Maximum, Inc.
30 Samuel Barnet Boulevard
New Bedford, Massachusetts 02745
508.995.2200
800.998.2580 · FAX
www.Maximum-inc.com

MAXIMUM WIRELESS

MAESTRO WIRELESS INTRODUCTION

Welcome and thank you for purchasing a Maximum Wireless Instrument, it has been designed and thoroughly tested to provide years of dependable service. As weather impacts our active daily lives more and more, having reliable data about the immediate conditions is ever more important. We know this system will become an intregal part of you life.

Maximum Wireless Instruments are designed to be installed with a minimal amount of effort. Please follow these easy to use directions carefully for a trouble-free installation.

ASSISTANCE

These step by step directions have been carefully crafted to ensure a smooth and successful installation. Please read and follow them and you should be enjoying your weather instrument in a few short hours. Every effort has been made to simplify the installation process. If you have technical questions, please do not hesitate to contact our technical staff who will walk you through any issues at 508.995.2200 (Monday — Friday 8:30am to 5:00pm EST) or by e-mail at service@maximum-inc.com. Our website is also regularly updated and here is where you will find the latest installation comments (www.maximum-inc.com). For on-site assistance, contact a local electrician, contractor or satellite television dish installer.

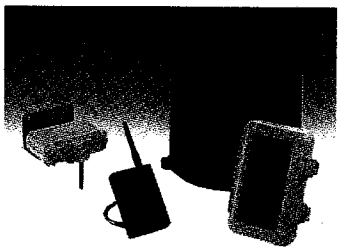
COMPONENTS

On a large flat surface, unpack and inventory the various items which should be in your instrument's box(s). ***SOME BOXES HAVE FALSE BOTTOMS WITH COMPONENTS UNDERNEATH, BE SURE TO CHECK CAREFULLY.***

TOOLS REQUIRED

For a basic installation, you will need the following tools:

- 3.0mm Jewelers Screwdriver
- #8 Phillips Head Screwdriver
- Small Adjustable Wrench or Socket Set



SUGGESTED SUPPLIES

For a basic installation, we suggest the following supplies:

- Black Electrical Tape or Wire Ties
- Good Surge Protector
- Mast and Mounting Hardware
- Nonconductive Silicone Caulk or Dielectric Grease

ELECTRICAL POWER

It is important to make sure you have a steady supply of power to the instruments. If your location is subject to power outages, brown outs and/or power spikes, these sensitive instruments may lockup. We encourage the use of a surge protector and where possible a separate electrical circuit.

SITING INTERIOR INSTRUMENTS

When locating the interior instruments, there are several considerations. First, where will you gain the most benefit from it on a daily basis? Some of the most popular locations are kitchens, family rooms, bedrooms, dens and offices. Second, you do not want to place it in direct sunlight or adjacent to other household appliances which could interfere with the transmission of data. Microwaves, ovens, cordless telephones, computers, televisions and large metallic surfaces can affect performance. Third, each wireless instrument has a transformer so sufficient electrical outlets must be nearby, there should be one outlet for each plug (two transformers will fit into one duplex outlet). A surge protector strip can reduce your need for outlets.

ATTACHING THE DIALS TO MOUNTING PANEL

When wiring several instruments together, the wires should be fed through the mounting panel holes and then attached to the instruments. It is generally easier to attach the wires before mounting the dials to the panel. After you have wired the instruments together, turn the panel right side up and attach the dials using the supplied screws. The predrilled Maximum Mounting Panels are made to enhance the overall appreciation of your system. When attaching the dials to the panel, we recommend you lightly coat the screw threads with cake soap or a dishwasher liquid as a lubricant. Be very careful when moving the panel, restrain the transformers with tape until ready to test and mount the panel.

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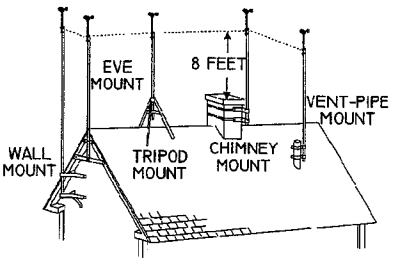
MAST

Once you have determined the exterior wind sensor location, you can purchase a mast to meet your specific needs from a variety of sources like Radio Shack, Home Depot or Lowes Home Improvement. Do not use a mast made of fiberglass or PVC plastic, metal provides the best results. Be sure to check with your local building/electrical code enforcement officer about mast grounding requirements.

SITING MAST

When siting MAESTRO'S exterior wind sensors and mast there are several factors to consider. First, and most important is the ability of the exterior sensors to transmit reliable and uninterrupted data. Second, you want to get good data, please refer to the diagram for some typical locations.



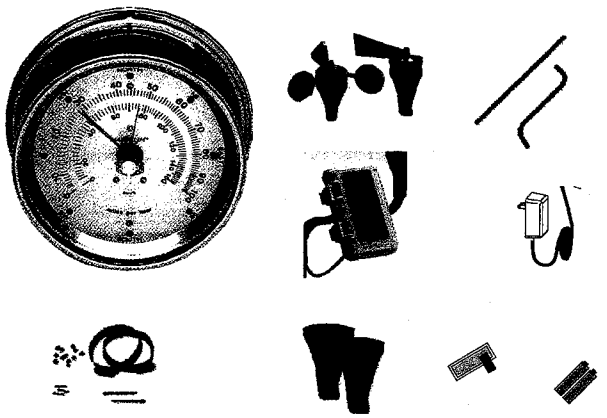
BATTERIES

Locate the NiCad Battery Charger and start charging the NiCad batteries. They should receive a good twelve hour charge prior to installation into the Wireless Wind Transmitter. The AA NiCad batteries in the Wind Transmitter will continually recharge via the internal solar charging system. The characteristics of NiCad batteries are such that they could need replacement every two to three years depending upon conditions. Be sure to always replace the Wireless Wind Transmitter batteries with 1000 milliamp NiCad batteries.

COMPONENTS

On a large flat clean surface, unpack and inventory each item associated with the instrument you purchased. Take this opportunity to familiarize yourself with the various components. ***SOME BOXES HAVE FALSE BOTTOMS WHICH SECURE ADDITIONAL COMPONENTS, PLEASE THOROUGHLY CHECK ALL PACKAGING BEFORE DISCARDING.***

MAESTRO



COMPONENTS

QTY—DESCRIPTION	PART NUMBER
1 — Wind Direction Distributor & Vane	(Item #DIS)
1 — Wind Speed Generator	(Item #400)
1 — Wireless Wind Transmitter	(Item #WWIND)
1 — 14" Black Straight Stub Mast	(Item #WM006)
1 — 14" Formed Mast	(Item #WM007)
2 — Rubber Boots	(Item #EA052)
1 — Class 2 12V Transformer	(Item #EA004)
1 — Package of Hardware	(Item #HDW01)
1 —NiCad Battery Charger	(Item #EH316)
2 — AA Rechargeable NiCad Batteries	(Item #EH317)

RECEIVER

COMPONENTS

QTY—DESCRIPTION	PART NUMBER
1 —Receiver	(Item #WREC)

Only one Receiver is required at each interior instrument station. Receiver operates at 916.5 MHz.

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MAESTRO WIRING DIAGRAM

WIRING

These pages show the wiring connections for various combinations of Maximum Wireless Instruments as well as individual components when purchased separately. You should identify your particular installation and wire accordingly. *When wiring several instruments together, the wires should be fed through the mounting panel holes and then attached to the instruments. It is generally easier to attach the wires before mounting the dials to the panel.*

MAESTRO ONLY

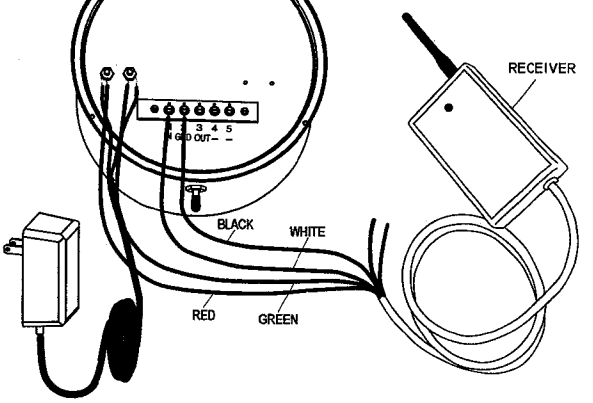
Step #1

Connect the RED and GREEN wires from the RECEIVER to power terminals on the back of the MAESTRO (no polarity). At the same time attach the wires from the 12 Volt Transformer to the same power terminals (no polarity).

Step #2

Connect the WHITE wire from the RECEIVER to TERMINAL #1 and the BLACK wire from the RECEIVER to TERMINAL #2.

MAESTRO



RECEIVER WIRING

RED ..... to ..... Power (no polarity)
GREEN ..... to ..... Power (no polarity)
WHITE ..... to ..... #1 Location on Mini-Max or Maestro*
BLACK ..... to ..... #2 Location on Mini-Max or Maestro*
YELLOW ..... to ..... #4 Location on Rainwatch*
BROWN ..... to ..... #5 Location on Rainwatch*

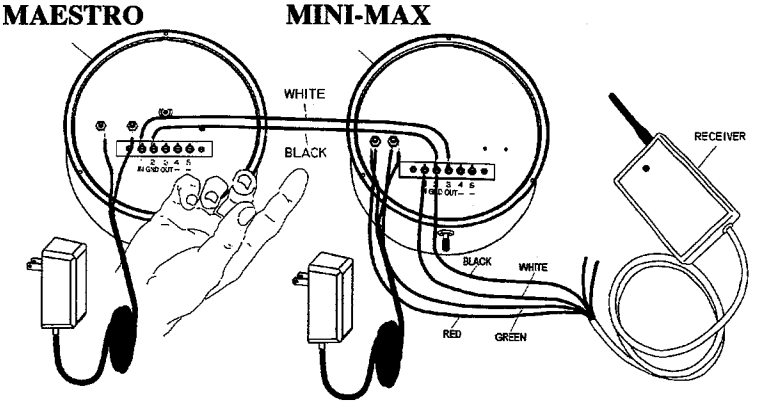
*** Which ever instrument you attach the power to, you should also attach the white and black wires from the RECEIVER except on the Rainwatch.**

MINI-MAX AND MAESTRO CONNECTIONS

Step #1

Connect the RED and GREEN wires from the RECEIVER to power terminals on the back of MINI-MAX (no polarity). At the same time attach the wires from the 12 Volt Transformer to the same MINI-MAX power terminals (no polarity).

MAESTRO **MINI-MAX**



Step #2

On the MINI-MAX, connect the WHITE wire from the RECEIVER to TERMINAL #1 and the BLACK wire from the RECEIVER to TERMINAL #2.

Step #3

Connect the two instruments using the supplied grey sheathed BLACK and WHITE wires as follows;

WIRE	MAESTRO	MINI-MAX
White	Terminal #1	Terminal #3
Black	Terminal #2	Terminal #2

Step #4

Connect the wires from the 12 Volt Transformer to the MAESTRO power terminals (no polarity).

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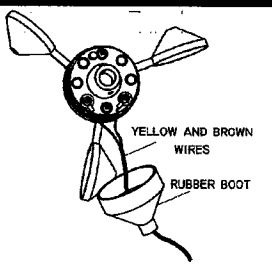
MAXIMUM WIRELESS

MAESTRO EXTERIOR SENSOR SETUP

MAESTRO WIND SENSOR SETUP

Step #1

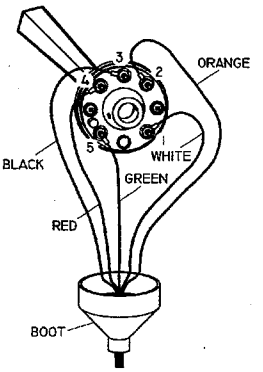
Thread the YELLOW and BROWN wires from the Wireless Wind Transmitter through the small access hole in one of the black rubber boots. Using the solid brass nuts from the Hardware Pack, attach the wires to the two terminals on the Wind Speed Sensor (no polarity).



Step #2

Thread the WHITE, ORANGE, BLACK, RED and GREEN wires from the Wireless Wind Transmitter through the small access hole in other black rubber boot. Using the solid brass nuts from the Hardware Pack, attach the wires to the five terminals on the Wind Direction Sensor as follows:

WHITE ..... to ..... TERMINAL #1
ORANGE ..... to ..... TERMINAL #2
BLACK ..... to ..... TERMINAL #3
RED ..... to ..... TERMINAL #4
GREEN ..... to ..... TERMINAL #5



SENSOR NOTES

Do not adjust the brass nuts on the sensors. Use the brass nuts from the hardware pack.

****

For additional weather protection, we suggest coating the terminals with non conductive silicone caulking or dielectric grease after you have verified correct operation.

****

Carefully slide the black rubber boot over the bottom of the sensors. It is a tight fit and should be positioned to tightly nest under the protruding ring near the middle of the sensor housing.

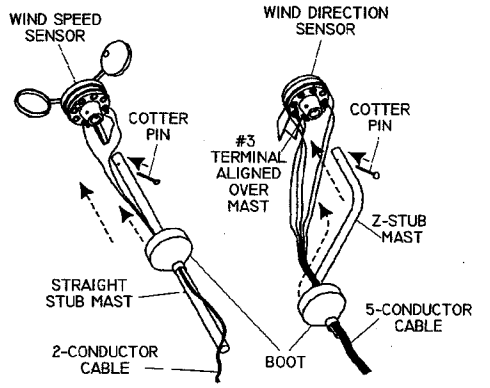
Step #3

Slide the straight stub mast through the black rubber boot and insert it into the Wind Speed Sensor, securing it with the supplied stainless steel cotter pin.

Step #4

Slide the "Z" shaped mast through the black rubber boot and insert it into the Wind Direction Sensor, securing it with the supplied stainless steel cotter pin.

MAKE SURE THE NUMBER 3 TERMINAL IS ALIGNED OVER TOP OF THE "Z" SHAPED ARM.

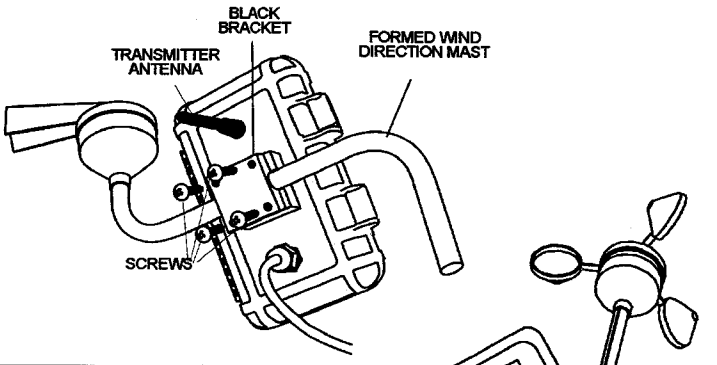


Step #5

Take the Wireless Wind Transmitter and mount it to the "z" shaped arm. Start by removing the four stainless steel screws holding the black locking bracket.

Step #6

Sandwich the "z" shaped arm between the two black locking brackets, reinstall and tighten the four stainless steel screws. Angle the Solar Panel approximately angled 22.5° above the horizon. See Page Six for a 22.5° template.

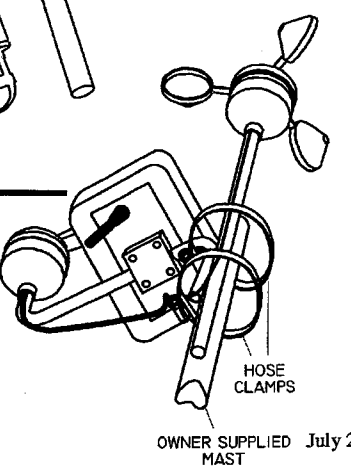


Step #7

Secure both black stub masts to your mast using the two supplied stainless steel hose clamps.

Step #8

Using electrical tape or plastic wire ties, firmly affix the wires to the stub arms and your mast.



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MAXIMUM WIRELESS

MAESTRO TRANSMITTER SETUP

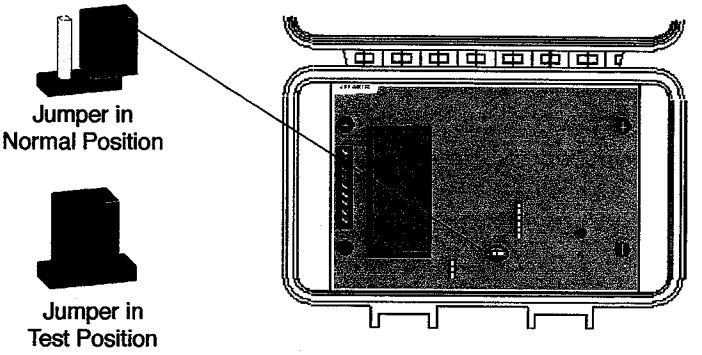
TESTING PROCESS

When installing one or more instruments, you will need to follow a very specific testing procedure. You will test each individual exterior sensor/transmitter and then deactivate it (remove the batteries) while testing the next exterior sensor/transmitter. Once all have been tested and found to be transmitting good data, you will permanently install the batteries. When installing multiple wireless instruments, start with the MINI-MAX or MYSTIC (Temperature), then the RAINWATCH (Rain Gauge) and then finish with the MAESTRO or MERLIN (Wind Speed & Direction).

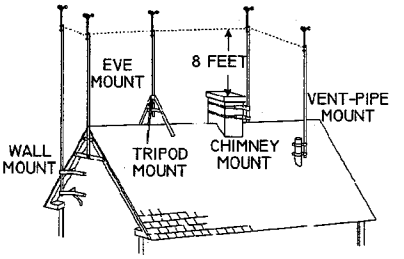
Prior to starting the testing of each exterior transmitter/sensor, move your assembled interior instrument panel and exterior sensors as close as possible to it's final location and apply power.

Step #1
Open the thumb-latch on the Wind Transmitter and place the circuit board jumper into the test position.

Step #2
While at the interior display, insert the two charged NiCad Batteries into the Wireless Wind Transmitter. The red LED on the RECEIVER should blink every two seconds.



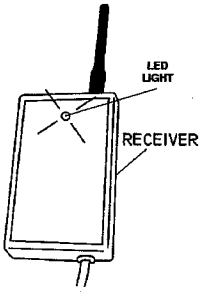
Step #3
Then take the exterior wind sensors to the desired exterior location. Make sure the Jumper is in the test position.
When siting MAESTRO'S exterior wind sensors there are several factors to consider. First, and most important is the ability of the exterior sensors to transmit reliable and uninterrupted data. Second, you want to get good data, please refer to the diagram for some typical locations.

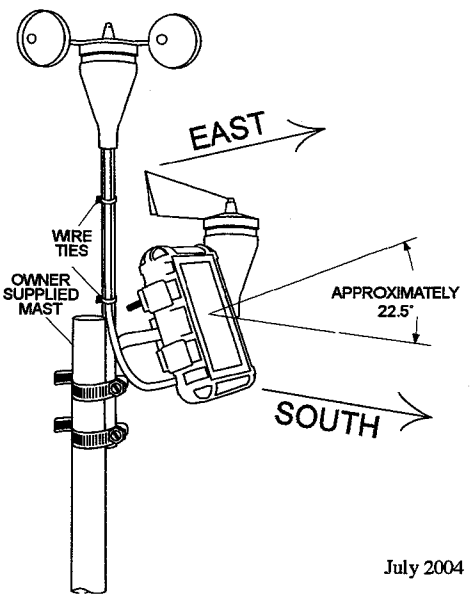


Step #4
Check the red LED on the RECEIVER again, it should continue to blink every two seconds. If it has lost the signal, try another exterior location until the RECEIVER light blinks every two seconds.

Step #5
REMOVE THE BATTERIES, put the test jumper back into the normal position, then ***REINSTALL THE BATTERIES.***

Step #6
Permanently mount the mast following the manufacturer's directions. ***THE "Z" SHAPED ARM MUST FACE EAST WITH THE SOLAR PANEL FACING SOUTH.***





PLEASE NOTE: *The Wind Direction Sensor will not transmit data until the Wind Speed Sensor is operating*

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OPERATION

The following will provide an overview of how to operate your MAESTRO features.

HIGHEST GUST REGISTER

Lightly holding the toggle switch to the right will display the highest winds gusts recorded since last reset.

AVERAGE WIND SPEED & DIRECTION

Lightly holding the toggle switch to the left will display the average wind speed and direction recorded since last reset.

RESETTING MEMORY

To reset the gust register, average wind speed and direction recording, fully depress the small push button for five seconds. The MAESTRO will once again begin storing new data.

TREND REGISTER NEEDLE

You can reset the Trend Register Needle by turning the knob located in the center of the dial face.

HIGH WIND SPEEDS

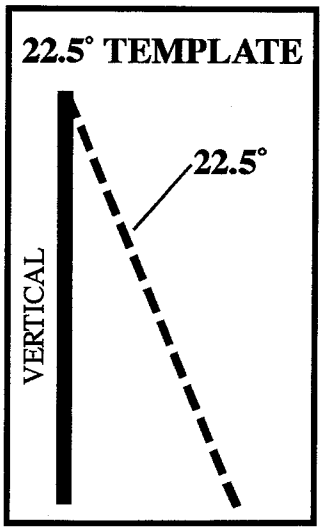
If the wind exceeds 100mph, the instrument will automatically switch into double mode. The two lights in the center meter opening in the dial will flash simultaneously and the reading will be half of the actual wind speed (75mph = 75 X 2 = 150mph). If the wind exceeds 200mph, the instrument will automatically switch into triple mode. The two lights in the center meter opening in the dial will light continuously and the reading will be one third of the actual wind speed (75mph = 75 X 3 = 225mph). The MAESTRO will stay in triple mode until the wind drops below 150mph.

TROUBLESHOOTING

Occasionally, you may experience disruptions in data transmission, *the most likely cause will be expired batteries in the Exterior Sensor/Transmitters.* For ALL errors, a red and blue LED will flash alternately at the left and right sides of the center meter opening of the dial.

When no data is received at the "In" terminal of a Maestro or MiniMax the meter will point to the 3 o'clock position. On a Maestro, the north, south, east and, west LED's will be on.

If a sensor transmitter is no longer responding to the receiver, the pointer on Maestro and/or MiniMax will indicate which transmitter is not responding.
The pointer at 12 o'clock indicates wind, 9 o'clock is temperature and between 7 and 8 o'clock (0MPH/-35degF) is rain.



FCC NOTICE

Warning: Changes or modifications to this equipment not expressly approved by Maximum, Inc. in writing as the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: 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 interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one of more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the 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.