

Synergy - Applications and Use

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Introduction

The ikon Synergy range of products provide a combination of cost - effective hardware with software packages allowing systems to be created that are greater than the sum of their parts – true Synergy.

At present the range consists of wall / dado / desk mounting control panels, an audio controller, a screen relay power pack and push button panels for aux inputs.

Disclaimer

The applications and attributes of Synergy controllers and software contained within this booklet have all been tried and tested, but at the time of printing, not all component parts featured may be available in quantity as production is ramped up.

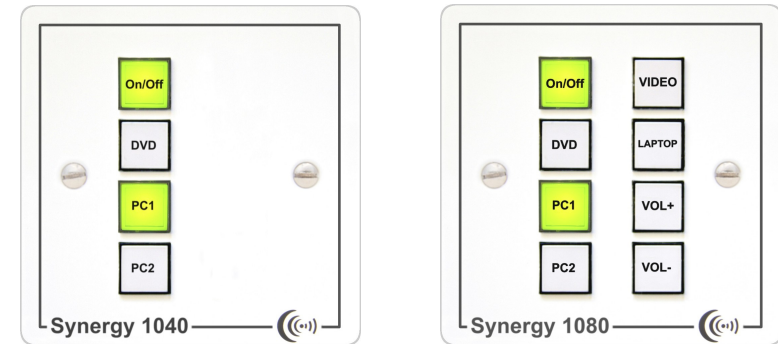
Please contact ikon AVS or your distributor to confirm availability.

The Synergy Range

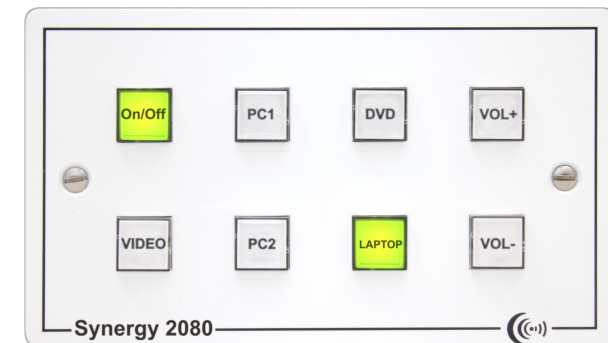
Controllers

At present there are three controllers available, with others to follow.

Two suitable for a single gang UK back box.



One suitable for a double gang UK back box.



All Synergy controllers will fit a 35mm deep standard socket box or dado trunking back box. The use of a 44mm box will give more room for cabling but is not essential.

Attribute	Details	1040	1080	2080
User - definable buttons	With internal LED illumination and can be user-labelled. Automatic label generation and printing is included as part of the configuration software.	4	8	8
Bi-directional RS232	For control of the display or any other RS232 device. Load from libraries or user-configurable	1	1	1
IR port	Each supports single or dual IR emitters for control of amplifiers, players, etc. Codes from built-in libraries or via captured device.	1	1	2
Outputs	Open collector outputs for external relays, indicators etc. Built-in screen, lift and power control routines.	2	2	2
Inputs	For use with external switches, PIR, etc. for additional control function or shutdown.	1	1	2
Syn-Link	RS232 port used for programming and the linking of panels. Also used to connect other Synergy peripherals (e.g. AU4 Audio controller) without additional programming. Software keys allow its use as a second, fully-configurable RS232 port for control, or with a PC running WinSyn for full GUI control.	1	1	1

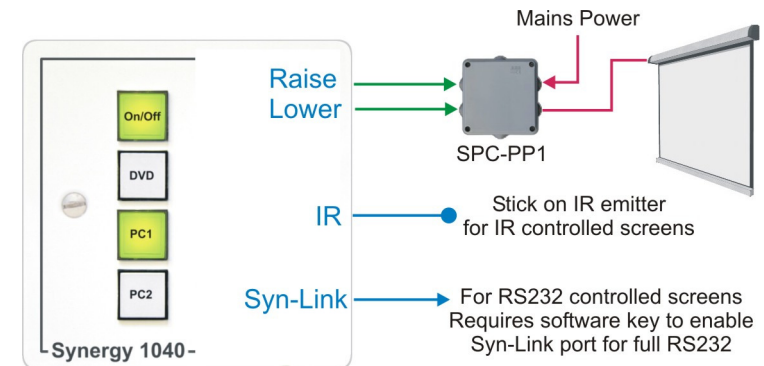
Synergy Outputs

Labelled on the unit as Screen relays, the two outputs provided on all controllers are an open collect type suitable for use with indicators and relays. One side of the load should be connected to the same +12V supply as the controllers; a screw terminal marked +V is provided for this purpose. The other side of the load is connected to Raise (for output 1) or Lower (for output 2).

It is possible to use a higher external voltage supply than 12V if necessary; please refer to the application notes on the Synergy website for instructions.

Screen Control

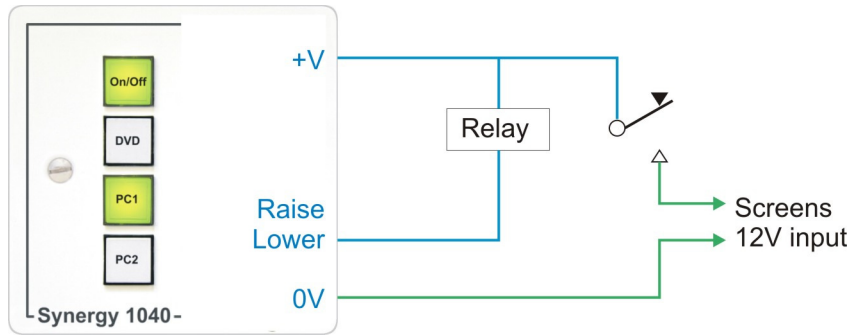
There are three methods supported by the Synergy controllers:



You can use external 12V DC relays for the power control as an alternative to the SPC-PP1, please see 'Alternative use of outputs' on the next page for details.

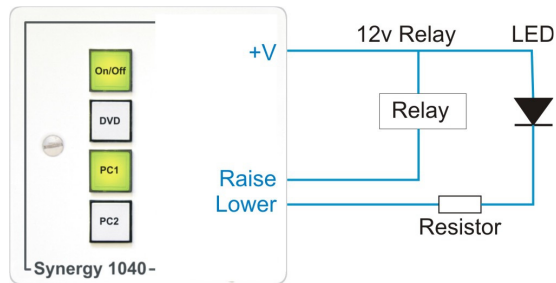
12V DC triggered screens

Controlling these requires the use of an external relay.

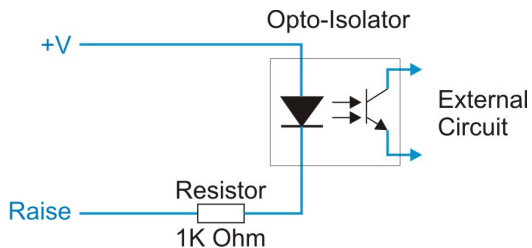


Alternative use of outputs

The outputs can also be used for general purpose control of external indicators or relays.



When isolated control is required, e.g. in parallel with a panel push button, the use of an opto-isolator is recommended.

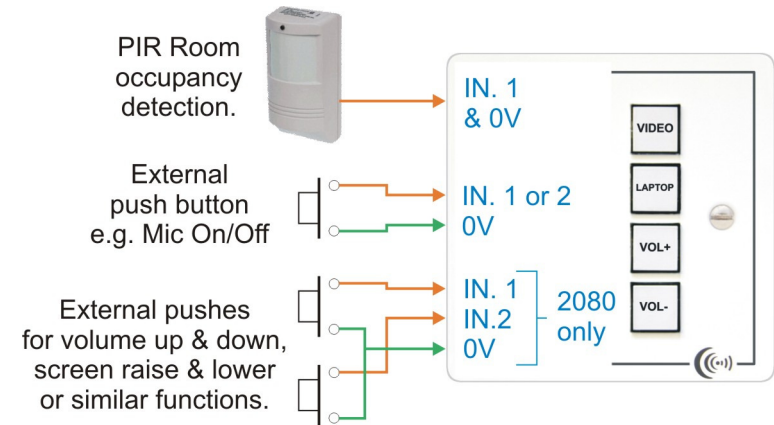


Synergy Inputs

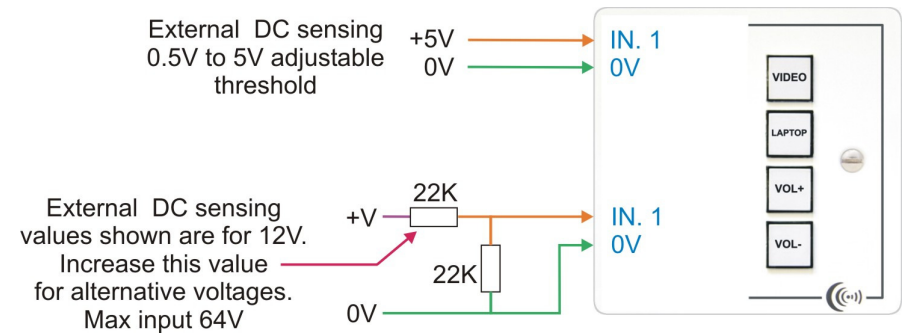
All Synergy controllers have at least one control input that can be used with a push button or grounding circuit.

In the application below using a PIR detector, note that some PIR's use a transistor as the output, which does not pull fully to 0V when activated. The Synergy control input 1 has an adjustable threshold to allow for this.

Using the Synergy external inputs with a PIR or Push Buttons



Using the Synergy external inputs with a DC voltage



IR Commands

The Synergy configuration software contains an embedded IR library for many current devices. This library can be updated from the Synergy website either manually, or the software can be set to automatically update both the IR and RS232 libraries every time an active Internet connection is detected and the software started.

For IR devices not contained within the library the codes can be captured using the IR Capture Podule available from ikon AVS and some dealers. We also offer a code capture service should you wish to send us the handset for capture.

In early summer 2011 an alternative version of the Synergy 2080 controller will be available, with onboard IR capture facilities. This can be used to capture codes for direct use or the codes can be stored in a library module.

RS232 Commands

The RS232 commands are also embedded within the Synergy software, but when a new device needs adding, this can be done from within the RS232 editor integrated in the Synergy configuration software.

Commands can be entered as Hex, ASCII or control characters, and the code can be tested by linking the computer running the software to the RS232 device to be controlled. Any replies can also be seen and captured.

When a new RS232 library file or IR file is added to your library, there is an option to forward this to ikon for inclusion in the global libraries with a credit to the supplier of the file along with any contact detail you may wish to include. (This facility can be disabled or files submitted anonymously.)

Syn-Link

All Synergy controllers are fitted with a Syn-Link port. This is a special purpose RS232 connection used to program the Synergy controllers from a host PC running the Synergy configuration software. It is also the method of connecting Synergy accessories and expanding the system beyond the capacity of the controller on its own.

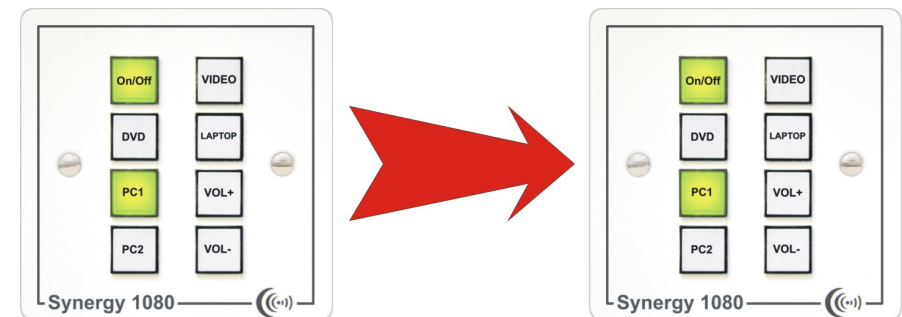
Incorporated Syn-Link Applications

The following applications are enabled from the Synergy software and also expansion of the system via the Syn-Link port.

Panel Linking

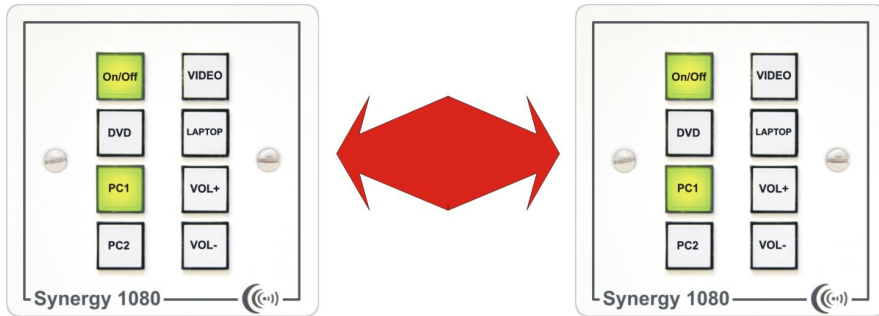
A pair of Synergy panels can be linked in three different ways.

Master / Slave



Operations on the slave panel only control devices connected to the slave panel while operations on the master panel control both its controlled devices as well as the ones connected to the slave. The buttons on the slave panel reflect the current status in both modes of operation. The panel linking can be enabled and disabled using the auxiliary inputs on the master panel, (e.g. from a room divide sensor).

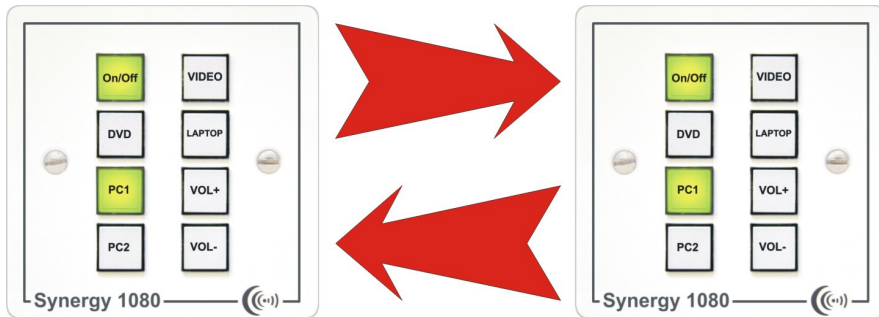
Dual Master



With no panel linking enabled each panel operates as an independent system. With panel linking enabled either panel controls both, allowing two-way control.

The linking can be configured to use either panels' auxiliary inputs or require both to be activated. This is ideal for use with key switches for dual, key confirmation of linking.

First Takes Precedence



With panel linking enabled (from either or both panels as above) the first panel to be operated takes control of the system locking the other panel out until the system has been shutdown.

Syn-Link - Applications

Audio Controller

Enabling the Syn-Link port for use with the Synergy audio controllers enables control of four audio inputs along with level control and microphone on/off, with minimal configuration. No programming of the audio controller is required.

PC Control

The Syn-Link port can be enabled for use with a downloadable utility that runs on a PC connected to the panel. When run, the utility interrogates the panel and creates a graphic of the correct panel with button labels allowing two-way operation of the panel from the PC screen as well as the physical panel.

Syn-Link - Expansion

Two software keys are available to expand the control functions of the Synergy panel.

2nd RS232

Using a purchased software key the Syn-Link port can be enabled as a completely configurable RS232 port for additional control of RS232 devices. This also allows the panel to be integrated into a BMS system using a suitable 3rd-party interface.

Full GUI

Using the WinSyn software (available from www.ikonavs.com/synergy), Complete graphical user interfaces can be created and run on a PC connected to the Syn-Link port.

Requiring a purchased software key to operate, this software allows access to the eight panel buttons and a further eight embedded buttons, enough for transport control of IR devices.

Multiple page screens can be created presenting the user with customisable button layouts for ease of use.

Synergy Audio Controller

The current range of Synergy audio controllers consist of four models.

- AU4L** Four unbalanced stereo line level inputs on phono / RCA sockets and a mixed microphone, all routed to an unbalanced stereo output, also on phono / RCA sockets.
- AU4P** As AU4L but incorporating a 20 watt per channel amplifier as well as the line level outputs.
- AB4L** Four balanced stereo line level inputs on detachable screw terminals and a mixed microphone, all routed to an balanced stereo output, also on detachable screw terminals.
- AB4P** As AB4L but incorporating a 20 watt per channel amplifier as well as the line level outputs.

When connected to a Synergy controller input selection can be assigned to any button. When an input is selected the volume can be adjusted with any change stored against the input. Dip switches on the rear of the unit allow either full range (+15 to -48dB) or limited range (+15dB to -15dB), The default level can also be set as fixed (0dB), or retaining the last setting.

The microphone input has switchable phantom power and a selectable hi-pass filter. It also has its own level control and EQ. The microphone is mixed with the program audio after the remote volume facility and the microphone can be turned on and off either remotely via the Synergy panel, or using a push button connected to terminals on the audio controller.

The unit can be used as a stand-alone RS232-controlled input selector and level controller.

Electromagnetic Compatibility

This equipment has been designed, manufactured and tested to conform to the European EMC directives EN55103-1 & EN55103-2 for classifications E2 and E4.

Additional EMC information for installation to comply with the EMC directives 2004/108/ec and SI 2006 No. 3418 is available on the ikon website.

Warranty

In common with most ikon Products, the Synergy series carry a 3 year RTB warranty that covers parts and labour only.

There are no user serviceable parts inside and the unit should be returned to the supplier for warranty repair.

Full details of our warranty are available on the Ikon website.

Manufacturers Information

The Synergy series is manufactured in England by Nebula Audio Ltd.

For service or warranty advice please initially contact your supplier. Alternatively contact the manufactures at:-

Nebula Audio Ltd
40 Saint Dunstons Close
Worcester
WR5 2AJ

Telephone: +44 (0) 1299 250991

Website:- www.ikonavs.com

Technical support email:- support@ikonavs.com

Environmental

The Synergy series are not IP rated and should not be used in bathrooms, outdoors or similar damp environments unless provided with additional protection with a suitable IP rating.

WEEE

Under the Waste Electrical & Electronic Equipment (WEEE) Directive & Regulations, when customers buy new electronic equipment from ikon AVS they are entitled to:-

1. Send old equipment back for recycling on a one-for-one, like-for-like basis.
2. Send the new equipment back for recycling when it ultimately becomes waste.



Recycling instructions and documentation for both Customers and Recyclers is available on the Ikon website.

Producer Registration Number: WEE/HD0052TQ