selection The IC-V82/U82 has a total of 10 banks (A to J). Each memory channel, 0 to 199, may be assigned to one of the banks for easy memory management. q Push [C·MR] to select memory mode. Push C MR Memory bank setting q Push [C·MR] to select memory mode, then select the deY Z sired memory channel via [Y] or [Z]. Push C MR w Push [A·FUNC] and [8·SET] to enter SET MODE.

[VOL] 6 w Push [A·FUNC] and [#·BANK] to enter memory bank selection. · Bank indicator blinks. [VOL] Y Z e Push [Y] or [Z] several times until "bAk" appears. · " " indication blinks as follows. A FUNC e Rotate [VOL] to select the desired bank, A to J.

· Banks that have no programmed contents are skipped. A FUNC r Rotate [VOL] to select the desired bank. ENT SET BANK ENT 8 r Push [·ENT lect the bank.] (or [D·CLR]) to se- · Indicator stops blinking. Y Z t Push [Y] or [Z] to select the channel in the bank.

· No channel numbers are displayed for memory bank operation. t Push [·ENT] (or [D·CLR]) to assign the channel to the bank and return to regular memory condition. y Repeat steps q to t to assign another memory channel to the same or another bank. NOTE: Display type setting (pgs. 16, 65) in INITIAL SET must be selected "FR," otherwise the memory bank operation cannot be performed. 25 y To return to regular memory condition, push [A·FUNC] and [#·BANK] to enter memory bank mode, then push [·ENT] (or [D·CLR]). MODE 6 MEMORY/CALL OPERATION Transferring bank contents Contents of programmed memory banks can be cleared or transferred to another bank. INFORMATION: Even if the memory bank contents are cleared, the memory channel contents still remain programmed. q Select the desired bank contents to be transferred or erased. Push [C·MR] to select memory mode.

Push [A·FUNC] and [#·BANK], then rotate [VOL] to select the desired memory bank. · Bank indicator blinks. [VOL] w Push [A·FUNC] and [8·SET] to enter SET MODE. [VOL] Y Z e Push [Y] or [Z] several times until "bAk" appears. · Bank indicator appears. A FUNC r Rotate [VOL] to select the desired bank to receive the transferred information or erase the bank contents. · Select " " indication when erasing the contents from the bank. ENT SET 8 A FUNC Push [·ENT] (or [D·CLR]) to Y select the bank then push [Y] Z and [Z] to select the desired contents. · Bank indicator stops blinking. t Push [·ENT] (or [D·CLR]) to transfer or erase, and return to regular memory mode.

y Repeat steps q to t for transferring or erasing an another bank's contents. BANK ENT 26 DTMF MEMORY Programming a DTMF code sequence The transceiver has 16 DTMF memory channels (d0 to dF) for storage of often-used DTMF code sequence of up to 24 digits. DTMF memories are used to store phone numbers or control codes. q Push [A·FUNC], then push [0·OPT] to enter OPTION SET MODE. · Rotate [VOL] to select "dtm.

OF," if necessary. Or when an opY Z tional UT-118 DIGITAL UNIT is installed, push [Y] or [Z] several times until "dtm.OF" appears. Push A FUNC 7 tEnter the desired DTMF code sequence by pushing the digit keys, [A·FUNC], [B·CALL], [C·MR], [D·CLR], [#·BANK] and [·ENT], in the desired sequence. ·A maximum of 24 digits can be input.

· [·ENT] enters tone "E", [#·BANK] enters tone "F." · If a digit is mistakenly input, push [MONI] or [PTT] momentarily then repeat from step q. 6 7 OPT 0 A FUNC B CALL C MR D CLR w Push and hold [0·OPT] for 1 sec. to select the DTMF memory. · One of "d0" to "dF" appears. Push TONE 1 P.BEEP 2 T.SCAN 3 BANK DUP 4 SCAN 5 SKIP 6 OPT 0 OPT 0 for 1 sec. PRIO 7 SET 8 H/M/L 9 ENT eRotate [VOL] to select the desired DTMF memory. rPush and hold [0·OPT] for 1 sec.

to enter the DTMF programming mode. · "_ _ _ _ _" appears. · Programmed memories can be cleared in this way. Push yPush [MONI] or [PTT] to save the digits and exit the DTMF programming mode. · Programmed DTMF code sequence sounds when [MONI] is pushed. · Or after 24th digit is input, the transceiver automatically saves the digits and returns to step w. OPT 0 for 1 sec. 27 7 DTMF MEMORY Transmitting a DTMF code sequence · DTMF memory indication The DTMF memory consists of 5 pages that are 1st to 5th, 6th to 10th, 11th to 15th, 16th to 20th and 21st to 24th digits. · 1st page indication · 2nd page indication · 3rd page indication D Using a DTMF memory channel q Push [A·FUNC], then push [0·OPT] to enter OPTION SET MODE. · Rotate [VOL] to select "dtm.

OF," if necessary. Push A FUNC OPT 0 w Push and hold [0·OPT] for 1 sec. to select the DTMF memory. Push Appears OPT 0 for 1 sec. ·4th page indication · 5th page indication e Rotate [VOL] to select the desired memory.

r Push [MONI] or [PTT] to exit the DTMF memory mode. · Selected DTMF code sequence sounds when [MONI] is pushed. Appears Blinks tWhile pushing [PTT], push [MONI] to transmit the selected DTMF memory. · After the DTMF code sequence is transmitted, the transceiver returns to receive automatically. 28 DTMF MEMORY 7 DTMF transmission rate D Manual DTMF code transmission While pushing [PTT], push digit keys, [A·FUNC], [B·CALL], [C·MR], [D·CLR], [#·BANK] and [·ENT] to transmit a DTMF code sequence manually.

· [·ENT] transmits tone "E", [#·BANK] transmits tone "F." USING INITIAL SET MODE When slow DTMF transmission rates are required with DTMF memory transmission (as for some repeaters), the transceiver's rate of DTMF transmission can be adjusted. Y qWhile pushing and holding [Y] and Z [Z], turn the power ON to enter INITIAL SET MODE. [VOL] 7 A FUNC B CALL C MR D CLR TONE 1 P.BEEP 2 T.SCAN 3 BANK DUP 4 SCAN 5 SKIP 6 OPT 0 Y Z wPush [Y] or [Z] several times until "dtd" appears. eRotate [VOL] to select the desired DTMF transmission rate. · Four rates are available: "1" (100 msec. intervals) is the fastest; "5" (500 msec. intervals) is the slowest.

PWR PRIO 7 SET 8 H/M/L 9 ENT ENT rPush [·ENT] to exit INITIAL SET MODE. 29 8 Band edge SCAN OPERATION Programmed scan End 1b 2b 3b Scan types PROGRAMMED SCAN Start 1A 2A 3A Scan edges Scan Jump Programmed scan P1 scans between 1A and 1b, P2 scans between 2A and 2b, and P3 scans between 3A and 3b frequencies. Band edge Programmed scan repeatedly scans between two user programmed frequencies (memory channels "1A-3A" and "1b3b") or scans between upper and lower band edges. @@Scans between lower (start) and high (stop) frequency. q Push [D·CLR] to select VFO mode, if necessary. @@@@@@(pgs. @@Program them in the same manner as regular memory channels. (p. @@@@@@@@@(pgs. @@@@@@ Priority watch Priority watch checks for signals on "priority channels" while operating on a VFO frequency.
D Memory or call channel watch While operating on a VFO frequency, memory or call channel watch monitors for signals in the selected memory or call channel every 5 sec. q Select the desired memory channel or the call channel. w Push [D·CLR] to select VFO mode. @@@@@@· The priority channel is monitored every 5 sec. @@ 8 Scan resume condition USING SET MODE wPush [A·FUNC], then push [5·SCAN] to start the memory scan. @@@@@@Use SET MODE to select the one which best suits your needs. q Push [A·FUNC], then push [8·SET] to enter SET MODE. Y Z wPush [Y] or [Z] several times until "SCP" or "SCt" appears. e Rotate [VOL] to select the desired scan resume condition. · Pause scan: When receiving a signal, scan pauses on the signal until it disappears.
Resumes 2 sec. after the signal disappears. · Timer scan: When receiving a signal, scan pauses on the signal for 5 sec., 10 sec. or 15 sec., then resumes. 8 Memory scan Priority channel Mch 4 Mch 5 Mch 6 Pause scan 5 sec. Mch 199 SKIP 50 msec. r Push [D·CLR] to stop the watching. Timer scan r Push [·ENT] (or [D·CLR]) to set and exit SET MODE.

33 9 SUBAUDIBLE TONES Tone squelch D Operation The tone squelch opens only when receiving a signal containing a matching subaudible tone. You can wait for calls from group members using the same tone and not hear other signals. q Set the operating frequency. · Set the volume and squelch to the desired level as the normal operation. NOTE: The transceiver has 50 tone frequencies and consequently their spacing is narrow compared to units having 38 tones. Therefore, some tone frequencies may receive interference from adjacent tone frequencies. To prevent interference from adjacent tone frequencies, using the frequencies as in the following table, is recommended. · Recommended CTCSS frequencies 67.0 69.3 71.
9 74.4 77.0 79.7 82.5 85.
4 88.5 91.5 94.8 97.4 100.
0 103.5 107.2 110.9 114.8 118.8 123.0 127.3 131.8 136.5 141.

3 146.2 151.4 156.7 162.2 167.9 173.8 179.9 w Set the desired subaudible tone in SET MODE. · See page 35 for programming. (Unit: Hz) 186.
2 192.8 203.5 210.7 218.1 225.
7 233.6 241.8 250.3 e Push [A·FUNC], then push [1·TONE]. · Repeat several times until " " appears when selecting CTCSS, or " D " appears when selecting DTCS.
Push A FUNC TONE 1 CTCSS DTCS · Recommended DTCS codes 023 025 026 031 032 043 047 051 054 065 071 072 073 074 114 115 116 125 131 132 134 143 152 155 156 162 165 172 174 205 223 226 243 244 245 251 261 263 265 271 306 311 315 331 343 346 351 364 365 371 411 412 413 423 431 432 445 464 465 466 503 506 516 532 546 565 606 612 624 627 631 632 654 662 664 703 712 723 731 732 734 743 754 r When the received signal includes a matching tone, squelch opens and the signal can be heard. · When the received signal's tone does not match, tone squelch does not open, however, the S-indicator shows signal strength. · To open the squelch manually, push and hold [MONI]. t Transmit in the normal way. y To cancel the tone squelch, push [A·FUNC] and [1·TONE]. · Repeat several times until " " or " D " disappears. 34 SUBAUDIBLE TONES D Setting subaudible tones for tone squelch operation Separate tone frequencies can be select for tone squelch operation rather than repeater operation (the same range of tones is available-- see right below). Like the repeater tones, these are set in SET MODE. q Select VFO or memory channel. w Push [A·FUNC], then push [8·SET] to enter SET MODE.

Y Z e Push [Y] or [Z] several times until "Ct" appears when selecting CTCSS, or "dt" appears when selecting DTCS. · " " blinks when selecting CTCSS, or " D " blinks when selecting DTCS. 9 When SET MODE is selected from memory mode. The tone squelch frequency is not stored in the selected memory channel unless you follow steps y and u. y Push [A·FUNC], then push and hold [C·MR] for 1 sec. to transfer the contents to VFO. · 3 beeps are emitted. · VFO mode is selected automatically. u Push [A·FUNC], then push and hold [C·MR] for 1 sec. · 3 beeps are emitted.
· Available CTCSS tone frequency list 67.0 69.3 71.9 74.4 77.
0 79.7 82.5 85.4 88.5 91.
5 94.8 97.4 100.0 103.5 107.2 110.9 114.8 118.8 123.0 127.

3 131.8 136.5 141.3 146.2 151.4 156.7 159.8 162.2 165.5 167.
9 171.3 173.8 177.3 179.9 183.
5 186.2 189.9 192.8 196.6 199.
5 203.5 206.5 (unit: Hz) 210.7 218.1 225.7 229.1 233.6 241.8 250.3 254.

1 9 r Rotate [VOL] to select the desired subaudible tone. t Push [·ENT] (or [D·CLR]) to program the selected tone and exit SET MODE. · The recommended CTCSS frequencies or DTCS codes are shown at previous page. 35 9 SUBAUDIBLE TONES Pocket beep operation This function listens for subaudible tones and can be used as a "common pager" to inform you that someone has called when you were away from the transceiver. t When a signal with the matching tone is received, the transceiver emits beep tones and blinks " ." · Beep tones sound for 30 sec. and " " blinks. To stop the beeps manually, push any key.

" " continues blinking until step y is operated. D Waiting for a call from a specific station q Set the operating frequency.
w Set the desired CTCSS tone frequency or DTCS code in SET MODE. · See p. 35 for programming details. CTCSS y Push [PTT] to answer. DTCS e Push [A·FUNC], then push [1·TONE].
· Repeat several times until " " appears when CTCSS, or " D " appears when DTCS is selected. Push A FUNC · " " disappears and cancels the pocket beep function automatically. TONE 1 CTCSS DTCS r Push [A·FUNC], then push [2·P.BEEP] to activate the pocket beep function. · " " appears.
Push A FUNC P.BEEP 2 CTCSS DTCS 36 SUBAUDIBLE TONES 9 Tone scan By monitoring a signal on a repeater, or using pocket beep or tone squelch function, you can determine the tone frequency necessary to access a repeater or open the squelch. q Set the frequency to be checked for a tone frequency or code. w Push [A·FUNC], then push [1·TONE]. · Repeat several times to select the type of tone to be scanned. (One of " ," " " or " D " appears) · Tone scan may be used even if the tone condition or type is not selected. Push A FUNC TONE r When the CTCSS tone frequency or DTCS code is matched, the squelch opens and the tone frequency or code is temporarily programmed into the selected mode such as memory or call channel. · The tone scan pauses when a CTCSS tone frequency or 3-digit DTCS code is detected. · The decoded CTCSS tone frequency or 3-digit DTCS code is used for the tone encoder or tone encoder/decoder depending on the selected tone condition or type in step w. - No indication : Cannot be used for operation.

-" " : CTCSS tone encoder -" " : CTCSS tone encoder/decoder - " D " : DTCS tone encoder/decoder 1 9 t Push [D·CLR] to stop the scan. e Push [A·FUNC], then push [3·T.SCAN] to start the tone scan. Y Z · To change the scanning direction, push [Y] or [Z]. Push A FUNC T.SCAN 3 37 10 PAGER/CODE SQUELCH Requires Optional UT-108 Pager function This function uses DTMF codes for paging and can be used as a "message pager" to confirm you of a caller's identification even when you leave the transceiver temporarily unattended. Pager selective code (push [PTT]) Code programming D Before programming The pager and code squelch functions require ID codes and a group code. These codes are 3-digit DTMF codes and must be written into the code channels before operation. q Decide the ID code of each transceiver and a group code for your group. w Decide whether you want to return to normal operation or code squelch operation after a connection is made.
e Program the ID code, group code and transmit codes (other station's codes) as below. Beep Beep Beep Answer back (manual) D Code channel assignment ID OR CODE CHANNEL GROUP CODE NUMBER "RECEIVE ACCEPT" OR "RECEIVE INHIBIT" "Receive accept" only "Receive inhibit" should be programmed in each channel. "Receive accept" must be programmed in one channel. "Receive inhibit" only. eep pB Bee Beep Your ID code Other parties' ID code 0 16 One of 16 P Set both transceivers to either code squelch or non-coded operation Group code Memory space* Communication *Channel CP automatically memorizes an ID code when receiving a pager call.
The contents in channel CP cannot be changed manually. 38 PAGER/CODE SQUELCH D Code programming Your ID code MUST be programmed into code channel C0. Up to 6 transmit codes (codes that you transmit) are programmable into code channels, C1 to C6, if required. q Push [A·FUNC], then push [0·OPT] to enter MODE. OPTION SET 10 y Enter the desired 3-digit transmit code via the keypad.
· Rotate [VOL] to select "dtm.PG" or "dtm.CS," if "dtm.OF" appears. or u Push [A·FUNC], then push [6·SKIP] to set the channel to "receive inhibit" or "receive accept." · When "receive inhibit" is set, "SKIP" appears as below. · Code channel C0 cannot be set as "receive inhibit." · See the table for "receive accept" and "receive inhibit" details (p. 38). w Push and hold [0·OPT] for 1 sec.

to enter the code selection mode. · One of either "CP" or "C0" to "C6" blinks. · "C0" is your ID code and "C1" to "C6" are transmit codes. 10 i Repeat steps t and y to set additional transmit code channels, if desired. o Push [·ENT] or [PTT] to exit code selection mode. · Receive accept/receive inhibit "Receive accept" ("SKIP" indicator does not appear) accepts pager calls when the transceiver receives a signal with a code the same as that in the code channel. "Receive inhibit" ("SKIP" indicator appears) ignores calls even when the transceiver receives a code the same as that in the code channel. Transmit codes should therefore be programmed for "receive inhibit," otherwise the transceiver will not reject unnecessary calls. 39 YZ e Rotate [VOL] (or push [Y]/[Z]) to select code channel C0. · Each transceiver should have a different ID code.
r Enter the desired 3-digit ID code via the keypad. YZ t Rotate [VOL] (or push [Y]/[Z]) to select a transmit code channel from C1 to C6. 10 PAGER/CODE SQUELCH Pager operation D Calling a specific station q Program the code channel in advance (p. 39). w Set the operating frequency.
· Set the volume and squelch to the desired level as in normal operation. u After confirming a connection, push [A·FUNC] and [0·OPT] to enter OPTION SET MODE, then rotate [VOL] to select the code squelch operation "dtm.CS," or non-selective calling system "dtm.OF." · DO NOT push any digit keys while code channels C0 to C6 are displayed, otherwise code channel contents will be changed.
e Push [A·FUNC], then push [0·OPT]. · Rotate [VOL] to select "dtm.PG," if "dtm.CS or "dtm.OF" appears. i Communicate with the other party as normal: push [PTT] to transmit; release to receive. D Waiting for a call from a specific station r Select the desired transmit code channel: Push and hold [0·OPT] for 1 sec. to enter the code selection mode. Rotate [VOL] to select the desired code channel. Push [·ENT] to return to previous mode.

· 100 MHz digit shows "P." q Set the operating frequency. w Push [A·FUNC], then push [0·OPT]. Rotate [VOL] to select "dtm.PG," if "dtm.CS or "dtm.OF" appears.