Utilimaster Access System

User's Guide

Feb. 28, 2011

Notes to the user:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

The installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, obtainable from Health Canada's website www.hc-sc.gs.ca/rpb

This product uses FreeRTOS Version 6.1.0 – © 2010 Real Time Engineers Ltd.
Source code for FreeRTOS is available free at www.freertos.org, and will be provided upon request in accordance with the GPL Exception clause.

System Overview

- Single Button RF Remote
    - 25-50+ Range
    - 6 Month estimated battery life (CR2032 coin cell)
    - Custom tooled, sealed plastic housing
    - 5,000,000 cycle switch life
    - Digital encryption
- Engine Start/Stop control (Start/Stop switch NOT provided as part of this system)
- Cargo and Bulkhead door latch activation
- USB Thumb-drive updateable
- System Heartbeat and Status LEDs
- Up to 16 remotes may be enrolled to a truck
- A remote may be enrolled to an unlimited number of trucks

System Inputs and Outputs

- 2x 10A (+12V) Smart FET outputs (Latch Solenoid Drivers)
    - Cargo Door
    - Bulkhead Door
    - 2 Spares
- 4x 1A (+12V) FET outputs
    - ACC Relay Driver
    - START Relay Driver
    - RUN Relay Driver
    - GND Relay Driver
    - Switch Backlight
- 2x +12V Active Digital Inputs
    - Start Switch Input
    - Stop Switch Input
    -
- USB port for thumb drive updates/reconfiguration

System Operation

Engine Start
1) Press the transmitter button on the key fob once to activate ignition. The green light on the Start button will flash to acknowledge the fob.
2) Within 8 seconds, tap the green Start button on the dash to turn the ignition on. The green light will turn on solid.
3) Within 5 seconds, press and hold the Start button to crank the engine until it starts.
4) If the engine doesn't start, you may try restarting it again within 5 seconds of releasing the Start button. After 5 seconds from the time you release the Start button, the controller will assume the engine is running and disable the Start function.

Engine Stop
1) When the engine is running, press the red Stop button for ½ second to stop the engine.

Bulkhead Door Quick Open
1) Use the Stop button to stop the engine when it is running.
2) Within 5 seconds after stopping the engine, press the Stop button a second time to open the Bulkhead Door (latch will activate for 2 seconds).

Bulkhead Door Remote Open
1) Press and hold the button on the key fob for 2 seconds.
2) The Bulkhead door solenoid will activate for 2 seconds, allowing the door to be opened.

Cargo Door Open
1) "Double-click" the button on the key fob.
2) The Cargo door solenoid will activate for 8 seconds, allowing the door to be opened.

Key Fob Enrollment
1) Stop the vehicle and turn off the engine.
2) Using a fob currently programmed to the vehicle, press the button once to prompt the Ready mode (blinking flash).
3) Press and hold the Stop button for 5 seconds to enter Learn Mode. The switch lights will "flicker flash" to indicate that it is in Learn Mode.
4) Release the switch.
5) Press the button on the fob to be added. The Start switch will double flash to acknowledge the fob, and then immediately exit the Learn mode.
6) Test the fob to verify that it has been added correctly.
7) Repeat step 1-5 to enroll another fob (up to 16 per truck).

Erase All Remotes

1) Stop the vehicle and turn off the engine.
2) Using a fob currently programmed to the vehicle, press the button once to prompt the Ready mode (blinking flash).
3) Press and hold the Stop button for 20 seconds to erase all fobs except the one that was used to initiate this procedure in step 2. The switch lights will double flash and exit the Erase mode automatically.

Manual Erase All and Enroll Remotes

1) Stop the vehicle and turn off the engine.
2) Open the controller module enclosure.
3) Press and hold the button SW1 for 20 seconds. The red and green LEDs will turn on to indicate that all fobs have been erased. Do not let go of the button
4) Continue to hold the button for 1 ½ minutes. The red and green LEDs will start blinking to indicate the system is in Learn mode.
5) Release the button.
6) Press the button on the fob to be added. The red and green LEDs on the circuit board, as well as the Ignition switch will double flash to acknowledge the fob has been added. The system will immediately exit the Learn mode.
7) Test the fob to verify that it has been added correctly.
8) Reassemble and reinstall the controller module.
9) Additional fobs may now be added using the standard enrollment process.