IMPORTANT!!!

PLEASE TAKE THE TIME TO FILL OUT THIS FORM COMPLETELY. FILE IT IN A SAFE PLACE. IN THE EVENT YOU EXPERIENCE PROBLEMS WITH OR HAVE QUESTIONS CONCERNING YOUR CONTROLLER, THE FOLLOWING INFORMATION IS NECESSARY TO OBTAIN PROPER SERVICE AND PARTS.

MODEL #    AA0

TYPE       INCANDESCENT

SERIAL #

PURCHASE DATE

PURCHASED FROM
TABLE OF CONTENTS

APPENDIX

WARRANTY & RETURN POLICY

RETURN MERCHANDISE AUTHORIZATION (RMA) FORM
APPENDIX

CHASSIS LAYOUT & SCHEMATIC ................................................................. 201-R (REV F)
OL-2 SIDELIGHT ASSEMBLY DETAIL .................................................... 310 (REV B)
SIDELIGHT RECEPTACLE WIRING ............................................................ 274-S (REV A)
JUNCTION AND STRAIN RELIEF BOXES ............................................. 100089 (REV A)
LK1A0 LIGHTING KIT w/NON-ALARMED ........................................... 259-01 (REV D)
LK2A0 LIGHTING KIT w/NON-ALARMED ........................................... 259-02 (REV D)
LIGHTING KIT w/CABLE FOR OL2 LIGHT ......................................... T1033 (REV E)
WRAPLOCK FASTENING DETAIL ......................................................... 100984
NOTES:
1) PLUG 6390-FAA PHOTOCELL INTO (#43109) TWIST LOCK RECEPTACLE AND TWIST TO LOCK.
### PARTS LIST

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QTY</th>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>AP35222</td>
<td>RED SIDELIGHT GLASS</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>OL2C</td>
<td>DOUBLE SIDELIGHT BODY</td>
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<tr>
<td>3</td>
<td>2</td>
<td>106C</td>
<td>LENS HOLDER RING</td>
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<tr>
<td>4</td>
<td>4</td>
<td>12V245</td>
<td>OL LENS CLIP</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>832X14PH</td>
<td>8-32 X 1/4 PH SS SLOT SCREW</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>HC255SS</td>
<td>SIDELIGHT LATCHES</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>7X7SS</td>
<td>1/16 HOL 7X7 S.S. WIRE</td>
</tr>
<tr>
<td>8</td>
<td>4</td>
<td>A1A</td>
<td>STAKON CRIMP</td>
</tr>
<tr>
<td>9</td>
<td>2</td>
<td>OLG</td>
<td>OL GASKET</td>
</tr>
<tr>
<td>10</td>
<td>2</td>
<td>TWR19062</td>
<td>SIDELIGHT RECEPTACLE</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>100324</td>
<td>OL2 SERIAL NUMBER LABEL</td>
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<tr>
<td>12</td>
<td>8</td>
<td>18PRSS</td>
<td>1/8 X .40 SS POP RIVET</td>
</tr>
<tr>
<td>13</td>
<td>1</td>
<td>A314</td>
<td>3/4&quot; CONDUIT LOCKNUT GALV.</td>
</tr>
<tr>
<td>14</td>
<td>4</td>
<td>104G</td>
<td>WHITE TEFLOON WASHER</td>
</tr>
<tr>
<td>15</td>
<td>4</td>
<td>832X34PH</td>
<td>8-32 X 3/4&quot; S.S. PH SLOT</td>
</tr>
<tr>
<td>16</td>
<td>2</td>
<td>TWR19062</td>
<td>116W-120V LAMP (TYP.)</td>
</tr>
</tbody>
</table>

* = PART NOT SHOWN
~ = PART SOLD SEPARATELY

### NOTE:
1. FAA APPROVED LIGHT USES THE 116A21TS LAMP. OTHER LAMPS ARE AVAILABLE TO MEET YOUR APPLICATION.
JB-5 AND JB-0
3/4" JUNCTION BOX

JB-8 AND JB-8SR
1" JUNCTION BOX

NOTES:

1) DRAWING ILLUSTRATES METHOD OF STRAIN RELIEVING WIRE. USE THIS METHOD ON ALL JUNCTION BOXES.

2) THE NATIONAL ELECTRICAL CODE—ARTICLE 300-19-B3 REQUIRES CONDUCTORS IN A VERTICAL CONDUIT BE SUPPORTED TO RELIEVE STRAIN ON TERMINAL BLOCK CONNECTIONS.

3) SKETCH ILLUSTRATES METHOD OF STRAIN RELIEVING A SINGLE CONDUCTOR. SEVERAL CONDUCTORS MAY BE GROUPED TOGETHER.

4) CONDUCTORS MAY BE MIXED BUT SHOULD NOT TAKE UP MORE THAN 40% OF CONDUIT'S INSIDE AREA.

USING THIS JUNCTION BOX METHOD SPACING IS 100 FEET MAXIMUM.

<table>
<thead>
<tr>
<th>AWG WIRE SIZE</th>
<th>MAX. NUMBER WIRE SIZE IN 3/4&quot; CONDUIT</th>
<th>MAX. NUMBER WIRE SIZE IN 1&quot; CONDUIT</th>
<th>WIRE AREA</th>
<th>WEIGHT PER 100 FEET</th>
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</thead>
<tbody>
<tr>
<td>12 THHN</td>
<td>16</td>
<td>26</td>
<td>0.0117</td>
<td>2.50</td>
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<td>10 THHN</td>
<td>10</td>
<td>17</td>
<td>0.0184</td>
<td>4.10</td>
</tr>
<tr>
<td>8 THHN</td>
<td>6</td>
<td>9</td>
<td>0.0373</td>
<td>6.70</td>
</tr>
<tr>
<td>6 THHN</td>
<td>4</td>
<td>7</td>
<td>0.0519</td>
<td>10.30</td>
</tr>
<tr>
<td>4 THHN</td>
<td>2</td>
<td>4</td>
<td>0.0845</td>
<td>16.20</td>
</tr>
</tbody>
</table>
BILL OF MATERIALS

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>QTY</th>
<th>TWR PART NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>OL2</td>
<td>DOUBLE CONSTRUCTION LIGHT</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>116A21TS</td>
<td>116 WATT 120 VOLT LAMP</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>5012002</td>
<td>BREATHER</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>SS10012</td>
<td>WRAPLOCK</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>J85</td>
<td>3/4&quot; JUNCTION BOX</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>PPDP</td>
<td>4&quot; OD, PIPE DOP</td>
</tr>
<tr>
<td>7</td>
<td>5</td>
<td>A314</td>
<td>3/4&quot; CONDUIT LOCKNUTS</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
<td>EL3490</td>
<td>3/4&quot; 90° SHORT ELBOW</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>N344M</td>
<td>3/4&quot; X 4&quot; CONDUIT NIPPLE</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>OL2PKT</td>
<td>18&quot; OL2 PKT</td>
</tr>
<tr>
<td>11</td>
<td>2</td>
<td>UNY205</td>
<td>3/4&quot; UNION</td>
</tr>
<tr>
<td>12</td>
<td>1</td>
<td>AA0</td>
<td>AAD NON-ALARMED CONTROLLER</td>
</tr>
</tbody>
</table>

ITEM NUMBERS #13-#15 ARE NOT INCLUDED IN THE KIT BUT ARE REQUIRED FOR INSTALLATION.

13  =  CONDUIT34  3/4" CONDUIT (TWR HT + 30'/9M)
14  =  14THN4WHT  #14 THHN WHT WIRE (TWR HT+40'/12M)
15  =  14THN4BLK  #14 THHN BLK WIRE (TWR HT+40'/12M)

* = ITEM NOT SHOWN

NOTES:
1) CONDUIT SIZE BASED ON USING TYPE THHN WIRE.
2) USE RIGID GALVANIZED STEEL CONDUIT.
3) BREATHERS ALLOW FOR CIRCULATION OF AIR TO PREVENT CONDENSATION.

TOWER WIRING AND ASSEMBLY

TO 120 VOLT POWER SUPPLY

TOWER HT.
21'/6M (MIN.)
100'/30M (MAX.)

TYPICAL SPACING EVERY 7'-6" (MAX.)
**BILL OF MATERIALS**

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>QTY</th>
<th>TWR PART NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>OL2</td>
<td>DOUBLE OBSTRUCTION LIGHT</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>116421TS</td>
<td>116 WATT 120 VOLT LAMP</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>CGS295SA</td>
<td>3/4&quot; CORD CONNECTOR .5-.62</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>SS5012</td>
<td>WRAPLOCK 50'</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>TL27CG</td>
<td>L CONDULET W/COVER &amp; GASKET</td>
</tr>
<tr>
<td>6</td>
<td>2</td>
<td>A314</td>
<td>3/4&quot; CONDUIT LOCKNUTS</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>OL2PICTAIL</td>
<td>18' OL2 PICTAIL</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>NSAT12</td>
<td>3/4&quot; X 12' NPPLE</td>
</tr>
<tr>
<td>9</td>
<td>6</td>
<td>WIRENUTRED</td>
<td>RED WIRE NUT</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>AA0</td>
<td>AAO CONTROLLER</td>
</tr>
<tr>
<td>11</td>
<td>2</td>
<td>12THHNGRN</td>
<td>#12 THHN GREEN WIRE</td>
</tr>
<tr>
<td>12</td>
<td>1</td>
<td>TAPE1</td>
<td>BLACK ELECTRICAL TAPE</td>
</tr>
<tr>
<td>13</td>
<td>---</td>
<td>STCABLETIE</td>
<td>CABLE TIES (TWR HT. = 5)</td>
</tr>
<tr>
<td>14</td>
<td>---</td>
<td>STCABLE0B</td>
<td>WIRE CABLE (TWR HT. + 30')</td>
</tr>
</tbody>
</table>

* = NOT SHOWN

**NOTES:**

1) USE TWR PART #WIRENUTRED AND TAPE1 TO CONNECT STCABLE0B WIRE TO OL2PICTAIL IN THE TL27CG.

2) PHOTOCELL AND PICTAIL PROVIDED WITH CONTROLLER. PHOTOCELL IS TO BE MOUNTED OUTDOORS.
**WRAPLOCK FASTENING DETAIL**

**DIRECTIONS FOR USING WrapLock**

- **Cut off band to proper length.**
  - (See table on cover of box)

1. **Pass one end through yoke and bend back about 1½ and flatten down.**
2. **Pass band around work and through yoke.**
3. **Repeat and pass end through a second time, draw up free end snugly with pliers.**
4. **Insert free end in slot of ratchet.**
5. **Turn down until clamp is tight.**
6. **Back off slightly to remove ratchet. Clamp is now securely locked.**

**TO REMOVE WrapLock**

- Uncoil end with ratchet, press down at point where band metal has been forced through curved part of yoke.

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**Diagram Details**

- **Tower Angle Brace**
- **Typical Technique for Application of WrapLock**
- **Electrical Conduit**

**Front Side View**

**Back Side View**
Warranty & Return Policy

TWR Lighting®, Inc. ("TWR") warrants its products (other than “LED Product”) against defects in design, material (excluding incandescent bulbs) and workmanship for a period ending on the earlier of two (2) years from the date of shipment or one (1) year from the date of installation.

TWR Lighting®, Inc. ("TWR") warrants its “LED Product” against defects in design, material and workmanship for a period of five (5) years from the date of shipment. TWR®, at its sole option, will, itself, or through others, repair, replace or refund the purchase price paid for “LED Product” that TWR® verifies as being inoperable due to original design, material, or workmanship. All warranty replacement “LED Product” is warranted only for the remainder of the original warranty of the “LED Product” replaced. Replacement “LED Product” will be equivalent in function, but not necessarily identical, to the replaced “LED Product.”

TWR Lighting®, Inc. ("TWR") warrants its “LED Product” against light degradation for a period of five (5) years from the date of installation. TWR®, at its sole option, will, itself, or through others, repair, replace, or refund the purchase price paid for “LED Product” that TWR® verifies as failing to meet 75% of the minimum intensity requirements as defined in the FAA Advisory Circular 150/5345-43G dated 09/26/12. All warranty replacement “LED Product” is warranted only for the remainder of the original warranty of the “LED Product” replaced. Replacement “LED Product” will be equivalent in function, but not necessarily identical, to the replaced “LED Product.”

Replacement parts (other than “LED Product”) are warranted for 90 days from the date of shipment.

Conditions not covered by this Warranty, or which might void this Warranty are as follows:

- Improper Installation or Operation
- Misuse
- Abuse
- Unauthorized or Improper Repair or Alteration
- Accident or Negligence in Use, Storage, Transportation, or Handling
- Any Acts of God or Nature
- Non-OEM Parts
  The use of Non-OEM parts or modifications to original equipment design will void the manufacturer warranty and could invalidate the assurance of complying with FAA requirements as published in Advisory Circular 150/5345-43.
Warranty & Return Policy
(continued)

Field Service – Labor, Travel, and Tower Climb are not covered under warranty. Customer shall be obligated to pay for all incurred charges. An extensive network of certified and insured Service Representatives is available if requested.

Repair, Replacement or Product Return RMA Terms – You must first contact our Customer Service Department at 713-973-6905 to acquire a Return Merchandise Authorization (RMA) number in order to return the product(s). Please have the following information available when requesting an RMA number:

- The contact name and phone number of the tower owner or
- The contact name and phone number of the contractor
- The site name and number
- The part number(s)
- The serial number(s) (if any)
- A description of the problem
- The billing information
- The Ship To address

This RMA number must be clearly visible on the outside of the box. If the RMA number is not clearly labeled on the outside of the box, your shipment will be refused. Please ensure the material you are returning is packaged carefully. The warranty is null and void if the product(s) are damaged in the return shipment.

All RMAs must be received by TWR LIGHTING®, INC., 10810 W. LITTLE YORK RD. #130, HOUSTON, TX 77041-4051, within 30 days of issuance.

Upon full compliance with the Return Terms, TWR® will replace, repair and return, or credit product(s) returned by the customer. It is TWR®’s sole discretion to determine the disposition of the returned item(s).
Warranty & Return Policy

(continued)

**RMA Replacements** – Replacement part(s) will be shipped and billed to the customer for product(s) considered as Warranty, pending return of defective product(s). When available, a certified reconditioned part is shipped as warranty replacement with a Return Merchandise Authorization (RMA) number attached. Upon receipt of returned product(s), inspection, testing, and evaluation will be performed to determine the cause of defect. The customer is then notified of the determination of the testing.

- Product(s) that is deemed defective and/or unrepairable and covered under warranty - a credit will be issued to the customer’s account.
- Product(s) found to have no defect will be subject to a **$75.00 per hour testing charge (1 hour minimum), which will be invoiced to the customer.** At this time the customer may decide to have the tested part(s) returned and is responsible for the return charges.
- Product(s) under warranty, which the customer does not wish returned, the customer will be issued a credit against the replacement invoice.

**RMA Repair & Return** – A Return Merchandise Authorization (RMA) will be issued for all part(s) returned to TWR® for repair. Upon receipt of returned product(s), inspection, testing, and evaluation will be performed to determine the cause of defect. The customer is then notified of the determination of the testing. If the returned part(s) is deemed unrepairable, or the returned part(s) is found to have no defect, the customer will be subject to a **$75.00 per hour testing charge (1 hour minimum), which will be invoiced to the customer.** Should the returned parts be determined to be repairable, a written estimated cost of repair will be sent to the customer for their written approval prior to any work being performed. In order to have the tested part(s) repaired and/or returned, the customer must issue a purchase order and is responsible for the return shipping charges.

**RMA Return to Stock** – Any product order that is returned to TWR® for part(s) ordered incorrectly or found to be unneeded upon receipt by the customer, the customer may be required to pay a minimum **20% restocking fee.** Product returned for credit must be returned within 60-days of original purchase, be in new and resalable condition, and in original packaging. Once the product is received by TWR it’s condition will be evaluated and a credit will be issued only once it is determined that the RMA Return Terms have been met.

**Credits** – Credits are issued once it is determined that all of the Warranty and Return Terms are met. All credits are processed on Fridays. In the event a Friday falls on a Holiday, the credit will be issued on the following Friday.
Warranty & Return Policy
(continued)

Freight – All warranty replacement part(s) will be shipped via ground delivery and paid for by TWR®. Delivery other than ground is the responsibility of the customer.

REMEDIES UNDER THIS WARRANTY ARE LIMITED TO PROVISIONS OF REPLACEMENT PARTS AND REPAIRS AS SPECIFICALLY PROVIDED. IN NO EVENT SHALL TWR® BE LIABLE FOR ANY OTHER LOSSES, DAMAGES, COSTS, OR EXPENSES INCURRED BY THE CUSTOMER, INCLUDING, BUT NOT LIMITED TO, LOSS FROM FAILURE OF THE PRODUCT(S) TO OPERATE FOR ANY TIME, AND ALL OTHER DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING ALL PERSONAL INJURY OR PROPERTY DAMAGE DUE TO ALLEGED NEGLIGENCE, OR ANY OTHER LEGAL THEORY WHATSOEVER. THIS WARRANTY IS MADE BY TWR® EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESSED OR IMPLIED. WITHOUT LIMITING THE GENERALITY OF THE FORGOING, TWR® MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS OF THE PRODUCT(S) FOR ANY PARTICULAR PURPOSE. TWR® EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES.
RETURN MERCHANDISE AUTHORIZATION (RMA) FORM

RMA#: ______________________ DATE: ______________________

CUSTOMER: ____________________________________________

_______________________________________________________

CONTACT: __________________ PHONE NO.: ________________

ITEM DESCRIPTION (PART NO.): _____________________________

_______________________________________________________

MODEL NO.: __________________ SERIAL NO.: ________________

ORIGINAL TWR INVOICE NO.: __________ DATED: ____________

DESCRIPTION OF PROBLEM: _______________________________

_______________________________________________________

_______________________________________________________

SIGNED: ______________________ DATE NEEDED: ____________

RETURN ADDRESS:

PLEASE RETURN PRODUCT TO: 10810 W. LITTLE YORK RD., #130 HOUSTON, TX 77041-4051
RETURN MERCHANDISE AUTHORIZATION (RMA) FORM

RMA#: ______________________ DATE: ______________________

CUSTOMER: __________________________________________

_____________________________________________________

CONTACT: _______________________ PHONE NO.: ______________

ITEM DESCRIPTION (PART NO.): ___________________________

_____________________________________________________

MODEL NO.: __________________ SERIAL NO.: ______________

ORIGINAL TWR INVOICE NO.: __________ DATED: ____________

DESCRIPTION OF PROBLEM: ______________________________

_____________________________________________________

_____________________________________________________

_____________________________________________________

SIGNED: _________________________ DATE NEEDED: ____________

RETURN ADDRESS:

PLEASE RETURN PRODUCT TO: 10810 W. LITTLE YORK RD., #130 HOUSTON, TX 77041-4051