Warranty

To Obtain Warranty Service

- Provide proof of the date of purchase within the package.
 Prepay all shipping costs to the authorized service center.
 Include a return shipping address within the package.

Please retain your sales receipt, the carton, the packing materials, and the printed material. The original carton is the best shipping container for the GMRS unit should you have to return it.

For your reference: Model Number Date of Purchase Name of Dealer _

Customer Service Telephone Number: 1-800-864-2199

21

22

Unisonic

GMRS

Notes

MODEL F29002 OWNER'S MANUAL INSTALLATION AND **OPERATING INSTRUCTIONS**

PLEASE READ THIS OWNER'S MANUAL **CAREFULLY BEFORE** USE. KEEP FOR YOUR REFERENCE.



Linisanie

FOR INSTALLATION INFORMATION, PLEASE SEE "GETTING STARTED" INSTRUCTIONS ON PAGE 8 OR YOUR SEPARATE QUICK START GUIDE.
© 2001 BellSouth Corporation

Congratulations on your selection of a quality Unisonic Product. With proper care and adherence to the set-up and user instructions in this Owner's Manual, this unit will provide you with years of trouble-free service.

Unisonic is committed to providing quality products that fit your needs. We would like to have any comments or suggestions you might have on this product. You may mail your comments to:

U.S. Electronics 105 Madison Avenue New York, NY 10016

PRODUCT DESCRIPTION

The GMRS is the newest generation in personal two-way communications. The GMRS operates in a licensed radio band (FCC license is needed for its operation), on any of the 15 licensed channels.

The GMRS is a lightweight, compact two-way communication device that can be used to communicate with family or friends at parks, shopping malls, sporting events, concerts - any indoor or outdoor activity!

The GMRS is compatible with other brands utilizing the same frequency band (operating in the frequency range from 462.5625MHz to 462.7250 MHz)

The GMRS has 15-CHANNELS, featuring a multi-functional LCD Screen (which displays the current channel and various status icons).

Other features include ON/OFF VOLUME CONTROL and BATTERY SAVE CIRCUITRY.

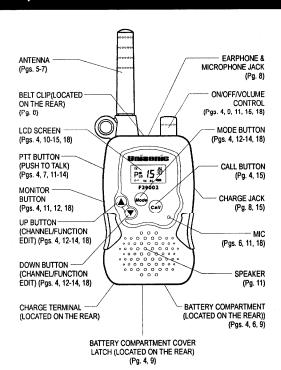
Please read this Owner's Manual carefully to get the most out of your TWO-WAY COMMUNICATOR.

NOTE: The maximum transmission range will vary depending on terrain and environment. Range will be greater in open fields, while range is shorter within and around buildings or large structures.

This unit may not ensure privacy of communication.

1

Special Features



Contents

SPECIAL FEATURES	3
CARE AND SAFETY	5
FCC NOTICE	7
GETTING STARTED	
Removing the Belt Clip	8
Installing the Belt Clip	8
Connecting the Adapter	8
Accessory Connection	8
Battery Installation	9
LCD Screen	10
Turning the Unit ON	11
Turning the Unit OFF	11
Adjusting Speaker Volume	11
Receiving a Signal	11
Transmitting a Signal	11
OPERATION	
Changing CHANNELS	12
MONITOR	12
MODE Button (FUNCTION EDITING)	12
Changing the CTCSS SUB-CHANNELS	13
VOX Selection	13
Transmit Power Selection Mode	14
CHANNEL SCAN	14
Battery Charge Level/Low Battery Indication	15
To Charge the COMMUNICATOR	15
Sending Call Tones	15
SPECIFICATIONS	16
TROUBLESHOOTING	18
WARRANTY	19
NOTES	22

2

Special Features

ANTENNA

BELT CLIP

LCD (Liquid Crystal Display) Screen - Displays current channel selection and other radio status symbols.

PTT (PUSH TO TALK) button - Press to transmit.

MONITOR M button - Press to tune in and hold onto weak signals.

UP (I) /DOWN buttons - Press to change channels and select FUNCTION in every editing mode.

CHARGE TERMINAL

BATTERY COMPARTMENT COVER LATCH - Secures BATTERY COMPARTMENT COVER.

EARPHONE & MIC (MICROPHONE) JACK

ON/OFF/VOLUME CONTROL - Rotate to turn your unit ON/OFF and to adjust the VOLUME CONTROL level.

MODE /LOCK button - Allows you to shift into FUNCTION EDITING mode. Press and hold for 5 seconds to LOCK the buttons.

CALL button - Press to transmit CALL Tones.

CHARGE JACK

MIC - MICROPHONE

SPEAKER

BATTERY COMPARTMENT - Houses four(4) "AAA" alkaline or Ni-MH rechargeable batteries (not included).

Care and Safety

CAUTION

Damaged ANTENNA
Do not use any GMRS that has a damaged ANTENNA. If a damaged ANTENNA
comes in contact with the skin, a minor burn may result.

Batteries

All batteries can cause property damage and/or bodily injury such as burns if conductive material such as jewelry, keys, or beaded chains touches exposed terminals. The material may complete an electrical circuit (short circuit) and become quite hot. Exercise care in handling any charged battery, particularly when placing it inside a pocket, purse, or other container with metal objects.

M WARNING

For Vehicles with an Air Bag

Do not place your GMRS in the area over an air bag or in the air bag deployment area. Air bags inflate with great torce. If a GMRS is placed in the air bag deployment area and the air bag inflates, the GMRS may be propelled with great force and cause serious injury to the occupants of the vehicle.

Potentially Explosive Atmospheres
Turn your GMRS OFF when in any area with a potentially explosive atmosphere,
unless it is a type especially qualified for such use (for example, Factory Mutual
Approved). Sparks in such areas could cause an explosion or fire resulting in bodily bodily injury or even death.

Batteries

Do not replace or charge batteries in a potentially explosive atmosphere. Contact sparking may occur while installing or removing batteries and cause

Blasting Caps and Areas

To avoid possible interference with blasting operations, turn your GMRS OFF near electrical blasting caps or in a "blasting area" or in areas posted: "Turn off two-way radio". Obey all signs and instructions.

NOTE: Areas with potentially explosive atmospheres are often, but not always, clearly marked. They include fueling areas such as below deck on boats; fuel or chemical transfer or storage facilities; areas where the air contains chemicals or particles, such as grain, dust, or metal powders; and any other area where you would normally be advised to turn off your vehicle engine.

5

FCC Notice

The FCC requires that you be advised of certain requirements involving the use of this device. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in residential installation. This device uses and can generate radio frequency energy. If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception (which can be determined by turning the equipment off and on), the user is encouraged to correct the interference by

- one or more of the following measures:
 Recrient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
 Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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. Privacy of communications may not be ensured when using this equipment.

FCC WARNING: This equipment generates or uses radio frequency energy. Changes or modifications not expressly approved in writing may cause harmful interference and void the user's authority to operate this equipment.

Your wireless hand-held portable transceiver contains a low power transmitter. When the PUSH TO TALK PITD button is pushed it sends out radio frequency (RF) signals. The device is authorized to operate at a duty factor not to exceed 50%. In August 1996, the Federal Communications Commissions (FCC) adopted RF exposure guidelines with safety levels for hand-held wireless devices.

CAUTION: To maintain compliance with the FCC's RF exposure guidelines CAUTION: To maintain compliance with the FCC's RF exposure guidelines hold the transmitter and ANTENNA at least 1 inch (2.5 cm) from your face and speak in a normal voice, with the ANTENNA pointed up and away from the face. If you wear the handset on your body while using the headset accessory, use only the supplied belt clip for this product and when transmitting, take it out of the heit to ensure that the ANTENNA is at least 1 inch (2.5 cm) from your body. Use only the supplied ANTENNA. Unauthorized ANTENNAS, modifications, or attachments could damage the transmitter and may violate FCC regulations.

Care and Safety

Care and Safety

To clean the unit, wipe with a soft cloth dampened with water. Don't use cleaners or solvents on the unit; they can harm the case and leak inside, causing permanent damage. Battery contacts may be wiped with a dry, lint-

If the unit gets wet, turn it OFF and remove the batteries immediately. Dry the BATTERY COMPARTMENT with a soft cloth to minimize potential water damage. Leave cover off the BATTERY COMPARTMENT overnight or until completely dry. Do not use the unit until completely dry.

Exposure to Radio Frequency Energy
The design of your GMRS, which generates radio frequency (RF) electromagnetic energy (EME), complies with the following national and international standards and guidelines.

- The Relevant Guidelines and Standards Are:

 FCC Report and Order FCC 96-326 (August, 1996)

 American National Standards Institute (C95-1-1992)

 National Council Radiation Protection and Measurements (NCRP-1986)

 International Commission on Non-Ionizing Radiation Protection (ICNRP-1986)

 To ensure optimal unit performance and to ensure that exposure to RF energy is within the guidelines in the above standards, the following operating procedures should be observed:

For Portable Two-Way GMRS

- When transmitting with a GMRS, hold the GMRS in a vertical position with its MICROPHONE 1 to 2 inches (2.5 to 5.0 cm) away from your mouth. Keep the ANTENNA at least 1 inch (2.5 cm) from your head and body.
- If you wear a GMRS on your body, ensure that the ANTENNA is at least one inch (2.5 cm) from your body when transmitting.

Electromagnetic Interference/Compatibility

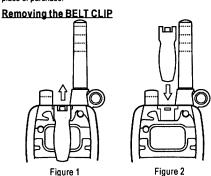
Nearly every electronic device is susceptible to electromagnetic interference (EMI) if inadequately shielded, designed, or otherwise configured for electromagnetic compatibility.

* Turn your unit OFF in any facilities where posted notices instruct you to do so. Hospitals or health care facilities may be using equipment that is

- sensitive to external RF energy.
- Turn your unit OFF when on board an aircraft when instructed to do so. Any
 use of the unit must be in accordance with airline regulations or crew instructions.

Getting Started

Carefully remove your GMRS from the Blister Pack. If there is any visible damage, do not attempt to operate this COMMUNICATOR. Return it to the place of purchase



- Pull the BELT CLIP LATCH away from the unit.
- While pulling the BELT CLIP LATCH, push up on the BELT CLIP to remove it from the unit, as shown in Figure 1.

Installing the BELT CLIP

1. Slide the BELT CLIP into the BELT CLIP SLOT as shown in Figure 2. 2. A "click" indicates the BELT CLIP is locked into position.

Connecting the ADAPTER

To charge the unit using "AAA" Ni-MH rechargeable batteries, insert the round connector of the AC/DC ADAPTER into the CHARGE JACK on the side of the unit. (The ADAPTER is not included with the package.)

Accessory Connection

The GMRS is designed to be used with accessories (Earphone, Microphone, etc.).

Getting Started

WARNING

DO NOT CHARGE THIS UNIT USING AN AC/DC ADAPTER WITH REGULAR "AAA" ALKALINE BATTERIES INSTALLED. USE ONLY THE AC/DC ADAPTER WITH "AAA" NI-MH RECHARGEABLE BATTERIES

BATTERY INSTALLATION





Figure 3

1. Release the BATTERY COMPARTMENT COVER LATCH located on the

- rear side of the unit. See Figure 3.

 2. Remove the BATTERY COMPARTMENT COVER from the BATTERY
- 2. Remove the DATTERT COMPARTMENT COVER Holli the BATTERT COMPARTMENT. See Figure 4.
 3. Install four (4) "AAA" alkaline or Ni-MH rechargeable batteries (not included) following the polarities as shown in Figure 4.
 4. Reinstall the BATTERY COMPARTMENT COVER and lock the BATTERY
- COMPARTMENT COVER LATCH into position

The GMRS has a built in POWER SAVER feature for maximum battery life. But when the COMMUNICATOR is not being used, conserve battery power by rotating the ON/OFF/VOLUME CONTROL to OFF. Remove the batteries if the unit will not be used for a long period of time.

9

Getting Started

Turning the Unit ON

Rotate the ON/OFF/VOLUME CONTROL in a clockwise direction. The unit will "beep" and the LCD Screen will display Fr5 then the current channel.

Turning the Unit OFF

Rotate the ON/OFF/VOLUME CONTROL in a counter-clockwise direction. The LCD Screen will turn blank.

Adjusting Speaker Volume

- Rotate the ON/OFF/VOLUME CONTROL in a clockwise direction to increase the SPEAKER Volume.
- Rotate the ON/OFF/VOLUME CONTROL in a counter-clockwise to decrease the SPEAKER Volume.
- Press and hold the MONITOR M button to confirm your SPEAKER Volume.

Receiving a Signal

The unit is continuously in the RECEIVE mode when the unit is ON and not transmitting. When you receive a signal on the current channel, the RX icon is displayed. (See "LCD Screen" for details.)

Transmitting a Signal

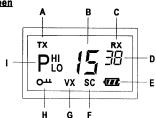
- 1. Check the channel activity by pressing and holding the MONITOR button. You'll hear static if the channel is unoccupied. Don't TRANSMIT if someone is talking on the channel. Press and hold the PII button to TRANSMIT. The TX icon is displayed. Hold the unit in a vertical position with the MICROPHONE 2 to 3 inches from the mouth.

 2. While holding the PII button, speak into the unit using a normal tone of yoice.
- 3. Release the PTT button when you have finished transmitting.

NOTE: In order for other people to receive your transmission, they must also be on the same channel and CTCSS sub-channel you are currently using. Refer to the "Changing Channels" section for more information.

Getting Started

LCD Screen



- A. TX Displayed when transmitting a signal.
- CHANNEL NUMBER. Changes from 1 to 15 as selected
- C. RX Displayed when receiving a signal.
- D. 38 CTCSS code. Changes from 1 to 38 as selected by user.
- E. . Displays the current BATTERY LEVEL charge.
- F. SC Displayed during the CHANNEL SCAN mode.
- G. VX Displays during the VOX mode.
- H. O-- Displays when the LOCK mode is activated .
- I. PHO POWER HI/LOW indicator. Appropriate icon appears when the transmit power is set to desired output power.

10

Operation

Changing CHANNELS

The GMRS has 15 available channels. To change channels, in NORMAL

- Press the UP button to move to a higher channel.
- Press the DOWN button to move to a lower channel.
- The channel changes from 1 to 15, or from 15 to 1.

NOTE: Refer to the "Channel Table" section of this Owner's Manual for detailed frequency listings.

MONITOR

You can use the MONITOR feature to check for weaker signals in the current

- Press the MONITOR button for normal monitoring.
 Press and hold the button until it "beeps" for continuous monitoring.

MODE/LOCK Button (FUNCTION EDITING)

- Depress the MODE button momentarily;
 Press the button briefly to enter into the FUNCTION EDIT modes in due order: CTCSS / VOX/POWER HI/LOW mode.

NOTE: In the current FUNCTION EDIT mode, press the PID button to return to the NORMAL mode after making your selection. In the FUNCTION EDIT mode, press the NODE button again to shift from the current option in each submenu to the next option.

2. Press and hold the MODE button for 5 seconds to activate or deactivate the BUTTON LOCK mode. The BUTTON LOCK icon is displayed on the LCD Screen.

NOTE: Channel Change Operations are disabled during BUTTON LOCK mode. Press and hold the MODE button again to deactivate BUTTON LOCK mode

Operation

Changing the CTCSS SUB-CHANNELS

The GMRS has 38 available CTCSS sub-channels. To change channels:

- 1. Press the MODE button once, the CTCSS sub-channel 0 will flash on the LGD Screen.
- While the sub-channel is flashing:
 Press the UP button to move to a higher sub-channel.
- Press the DOWN button to move to a lower sub-channel.
- The sub-channel changes from 0 to 38, or from 38 to 0.
- 3. Press the PTT button to confirm your selection and return to the NORMAL mode.
- 4. To confirm and shift to the next option, press the MODE button.

NOTE: To communicate with other FRS units, both units must be protehed to the same channel and CTCSS sub-channel.

VOX Selection

The GMRS is capable of voice activated (VOX) transmission. In VOX mode, the radio will transmit a signal only when it is activated by your voice or other sound around you. VOX operation is not recommended if you plan to use your radio in a noisy or windy environment.

- 1. Press the MODE button twice, the VX icon will flash on the LCD Screen.
- Press the UP button to turn the VOX feature ON, or press the DOWN button to turn the VOX feature OFF.
 In the VOX mode, the VX icon will be displayed.
- 4. To confirm your selection and return to the NORMAL mode, press the PTT button.
- To confirm and shift to the next option, press the WODD button.

NOTE: To save power, the unit will not turn ON the LCD Screen light when in the VOX made

13

Operation

Battery Charge Level/Low Battery Indication

- The BATTERY CHARGE LEVEL is indicated by the number of squares
- present inside the BATTERY con on the LCD Screen.
 When the BATTERY CHARGE LEVEL is low, the BATTERY icon will flash to indicate that the batteries need to be replaced.
- Do not charge this unit using an AC/DC ADAPTER with regular "AAA" alkaline batteries installed. Only use the optional AC/DC ADAPTER with "AAA" Ni-MH rechargeable batteries (not included).

To Charge the GMRS

To use this GMRS with an AC/DC ADAPTER and rechargeable batteries do the following:

- 1. Plug the 7.5 V DC / 150 mA ADAPTER into the CHARGE JACK on the side of the GMRS and turn it ON by rotating the ON/OFF/ VOLUME CONTROL in clockwise direction.
- 2. The battery icon will flash while the indicator bar is scrolling.

NOTE: The GMRS cannot trummed calls while the BATTERY PACK is being charged.

Sending Call Tones

You can use Call Tones to alert the other user to identify yourself. You can also use Call Tones to signal the beginning or the end of a transmission.

1. Press and release the CALL button.

2. Your Call Tones will transmit to nearby receivers set to the same

Operation

Transmit Power Selection Mode

This feature permits selection of the transmitting power level to high (1.8 waits) or low (0.5 wait). Using low power the unit will have a lower transmit range but battery life will be increased.

To access the transmitter power selection function:

1. Press the (MODE) button thrice, the P (POWER) icon will fissh on the LCD Screen.

- 2. While the P (POWER) icon is flashing:

 Press the UP button to select the HI power level

 Press the DOWN button to select the LO power level.

 Press the (PIT) button to confirm your selection and return to the NORMAL mode.
- 4. To confirm and shift to the next option, press the MODE button.

CHANNEL SCAN

CHANNEL SCAN performs searches for active signals in an endless loop from 1 to 15.

- Press and release the (MODE) and the UP (A) or DOWN (T) button together to activate CHANNEL SCAN. The channel number on the LCD Screen changes rapidly until an active signal is detected.
- 2. When an active signal (one of 15 channels) is detected, CHANNEL SCAN
- pauses keeping the active signal broadcasted.

 3. Press the PTT button to communicate through the active signal channel and CHANNEL SCAN is deactivated.
- When an active signal (one of 15 channels) is detected, but another channel is desired, press the UP or DOWN button to bypass the current channel and continue to search for another active channel.

 5. Press the MODE button to deactivate CHANNEL SCAN mode.

14

Specifications

Channels Available	15 Channels		
CTCSS Sub-channel	38 for each Channel		
Output Power (TX)	60mW		
Battery Life	14 Hours (High) / 30 Hours (Low)		
Range	About 2 Miles (High) / 3 Miles (Low		

CHANNEL TABLE

CHANNEL NUMBER FREQUENCY		
1	462.5625	
2	452.5875	
3	462.6125	
4	462.6375	
5	462.6625	
6	462 6875	
7	462.7125	
8	462.5750	
9	462.6250	
10	462.6750	
11	462,5500	
12	462.6000	
13	452.6500	
14	462,7000	
15	462.7250	

NOTE: Channels I through 7 are shared with FRS radios. The maximum transmission range will vary depending on serrain and environment

Specifications

SUB-CHANNEL TABLE

CTCSS Channel	Freq (Hz)	CTCSS Channel	Freq (Hz)	CTCSS Channel	Freq (Hz)
1	67.0	14	107.2	27	167.9
2	71.9	15	110.9	28	173.8
3	74.4	16	114.8	29	179.9
4	77.0	17	118.8	30	186.2
5	79.7	18	123.0	31	192.8
6	82.5	19	127.3	32	203.5
7	85.4	20	131.8	33	210.7
8	88.5	21	136.5	34	218.1
9	91.5	22	141.3	35	225.7
10	94.8	23	146.2	36	233.6
11	97.4	24	151.4	37	241.8
12	100.0	25	156.7	38	250.3
13	103.5	26	162.2	0	No Tone

17

Warranty

Warranty Information

Unisonic Products

One-Year Limited Warranty

This limited warranty sets forth all Unisonic Products responsibilities regarding your GMRS. There are no other expressed or implied warranties from Unisonic Products.

Warranty Service Provided

If you purchased the GMRS unit new from a retail vendor, Unisonic Products warrants the unit against defects in material and workmanship for a period of one (1) year from the original date of purchase. This warranty is in lieu of all other expressed warranties. This warranty begins when you purchase the GMRS unit and continues for (1) one year unless you sell or rent the unit, in which case the warranty stops.

Unisonic Products disclaims any implied warranty, including the warranty of merchantability and the warranty of fitness for a particular nurpose, as of the date of one year from your original purchase of the GMRS unit. Unisonic Products assumes no responsibility for any special, incidental, or consequential damages.

This warranty gives you specific legal rights and you may have other rights which vary from state to state. Some states do not allow the exclusion or limitations of special, incidental or consequential damages or limitations on how long a warranty lasts, so the above exclusion or limitation may not apply to you.

Troubleshooting

SYMPTOM	SOLUTION			
No power.	Check batteries. Ensure that the batteries are installed properly. The batteries may be weak. Replace old batteries with four (4) new "AAA" alkeline or Ni-MH rechargeable batteries.			
Reception is weak.	Rotate the ON/OFF/VOLUME CONTROL in a clockwise direction to increase VOLUME. The receiving signal may be weak and/or out of range. If this happens press the MONITOR button.			
Cannot change CTCSS sub- channels.	BUTTON LOCK mode must be deactivated if the BUTTON LOCK icon (key) is displayed on the LCD Screen. To change CTCSS sub-channel number flashes on the LCD Screen. Preas the IP or DOWN buttons to change the CTCSS sub-channels. Batteries may be weak.			
Range is limited.	Batteries may be weak. Replace with new batteries if the BATTERY CHARGE LEVEL indicator is low. The maximum range will vary depending on terrain and environment. Open fields provide the maximum range, while steel/concrete structures, heavy foliage and use in buildings and in vehicles may limit the range significantly. Wearing the radio close to the body, such as in a pocket or on a belt, will decrease range; change the location of the radio.			
Sound distortion problems.	If you are transmitting, speak in a normal tone of voice, 2 to 3 inches away from the MICROPHONE. If you are receiving, lower the VOLUME to a comfortable level. Radios too close. Radios must be at least 5 feet apart; increase your distance. Radios too far apart. Obstaclas interfers with transmission. Talk range is up to 2 miles in clear unobstructed conditions.			

18

Warranty

Warranty Service Not Provided

This warranty does not cover damage resulting from accident, misuse, abuse, improper installation or operation, lack of reasonable care, unauthorized modification, or the affixing of any attachment not provided by Unisonic Products with the GMRS unit, and/or loss of parts. This warranty is voided in the event any unauthorized person opens, alters, or repairs the unit. All Unisonic equipment being returned for repair must be suitably packaged. Unisonic Products does not warrant that this equipment is compatible with the type of accessory of any particular communicator company or the services provided by it.

What To Do for Warranty Service

During the first thirty (30) days, a defective product is eligible for over-the-counter exchange at the retailer from whom it was purchased. After thirty (30) days, the defective product should be returned to the authorized service center. The shipping address of the authorized service center is:

US Electronics CONSUMER CENTER C/O Southern Bonded Warehouse 1491 Mt. Zion Rd. Morrow, GA 30260

Your unit will be repaired or replaced if examination by the service center determines the unit is defective.

A GMRS unit received damaged as a result of shipping will require you to file a claim with the carrier to cover repair costs.

A GMRS unit received with missing parts or with damage due to abuse, inadequate packing, or some other noncompliance with this limited warranty will be returned to you C.O.D., freight collect.

NOTE: A GMRS unit received which was not made for Unisonic Products or which is not defective as determined by our test procedures will not be repaired and will be returned to you C.O.D., freight collect.