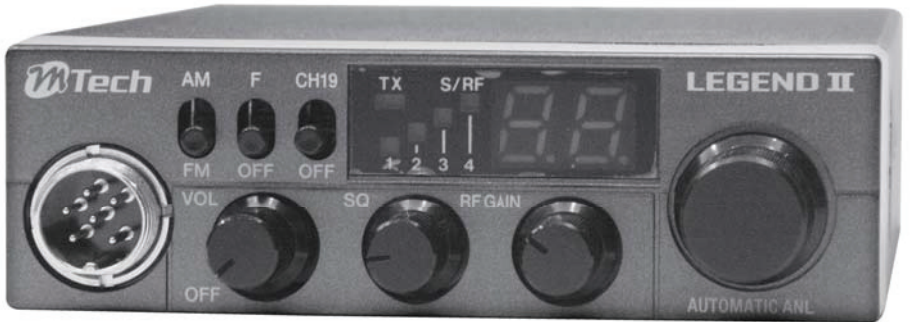




LEGEND II

Mobile CB Radio



Instruction Manual

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LEGEND II

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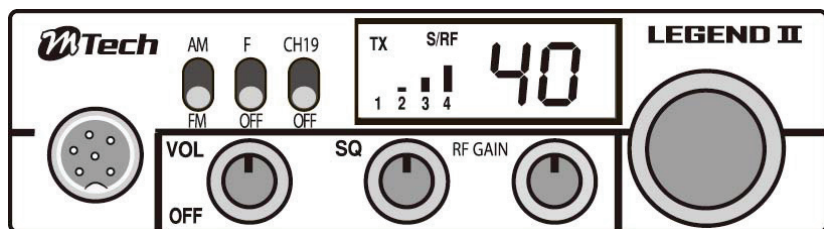
Mobile CB Radio

INTRODUCTION

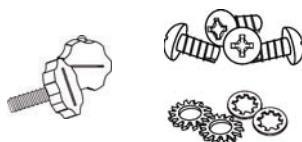
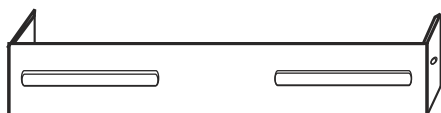
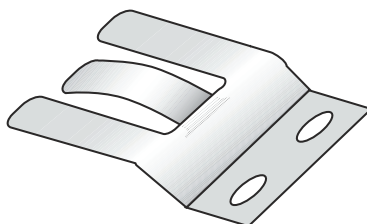
Welcome to the world of Citizens Band radio communications. Your radio is an advanced mobile radio designed for use in the Citizens Band (CB) Radio Service. It will operate on any of the 40 AM/FM frequencies. Your Radio features a super heterodyne circuit with PHASE LOCKED LOOP techniques to assure precise frequency control.

INCLUDED IN YOUR PACKAGE

If any of these items are missing or damaged, immediately contact your place of purchase.



Microphone and hook



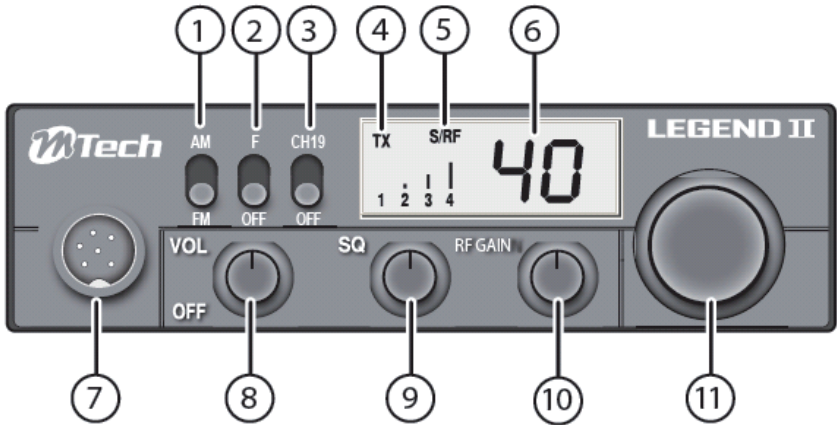
Mounting bracket, knobs, and mounting hardware

► Other printed materials

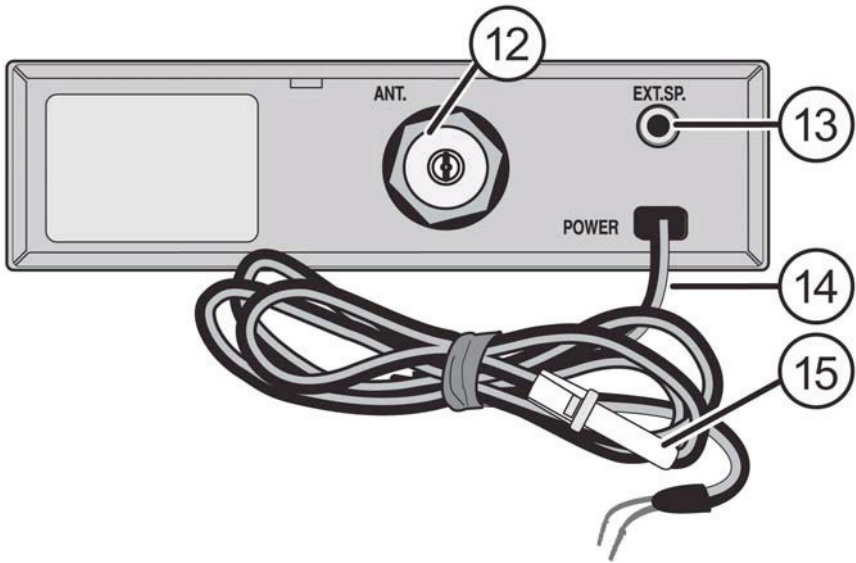
NOTE: You must use a CB antenna (sold separately) with this radio.

PARTS OF THE RADIO

Front



- 1. AM/FM Select Switch**
Switches modulation mode AM or FM.
- 2. Config. Select Switch**
Switches config. select mode on or off.
- 3. CH19 Switch**
Switches the radio over to channel 19.
- 4. TX LED**
Indicates when the radio is transmitting.
- 5. S/RF (Signal/RF) Meter**
Shows the strength of the received signal or the RF output.
- 6. Channel Indicator**
Displays the channel currently in use.
- 7. Microphone Jack**
Connects to the included detachable electret microphone.
- 8. Volume Control**
Powers on the radio and adjusts the volume.
- 9. Squelch Knob**
Adjusts the level at which the radio squelches or suppresses weak radio signals.
- 10. RF Gain Knob**
Adjusts the level of the signal reception.
- 11. Channel Selector**
Select which channel the radio will transmit or receive on.



12. Antenna connector

Connects to a male PL-259 external antenna cable (antenna sold separately).

13. External Speaker Jack

See *Connecting external speakers*, below.

14. 12 Volt DC Power Cord

15. Fuse Holder

Microphone



16. Push-to-talk (PTT) button

INSTALLATION

Connect the microphone

Align the microphone connector with the jack on the front of the radio. Push the connector in firmly and secure it with the locking screw.

Connect the power

You can connect the radio to any standard 12 volt DC power source, with a negative ground. If you don't know whether your power supply uses a positive or negative ground, consult the manual for your power supply or contact the manufacturer.

WARNING! DO NOT connect this equipment to a power supply if you are not absolutely certain of the grounding type!

- 1) Make sure your power supply is turned off.
- 2) Connect the RED lead on the radio to the power supply's POSITIVE (+) pole, and connect the BLACK lead to the power supply's NEGATIVE (-) pole or to a neutral ground such as the chassis.
- 3) Turn on your power supply.
- 4) Turn the radio's **Volume** knob clockwise to power on the radio.

Installing the mounting bracket

When choosing the location for the radio's mounting bracket, keep the following things in mind:

- ▶ Pick a location that does not block your view, interfere with your vehicle's controls, or hinder your driving.
- ▶ Make sure the radio and microphone are not in front of an airbag.
- ▶ Pick a solid surface that can support the weight of the bracket and the radio.
- ▶ Make sure there's enough room. (You may want to put the radio in the bracket when you're choosing where to install the bracket.)

Once you choose the location, use the included, self-tapping screws to attach the mounting bracket and the microphone bracket to your vehicle (you don't have to drill holes). Slide the radio into the bracket and use the included knobs to hold it at the preferred angle.

Connecting an external antenna

WARNING! The antenna used for this radio must be installed at least 25 inches (63 cm) away from all persons. The antenna must not be collocated or used with any other antenna or transmitter.

CAUTION: Never operate your radio with no antenna or with a damaged antenna cable. This can damage the radio

You will need to purchase an antenna to operate the radio. There are two basic types of mobile CB antennas--full-length whips and loaded whips--with a wide variety of mounts to suit different vehicle locations.

- ▶ Choose an antenna that matches the specifications of this radio.
- ▶ Follow the manufacturer's installation instructions carefully.
- ▶ Tune your antenna using a Standing-Wave Ratio (SWR) meter: set the radio to channel 20, and adjust the antenna until the SWR is as close as 1:1 as possible.

CAUTION: Make sure the SWR is less than 2:1 before using the radio. An SWR higher than 2:1 can damage the transmitter.

Your dealer can help you select the antenna that is best for your needs. Consult the specifications in the back of this manual for detailed transmitter and antenna information.

Connecting external speakers

Your radio supports a external speaker for remote monitoring features. External speakers are sold separately.

To prevent feedback, direct a speaker away from the microphone.

External monitor

Function	Remote receiver monitoring or substitution for internal speaker
Impedance	8 Ohm
Rating	7 Watts
Connect to	EXT.SP. jack (1/8-in/3.5 mm)
Notes	The internal speaker is disabled when an external speaker is connected.

OPERATION AND MAINTENANCE

Turning the radio on	Turn the Volume knob clockwise until the display backlight comes on.
Turning the radio off	Turn the Volume knob counter-clockwise until it clicks and the display backlight turns off.
Selecting a channel	<p>-The frequency bands must be chosen according to the area where you are going to operate. Do not use another config code.</p> <ol style="list-style-type: none"> 1) Make sure your power supply is turned off. 2) Slide the F/OFF switch on F position. 3) Turn on your power supply. 4) Selects the desired config. code with the channel selector. 5) Slide the F/OFF switch on OFF position. 6) To confirm the setting, turn off your power supply, and then repeatedly turn on your power supply. <p>-Turn the Channel knob clockwise to move up the channel list. Turn it counter-clockwise to move down the channel list.</p>
Changing the volume	Turn the Volume knob clockwise to increase the volume; turn it counter-clockwise to decrease the volume.
Transmitting	<p>-Tune the radio to the channel you want to transmit on, and listen to make sure the channel is clear.</p> <p>-Press and hold the PTT button.</p> <p>-Hold the microphone about 2 inches away from your mouth and speak in a normal voice.</p> <p>-Release the button to listen for a response.</p>
Adjusting the squelch level	<p>-To filter out weaker signals and background noise, turn the knob clockwise to increase the squelch level.</p> <p>-To decrease the squelch level so you can hear weaker radio signals, turn the knob counter-clockwise.</p>

Adjusting the RF gain	<p>-Turn the knob clockwise to boost the reception of weak signals, or counter-clockwise to reduce the reception of strong signals.</p> <p>-In areas where strong signals cause noise and distortion, reduce the RF gain (turn the knob counter-clockwise).</p> <p>-In areas where weaker signals are difficult to hear, increase the RF gain (turn the knob clockwise).</p>
Using the Instant Channel 19 feature	<p>-Move the CH19 switch up; the radio automatically tunes to channel 19 and disables the channel selector.</p> <p>-Move the switch back down to return to the previous channel and enable the channel selector.</p>

Maintenance

Every six to twelve months, check to make sure that...

- ▶ The Standing Wave Ratio (SWR) is less than 2:1.
- ▶ All electrical connections are secure and free of corrosion.
- ▶ The antenna cable shows no wear or damage.
- ▶ All mounting screws are securely fastened.

TROUBLESHOOTING

If your radio is not performing to your expectations, please try these simple steps.

Problem:	Things to try:
Radio won't turn on (no power)	<ol style="list-style-type: none"> 1. Check the radio's power cord and all connections. 2. Check the fuse in the radio's power cord. 3. Check your vehicle's electrical system.
Poor reception	<ol style="list-style-type: none"> 1. Adjust the squelch level. 2. Adjust the RF gain level. 3. Check the antenna, cable and connectors. 4. Check operation mode of the radio.
Weak transmission	<ol style="list-style-type: none"> 1. Check the antenna, cable and connectors. 2. Check the antenna grounding. 3. Check for corrosion on the connectors.

Service and repair information

- ▶ Technical information, diagrams and charts will be provided upon request.
- ▶ Service, repair, or alignment should only be attempted by a qualified and/or licensed radio technician.
- ▶ When ordering parts, it is important to specify the correct model number of this radio.

**Expert Opinion of the Notified Body on the Conformity Assessment
according to Article 10.5 of R&TTE Directive 1999/5/EC**

**of the Notified Body SGS
EU Identification Number 2150**

recognized by



Bundesnetzagentur

BNNetzA-LS-09/51-57

Registration-No.	ZF0100001
Certificate Holder	M-TECH DYNAMIC CORPORATION LTD.
	Unit 5, 17/F, Grandtech Centre, 8 On Ping Street, Shatin, New Territories, Hong Kong
Product Designation	LEGEND II
Product Description	M-Tech CB Radio

Opinion on the Essential Requirements

Article 3.1a): Health and Safety	EN 62311:2008 EN 60065:2002 + A1:2006 + A11:2008 + A2:2010 + A12:2011	compliant
Article 3.1b): Electromagnetic Compatibility	ETSI EN 301 489-1 (V1.8.1, 2008) ETSI EN 301 489-13 (V1.2.1, 2002)	compliant
Article 3.2: Effective Use of the Radio Spectrum	ETSI EN 300 135-2 (V1.2.1, 2008) ETSI EN 300 433-2 (V1.3.1, 2011)	compliant

Marking

EC conformity marking

Marking Example according to R&TTE Directive 1999/5/EC, § 12:



This certificate is issued in accordance with the Directive 1999/5/EC of the European Parliament and the Council on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity dated 9th March 1999 and is only valid in conjunction with the following annex (1 page(s)).

approved by:

Date

Signature

Beier
Head of Notified Body R&TTE

Jun 20, 2012

i. v. de. Beier

Werner
Deputy Head of Notified Body R&TTE

Jun 20, 2012

i. A. W. Werner

This document was signed electronically.

SGS Germany GmbH, Certification Body Munich, Hofmannstr. 50, D-81379 Muenchen,
Phone +49 89-787475-132, Internet www.sgs-certification-body.de

SPECIFICATIONS

General	
Channels	40 AM/FM (Config. E)
Frequency Range	26.965 to 27.405 MHz (Config. E)
Frequency Control	Phase Locked Loop (PLL) synthesizer
Frequency Tolerance	±600Hz
Operating Temperature	-10°C to +55°C
Microphone	Electret condenser Type Microphone
Input Voltage	12.0 V DC
Current Drain	TX full mod., 2.0A Max RX with max. audio output, 1.5A Max
Consumption Power	24W max
Size	115(L) x 180(H) x 35(D) mm
Weight	0.8 Kg
Antenna Connector	UHF, SO-239
LED Meter	Indicates relative RF output and received signal strength
Filter	ANL(Automatic Noise Limiter) built-in
Transmitter	
Power Output	4 W AM / 4 W FM
Freq. Response	300-3,000 Hz in AM/FM
Output Impedance	50 ohm, unbalanced
Receiver	
Sensitivity	0.7µV for 20dB SINAD typical(limit 1.4µV)
Adjacent Channel Rejection	66 dB typical
Image Rejection	75 dB typical
I.F. Frequency	Double Conversion Superheterodyne 1 st 10.695 MHz 2 nd 455 KHz
RF Gain Control Range	Adjustable for optimum reception - More than 20 dB (@1µV)
Automatic Gain Control (AGC)	Less than 10dB change in audio output for inputs from 10 to 50,000µV
Squelch	Adjustable; threshold less than1µV
Audio Output Power	5 W max. into 8 ohm
Freq. Response	300 to 3,000 Hz
Distortion	Less than 10%, 0.5W 1KHz

Specifications and features are subject to change without notice.

CHANNELS AND FREQUENCIES

CH	Freq.	CH	Freq.
1	26.965 MHz	21	27.215 MHz
2	26.975 MHz	22	27.225 MHz
3	26.985 MHz	23	27.255 MHz
4	27.005 MHz	24	27.235 MHz
5	27.015 MHz	25	27.245 MHz
6	27.025 MHz	26	27.265 MHz
7	27.035 MHz	27	27.275 MHz
8	27.055 MHz	28	27.285 MHz
9	27.065 MHz	29	27.295 MHz
10	27.075 MHz	30	27.305 MHz
11	27.085 MHz	31	27.315 MHz
12	27.105 MHz	32	27.325 MHz
13	27.115 MHz	33	27.335 MHz
14	27.125 MHz	34	27.345 MHz
15	27.135 MHz	35	27.355 MHz
16	27.155 MHz	36	27.365 MHz
17	27.165 MHz	37	27.375 MHz
18	27.175 MHz	38	27.385 MHz
19	27.185 MHz	39	27.395 MHz
20	27.205 MHz	40	27.405 MHz

NORMS

Config. code	FM channel	AM channel
E	40CH FM (4W)	40CH AM (4W)
	26.965 to 27.405MHz	26.965 to 27.405MHz
d	80CH FM (4W)	80CH AM (1W)
	26.565 to 27.405MHz	26.565 to 27.405MHz
d2	40CH FM (4W)	40CH AM (1W)
	26.965 to 27.405MHz	26.965 to 27.405MHz
EU	40CH FM (4W)	40CH AM (1W)
	26.965 to 27.405MHz	26.965 to 27.405MHz
EC	40CH FM (4W)	-
	26.965 to 27.405MHz	-
U	AM Position (CEPT)	-
	40CH FM (4W)	
	26.965 to 27.405MHz	
	FM Position (ENG)	
PL	40CH FM (4W)	40CH AM (4W)
	26.96 to 27.4MHz	26.96 to 27.4MHz

CE2150!

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