

REMOTE KIT INCLUDING:  
1 EACH TRANSMITTER (P/N: 3A1222B)  
1 EACH RECEIVER (P/N: 3A0368E)

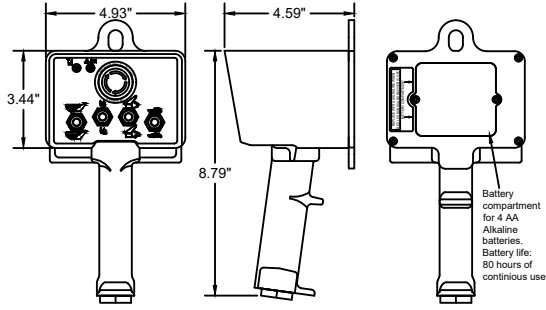
TRANSMITTER ERROR CODE CHART

ERROR CODE	PROBABLE CAUSE
1	LOW BATTERY
2	FAULTY CIRCUIT TO HOIST UP
3	FAULTY CIRCUIT TO HOIST DOWN
4	FAULTY CIRCUIT TO BOOM UP
5	FAULTY CIRCUIT TO BOOM DOWN
6	FAULTY CIRCUIT TO ROTATION CW
7	FAULTY CIRCUIT TO ROTATION CCW
8	FAULTY CIRCUIT TO EXTENSION IN
9	FAULTY CIRCUIT TO EXTENSION OUT
10	FAULTY CIRCUIT TO PUMP RELAY
Blink one second is the number of red light blinks between every flash.	

RECEIVER ERROR CODE CHART

ERROR CODE	PROBABLE CAUSE
1	RADIO SIGNAL PROBLEM
2	FAULTY CIRCUIT TO HOIST UP
3	FAULTY CIRCUIT TO HOIST DOWN
4	FAULTY CIRCUIT TO BOOM UP
5	FAULTY CIRCUIT TO BOOM DOWN
6	FAULTY CIRCUIT TO ROTATION CW
7	FAULTY CIRCUIT TO ROTATION CCW
8	FAULTY CIRCUIT TO EXTENSION OUT
9	FAULTY CIRCUIT TO EXTENSION IN
10	FAULTY CIRCUIT TO PUMP RELAY
11	TRANSMITTER NOT IN NEUTRAL MODE*
Blink one second is the number of red light blinks between every flash. *Action is first taken when transmitter is turned on.	

INCLUDES TWO 65 LB FORCE MOUNTING MAGNET FOR SIMPLE INSTALLATION OF THE RECEIVER TO CRANE ELIMINATING ANY DRILLING



TRANSMITTER (P/N: 3A1222B)

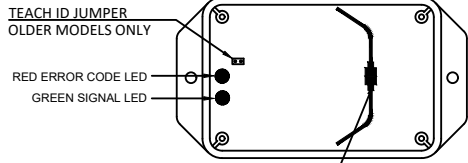
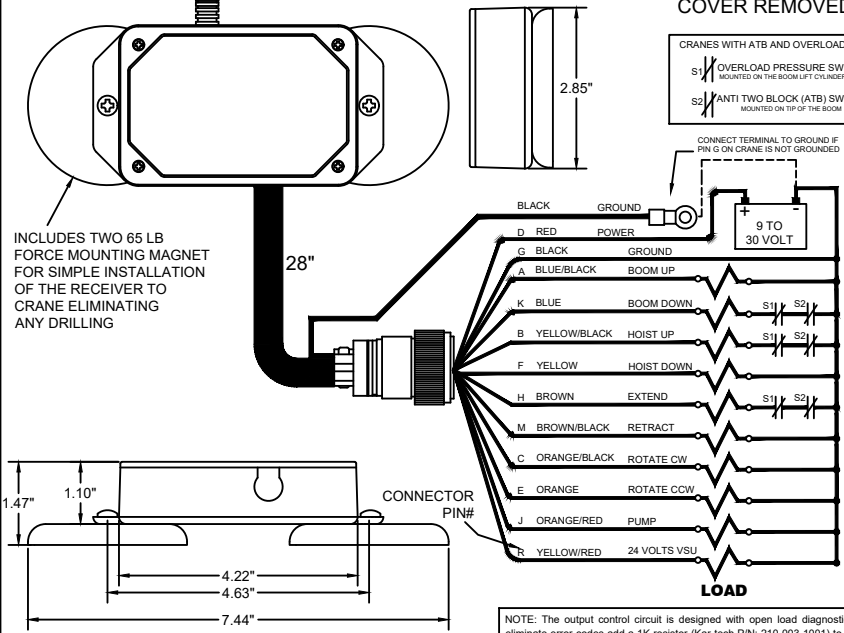
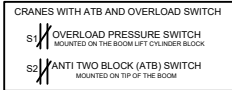


FIG. 1: RECEIVER WITH COVER REMOVED



NOTE: The output control circuit is designed with open load diagnostics. To eliminate error codes add a 1K resistor (Kar-tech P/N: 210-003-1001) to ground for each unused output.

OPERATION

- Power must be applied to the receiver module for the system to work.
- Releasing the E-STOP will turn on the transmitter. Pressing the E-STOP will turn off the transmitter. Pressing the E-STOP will also turn off all outputs as a safety feature. If the transmitter goes out of range for more than 2 seconds, all outputs will turn off as a safety feature.
- To save battery life, the transmitter will turn off when it is idle (no functions are used) for a period greater than 15 minutes, irrespective of receiver status. The user must press and release the E-STOP at this point to restore transmitter operation.

INDICATOR LED's

- The transmitter has two indicators, the red BATTERY indicator and the green TRANSMIT indicator. The green TRANSMIT indicator blinks rapidly whenever there is communication between the transmitter and the receiver. It will blink slowly when no functions are used.
- The red BATTERY indicator starts blinking once every second when the battery voltage is low and requires batteries to be replaced.
- The transmitter & receiver modules can identify problems with the system in the form of an error code. Check the red indicator to diagnose system problems. Then, refer to the ERROR CODE CHART in this manual for explanation of the error codes. The green LED indicator will blink on the receiver during active operation.

TRANSMITTER AND RECEIVER SYNCHRONIZATION

In the event that a transmitter becomes damaged and a new one is needed, the receiver can be reprogrammed to respond to the new transmitter. To teach the ID code to the receiver, use the following procedure. \*Please note that if this procedure is interrupted before it has completed, the system may have intermittent operation:

- Turn the transmitter and receiver off
- Press and hold the BOOM RAISE AND BOOM RETRACT switches
- Release the E-STOP. Wait until the green LED begins blinking
- Release the switches. Both LEDs should blink at this point
- Apply power to the receiver. Only the green LED should start to blink on the transmitter  
On older model receivers, Place a jumper across the TEACH ID jumper inside the receiver. The green LED will go from blinking to steady. Remove the jumper and store it on one pin
- Teach complete

SLEEP TIME:

All transmitters have the ability to change the sleep time from the default to user's preference. The transmitter is factory set to turn off (sleep) after 15 minutes. To change the time the transmitter waits before going to sleep, use the following procedure:

- With the transmitter off, hold BOOM RAISE, WINCH UP, BOOM CCW, BOOM EXTEND, release E-STOP and keep holding the switches for couple of seconds and release.
- At this point, both lights will blink together slowly.
- On the transmitter, press one of the following switches to adjust the sleep time:
  - BOOM LOWER = 15 minutes
  - WINCH DOWN = 30 minutes
  - BOOM CW = 60 minutes
  - BOOM RETRACT = 120 minutes
  - BOOM RAISE = Disabled
- Sleep time programming complete.

CLONING:

**WARNING! - ONLY ONE TRANSMITTER CAN BE ON AT A TIME, THEY CANNOT BE USED SIMULTANEOUSLY - use with CAUTION!**  
Occasionally, it is desirable to have more than one transmitter work with a single receiver. This is accomplished by a process called cloning. Cloning allows an additional transmitter (B) to have the same ID code as the original transmitter (A). If this feature is desired, use the following procedure:

- Make sure both transmitters and the receiver are off
- On Transmitter A, hold switches BOOM RAISE, BOOM RETRACT, release E-STOP and keep holding switches for couple of seconds and release. Green and red LEDs will blink together at this point
- On Transmitter B, hold switches BOOM LOWER, WINCH UP, BOOM CCW, BOOM RETRACT, release E-STOP and keep holding switches for couple of seconds and release. Green and red LEDs will blink together at this point
- Wait for few seconds until only the green LED starts to blink on Transmitter A, which indicates Cloning success.
- Turn both the transmitters off
- Synchronize one of the transmitters to the receiver using SYNCHRONIZING TRANSMITTER AND RECEIVER instructions above

If the cloning feature has been invoked and is no longer desired, the ID code of one of the transmitters needs to be changed. This will unclone the transmitters. If this is desired, use the following procedure:

- Make sure the transmitter is off.
- Press and hold switches BOOM LOWER, WINCH DOWN, BOOM CW, BOOM RETRACT and release E-STOP and switches after couple of seconds. LEDs will start toggling.
- Press any switch and release, GREEN LED should be blinking rapidly.
- ID change Sequence complete.

Specifications:  
RF: 900 MHz FHSS 10 mW  
Temperature: Operation: -40 to +85 Degree C  
Storage: -55 to 100 Degree C  
Output Rating: 5 Amps max. each sourcing, 20A system max  
16A max, 12V for PUMP output with relay  
Encapsulated electronics inside receiver.

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 Kar-Tech will void the user's authority to operate the equipment.

KAR-TECH Delafield, WI 53018					IMPLIED TOLERANCE	
TITLE GUIDER REMOTE KIT FOR AUTOCRANE 3203H, 4004,5005,6006, W/19 PIN CONNECTOR	COMPANY/DEP AUTOCRANE	XX * .1				
		XXX * .06				
		XXXX * .015				
		FRACTIONAL * 1/8				
				ANGULAR * 0.5 deg		
CAD DRAWING DO NOT REVISE MANUALLY						
SCALE FULL	DRAWN BG	DATE 04-15-24	CHECKED	APPROVED	DRAWING NO. 3A-036-9-E-3	