8.5. Learning Process & Search mode

During learning process, both transmitter and receiver have to be in search mode. User can force both transmitter and receiver into search mode by:

Power reset the unit, or press and hold the [MODE] key for 2 seconds on any mode except demo mode.

At Search mode, transmitter or receiver will flash Left, Middle and Right LED per 3 seconds, to indicate the unit is at search mode.

Within the first 30 minutes of power reset, the transmitter set a power flag on the transmission signal, to broadcast outside that this transmitter is just reset.

Within the 5 minutes of power reset, the receiver unit will enter search mode. In search mode, the receiver will look for any RF signal which belongs to Bicygnals system.

If the receiver logs a transmitter with power flag, the receiver will treat this as paired unit and quit the search mode immediately.

If the receiver logs a transmitter without power flag, it will record this transmitter as temporary paired unit and stay at search mode. The receiver will continue to look for any transmitter with power flag within search period. If the receiver finds a new transmitter with power flag, then the temporary paired transmitter ID will be replaced by the new transmitter ID.

If there is no transmitter is logged in search mode, on exiting the search mode, the receiver will turn on Left, Right and Middle LEDs simultaneously for 5 seconds, to indicate there is no transmitter paired. After that, the receiver will turn off the RF reception completely.

If the receiver is paired with a transmitter during search mode, on exiting the search mode, the receiver will flash Left, Right and Middle LEDs for 5 seconds. (at 1.5Hz).

At any mode of Receiver except demo mode, press and hold the [MODE] key for 2 seconds will enter search mode.

8.6. Frequency Switching

At power reset, every transmitter and receiver will stay at an initial frequency channel, which is common to all Bicyngals light units.

Once a transmitter and receiver are paired, the transmitter will inform the receiver on communication information (such as selected channel table, next channel number if lost link, etc). The receiver will acknowledge it once received. Then both transmitter and receiver will switch to pre-defined channel frequency and then enter off mode.

Within a channel table, it has several pre-defined frequencies for frequency switching.

When the transmitter is not able to receive acknowledgement from receiver at a finite time (1 second), both transmitter and receiver will switch to pre-agreed next frequency within the selected channel table during pairing. If no paired unit is found in 1 minute, the unit will return to the last communication frequency and stop switch frequency.

On both Transmitter and Receiver, if the unit is switched to OFF mode, the RF power is turned off and last communication frequency is stored.

f transmitter or receiver has a previous paired unit and user switches the unit from Off mode to standby mode, the unit will stay at previous stored frequency for one minute, if no signal is found, the unit will time out to Off mode.

For a paired transmitter, if the unit is switched from Off Mode to Standby Mode, even it can’t find the paired receiver, it will not do frequency switching.

For a paired receiver, if the unit is switched from Off Mode to Standby Mode, it will do frequency switching if paired transmitter is not found in 1~ 2 seconds.

8.7. Low Battery Detection and Cycle

On both Transmitter and Receiver, the battery status will be checked on every 60 minutes. If the battery status is at low level, the corresponding low battery LED will be flashing for indication.

The low battery LED indication function is disabled at off mode.