XePulse™2 with SPM ballast wiring Instructions (Mar 10, 2014)

Description and Remarks:
Pulsing (wig-wag) of one or more channels (HID lights) comprises either ON-OFF or High-Low switching of the lights by means of the XePulse 2. This document focuses on ON-OFF wig-wagging with our SPM (single power mode) ballasts.

The HID ballasts (HID lights) are powered directly from the aircraft power source through an existing main switch (or by means of a relay) with appropriate CB for the ballasts and adequate ground. The XePulse 2 is an added separate circuit with its own CB. The XePulse 2 cannot be used to power any HID ballasts, the XePulse 2 only provides a low-level trigger signal to switch (pulse) the ballast ON-OFF using our Single Power Mode ballasts (SPM).

Only HID XeVision ballasts (SPM) with a 3-pin connector are pulsing capable by means of the XePulse 2. The 3rd pin is the trigger pin for pulsing controlled by the XePulse 2.

Two installation options (A, B) are recommended to wire the XePulse 2 with one, or two output channels for synchronized ON-OFF pulsing

Make sure the XePulse 2 is properly grounded, otherwise the pulsing output signal will stay on and therefore the HID lights will remain turned off.

Important: Each time the XePulse 2 module is selected for pulsing, there is a programmed time delay of 30 seconds before pulsing is activated while the light(s) is powered. This ensures that the HID bulb has reached steady state condition before pulsing.

Installation wiring A:
A switch (low current) is used for switching the XePulse 2 module ON or OFF. The way to do this is to install the switch between the aircraft power source (with 1 amp CB) and the pin 1 of the XePulse 2 module. Pin 2 is the aircraft ground connection. The XePulse 2 5-VDC contact must be permanently jumpered to the pulsing contact (connect pin 5 and pin 6), and the ‘continuous’ contact, pin 4, is unused.

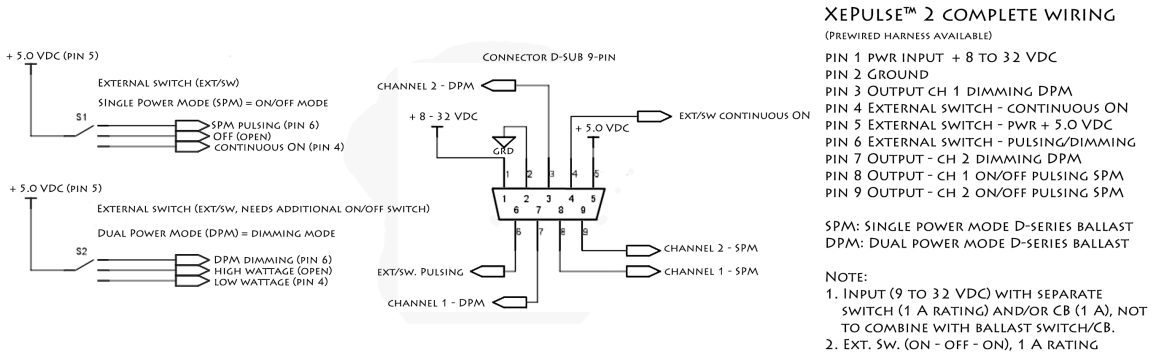
With this setup, pulsing is accomplished by switching the power to the XePulse 2 ON. In the OFF position the HID lights are continuously ON, meaning that the HID ballasts are powered on, controlled by the main ‘landing light’ switch or switches set to ON.

Installation wiring B:
This is based on using an external 3-way low current switch (switch not part of the XePulse 2 shipment) wired directly from the XePulse 2 for completely controlling the HID ballasts (HID lights) operation. A main switch may or may not be needed.

A 5-VDC signal is generated by the XePulse 2 that is used to select CONTINUOUS ON, PULSING or OFF depending on the 3-way switch position. The 5-VDC signal (XePulse 2, pin 5) is routed to the center contact of the switch. Pin 4 and pin 6 are wired to the remaining 3-way switch contacts. The center position of the switch will turn the HID ballasts off.

Note: If there is no power to the XePulse 2 and there is power from the main aircraft system to the ballasts then the HID lights are on.

Wiring schematic:



XEPULSE™ 2 COMPLETE WIRING
(PREWIRED HARNESS AVAILABLE)

PIN 1 PWR INPUT + 8 TO 32 VDC
PIN 2 GROUND
PIN 3 OUTPUT CH 1 DIMMING DPM
PIN 4 EXTERNAL SWITCH - CONTINUOUS ON
PIN 5 EXTERNAL SWITCH - PWR + 5.0 VDC
PIN 6 EXTERNAL SWITCH - PULSING/DIMMING
PIN 7 OUTPUT - CH 2 DIMMING DPM
PIN 8 OUTPUT - CH 1 ON/OFF PULSING SPM
PIN 9 OUTPUT - CH 2 ON/OFF PULSING SPM

SPM: SINGLE POWER MODE D-SERIES BALLAST
DPM: DUAL POWER MODE D-SERIES BALLAST

NOTE:
1. INPUT (9 TO 32 VDC) WITH SEPARATE SWITCH (1 A RATING) AND/OR CB (1 A), NOT TO COMBINE WITH BALLAST SWITCH/CB.
2. EXT. SW. (ON - OFF - ON), 1 A RATING

Wire harness (optional) color code and XePulse 2 pin assignment:

Red	pin 1
Black	pin 2
White	pin 3
Brown	pin 4
Gray	pin 5
Blue	pin 6
White	pin 7
Yellow	pin 8
Yellow	pin 9

XeVision SPM ballasts (single power mode ballast for ON-OFF operation)

Pulsing output	channel 1	Yellow	pin 8
Pulsing output	channel 2	Yellow	pin 9