

MODEL HHV200 Wireless Test Indicator

Hagenhoff LLC 9/19/14 Operation Use and Maintenance

OPERATION:

Start the VYNDICATOR by pressing the RECIEVER’s POWER button. “NO RECEPTION” displays. Two three digit numbers indicating the number of minutes of reception and transmission time since the last battery change appears in the upper left corner. Press the TRANSMITTER POWER button. Note that the TRANSMITTER transmission indicator LED blinks every 2 seconds. The receiver should show blinking zeros indicating that the stylus is out of measurement range. Move the stylus by hand and note that the display numbers and position bar follow the stylus location.

RESTART THE TRANSMITTER IF THE POSITION BAR DOES

NOT MOVE TO ESTABLISH THE TRANSMISSION IF NECESSARY.

Move the stylus direction lever if needed to accommodate your need on your job. Use care not to overshoot the stylus direction stops.

MENU BUTTON:

Press the MENU button repeatedly to display the selectable options which are:

STD MODE, TIR MODE, LOW MODE, HIGH MODE, English Units, Metric Units, ZERO TRANS BAT,

ZERO RECVR BAT, Stylus 0.59, Stylus 0.78 (STD), Stylus 1.04, Stylus 1.47, Transmitter ALL, Transmitter 1 thru 3, BEGIN CALIBRATION. Calibration is explained in HOW THE VYNDICATOR WORKS.

An item can be selected on the MENU list by pressing the ZERO button. That item will then be highlighted.

If there is only one VYNDICATOR in the area you may choose Transmitter ALL. If multiple units are in the same area, choose the TRANSMITTER that is associated with your RECEIVER by looking for a non 00000000 address, for example 00002014. This will cause your RECEIVER to reject all other units in the area.

The BEGIN CALIBRATION procedure is used to adjust the calibration of the unit and allow for manufacturing variations and is explained in "HOW the VYNDICATOR WORKS". The VYNDICATOR is

accurate within 2.5% full scale regardless of the Calibration. This is close enough for most centering operations.



USE:

Carefully mount the transmitter assuring the unit is firmly mounted. Engage the stylus and work piece. Make certain there are no obstructions that would catch the stylus or housing body. Keep the angle between the work piece and stylus as small as practical to minimize cosine error. Press ZERO to establish a zero datum to work from. Move the VYNDICATOR body till the range bar is somewhat centered. Center your work piece. The VYNDICATOR is not waterproof. Use caution to avoid coolant from the entering unit. The VYNDICATOR TRANSMITTER and RECEIVER are programmed to turn off in the normal run mode after 15 minutes if there is no stylus motion. This is done to conserve the battery in the case the operator forgets to turn the units off. If it is required to run the RECEIVER and TRANSMITTER continually then hold down the TRANSMITTER power button for four seconds when starting. The TRANSMITTER indicator LED will blink twice in the continual mode. Hold the RECEIVER ON button for four seconds when starting to place in continual mode. A “#” symbol will appear right of the “R” of the RECEIVER minutes denoting continual mode. Do not “flick” the stylus.

The STD MODE displays the stylus position directly. The TIR MODE displays the difference between the highest and lowest recorded reading. The LOW MODE will capture the lowest reading and the HIGH MODE will capture the highest reading. The ZERO button will set a datum for these three modes.

MAINTENANCE:

The RECEIVER requires 2 AA size batteries. Remove the back panel by pressing the arrow and replace the batteries noting polarity on the battery icon. The TRANSMITTER requires 2 common CR2032 3V coin cell batteries. Replace the batteries if the TRANSMITTER seems to work for a minute or so then “NO RECEPTION” appears on the display or the display becomes erratic. The TRANSMITTER batteries should last approximately 8 transmission hours. Replace the batteries by first removing the top. (Note small screw driver pry spot) Using a sharp pen knife, scribe or small screw driver pry the batteries from their holder. Support the back of the TRANSMITTER board with your finger while prying. Replace the batteries noting:

(+)PLUS TOWARD THE HOUSING SIDE OF THE UNIT and the (-)MINUS TOWARD THE BOARD SIDE. Using the MENU button, zero the appropriate minute accumulator.

SERVICE and REPAIR:

Stylus 1.7 MM thread Available from MSC supply part number 48704449.

Other lengths available from MSC.

Please call: Hagenhoff LLC 1-623-544-0679 Nov 1 to May 1

13536 W. Springdale Dr. Sun City West Az 85375

Please call: Hagenhoff LLC 1-330-477-3019 May 1 to Nov 1

2814 West Dale Rd N.W. Canton Ohio 44708

Email: VYNDICATOR@COX.NET

Hagenhoff LLC will fix and repair free any faults for 1 year from purchase.

Major damage and crashes to the housing are excluded.

Your TRANSMITTER address ……………………........... Ship date ……………



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Hagenhoff LLC 1/18/2013

Calibration Instructions

HOW THE VYNDICATOR WORKS:

The VYNDICATOR transmitter uses a Linear Image Sensor which has 2048 pixels packed in a length of

8.1 MM or .318”. A small LED looks thru a light slit to illuminate a section of the sensor. The microprocessor scans the sensor to determine the slit position on the sensor. The processor then sends packets of data thru the antenna to the receiver for reception and display. The VYNDICATOR receiver looks at the position data of each packet, the length of the chosen Stylus and units (English or Metric) to display the position. The VYNDICATOR uses IEEE 802.15.4 transmission protocall (a subset of ZIGBEE) to transmit data. Google 802.15.4 for transmission details.

CALIBRATION SUGGESTIONS:

The CALIBRATION procedure is used to adjust the calibration of the unit and allow for manufacturing variations. The VYNDICATOR is accurate within 2.5% of full scale regardless of the calibration.

CALIBRATING:

Use Super Mike, height stand or JO blocks as a measurement standard.

1. Turn on Transmitter and Receiver assuring that the position bar moves.

2. Assure the direction lever points towards the start button.

3. Mount VYNDICATOR transmitter and adjust the stylus slip clutch so the

Receiver reads midpoint (about .085" for the .780" Stylus) and the stylus

is directly inline with the axis of the transmitter body to minimize Cosine error.

4. Bring the stylus against the face of the calibration device and preload to VYNDICATOR

until it reads between .005” and .010”. Gently lift the stylus and assure the reading repeats.

5. Zero the reading. Move the calibration device until the VYNDICATOR reads .170”.

Reposition the clutch if necessary if range override occurs.

6. Press the menu button until BEGIN CALIBRATION shows.

7. Move calibration device back to zero.

8. Press the ZERO button to begin the calibration procedure appears.

9. Press ZERO to establish base datum. (Set Zero) shows.

10. Press MENU to advance to the first set point target .170”.

11. Move calibration device to .170”. Vyndicator may show a different reading.

12. Repeatedly press ZERO. Notice that the tenths digit advances. The display will increase

then drop back below the target then start to increase. Match the target and display.

Press Menu to advance to the next of the 6 target points.

13. Repeat process for all 6 target points. .170”, .150”, .120”, .090”, .060”, .030”.

14. When "Set CALIBRATION" appears, press ZERO.

15. Clear Calibration by pressing ZERO if desired.

16. Test calibration. Recalibrate if required.