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ELECTRONICS, LTD.

Thank you for buying our equipment.....

All of us at Zephyrus do our best to provide our customers with excellent products at a fair price. We hope our gear will give you many years of dependable service. If you have any questions or problems, please give us a call. We're in the Central Time zone and our hours are 8:00 to 5:00 Monday to Friday.

Our limited warranty

(We hope you won't have to worry with this)

Our warranty is FOB the factory in Tulsa and the term is one year. During that period we will, at our option, repair or replace defective equipment. Equipment that has been damaged is excepted. No other warranties apply. Unless forbidden by law, we will not be responsible for incidental or consequential damages.

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READ THIS FIRST!

(Then keep for future FAQ reference)

The active software suppliers are steadily updating their product (WeatherNode is freeware and no longer supported). The software copies on your CD might be updated even by the time you receive it. Go to their sites periodically for downloadable upgrades. Sites are:

- RealEmwin: www.skywatch.org
- Digital Atmosphere: www.weathergraphics.com
- Global Tracks www.gtracks.com

The splitter/terminator that is furnished serves as an attenuator to prevent your receiver from making data errors due to signal overload. It **MUST** be used on cable runs less than 125' long. Even with the splitter installed, do not use less than 75' of cable.

MINIMUM QUALITY cable is RG-6 (furnished). We have a notebook of goofy problems that have occurred from RG-59. Just don't use it.

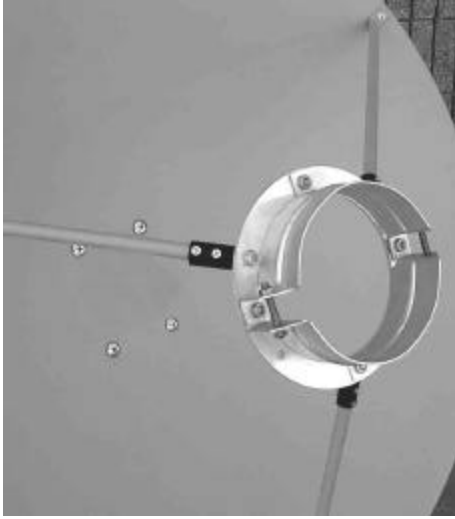
If, after a data outage (such as an eclipse period), your system doesn't resume receiving data (unless you shut down RealEMWIN and restart), go to "ingest-backup.txt" in your RealEmwin directory and edit it to read as follows:

```
#Enabled (0 = No, 1 = Yes)
1
#Backup Port Number (WHATEVER YOU USE AS YOUR CURRENT EMWIN COM PORT)
1
#Recheck primary port if backup is activated (in minutes, 0 = Manual Only)
1
```

readfirst.sam

This will have it close and reopen the com port until it starts getting data again.

Assembly details of Three point mounting 3' dish



Mounting Ring Assembly



Universal Mount



Feedhorn Mounting Detail



Non-Penetrating Mount

FEEDHORN MOUNTING ON 6 FOOT MESH DISH FOR GOES EMWIN AND WEFAX RECEPTION

Use the supplied hardware to bolt the four arms from the dish to the LNF (low noise feed) mounting collar and plastic base plate of the weather cover "bullet."

Insert the LNF as shown with the Low-noise amplifier assembly **ON TOP**. Refer to the dish aiming instruction page for the proper rotation position of the LNF at your location.

Dress the RG-6 cable up the lower arm and inside the plastic base plate ring as shown. Be sure the cable F connector is snug. Mold a silicone base clay sealer such as "Coax-Seal" around the entire F connector down onto the cable.

Align the dish with the satellite per the instructions with your WX series receiver.



Dish Optimization Procedure

WX-12 & 13 EMWIN Receivers

After assembling your satellite dish, you will need to acquire the EMWIN signal from GOES-8 or 10 and optimize the signal strength. **Follow these procedures to obtain error-free data.**

There are three factors to be considered when aligning a satellite dish for reception, and should be accomplished before attempting to optimize signal strength:

1. AZIMUTH

Refer to the dish-aiming chart to determine the azimuth settings. Use the chart as a reference to your location, and “split the difference” relative to those listed. A compass is a handy tool at this point. Aim the dish in the direction of the azimuth (degrees clockwise from **true** north). *Be sure your dish has a clear shot of the sky in that direction.* If this setting is correct, your receiver signal loss light should be out. If it’s on, check the elevation and polarity, then sweep s-l-o-w-l-y until it goes out. Remember that these settings are *approximates* and only by optimizing your system with the procedures listed will you be able to have error-free data.

2. ELEVATION

Refer to the dish-aiming chart to determine the elevation settings. A protractor is a handy tool at this point. If this setting is correct, your receiver signal loss light should be out. If it’s on, check the azimuth and polarity. Remember that these settings are *approximates* and only by optimizing your system with the procedures listed will you be able to have error-free data.

3. POLARITY

Refer to the dish-aiming chart to determine the polarity settings. The LNF feed horn assembly has a LNA down converter attached to it. When first placing the LNF feed horn assembly, you will be facing the front of the dish. Using the F-connector on the LNA as a reference to a clock’s hour hand, make your polarity settings from the dish-aiming chart.

The enclosed splitter with the attached 75-ohm terminator is necessary for the 75-foot run of RG-6 coaxial cable supplied with the unit. Install this assembly as close to the receiver as allowable. Cable runs up to 250 feet can be accomplished without line amplifiers, and do not need the splitter.

The WX-12 has a tone pitch dish optimizer. Set the tone pitch of the WX-12 dish optimizer, and adjust each of the three alignment factors for the maximum pitch between the points where the tone drops off or decreases in pitch. Be sure to turn the tone pitch **off** after optimizing signal strength, as it will interfere with data quality.

The WX-13 has a signal strength meter on the front panel in addition to the tone pitch dish optimizer that is very useful in noisy environments. These setup procedures should be accomplished *after* finding an approximate azimuth, elevation and polarity.

- First, set the tone pitch control on the back panel to mid-range, approximately half way between its maximum and minimum endpoints.
- Second, set the meter select switch above the heat sink on the back panel to **PEAK DISH**
- Adjust the **CENTER METER** control above the heat sink until the meter pointer is where you can easily see it change to indicate peak signal strength, usually around mid-range.
- Peak the dish by adjusting the azimuth, elevation and polarity for maximum signal strength as indicated by the meter.
- Re-center the meter, and then set the meter select switch to **MONITOR**. An indication somewhat less than full scale will allow you to observe fluctuations in signal strength.

Dish Optimization Procedure WX-12 & 13 EMWIN Receivers

**Approximate Dish Aiming for GOES Satellites
GOES 8 is at 75° Longitude and GOES 10 is at 135°**

| Location | Goes 8 Elevation | Goes 8 Azimuth | Polarity | | Goes 10 Elevation | Goes 10 Azimuth | Polarity |
|------------------|---------------------|-------------------|----------|--|----------------------|--------------------|----------|
| Washington State | 20° | 126° | 1:00 | | 34° | 194° | 11:30 |
| Oregon | 23° | 126° | 1:00 | | 38° | 198° | 11:30 |
| San Francisco | 25° | 120° | 1:30 | | 45° | 198° | 11:30 |
| Los Angeles | 30° | 122° | 1:30 | | 47° | 205° | 11:15 |
| Utah | 31° | 132° | 1:30 | | 39° | 211° | 11:15 |
| Arizona | 28° | 118° | 1:15 | | 45° | 215° | 11:00 |
| Minnesota | 34° | 156° | 12:30 | | 25° | 228° | 11:00 |
| Kansas City | 39° | 147° | 1:00 | | 32° | 228° | 10:45 |
| Dallas | 46° | 146° | 1:00 | | 35° | 234° | 10:30 |
| Corpus Christi | 49° | 139° | 1:15 | | 40° | 236° | 10:30 |
| Chicago | 40° | 162° | 12:30 | | 24° | 236° | 10:45 |
| Nashville | 47° | 162° | 12:30 | | 26° | 240° | 10:30 |
| New Orleans | 52° | 154° | 12:45 | | 32° | 242° | 10:45 |
| New Hampshire | 39° | 186° | 12:00 | | 12° | 249° | 10:30 |
| New York City | 43° | 183° | 12:00 | | 15° | 249° | 10:30 |
| Washington | 45° | 180° | 12:00 | | 17° | 248° | 10:30 |
| Orlando | 57° | 169° | 12:15 | | 25° | 250° | 10:00 |
| Florida Keys | 60° | 170° | 12:15 | | 25° | 252° | 10:00 |
| Massachusetts | 65° | 183° | 12:00 | | | | |