



**STYLE 6037 CAN WIRELESS INTERFACE
INSTALLATION, OPERATION & MAINTENANCE MANUAL**



TABLE OF CONTENTS

1. SAFETY SUMMARY	2
2. PRODUCT SPECIFICATIONS	3
6037 CAN WIRELESS IINTERFACE	3
HANDHELD CONTROLLER	3
3. INSTALLATION INSTRUCTIONS	4
TOOLS & MATERIALS REQUIRED	4
MECHANICAL ATTACHMENT OF RECEIVER	4
ELECTRICAL INSTALLATION OF RECEIVER	5
SYNCHRONIZATION OF HANDHELD CONTROLLER TO 6037	8
4. OPERATING INSTRUCTIONS	9
HANDHELD CONTROLLER OPERATION	9
AUTO POWER DOWN	9
LOW BATTERY	9
HANDHELD BACKLIGHT	9
SETUP	9
Changing the Priority Level	9
5. MAINTENANCE INSTRUCTIONS	10
HANDHELD BATTERY REPLACEMENT	10
6. TROUBLESHOOTING	11
6037 STATUS LEDS	11
AKROVIEW SOFTWARE	12
7. REVISION HISTORY	12

LIST OF ILLUSTRATIONS

Figure 1 – 6037 Physical Dimensions	4
Figure 2 – Deutsch DTM06-12SA-E007 (from rear)	5
Figure 3 – Typical Electrical Connections	6
Figure 4 – Typical J1939 Wiring	7
Figure 5 – 6037 Label	11

SAFETY SUMMARY

SIGNAL WORD DEFINITION

Per the ANSI Z535.4 standard, the following signal words and definitions are used to indicate hazardous situations:



DANGER indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.



WARNING indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury.



CAUTION indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It is also used to alert against unsafe practices.

GENERAL SAFETY PRECAUTIONS

The following are general safety precautions that are not related to any specific procedures and therefore do not appear elsewhere in this publication. These are recommended precautions that personnel must understand and apply during many phases of operation and maintenance.



For fire fighting use only by trained fire fighters.



Do not use the WRC when the override cranks are being used or are in position for use.



Replace the identification tags if they should become worn or damaged.



Do not stow the monitor when flowing water.



Although the enclosures for the controller and receiver are water-resistant, it is important to keep water out of the enclosure. Prolonged exposure to water will cause damage. When the cover of the enclosure is removed, make sure the O-ring under the cover is intact and free of dirt and debris.



This product must be wired in adherence with the SAE J1939/11 specification. Failure to do so may result in sporadic operation or non-operation.



While this device is designed to reside on a standard J1939 CAN network, it is recommended that Akron Brass CAN products operate on their own CAN network isolated from the other CAN networks on the vehicle.

PRODUCT SPECIFICATIONS

6037 CAN WIRELESS INTERFACE

- Input power – 10 to 32 VDC
- Receiver dimensions 4 3/4" x 6" x 1 3/8"
- Receiver weight 1/2 lb
- Operating temperature range -40°F to 140°F (-40°C to 60°C)
- Receiver RF power 100mW
- Operating Frequency 2.4GHz (Optional 900MHz)
- FCC ID OUR-XBEE
- Security Code 64 bit code from serial number of module
- 1 Amp protected current sinking outputs
- Housed in Deutsch EEC-325X4B-E016 enclosure
- Communications – J1939/71 CAN Network

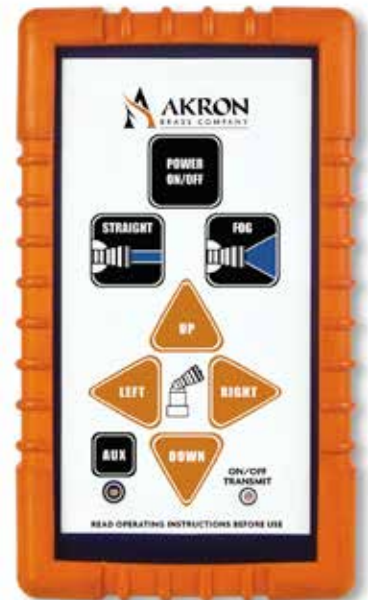
NOTE: Enclosing the receiver in a compartment or behind the pump panel will limit the effective range.



HANDHELD CONTROLLER

- Input power – Two 1.5v Lithium AA batteries
- Battery life 20 continuous hours
- Output power Meets FCC part 15 requirement for license free operation
- Controller dimensions 6 1/4" x 3 1/2" x 1 3/4"
- Controller weight 3/4 lb
- Operating temperature range -40°F to 140°F (-40°C to 60°C)
- Controller RF power 100mW
- Operating Frequency 2.4GHz (Optional 900 MHz)
- FCC ID OUR-XBEE

NOTE: Range will vary dependent upon other RF interference and mounting location of receiver.



INSTALLATION INSTRUCTIONS

The following is intended to provide the basic instructions for installation and operation of the 6037 CAN Wireless Interface (WRC), and to assist in attaining the best possible performance from the unit. Read and understand these operating instructions before use.

TOOLS & MATERIALS REQUIRED

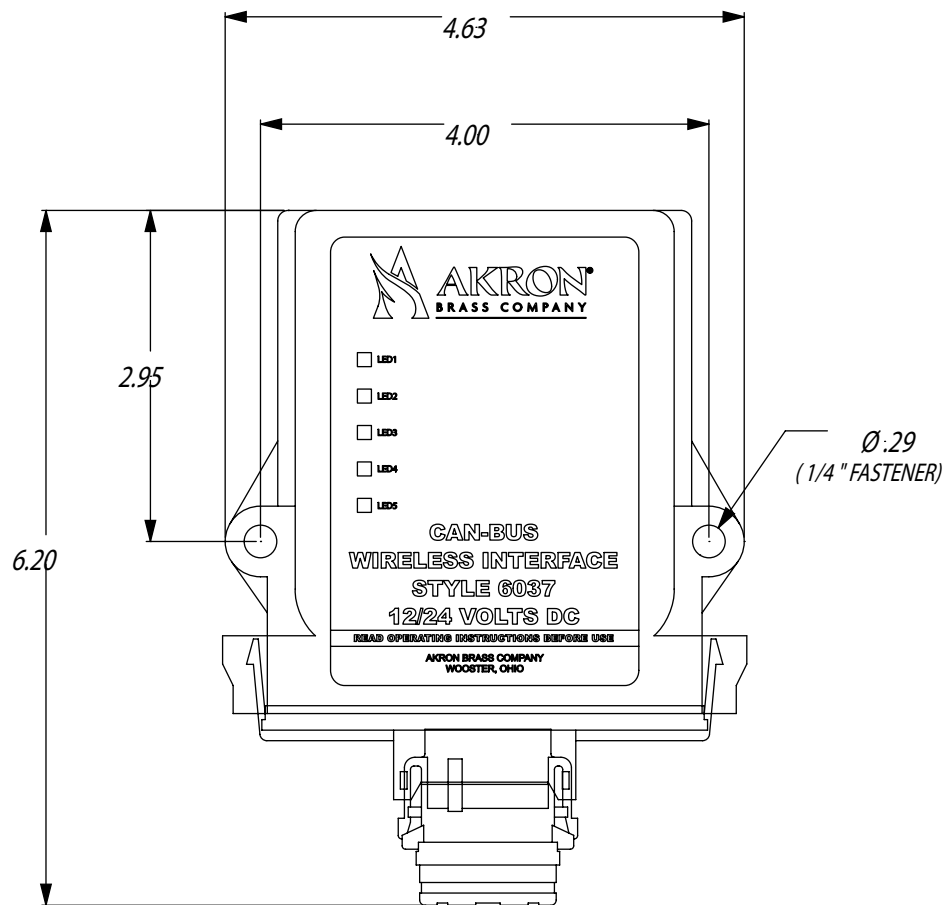
- Medium Phillips screwdriver • Small flat screwdriver
- Deutsch Crimping Tool (HDT-48-00 or equivalent)
- Deutsch DTM06-12SA-E007 or equivalent and associated crimp terminals (included with module)
- Optional Akron Brass 721580 pre-wired connector/harness

MECHANICAL ATTACHMENT OF RECEIVER

Below are the mounting hole dimensions for the receiver. Mount the 6037 receiver to allow enough room for proper cable bend radius of 2" (inches), and in a location that will provide the best clear line of sight to the Handheld during normal operation.

NOTE: Enclosing the receiver in a compartment or behind the pump panel will reduce the effective range.

Figure 1



6037 Physical Dimensions

⚠ CAUTION

Although the enclosures for the controller and receiver are water-resistant, it is important to keep water out of the enclosure. Prolonged exposure to water will cause damage. When the cover of the enclosure is removed, make sure the O-ring under the cover is intact and free of dirt and debris.

ELECTRICAL INSTALLATION OF RECEIVER

The following is the wiring chart for the 6037 CAN Wireless Interface to the 6032 Universal II Logic Box. Keep in mind that the CAN (Controller Area Network) wiring connection between the WRC and the Universal II is a high speed data bus that must be compliant to SAE J1939 specifications. Refer to Figure 4

⚠ CAUTION

This product must be wired in adherence with the SAE J1939/11 specification. Failure to do so may result in sporadic operation or non-operation.

⚠ CAUTION

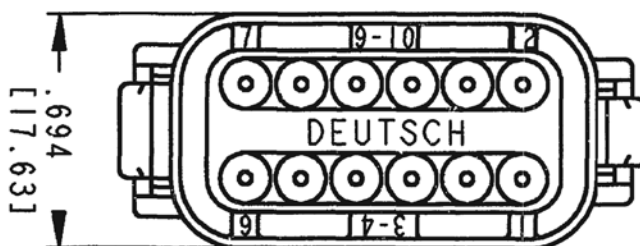
While this device is designed to reside on a standard J1939 CAN network, it is recommended that Akron Brass CAN products operate on their own CAN network isolated from the other CAN networks on the vehicle.

⚠ CAUTION

Failure to adhere to SAE J1939 specifications could result in erroneous behavior.

1. Connect vehicle battery power (either 12 or 24 volt systems supported) positive to pin 1 and battery common to pin 2.
2. Connect CAN Bus to pins 3 and 4 respectively; observing data line polarity.
3. Connect switch inputs as needed to pins 5 through 10. These inputs are defined by the programming of the 6037 CAN Wireless Interface. Refer to the control drawing for 6037XXXX variant for details. NOTE: The switch inputs recognize three different conditions; continuity to battery positive, continuity to battery negative, and disconnected.
4. Connect the output loads whose opposing connection is to battery positive as needed. These outputs are defined by the programming of the 6037 CAN Wireless Interface. Refer to the control drawing for 6037XXXX variant for details.

Figure 2

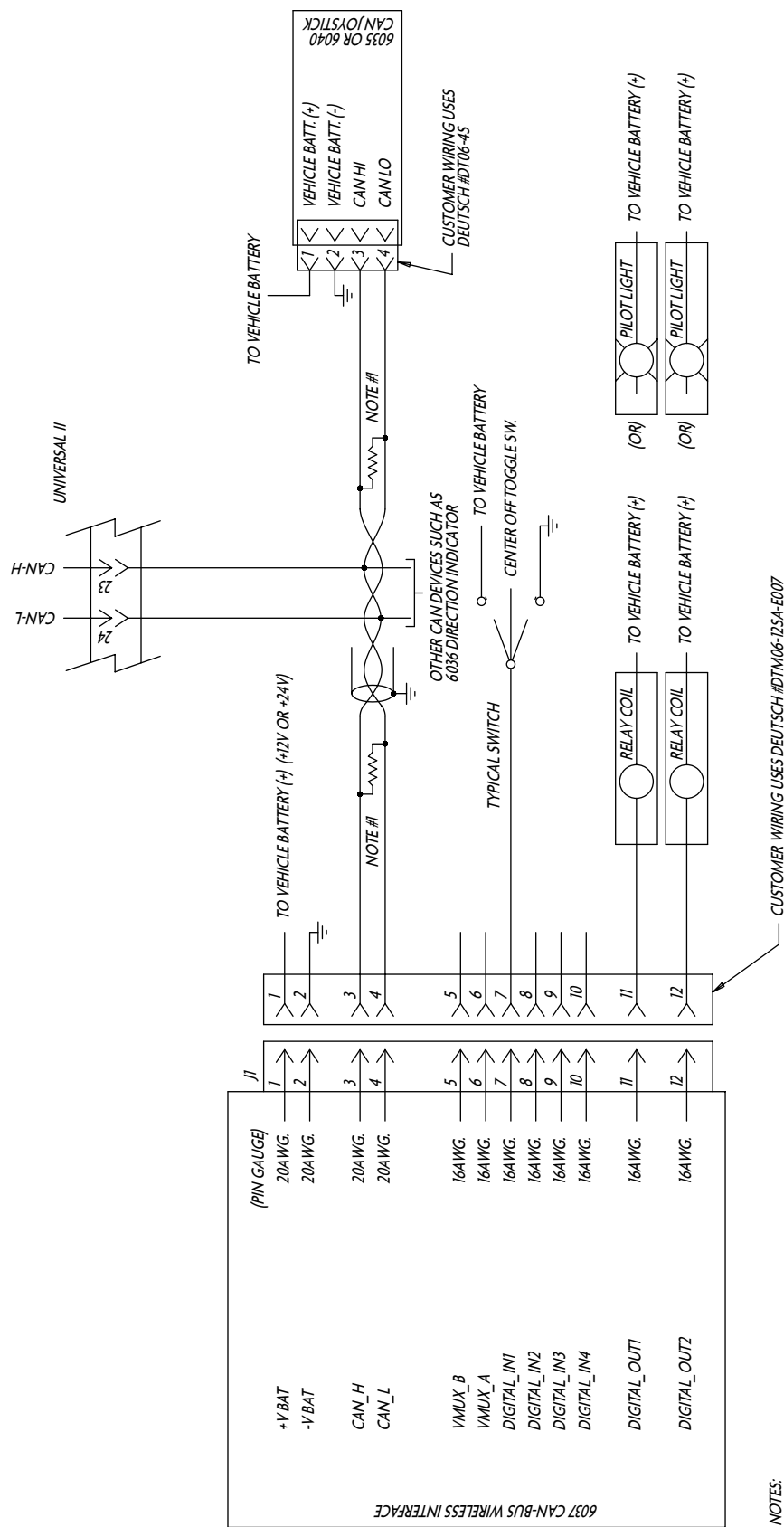


Deutsch DTM06-12SA-E007 (from rear)

Pin	Function	7	Switch Input #1
1	Battery Positive	8	Switch Input #2
2	Battery Negative	9	Switch Input #3
3	CAN_H	10	Switch Input #4
4	CAN_L	11	Output #1 (current sinking – load attaches to battery +)
5	VMUX-B	12	Output #2 (current sinking – load attaches to battery +)
6	VMUX-A		

(Functionality of Pins 7 through 12 are defined in software. Please refer to the control drawing for the particular 6037 variant as indicated by the barcode label on the back of the device)

Figure 3



NOTES:
1) J1939 CAN REQUIRES 120 OHM TERMINATING RESISTORS AT EACH END OF NETWORK.

Typical Electrical Connections

Figure 4

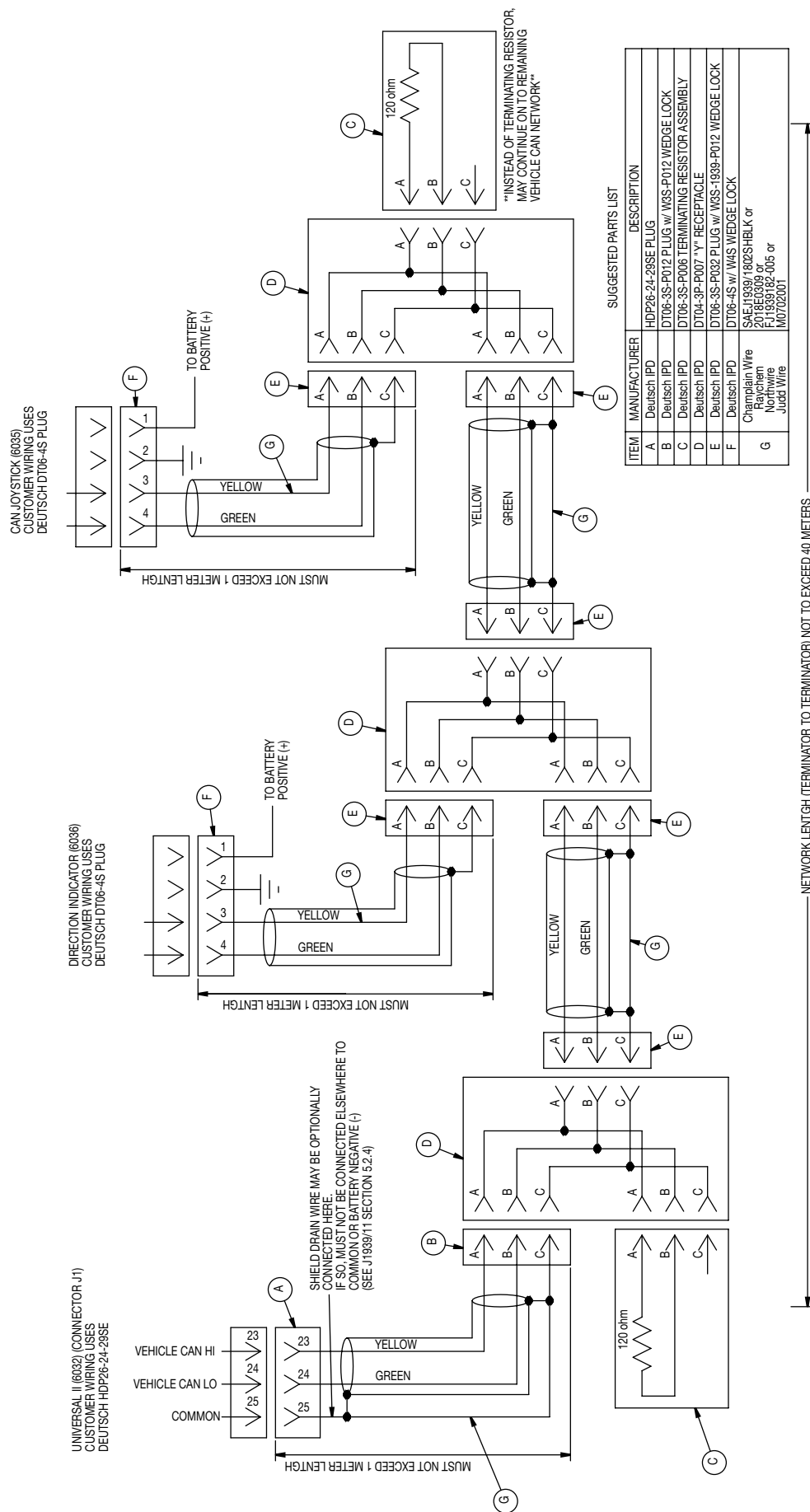


Figure 4 – Typical J1939 Wiring

SYNCHRONIZATION OF HANDHELD CONTROLLER TO 6037

Before initial operation can occur, the Handheld Controller must be synchronized with the Receiver. This allows proper communication between the two and ensures that the handheld Controller will only control the operation of one Receiver. Synchronization is performed only once when the system is put into operation for the first time or if it becomes desirable to synchronize the Handheld Controller with a different Receiver.

An unsynchronized Handheld will flash all LED's in unison when it is turned on. This will continue for approximately 20 seconds at which time the unit will power down. New Handheld controllers are shipped unsynchronized.

CAUTION

Before synchronizing, be aware of the following precautions:

1. Make sure only the intended Receiver module is powered on. If multiple Receivers are powered, the Handheld unit will synchronize with the Receiver which returns the strongest signal. Normally this is the intended Receiver, but any shielding or reflective material may occasionally cause a nearby Receiver to return a stronger signal.
2. Starting a synchronization procedure can only be done at power up with the Handheld unit. The Handheld unit cannot be made to request a synchronization process once it has started its normal operation.
3. In an attempt to prevent unwanted synchronizing, the key strokes required to initiate synchronizing have a time limit. Once the time limit has passed, the Handheld unit must be powered off before a new synchronization can be initiated.

Follow these instructions to perform synchronization:

1. Hold the AUX button down while powering up the Handheld unit. The Handheld unit is powered up by briefly pushing and releasing the Power ON/OFF button. Release the AUX button anytime after the green On/Off/Transmit LED comes on.
2. Within the next 3 seconds push and release the AUX button again. After a short delay the Handheld unit will start sending requests to the Receiver for a serial number. Up to 6 requests will be made while the Handheld listens for any Receivers in the vicinity. The Handheld will then flash all LED's; once for each Receiver which responded to the Handheld. The Handheld will then select the Receiver with the strongest signal.
3. If a new Handheld unit continues to flash all LED's in unison after an attempt is made to synchronize it to a Receiver, the synchronization attempt was unsuccessful. This is usually due to improperly implementing the synchronization sequence of button pushes. Simply turn the Handheld off and try again.
4. If a Handheld unit is not new and has been previously synchronized to a Receiver, it can be synchronized to a different Receiver if desired. In this case the synchronization to the old Receiver is lost when the synchronization to the new Receiver is established. Additionally, the Handheld unit will not flash all LED's in unison if the attempt to synchronize to a new receiver is unsuccessful.

OPERATING INSTRUCTIONS



For fire fighting use only by trained fire fighters.

HANDHELD CONTROLLER OPERATION

The Handheld controller is used to control the monitor and nozzle.

1. To change the horizontal monitor position toward the right or left, press the proper button “RIGHT” or “LEFT” respectively, as labeled on the controller, until the desired position is reached.
2. To change the vertical monitor nozzle position upward or downward, press the proper button “RAISE” or “LOWER” respectively, as labeled on the controller, until the desired position is reached.
3. To change the nozzle pattern toward the straight stream or fog position, press the proper button “STRAIGHT” or “FOG” respectively, as labeled on the controller, until the desired nozzle position is reached.
4. The AUX button can be used for a Stow, Deploy or Oscillation depending on the programming of the 6037 CAN- or Valve Wireless Interface. Refer to the control drawing for 6037XXXX variant for details. The full eight digit variant number can be found on a barcode label located on the back of the device. An Akron Brass customer service representative can assist you in acquiring that control drawing.
5. The AUX LED is a status LED reporting the state of the function associated with the AUX button and is dependent on the programming of the 6037 CAN Wireless Interface. Refer to the control drawing for 6037XXXX variant for details. The LED is updated when the Handheld unit is powered up but thereafter only when the Handheld is moving the monitor or nozzle. The AUX LED is also updated for 20 seconds after the AUX button is released. The green On/Off/Transmit LED will continue to flash during the 20 seconds that the Handheld is updating the AUX LED.

AUTO POWER DOWN

The Handheld controller will automatically power down after 5 minutes of non-activity to conserve battery life. To return the Handheld to normal operation, it is necessary to press the “ON/OFF” button.

LOW BATTERY

The ON/OFF transmit LED on the Handheld will turn red with approximately 2 hours of continuous transmission time remaining before the battery(s) are completely discharged. There is a transition period in which the LED will alternate between red and green as the battery voltage slowly drops.

HANDHELD BACKLIGHT

The Handheld controller is equipped with a backlight to illuminate the buttons when visibility is limited. The backlight will turn off after 30 seconds of non-activity. Press any button to turn the backlight back on.

SETUP

Changes to the behavior of the wireless interface can be achieved by entering the setup mode. This can be done in the field with a small magnet. Three small dots located on the wireless interface label (see Figure 5) identify the location of Hall Effect switches inside the wireless interface.

Changing the Priority Level

The 6037 CAN Wireless Interface appears to the CAN network and Universal II as a joystick. The SAE J1939/71 specification has made provisions for up to six joysticks residing on the same CAN bus (Joystick1 through Joystick6). Akron Brass has chosen to interpret this assignment as the priority level. Joystick1 having the highest priority, and Joystick6 having the lowest priority. A device at Joystick3 issuing “go right” messages would override a device at Joystick5 issuing “go left” messages. Akron Brass has set the default for the 6041 CAN Switch Box at Joystick1, the 6035 CAN Joystick at Joystick3, and the 6037 CAN Wireless Interface at Joystick5. Customers may require a different priority scheme. The following steps allow field changing of priority level.

Place a magnet over the Switch 2 dot for approximately one second (see Figure 5). All five LEDs will begin flashing the current priority level (the default will be five flashes). Momentarily placing a magnet over Switch 2 again will increase the Joystick number (decrease the priority) by one. Continue with momentarily placing a magnet over Switch 2 until the desired priority level has been reached. When Joystick6 has been reached, another Switch 2 activation will wrap around to Joystick1. When the desired priority level has been reached, momentarily place a magnet over Switch 3 to save the setting and the Wireless Interface will reset and return to normal operation.

NOTE: There cannot be two devices with the same priority level. If two devices are assigned the same priority level, only one will remain active on the network. The remaining device will become inactive and claim CAN node address 254 as defined and specified by SAE J1939.

MAINTENANCE INSTRUCTIONS

The 6037 CAN Wireless Interface has no user serviceable parts. If the device fails to operate properly, See Trouble Shooting.

HANDHELD BATTERY REPLACEMENT

For Handheld units with two 1.5V AA Lithium batteries, remove the battery cover on the rear of the Handheld controller and remove the old batteries. Replace with new batteries and replace the battery cover. Be sure to observe the polarity markings in the battery compartment. In an emergency, normal 1.5V AA alkaline batteries can be used to power the controller for several hours of continuous use. For single battery Handheld units, remove the four screws on the back of the Handheld and carefully remove the back cover. It may be necessary to use a small screw driver to remove the battery from its holder. Be careful to not damage any components on the circuit board during battery replacement.

⚠ CAUTION

Although the enclosures for the controller and receiver are water-resistant, it is important to keep water out of the enclosure. Prolonged exposure to water will cause damage. When the cover of the enclosure is removed, make sure the O-ring under the cover is intact and free of dirt and debris.

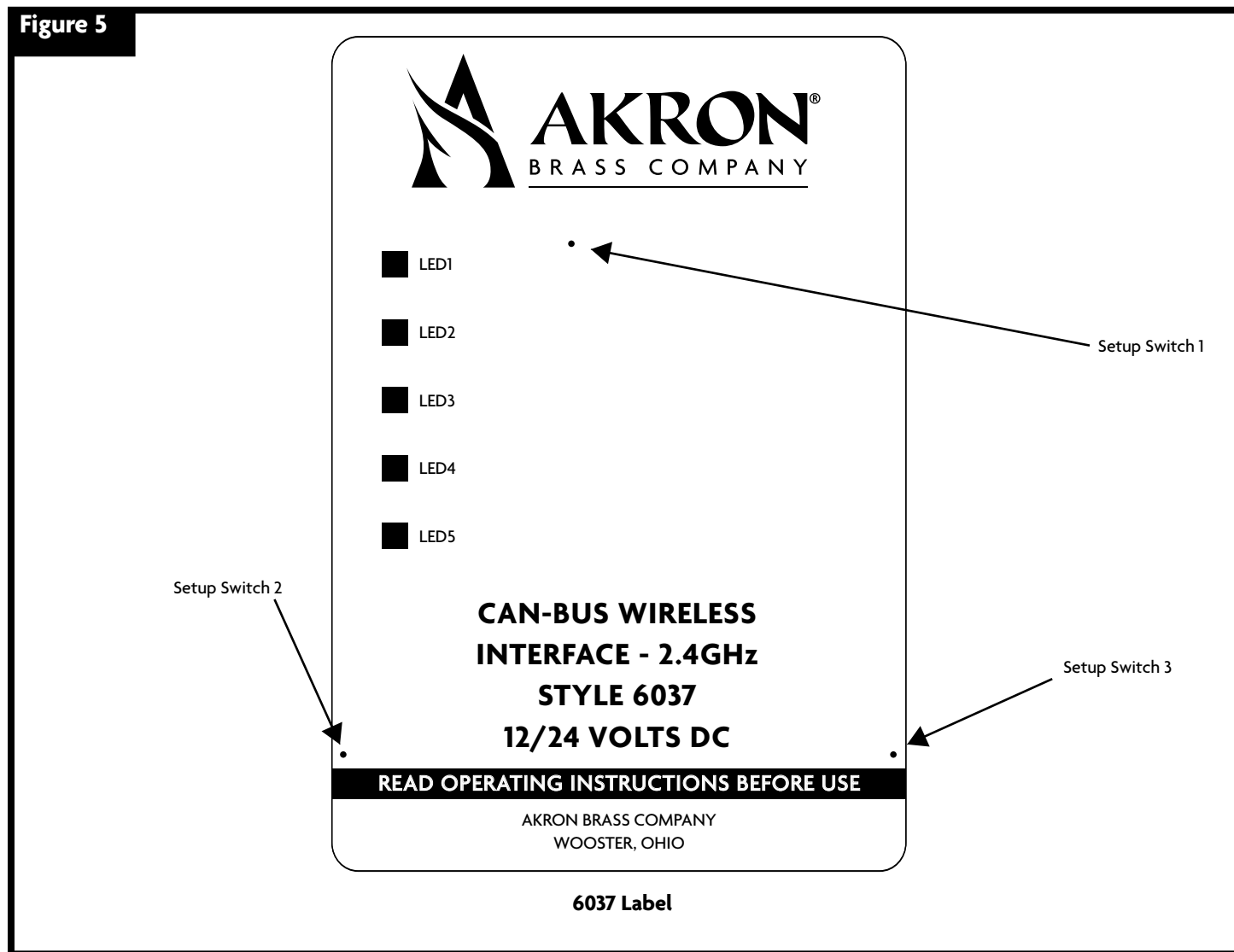
TROUBLESHOOTING

6037 STATUS LEDS

The 6037 has five status LEDs which are defined through software programming. During normal operation, they show receive, transmit, and signal strength information. LED3, LED4, and LED5 form a bargraph representation of signal strength. Their function is as follows:

- LED1 – Active/Receive, indicating the unit has power and is operating. The LED will momentarily flash during receiving messages from the Handheld controller.
- LED2 – Transmit, indicating when the 6037 WRC is sending messages to the Handheld controller.
- LED3 – Signal Strength Weak
- LED4 – Signal Strength Medium
- LED5 – Signal Strength Strong

Figure 5



Make sure that no two CAN operator devices (Joystick, Wireless, or Switch Box) have identical priority settings, otherwise one of them will become inactive.

AKROVIEW SOFTWARE

As with all of the Akron Brass CAN product family, the 6037 wireless module supports the Akroview Software. The software provides additional diagnostics as well as software updating and other capabilities. Contact Akron Brass for additional information on how you can obtain a copy of Akroview software.



PHONE: 330.264.5678 or 800.228.1161 | FAX: 330.264.2944 or 800.531.7335 | akronbrass.com

REVISED: 4/12

WARRANTY AND DISCLAIMER: We warrant Akron Brass products for a period of five (5) years after purchase against defects in materials or workmanship. Akron Brass will repair or replace product which fails to satisfy this warranty. Repair or replacement shall be at the discretion of Akron Brass. Products must be promptly returned to Akron Brass for warranty service.

We will not be responsible for: wear and tear; any improper installation, use, maintenance or storage; negligence of the owner or user; repair or modification after delivery; damage; failure to follow our instructions or recommendations; or anything else beyond our control. WE MAKE NO WARRANTIES, EXPRESS OR IMPLIED, OTHER THAN THOSE INCLUDED IN THIS WARRANTY STATEMENT, AND WE DISCLAIM ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. Further, we will not be responsible for any consequential, incidental or indirect damages (including, but not limited to, any loss of profits) from any cause whatsoever. No person has authority to change this warranty.

© Akron Brass Company. 2012 All rights reserved. No portion of this can be reproduced without the express written consent of Akron Brass Company.