

ET6000 SENSOR CALIBRATION PROCEDURES

SENSOR DEFINITIONS

TOF - The Top Of Form sensor is used to detect the end of the tag currently being printed and the beginning of the tag to be printed on next. The TOF sensor is located behind the print head and can be located either in the left paper guide rail or the center point of the paper path. The TOF point can be detected using the following methods:

LABELS (BACKING); In this mode, the unit detects the difference in the light level when paper passes through the sensor point and when only backing passes through the sensor point. The difference in the light level detected under these two conditions allows the unit to detect the TOF of the stock.

TICKET (HOLE); In this mode, the unit operates similar to LABELS (BACKING) mode except that the light source when the hole passes over the sensor point is significantly larger and generally easier to detect than when the backing gap passes over the sensor.

BLACK MARK; In this mode, the unit detects the difference in the light level when regular stock passes through the sensor point and when the black mark point passes through the sensor point. The difference in the light level detected under these two conditions allows the unit to detect the TOF of the stock.

NONE; In this mode, the unit simply ignores the TOF sensor except for detecting the presence of stock and for auto stock loading.

EXIT - Used to detect when stock is hanging out the front of the unit. This sensor is located just in front of the print head near the front opening in the unit.

AUTO SENSOR SET PROCEDURE

This process calibrates the TOF sensor baseline (light level without any stock) and the detection and drive levels of the Exit Sensor. If this procedure does not match your menu, contact Unimark with your specific firmware version for assistance.

1. Take the unit OFFLINE by pressing the OLINE key.
2. Press the ENTER key.
3. Press the DOWN/UP arrow and find SERVICE menu.
4. Press the ENTER key.
5. Enter service password (UP/DOWN arrows change value in each block, LEFT/RIGHT arrows move cursor to each block).
6. Press the ENTER key to accept password.
7. Press the DOWN/UP arrow and find MAINTENANCE menu.
8. Press the ENTER key.
9. Press the DOWN/UP arrow and find SENSOR SETUP menu.
10. Press the ENTER key.
11. Press the DOWN/UP arrow and find AUTO SENSOR SET option.
12. Press the ENTER key.
13. Follow instructions on the display.
14. Once the process is completed, the TOF baseline and Exit sensor settings will be calibrated.

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TOF SENSOR CALIBRATION PROCEDURE

This process calibrates the TOF sensor to operate with the selected ticket stock. If this procedure does not match your menu, contact Unimark with your specific firmware version for assistance.

The Top Of Form mode must be set to LABELS (BACKING) to perform this procedure.

The TOF sensor calibration procedure calculates the TOF sensor drive level and the TOF sensitivity setting. The procedure calculates the optimum values to provide the largest difference between the light level when the stock is over the sensor and when only the backing is over the sensor.

Selecting the stock type

1. Take the unit OFFLINE by pressing the OLINE key.
2. Press the ENTER key.
3. Press the DOWN/UP arrow and find SELECT DOC TYPE menu.
4. Press the ENTER key.
5. Press the DOWN/UP arrow and find the desired document type for calibration. Usually this will be Bagtag or Cargo. Board Pass would never need the TOF calibration and either uses TOF mode NONE or TICKETS (HOLE) assuming there is a hole lined up with the TOF sensor.
6. Press the ENTER key.
7. Press the ONLINE key. Then select "Y" and press ENTER to save the stock selection.

Setting the TOF MODE

1. Take the unit OFFLINE by pressing the OLINE key.
2. Press the ENTER key.
3. Press the DOWN/UP arrow and find SERVICE menu.
4. Press the ENTER key.
5. Enter service password (UP/DOWN arrows change value in each block, LEFT/RIGHT arrows move cursor to each block).
6. Press the ENTER key to accept password.
7. Press the DOWN/UP arrow and find "Specific Stock" setup menu (whatever was selected in the first section above).
8. Press the ENTER key.
9. Press the DOWN/UP arrow and find TOP OF FORM MODE menu.
10. Press the ENTER key.
11. Press the DOWN/UP arrow and find LABELS (BACKING) option.
12. Press the ENTER key.
13. Press the ONLINE key. Then select "Y" and then press ENTER to save the stock selection.

Performing the TOF Sensor Calibration

1. Take the unit OFFLINE by pressing the OLINE key.
2. Press the ENTER key.
3. Press the DOWN/UP arrow and find SERVICE menu.
4. Press the ENTER key.
5. Enter service password (UP/DOWN arrows change value in each block, LEFT/RIGHT arrows move cursor to each block).
6. Press the ENTER key to accept password.
7. Press the DOWN/UP arrow and find "Specific Stock" setup menu (whatever was selected previously).
8. Press the ENTER key.
9. Press the DOWN/UP arrow and find TOP OF FORM SETUP menu.
10. Press the ENTER key.
11. Press the DOWN/UP arrow and find TOF SENSOR CAL option.
12. Make sure stock is installed into the unit and there is at least two pieces of stock in total (connected together across perforation).
13. Press the ENTER key.
14. The unit will perform the calibration procedure. The unit moves the stock up to the perforation area and then slowly steps the area past the TOF sensor while taking light level readings as the drive level is ramped up and down.
15. Wait for the message "Sensor Cal Success, Settings Saved" to be displayed.
16. Press any key to reset stock location (perforation to the printhead location). Remove unused tag if hanging out front.
17. Press the ONLINE key.

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TOF SENSOR CALIBRATION TROUBLE SHOOTING

1. Message “BACKING OPAQUE” appears at the end of the TOF calibration sequence.
 - A. Verify that the stock length is set correctly. If the stock length is set incorrectly, the unit will not be able to properly locate the perforation between the first and second tag.
 - B. Make sure that the stock is not folded over covering the perforation.
2. Cannot find the TOF Sensor Cal option in the menu.
 - A. Verify that the correct stock has been selected.
 - B. Verify that the TOP OF FORM MODE is set to LABELS (BACKING). When the unit is set to TICKETS (HOLE) or NONE, the TOF Sensor Cal option will be unavailable.
3. Unit makes a grinding noise at the end of the calibration or the TOF drive level calculated is very low.
 - A. Verify that there is not a TOF hole in the perforation that lines up (even partially) with the TOF sensor location.

If there is a TOF hole in line with the TOF sensor location, try recalibrating with the stock in backwards (two pieces required).

If there is no way to avoid the TOF hole, then the TOF mode should probably be changed to TICKETS (HOLE).
 - B. Verify that at least two pieces of stock are used during the calibration process. The unit cannot properly calibrate if it cannot see a second piece of stock after the perforation.