

ICOM

INSTRUCTION MANUAL

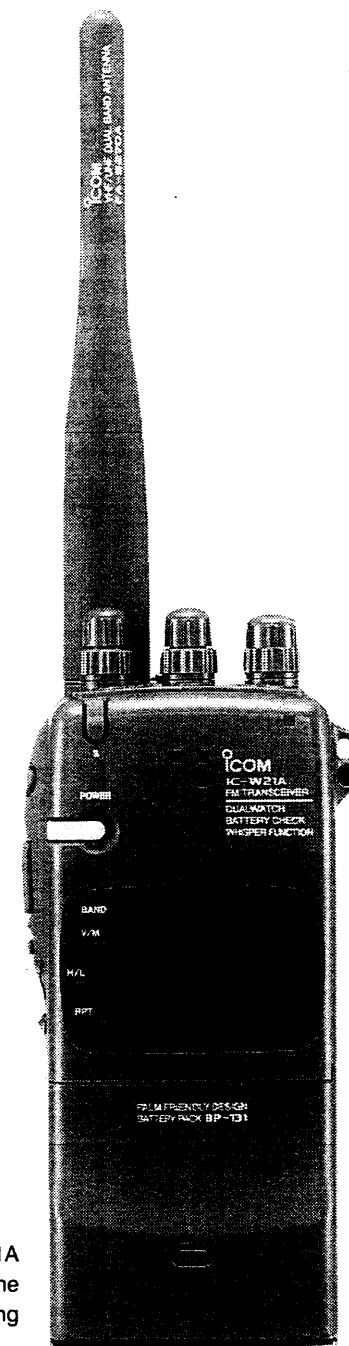
DUAL BAND FM TRANSCEIVER

IC-W21A

IC-W21E

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.



The photo shows IC-W21A with optional BP-131. The battery pack differs according to versions.

IMPORTANT

READ ALL INSTRUCTIONS carefully and completely before using the transceiver.

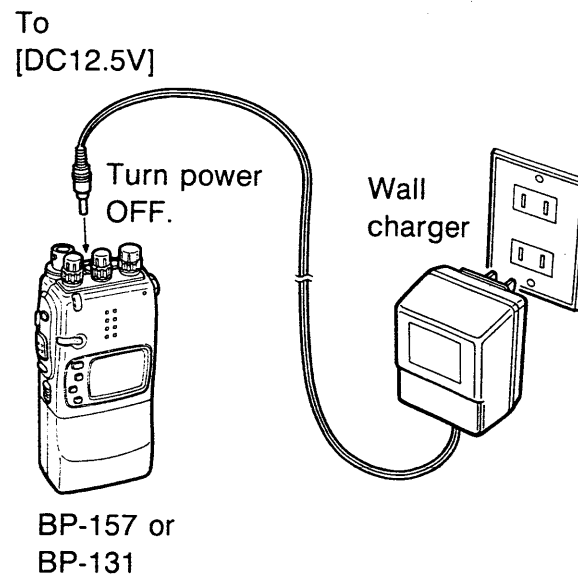
SAVE THIS INSTRUCTION MANUAL — This instruction manual contains important safety and operating instructions for the IC-W21A and IC-W21E.

Note that this instruction manual applies only to those functions accessible in its factory-shipped state. For operating more advanced functions, a booklet titled "Tech Talk" is available from your Icom Dealer.

WHEN FIRST APPLYING POWER

◆ Battery pack charging

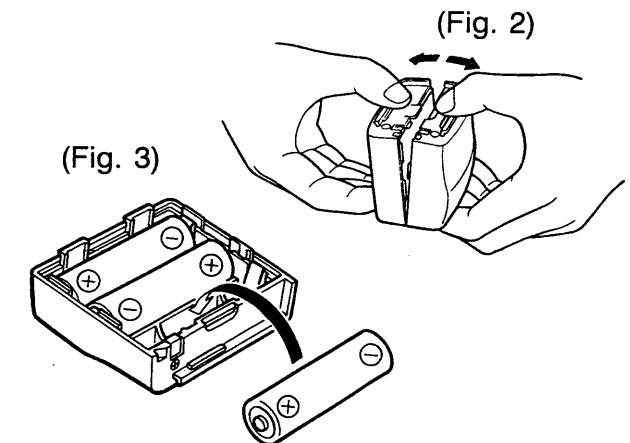
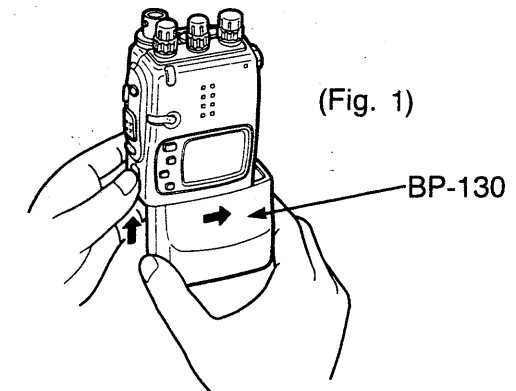
- ① Attach the battery pack to the transceiver.
- ② Connect the wall charger to the [DC12.5V] jack to charge the battery pack.
 - Charging period of the BP-157 and BP-131 is approx. 15 hrs.



◆ Installing batteries into the battery case

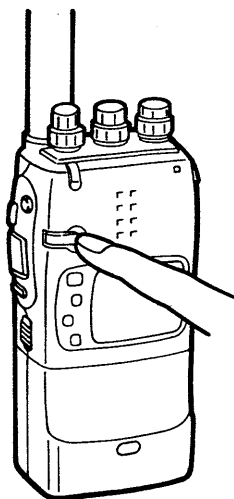
Install six dry cell batteries as shown in the figures below.

- Pay attention to the polarities.



◆ **Power ON**

Push and hold [POWER] for 1 sec. to turn power ON.



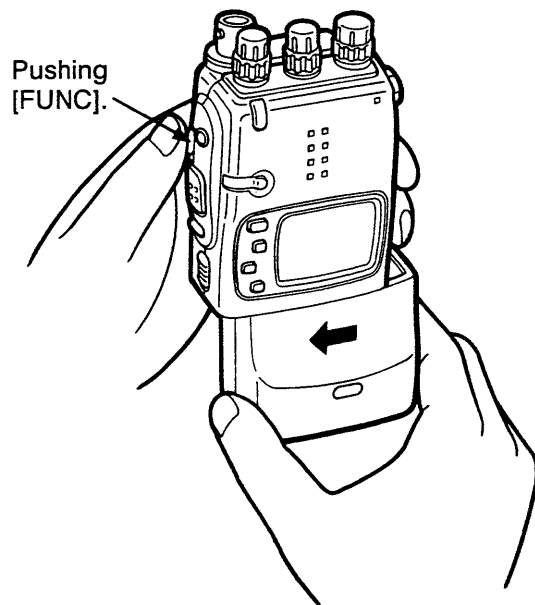
Push and hold [POWER] for 1 sec. again to turn power OFF.

The power key may not function when the transceiver has not been operated for 2 months or more as the internal rechargeable backup battery may have become empty. In this case, activate the CPU as described in the box at right.

◆ **Activating the CPU**

(when the power does not come on)

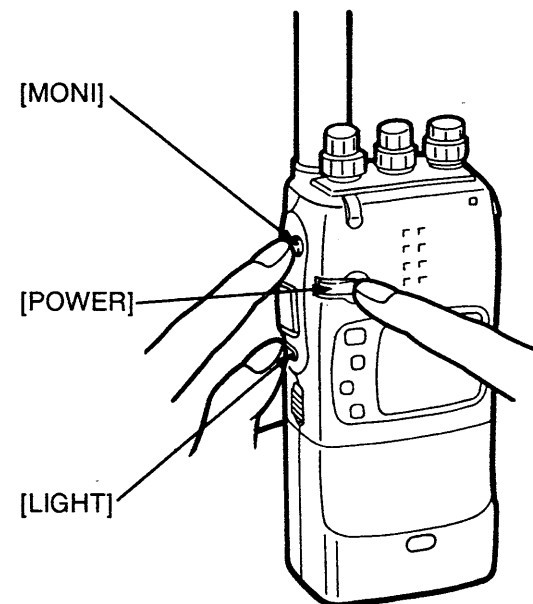
While pushing the [FUNC] key, attach the charged battery pack. Then, turn power ON.



◆ **Resetting the transceiver**

Reset the transceiver before operating for the first time, or when the internal CPU malfunctions.

- ① Turn power OFF.
- ② While pushing [MONI] and [LIGHT], push and hold [POWER] for 1 sec. to reset the CPU.



CAUTIONS

NEVER connect the transceiver to an AC outlet or to a power source of more than 16 V DC.

NEVER connect the transceiver to a power source using reverse polarity. This connection will ruin the transceiver.

NEVER allow children to touch the transceiver.

AVOID using or placing the transceiver in direct sunlight or in areas with temperatures below -10°C ($+14^{\circ}\text{F}$) or above $+60^{\circ}\text{C}$ ($+140^{\circ}\text{F}$).

BE CAREFUL! When transmitting for a long time with high output power, the rear panel may become hot.

The use of non-Icom battery packs/chargers may impair transceiver performance and invalidate the warranty.

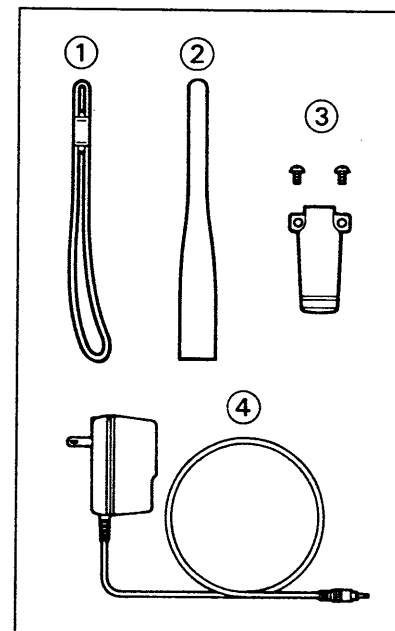
Even when the transceiver power is OFF, a slight current still flows in the circuits. Remove the battery pack or case from the transceiver when not using the transceiver for a long time. Otherwise, the battery pack or installed dry cell batteries in the battery case will become exhausted.

EXPLICIT DEFINITIONS

The following explicit definitions apply to this manual.

WORD	DEFINITION
CAUTION	Equipment damage may occur.
NOTE	If disregarded, inconvenience only. No risk of personal injury, fire or electric shock.

UNPACKING



- Included accessories: Qty.**
- ① Handstrap 1
 - ② Antenna (FA-B270A) 1
 - ③ Belt clip and screws 1 set
 - ④ Wall charger* 1
Battery pack (BP-157) or battery case (BP-130) (attached with the transceiver) 1

* Not included with versions which include a battery case.

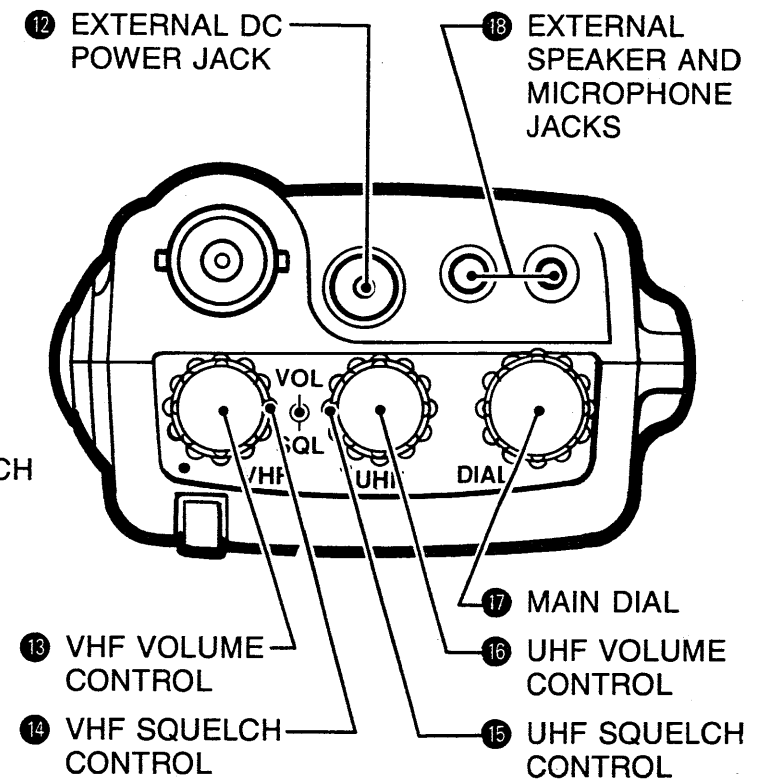
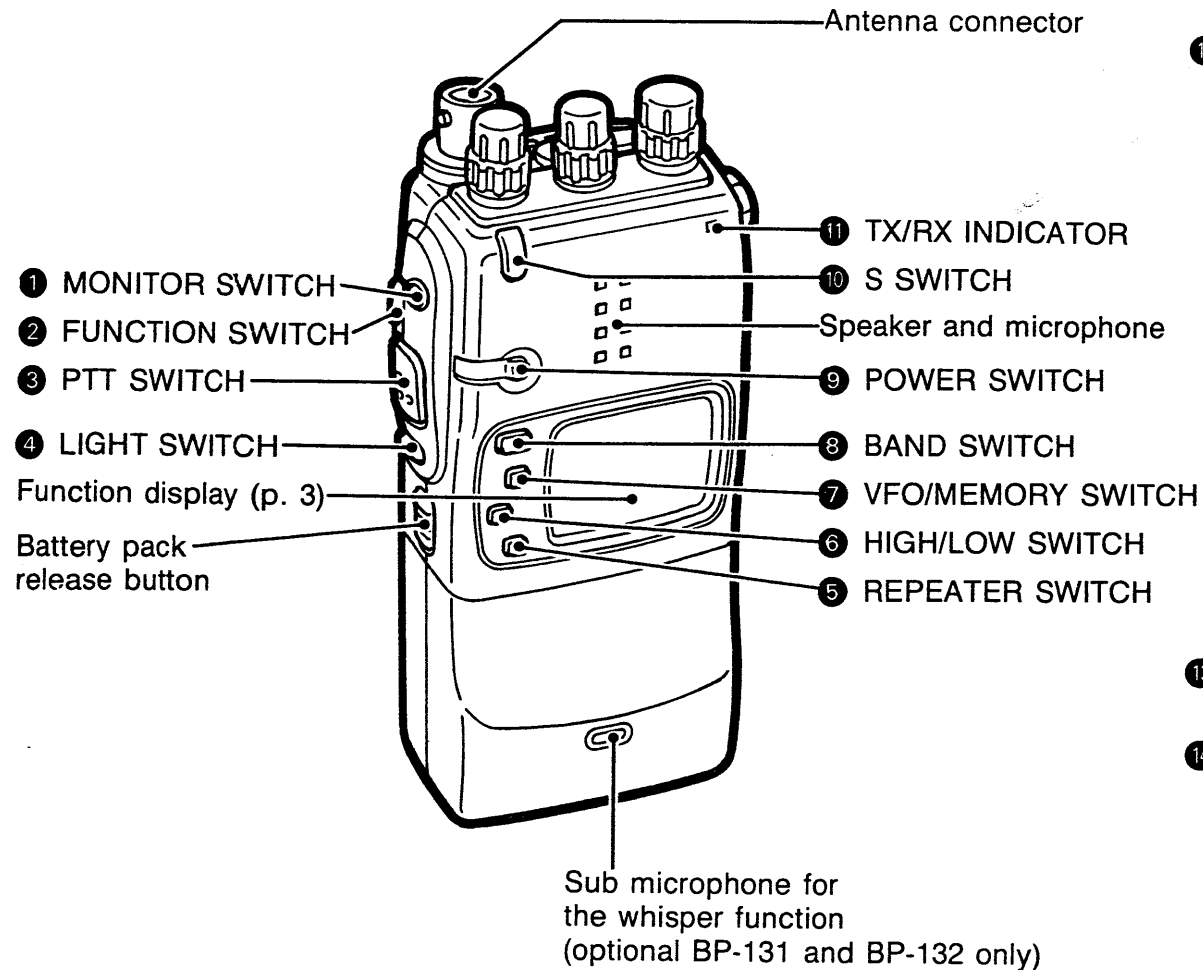
TABLE OF CONTENTS

IMPORTANT	i		
WHEN FIRST APPLYING POWER	i ~ ii		
CAUTIONS	iii		
EXPLICIT DEFINITIONS	iii		
UNPACKING	iii		
TABLE OF CONTENTS	iv		
1 PANEL DESCRIPTION	1 ~ 3		
■ Panel description	1		
■ Function display	3		
2 BATTERY PACK CHARGING	4 ~ 6		
■ Battery pack charging	4		
■ Charging precautions	4		
■ About the battery pack	4		
■ Charging examples	5		
3 OPERATION	7 ~ 12		
■ Accessory attachment	7		
■ Main band	8		
■ Setting a frequency	9		
■ Receiving	11		
■ Transmitting	12		
4 MEMORY CHANNEL	13 ~ 14		
■ Selecting a memory channel	13		
■ Programming a frequency into a memory channel	13		
■ Transferring a programmed frequency to VFO	14		
5 CALL CHANNEL	15		
■ Calling up a call channel	15		
■ Programming a call channel	15		
6 SCAN	16 ~ 17		
■ Scan types	16		
■ Programmed scan	16		
■ Memory scan	17		
7 OTHER FUNCTIONS	18 ~ 20		
■ Clock indication	18		
■ Battery voltage indication	19		
■ Optional whisper function	20		
■ Optional HM-75 operation	20		
8 REPEATER OPERATION	21 ~ 24		
■ EASY mode and MULTI-FUNCTION mode	21		
■ Basic repeater use	21		
■ Repeater memory	22		
■ Entering the MULTI-FUNCTION mode	23		
■ Setting an offset frequency	24		
■ Setting a subaudible tone frequency	24		
9 TROUBLESHOOTING	25		
10 SPECIFICATIONS	26		
SCHEMATIC AND BLOCK DIAGRAMS	SEPARATE		

■ Panel description

CAUTION when using dry cell batteries!

Operation with an external DC power source simultaneously charges batteries inside the battery case. This may cause battery leakage and damage the transceiver.



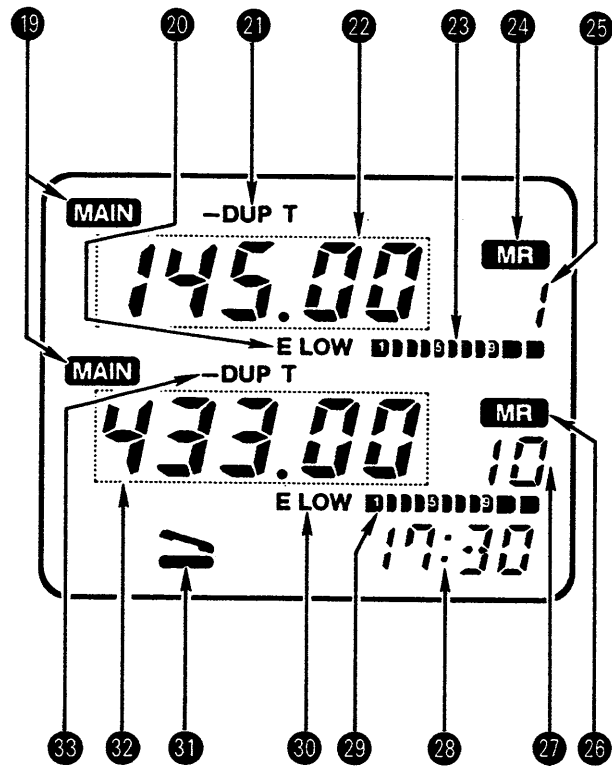
- ① **MONITOR SWITCH [MONI]** (p. 11)
 - Manually opens the main band's squelch and monitors the transmit frequency.
 - Alters the dial select step while pushing [FUNC].
- ② **FUNCTION SWITCH [FUNC]**
 While pushing this switch, other switches and the main dial perform secondary functions.
 - "Push [FUNC] + [LIGHT]" means "while pushing the [FUNC] switch, push the [LIGHT] switch."
- ③ **PTT SWITCH [PTT]** (p. 12)
 Push and hold to transmit; release to receive.
- ④ **LIGHT SWITCH [LIGHT]**
 - Turns the LCD lighting ON and OFF. (p. 10)
 - Turns the lock function ON and OFF while pushing [FUNC]. (p. 10)
- ⑤ **REPEATER SWITCH [RPT/WSPR]**
 - Turns the duplex or tone encoder ON and OFF. (p. 21)
 - Calls the repeater memory up when pushed for 1 sec. (p. 22)
 - Turns the optional whisper function ON and OFF while pushing [FUNC]. (p. 20)
 - Generates a 1750 Hz tone while pushing [PTT]. (IC-W21E only)

- ⑥ **HIGH/LOW SWITCH [H/L/TS]**
 - Selects high or low output powers.
 - The main dial selects a low output power level while pushing this switch. (p. 12)
 - Enters the tuning step setting condition while pushing [FUNC]. (p. 10)
- ⑦ **VFO/MEMORY SWITCH [V/M MW]**
 - Changes the mode between VFO and MEMORY. (p. 8)
 - Programs the displayed frequency into a memory channel while pushing [FUNC]. (p. 13)
- ⑧ **BAND SWITCH [BAND]**
 - Changes the main band between VHF and UHF. (p. 8)
 - Turns the sub band OFF for single band operation while pushing [FUNC]. (p. 11)
- ⑨ **POWER SWITCH [POWER]** (p. ii)
 Turns power ON and OFF when pushed for 1 sec.
- ⑩ **S SWITCH [S]**
 - Selects a call channel. (p. 15)
 - Starts scan when pushed for 1 sec. (pgs. 16~17)
 - Selects clock or battery voltage indication while pushing [FUNC]. (pgs. 18~19)

- ⑪ **TX/RX INDICATOR**
 Lights up in green while the squelch is open. Lights up in red while transmitting.
- ⑫ **EXTERNAL DC POWER JACK [DC12.5V]**
 Allows operation with a 12.5 V DC power source using the optional cables, CP-13 or OPC-288.
- ⑬ **VHF VOLUME CONTROL [VOL]**
 Adjusts the VHF audio output level.
- ⑭ **VHF SQUELCH CONTROL [SQL]**
 Varies the VHF squelch threshold point for noise mute.
- ⑮ **UHF SQUELCH CONTROL [SQL]**
 Varies the UHF squelch threshold point for noise mute.
- ⑯ **UHF VOLUME CONTROL [VOL]**
 Adjusts the UHF audio output level.
- ⑰ **MAIN DIAL [DIAL]** (pgs. 8, 9)
 Selects an operating frequency, memory channel, etc.
- ⑱ **EXTERNAL SPEAKER AND MICROPHONE JACKS [MIC]/[SP]**
 Connects an optional speaker-microphone or headset, if desired.

1 PANEL DESCRIPTION

■ Function display



19 MAIN BAND INDICATOR

Appears in one of two positions to show the main band for transmitting and function control.

20 VHF LOW POWER INDICATOR

(p. 12)

- "LOW" appears while one of the low output powers (LOW 1 ~ LOW 3) is selected in VHF.
- "E LOW" appears while economical low output power is selected in VHF.

21 VHF DUPLEX/TONE INDICATOR

(p. 21)

- "- DUP" or "DUP" appears when duplex is ON.
- "T" appears when the subaudible tone encoder is ON.

22 VHF FREQUENCY READOUT

Shows the VHF operating frequency.

23 VHF S/RF INDICATOR

(p. 12)

- Shows the relative signal strength while receiving in VHF.
- Shows the selected output power while transmitting in VHF.

24 VHF MEMORY MODE INDICATOR

(p. 8)

Appears while MEMORY mode is selected in VHF.

25 VHF MEMORY CHANNEL READ-OUT

(p. 13)

Indicates a VHF memory channel number, etc.

26 UHF MEMORY MODE INDICATOR

Refer to 24.

27 UHF MEMORY CHANNEL READ-OUT

Refer to 25.

28 CLOCK/BATTERY VOLTAGE INDICATOR

(pgs. 18, 19)

Shows the time or shows the connected battery voltage as a %.

29 UHF S/RF INDICATOR

Refer to 23.

30 UHF LOW POWER INDICATOR

Refer to 20.

31 WHISPER FUNCTION INDICATOR

(p. 20)

Appears while the optional whisper function is activated.

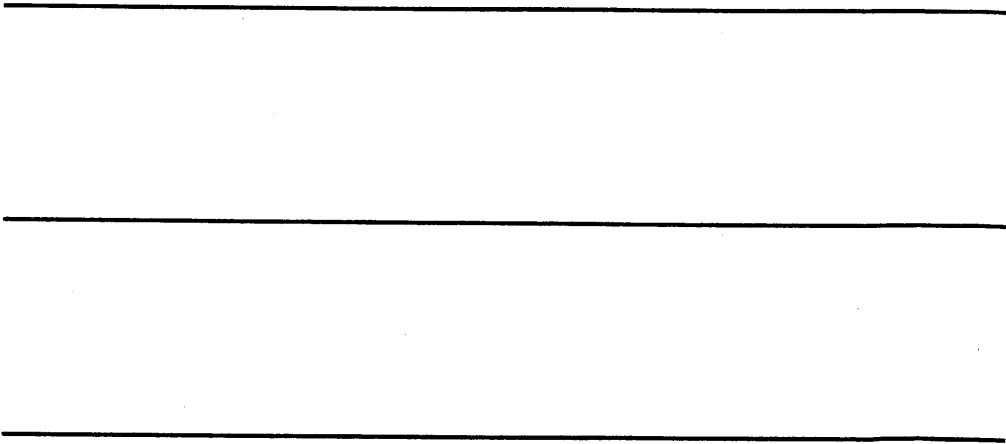
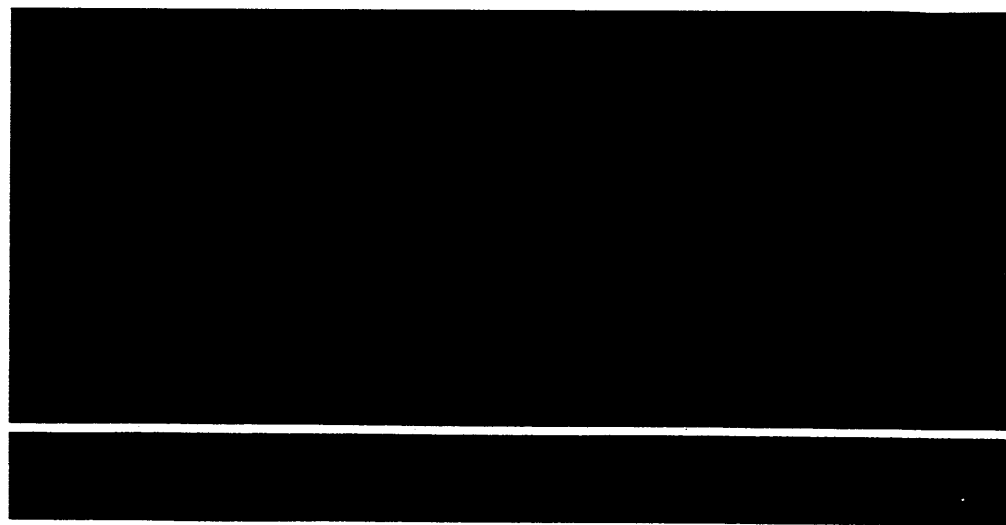
32 UHF FREQUENCY READOUT

Refer to 22.

33 UHF DUPLEX/TONE INDICATOR

Refer to 21.

Count on us!



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