

SkyScan Field Pro Operation Manual





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1. Installation

AC power installation

Remove the two screws and open the swing door.

Run 3/4" conduit and wiring to the compression fitting on the Control Enclosure. The AC adaptor in the Control Enclosure is a two pin isolated adaptor and does not require a ground connection. Connect the neutral (white) wire to the connector with the white wire already attached.

Connect the hot line (black) to the connector with the black wire. Cap off the ground (green) wire with the wire nut supplied.

During operation should the unit lose power, the internal backup battery will power the unit for up to one hour. This battery is charged during normal operation.

The system should be hooked to the AC power source for an hour before operation to fully charge the battery.



Interface Cables

There are two cables, each 10' long. The cable with the 8 pin connector connects the Control Enclosure to the Display Enclosure. Be sure to turn the locking collar tight after installing to insure a solid connection. The cable with the 4 pin connector connects the Display to the Horn assembly. Different cable lengths can be specially ordered.



Mounting Brackets

It is important that the Display Enclosure not be mounted directly against a metal object.

The display enclosure may be mounted using two methods. The preferable method is to use the supplied flange on the back of the enclosure connecting it via a pipe to another structure. The other way is to use the four mounting tabs against a suitable surface.

The height of the display should be such that all affected persons can easily see it (usually 8' to 10' high). The cover should be locked to protect from any unauthorized access.

The control enclosure may be mounted any place that is convenient. Longer cables may be ordered as an option.

The horn **must** be mounted at least 5 feet from the display enclosure so as to not interfere with the operation. There are four tabs on the back of the housing that may be used for mounting

2. Operation

Theory of Operation:

Field Pro detects the characteristic electromagnetic emissions from individual lightning strikes and uses patented technology to determine the distance to the detected strike. The distances are indicated in four ranges: 0-3 miles; 3-8 miles; 8-20 miles and 20-40 miles. This allows you to track the approach of dangerous storm activity.

When installation is complete you can operate the unit via the On/Off switch in the Control Enclosure. The indicators will cycle once. A blinking green LED will indicate that the unit is set properly.

The Horn switch should be off at this time. Wait 3 sec. for the system to do a self check and all of the LEDs have stopped blinking (except for the on/off LED), then turn the horns on.

Turning the horns off does not disable the normal operation. The blinking green horn LED indicates that the horn/siren is activated.

The Range switch allows you to choose the distance at which detected lightning strokes will trigger the siren. To activate the Range distance, press the switch repeatedly until the desired

range category indicator is on. wait for 3 seconds and this range will be entered in the computer.

To change the range repeat this process.

Facts about Lightning and Thunderstorms

The average lightning strike is 5-6 miles long A lightning strike is incredibly powerful; up to 30 million volts at 100,000 amps flow in less than 1/10 of a second.

Thunderstorms and the associated lighting cause an average of 200 deaths and many more injuries in the U.S. every year. Most of these deaths and injuries could be prevented by the warning provided by Field Pro.

The average thunderstorm is 6-10 miles wide and moves at a rate of 25 miles per hour.

Once the leading edge of a thunderstorm approaches to within 10 miles, you are at immediate risk due to the possibility of lightning strikes coming from the storm's overhanging anvil cloud. This is the reason many lightning deaths and injuries occur with clear skies overhead.

On average, the thunder from a lightning strike can only be heard over a distance of 3-4 miles, depending on the terrain, humidity and background noise around you. By the time you can hear the thunder, the storm has already approached to within 3 - 4 miles.

The sudden cold wind that many people use to gauge the approach of a thunderstorm is the result of down drafts and usually extends less than 3 miles from the storm's leading edge. By the time you feel the wind, the storm can be less than 3 miles away.

Approximately 100,000 thunderstorms occur in the U.S. each year. About 10% of all thunderstorms are severe enough to produce high winds, fl ash fl oods and tornadoes.

IMPORTANT

There are two types of lightning produced by a thunderstorm, cloud-to-ground and cloud-to-cloud. For any user on the ground, the cloud-to-ground is the most dangerous. The Field Pro is designed to detect cloud-to-ground lightning strikes. While it may detect cloud-to-cloud lightning strikes, there may be occasions where storms will produce cloud-to-cloud lightning strikes that are not detected by the Field Pro. User should therefore still exercise extreme caution when exposed to lightning storms.

3. Care and Maintenance

The Field Pro has been manufactured of the highest quality materials and components. It should provide you with years of service with minimum maintenance. A few important tips will maximize the operational life of your Field Pro.

The Field Pro is weather-resistant not waterproof. Your Field Pro should **never** be immersed in water.

The Field Pro is a sensitive electronic instrument and should **never** be dropped or subjected to high impact forces.

Your Field Pro contains no user serviceable parts and is not intended to be opened. Opening the case will void the Product Warranty

4. Warranty, Service and Support

Warranty

SkyScan Division agrees to repair or replace this product for one year from the original date of purchase absolutely free. This warranty does not include any physical damage to the unit or any of its' accessory items and does not cover damage to the Field Pro unit resulting from the use of accessories not manufactured or authorized for use by Field Pro. Any modifications or repairs by unauthorized service personnel will void this warranty. You are responsible for all shipping charges to SkyScan will pay for ground UPS back to the customer.

NO OTHER EXPRESS WARRANTY HAS BEEN MADE OR WILL BE MADE WITH RESPECT TO THE UNIT AND NO PERSON IS AUTHORIZED TO PROVIDE ANY OTHER WARRANTY IN CONNECTION WITH THE SALE OF OUR PRODUCTS BEYOND THE DESCRIPTION ON THE FACE HEREOF. IMPLIED WARRANTIES, INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED TO ONE YEAR FROM THE DATE OF ORIGINAL PURCHASE. SKYSCAN RESERVES THE RIGHT TO PERFORM MODIFICATIONS OR IMPROVEMENTS ON ITS' PRODUCTS WITHOUT INCURRING THE OBLIGATION TO INSTALL THE CHANGES ON UNITS PREVIOUSLY SOLD, DELIVERED OR SERVICED. SOME STATES DO NOT ALLOW LIMITATIONS

ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. LIABILITY SHALL BE LIMITED TO THE COST OF REPAIR OR REPLACEMENT OF THE UNIT AND SKYSCAN SHALL IN NO EVENT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU..

Service

This Service Policy is valid in the United States only. This applies to Field Pro units returned to our factory in Arvada, CO and is subject to change without notice.

Field Pro reserves the right to deem any product unserviceable when replacement parts are no longer reasonably available. After the original warranty period, a standard service charge will be assessed for each repair (physical damage and missing parts are not included).

Please call our Customer Support Department to verify the service charge for you unit. The standard service charge includes UPS Gnd. or Parcel Post freight only. If charges are not prepaid, the unit will be returned C.O.D. Repairs are warranted for ninety (90) days. Return units for repair to:

Orion Engineering, Inc.
6626 W. 79th Ave.
Arvada, CO 80003

5. Troubleshooting

The unit may be tested by placing it near a high voltage source, i.e. the back of an operating CRT (approximately 30K volts). A one foot separation should be sufficient. A small stun gun may also be used with a one to one and a half foot separation from the unit. A wait time of 10 seconds after turn on is necessary before initiating a high voltage signal. A wait time of 45 seconds is necessary between successive tests.

If the unit fails to alarm, turn it off, restart, wait the appropriate time, then retry. If the unit fails to start, call the factory for further information.

6. Specifications

Microprocessor controlled

Patented dual antenna technology

4 detection zones

0 to 3 miles

3 to 8 miles

8 to 20 miles

20 to 40 miles

Separate control and display enclosures with 10' interface cables.

Horns - 120 dB

Custom length interface cables available (call for a quote)