



USER GUIDE

Transformix Engineering Inc.
50 Grant Timmins Dr, Unit 3
Kingston, Ont.
K7L 4V4

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GENERAL DESCRIPTION:

The FARM ALERT system provides a farmer with a wireless lighting system for use on agricultural implements. This wireless system allows the user to control the turn signals, hazard lights, brake lights, and running lights all from a keypad unit located near the driver. Each signal is simply activated by pressing the corresponding key on the keypad. Lights on the keypad unit will indicate that a signal has been sent and received. These lights will continue to operate until a signal is sent to cancel the operation by simply pressing the same corresponding button on the keypad unit.

SIGNAL LIGHT OPERATIONS:

Sufficient LED lighting is used to ensure running light visibility at 150 meters on a clear night.

<u>Signal Type</u>	<u>Result</u>
Left Turn:	Left Side, Bright, Flashing
Right Turn:	Right Side, Bright, Flashing
Brake Lights:	Left and Right Side, Bright
Hazard Lights:	Left and Right Side, Bright, Flashing
Running Lights:	Left and Right Side, Dim

Bright - All LEDs on

Dim - Half of the LEDs on

KEYPAD OVERVIEW:



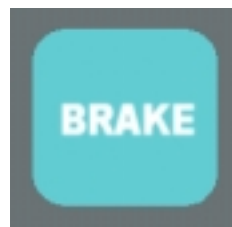
Note: The selected function will continue to operate until a signal is sent to cancel the function by simply pressing the same corresponding button.



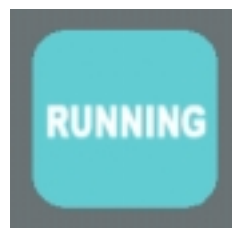
Right button: By pressing the RIGHT button on the keypad a signal is sent to the taillight unit to activate the right turning lights, a red confirmation light located above the button will let the user know that the signal was sent and received by the keypad unit.



Left button: By pressing the LEFT button on the keypad a signal is sent to the taillight unit to activate the left turning lights.



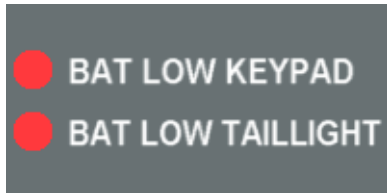
Brake button: By pressing the BRAKE button on the keypad a signal is sent to the taillight unit to activate the brake lights. The brake lights will continue to operate until a signal is sent to cancel the operation by simply pressing the same corresponding button.



Running button: By pressing the RUNNING button on the keypad a signal is sent to the taillight unit to activate the running lights.



Hazard button: By pressing the HAZARD button on the keypad a signal is sent to the taillight unit to activate the hazard lights. Both lights above the RIGHT and the LEFT buttons will flash as a confirmation that hazard has been selected.



Low battery keypad/taillight: A warning light will activate if the battery level for the keypad or the taillight drops below a certain level letting the user know that the batteries will have to be changed.

REPLACEABLE COMPONENTS:

The replaceable components that make up the electrical hardware are:

1. Taillight LED board
2. Taillight Computer/Battery Module
3. Keypad unit

Taillight LED board:

The taillight lens module consists of a red molded lens cap, three screws and a LED circuit board. If the LED circuit board needs to be replaced, a new board can be easily installed.

LED board removal

To remove an LED board:

- 1) Remove the three lens screws from the red lens cap and then remove the lens cap.
- 2) Remove the two screws securing to the LED board.
- 3) Remove the LED board by pulling up on the LED board so that it disconnects from the connector located just underneath the board.

LED board replacement

To replace an LED board:

- 1) Take the new replacement LED board and by pushing down fit the board into the connector insuring that the connector is in the correct position.
- 2) Reinstall the two LED board screws.
- 3) Then place the red lens cap back over the main housing and reinstall the three lens screws.
- 4) Make sure that the drainage lip on the red lens cap is facing down on the taillight unit.

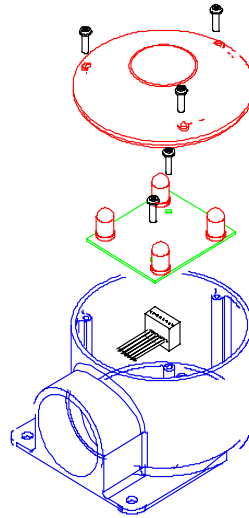


Diagram 1: LED Board Assembly

Taillight Computer/Battery Module:

The Taillight Computer Module consists of an ON/OFF switch, battery compartment and submerged electronics. If the Taillight Computer Module needs to be replaced, a new module can be easily installed.

Taillight module removal

To remove the Taillight Computer Module:

- 1) Remove the four cover screws, then remove the cover.
- 2) Remove the four screws located at the top and the bottom of the Computer Module.
- 3) Remove the Computer Module by pulling up on the Module so that it disconnects from the two connectors located to the left and right side of the module just underneath.

Taillight module replacement

To replace the Taillight Computer Module:

- 1) Take the new replacement Taillight module and by pushing down fit the module into the connectors insuring that the connectors are in the correct positions.
- 2) Reinstall the four screws located at the top and the bottom of the Computer Module.
- 3) Replace the cover insuring that the ON/OFF switch fits properly with the space provided in the cover, then reinstall the four cover screws.
- 4) Make sure that the switch is on the right side of the taillight unit.

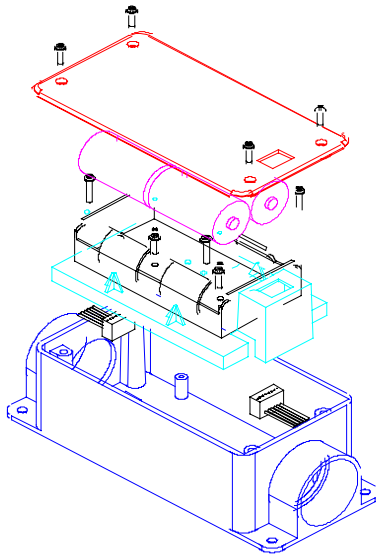


Diagram 2: Taillight Housing Assembly

Keypad unit:

The Keypad unit consists of five membrane push buttons, four confirmation lights and two low battery indicator lights. The Keypad unit is automatically turned on when a button is pushed. If the Keypad unit needs to be replaced because of a problem, the entire Keypad unit has to be replaced. (No serviceable parts inside the Keypad unit, except for the battery.)

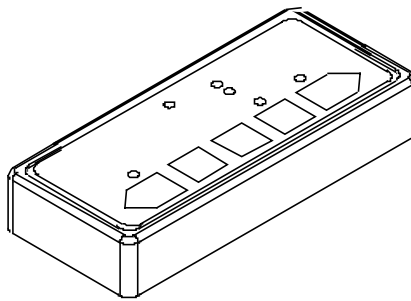


Diagram 3: Keypad Replacement

TAILLIGHT/KEYPAD BATTERY REPLACEMENT:

Taillight unit battery replacement:

The batteries that are used in the taillight and the keypad are easily found at convenience stores (4 x 'D' cells, 1 x 9V cell). The main taillight section uses four D cell batteries that can be changed by first removing the four cover screws, and then removing the cover. The old batteries can now be removed and replaced. Replace the cover ensuring that the ON/OFF switch fits properly with the space provided in the cover, then reinstall the four cover screws.

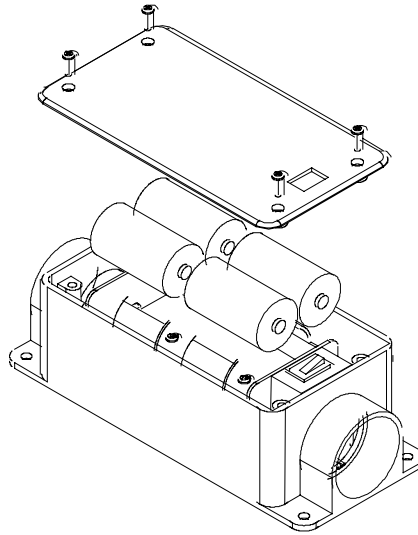


Diagram 4: Taillight Battery Replacement

Keypad unit battery replacement:

The keypad unit uses one 9 volt battery that can be easily changed, by first removing the four back cover screws, and then removing the back cover. The old battery can now be removed and replaced. Replace the back cover, then reinstall the four cover screws.

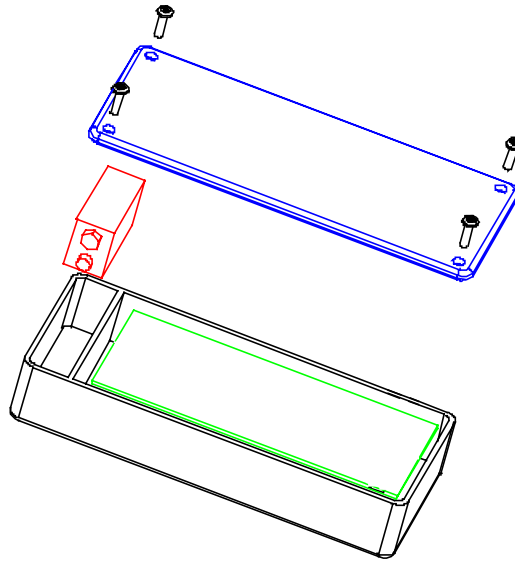


Diagram 5: Keypad Battery Change

ELECTRICAL SPECIFICATIONS:

Keypad unit:

RF Range: 100 Ft

Battery type: One 9 volt

Battery life: Approximately 200 hours of normal operation at 25° C with alkaline
(under use) batteries.

Taillight unit:

RF Range: 100 Ft

Battery type: Four D cell's

Battery life: Approximately 200 hours of normal operation at 25° C with alkaline
(under use) batteries.

A low-battery detector is built into the keypad/taillight system. There are lights on the keypad unit to indicate a low battery condition for both the keypad unit and the taillight unit. Each unit is designed to withstand a temperature range between -20° C and +50° C. Both the keypad unit and the taillight unit are also designed to withstand impact, vibration and to protect the electronic components from the elements such as wind, water and dust.

MECHANICAL SPECIFICATIONS:

The mechanical system is made up of 2 assembled parts. One part is a hand held keypad unit that can be mounted in the cab of the vehicle. The second is a taillight unit that can be mounted on the rear of the implement under tow. Both units are designed to withstand impact and vibration loading and will protect the electronic components from the elements.

Keypad unit:

Temperature range: -20° to +50°

Height: 3.1”

Width: 7.3”

Weight: 250g

Taillight unit:

Temperature range: -20° to +50°

Height: 4.3”

Width: 7.2”

Weight: 1950g

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES.

OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRE OPERATION IN THE DEVICE.

L'UTILISATION DE CE DISPOSITIF EST AUTORISEE SEULEMENT AUX CONDITIONS SUIVANTES: (1) IL NE DOIT PAS PRODUIRE DE BROUILLAGE, ET (2) L'UTILISATEUR DU DISPOSITIF DOIT ETRE PRET A ACCEPTER TOUT BROUILLAGE RADIOELECTRIQUE RECU, MEME SI CE BROUILLAGE EST SUSCEPTIBLE DE COMPROMETTRE LE FONCTIONNEMENT DU DISPOSITIF.