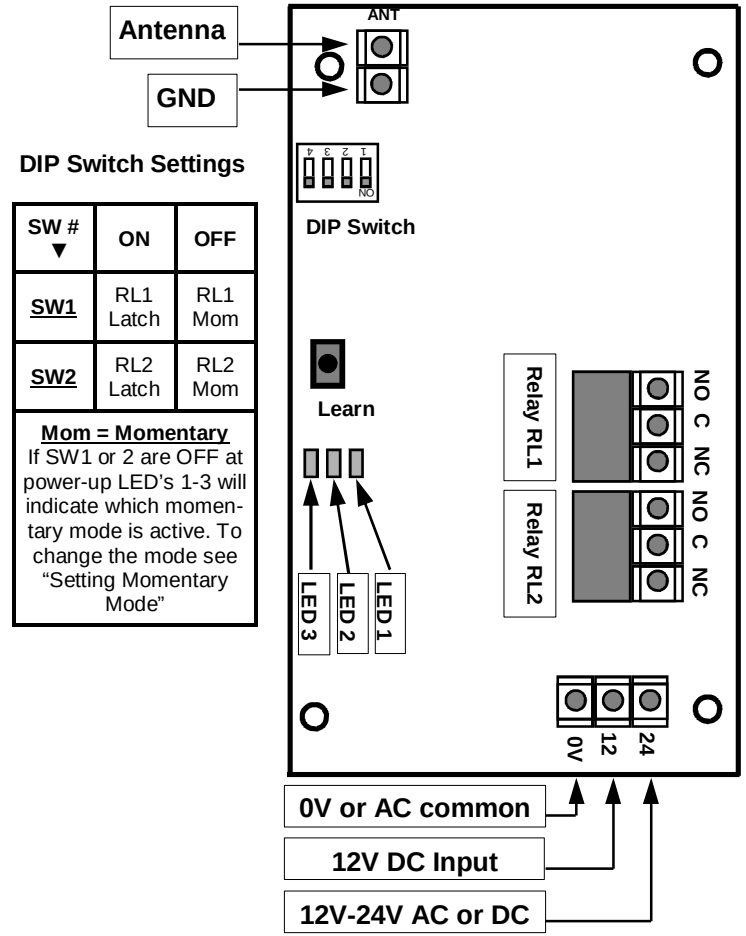
Programming and operating instructions



DIP Switch Settings

SW # ▼	ON	OFF
SW1	RL1 Latch	RL1 Mom
SW2	RL2 Latch	RL2 Mom

Mom = Momentary
If SW1 or 2 are OFF at power-up LED's 1-3 will indicate which momentary mode is active. To change the mode see "Setting Momentary Mode"

DIP SWITCH FREQUENCY SELECTOR

FREQUENCY ▼	SW3	SW4	ANTENNA Length
304Mhz	OFF	OFF	Use Standard Length supplied
433Mhz	ON	OFF	Cut Antenna to 18cm
915Mhz	OFF	ON	Cut Antenna to 9cm

Introduction

The Arrowhead Standalone RX1MF349 & RX2MF349 Receivers are designed to operate with ASK, OOK and FSK radio transmitters working in the 304Mhz, 433Mhz & 915Mhz frequency bands. The frequency of operation is set by DIP switches 3 & 4. The RX1MF is a single channel Receiver and the RX2MF is a dual channel Receiver. The RX1MF can store up to 20 radio codes that will operate relay RL1. The RX2MF can store up to 20 radio codes as well, the first 10 radio key codes (1-10) will operate relay RL1 and the last 10 radio key codes (11-20) will operate relay RL2. The RX1/2MF receivers also allow for different relay operating modes using DIP Switches 1 & 2. They are, Momentary operation (follow TX), Momentary operation with the relay off time delayed by 1 second or Latched (Toggle) operation.

The board can be powered from a 12V- 24V AC or DC supply (using the 0V & 24V terminals). There is also a 12V DC input (using the 0V & 12V terminals).

NOTE: All DIP switches MUST be set to the desired state prior to powering up the board. Also the ANTENNA must be cut to the correct length based on the frequency being used (see chart on this page).

Setting Momentary Mode

At power-up, provided either DIP Switch 1, 2, or both are set to the OFF position, LED's 1-3 will indicate the momentary mode currently selected. If all the LED's are on solid for 2 seconds at power-up the relays will follow the transmission, if the LED's flash for the 2 seconds at power-up the relays will have a 1 second off delay when the transmission stops. To change the mode simply hold down the Learn button for 1 second at power up to change from one mode to the other.

Programming & Operation

There are four modes that can be accessed via the learn button. They are;

1-Learn Mode
2-Individual Erase Mode
3-Erase All Programmed Data Mode
4-Find Programmed Slot Number Mode

A description of each mode follows;

1-Learn Mode

To program a Radio Transmitter into one of the 20 memory slots you must first get into "Learn Mode". To do this you have to press the "Learn" button momentarily (press and release the button in less than 1 second). This will bring you to Slot # 1. To move to another slot press the "Learn" button again (holding for less than 1 second), counting each press to keep track of the slot number you are up to.

After 2 seconds of no further presses of the "learn" button, LED's 1,2 & 3 will indicate the current Slot number (please refer to Chart 1 for further details), e.g. Slot 3 = 3 flashes of LED 1, Slot 12 = LED 3 On and 2 flashes on LED 1.

Two seconds later the receiver will repeat the slot number display then enter "Learn Mode" for the slot indicated. "Learn Mode" is indicated by LED's 2 & 3 flashing together. Learn Mode is active for 20 seconds during which time you should operate the transmitter button you wish to learn into the receiver. When a valid transmission is received in learn mode LED's 2 & 3 will stop flashing and LED's 1,2 & 3 will then flash back the slot number where the transmitter was stored. The slot number indication will be repeated every two seconds until one of two things happen.

A-The "learn" button is pressed again for less than 1 second to move on to the next slot number or,

B-The "learn" button is pressed for longer than 2 seconds which will stop the display and EXIT "Learn Mode" (all LED's off).

There are 20 slots where radio codes may be saved and Chart 1 shows the various combinations of the LED's to indicate each slot. When multiple transmitters are used be sure to record who the transmitter is issued to in the chart so that if a transmitter is lost you can delete the correct one.

EXIT LEARN MODE: Pressing the "learn" button for 2 seconds will return the receiver back to normal mode.

2-Individual Erase Mode

To Erase an individual transmitter you must follow the same procedure as Learning by pressing the “Learn” button repeatedly (each press less than 1 second) until you get to the desired slot number (e.g. 3 presses = slot # 3 which is indicated by 3 flashes on LED 1). Once you reach the slot you wish to erase, the slot number will be displayed twice. After the first indication of the slot number but before the second display has finished, press and hold the “learn” button for 2 seconds to Erase the selected slot. When the slot has been erased, LED’s 1&3 will flash simultaneously until the “learn” button is released, then the receiver will return to normal mode automatically.

3-Erase All Programmed Data Mode

To erase ALL stored transmitter codes, you must press and hold the “learn” button for longer than 4 seconds.

To do the bulk erase function the receiver must be in normal mode (not learn or find modes). Two seconds after holding the “Learn” button on, LED’s 2&3 will flash alternately. Continue holding the learn button on past this time for another two seconds at which time LED 3 will turn on solid. This indicates that ALL stored codes have now been erased.

4-Find Programmed Slot Number Mode

If the receiver is in normal mode and the “learn” button is pressed for more than 2 seconds, but less than 4 seconds, LED’s 2 & 3 will flash alternately to indicate that the “Find Slot Number” mode has been accessed (You MUST release the “learn” button as soon as LED’s 2&3 start to flash so you don’t accidentally erase all slots). Now operate a Transmitter button that has been learnt into the receiver previously. The receiver will flash out the transmitters stored slot number three times in a row (refer to chart 1 for the LED indications) then return to normal mode again. If no stored transmitters are received within a 20 second period the receiver will automatically return to normal mode. Alternatively, you can momentarily press the “learn” button to terminate “Find” mode.

Operation

In Normal Mode, LED 1 turns on every time a signal is received. If the signal matches one of the stored slots, then the appropriate relay will also turn on.

Follow TX Mode

If LED’s 1-3 are on solid during power-up (Follow TX Mode) and the relay mode is set to “Mom” (DIP switches 1 or 2 set to OFF) the relay associated with the transmitter will be energised for the duration of a valid transmission (TX) and then turn off immediately the transmission ends.

Follow TX with Delayed off Mode

If LED’s 1-3 are flashing during power-up (Follow TX with Delayed off Mode) and the relay mode is set to “Mom” (DIP switches 1 or 2 set to OFF) the relay associated with the transmitter will be energised for the duration of a valid transmission (TX) and then turn off 1 second after the transmission ends.

Latch Mode

If DIP switches 1 or 2 set to ON (latch Mode) the relay associated with the transmitter will be energised on a valid transmission (TX) and remain in that state (Latch) until another valid transmission is received to de-energise the relay again.

(NOTE: The 4 DIP switch settings are only checked at power-up so the board must be powered down then back up again if any switch settings are changed).

Chart 1 — **RADIO SLOT NUMBER LED INDICATIONS**

RADIO TX # È	**LED # 1**	**LED # 2**	**LED # 3**	**RADIO TRANSMITTER ISSUED TO;** È
TX # 1	1 Flash	-	-	
TX # 2	2 Flashes	-	-	
TX # 3	3 Flashes	-	-	
TX # 4	4 Flashes	-	-	
TX # 5	5 Flashes	-	-	
TX # 6	1 Flash	On	-	
TX # 7	2 Flashes	On	-	
TX # 8	3 Flashes	On	-	
TX # 9	4 Flashes	On	-	
TX # 10	5 Flashes	On	-	
TX # 11	1 Flash	-	On	
TX # 12	2 Flashes	-	On	
TX # 13	3 Flashes	-	On	
TX # 14	4 Flashes	-	On	
TX # 15	5 Flashes	-	On	
TX # 16	1 Flash	On	On	
TX # 17	2 Flashes	On	On	
TX # 18	3 Flashes	On	On	
TX # 19	4 Flashes	On	On	
TX # 20	5 Flashes	On	On