WCM-D Instruction Manual
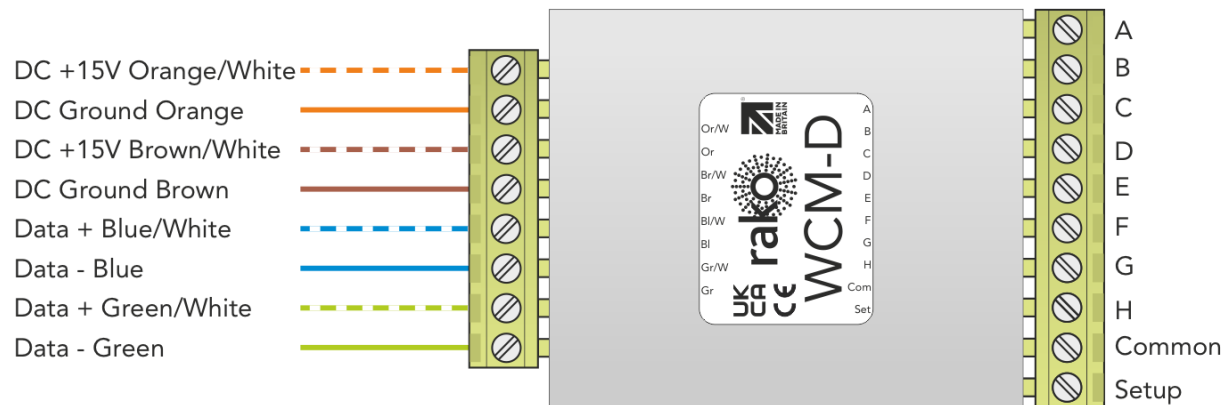
For programming information: "Wired programming guide"

For further installation information: "Wired Application Sheet"

The WCM-D allows custom and third party switch plates to be used in place of a Rako wired keypad (WCM/WK-EOS/WK-MOD etc).

The WCM-D will fit inside a single gang UK back box. Up to eight switch inputs can be taken per WCM-D. The switch plate can be formed of Latching or Momentary Action switches connected by short wires to terminals on the WCM-D.
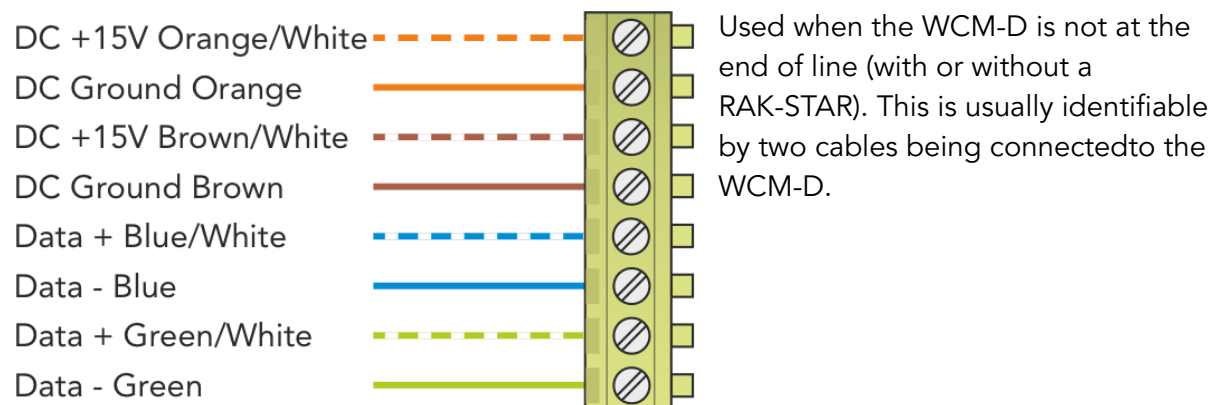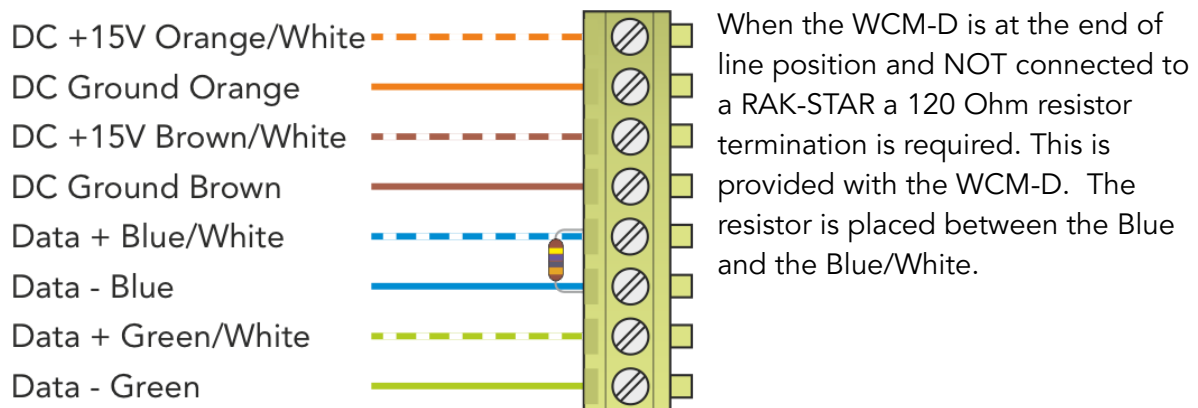
Wiring Switches to the WCM

The WCM-D is wired into two pluggable sets of terminals. The 8 way terminal block connects to the Rako wired network formed of Cat5/Cat6 cable with cable allocations as set out above. The ten way terminal block is used to wire between one and eight 3rd party switch panels into the WCM-D. Inputs "A-H" are shorted to common to output commands from the WCM-D.
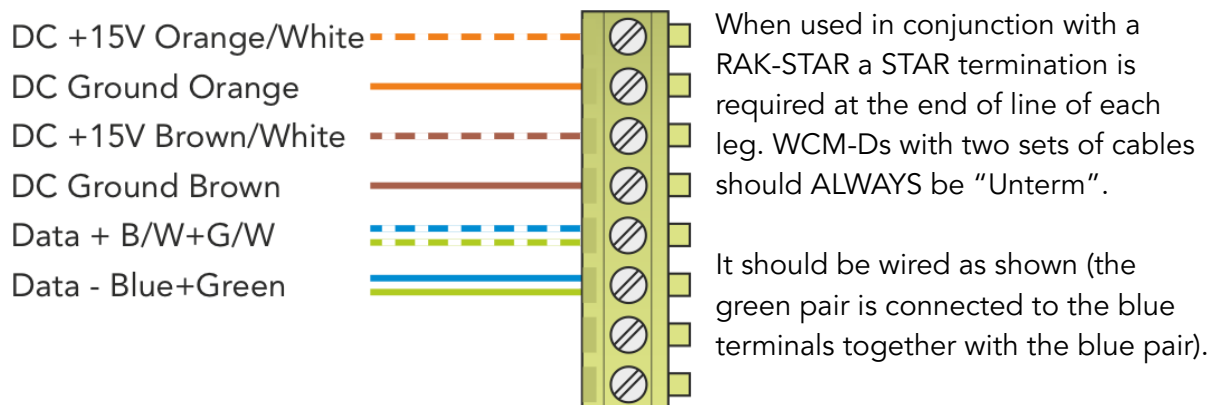
Terminating the WCM-D

No Term (Unterminated)

Used when the WCM-D is not at the end of line (with or without a RAK-STAR). This is usually identifiable by two cables being connectedto the WCM-D.

End of line termination

DC +15V Orange/White
DC Ground Orange
DC +15V Brown/White
DC Ground Brown
Data + Blue/White
Data - Blue
Data + Green/White
Data - Green

When the WCM-D is at the end of line position and NOT connected to a RAK-STAR a 120 Ohm resistor termination is required. This is provided with the WCM-D. The resistor is placed between the Blue and the Blue/White.

Star termination

DC +15V Orange/White
DC Ground Orange
DC +15V Brown/White
DC Ground Brown
Data + B/W+G/W
Data - Blue+Green

When used in conjunction with a RAK-STAR a STAR termination is required at the end of line of each leg. WCM-Ds with two sets of cables should ALWAYS be "Unterm".

It should be wired as shown (the green pair is connected to the blue terminals together with the blue pair).
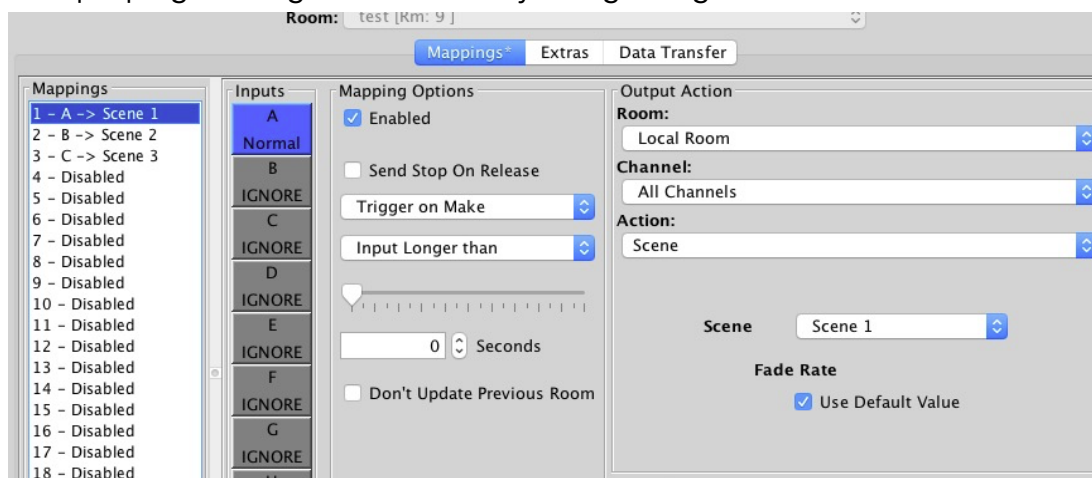
See RAK-LINK and RAK-STAR user manual for further information on when to use each termination.

Setting up the WCM-D

- First open Rasoft Pro and ensure a WK-HUB or WA/WTC-Bridge is successfully connected (see wired programming guide for details).

- Short between the "setup" and "common" input for 3 or 4 seconds (when the WCM-D successfully enters set-up mode the LED will begin to blink).

- If the installation is correct a pop up box will appear in Rasoft Pro. If no pop up box appears there is most likely an error in the wiring of the Rako Wired Network.

- Enter a suitable name and assign the local room.
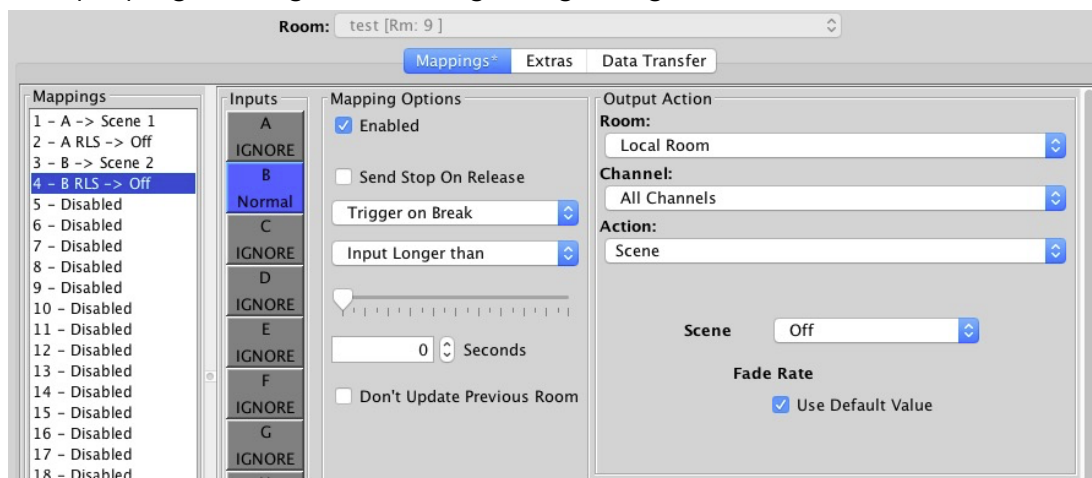
Programming the WCM-D inputs

Example programming for a momentary wiring configuration:

Above is an example of how a three way momentary switch would be programmed when wired into inputs A,B and C of a WCM-D.

Example programming for a latching wiring configuration:

Above is an example of how a two way latching switch would be programmed when wired into inputs A and B of a WCM-D.

Rako thanks you for having purchased a Rako product and hopes that you are pleased with your system. Should for any reason you need to contact us please contact us via our website www.rakocontrols.com or by phoning our customer help line on 01634 226666.
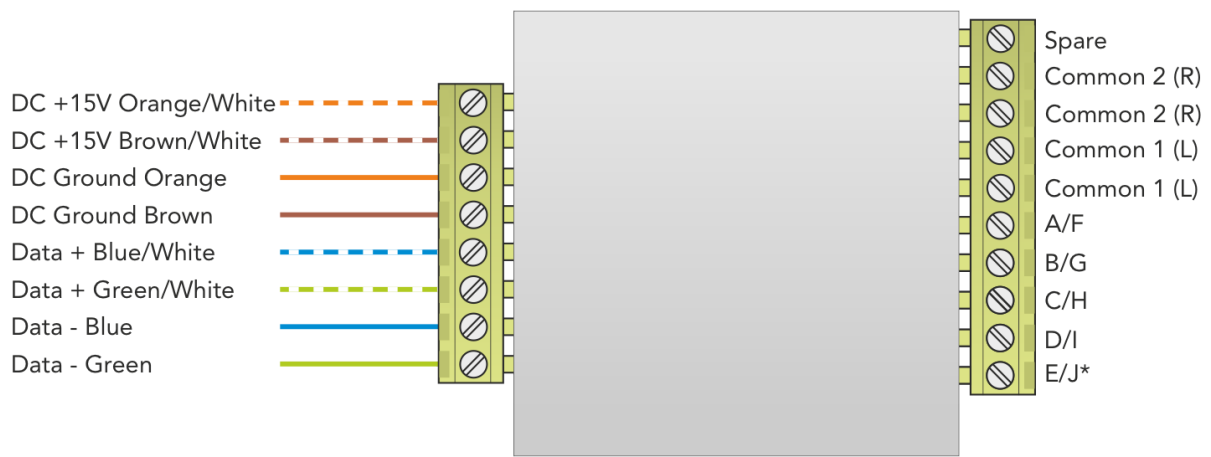
Appendix:

WCMs shipped before 2022 have a different wiring diagram as shown below. This should also be identifiable from the label attached to the WCM-D itself.
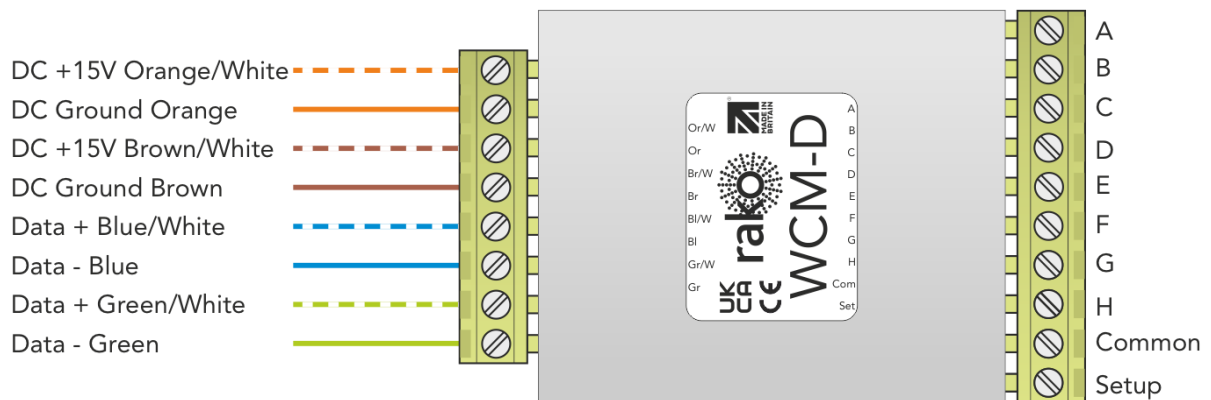
Please ensure that the correct wiring configuration is used, incorrect connection of the wired network side of the WCM-D may cause the Rako wired network as a whole to become offline.

"Old" WCM-D wiring (RTL1067):

As shown "Old" WCM-D with no label.

"New" WCM-D wiring (RTL1139):

As shown "New" WCM-D with label.