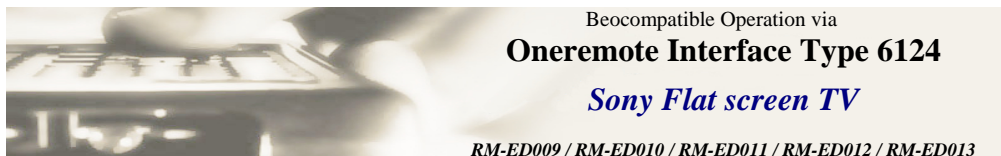


Beo4 and Beolink 1000 are remote control terminals from Bang & Olufsen. OneRemote supplies interface modules that allow third party equipment to be operated via a Bang & Olufsen remote control system.






Beocompatible Operation via
Oneremote Interface Type 6124
Sony Flat screen TV

RM-ED009 / RM-ED010 / RM-ED011 / RM-ED012 / RM-ED013



Operating with Beo4 and Beo5

Beo4 and Beo5 do not have as many keys as this TV’s original remote control. Thus certain Beo4/ Beo5 keys have got alternative functionality.

To get to this  has to be pressed first, i.e.  followed by  on corresponds to info on the TV’s own remote control.
















The table to the right shows how special Beo4/ Beo5 key operations translate to operations of the original remote control.

To get the most of operating the TV with a Bang & Olufsen remote control, the user has to be familiar with operations with the original remote control as described in the TV’s user manual.


Power on the TV









The TV automatically powers up, when the source is pressed on beo4, which the bee2 controller is programmed for.

Usually this source will be t .

Beo4/ Beo5		Daily operation
		OK
	1	Analog
	2	Digital
	*2 *1	P+
	*2 *1	P-
	*2	Guide
	*2	Return
m		Home
	m	Options
e		Back
w		Power off
		Other operation
q		Format
		i+
	3	FAV
	4	Subtitle
	6	AV
	7	Audio

**1 It is possible to exchange the up/ down arrow the functions with the blue and yellow buttons. This is done with an option, refer to the installation pages.*

**2 As the direct function of the coloured buttons on the Beolink remote control has been reassigned to other functions,  has to be pressed before these buttons, to get to the colour function.*

-   Red function
-   Green Function
-   Yellow function
-   Blue function

Congratulations

With your bee2 controller from www.oneremote.dk you now can fully operate your Sony TV using your Bang & Olufsen remote control terminal, via a beeLINK system bus.

Beolink1000, Beo4 or Beo5 remote controls can be used. This guide explains how.

This BeeLINK2 controller is ready for use, plug & play. See the opposite page regarding daily operation.

Some operations can be altered, to improve interaction with other controllers or to your convenience. Refer to the installation section further on, if changes are needed.


BeeLINK - How it works

The OneRemote beeLINK system is based on a 455 khz IR-receiver placed in the room. Via a beeLINK amplifier it can distribute control data to many different beeLINK controllers or BeeLINK compatible devices, each designed for a specific purpose. One controller is used for the TV, another controller for the DVD, a third for a beamer and so on.

The BeeLINK system lets you control many devices, in a logic way. A single press on the DTV button on the Beo4 might operate the TV, a receiver, an amplifier and a HDMI switch at the same time. There are many solutions.

The beo4 remote control is not equipped with as many keys, so we have designed a 'layout' that works logically, even when shifting between different devices. To get a common layout for many devices, we therefore needed to redefine a few of the beo4/ beo5 buttons to other functions:

- ***Coloured buttons.***

To make room for more important functions, we have moved the coloured buttons, to a lower layer. To send a 'red' button command  must be pressed first. The same goes with the other 3 coloured buttons. This way we can assign other functions to the coloured buttons, when pressed, without a preceding go. In a OneRemote environment the red button is used as Back, Backup or return. The green button is used as EPG, Guide or similar. Finally the blue and yellow button is used for programme stepping.



- ***Programme stepping, up/ down manoeuvring in menu's.***

Most set top boxes and TV's has 4 arrow buttons for moving up, down, left and right, in on screen menus. In addition they have separate programme stepping buttons for zapping through programmes. B&O remote controls do not include separate buttons for programme zapping.

We therefore have assigned the blue and the yellow buttons to function as programme stepping buttons, in our basic setup. The four up, down, left and right buttons have been assigned for manoeuvring in on screen menus, in our basic setup.

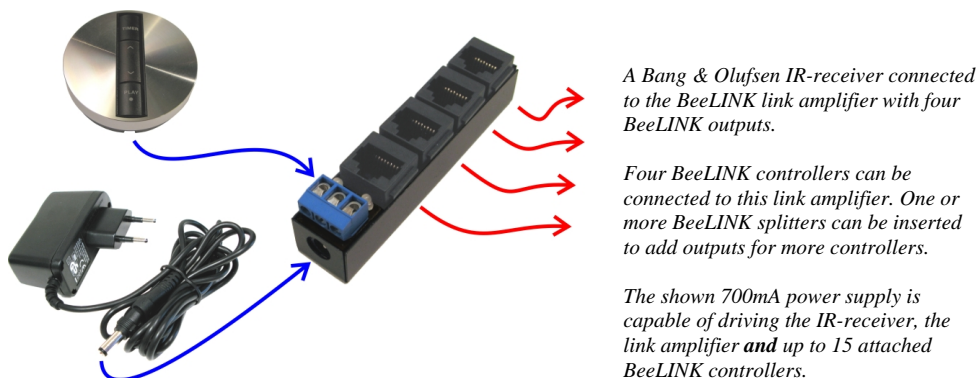
It is possible to use the up and down arrow for programme stepping, refer to the installation section.

- ***Go or Record shifted operation.***

Some of the buttons has 2 or three functions. To get to these they have to be preceded with  or . Which buttons has secondary functions can be seen in the operating table on page 2.

BeeLINK basics – the link amplifier.

To receive the IR data emitted from a Bang & Olufsen remote control, a B&O IR-receiver is often used. If there is already one IR-receiver in the room, this can also be used to feed the BeeLINK bus. Normally there is no need for two IR receivers in the same room.



This basic setup is the core of a BeeLINK installation. Up to four BeeLINK controllers or BeeLINK compatible devices can be connected to this linkamplifier.

BeeLINK basics – the distribution of power and data.

The BeeLINK bus distributes the IR-data, received with the attached IR-receiver. It also distributes 12 volt power from the attached power supply.

The cable used is ordinary CAT5 type cable with RJ45 plugs. The same type used for computer network. We chose this type for several reasons. This cable is inexpensive and easy to crimp plugs on, with inexpensive tools. Also it is well suited for data transmission, and it provides us with extra leads for power supplying of the attached BeeLINK controllers. Finally many modern house installations use the same connectors, making installation even easier.

Note !

*A BeeLINK bus must **ONLY** be connected to BeeLINK components.*

*If connected to LAN or other systems,
there is a great risk to damage these systems.*

The BeeLINK bus is a parallel bus type. Passive splitters therefore can be used, to make a network of any shape. If many controllers or very long cables are used, it might be necessary to place one more or more power supplies, placed closer to the controllers that lack power.

Using this parallel structure each BeeLINK controller receives the IR-data at the same time. Every controller has its own microcomputer, living its own life.

Although some of the controllers can ‘talk’ to each other, most controllers operate fully on their own.

BeeLINK2 – installation

The BeeLINK2 controller gets its power supply and control data, via the CAT5 cable from a BeeLINK amplifier.

Once connected to the BeeBus the BeeLINK2 controller only needs an IR-emitter to operate the TV. The IR-emitter emits the same IR data as the TV's own remote control.

*Emitted IR data is in fact light at a frequency just out of the spectrum that the human eye is able to see.
It is short flashes of light, a bit like when sending morse codes using a flashlight.*

The emitter must be stuck on the TV, nearby the TV's IR-receiver. It must be placed so the IR receiver in the TV is able to see the emitted light from the IR-emitter.

The IR-emitter can be placed inside the TV, if you want to avoid having it on the outside, as long as the IR-receiver is able to see the light from the emitter.



A BeeLINK2 controller connects to the BeeBUS via a CAT5 cable, for power supply and control data.

A IR-emitter sends the commands to the TV.

The BeeLINK2 controller can be placed by the TV or in another room. IR emitters are available in lengths of 1, 5 and 10 meters. In addition extension cords can be used. An IR-emitter can be extended to more than 30 meters.

The BeeBUS CAT5 cable can be more than 75 meters.

BeeLINK2 connections.



The IR/ sense socket is output for the IR-emitter that sends IR to the device to be operated. In some cases this socket is also used for sensing purposes. Often the BeeLINK2 controller needs to know if the device is powered up or not. In some cases this socket is used for other serial communication like RS-232.

Prog switch is a push button that must be activated to initiate a programming sequence, as described in the option programming chapters.

Do not use socket is for firmware updating of the controller. If used for anything else, the controller can be damaged.

LED indicates different operating modes:

Red-green flash: No data has been received since power has been applied

Red flash: The controller is in option programming mode.

Red: The controller is active.

Green: The controller is inactive.



A BeeLINK2 controller connects to the BeeBUS via a RJ45 connector and CAT5 cable.

Warning:

*If connected to a computer network,
this is likely to be damaged.
Connect only to a BeeLINK bus.*

BeeLINK Active option.

As all controllers on the BeeLINK bus are receiving all the IR-data at the same time, every controller must know when to go *active* and when to go *inactive*. Sometimes two or more controllers are active at the same time.

A BeeLINK 2 controller is used to operate a TV, a satellite receiver, a DVD-player, a projector or similar devices. Each controller is specifically made for one device.

This BeeLINK 2 controller is made for operating a TV; therefore it would be logic if the TV button makes the controller go active and turns on the TV. Any other source button could be used, if this is required.

Your BeeLINK2 controller needs to know when you want it to go active, in your setup. You need to program it with an *option*.

An option programming sequence is started by pressing the little red switch on the BeeLINK2 controller, until its LED starts flashing. Then the 3 code option must be entered with the B&O remote control. Here some examples:

Option			Function		
t	O	r	t		turns on the TV.
t	1	r	t	+ 1	turns on the TV.
t	2	r	t	+ 2	turns on the TV.

Up to 10 TV's or projectors can be controlled this way. This could be useful for a TV wall in a shop, but also useful if there is more than one TV or projector in the room.

When the BeeLINK2 controller goes active, its LED will turn red to indicate this. When another source is selected, the controller will go inactive and the LED turn green.

As the controller goes active, it will turn on the TV, if it is not already turned on.

BeeLINK source option.

The BeeLINK active option sets which source button on the remote control, that makes the BeeLINK2 go active and turns on the TV, as described in the previous chapter.

The BeeLINK source option combines other source buttons on the remote control, with the input sockets on the TV. The source option can force the TV to open a specific input, when another source is selected.

Pioneer TVs have up to 9 selectable sources, as shown in this table:

0: No new source		
1: HDMI 1	4: HDMI 4	7: Video 3
2: HDMI 2	5: Video 1	8: Component 1
3: HDMI 3	6: Video 2	9: Component 2

Source buttons on beo4, like S, T, f, C, y can be programmed to select one of these inputs. Here are some programming examples:

An option programming sequence is started by pressing the little red switch on the BeeLINK2 controller, until its LED starts flashing. Then the 3 code option must be entered with the B&O remote control. Here some examples:

Beo4	Source	Volume	Function
T	1	O	T selects HDMI 1 on the TV. No volume regulation on TV
T	2	O	T selects HDMI 2 on the TV. No volume regulation on TV
T	1	1	T selects HDMI 1 on the TV. Volume regulation on TV
d	2	O	d selects HDMI 2 on the TV. No volume regulation on TV
d	9	O	d selects Component on the TV. No volume regulation on TV
c	1	O	c selects HDMI 1 on the TV. No volume regulation on TV

Programme Zapping option

The buttons **W**, **R**, **D** and **F** are being used for programme stepping and to manoeuvre up and down in an on screen menu.

This is the basic OneRemote layout and compatible with other OneRemote controllers. Some people prefer the programme zapping buttons on the up and down buttons. The programme zapping option, make it possible to change the function of these buttons.

An option programming sequence is started by pressing the little red switch on the BeeLINK2 controller, until its LED starts flashing. Then the 3 digit option code must be entered with the B&O remote control.

Option	Function		
090	W	and R	is used for programme zapping.
091	D	and F	is used for programme zapping. Factory setting.

Volume option

In a setup that includes a surround sound system, volume regulation needs to be avoided on the TV. This can be done with the volume option.

An option programming sequence is started by pressing the little red switch on the BeeLINK2 controller, until its LED starts flashing. Then the 3 digit option code must be entered with the B&O remote control.

Option	Function
000	Volume regulation on the TV disabled.
001	Volume regulation on the TV enabled. Factory setting.

one>remote