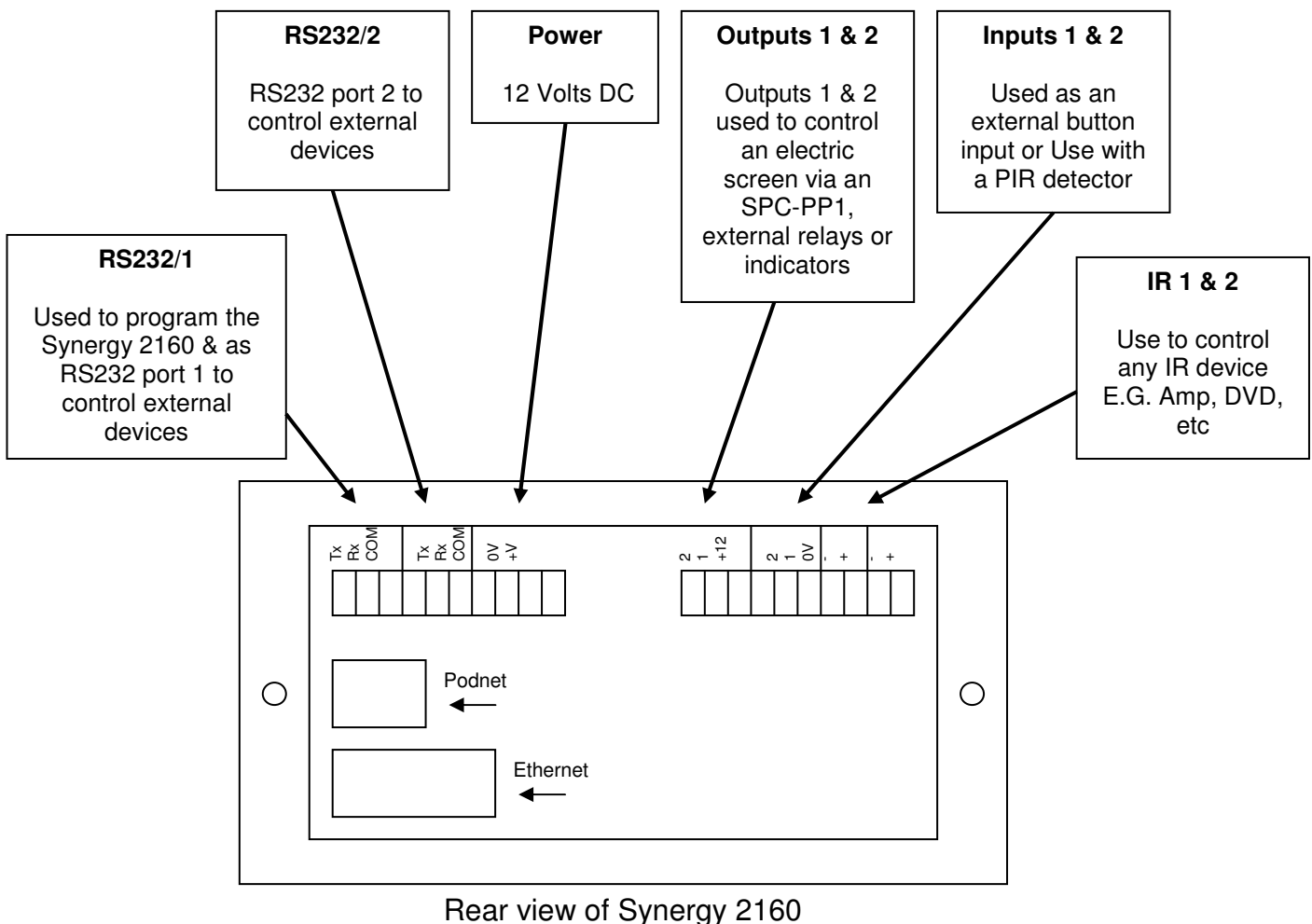# Connecting & Using the Synergy 2160

Installation.

Mechanical installation and connecting of the Synergy should be carried out before any power is applied. Synergy's should not be used in areas of extreme heat or moisture.

Synergy's are designed for mounting into a standard UK back box with a minimum depth of 45mm. Only boxes with horizontal panel mounts should be used. If vertical mounts are fitted these must be removed prior to fitting the Synergy.

Local Connections

All Connections are via screw terminals, apart from Podnet & Ethernet, which are RJ45 connections. *(Podnet & Ethernet are optional extras and are not fitted as standard)*

Important: Please verify polarity of the DC power supply before powering.

RS232/2

RS232 port 2 to control external devices

Power

12 Volts DC

Outputs 1 & 2

Outputs 1 & 2 used to control an electric screen via an SPC-PP1, external relays or indicators

Inputs 1 & 2

Used as an external button input or Use with a PIR detector

RS232/1

Used to program the Synergy 2160 & as RS232 port 1 to control external devices

IR 1 & 2

Use to control any IR device E.G. Amp, DVD, etc

Rear view of Synergy 2160

Connections

Power

Synergy 2160	DC PSU 12V
+12V	+12 Volts
0V	0 Volts

RS232/1 & Programming

Synergy 2160 RS232/1	Projector or Display Device	Programming. Computer Serial Port
Tx	Rx	Pin 2
Rx	Tx	Pin 3
Com	Com or Ground	Pin 5

RS232/2

Synergy 2160 RS232/2	Projector or Display Device
Tx	Rx
Rx	Tx
Com	Com or Ground

If Ethernet option is fitted then the second RS232 port is not available, as it is used for data to the Ethernet Port.

Outputs 1 & 2. (Screen Relays.)

Synergy 2160	SPC-PP1
OUT 1	RAISE
OUT 2	LOWER
+12	+V

Synergy 2160	Ext Relays
OUT 1	0V (Relay 1)
OUT 2	0V (Relay 2)
+12	+12V (Both)

Synergy 2160	Ext Indicators
OUT 1	0V (Ind 1)
OUT 2	0V (Ind 2)
+12	+12V (Both)

Please note:
Output connections are to be connected to external relays for control of an electric screen, like the SPC-PP1 unit. **Do not connect these connections directly to the electric screen**.
Note:- Only 12 volt DC devices can be controlled from these outputs. Flyback diodes are required across the coil of inductive loads. These are pre-fitted internally to the SPC-PP1 relay pack.

Inputs 1 & 2.

Synergy 2160	
Input 1	**Input 2**
1	2
0V	0V

Please note:
Inputs 1 & 2 are for external switches, key switches and PIR Detectors relay outputs.
Do not connect any voltages to these inputs.

IR Outputs

Synergy 2160		IR Emitter
IR1	**IR2**	
+	+	+ (Tip)
-	-	- (Ring)

Programming Please refer to separate instructions for programming using PodFlow.