

C.B. 1.5-WATT SOLID-STATE WALKIE-TALKIE



TRC-1002

OWNER'S MANUAL

PLEASE READ BEFORE
USING THIS EQUIPMENT

*REALISTIC*TM

**Cat. No.
21-9111**

★ TRADEMARKS OF TANDY CORPORATION

Your TRC-1002 is a 1.5 watt CB Walkie-Talkie designed for portable 2-channel 2-way communications.

The TRC-1002 is a fine walkie-talkie — a quality piece of electronic equipment skillfully constructed from the finest components. The circuitry is all solid state, mounted on a rugged printed circuit board. Constructed to provide reliable, trouble-free performance.

FEATURES

- Comes with Channel 20 crystals — can use any 1 of the remaining 39
- Adjustable SQUELCH
- BATTERY TEST with LED indicator
- BATTERY CHARGER jack
- Built-in Modulation limiter circuit
- EXTERNAL POWER jack

SPECIFICATIONS

RECEIVER

Frequency Coverage	: 27.60125 to 27.99125 MHz*
Sensitivity for S + N/N (maximum)	: 1 μ V
Adjacent Channel Rejection	: 50 dB
Squelch Sensitivity	: 0.5 μ V
Audio Output	: 500 milliwatts (10% THD)
Current Drain	: 40 mA to 200 mA

TRANSMITTER

Frequency Coverage	: 27.60125 to 27.99125 MHz*
Power Input (at 12V DC)	: 3 watts
Power Output	: 1.5 watt
Spurious Emission	: -80 dB or better
Type of Emission	: F3
Frequency Tolerance	: 0.005 %
Antenna Impedance	: 50 ohms
Current Drain	: 350 mA

***NOTE:** Supplied with Channel 20 crystals in
Channel A position (27.79125 MHz)

Your Walkie-Talkie can function on any 2 of the 40 channels available in the CB Band. It comes with crystals for Channel 20 (in position A). For B, you can select any other channels. See Page 10 for instructions on installing other crystals.

ASSIGNED FREQUENCY AND CHANNEL

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

NOTE:

Receive crystals are 455 kHz lower in frequency than Transmit crystals.

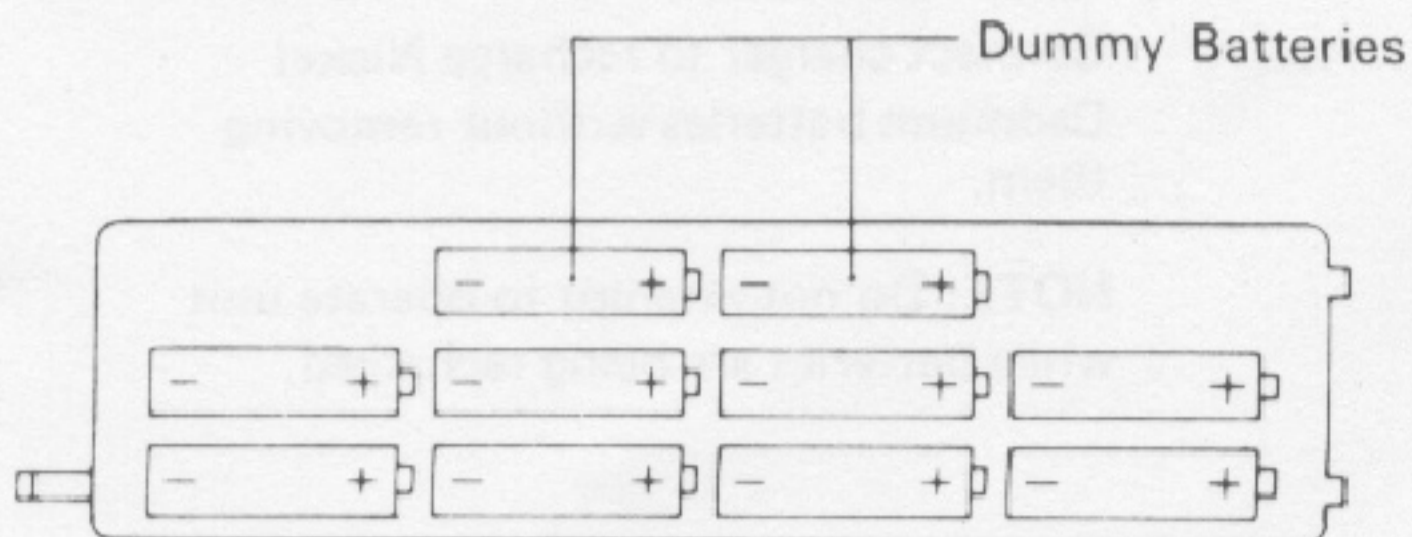
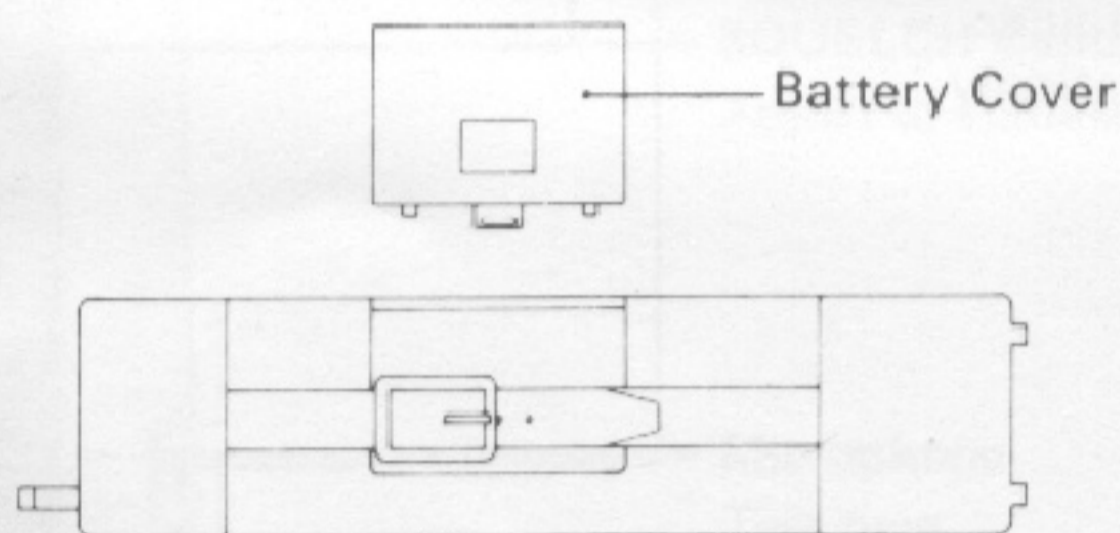
PREPARING FOR USE

1. Slide off the Battery Compartment cover to install the batteries.
2. You can use the following types of batteries (size AA "penlight").

Description	Quantity Required
Rechargeable Nickel Cadmium (1.2 volts)	10
Alkaline type (1.5 volts)	8
Standard type (1.5 volts)	8

3. Install batteries with **polarity** as shown on the **Battery Compartment label**.
4. If you are using Alkaline or Standard type AA "penlight" batteries, use the "dummy" batteries as shown below.
5. Check battery condition as follows:
 - A. Turn power "on" by rotating **VOLUME** clockwise.
 - B. Press **BATT TEST**.
 - C. If the Battery Test **LED** comes on, the batteries are OK. The batteries need to be recharged or replaced if this LED does not light up when you press the button.

NOTE: NiCad batteries typically are in a discharged condition when they come from a store. Therefore, if you are using NiCad's, you probably will 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 Power Supply/Charger designed for this unit (Catalog Number 21-516).



CONTROLS

Battery Test LED —

Talk Button —

Press to transmit.
Release to listen.

OFF/VOLUME Control —

Turn clockwise to apply power.
Adjust for desired listening level.

POWER Jack —

Connect a 12 Volt DC source
Batteries will be automatically
disconnected.

CHARGER Jack —

Connect charger to recharge Nickel
Cadmium batteries without removing
them.

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





Antenna

Extend fully.

BATTERY TEST Button

Press to check condition of Batteries. If "LED" comes on, batteries are OK; if "LED" does not light, replace (or recharge) batteries.

Speaker

Listen here.

CHANNEL Selector

Position A is for Channel 20 (crystals supplied with the unit). Use B for another channel as desired.

SQUELCH Control

Adjust to eliminate background noise.

Microphone

Talk here.

USING YOUR WALKIE-TALKIE

TO RECEIVE:

1. Fully extend Antenna and keep in a vertical position.
2. Set **SQUELCH** control maximum counterclockwise.
3. Turn power "on" by rotating **VOLUME** clockwise.
4. Check the Battery condition (See page 5).
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 a channel where no signals are present (or wait till signals cease on your channel). Then, rotate **SQUELCH** clockwise 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** will keep the receiver "dead" until a signal comes in on that channel. Do not set **SQUELCH** too high, or weak signals will not be able to "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. Fully extend Antenna and keep in vertical position.
IMPORTANT: If the Antenna is not fully extended, the efficiency of the transmitter is reduced and the power amplifier transistor could be damaged.
2. Check the Battery condition (See page 5).
3. Turn power "on" by rotating **VOLUME** clockwise.
4. Set **CHANNEL Selector** to desired channel of operation.
5. To transmit, press the **Talk** button. Speak slowly and clearly in a normal voice, 2 or 3" (5 cm or 7.5 cm) from the Microphone. A built-in modulation limiter circuit allows the Microphone to adjust automatically to a wide variety of voice levels.
6. To receive, release the **Talk** button.

Operational Hints

POWER Jack — you can power your Walkie-Talkie from an external 12 Volt DC source (and thus conserve battery power) by using an optional 12 Volt DC Power supply. Or, you can use our 12 V DC Power Cord, 270-1533, in your vehicle and power your Walkie-Talkie directly from the battery in your vehicle.

RANGE

The range of your Walkie-Talkie will vary depending on conditions. Factors such as antenna, terrain and battery charge all affect range. Buildings absorb transmitted signals and if they contain metal, may completely block them. Trees and heavy cloud formations have a similar effect, though not as severe. However, if you are near a lake or the ocean, you may obtain excellent range (large bodies of water help signal propagation). Thus, you can see that many things affect the range you will obtain.

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 Triple Life Batteries (23-582) which will last three times longer than "regular" batteries or TANDY Alkaline ENERCELLs (23-552) which will 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 **CHARGER** jack for charging). They can be recharged up to 500 times to save you time, trips and money.

NOTE: Do not try to use 270-1533 for charging batteries (it's intended only for DC operation – on products which have External DC power jacks).

USES FOR YOUR WALKIE-TALKIE

Applications for your Walkie-Talkie are limited only by your imagination. You can use it around the home or in the office or in place of your mobile unit in the car or boat. You can put it to good use on fishing, hunting and camping trips. Use it in your business. It can be used by TV technicians, plumbers, electricians, construction crews, surveyors, security patrols, forestry services and others.

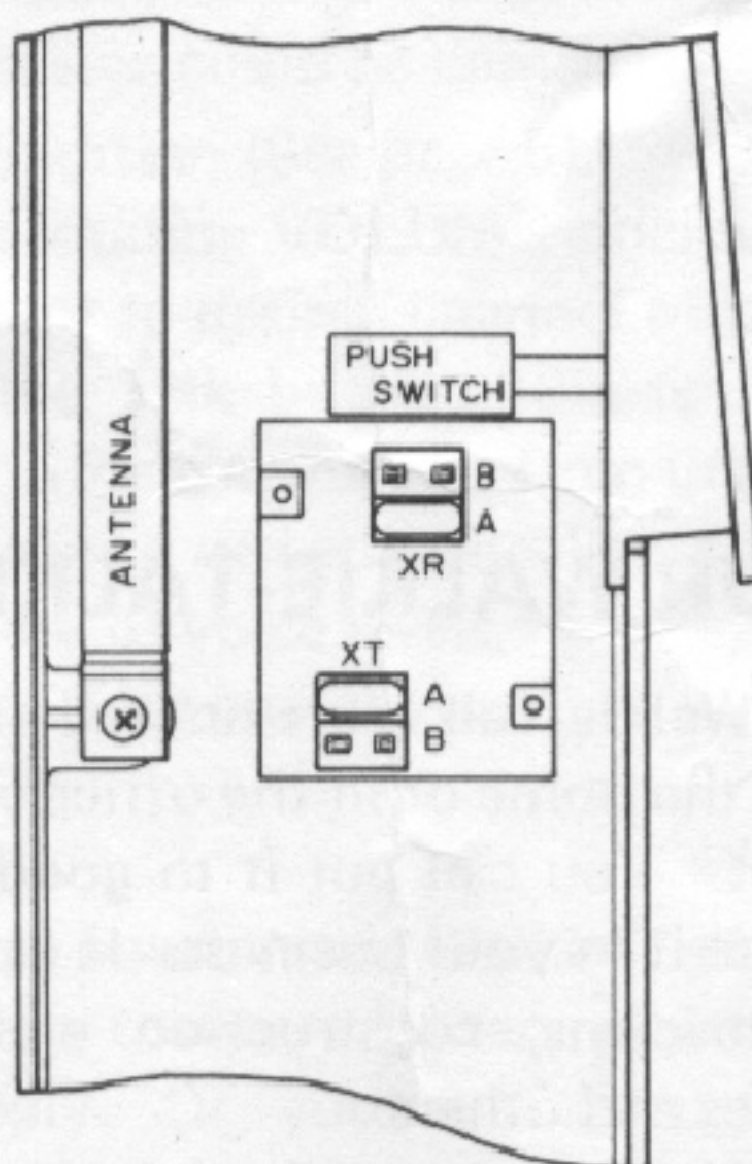
Regardless of how you use it, enjoy it !

CHANGING OR INSTALLING NEW CRYSTALS

Your TRC-1002 comes with Channel 20 crystals installed in Channel position A. You can use any 2 channels of the 40 allotted to the CB Band. **You must use crystals specifically designed for your unit.** To obtain crystals, order through your local TANDY store. Be sure to specify the channel, Catalog Number of this Walkie-Talkie and complete description.

Do not attempt to use non-standard crystals or to make any internal adjustments to your TRC-1002. Such is prohibited by the home office and may result in illegal operation — for which you may be liable and may be fined.

1. Remove the back cover.
2. Insert the new matched pair of crystals into the sockets. Each crystal will be marked with the channel (1-40), transmit or receive (T or R), and frequency. Make sure the transmit (T) and receive (R) crystals are installed in their correct sockets. If the crystals are reversed, the unit will transmit on one frequency and receive on another, both of which will be outside the citizens band, resulting in illegal operation.
3. Replace back cover.



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. Check batteries for weak or discharged condition. Replace or recharge if necessary.
2. If trouble is experienced with transmitting, make sure you are fully depressing the **Talk** button. Also, the antenna must be fully extended for proper operation.
3. If trouble is experienced with receiving, be sure **SQUELCH** is adjusted properly.
4. 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 technician. Whenever possible, return unit to the store from which it was purchased.

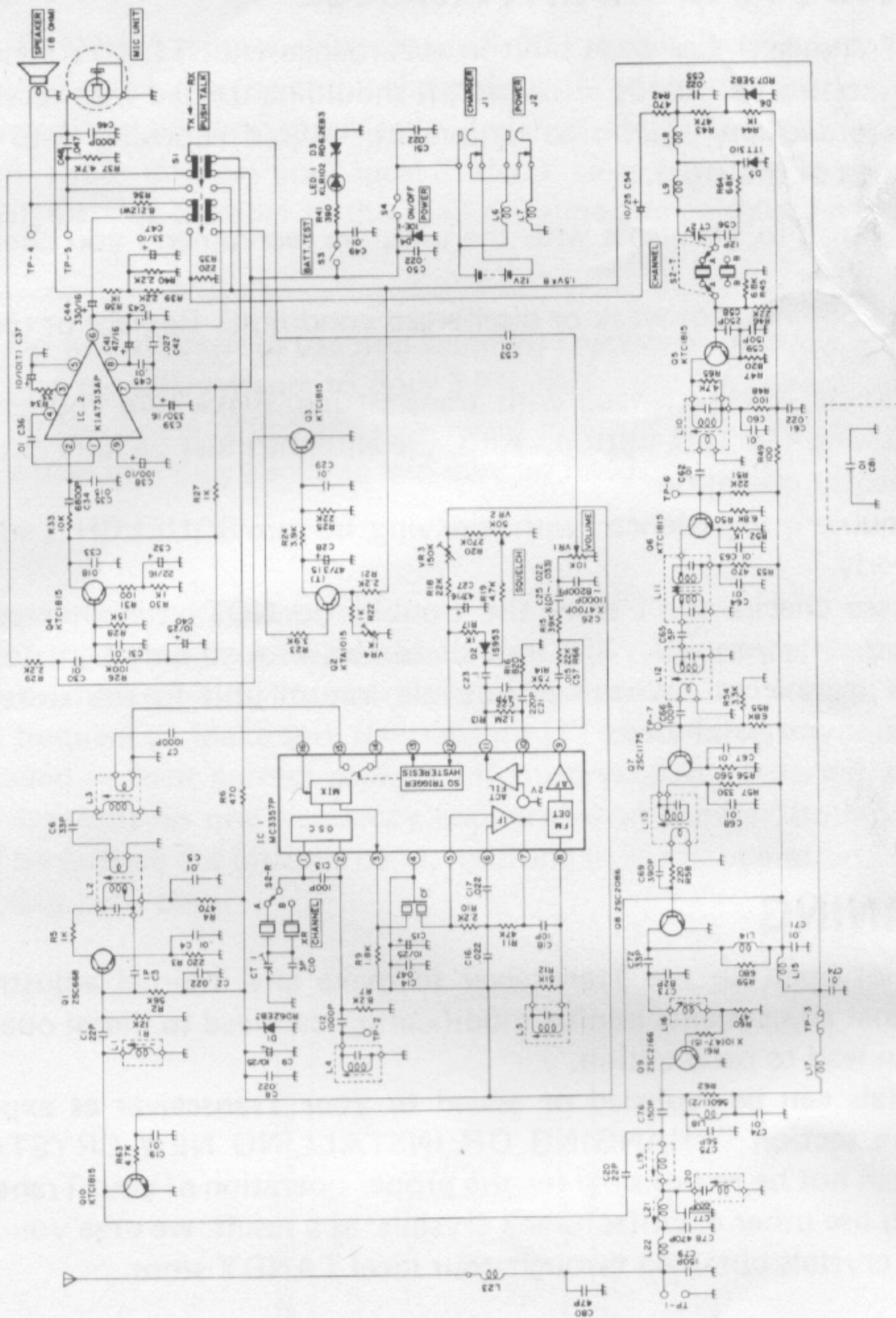
WARNING

- * Do not open up the Transceiver to make any internal adjustments. Internal adjustments and/or modification can lead to illegal operation as can lead to prosecution.
- * **Crystals can be replaced or added to your Transceiver as explained in the section "CHANGING OR INSTALLING NEW CRYSTALS".** We can not be responsible for the proper operation of your Transceiver if you use other manufacturer's crystals; as a result, we urge you to use only crystals obtained through your local TANDY store.

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 other than Batteries and/or Crystals. And, to be assured of on-frequency operation, use **only** crystals obtained through your TANDY store.

SCHEMATIC DIAGRAM



NOTE 1 ALL RESISTANCE VALUES ARE INDICATED IN OHM (K = 10^3 OHM, M = 10^6 OHM).
 2 ALL CAPACITANCE VALUES ARE INDICATED IN μ F (P = 10^{-6} μ F).

For service, return this set to your nearest Tandy Electronics store.

CUSTOM MANUFACTURED FOR TANDY/INTERTAN
 FABRIQUE POUR TANDY/INTERTAN

U.K. BILSTON ROAD WEDNESBURY, WEST MIDLANDS WS10 7JN