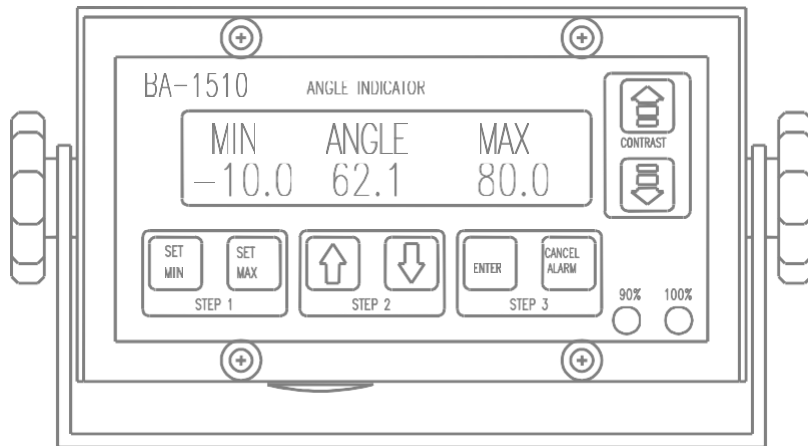


GREER COMPANY

Crane Systems

BA 1510™ ANGLE INDICATOR



OPERATOR'S MANUAL

HYDRAULIC & LATTICE CRANES



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WARNING

The BA-1510™ Angle Indicator is designed to aid the fully trained and experienced crane operator in safe crane setup and operation involving boom angles. This manual provides the operator with instructions for using the BA-1510™ System. At no time may this System be used as a substitute for the standard safety practices and precautions required in the safe setup and operation of cranes.

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BA-1510™ ANGLE INDICATOR

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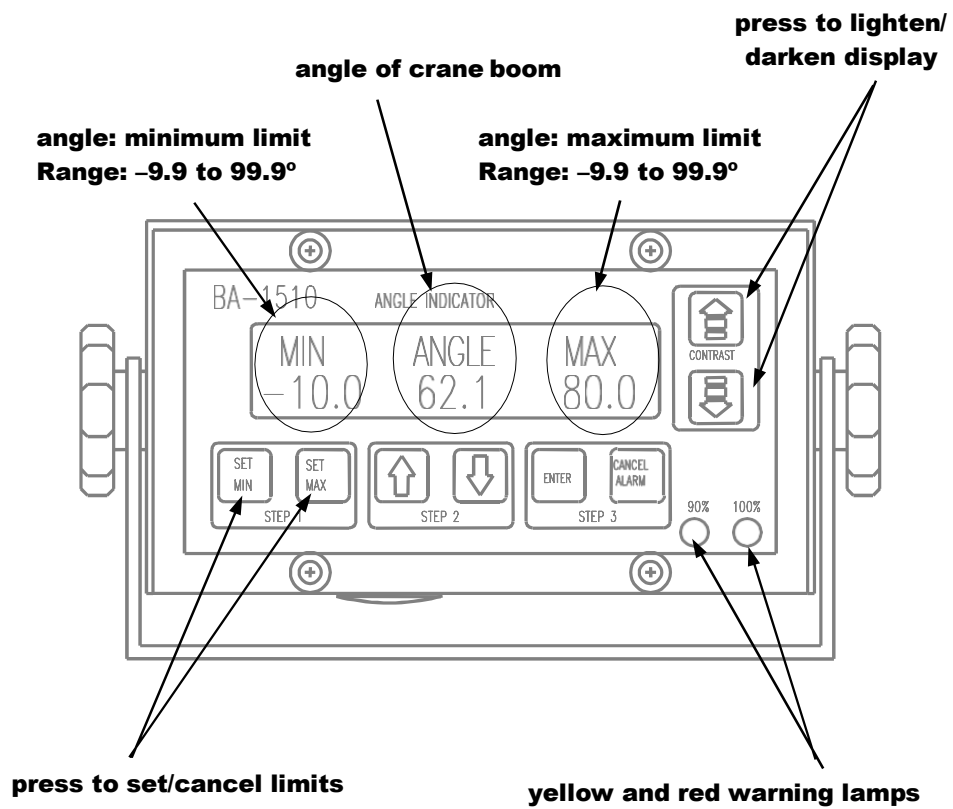
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The BA-1510™ Angle Indicator (meter)

BA-1510™ Operator's Manual GREER COMPANY Tel: (714) 259-9702 Fax: (714) 259-7626 PN W340002 Rev A 08/99

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THE BA-1510™ ANGLE INDICATOR (METER)

The BA-1510™ Angle Indicator (meter) is used during setup and operation of the crane to display the crane boom angle and to set and display crane boom minimum and maximum angle limits. The System provides visual and audible warning alerts if the set limit(s) are exceeded. Motion cuts (halting of crane hoist up, extend out, and boom down movements) are available as an additional option, if desired. (Refer to MOTION CUTS, page 7.)

SETTING AN ANGLE LIMIT

Position the crane boom at the desired limit.

Refer to the illustration on the opposite page while following the steps below.

1. **PRESS SET MIN OR SET MAX.**
2. **PRESS THE UP or DOWN ARROW IN THE CENTER OF THE METER TO ADJUST THE LIMIT.**
3. **PRESS ENTER.**

NOTE: The alarm(s) will activate until the boom is withdrawn from the SET limit SHOWN on the display.

REMOVING AN ANGLE LIMIT

1. **PRESS SET MIN OR SET MAX.**
2. **PRESS CANCEL**

NOTE: The limit will be replaced with a dashed - - - - line.

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THE ALARMS

PRE-ALARMS

The horn beeps at 90% of the working range of the boom angle **IF** the display identifies **TWO** angle limits. **IF** only **ONE** angle limit is identified, the pre-alarm activates **5° BEFORE** that limit. Between the pre-alarm point and the alarm point, the limit name flashes "!!!" and the yellow lamp lights.

ALARMS

At and beyond a limit, the horn sounds, both the red and yellow lamps light up, and a warning message appears. Motion cuts (if installed) will activate.

OPTIONS WHEN AN ALARM ACTIVATES:

- **MOVE OUT OF THE ALARM CONDITION**
- **PRESS CANCEL ALARM TO SILENCE THE HORN AND DEACTIVATE THE RED LAMP.**
- **PRESS CANCEL ALARM AND HOLD THE KEY DOWN UNTIL THE HORN BEEPS. "ALARMS INHIBITED" WILL APPEAR ON THE DISPLAY AND ALL MOTION CUTS WILL BE OVERRIDDEN.**
- **PRESS CANCEL ALARM THREE TIMES TO RETURN THE METER TO THE FULL ALARM CONDITION.**

NOTE: ANY NEW ALARM, EVEN DURING ALARMS INHIBITED, WILL CAUSE THE METER TO RETURN TO THE FULL ALARM CONDITION.

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MOTION CUTS: (Optional)

- WHEN INSTALLED, MOTION CUTS WILL HALT HOIST UP, BOOM DOWN, AND TELESCOPE OUT BOOM ACTION DURING A TWO BLOCK CONDITION.
- ACTIVATION OF THE MIN ANGLE ALARM HALTS BOOM DOWN, **UNLESS** THE ALARM WAS PURCHASED AS "AUDIOVISUAL ALARMS ONLY."
- ACTIVATION OF THE MAX ANGLE ALARM HALTS BOOM UP, **UNLESS** THE ALARM WAS PURCHASED AS "AUDIOVISUAL ALARMS ONLY."

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SPECIAL FUNCTIONS

ALARM TEST

- **WHILE NOT IN ANY PROCEDURE, PRESS AND HOLD ENTER TO SOUND THE HORN, LIGHT UP THE LED'S, DISPLAY "ALARM TEST," AND ACTIVATE ALL INSTALLED MOTION CUTS.**

RIGGING MODE

- PRESS AND HOLD THE **DOWN ARROW**; THEN PRESS **ENTER** TO ACTIVATE THE RIGGING MODE WHEN WORKING ON THE CRANE.
NOTE: ALL ALARMS AND WARNINGS ARE DISABLED WHEN THE RIGGING MODE IS ACTIVE
- PRESS **CANCEL ALARM** TO EXIT THE RIGGING MODE.
NOTE: THIS ACTION WILL RESTORE ALARMS AND MOTION CUT FEATURES (IF INSTALLED).

CALIBRATION MODE

- TO ACCESS THE CALIBRATION MODE, PRESS THE **UP AND DOWN ARROWS AT THE SAME TIME.**
NOTE: A PROMPT WILL REQUEST ENTRY OF A **KEY CODE.** (SEE THE CALIBRATION MANUAL FOR THIS CODE.) IF CODE IS NOT ENTERED, "ACCESS DENIED" WILL APPEAR AND THE NORMAL SCREEN WILL RETURN.

CONTRAST KEYS

- PRESS THE **UP OR DOWN CONTRAST KEYS** (ON FAR RIGHT OF DISPLAY) TO MAKE READOUT LETTERS ON THE DISPLAY LIGHTER OR DARKER.

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FACTORY RECOMMENDED SERVICE

PREVENTIVE MEASURES FOR GREER INSTRUMENTATION

DAILY OR EVERY 8 HOURS OF OPERATION

1. EXERCISE THE METER BY ENTERING DIFFERENT VALUES IN THE DISPLAY, SUCH AS HIGH OR LOW ALARMS, AS APPROPRIATE TO THE METER USED. PRESS ENTER TO TEST THE HORN, WARNING LIGHTS, AND MOTION CUTOFF SIGNAL (IF MOTION CUT OPERATION IS INSTALLED).
2. IF USING AN ANTI TWO-BLOCK SYSTEM, TEST THE SYSTEM BY CAUTIOUSLY HOISTING THE HOOK(S) TO ACTUATE THE SWITCH AND ALARM.
3. CHECK THE METER FOR ANY VISIBLE MOISTURE AND KEEP IT AS DRY AS POSSIBLE.

MONTHLY OR EVERY 160 HOURS OF OPERATION

1. CHECK THE ACCURACY OF THE BA-1510™ ANGLE INDICATOR (METER). FOR ANGLE INDICATING SYSTEMS, VERIFY THE BOOM ANGLE WITH AN INCLINOMETER AND COMPARE IT WITH THE VALUE DISPLAYED. IMMEDIATELY CORRECT ANY ERRORS.
2. CHECK ALL ELECTRICAL CABLING BETWEEN THE METER AND ITS SENSORS TO ENSURE THAT THE CABLING IS NOT BEING STRETCHED OR DAMAGED.

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3. CHECK ALL THE SENSOR HARDWARE FOR LOOSE CLAMPS, FITTINGS, BOLTS OR NUTS, ETC.

ANNUALLY OR EVERY 1000 HOURS OF OPERATION

1. UNDO THE CABLE CONNECTORS IN THE SYSTEM; INSPECT AND CLEAN THESE CONNECTORS. GENEROUSLY REPACK EACH CONNECTOR WITH DOW CORNING #111 SILICON GREASE OR A COMPARABLE SUBSTITUTE.
2. IF USING AN EXTENSION REEL, CLEAN THE REEL CABLE AND GENEROUSLY LUBRICATE IT WITH SILICON SPRAY.



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PSR is the global provider for sales, repair and installation of Load Moment Indicating (LMI) systems, Anti-Two Block Systems (A2B), and Rated Capacity Indicating systems. Please contact us with your crane repair and certification needs today.

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