Abstract
This manual contains information and instructions for installing, operating and maintaining the CHW170 Wireless Synchronization Unit.

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Warranty
Cooper Crouse-Hinds warrants all components, under normal operating conditions, for one year.
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Section 1 – Introduction and Operation

Operation

The CHW 170 Wireless Unit supplies a pulse to synchronize any number of controllers or power converters. One tower or system may have several interconnected controllers or power converters and would require one CHW 170 Wireless Unit. Each other tower or system to be synchronized would require a CHW 170 Wireless Unit. The towers to be synchronized can be any distance apart without limit.

The CHW 170 Wireless Unit provides a synchronization pulse of a nominal 5 volts in amplitude and a minimum of 50 milliseconds in duration. The pulse typically occurs once per minute and is provided on terminal 10.

Specifications

Dimensions (H x W x Depth, Weight):

8.25 x 6.50 x 4.50 in., 6.50 lbs.
210 x 165 x 114 mm, 2.95 kg.

Aerodynamic Wind Area:

0.34 ft.², 0.032 m²

Electrical:

AC Voltage: 24 VAC
Volt-Amperes: 5 VA
Section 2 - Mounting and Installation

Unpacking
Inspect shipping carton for signs of damage before opening them. Check package contents against the packing list and inspect each item for visible damage. Damage claims must be reported promptly to the freight handler.

Tools
Although no special tools are necessary, CWCA suggests the following tools for installation and maintenance:

- #2, flat-blade screwdriver
- 5/16 inch, flat blade screwdriver
- #2, Phillips® 9-inch shank screwdriver
- Long-nose pliers
- 8- or 10-inch adjustable wrench

Unit Access
A quick-release latch secures the cover. When you release it you can open the cover for internal access.

Mounting
Mounting and outline dimensions for the CHW 170 Wireless Unit are shown in Figure 1-1.

Ensure that adequate space exists around the equipment for access during installation, maintenance and servicing.

Cooper Crouse-Hinds does not furnish mounting hardware unless you order it as part of an installation kit.

Wiring
Refer to Figure 1-2 for wiring to the unit to be synchronized.

Multiple Beacon Systems
On multi-beacon systems where there is one master and one or two slaves, all units must be connected to the same GPS source. Connect the GPS signal to the GPS connector on the master unit and also to GPS connector on each of the slave units. Please note this is J11 for 4747 boards and J14 for 9038 boards. This must be done in addition to the master/slave connection.
Battery Installation

WARNING: Remove power before connecting the battery to terminal screws 8 and 9.

- Install battery.
- Tighten the tie wraps.
- Connect red to battery +.
- Connect black to battery –.
- Coat the battery terminals and connectors with anti-oxidation paste such as NoOx.

Error Condition

See Figure 1-2. The Satellite Error LED indicates that less than three satellites are being received. This may be caused by improper antenna location. This error prevents a sync pulse from being delivered to the controlled unit.

The Satellite Error LED can remain lit from approximately 20 seconds to approximately 20 minutes from a “cold” start-up as the unit acquires satellites. If it remains lit for over 20 minutes, there is an excellent chance that the antenna must be repositioned eliminating any barriers to its acquisition of satellites. The desirable ideal position is to allow the antenna to view a full hemisphere of sky, if possible. Buildings, towers, trees, and so forth act as barriers because the GPS information travels by “line of sight” and cannot penetrate through most barriers.
Figure 2-1 – Mounting and Outline

NOTE: ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
COOPER CROUSE-HINDS WIRELESS UNIT

Figure 2-2 – Installation
Section 3 – Recommended Spare & Replaceable Parts

Customer Service
Customer Service: (866) 764-5454
Facsimile: (315) 477-5590
Shipping Address:
  Cooper Crouse-Hinds
  P.O. Box 4999
  Wolf & 7th North St.
  Syracuse, NY 13221

Ordering Parts
To order spare or replacement parts, contact customer service at 1-866-764-5454

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>12V Battery</td>
<td>4991875</td>
</tr>
<tr>
<td>DC Battery Board</td>
<td>2872204</td>
</tr>
<tr>
<td>GPS Board</td>
<td>6903298</td>
</tr>
<tr>
<td>Antenna with Cable</td>
<td>6903299</td>
</tr>
<tr>
<td>Enclosure</td>
<td>5903169</td>
</tr>
</tbody>
</table>

Figure 3-1 – Replacement Parts

Disconnecting Power
When removing power from the equipment, ensure that the red wire to the battery is disconnected first.
Figure 3-2 – Component Locations
Returning Equipment – Return Material Authorization (RMA)

If a product purchased from Cooper Crouse-Hinds must be returned for any reason, please follow the procedure below:

**NOTE:** An RMA number must be requested from Cooper Crouse-Hinds prior to shipment of any product. No returned product will be processed without an RMA number. This number will be the only reference necessary for returning and getting information on the product’s progress.

1. To initiate an RMA, customers should call the Cooper Crouse-Hinds Customer Service Center at (866-764-5454) to receive technical assistance and a case number. The following information is required before a case number can be generated:
   - Site Name/Number / FCC Registration number/ Call Letters or Airport Designator
   - Site Owner (provide all that apply – owner, agent or subcontractor)
     - Contractor Name
     - Contractor Company
   - Point of Contact Information: Name, Phone Number, Email Address, Fax Number and Cell Phone (or alternate phone number)
   - Product’s Serial Number
   - Product’s Model Number or part number
   - Case Number (if previously given)
   - Reason for call, with a full description of the reported issue

2. The case number will then serve as a precursor to receiving an RMA number if it is determined that the product or equipment should be returned. To expedite the RMA process, please provide:
   - Return shipping method
   - Purchase Order (if non-warranty repair)
   - Shipping Address
   - Bill To Address
   - Any additional information to assist in resolving the issue or problem

3. A P.O. is required in advance for the replacement of product that may be under warranty. Cooper Crouse-Hinds will then, at its discretion issue a credit once the validity of the warranty has been determined.

4. A purchase order (P.O.) is also required in advance for all non-warranty repairs. NOTE: the purchase order is required prior to the issuance of the RMA number.
   - If the P.O. number is available at the time of the call, an RMA number will be issued and the customer must then fax or email the P.O. with the RMA number as the reference, to ensure prompt processing.
If the P.O. number is NOT available at the time of the call, a Case Number will be given to the customer and should be referenced on the P.O. when faxed or emailed to RMA Rep.

Cooper Crouse-Hinds will then, at its discretion repair or replace the defective product and return the product to the customer based on the shipping method selected.

The customer may purchase a new product before sending in the existing product for repair. If Cooper Crouse-Hinds determines the existing product is still covered under warranty a credit will be issued to the customer for the new product.

5. After receiving the Cooper Crouse-Hinds RMA number, please adhere to the following packaging guidelines:

   • All returned products should be packaged in a way to prevent damage in transit. Adequate packing should be provided taking into account the method of shipment. **Cooper Crouse-Hinds will not be responsible for damaged items if product is not returned in appropriate packaging.**

6. All packages should clearly display the RMA number on the outside of all RMA shipping containers. RMA products (exact items and quantity) should be returned to:

   Cooper Crouse-Hinds
   Attn: RMA #XXX
   1700 Blue Hills Drive, NE
   Roanoke, VA 24012

7. All RMA numbers:

   • Are valid for 15 business days. Products received after may result in extra screening and delays.

   • Must have all required information provided before a RMA number to be assigned.

**Return to Stock Policy**

• Parts can be returned within 90 days of ship date and will be subject to a 20% restocking fee. Product must:

   - Be in the original packaging
   - Not be damaged

• After 90 days no parts can be returned