Midland 13-882B Owner's Manual

MIDLAND INTERNATIONAL®

INTEGRATED CIRCUIT

MODEL 13-882B

23-CHANNEL MOBILE TRANSCEIVER

OWNER'S GUIDE

FEDERAL COMMUNICATIONS COMMISSION'S REQUIREMENTS

Your new Midland 13-882B is a combination receiver-transmitter designed, built, and F.C.C. type accepted for licensed Class D operation on any of the 23 frequencies designated as citizens band channels by the Federal Communications Commission. You are required to read and understand Part 95 of the F.C.C. rules and regulations prior to operation of this unit. Part 95 regulations are available from the Superintendent of Documents, Government Printing Office, Washington D. C. 20402. You are also required to complete F.C.C. form 505 and submit it to the F.C.C. in order to receive your license to operate this unit. F.C.C. regulations will be violated if you transmit with this unit prior to receipt of your license.

NOTE: The technical information, diagrams, and charts provided in this manual are supplied for the use of a qualified holder of a first or second class radiotelephone license in servicing this transceiver. It is the user's responsibility to see that this unit is operating at all times in accordance with the F.C.C. Citizens Radio Service regulations.

If you install or service your own transceiver, do not attempt to make any transmitter tuning adjustment. Transmitter adjustments are prohibited by the F.C.C. unless you hold a first or second class radiotelephone license or are in the presence of a person holding such a license. A Citizens Band or Amateur license is not sufficient.

When service is performed by an authorized and licensed person, care must be taken in the replacement of parts to use only authorized parts, in order not to void the type acceptance of this model.

Midland International Corporation, Communications Division, hereby certifies that this unit has been designed, manufactured and F.C.C. type accepted in accordance with Vol. 6, Part 95 of the current F.C.C. rules and regulations as of the date of manufacture.

OWNERS GUIDE

Your 13-882B is a versatile, professional quality transceiver and we strongly suggest that you read this Owners Guide carefully before operation so that you may receive full benefit from its many features.

OPERATING CONTROLS, CONNECTORS AND THEIR FUNCTIONS

VOLUME CONTROL / POWER SWITCH

This turns the power on or off.
This controls the sound output from the speaker when receiving or from the public address (PA) speaker connected to the PA jack on the rear panel. The volume control does not affect transmitting output.

SQUELCH CONTROL

Quiets the receiver when signals are not being received and allows a quiet standby operation. It functions only in the receive mode and does not affect the receiver volume when signals are being received.
To adjust, when no signals are present, rotate the squelch control clockwise until the receiver is quieted. Incoming signals will automatically release the squelch. Careful adjustment is necessary as a setting too far to the right will not allow weaker signals to release the squelch.

ANL-OFF SWITCH

An Automatic Noise Limitter (ANL) circuit is provided for reducing undesirable noise. To operate the ANL circuit place the switch in the ANL position. To cut off the circuit, place it in the OFF position.

NB SWITCH

The NB (Noise Blanker) is a circuit designed to reduce impulse noises such as ignition noise from vehicles, etc., without significantly affecting the basic sensitivity of the receiver.

CB-PA SWITCH

This transceiver may also be used as a PA (Public Address) amplifier. Connect a suitable 4-32 ohms PA speaker to the "PA" jack on the rear panel. Place the CB-PA switch in the (PA) position and press the Push-to-Talk button on the microphone.
For regular 2-way communications, the switch must be placed in the (CB) position.

CHANNEL SELECTOR SWITCH

This controls both transmitter and receiver frequencies simultaneously and may be set to any of the 23 channel positions indicated. All necessary crystals are supplied for full 23 channel operation.

DELTA TUNE CONTROL

This is a 3-position switch which varies the receiving frequency for about ±1 kHz. This enables you to receive stations transmitting slightly off frequency. Place the control in one of the three positions where the clearest reception is obtained. This control does not affect transmitting frequency.

S/RF POWER METER

This gives the relative strength of incoming signals when receiving and RF power output when transmitting.

ANTENNA WARNING INDICATOR

This indicator alerts you to trouble in your antenna system. The red light is a warning indicator which is activated when the antenna or connecting cable is damaged or badly mismatched or not connected. When this red light is activated you should stop transmitting until the antenna condition or problem is corrected.

ANTENNA CONNECTOR

Used for antenna connection, matches PL-259 standard type.

EXT SPEAKER JACK

Used for an external speaker (8 ohms) connection.

This jack accepts a standard (3.5 mmϕ) 2 circuit phone plug. When the plug is inserted into the jack, the built-in speaker is automatically disconnected.

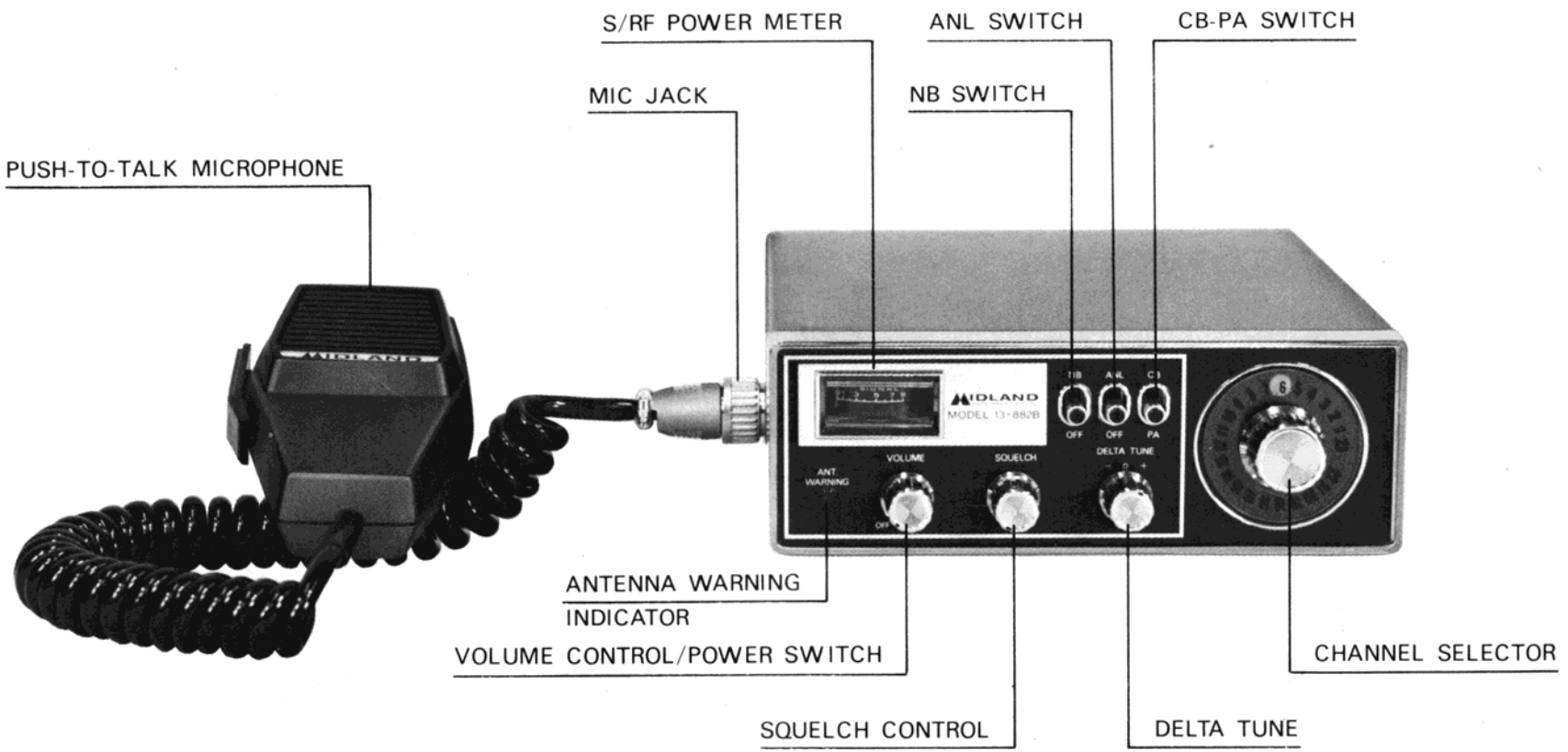
PA JACK

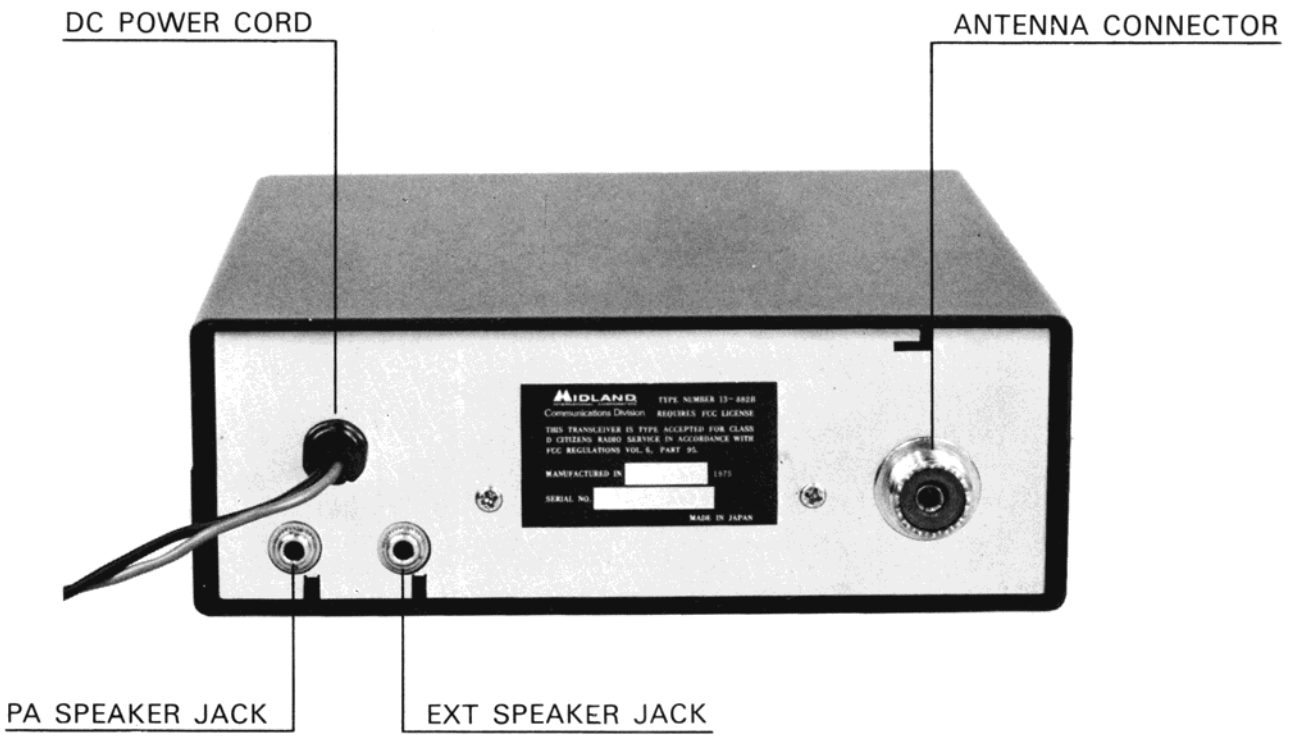
This will be used for connection of PA speaker, see "CB-PA" switch in this manual.

DC POWER CORD

Connect the transceiver to the DC power source.

OPERATION OF CONTROLS




DC POWER CORD
ANTENNA CONNECTOR
MIDLAND
Communications Division
TYPE NUMBER 13-882B
REQUIRES FCC LICENSE
THIS TRANSCEIVER IS TYPE ACCEPTED FOR CLASS D CITIZENS RADIO SERVICE IN ACCORDANCE WITH FCC REGULATIONS VOL. 6, PART 95.
MANUFACTURED IN
1975
SERIAL NO.
MADE IN JAPAN
PA SPEAKER JACK
EXT SPEAKER JACK

MOBILE INSTALLATION

Safety and operating convenience are the primary factors to consider when mounting any piece of equipment in an automobile. Be sure that the transceiver controls may be easily reached by the operator. Also be sure that connecting cables do not interfere with the operation of the brake, accelerator, etc.

POWER CONNECTION

The Model 13-882B may be installed and used in any 12 volt DC negative or positive ground system vehicle. Most newer U.S. and foreign-made cars and small trucks use a negative ground system while some older cars and some newer large trucks may use a positive ground system.

Connect the red DC power cord from the transceiver to the positive or +battery terminal or other convenient point and connect the black power cord to the negative or —battery terminal.

With regard to the connection of the power cords, it may be possible or desirable to connect the ignition switch accessory terminal, so that the transceiver is automatically turned off when the ignition switch (key) is turned off.

Alternately, the power cord may be connected to an available terminal on the fuse block or even to a point in the wiring harness. Care must be taken, however, to guard against a short circuit condition so when in doubt, please contact your vehicle dealer for specific information for your vehicle.

MOBILE ANTENNA CONNECTION

A vertical whip antenna is best suited for mobile operation. A nondirectional antenna should be used for best results in any case. The base-loaded whip antenna will normally provide effective communication or for greater range and more reliable operation a full quarter-wave whip may be used. Either of these antennas use the metal car body as a ground plane and the shield of the base lead as well as the metal case of the transceiver should be grounded. A standard antenna connector (type SO-239) is provided on the transceiver for easy connection to a standard PL-259 coax plug. Following the antenna manufacturer's instructions carefully will insure proper operation.

Whatever the type of antenna selected, it is important that it be properly adjusted and matched and the connecting transmission line be in good condition so as to avoid a high VSWR (voltage standing wave ratio). A VSWR over 2.5 results in reduced radiated power and may cause instability and damage to the final output stage of the transceiver.

BASE STATION OPERATION

Although the 13-882B is designed for mobile operation, it will work equally well as a base station when connected to a suitable base station power supply.

When the 13-882B is used as a base station, any Citizens Band beam, dipole, ground plane or vertical antenna may be used. A ground plane type antenna will provide good coverage, and since it is essentially non-directional, it is ideal in base station to mobile operation. From base station to base station or point-to-point operation a directional beam will give greater distance even under adverse conditions. The range of the transceiver also depends on the height of the antenna so whenever possible, select the highest location within F.C.C. limits.

OPERATING INSTRUCTIONS

1. Insert the MIC plug in the MIC connector (side panel).
2. Make sure your Antenna is securely connected to the antenna connector.
3. Turn the Power on and Adjust the VOLUME control for proper sound level.
4. Turn the SQUELCH control knob counter-clockwise fully.
5. Place the DELTA TUNE switch at center position.
6. Place the CB-PA switch in the CB position.
7. Place the Channel Selector switch to a desired channel.
8. To transmit press the Push-to-Talk button on the microphone and to receive release the button.

IMPORTANT: Do not short circuit the antenna or do not try to transmit without an antenna connected to the Antenna connector on the rear panel. This may cause damage to the output power transistors. Transmit only after carefully checking the installation of connector and coaxial cable.

SPECIFICATIONS

Circuitry:	IC 1, 22 Transistors, 12 Diodes, 1 Zener Diode
Frequency Control:	Crystal Synthesizing System
Channels:	23 channels all installed
Mode of Operation:	AM

Receiver System:	Dual Conversion Superheterodyne
Sensitivity:	Nominal 0.7 μV (S/N 10 dB)
Selectivity:	More than 45 dB down at ±10 kHz
Intermediate Frequency:	1st: 11.275 MHz 2nd: 455 kHz
Frequency Tolerance:	±0.005%
Spurious Rejection:	More than 50 dB
RF Output Power:	Maximum 4.0W (F.C.C. Maximum)
Squelch Range:	0.5 μV — 500 μV
Delta Tune:	About ±1 kHz (Receiving only)
Audio Output Power:	More than 3W (EXT. SP at 8 ohms)
Controls:	Volume/PA, Squelch, Delta Tune, Channel selector, ANL-OFF Switch, CB-PA Switch, NB-OFF Switch.
Jacks and Connectors:	Microphone, EXT SP, Antenna, PA Speaker, DC Power cable (connected directly).
Speaker:	3" dynamic, 8 ohms
Microphone:	Dynamic CB mike
Power Source:	DC 13.8V
Size:	6-3/8 (W) x 7-7/8 (D) x 2-1/4 (H) inches
Weight:	3.8 lbs

TRANSCEIVER SERVICING

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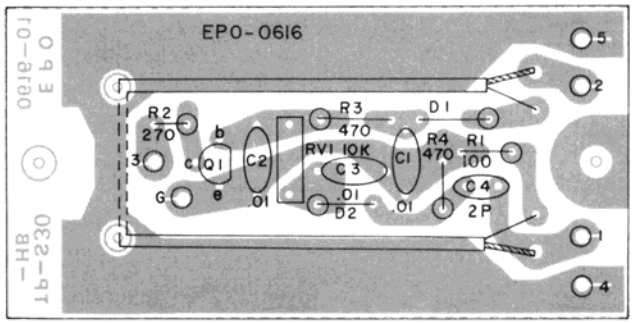
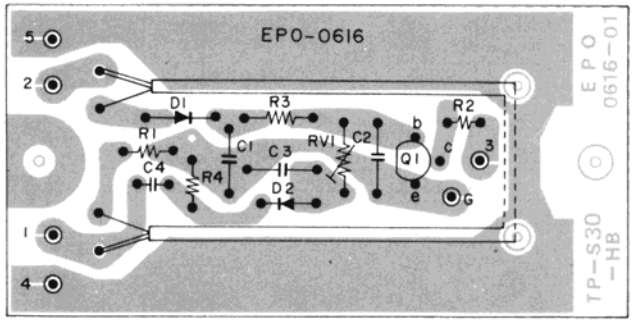
PARTS LAYOUT

FRONT VIEW



BACK VIEW



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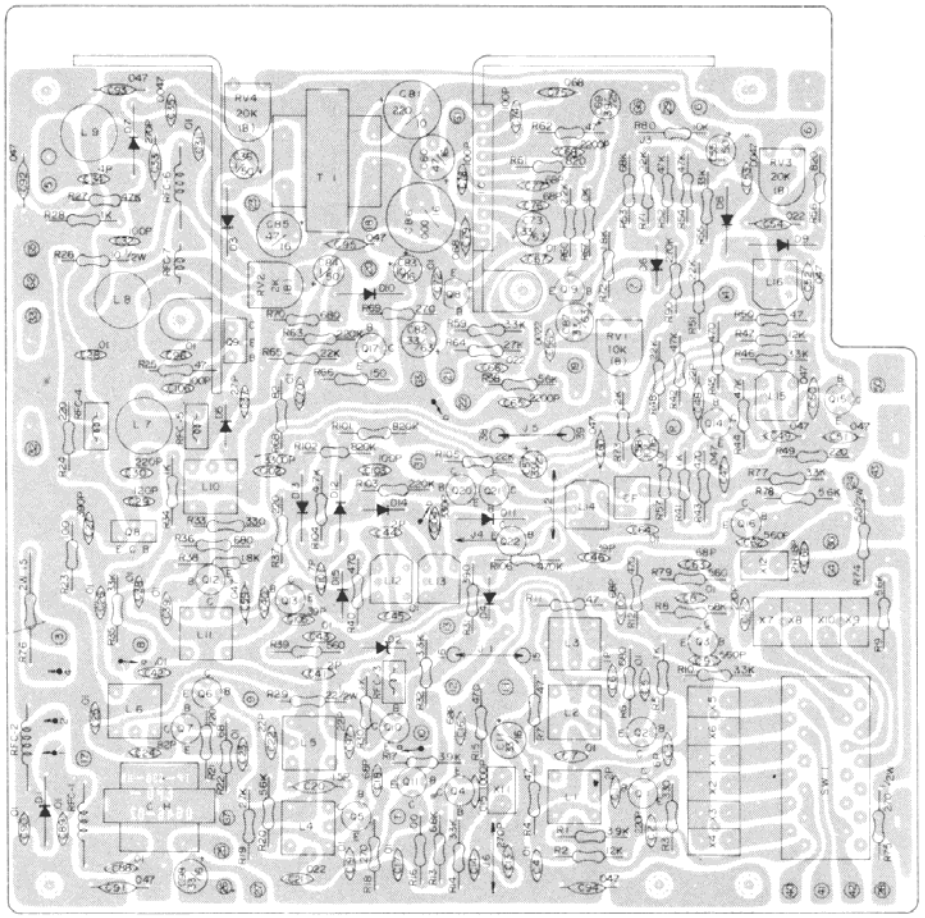

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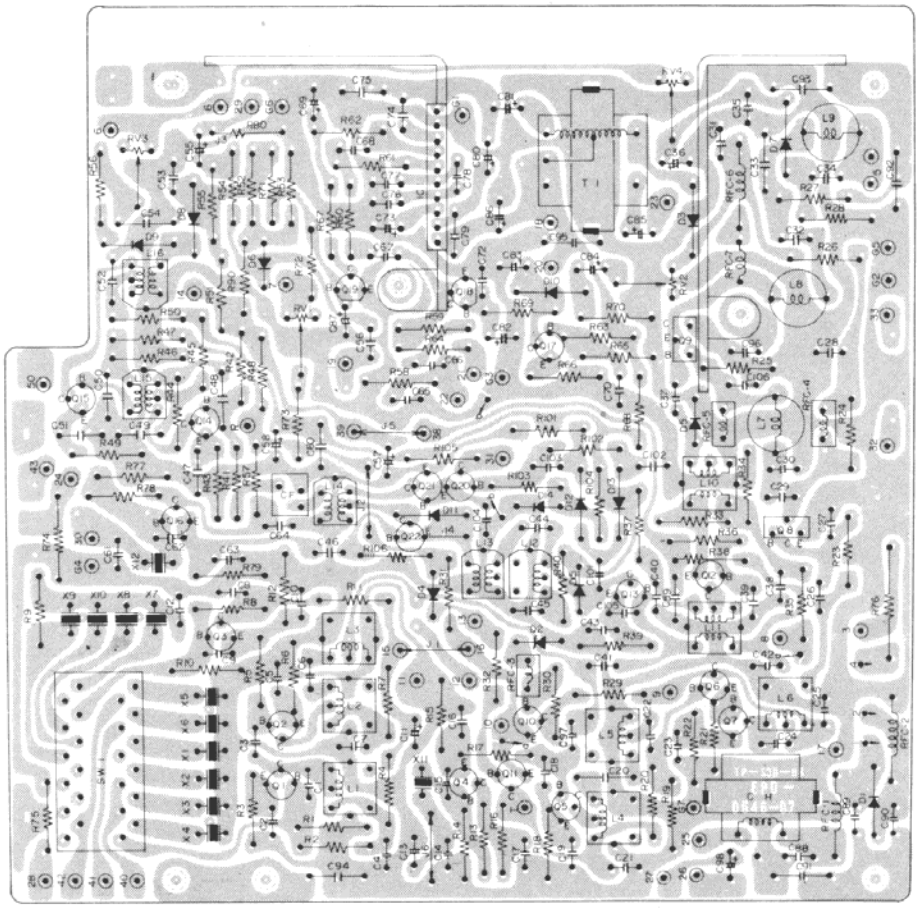

LIMITED WARRANTY

Midland International Corporation, Communications Division warrants each new Midland product to be free from defects in material and workmanship under normal use and service for a period of 90 days after delivery to the ultimate user and will replace or repair the product at our option, at no charge should it become defective and which our examination shall disclose to be defective and under warranty.

This warranty shall not apply to any Midland product which has been subject to misuse, neglect, accident, incorrect wiring not of our own installation, or to use in violation of instructions furnished by us, nor extended to units which have been repaired or altered outside of our factory.

This warranty does not cover carrying cases, earphones, batteries, antenna, broken or cracked cabinets, or any other accessory used in connection with this product.

This warranty is in lieu of all other warranties expressed or implied and no representative or person is authorized to assume for us any other liability in connection with the sale of our products.

Sales receipt must accompany product to validate the date of purchase.

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