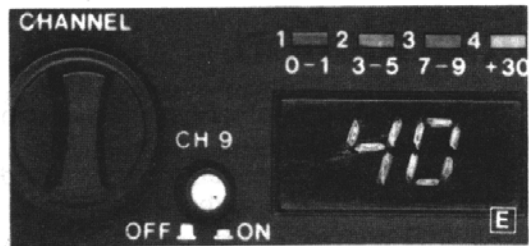
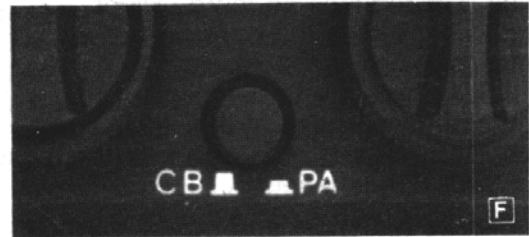


E Lighted LED Digital Channel Indicator. Clearly displays the channel selected by use of the selector dial.

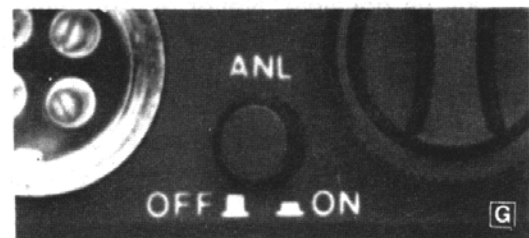
Turn the dial to the right to select a higher-numbered channel spectrum, left to select channels below the number indicated.



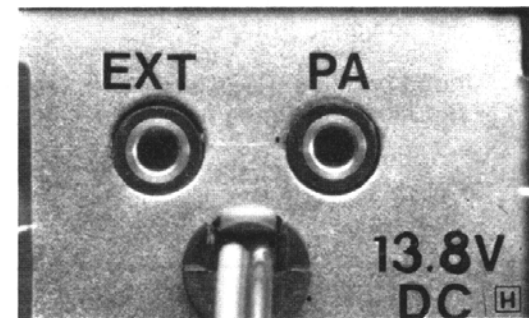
F CB-PA Switch. Switches your CB speaker system from a CB function, using the internal, main-unit speaker, to a Public Address function, using an external PA speaker, and back again.



G ANL/Off Switch. When pushed in, it operates in the receiver to reduce atmospheric and ignition noise.



H External Speaker Jack. Allows you to attach an external speaker that will override the unit's internal speaker. Connection is made through the External Speaker Jack on the back panel.



H PA Jack. An optional PA speaker may be attached to your transceiver through the PA output jack on the back panel. This allows you to communicate with pedestrians or other vehicles through your CB microphone.

I Microphone Push-To-Talk Bar. Simply push this bar in to transmit; release when receiving.



I

General CB information.

In 1958, The Federal Communications Commission approved the use of 23 channels by duly licensed Citizens Band radio operators. The authorization was expanded to 40 channels in 1977.

A simple, basic means of communication, CB requires no more skill or knowledge than the operation of a standard AM or FM receiver.

Still, there are certain facts, procedures and "rules of the road" you'll need to know in order to make the most of your CB experience.

Make it "short and sweet." When using your CB, get on and off the air as quickly as possible. Never use profanity — which is against the law and subject to heavy penalties. Follow the FCC rules outlined in Part 95.

Use Channel 9 in emergencies only.

Emergency channel 9 is designated for this purpose and this purpose alone.

The FCC has given public safety agencies various "call signs" including "0911" numbers, coinciding with the "911" phone numbers these agencies use in telephone communications.

The call signs for state-level agencies use 3 letters and 4 numbers, with the second and third letters being the official Post Office state abbreviation, e.g., "KS" for "Kansas."

Why and how to use the "10 Code." Developed over the years by official agencies in order to save time and provide precise, clear messages, the "10-Code" has become a popular tool for CBers.

The table below lists some of the more common codes and their meanings.

Code	Meaning		
10-1	Receiving poorly	10-35	Confidential information.
10-2	Receiving well	10-36	Correct time is.
10-3	Stop transmitting.	10-37	Wrecker needed at.
10-4	OK, message received.	10-38	Ambulance needed at.
10-5	Relay message.	10-39	Your message delivered.
10-6	Busy, stand by.	10-41	Please turn to Channel.
10-7	Out of service; leaving the air.	10-42	Traffic accident at.
10-8	In service, subject to call	10-43	Traffic tie-up at.
10-9	Repeat message.	10-44	I have a message for you.
10-10	Transmission completed, standing by.	10-45	All units within range report.
10-11	Talking too fast.	10-50	Break channel.
10-12	Visitors present.	10-60	What is next message number?
10-13	Advise weather/road conditions.	10-62	Unable to copy; use phone.
10-16	Make pickup at.	10-63	Network directed to.
10-17	Urgent business.	10-64	Network clear.
10-18	Anything for us?	10-65	Awaiting your next message/assignment.
10-19	Nothing for you; return to base.	10-67	All units comply.
10-20	My location is.	10-70	Fire at.
10-21	Call by telephone.	10-71	Proceed with transmission in sequence.
10-22	Report in person to.	10-77	Negative contact.
10-23	Stand by.	10-81	Reserve hotel room at.
10-24	Completed last assignment.	10-82	Reserve room for.
10-25	Can you contact?	10-84	My telephone number is.
10-26	Disregard last information.	10-85	My address is.
10-27	I am moving to Channel.	10-91	Talk closer to mike.
10-28	Identify your station.	10-93	Check my frequency on this channel.
10-29	Time is up for contact.		
10-30	Does not conform to FCC rules.	10-94	Please give me a long count.
10-32	I will give you a radio check.	10-99	Mission completed; all units secure.
10-33	Emergency traffic.		
10-34	Trouble at this station.	10-200	Police needed at.

Frequency-channel number chart.

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

Factors affecting effective CB range.

Essentially, they're the same influences that optimize or limit AM, FM and other kinds of performance in moving vehicles:

Terrain: Hills and valleys naturally interrupt and shorten CB signals.

Weather. You can expect that CB range will be reduced — perhaps drastically — in times of atmospheric disturbance, such as in a thunderstorm or heavy snow. Sunspots, too, are known to adversely affect CB performance.

Obstructions. Inside a tunnel, covered parking garage or viaduct, CB sending/receiving capability may be cut off altogether.

In short, you can expect to maintain maximum transmitting/receiving performance in flat, open country in stable (not necessarily clear) weather conditions.

Should effective range be limited in these conditions, check to see that your CB is connected properly and your antenna adjusted correctly. It may be necessary to consult your Midland CB Dealer's service department.

What causes noise?

If you have an abnormal noise problem, the chances are your vehicle itself is the cause.

A CB receiver is a very sensitive instrument, able to pick up small noise signals and amplify them — particularly if the source of these signals is within a few feet of your CB.

Any noise that comes from your CB almost certainly comes from outside the unit itself. Devices have been designed into your Midland CB (a noise blanker or an automatic noise limiter, for example) to minimize this kind of distraction.

Trouble-shooting aids.

Frequently, there are simple, quick actions you can take to eliminate or minimize such problems as interference and noise.

Noise suppression.

A very common source of excessive noise is the ignition system of a CB owner's vehicle. If you suspect this is true, simply turn off the ignition and set the key in the accessories (ACC) position.

This way you'll provide power to the transceiver, minus any ignition interference that might exist. If the noise goes away, you know instantly that the ignition system is the culprit.

Still, there are a number of places in the ignition system where noise can originate.

Sparkplugs and sparkplug wires, are probably the worst noise producers. To eliminate this kind of noise, you can take any of four simple measures: (1) Install resistive sparkplug suppressors, (2) resistor sparkplugs or (3) resistance-wire cabling, between plugs and the distributor and also between the distributor and ignition coil. (4) Replace old plugs and sparkplug wiring and properly tune the engine. This generally cures most noise.

Many cars come suppressor-cable equipped. If yours didn't (consult your vehicle owners manual or dealer service department to be sure), you can get it at any auto supply store and, given a moderate amount of mechanical skill, install it yourself.

Caution: Do not undertake any ignition-system repairs or modifications without either professional help or some automotive service experience.

Generator-brush sparking can create an annoying "whine." It's caused by a dirty commutator, and is eliminated by polishing its surface with fine-grade emery cloth, and cleaning grooves with a small, sharp tool.

Voltage regulators can cause a "hashy" sound in your CB when relay contacts jitter open and closed when the battery is fully charged. To eliminate this noise, mount coaxial feedthrough capacitors at the battery and armature terminals on the regulator box.

Alternator slip rings should also be kept clean and good brush contact maintained to minimize CB noise.

In addition, single-contact alternator regulator boxes need a coaxial capacitor at the ignition terminal. Double-contact units should have a second capacitor at the battery terminal. Shielding between the regulator and alternator may be needed as well. Be sure to ground the shield at both ends.

Infrequent, though real, noise generators like your car's heat fan, turn signals, electric-windows and windshield-wiper motors can also be silenced with a coaxial capacitor (consult your serviceman).

Wheels and tires can also cause CB noise also. Wheel noise is eliminated by putting static-collector springs between the wheel spindle bolt and grease retainer cup. Tire static can be quieted with antistatic powder applied inside each wheel.

Antenna corona-discharge noise — most frequently occurring with sharp-pointed "whip" models — can happen just before or during electrical storms. The only cure is for the storm to blow over or pass.

SOLUTIONS:

COMMON CB PROBLEMS:

	Check power cable connection.	Check fuse.	Check Squelch adjustment.	Change on/off switch.	Check to active channel.	Check antenna connection and cable.	Fully depress push-to-talk bar.	Check microphone connection.	Check metal-to-metal ground connection.	Check CB-PA Switch.
No sound or channel light.	•	•	•					•		
Channel light but no sound.			•		•		•	•	•	
Poor reception.					•		•			•
Transmission problems.					•	•	•	•		
Unclear reception.					•			•		
No voice reception.		•		•						
Inoperative channel selector.								•		

Caution: The fuse included with this unit is an important safety feature which must not be circumvented. Removal of this fuse or the use of a fuse greater than supplied may result in overheating and/or fire and consequential damage to the unit or vehicle. If a replacement fuse burns out, have the unit inspected and repaired by a qualified service technician.

Midland 77-145A Mobile CB Transceiver: Technical Specifications

General Construction.

- Unit size:
5-3/16" w. X 1-5/16 h. X 6-1/8" d.
- Unit weight: 2.2 lbs
- Shipping weight: 4.5 lbs
- Screw Type microphone connector.
- No mechanical relays. All switching is solid state using diodes and transistors for high reliability.
- Transmitter output stage is protected from mismatch, no-load or short-circuit conditions.
- Input power is suitably filtered and bypassed to prevent alternator "whine" on transmit or receive.

Electrical Specifications.

All test conditions and methods are in accordance with EIA standards RS-382 and RS-424 or applicable government regulations.

Frequency Control: PLL

Receiver Sensitivity: 0.7 uV for 10 dB (S+N)/N.

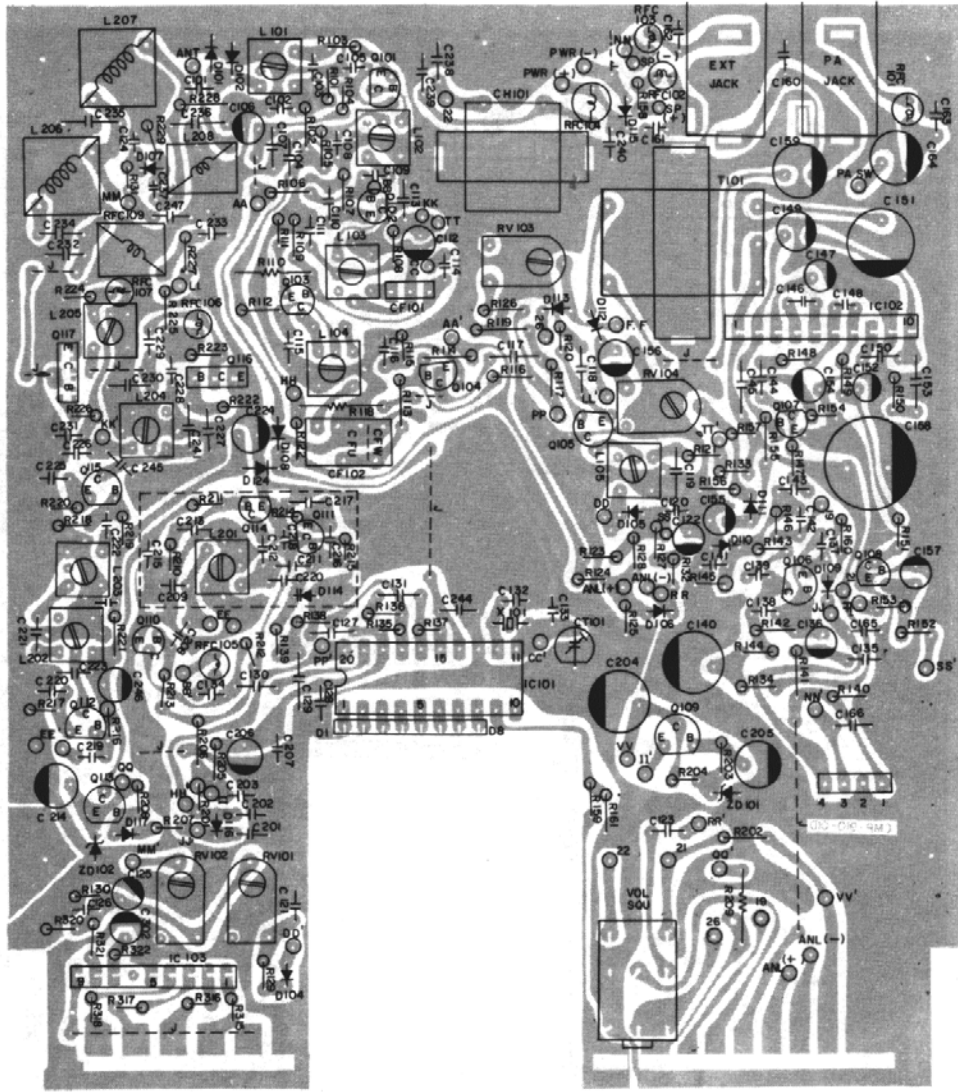
Receiver Selectivity: More than 50 dB ± 10 KHz.

Controls: On/off/volume. Variable squelch. S/LED meter. CB/PA. ANL. LED digital readout channel indicator. Push-to-talk (on microphone).

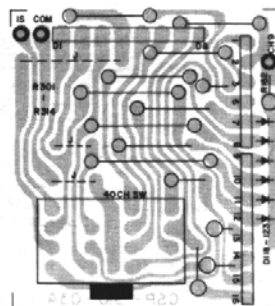
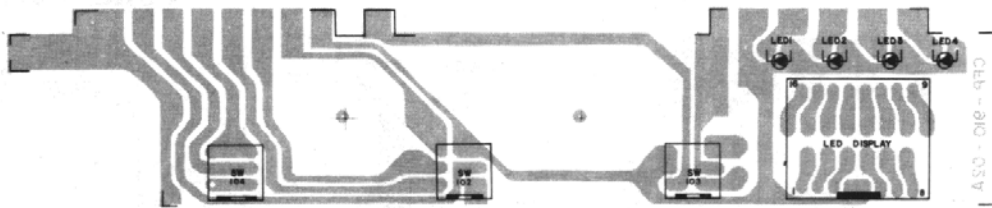
Jacks and Connections: Microphone. 50-ohm antenna. 8-ohm external speaker. PA speaker.

Accessories Included: 500-ohm push-to-talk microphone with coil cord and screw in connector. Microphone clip. Slotted mounting bracket and hardware. Owners manual. Part 95 Subpart D, DC power cord with 2-pin connector.

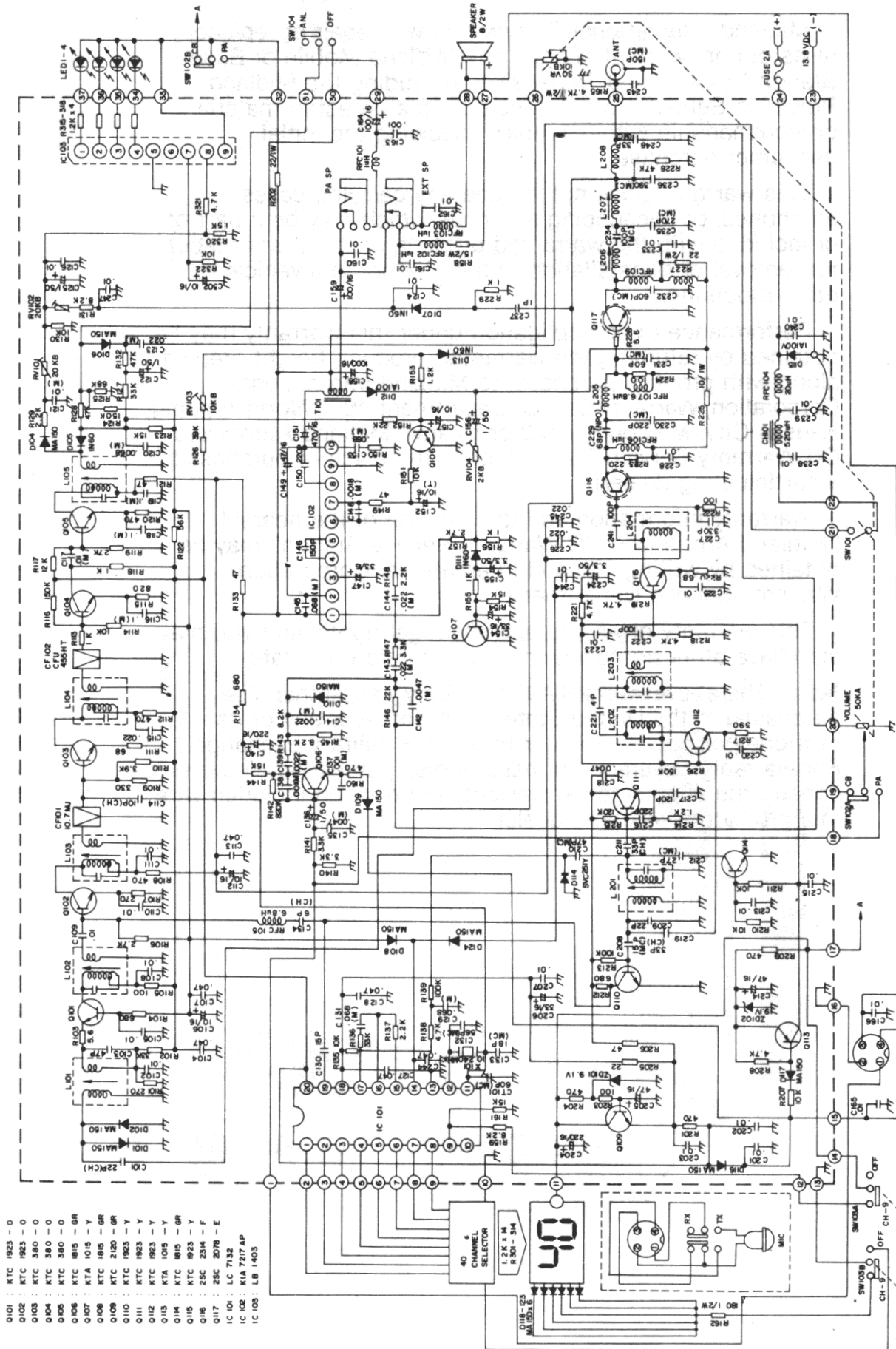
Parts Layout. Main PC Board.



Component Side.



Schematic Diagram



- 0101 : KTC 1923 - 0
- 0102 : KTC 1923 - 0
- 0103 : KTC 380 - 0
- 0104 : KTC 380 - 0
- 0105 : KTC 380 - 0
- 0106 : KTC 1815 - GR
- 0107 : KTA 1015 - Y
- 0108 : KTC 1815 - GR
- 0109 : KTC 1920 - GR
- 0110 : KTC 1923 - Y
- 0111 : KTC 1923 - Y
- 0112 : KTC 1923 - Y
- 0113 : KTA 1015 - Y
- 0114 : KTC 1815 - GR
- 0115 : KTC 1923 - Y
- 0116 : 23C 2314 - F
- 0117 : 23C 2078 - E
- IC 101 : LC 7132
- IC 102 : KIA 7217 AP
- IC 103 : LB 1403

Limited Warranty.

Midland International Corporation will repair or replace, at its option, without charge, any Midland Mobile or Base Station Citizen Band Transceiver, excluding the Midland Precision Series™, which fails due to a defect in material or workmanship within 1 year following the initial consumer purchase.

This warranty does not include any carrying cases, earphones, or telescoping antennas which may be a part of or included with the warranted product, or the cost of labor for removal or reinstallation of the product in a vehicle or other mounting.

Performance of any obligation under this warranty may be obtained by returning the warranted product, freight prepaid, along with proof of purchase, to Midland International Corporation, Warranty Service Department, 1690 North Topping, Kansas City, Missouri 64120 or to any "Midland Authorized CB Warranty Service Station," or to the place of purchase (if a participating dealer).

Warranty information and the location of the nearest "Midland Authorized CB Warranty Service Station" may be obtained by writing Midland International Corporation, Warranty Service Department.

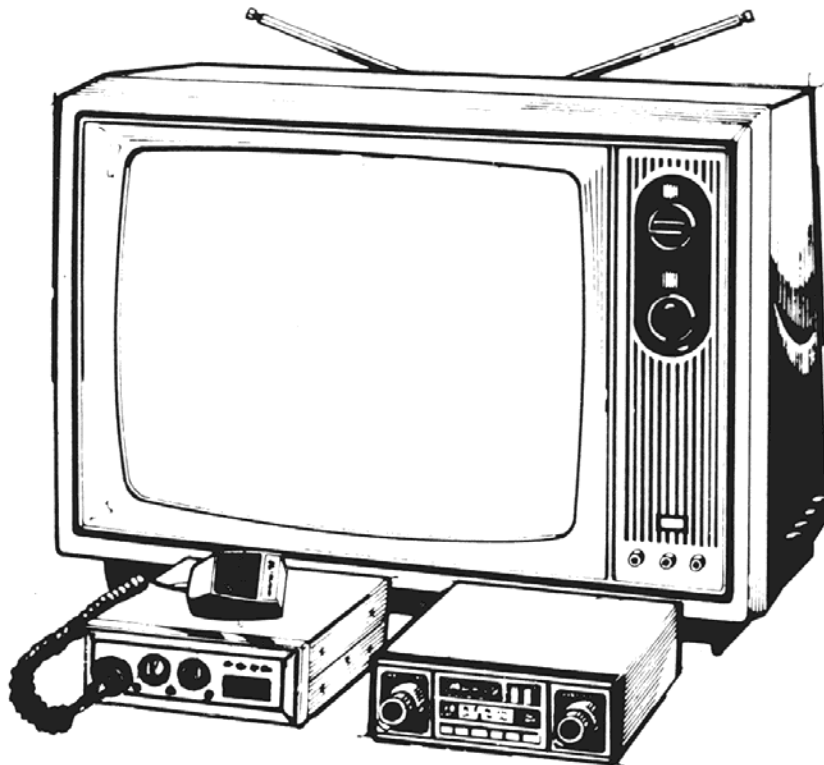
This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Note: The above warranty applies only to merchandise purchased in the United States of America or any of its territories or possessions or from a US military exchange. For warranty coverage on merchandise purchased elsewhere, consult the supplemental warranty information included with this product or ask your dealer.

The Midland tradition of electronic excellence.

Outstanding CB performance and dependability are only two ways Midland electronic excellence will brighten your life.

The same expertise, skill and dedication that's engineered into your Midland CB also go into every product in the long, versatile line of Midland car stereo receivers, telephones and other electronic products.





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