



MICROTEL

*Installation and
Operations Manual*

Microtel Installation and Operations Manual

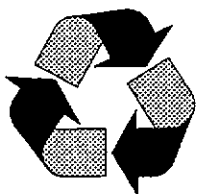
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Introduction

Thank you for your purchase of Gentner's Microtel.

This booklet provides operation instructions for the Microtel unit. Microtel requires the use of a telephone with modular handset jacks. Single piece telephones (with non-removable handsets) will not work with Microtel. Please read all instructions carefully before using.

Microtel is a portable, battery-operated telephone interface that may be used for a variety of applications. In its typical application, Microtel replaces the *handset* of the telephone to provide high quality audio for feeding and receiving information. It can also be used in a number of non-telephone applications. Your imagination is your only limitation!

We encourage you to refer to these instructions first if you have any questions or problems regarding the use of the Microtel. If you cannot find an answer, please contact:

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Controls—Inputs and Outputs

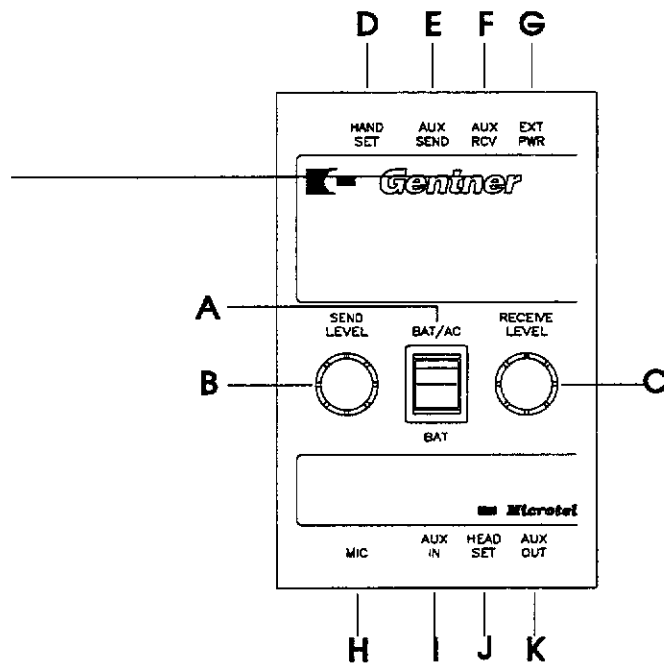


Figure 1

- A POWER SWITCH.** The power switch selects between BAT/AC mode (wall transformer with 9 volt battery backup), BAT mode (9 volt battery operation), and OFF (in center position). This switch selects the power mode you choose, or turns the unit off when not in use.
- B SEND LEVEL.** This knob controls the level of your microphone and AUX IN source. Do not adjust this level too high or distortion will occur.
- C RECEIVE LEVEL.** This knob controls your headset volume, but not the level of the AUX OUT jack.
- D HAND SET.** This RJ-11c modular jack connects Microtel to the telephone. Unplug the *handset* of your modular telephone and plug Microtel in its place.
- E AUX SEND.** This mini-jack output provides a high quality unbalanced line level output of the send amplifiers for feeding other audio sources such as a broadcast loop.
- F AUX RCV.** This mini-jack input is used for mixing another audio source with the receive telephone audio.
- G EXT PWR.** If using a wall transformer for power, plug the transformer into this sub-mini jack and place the power switch (A) on the Microtel to the BAT/AC position.
- H MIC.** This female XLR provides connection for your microphone.
- I AUX IN.** This mini-jack is provided for feeding another audio source down the phone line.
- J HEAD SET.** Your headphone or speaker plugs into this mini-jack.
- K AUX OUT.** Connect the input of your tape recorder to this mini-jack to record information from the phone line.

Installing Batteries

One 9 volt battery is required for operating the Microtel in the BAT (battery) mode. Space for a second battery (backup) is provided for use when using the 12 VDC wall transformer (BAT/AC mode). Batteries operate independently; one for each switch position. Gentner recommends installing two alkaline batteries.

To install the batteries, open the chassis by removing the screw on the bottom plate. The battery terminals will be readily visible. Plug both batteries into the terminals and reclose the chassis. Replace the bottom plate and secure the screw.

Operation

General Use

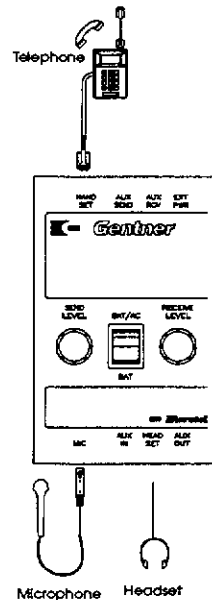


Figure 2

Before making connections, see "Installing Batteries" above.

1. Unplug your telephone handset at the cord and plug the modular jack into the HAND SET jack on the back of the Microtel using Figure 2 for reference.
2. Plug in your microphone into the MIC XLR connector.
3. Plug in your headphones into the HEAD SET jack.
4. Adjust the microphone and headset levels using the SEND LEVEL and RECEIVE LEVEL knobs on the top of the unit.
5. Select BAT/AC or BAT operation to turn the unit on.

You now have the equivalent of a telephone handset and may use your phone for normal calls, including dialing out. In this configuration, you have the added advantage of a good microphone and headphone set.

Audio Feeding

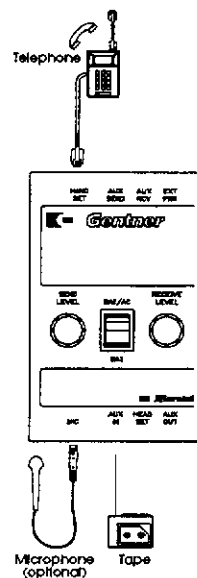


Figure 3

Before making connections, see "Installing Batteries" on page 3.

1. Set up Microtel as described in "General Use" (page 4) and shown in Figure 3.
2. Patch the output of your cassette recorder to the AUX IN plug on Microtel.
3. Select BAT/AC or BAT operation to turn the unit on.

In this configuration, your mic audio may be mixed with tape audio, if desired. Output tape level will be controlled at your tape recorder.

Simultaneous Off-Air Monitoring and Program Interrupt (IFB)

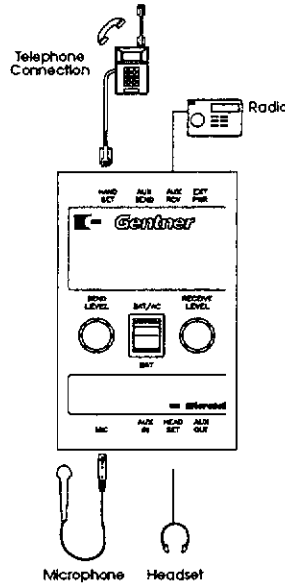


Figure 4

Before making connections, see “Installing Batteries” on page 3.

1. Set up your Microtel as described in “General Use” (page 4) and shown in Figure 4.
2. Plug the output of a transistor radio, two-way radio, etc., to the Microtel’s AUX RCV connector.
3. Select BAT/AC or BAT operation to turn the unit on.

In this configuration you will be able to hear both the telephone audio and the audio coming from your auxiliary source.

Feed a Loop (VTR, Tape, etc.)

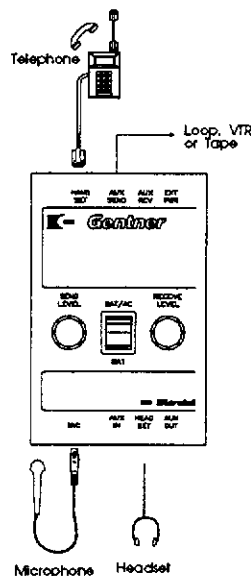


Figure 5

Before making connections, see "Installing Batteries" on page 3.

1. Set up your Microtel as described in "General Use" (page 4) and shown in Figure 5.
2. Patch the AUX SEND on the Microtel to the input of the desired loop (VTR, tape, etc.).
3. Select BAT/AC or BAT operation to turn the unit on.

You are now able to feed both the telephone line and the auxiliary source.

Mixing and Dubbing

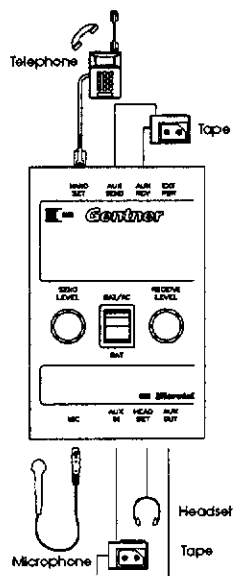


Figure 6

Before making connections, see "Installing Batteries" on page 3.

1. Set up your Microtel as described in "To Record Interviews" (page 9) and as shown in Figure 6.
2. Patch the output of your cassette recorder into the AUX IN connector of the Microtel.
3. Connect output of a second recorder to the AUX RCV mini jack of the Microtel.
4. Connect the AUX SEND of the Microtel to the input of the second recorder.
5. Select BAT/AC or BAT operation to turn the unit on.

In this configuration, your applications include: mixing your mic with audio from tape 2 onto tape 1; dubbing from tape 1 to tape 2; feeding audio down the telephone line; and recording interviews off the telephone line, etc.

To Record Interviews

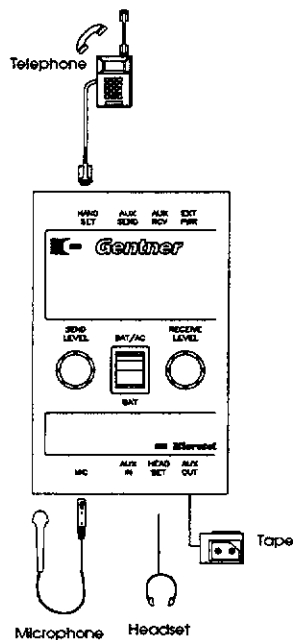


Figure 7

Before making connections, see “Installing Batteries” on page 3.

1. Set up your Microtel as described in “General Use” (page 4) and as shown in Figure 7.
2. Patch the AUX OUT of Microtel to the input of your recorder.
3. Select BAT/AC or BAT operation to turn the unit on.

Your mic audio will be mixed with telephone audio at comparable levels.

NOTE: The receive level control adjusts your headset volume only and will not affect actual levels coming from the telephone line.

Using Microtel as a Mic-to-Line Driver or Headset Amp

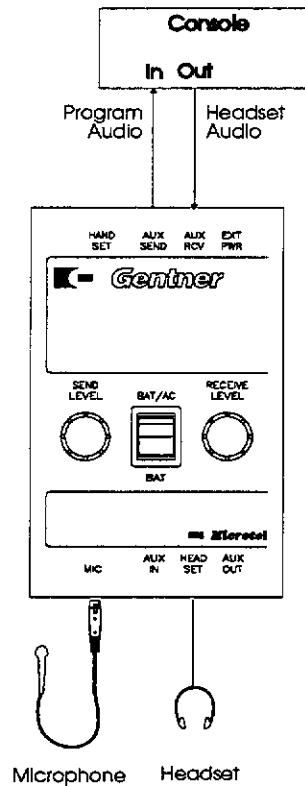


Figure 8

Before making connections, see “Installing Batteries” on page 3.

1. Plug the microphone into the MIC XLR jack.
2. Plug the headphones into the HEAD SET mini-jack.
3. Connect headset audio source to the AUX REC mini-jack of the Microtel.
4. Feed the program audio by connecting the AUX SEND mini-jack to your console, speaker, etc.
5. Select BAT/AC or BAT operation to turn the unit on.

Two-Talent Sports or Remote Setup

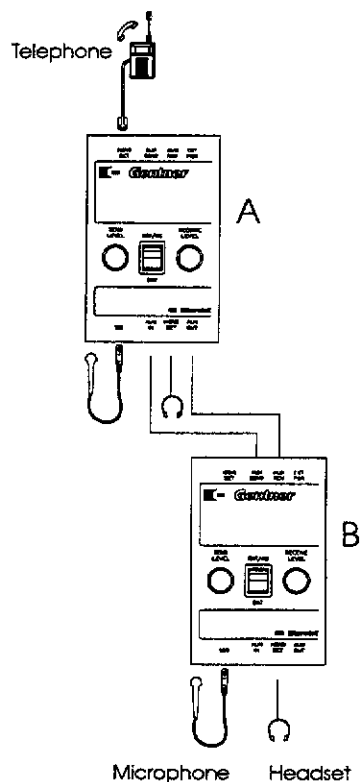


Figure 9

(This requires two Microtel units.)

Before making connections, see "Installing Batteries" on page 3.

1. Set up Microtel "A" for general use as shown in Figure 9.
2. Patch the AUX OUT on Microtel "A" to the AUX REC on Microtel "B".
3. Patch the AUX SEND on Microtel "B" to the AUX IN on Microtel "A".
4. Connect mic and headphones to Microtel "B" as shown in the Figure 9. The two units will now talk to each other and will feed audio down one telephone line.
5. If an additional feed source such as a tape is desired, plug it into the AUX IN on Microtel "B".
6. Select BAT/AC or BAT operation to turn the unit on.

Modifications

Some modifications to the Microtel are available and are used in certain circumstances for some users. If you find that your unit requires changes, as indicated below, it will require opening the Microtel chassis and making component changes on the PC board using soldering techniques.

1. Remove two screws from each end panel of the Microtel. Retain for use in step 7 below.
2. Firmly lift up the top cover. A Mascon connector will need to be carefully disconnected from the PC board in order to completely remove the cover.
3. Remove the four screws from the stand-offs and lift the board out of the chassis *taking note of the board's position and direction within the chassis*. Retain screws for use in step 6 below.
4. Remove the foam tape from the bottom of the board.

CAUTION: Soldering will be required for all changes. Use caution to prevent damaging the board and its components.

- *To increase the send gain (both mic and AUX IN):* Replace R2 with a 105K,

To modify the AUX IN for mic input: Replace C1 with a 33 μ F 16V capacitor and R1 with a 150 ohm

To increase headset (or speaker) gain: Remove R13 and R14 and replace with jumpers. (This will discharge the batteries at a faster rate.)

5. Clean the board using water, and blow dry. Replace the foam tape on the bottom of the board.
6. Reposition the board inside the chassis in the correct position, to ensure connectors are facing properly when the cover is reinstalled. Reinstall the four screws, retained in step 3 above, into the standoffs.
7. Carefully reinstall the cover and replace the four end panel screws retained in step 1 above.

If you require additional information or have questions about other possible modifications, please contact Gentner's Technical Support at (801) 975-7200.

Microtel Specifications

Physical Dimensions: 4-7/8" L x 2-1/8" H x 3-1/8" W
 Weight: 1 lb.

Connections

All connections are mini-jacks except:

Microphone	XLR
Handset	RJ-11C
External Power	Sub-mini jack

Inputs

Nominal levels and impedances:

MIC	-55dBm	150 ohms
AUX IN	-10dBm	47k ohm
AUX REC	-10dBm	47k ohm
HANDSET REC	-25dBm	10k ohm balanced

Outputs

Nominal levels, impedances and frequency response:

Handset Transmit	-15 dBm	600 ohms	300 Hz - 3 kHz +2dB
AUX OUT	-20 dBm	600 ohms	20 Hz - 10 kHz +2dB
AUX SEND	+4 dBm	600 ohms	20 Hz - 5 kHz +2dB
HEADSET (Speaker)	300 mW	20 Hz - 70 kHz	+2db
Distortion	Less than .5%		

Power:

Two (2) 9V Batteries

Battery Life: Nominally 12 hours with Alkaline batteries

AC Power

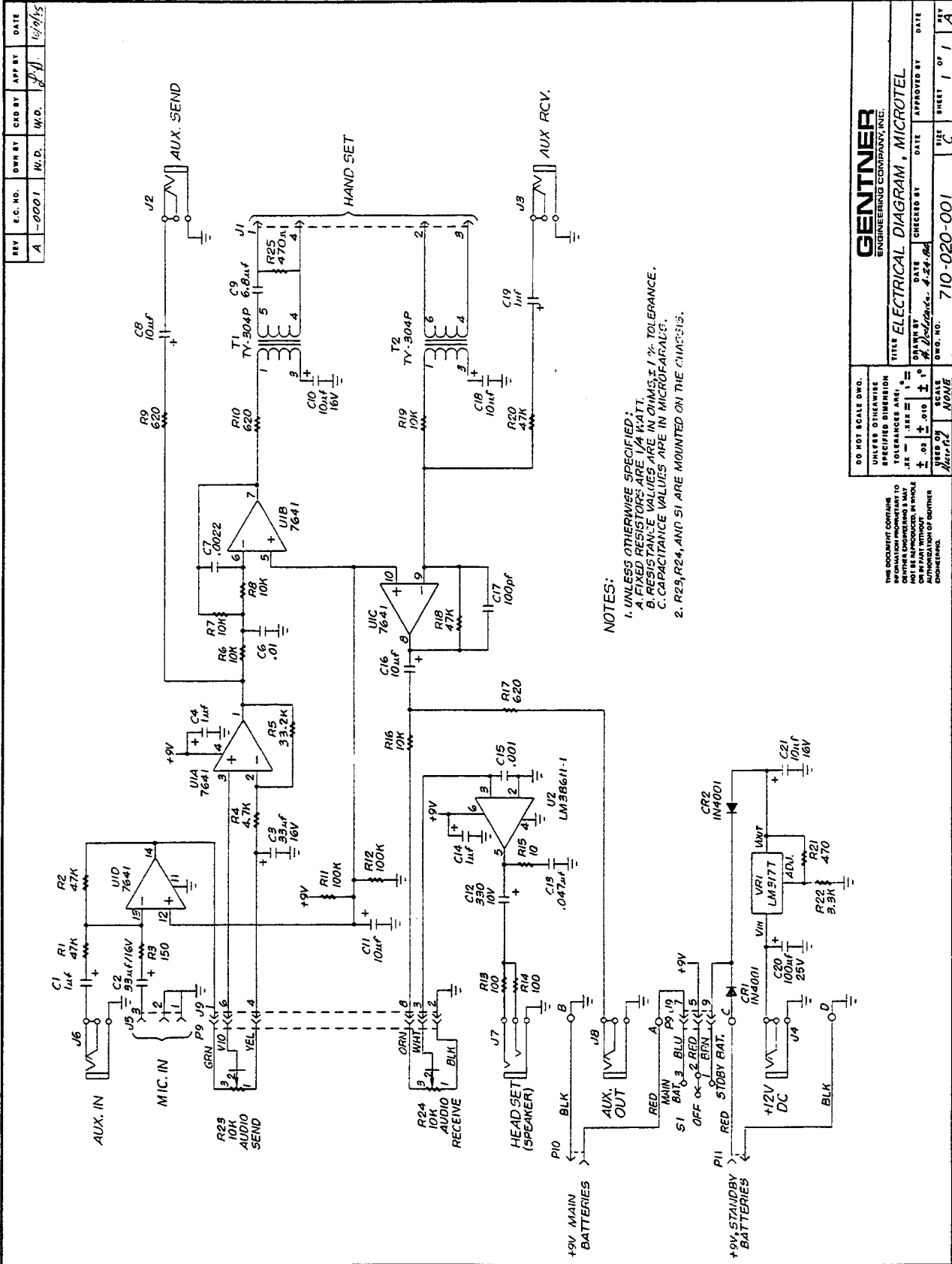
Wall transformer 12 VDC sub-mini jack

Nominal current consumption:

33 mA at full output
 13 mA at idle current

Specifications are subject to change without notice.

Schematic



REV	E.C. NO.	DWN BY	CRD BY	APP BY	DATE
A	-0001	M.D.	M.D.	M.D.	10/2/15

- NOTES:
- UNLESS OTHERWISE SPECIFIED:
 A. FIXED RESISTORS ARE 1/4 WATT.
 B. RESISTANCE VALUES ARE IN OHMS ± 1% TOLERANCE.
 C. CAPACITANCE VALUES ARE IN MICROFARADS.
 - R23, R24, AND S1 ARE MOUNTED ON THE CHASSIS.

DO NOT SCALE DWG.		UNLESS OTHERWISE SPECIFIED DIMENSION TOLERANCES ARE: .XX - .XX ± .01 .XX - .XX ± .01 .XX - .XX ± .01	
THE DOCUMENT CONTAINS INFORMATION PROPRIETARY TO GENTNER ENGINEERING COMPANY, INC. IT IS TO BE KEPT ON FILE IN THE OFFICE OF THE AUTHORIZATION OF GENTNER ENGINEERING.		GENTNER ENGINEERING COMPANY, INC.	
TITLE ELECTRICAL DIAGRAM, MICROTEL		DATE	
DRAWN BY M. Zdzieniec-424-86		CHECKED BY	
DWG. NO. 710-020-001		SHEET 1 OF 1	

Warranty

GENTNER COMMUNICATIONS CORPORATION (Manufacturer) warrants that this product is free of defects in both materials and workmanship. Should any part of this equipment be defective, Manufacturer agrees, at its option, to:

- A. Repair or replace any defective part free of charge (except transportation charges) for a period of one year from the date of the original purchase, provided the owner returns the equipment to the Manufacturer at the address set forth below. No charge will be made for parts or labor during this period;
- B. Furnish replacement for any defective parts in the equipment for a period of one year from the date of original purchase. Replacement parts shall be furnished without charge, except labor and transportation.

This Warranty excludes assembled products not manufactured by Manufacturer whether or not they are incorporated in a Manufacturer product or sold under a Manufacturer part or model number.

THIS WARRANTY IS VOID IF:

- A. The equipment has been damaged by negligence, accident, act-of-God or mishandling, or has not been operated in accordance with the procedures described in the operating and technical instructions; or,
- B. The equipment has been altered or repaired by other than Manufacturer or an authorized service representative of Manufacturer; or,
- C. Adaptations or accessories other than those manufactured or provided by Manufacturer have been made or attached to the equipment which, in the determination of Manufacturer, shall have affected the performance, safety or reliability of the equipment; or,
- D. The equipment's original serial number has been modified or removed.

NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE, APPLIES TO THE EQUIPMENT, nor is any person or company authorized to assume any warranty for Manufacturer or any other liability in connection with the sale of Manufacturer's products.

Manufacturer does not assume any responsibility for consequential damages, expenses or loss of revenue or property, inconvenience or interruption in operation experienced by the customer due to a malfunction in the purchased equipment. No warranty service performed on any product shall extend the applicable warranty period.

In case of unsatisfactory operation, the purchaser shall promptly notify Manufacturer at the address set forth below in writing, giving full particulars as to the defects or unsatisfactory operation. Upon receipt of such notice, Manufacturer will give instructions respecting the shipment of the equipment, or such other matters as it elects to honor this warranty as above provided. This warranty does not cover damage to the equipment during shipping and Manufacturer assumes no responsibility for such damage. All shipping costs shall be paid by customer.

This warranty extends only to the original purchaser and is not assignable or transferable.

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