



## **MPD-ASI** | ATSC/8VSB/QAM Digital Demodulator

### ***MPD-ASI Owners Manual***

Please read this manual thoroughly before use.  
Keep this manual handy for future reference.

Visit Our Web-Site [www.picomacom.com](http://www.picomacom.com)  
Contact Us **858.546.5050**  
Toll Free **800.421.6511**

**Pico Macom**  
**MPD-ASI- ATSC/8VSB/QAM Digital Demodulator**  
**OWNERS MANUAL**

**Product Inspection**

Inspect the equipment for shipping damage. Should any damage be discovered, immediately file a claim with the carrier.

**Important Safety Instructions**

To ensure proper installation and operation, take a moment to read this guide before proceeding with the installation. If you have any questions or comments about the **MPD-ASI-ATSC/8VSB/QAM Digital Demodulator**, please contact your dealer or have him contact the **PICO MACOM** Service Center at these phone numbers: 800-421-6511.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**WARNING:** TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE. DO NOT OPEN THE CABINET. REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

**CAUTION:** TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

**ATTENCION:** POUR PREVENIR LES CHOCS ELECTRIQUES, NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR, UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

- 1. Read Instructions:** All safety and operating instructions should be read before the appliance is operated.
- 2. Retain Instructions:** The safety and operating instructions should be retained for future reference.
- 3. Heed Warnings:** All warnings on the appliance should be adhered to.
- 4. Follow Instructions:** All operating and user instructions should be followed.
- 5. Cleaning:** Unplug this appliance from the wall outlet before cleaning. Use a damp cloth for cleaning. Do not use liquid cleaners or aerosol cleansers.
- 6. Do Not Use Attachments:** Use of attachments not recommended by the manufacturer may cause hazards.
- 7. Water and Moisture:** Do not use this product near water—for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool—and the like.

- 8. Accessories:** Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the appliance.
- 9. Elevated Operating Ambient:** If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (T<sub>ma</sub>) 50°C.
- 10. Reduced Air Flow:** Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.
- 11. Mechanical Loading:** Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.
- 12. Circuit Overloading:** Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent

protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

**13. Reliable Earthing:** Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips).

**14. Power Sources:** This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your appliance dealer or local power company.

**15. Power-cord Protection:** Power-supply cords should be routed so they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords and plugs, convenience receptacles, and the point where they exit from the appliance.

**16. Lightning:** For added protection for this product during a lightning storm, or when it is left unattended or unused for long periods of time, the unit should be disconnected from power source.

**17. Power Lines:** An outside antenna system should not be located in the vicinity of overhead power lines, other electric light or power circuits, where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them may be fatal.

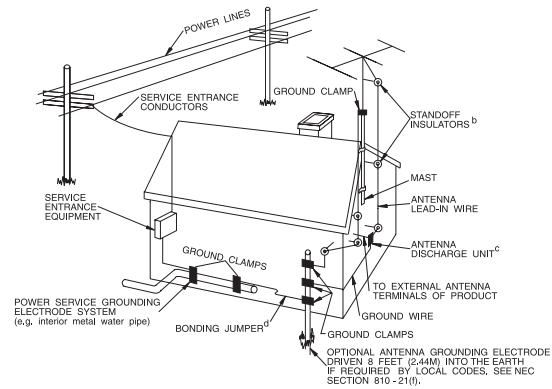
**18. Object and Liquid Entry:** Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

**19. Servicing:** Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

**20. Damage Requiring Service:** Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- a. When the power-supply cord or plug is damaged.
- b. If liquid has been spilled, or objects have fallen into the product.
- c. If the product has been exposed to rain or water.
- d. If the product does not operate normally by following the operating instruction. Adjust only those controls that are covered by the operating instructions. An improper adjustment may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
- e. If the product has been dropped or the cabinet has been damaged.
- f. When the product exhibits a distinct change in performance—this indicates a need for service.

EXAMPLE OF ANTENNA GROUNDING ACCORDING TO NATIONAL ELECTRICAL CODE INSTRUCTIONS CONTAINED IN ARTICLE 810 - "RADIO AND TELEVISION EQUIPMENT"



**21. Replacement Parts:** When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original parts. Unauthorized substitutes may result in fire, electric shock or other hazards.

**22. Safety Check:** Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating conditions.

**23. Outdoor Antenna Grounding:** Before attempting to install this product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges.

- a. Use No.10 AWG (5.3mm) copper, No.8 AWG (8.4mm) aluminum, No.7 AWG (10mm) copper-clad steel or bronze wire or larger, as ground wire.
- b. Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4 feet (1.22m) to 6 feet (1.83m) apart.
- c. Mount antenna discharge unit as close as possible to where lead-in enters house.
- d. A driven rod may be used as the grounding electrode where other types of electrode systems do not exist. Refer to the National Electrical Code, ANSI/NFPA 70-1984 for information.
- e. Use jumper wire not smaller than No.6 AWG (13.3mm) copper or equivalent, when a separate antenna grounding electrode is used.

**NOTE TO THE CATV SYSTEM INSTALLER**

**THIS REMINDER IS PROVIDED TO CALL THE CATV SYSTEM INSTALLER'S ATTENTION TO ARTICLE 820-22 OF THE NEC THAT PROVIDES GUIDELINES FOR PROPER GROUNDING AND, IN PARTICULAR, SPECIFIES THAT THE CABLE GROUND SHALL BE CONNECTED TO THE GROUNDING SYSTEM OF THE BUILDING, AS CLOSE TO THE POINT OF CABLE ENTRY AS PRACTICAL.**

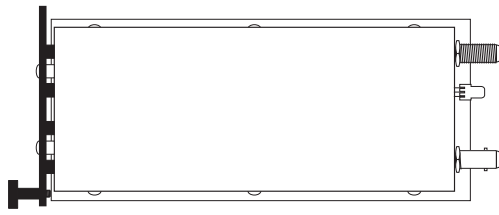


**MPD-ASI** ATSC/8VSB/QAM Digital Demodulator

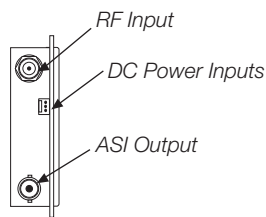
- Professional quality digital (HD/SD) demodulator
- Covers frequency range from 54 to 860 MHz (CATV 2-135, VHF and UHF, ch 2-13, 14-69)
- Demodulates 8VSB any of the 18 ATSC video formats, QAM64 and 256 (J.83 ANNEX B) RF modulated signal
- One ASI 75Ω BNC transport stream output
- Easy set-up via front panel switches
- Front panel LED indicator for signal lock
- Used with MPC-12, MPC-12R or MPC-16PS/CS (chassis and power supply)



Front View



Side View



Rear View

**Specifications**

**RF Input Range** 54-860 MHz

**INPUT 8VSB MODE**

Tuning Range UHF: 14 to 69, VHF: 2-13  
 Frequency Range 54 to 806 MHz  
 Data Rate 19.392 Mbps  
 Input AGC Range -83 to -5 dBm

**INPUT QAM MODE**

Channel Range 2-135  
 Frequency Range 54 to 860 MHz  
 QAM Mode 64 & 256  
 Data Rate: 64 and 256 QAM 26.9, 38.8 Mbps  
 Input AGC Range -60 to -5 dBm

**OUTPUT ASI**

Bit Rate 270 Mbps  
 Connector 75Ω

**POWER CONSUMPTION**

12 VDC 180 mA  
 5 VDC 160 mA  
 Operating Temperature Range 0° to 50°C

**Ordering Information**

**MPD-ASI** ATSC/8VSB/QAM Demodulator

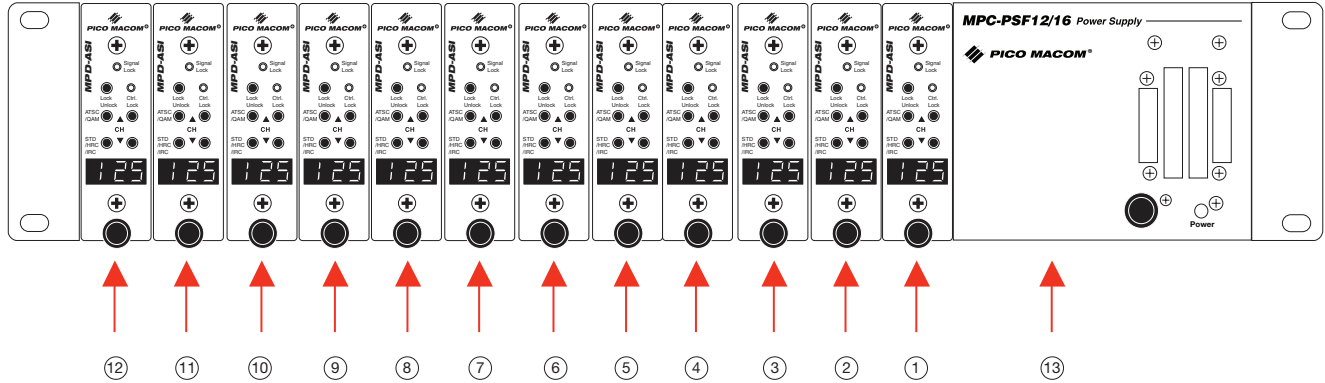
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## Hardware Installation

### Front View

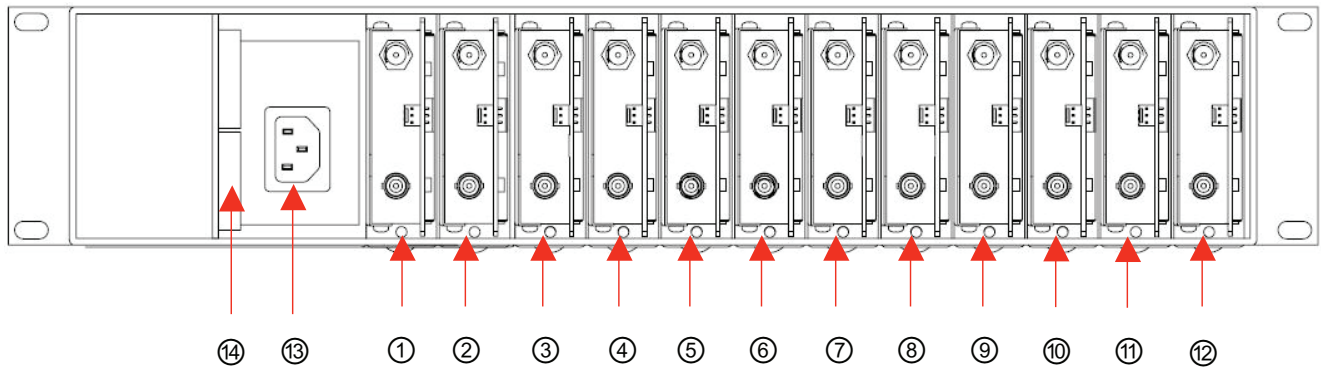
The following picture shows 12 MPD-ASI units with power module.



- ① ~ ⑫ UNIT1~UNIT12 (MPD-ASI)
- ⑬ Power Module

### Rear View

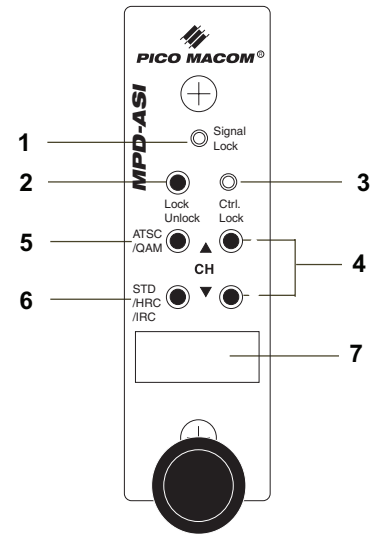
Please connect DC output cables to each MPD-ASI unit as shown in the picture below:



- ① ~ ⑫ UNIT1 ~ UINT12 (MPD-ASI)
- ⑬ AC Power Cable Connect or
- ⑭ DC PowerGroup Connector

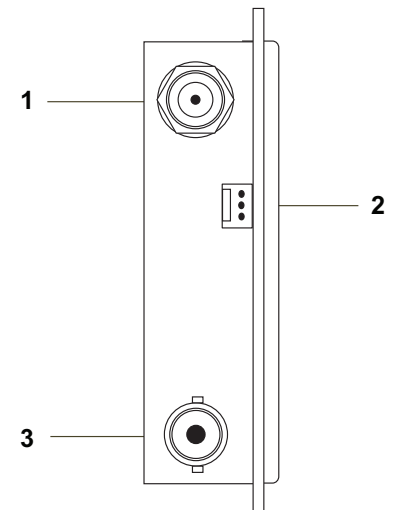
## Front Panel Controls and Indicators

Item	Function	Description
1	Signal Indicator	The signal lamp indicates the current channel status of MPD-ASI unit: I. Blinks when the selected channel is unlocked. II. Lights on when the selected channel is locked.
2	Lock/Unlock Control	Switch is used to prevent accidental change of control panel.
3	Lock/Unlock Indicator	The lamp indicates MPD-ASI unit status which the control panel is lock or unlock. Lock: Lights on Unlock: Blackout
4	Channel Select	Sets the desired channel for ATSC or QAM channels. ATSC: 02 - 69. (Free-to-Air) QAM: 01 - 135.
5	ATSC/QAM Control	Sets the reception mode for ATSC or QAM system.
6	System Control	Selects STD, HRC or IRC for QAM system.
7	Indicates selected channel.	Indicates selected channel.

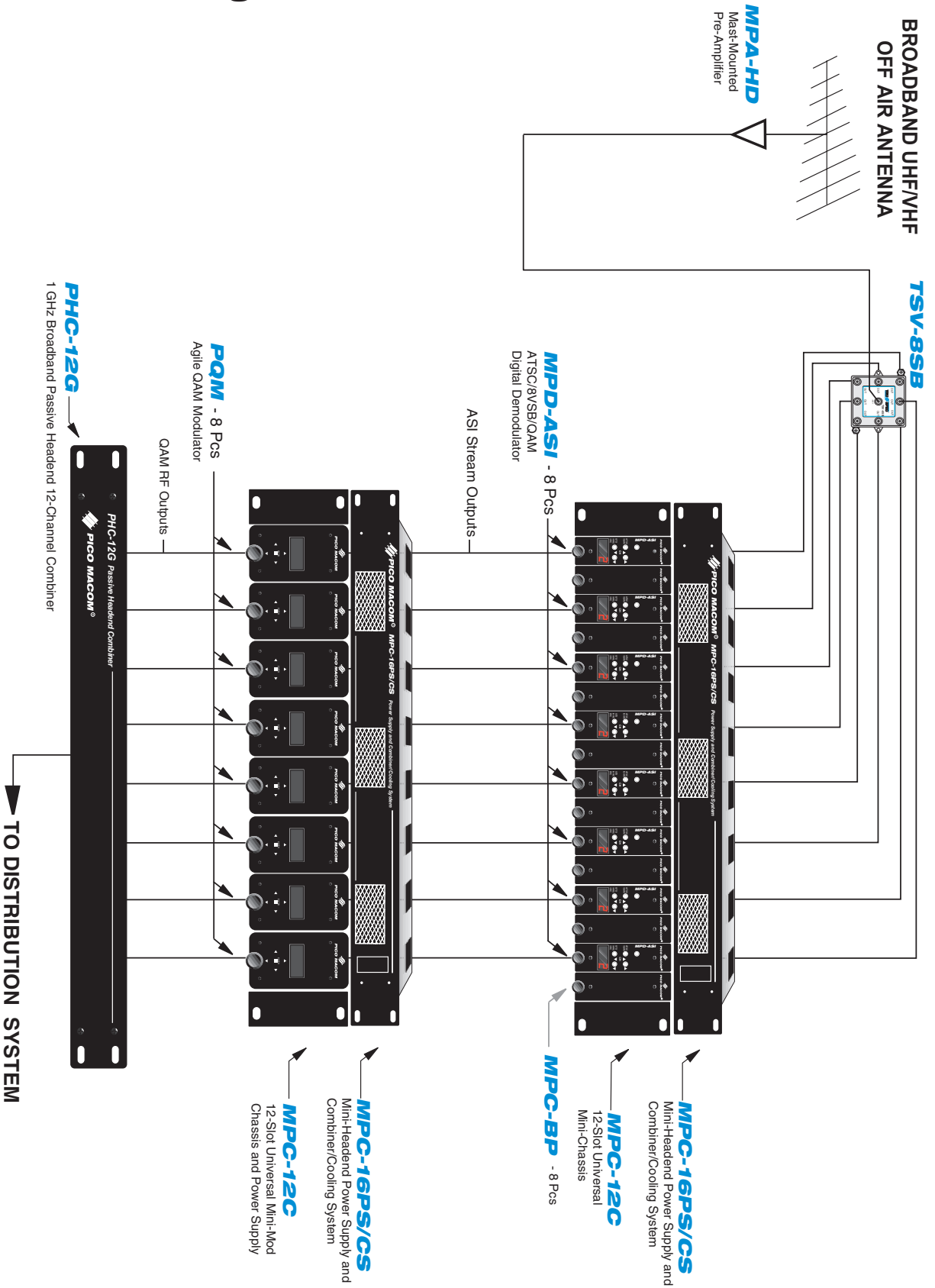


## Rear Panel Connections

Item	Function	Description
1	RF Input	RF source (ATSC or QAM) input connector.
2	Power Connector	This 3-pin connector (Male) is used for connecting to DC power module.
3	ASI Output	ASI output meets EN50083-9.



**Installation Diagram**





## Five-Year Limited Warranty



Most products designated as “Headend Electronics” are covered for a full 5-year warranty period. Considered the best warranty in the industry, Pico Macom will repair or, at its discretion, replace without cost to the original purchaser, the product which, upon inspection by Pico Macom, appears to be defective or not conforming to the Factory Specifications. Pico Macom will cover the cost of parts, labor, and return freight from factory.



## Three-Year Limited Warranty

Some Pico Macom products are covered with a full 3-year warranty period. Pico Macom will repair or, at its discretion, replace without cost to the original purchaser, the product which, upon inspection by Pico Macom, appears to be defective or not conforming to the Factory Specifications. Pico Macom will cover the cost of parts, labor, and return freight from factory.



## One-Year Limited Warranty\*

Pico Macom warrants to the original purchaser a full 1-year warranty period on all new products. Pico Macom will repair or, at its discretion, replace without cost to the original purchaser, the product which, upon inspection by Pico Macom, appears to be defective or not conforming to the Factory Specifications. Pico Macom will cover the cost of parts, labor, and return freight from factory.

## Warranty Limitations

This warranty excludes coverage of damage or inoperability resulting from (1) use or installation other than in strict accordance with Pico Macom’s written instructions, (2) disassembly or repair by someone other than Pico Macom or a Pico Macom authorized repair center, (3) misuse, misapplication or abuse, (4) alteration, (5) lack of reasonable care or (6) wind, ice, snow, rain, lightning, power surges, excessive heat, or any other weather conditions or acts of God. Pico Macom’s warranty with respect to third-party proprietary sub-assembly modules and/or private-label products are limited to the duration and terms of third-party vendors’ warranty. Pico Macom shall in no event and under no circumstances be liable or responsible for any consequential, indirect, incidental, punitive, direct or special damages based upon breach of warranty, breach of contract, negligence, strict tort liability or otherwise or any other legal theory, arising directly or indirectly from the sale, use, installation or failure of any product acquired by buyer from Pico Macom. This limited warranty extends to the original purchaser and cannot be assigned or transferred to any other party without the prior express written permission of Pico Macom, which permission Pico Macom may withhold for any reason or for no reason at all. Pico Macom reserves the right to modify or discontinue this warranty at Pico Macom’s sole discretion without notification. No other warranties are expressed or implied.

## Damage or Shortage Claims

Our shipping staff carefully packs and ships your orders in compliance with common carriers’ requirements. Please make note of any obvious damage or shortage on the freight bill or carrier’s receipt next to your signature. The carrier’s agent must also sign acknowledging the loss. Failure to do so may result in the carrier’s refusal to honor the claim. Please open your order immediately upon receipt to check for concealed damage and compare the packing list to the items shipped. If damaged, keep the original shipping cartons for possible inspection by the carrier. You must report claims for loss or damage within 3 days of delivery, while claims for erroneous charges or price corrections must be presented within 30 days of invoice date.

## Returning Shipped Items

To return any shipped items, including those shipped for warranty repairs or credit, call our Customer Service desk to request a Return Merchandise Authorization (RMA) number. Please reference the original invoice number and purchase date, and product serial number (if any). Be certain to mark the RMA number on the package boldly and legibly. Unless we specify a different carrier, please ship your returned items to us via UPS freight prepaid and fully insured. If returned for credit, we will promptly process your request upon receipt of your return order.

## Our Return Policy: Your Satisfaction Guaranteed

Our goal is your complete satisfaction. If for any reason, our products were not quite what you anticipated, simply call your customer service rep and we will be happy to assist you in replacing or returning the order. You may return current, non-discontinued items for full credit for up to 30 days from invoice date. Our requirements are simple: Excepting defective items, the products must be returned in their original packaging and in re-salable condition. Re-certification fees of 10% to 50% of original purchase price may otherwise apply beyond this period or if products are not returned in their original condition. Please contact your customer service rep for more information.

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