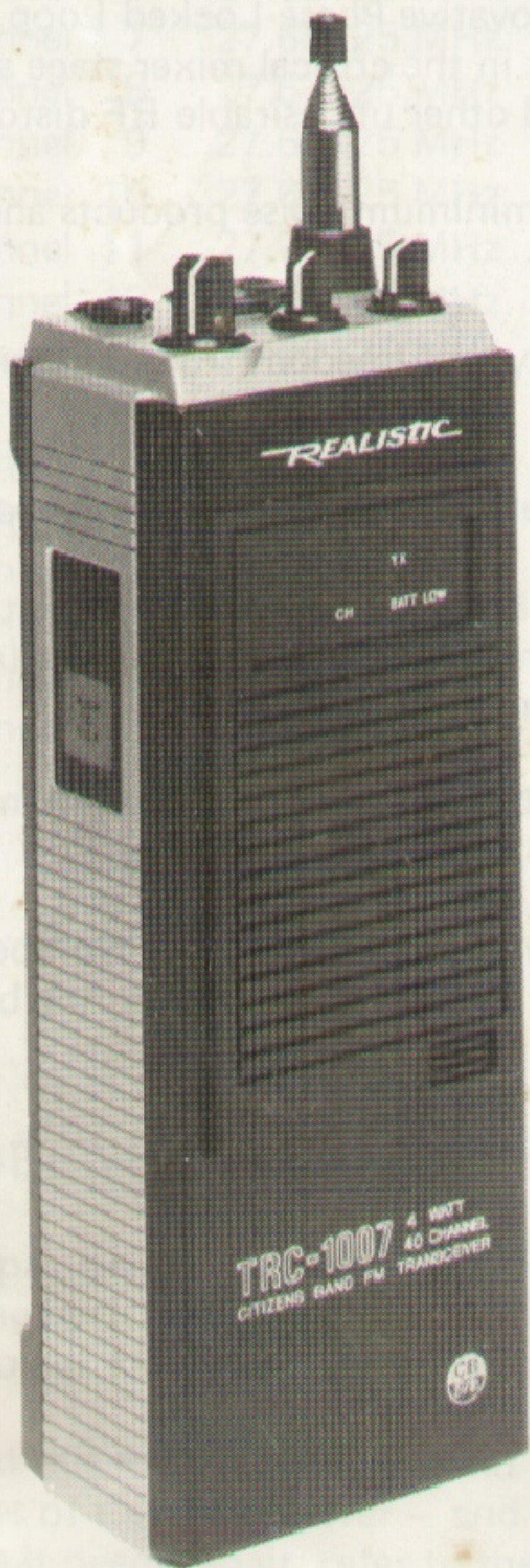


C.B. 4-WATT, 40-CHANNEL WALKIE-TALKIE



TRC-1007

**OWNER'S
MANUAL**

**PLEASE READ BEFORE
USING THIS EQUIPMENT**

REALISTIC®*

CAT. NO.
21-7009

*TRADEMARKS OF TANDY CORPORATION

Your Realistic TRC-1007 belongs to the latest generation in our famous line of walkie-talkie styled CB transceivers. This rugged 40 channel unit uses a digital phase-locked loop synthesizer to generate all 40 operating frequencies with the very highest accuracy and stability.

The all solid-state circuit incorporates many more special features you can't see – but they sure make a difference in the performance!

- * Full 40 channel operation from innovative Phase-Locked Loop system.
- * Dual C-MOS Field Effect Transistor in the critical mixer stage assures freedom from cross-modulation and other undesirable RF distortion products.
- * All-silicon solid-state circuitry (for minimum noise products and maximum circuit efficiency).
- * Low-distortion IC audio circuit.
- * Ceramic filter for superior selectivity and freedom from adjacent channel interference.

There are plenty of controls for top performance and convenience, too:

- * LED indicates channel number and battery condition/Transmit mode.
- * HIGH/LOW power switch lets you reduce your power output (and battery drain) for short-range transmissions.
- * Separate built-in condenser mic and speaker.
- * Jacks for external power source, battery charger, push-to-talk mic, speaker and even for an external CB aerial (all optional).

For your own protection, we urge you to record the Serial Number of this unit in the space provided. You'll find the Serial Number on the bottom of the unit.

Serial Number

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ASSIGNED FREQUENCY AND CHANNEL

Channel 1	27.60125 MHz	Channel 21	27.80125 MHz
Channel 2	27.61125 MHz	Channel 22	27.81125 MHz
Channel 3	27.62125 MHz	Channel 23	27.82125 MHz
Channel 4	27.63125 MHz	Channel 24	27.83125 MHz
Channel 5	27.64125 MHz	Channel 25	27.84125 MHz
Channel 6	27.65125 MHz	Channel 26	27.85125 MHz
Channel 7	27.66125 MHz	Channel 27	27.86125 MHz
Channel 8	27.67125 MHz	Channel 28	27.87125 MHz
Channel 9	27.68125 MHz	Channel 29	27.88125 MHz
Channel 10	27.69125 MHz	Channel 30	27.89125 MHz
Channel 11	27.70125 MHz	Channel 31	27.90125 MHz
Channel 12	27.71125 MHz	Channel 32	27.91125 MHz
Channel 13	27.72125 MHz	Channel 33	27.92125 MHz
Channel 14	27.73125 MHz	Channel 34	27.93125 MHz
Channel 15	27.74125 MHz	Channel 35	27.94125 MHz
Channel 16	27.75125 MHz	Channel 36	27.95125 MHz
Channel 17	27.76125 MHz	Channel 37	27.96125 MHz
Channel 18	27.77125 MHz	Channel 38	27.97125 MHz
Channel 19	27.78125 MHz	Channel 39	27.98125 MHz
Channel 20	27.79125 MHz	Channel 40	27.99125 MHz

BEFORE YOU CALL FOR HELP...

Our repair centres receive many returned products which are actually working perfectly. Maybe the owner just didn't read the instructions, or overlooked something. Or perhaps the problem was merely weak-batteries!

So read this manual carefully and be sure you understand all the basic features of this Transceiver – and the special ones, too! And before you assume it needs repair, refer to the Service and Maintenance section of this manual, to see if the problem is something you can eliminate.

Enjoy your Realistic TRC-1007!

SPECIFICATIONS

RECEIVER

Frequency Coverage	27.60125 MHz to 27.99125 MHz
Sensitivity	0.5 μ V for 10 dB (S+N)/N
Selectivity	\pm 4.5 kHz at -6 dB
Adjacent Channel Rejection	60 dB
Audio Distortion at 1000 Hz	Less than 10% at 1 watt output (8 Ω)
I.F.	1st 10.695 MHz, 2nd 455 kHz
Squelch	Adjustable from 0.3 μ V

TRANSMITTER

Frequency Coverage	27.60125 MHz to 27.99125 MHz
Power Output	3.5 watts in HI Power Position 0.3 watts in LOW Power Position
Modulation	1.5 kHz – 2.0 kHz deviation
Spurious Output	0.25 μ W or better
Emmission	FM
Frequency Tolerance	\pm 0.002%
Current Drain (12.5V DC)	65 – 1000 mA (from no-signal receive, to transmit)

GENERAL

Power Requirements:

8 AA Penlight batteries (or 10 rechargeable Ni-Cad batteries).
12 Volts DC with external adaptor Rechargeable Ni-Cads can be charged in the unit, while using an external Charger/Adaptor and the CHG Jack.

Speaker:

5 cm (2") permanent magnet dynamic type.

Microphone:

Built-in electret-condenser type with FET amplifier.
Provision for external mic with push-to-talk capability via the 5-pin DIN Jack.

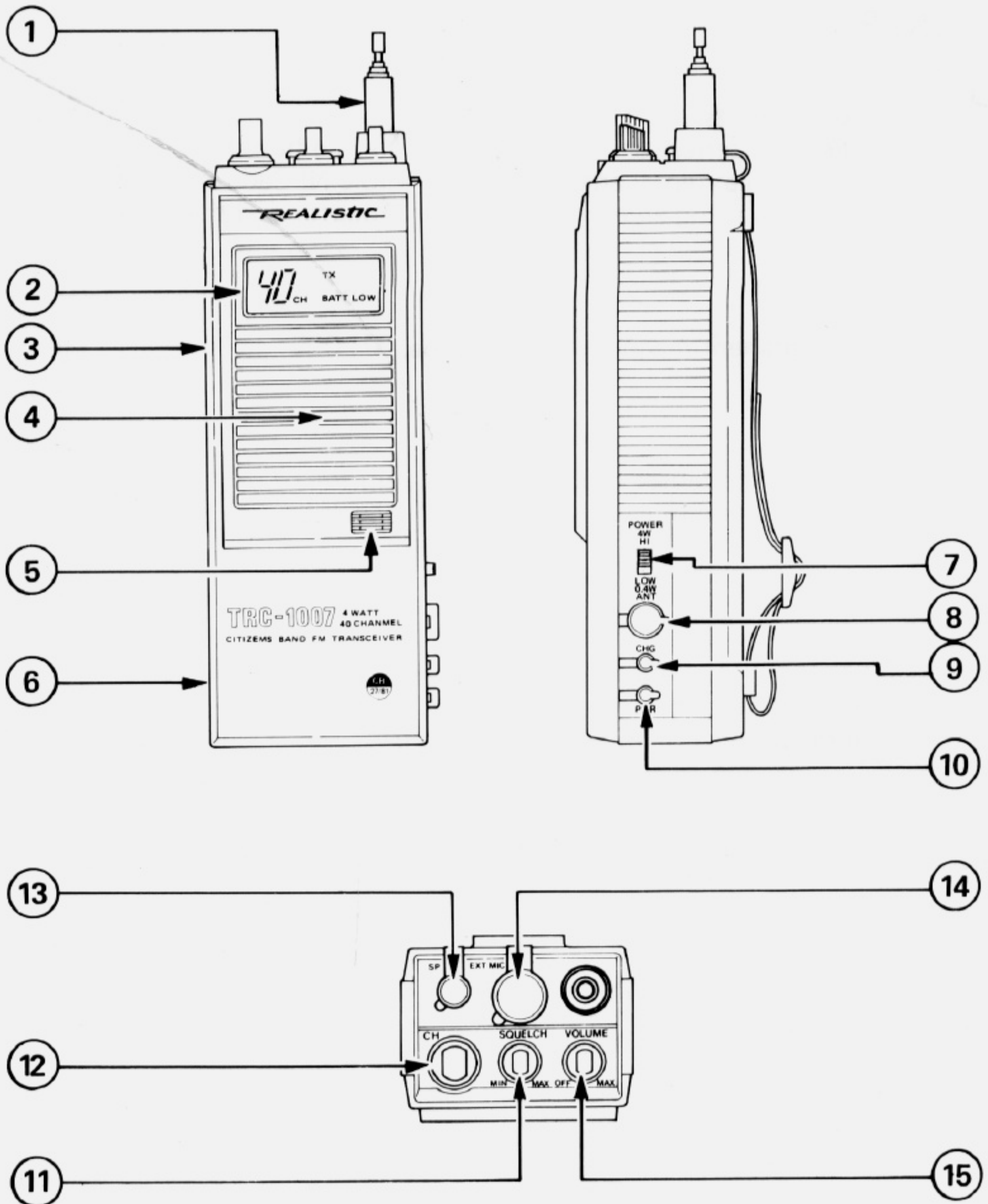
LED Indicator:

Indicates channel (1 – 40) number selected.
Provides indication of battery condition.
Provides indication of relative transmit mode.

Aerial:

Built-in telescopic aerial.

CONTROLS



1. Aerial
Extend fully.

**2. Channel Display, TX mode/
BATTERY LOW**
Indicates channel (1 – 40) number selected. Also indicates condition of batteries.

3. PUSH TO TALK Soft Button
Press to transmit.
Release to listen.

4. Built-in Dynamic Speaker
Listen here.

**5. Built-in Electret Condenser
Microphone**
Talk here.

**6. Battery Compartment on
back**
Load batteries as noted on page 8.

7. HI/LOW POWER Switch
Switch to LOW when transmitting a short distance and/or to conserve batteries.

8. ANT Jack
Connect external aerial (50 ohm) here for mobile or base use – or just to extend range. Keep telescopic aerial collapsed.

9. CHG Jack
Connect charger (such as TANDY Catalog Number 21-516) to recharge Nickel Cadmium batteries while they're in the unit.

Note: Do not attempt to operate unit while batteries are being recharged.

10. PWR Jack
Connect a 12-volt DC source, (TANDY 270-1533). Batteries will be automatically disconnected.

11. SQUELCH Control
Adjust to eliminate background noise.

12. CHannel Selector
Select any one of 40 channels.

13. External SPEAKER Jack
Connect external speaker or earphone (8 – 16 ohm impedance). Internal speaker is automatically disconnected.

14. EXTERNAL MIC Jack
Connect external microphone here (5-pin DIN plug). Can be used with push-to-talk mics. Built-in mic is automatically disconnected.

15. OFF-VOLUME Control
Turn clockwise to apply power. Adjust for desired listening level.

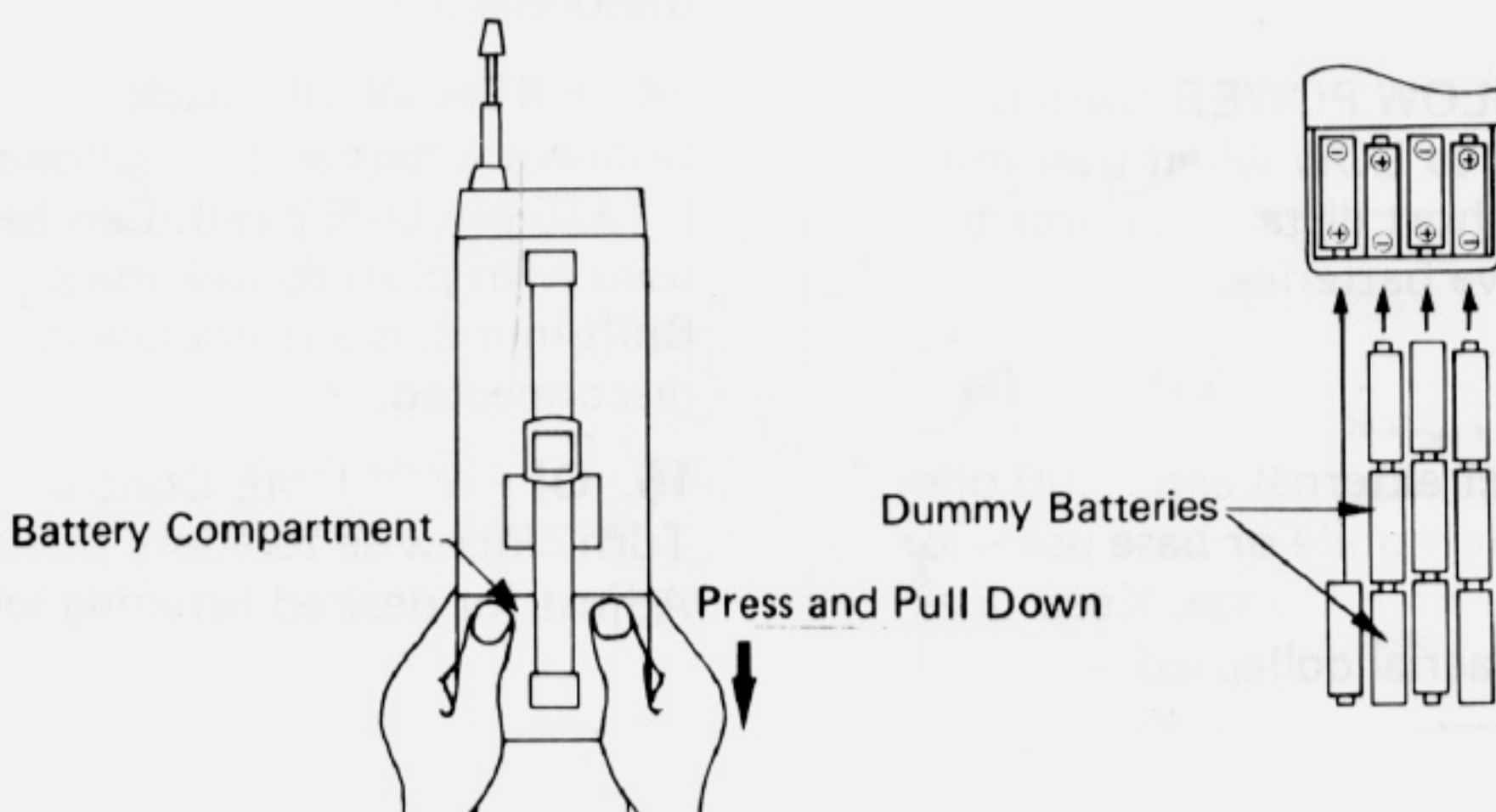
PREPARING FOR USE

1. Remove the Battery Compartment Cover as shown below.
2. You can use the following types of batteries (size AA "penlight").

Description	Quantity Required
Rechargeable Nickel Cadmium (1.25 volts)	10
Alkaline type (1.5 volts)	8
Standard type (1.5 volts)	8

3. Install batteries with polarity as shown in the Compartment.
4. If you are using alkaline or standard type AA "penlight" batteries, use the dummy batteries as shown.
5. Check battery condition as follows:
 - A. If BATT LOW does not light, battery condition is OK.
 - B. If BATT LOW does not appear on the display, battery condition is OK. Batteries need to be recharged or replaced if LED indicates BATT LOW.

NOTE: Ni-Cad batteries are typically in a discharged condition when they come from a store. Therefore, if you are using Ni-Cad's, you will probably have to charge them before using your Walkie-Talkie. The best way to do this is to charge them in the set, using the TANDY Battery Charger designed for this unit (Catalog Number 21-516). Plug it into the **CHG** Jack on the side of the unit; connect the other end to a source of 240 volts, 50 Hz AC power (standard AC power).



USING YOUR WALKIE-TALKIE

TO RECEIVE

1. Extend aerial fully and keep it in a vertical position.
2. Turn power "on" by rotating **VOLume** clockwise.
3. Check the battery condition (see page 8).
4. Set **SQUELCH** control to maximum counterclockwise.
5. Set **CHANNEL Selector** to the desired channel.
6. Adjust **SQUELCH** to cut out annoying background noise when no signal is being received. To do this, set **CHANNEL Selector** to where no signals are present (or wait till signals cease on your channel). Then rotate **SQUELCH** in a clockwise direction to the point where the background noise just stops. Now, when a signal is present you will hear it, but will not be disturbed by noise on the channel in between signals. When properly set, **SQUELCH** keeps the receiver "dead" until a signal comes in on that channel. Do not set **SQUELCH** too high, or weak signals cannot "open" the Squelch circuit. To receive weak signals, it is best to leave **SQUELCH** set to the minimum position (maximum counterclockwise).
7. Adjust **VOLume** for a suitable listening level.

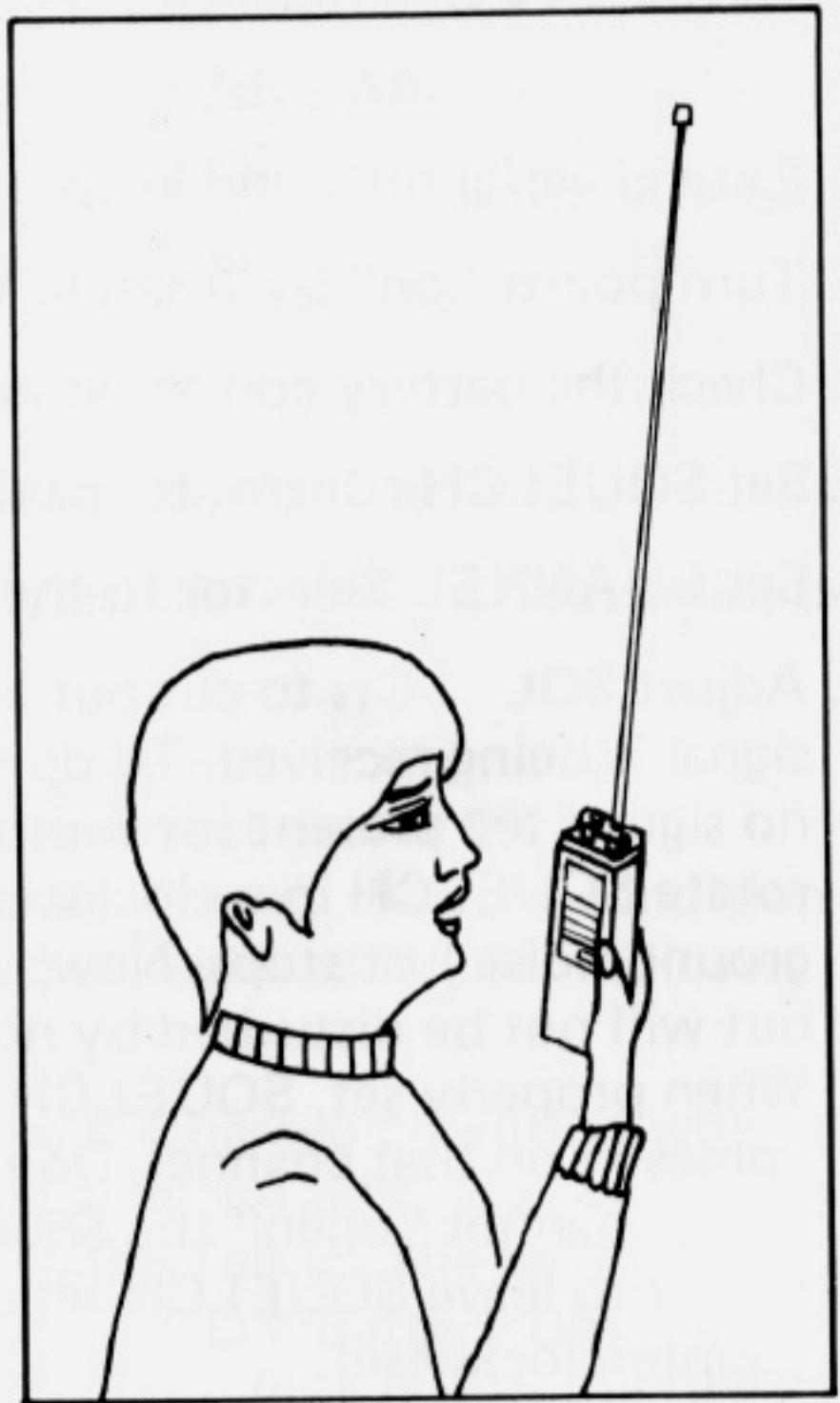
TO TRANSMIT

1. Extend aerial fully and keep it in a vertical position.
IMPORTANT: If the aerial is not fully extended, the efficiency of the transmitter is reduced and the power amplifier transistor could be damaged.
2. Turn power "on" by rotating **VOLume** clockwise.
3. Check the Battery condition (see page 8).

4. Set **CHANNEL Selector** to desired channel of operation.

5. To transmit, press the **Talk** button. Speak slowly and clearly in a normal voice, 5 ~ 7.5 cm (2 ~ 3") from the Microphone. A built-in modulation limiter circuit allows the Microphone to adjust automatically to a wide variety of voice levels. No need to shout or speak loudly — the built-in circuitry automatically compensates for voice levels.

If you are transmitting only a short distance, or want to conserve battery power, set **HI/LOW** switch to the **LOW** position. As a courtesy on-the-air, you should always use only the required amount of power (**LOW** if possible), this will avoid unnecessary interference with other CBer's.



6. To receive, release the **Talk** button.

7. To use an external/remote microphone, such as TANDY's 21-1172, just plug it into the 5-pin DIN **EXT MIC Jack**. Then, you can press the Push-to-Talk bar on the mic and talk there; release and listen to the sound from the Walkie-Talkie's built-in speaker. As you will note, the built-in mic will be disconnected when you use an external mic.

When using such an external mic, hold it 5 ~ 7.5 cm (2 ~ 3") from your mouth (hold at a slight angle — don't talk straight into it) and speak slowly at a normal voice level.

NOTE: Your Walkie-Talkie has more than adequate mic gain so a pre-amp mic is not an advantage. As a matter of fact, if you do use a pre-amp mic and set its gain too high, you can end up with audio distortion and other undesired problems. Thus, we do not recommend a pre-amp mic with this Walkie-Talkie.

OPERATING HINTS

EXTernal MICrophone Jack: You can plug a remote microphone into the 5-pin DIN **EXT MIC** jack. Use an optional microphone such as TANDY's 21-1172. Your Walkie-Talkie features a new locking type microphone jack. This insures that you won't accidentally pull out or loosen the plug connection (when extending the Mic cable while moving about).

SPeaker Jack: Plug an external speaker or earphnoe into this jack and enjoy the advantage of avoiding annoying background noise when trying to listen to weak or distant stations. When you push a plug into this jack, it automatically disconnects the internal speaker (but not the microphone function).

Power HI-LOW Switch is for reducing the battery drain when transmitting over short distances. If the switch is set to HI, the power output is 4 watts maximum. About 40% of the current is saved if the switch is set to LOW.

External ANT Jack is for connecting an external aerial. When using an external aerial the telescopic aerial should be left collapsed within the unit.

CHG Jack is for charging Nickel Cadmium batteries (if you are using them).

PWR Jack: You can power your Walkie-Talkie from an external 12-Volt DC source (and thus conserve battery power) by using an optional AC to 12-Volt DC power supply such as TANDY's 22-7000. Or, you can use our 12V DC power cord 270-1533 in your vehicle and power your Walkie-Talkie directly from the battery in your vehicle.

To insure maximum range, always keep fully charged batteries in the unit. As the voltage decreases, it directly affects range. Use only quality batteries such as TANDY ENERCELLs (23-582) which last three times longer than regular batteries, or TANDY Alkaline ENERCELLs (23-552) which last six times longer. If you dislike those trips to the store for replacement batteries, we suggest TANDY Nickel Cadmium ENERCELL (23-125) rechargeable batteries. Use these together with TANDY's Power Supply/Charger, Catalog Number 21-516 (plugged into **CHG** jack for charging). They can be recharged up to 500 times to save your time, trips and money.

NOTE: Do not try to use 270-1533 for charging batteries (it's intended only for DC operation, not charging).

Caution: Do not attempt to operate the Transceiver when charging Ni-Cad batteries. Wait till batteries are fully charged and then operate from the batteries.

SERVICE AND MAINTENANCE

Your Transceiver has been built in accordance with TANDY's exacting quality control standards. However, it should be treated with reasonable care accorded any electronic equipment. Avoid exposing it to severe shock, dirt or moisture.

If you run into problems with the unit, we recommend you check the following:

1. If trouble is experienced with receiving.

- Check batteries for weak or discharged condition. Replace or re-charge if necessary.
- Check the **OFF/VOLUME** switch setting.
- Be sure **SQUELCH** is adjusted properly. Is it over-squelched?
- Check if the unit is switched to an active channel.

2. If trouble is experienced with transmitting.

- Check if the antenna is fully extended for proper operation.
- Make sure you are fully pressing the Push-to-Talk button.

If these checks don't solve the trouble, do NOT attempt repairs or adjustments yourself. The unit should be serviced only by a qualified radio service technician. Whenever possible, return the unit to the store from which it was purchased.

10-CODES

Citizens band radio operators have largely adopted the 10-codes for standard questions and answers. Its use permits faster communication and better intelligibility in noisy areas. The following table lists some of the more common codes and their meanings.

Code	Meaning	Code	Meaning
10-1	Receiving poorly	10-10	Standing by
10-2	Receiving well	10-13	Advise road/weather conditions
10-3	Stop transmitting	10-20	What is your location?
10-4	OK	10-33	Emergency traffic
10-7	Out of service	10-36	Correct time
10-8	In service	10-41	Switch to channel
10-9	Repeat	10-62	Cannot copy you

SOME HINTS TO HELP YOU ENJOY YOUR C.B.

- * Wait for a pause in transmission before asking for a break.
- * If you don't receive an answer after a second, call to another station, sign off and allow others to use the channel – wait a while, ask for a break and try again.
- * Do not dead key (hold transmitter button in).
- * Assist callers with directions, road conditions or other requested information.
- * Keep harassment off the air. This is unnecessary and causes problems for everyone including you.
- * Be courteous – treat others the way you wish to be treated.

WARNING

- * Do not open up the Transceiver to make any internal adjustments. Internal adjustments and/or modification can lead to illegal operation as defined by licence term, and other regulations. Such illegal operation can lead to prosecution.
- * MPT1320 specifies that if an aerial is mounted at a height exceeding 7 meters the licence will require a reduction in transmitter power of 10 dB. This transceiver provides power Hi/Low switch to meet the requirement.

TO BE SAFE AND SURE:

1. You should never open up the case of your Transceiver.
2. Never change or replace anything in your Transceiver.

NOTES



10	10	10	10
10	10	10	10
10	10	10	10
10	10	10	10

WARRANTY

Tandy/InterTAN offer the following guarantee on this product. Any defect discovered within 90 Days from date of purchase from any Tandy store or dealer will be repaired without charge for parts or labour (or at Tandy's option, replaced or the purchase price refunded).

Simply return the equipment with your sales receipt as proof of purchase to any Tandy store or dealer. This guarantee does not cover any defect caused by misuse or accidental damage, nor does it cover any cost of delivery or collection.

Your sales receipt is all you need to obtain this FREE SERVICE.

This guarantee gives you specific legal rights and is additional to any statutory rights you may have.

WE SERVICE WHAT WE SELL

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