

Cat. No. 19-1110 A
OWNER'S MANUAL

Please read before using this equipment.

HTX-10

10-Meter Transceiver



RadioShack®

FEATURES

Your RadioShack HTX-10 10-Meter Transceiver is ideal for use in your vehicle. Its 25-watt SSB/FM and 7-watt AM output provides the power you need to communicate, and its tuner covers the entire 10-meter Amateur Radio band (including the 28.3 to 28.5 MHz Novice band). You can connect a DC power supply and base station antenna to your transceiver to set up a base station in your home. The transceiver's crystal-controlled circuitry provides accurate and stable channel selection, making it an ideal choice for your amateur communications needs.

Your transceiver has these advanced features:

Large, Illuminated, Digital Display — clearly shows the frequency, functions, and incoming signal strength.

1 kHz Frequency Resolution — lets you fine tune frequencies for optimum transmission and reception.

Scan — the transceiver scans its frequency range for transmissions.

MIC and RF Gain Control — lets you adjust the microphone and receiver gain to match the strength of the received signal.

Switchable Noise Blanker — reduces interference from ignition systems, motors, and other electrical equipment.

Squelch Circuit — compensates for signal fading and eliminates signal chopping.

Automatic Gain Control — maintains a constant volume level, regardless of the signal strength.

Built-In Automatic Modulation Control — ensures a constant RF modulation level.

Universal Mounting Bracket — lets you mount your transceiver securely in your vehicle or on a shelf in your home.

Important: You must have a Technician Class or higher Amateur Radio Operator's License, and a call sign issued by the FCC, to legally transmit using this transceiver. Transmitting without a license carries heavy penalties. Getting a license is easier than ever. See "Introduction to Amateur Radio" on Page 6 for more information.

We recommend you record your transceiver's serial number here. The number is on the transceiver's back panel.

Serial Number _____

MANUAL CONVENTIONS

Your transceiver's buttons perform multiple functions. The abbreviation or symbol for a function is printed on, below, or above each button.

To activate certain transceiver features, you must press **PUSH FUNC** (function) then another button.

Button names are printed in this manual in small, bold, capital letters (such as **PUSH FUNC** or **SCAN**). Words, symbols, and numbers that appear on the display are printed using a distinctive typeface (such as **28.300** or **BUSY**).

FCC INFORMATION

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.

This equipment complies with the limits for a Class B digital device as specified in Part 15 of *FCC Rules*. These limits provide reasonable protection against radio and TV interference in a residential area. However, your equipment might cause TV or radio interference even when it is operating properly. To eliminate interference, you can try one or more of the following corrective measures:

- reorient or relocate the receiving antenna
- increase the distance between the equipment and the radio or TV

Consult your local RadioShack store if the problem still exists.

You must use shielded interface cables with this equipment.

CONTENTS

Introduction to Amateur Radio	6
Preparation	8
Attaching the Microphone Holder	8
Mounting the Transceiver	8
Connecting an Antenna	10
Connecting the Microphone	12
Connecting an Optional External Speaker	12
Using Vehicle Battery Power	13
Using the Transceiver as a Base Station	14
A Quick Look at the Controls	16
Operation	17
Setting Squelch and Receiving	17
Transmitting	18
Notes on SSB Reception	19
Special Features	20
Using the Special Features	20
Using STEP	21
Using CALL	22
Using SCAN	22
Using LCR (Last Channel Recall)	23
Using M-LOAD	23
Using NB (Noise Blanker)	23
Using SHIFT	24
Using T-LOW (Tone-Low)	24
Using M-SAVE (Memory Save)	25
Using FINE (Clarifier)	25
Using RF-G (RF Gain)	26
Using MIC-G (Microphone Gain)	26
Turning the Key Tone on and Off	26
Care and Maintenance	27
Troubleshooting	28
Noise Reduction	29
Replacing the Fuse	30
Specifications	32

INTRODUCTION TO AMATEUR RADIO

This transceiver is a great intermediate-level tool for the experienced amateur radio operator. The transceiver opens a door for you to the world from almost anywhere! All you need is an Amateur Radio Operator's License (Novice Class, or Technician Plus, or higher) issued by the Federal Communications Commission (FCC). If you do not have a license, it is easier than ever to get one and help from licensed operators is available. Here are a few tips to help you get started.

You can turn on your transceiver and scan the entire band to hear what is going on; **however, do not attempt to transmit until you get your license.** If you transmit without a license, you are in violation of federal law. That violation can lead to severe penalties. Note that ham operators take the FCC rules very seriously and want nothing to do with “bootleggers” — their term for people who operate without a license.

Find out if there is a ham radio club in your area. Most clubs welcome newcomers and are glad to help you get your license. There are thousands of clubs across the country, so there is probably one in or near your own community. Often, the staff at your local RadioShack store can help you locate a club.

If you do not hear anyone talking about a local club in your area as you listen to local transmissions, write to the American Radio Relay League (ARRL) at the following address, to find out how to contact a local affiliate. The ARRL is the national organization representing amateur radio in the United States. The league has more than 150,000 members. Most are ham operators, or members in the process of obtaining their license.

The American Radio Relay League
225 Main Street
Newington, CT 06111

<http://www.arrl.org>

Start studying for the license exams. Do not be intimidated by the word “study,” for most people can go from knowing absolutely nothing about amateur radio to passing the Novice and Technician written exams in less than a month.

The exams test your knowledge of basic radio regulations and elementary radio theory. Many clubs hold license classes, which can be a fun and easy way to learn about amateur radio. There are good books, cassette tapes, computer programs, and many other study aids available. Your local RadioShack store sells *FCC License Preparation* study guides for amateur radio operator licenses. While you are no longer required to learn Morse code for a Technician Class license, we encourage you to learn it anyway so you can advance to higher levels of operating privileges.

The examiners for a Novice license test can be any two ham operators who hold a general or higher class license and who are at least 18 years old and are not related to you. There is no fee to take the Novice exam. As soon as you pass the Novice exam, you can immediately take the Technician exam. There is a small fee required for taking the Technician exam, and the test must be administered by a three-member Volunteer Examiner Team. Contact the ARRL for a schedule of exam opportunities in your area.

A Novice Class or Technician Plus (or higher) license lets you use the HTX-10 to communicate directly with other operators.

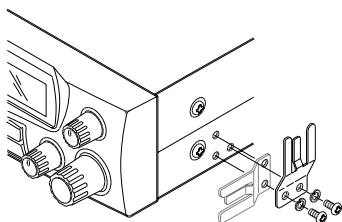
Amateur radio is a great hobby that has enriched the lives of millions of people all over the world. The ARRL would be glad to hear from you if you need more information or would like to join!

PREPARATION

ATTACHING THE MICROPHONE HOLDER

You can connect the microphone holder horizontally or vertically to either side of the transceiver or to another location in your vehicle.

Use the supplied screws and lock washers to secure the holder to the side of the transceiver.



Or, follow these steps to attach the holder to another location in the vehicle (such as the dashboard).

1. Using the holder as a template, mark the positions for the mounting screw holes at the desired location.
2. At each marked position, drill a hole slightly smaller than the supplied mounting screws.

Caution: Be careful not to drill into anything behind the mounting surface.

3. Attach the holder at the mounting location using the supplied machine screws and lock washers.

MOUNTING THE TRANSCEIVER

The most common mounting location for this transceiver is under a vehicle's dashboard. If you use the HTX-10 as a base station, however, you can place it on a desk, shelf, or table (see "Using the Transceiver as a Base Station" on Page 14).

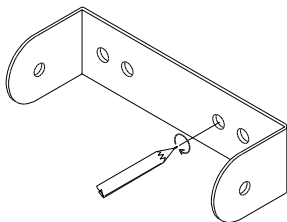
If you are mounting the transceiver in a vehicle, choose a location where:

- you can easily reach the transceiver.
- wires and cables are clear of the vehicle's pedals or other moving parts.
- the transceiver is not directly in front of heating vents.
- all wires and cables can reach their connection points.

Warning: If you use the transceiver in a vehicle, mount it securely to avoid damage to the transceiver or vehicle, and to avoid injury to anyone in the vehicle during sudden starts or stops.

Follow these steps to mount the transceiver using the supplied hardware.

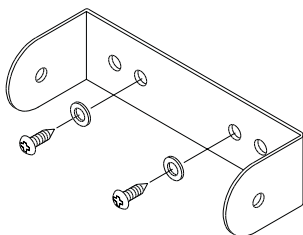
1. Using the mounting bracket as a template, mark the positions for the screw holes on the mounting surface.



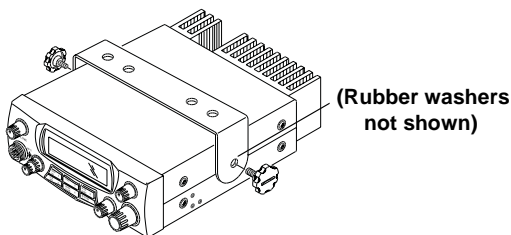
2. In each marked location, drill a hole slightly smaller than the supplied mounting screws.

Caution: Be careful not to drill into objects behind the mounting surface.

3. Using a Phillips screwdriver, attach the mounting bracket to the mounting surface with the supplied mounting screws and flat washers.



4. Attach the transceiver to the mounting bracket using the supplied rubber washers and mounting knobs.



(Rubber washers
not shown)

CONNECTING AN ANTENNA

There are many different types of transceiver antennas for mobile transceivers. Each antenna type has its own benefits, so choose the one that best meets your needs. Your local RadioShack store sells a wide variety of antennas.

Note: If you are using this transceiver as a base station, see “Using the Transceiver as a Base Station” on Page 14.

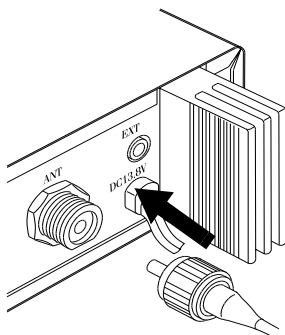
When you choose an antenna, keep in mind that for the best performance you should mount the antenna:

- as high as possible on the vehicle
- as far as possible from sources of electrical noise
- vertically

Once you choose an antenna, follow its mounting instructions. Then route the cable to the transceiver and connect the cable to the **ANT** jack on the back of the transceiver.

Cautions:

- Avoid routing the cable next to sharp edges or moving parts, which might damage the cable.
- Do not run the cable next to power cables or other radio antenna cables.
- Do not run the cable through the engine compartment or other areas that produce extreme heat.



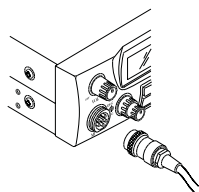
To achieve your radio's maximum range, adjust the antenna's Standing Wave Ratio (SWR). You can use an SWR meter (not supplied) to adjust the SWR for your antenna.

Follow the instructions supplied with the SWR meter and antenna to adjust your antenna's SWR to the lowest possible value. SWR values of 2.0:1 are generally acceptable, with readings of 1.5:1 or lower being more desirable.

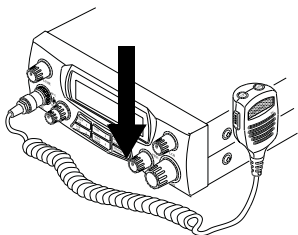
Caution: You might damage your transceiver if you use it at a high SWR value.

CONNECTING THE MICROPHONE

1. Align the slot on the bottom of the microphone's plug with the ridge inside the **MIC** jack. Then fully insert the plug into the jack.
2. Turn the plug's locking nut clockwise to tighten it.
3. Slide the microphone onto the microphone holder.



To disconnect the microphone, unscrew the locking nut and gently pull out the microphone plug. Never pull on the microphone cable to disconnect the microphone.

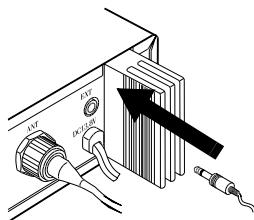


CONNECTING AN OPTIONAL EXTERNAL SPEAKER

You can connect an external speaker to the transceiver. The external speaker you use with the transceiver should have an impedance of 8 ohms and be able to handle 3 to 10 watts of power. The speaker's cable must have a $\frac{1}{8}$ -inch (3.5-mm) plug. Both accessories are available at your local RadioShack store.

To connect the external speaker to the transceiver, insert the speaker's plug into the **EXT** jack on the back of the transceiver

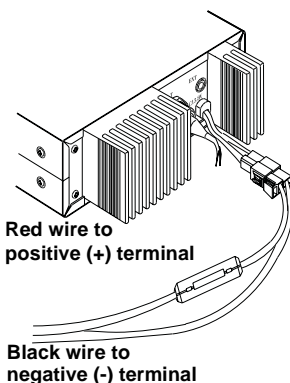
Note: Connecting an external speaker disconnects the transceiver's internal speaker.



USING VEHICLE BATTERY POWER

Follow these steps to connect the transceiver to your vehicle's battery power.

1. Connect the red wire (with in-line fuse holder) from the back of the transceiver to a point in your vehicle's fuse block that has power only when the ignition is in the ACC (accessory) or ON position.
2. Connect the black wire to a metal part of the vehicle's frame (chassis ground).



Caution: Do not connect the black wire to a non-metallic (plastic) part, or to any part insulated from the vehicle's chassis by a non-metallic part.

3. Connect the single connector end of the power cord to the connector on the back of the transceiver.

USING THE TRANSCEIVER AS A BASE STATION

Although this transceiver is designed mainly for mobile use, you can also use it as a base station with an AC power source. For base station installation, you need these items.

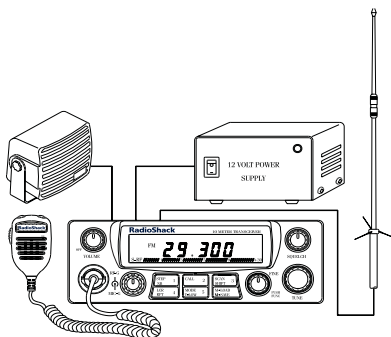
- a 12-volt DC power supply that can supply at least 7 amps

Caution: Most 12-volt DC power supplies plug into a standard AC outlet to produce DC power. Before connecting your transceiver to a 12-volt DC power supply, read and follow the instructions included with the power supply.

- base station antenna
- coaxial antenna cable and connectors
- external 8-ohm speaker

Note: Your local RadioShack store carries everything you need to use the transceiver as a base station.

Follow these steps to install the transceiver as a base station.

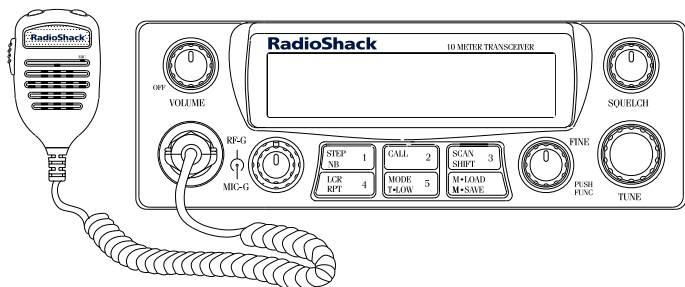


1. Mount the base station antenna as described in its owner's manual.

Warning: Use extreme caution when you install or remove a base station antenna. If the antenna starts to fall, let it go! It could contact overhead power lines. If the antenna touches a power line, contact with the antenna, mast, cable, or guy wires can cause electrocution and death. Call the power company to remove the antenna. DO NOT attempt to do so yourself.

2. Connect the antenna to the **ANT** jack on the back of the transceiver.
3. Connect the transceiver's black power wire to the negative (-) terminal on the DC power supply.
4. Connect the transceiver's red wire (with in-line fuse holders) to the positive (+) terminal on the DC power supply.
5. Connect the single-connector end of the power cord to the connector on the back of the transceiver.
6. Connect the DC power supply to a standard AC outlet.

A QUICK LOOK AT THE CONTROLS



OFF/VOLUME — turns the radio on/off; adjusts the volume

RF-G/MIC-G — attenuates strong signals; reduces the microphone's gain and SSB transmitting power

STEP/NB/1 — selects the frequency tuning step; turns the noise blanker on/off; selects memory Channel 1

CALL/2 — quickly recalls a frequency in memory Channel 2; selects memory Channel 2

SCAN/SHIFT/3 — starts/stops scanning; selects the frequency shift; selects memory Channel 3

LCR/4 — recalls the last tuned channel; selects memory Channel 4

MODE/T-LOW/5 — selects the operation band, AM/FM/USB/LSB; turns hi-cut filter on/off; selects memory Channel 5

M-LOAD/M-SAVE — loads from/saves to a memory location

FINE/PUSH FUNC — adjusts fine tuning; activates second function

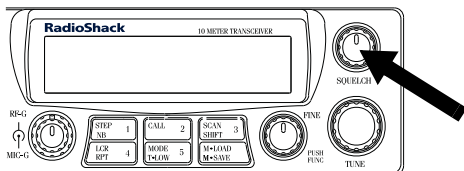
SQUELCH — sets the squelch level to block weak signals

TUNE — selects a frequency

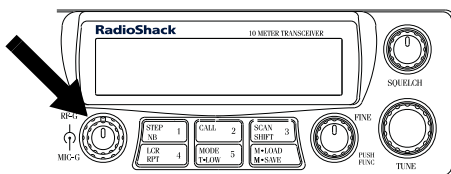
OPERATION

SETTING SQUELCH AND RECEIVING

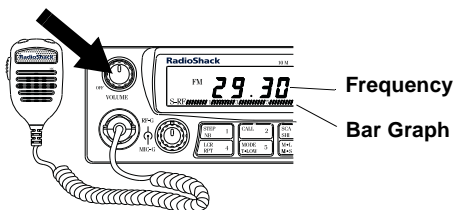
1. Rotate **SQUELCH** fully counterclockwise.



2. Rotate **RF-G** fully clockwise.



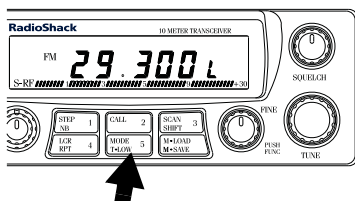
3. To turn on the transceiver, rotate **OFF/VOLUME** clockwise until it clicks. The display lights and the frequency appears. A bar graph also appears which shows the received signal's strength.



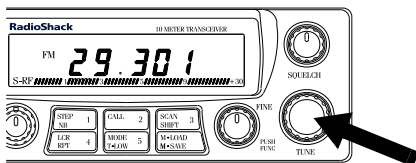
4. Set **OFF/VOLUME** to a comfortable listening level.
5. Rotate **SQUELCH** clockwise until you hear a hissing sound. Then slowly rotate **SQUELCH** counterclockwise just until the noise stops.

Note: If the transceiver picks up unwanted weak transmissions, rotate **RF-G** slightly counterclockwise to decrease the transceiver's sensitivity to signals. The transceiver blocks the weak transmissions.

- Repeatedly press **MODE** to select the desired band (FM, AM, USB (upper sideband), or LSB (lower sideband)).



- Rotate **TUNE** or press **UP** or **DN** on the top of the microphone to select a frequency.



- To turn off the transceiver, rotate **OFF/VOLUME** counterclockwise until it clicks.

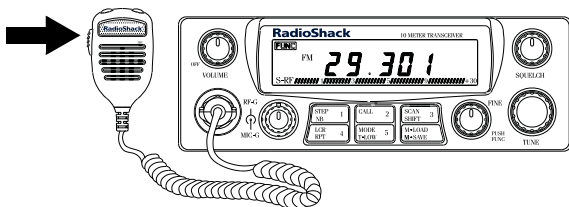
TRANSMITTING

Notes:

- Do not attempt to transmit unless you possess a valid amateur radio license.
- We recommend you try receiving before you transmit.

- Follow Steps 1–7 in “Setting Squelch and Receiving” on Page 17.
- Turn **MIC-G** fully clockwise.

3. To transmit, hold down the push-to-talk button on the microphone, hold the microphone 2–3 inches from your mouth, and speak in a normal tone of voice. **TX** appears along with a bar graph which shows the strength of your transmission.



4. When you finish transmitting, release the PTT button. **TX** and the signal strength bars disappear.
5. To turn off the transceiver, rotate **OFF/VOLUME** counterclockwise until it clicks.

NOTES ON SSB RECEPTION

- If the voice sounds distorted, slowly rotate **FINE** to bring the signal into its natural voice tonal range.
- An SSB signal produces a fluttering, unintelligible sound when received in the AM mode. Set the mode switch to either LSB or USB, and adjust **FINE**. If the voice is still not intelligible, it might be an SSB signal operating on the other sideband — try the other SSB mode.

SPECIAL FEATURES

USING THE SPECIAL FEATURES

Your transceiver has several advanced features that give you additional control and convenience while using it.

This list provides additional information about your transceiver's special features.

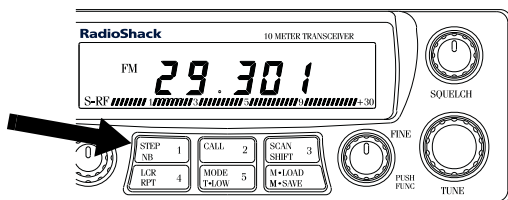
Feature	See:
Step — let's you change the increment you set to tune frequencies in the 10-meter band.	Page 21
Call — recalls a specific frequency in memory channel 2.	Page 22
Scan — scans incoming signals.	Page 22
Last Channel Recall — returns to the last channel that was transmitted.	Page 23
M-LOAD — recalls frequencies stored in memory Channels 1–5.	Page 23
NB (Noise Blanker) — reduces electrical noise.	Page 23
Shift — lets you set the frequency shift direction and offset frequency.	Page 24
T-LOW (Tone Low) — turns the high-cut filter on or off.	Page 24
M-SAVE (Memory Save) — saves up to five frequencies into memory channels.	Page 25
FINE (Clarifier) — tunes in stations or tunes out interference broadcast using an SSB signal.	Page 25

Feature	See:
RF-G (RF Gain) — attenuates strong signals.	Page 26
MIC-G (Microphone Gain) — reduces the microphone gain and SSB transmitting power,	Page 26

Using STEP

Repeatedly press **STEP** to select the frequency step your transceiver displays when it shows a frequency. As you press **STEP**, one of the three frequency digits flashes for about 2 seconds to show which digit is selected. The increment that the selected digit displays is:

- the rightmost digit: 1 kHz
- the second digit from the right: 10 kHz
- the third digit from the right: 100 kHz



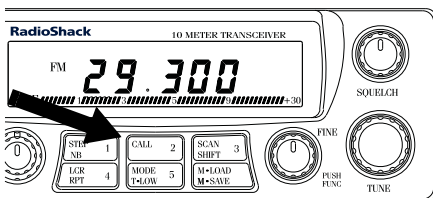
Using CALL

The transceiver's call memory lets you quickly recall a specific frequency in memory Channel 2.

Note: See "Using M-SAVE (Memory Save)" on Page 25 for more information about storing a frequency in memory channel 2.

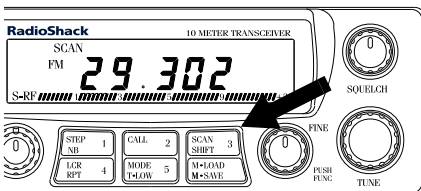
Press **CALL** to recall the stored frequency at any time. The frequency flashes.

Press **CALL** again and the last selected frequency appears.



Using SCAN

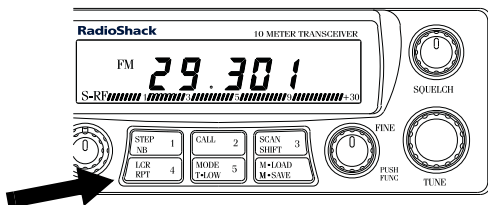
Press **SCAN** to scan incoming signals. **SCAN** appears and the transceiver stops for 5 seconds on each channel when it detects a signal.



To stop scanning, press **SCAN** or the PTT button on the microphone. **SCAN** disappears.

Using LCR (Last Channel Recall)

Press LCR to return to the last channel you selected.



Using M-LOAD

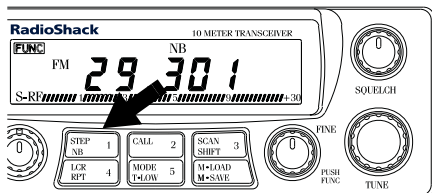
You can recall frequencies stored in memory Channels 1–5.

Note: See “Using M-SAVE (Memory Save)” on Page 25 for more information about storing frequencies in memory channels.

To recall a memory channel, press **M-LOAD** so **L** appears, then, press the desired memory channel number.

Using NB (Noise Blanker)

If the transceiver's reception is disturbed by interference from electrical noise (such as ignition noise), you can reduce the noise by using the transmitter's noise blanker feature. To turn on or off the noise blanker, press **PUSH FUNC** then **NB**. **NB** appears while the noise blanker is on.

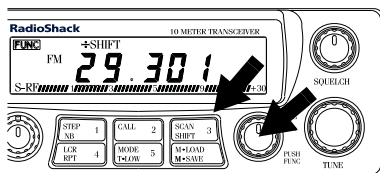


Using SHIFT

The transceiver's shift function lets you set the transmit frequency shift from the receive frequency in either direction within the range of 0.0 Hz to 990 kHz.

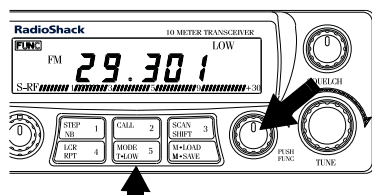
Follow these steps to set the frequency shift direction and offset frequency.

1. To set the frequency shift direction to +, press **PUSH FUNC** then press **SHIFT** while **FUNC** appears. **+SHIFT** appears. Press **PUSH FUNC** and **SHIFT** again while **FUNC** appears to set the frequency shift direction to -. **-SHIFT** appears.
2. Press **PUSH FUNC** then **SHIFT** for about 3 seconds. **000** appears.
3. Rotate **TUNE** to set the offset frequency to any frequency from 0 to 990 kHz.
4. To exit, hold down **PUSH FUNC** and **SHIFT** together for about 3 seconds.



Using T-LOW (Tone-Low)

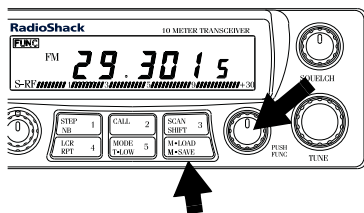
Press **PUSH FUNC** then **T-LOW** to turn the high-cut filter on or off. **LOW** appears when the high-cut filter is on.



Using M-SAVE (Memory Save)

Follow these steps to save up to five frequencies into memory channels.

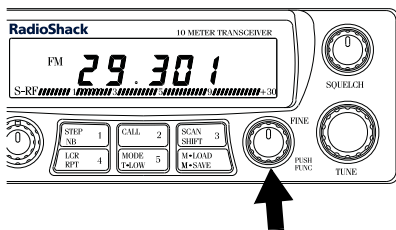
1. Select the desired frequency.
2. Press **PUSH FUNC** then **M-SAVE**. **S** appears.



3. While **S** appears, press the desired memory channel number. The transceiver stores the frequency you selected into the memory channel you selected.
4. To recall a frequency you stored, see “Using M-LOAD” on Page 23.

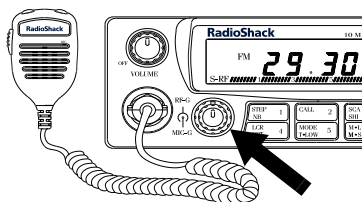
Using FINE (Clarifier)

When you listen to an SSB signal, rotate **FINE** to tune in slightly off-frequency stations or to tune out interference from adjacent channels.



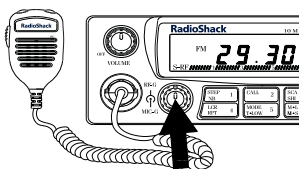
Using RF-G (RF Gain)

When you receive an extremely strong signal, rotate **RF-G** counterclockwise to attenuate the signal.



Using MIC-G (Microphone Gain)

Rotate **MIC-G** to adjust the transmitter's microphone gain and SSB transmitting power for the best audio quality.



TURNING THE KEY TONE ON AND OFF

The transceiver is preset to sound a tone each time you press a key. To turn the transceiver's key tone on or off, turn on the transceiver while holding down the push-to-talk button on the microphone.

CARE AND MAINTENANCE

Your HTX-10 10-Meter Transceiver is an example of superior design and craftsmanship. The following suggestions will help you care for your transceiver so you can enjoy it for years.



Keep the transceiver dry. If it gets wet, wipe it dry immediately. Liquids might contain minerals that can corrode the electronic circuits.



Use and store the transceiver only in normal temperature environments. Temperature extremes can shorten the life of electronic devices and distort or melt plastic parts.



Keep the transceiver away from dust and dirt, which can cause premature wear of parts.



Handle the transceiver gently and carefully. Dropping it can damage circuit boards and cases and can cause the transceiver to work improperly.



Wipe the transceiver with a damp cloth occasionally to keep it looking new. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the transceiver.

Modifying or tampering with the transceiver's internal components can cause a malfunction and might invalidate its warranty and void your FCC authorization to operate it. If your transceiver is not performing as it should, take it to your local RadioShack store for assistance.

TROUBLESHOOTING

If your transceiver is not working as it should, these suggestions might help you eliminate the problem. If the transceiver still does not operate properly, take it to your local RadioShack store for assistance.

Problem	Possible Causes	Remedies
Trouble with reception.	The squelch might need to be adjusted.	Adjust the squelch.
	The transmitter might not be set to an operating frequency.	Tune the transceiver to an operating frequency.
	The microphone might not be connected.	Make sure the microphone is connected.
	The antenna might not be connected.	Make sure the antenna is connected.
	The receive mode might not be properly set.	Set the receive mode to FM, AM, LSB, or USB.
Trouble with transmission.	The antenna might not be connected.	Make sure the antenna is connected.
	The microphone might not be connected.	Make sure the microphone is connected.
	The microphone's push-to-talk button might not be fully pressed in.	Press the microphone's button in fully.

Problem	Possible Causes	Remedies
Trouble with transmission (continued)	The microphone's gain might not be properly set.	Adjust MIC-G .
Transceiver does not work at all.	The power cord might not be connected.	Make sure the power cord is connected.
	The power cord's fuse might be blown.	Replace the fuse (see "Replacing the Fuse" on Page 30).

The transceiver should be serviced only by a qualified radio technician. If you still have problems, take your transceiver to a local RadioShack store for assistance.

NOISE REDUCTION

Because your transceiver is exceptionally quiet, any noise you hear is probably from an external source in your vehicle such as your vehicle's alternator, radio, or spark plugs.

To solve the problem, you must go to the noise's source. You can determine the noise's source by turning off the engine and operating the transceiver with your vehicle's ignition set to ACC. If the noise decreases, the problem is in your vehicle's ignition or electrical system.

Here are a few hints to help you reduce or eliminate such noise:

- Make all transceiver power and antenna wires as short as possible.
- Route the power wires away from the antenna wires.

-
- Be sure that the chassis ground connection is secure.
 - Replace old ignition wires with new, high-voltage, noise suppression wires.
 - Install noise suppressors on your spark plugs, or install new spark plugs that have built in noise suppressors.
 - If problems persist, check your alternator/generator and regulator gauges. You can reduce the noise from these sources by using bypass capacitors at the various output voltage points.

Your local RadioShack store has a wide selection of noise suppression accessories.

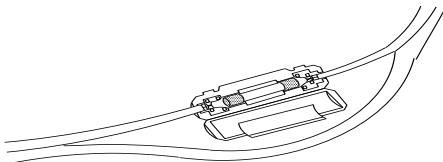
REPLACING THE FUSE

If the HTX-10 stops operating, you might need to replace the red power wire's fuse with the supplied spare fuse.

Caution: Do not use a fuse with ratings other than those specified here. Doing so might damage your transceiver.

Follow these steps to replace your transceiver's fuse.

1. Make sure the power source and transceiver are both off.
2. Pull the latches apart on the fuse holder until it opens.



3. If the fuse is blown, replace it. Use only a standard $1\frac{1}{4} \times \frac{1}{4}$ inch fast-acting fuse with the proper rating. The fuse must be 10 amps.

Caution: The supplied fuse has the proper ratings. Make sure you replace a fuse only with another fuse of the same rating.

4. Reassemble the fuse holder by squeezing it together until it snaps shut.

SPECIFICATIONS

GENERAL

Frequency Range	28.000 MHz to 29.699 MHz
Tuning Step	1 kHz/10 kHz/100 kHz (selectable)
Frequency Generation	Digital PLL Synthesizer
Antenna Connector	50 ohm coaxial connector
Microphone	Electret condenser type
Operating Temperature	-4° to 122°F (-10° to 55°C)
Power Source	12-16V DC, negative or positive ground
Speaker	8 ohm, 2 watt
Impedance	50 ohm
Dimensions (HWD)	6 ¹ / ₁₆ × 2 ³ / ₆₄ × 9 ⁴¹ / ₆₄ inches (154 × 52 × 248 mm)
Weight (without batteries).....	2.65 lb (1.2 kg)
Accessories	Microphone, Microphone Holder, Mounting Hardware, Mounting Bracket, DC Power Cord, Spare Fuse

RECEIVER

Sensitivity	0.5 μV for 10 dB S/N
Audio Output @ 10% THD (External)	2.5 W at 8 ohm
Selectivity	50 dB min
Intermodulation	60 dB min
Distortion	10% max
S/N Ratio	40 dB min
IF Rejection	70 dB or better

TRANSMITTER

Power Output	7w (AM), 25w (FM/SSB)
Distortion	5%
Deviation	± 2 kHz
S/N Ratio.....	40 dB
Spurious Emission	-65 dB or better
Battery Drain:	
At max output power	AM Less than 3.0 A, FM Less than 5.0 A, SSB 5.0 A
At no modulation	AM Less than 3.0 A, FM Less than 5.0 A, SSB 1.0 A

Specifications are typical; individual units might vary. Specifications are subject to change and improvement without notice.

NOTES



Limited Ninety-Day Warranty

This product is warranted by RadioShack against manufacturing defects in material and workmanship under normal use for ninety (90) days from the date of purchase from RadioShack company-owned stores and authorized RadioShack franchisees and dealers. EXCEPT AS PROVIDED HEREIN, RadioShack MAKES NO EXPRESS WARRANTIES AND ANY IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE DURATION OF THE WRITTEN LIMITED WARRANTIES CONTAINED HEREIN. EXCEPT AS PROVIDED HEREIN, RadioShack SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO CUSTOMER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS OR DAMAGE CAUSED DIRECTLY OR INDIRECTLY BY USE OR PERFORMANCE OF THE PRODUCT OR ARISING OUT OF ANY BREACH OF THIS WARRANTY, INCLUDING, BUT NOT LIMITED TO, ANY DAMAGES RESULTING FROM INCONVENIENCE, LOSS OF TIME, DATA, PROPERTY, REVENUE, OR PROFIT OR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, EVEN IF RadioShack HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

In the event of a product defect during the warranty period, take the product and the RadioShack sales receipt as proof of purchase date to any RadioShack store. RadioShack will, at its option, unless otherwise provided by law: (a) correct the defect by product repair without charge for parts and labor; (b) replace the product with one of the same or similar design; or (c) refund the purchase price. All replaced parts and products, and products on which a refund is made, become the property of RadioShack. New or reconditioned parts and products may be used in the performance of warranty service. Repaired or replaced parts and products are warranted for the remainder of the original warranty period. You will be charged for repair or replacement of the product made after the expiration of the warranty period.

This warranty does not cover: (a) damage or failure caused by or attributable to acts of God, abuse, accident, misuse, improper or abnormal usage, failure to follow instructions, improper installation or maintenance, alteration, lightning or other incidence of excess voltage or current; (b) any repairs other than those provided by a RadioShack Authorized Service Facility; (c) consumables such as fuses or batteries; (d) cosmetic damage; (e) transportation, shipping or insurance costs; or (f) costs of product removal, installation, set-up service adjustment or reinstallation.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

RadioShack Customer Relations, 200 Taylor Street, 6th Floor, Fort Worth, TX 76102

We Service What We Sell

12/99

RadioShack
A Division of Tandy Corporation
Fort Worth, Texas 76102