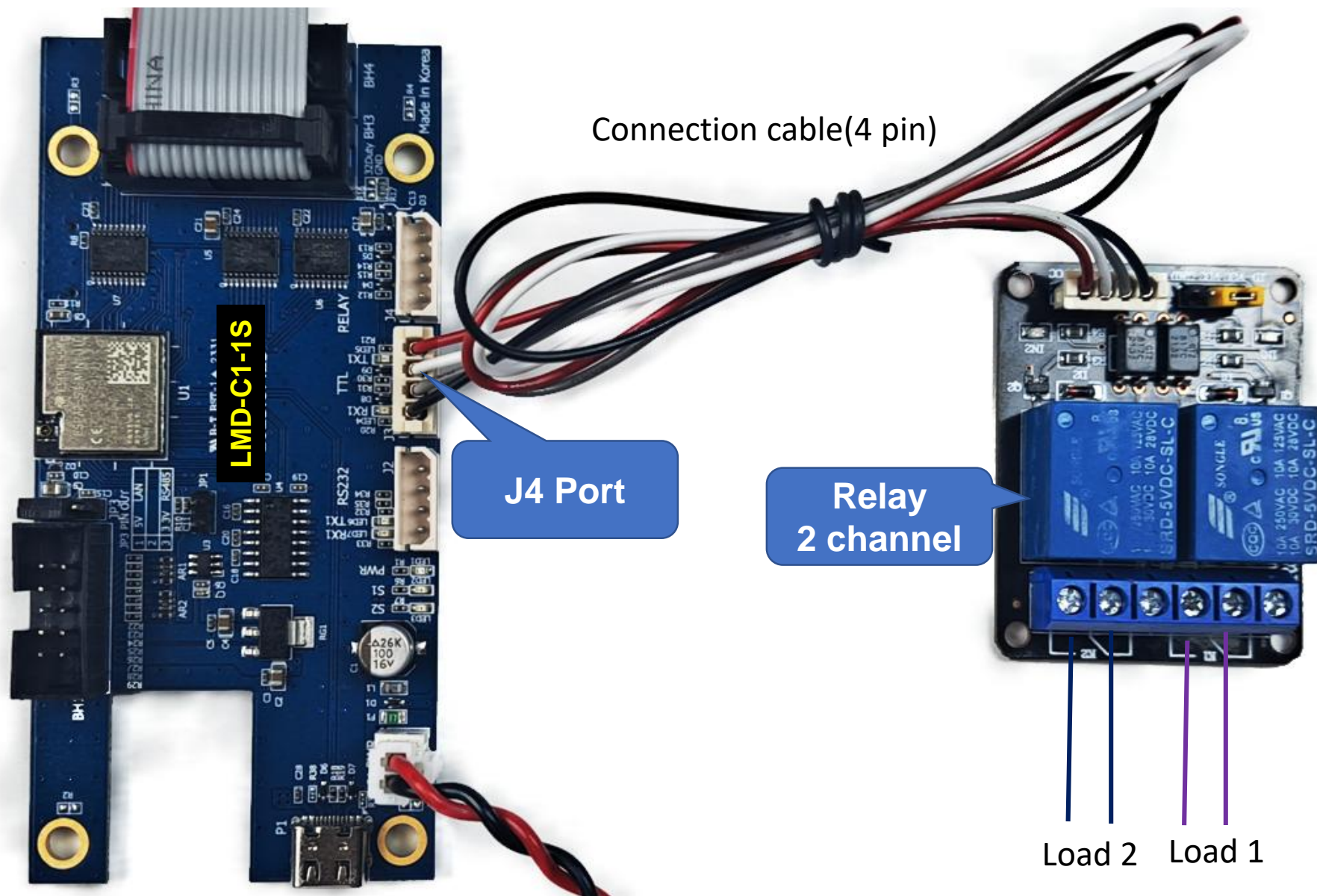


# How to Use LMD Relays

The LMD controller has relay control ports, allowing you to directly control “buzzers, warning lights, fans, etc.” by transmitting protocols from your system. The connection and setup method is the same as shown below.

The common Arduino relay (2 channel) used here can be easily purchased from [www.Aliexpress.com](http://www.Aliexpress.com) ([link1](#), [link2](#)), and the connection cable (4 pin) is provided free of charge upon request when ordering the controller.



1. Connect the controller's port "J4(5V-D2-D1-GND)" to the relay input port (VCC-IN2-IN1-GND). You can connect a load (Max. 10A, 250VAC or 30VDC) to the relay output ports (K1, K2).

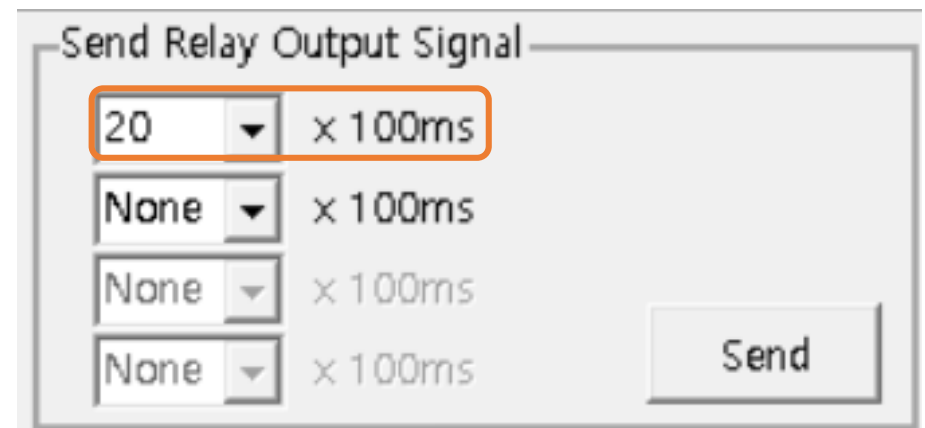
2. Run **DABIT Protocol Simulator**.

3. Go to “Special Functions > Send Relay Output Signal”, set the relay 1 to “20 x 100ms” and click “Send”. Then, Relay 1 will turn on for 2 seconds.

For more details, refer to the followings:

>> “[Chapter 4-D-⑤](#)” of “DABIT Protocol Simulator Manual”

>> “[Chapter 7-C](#)” of “LMD Protocol Document”



Two relays can be used as standard. If you need to use 4, please contact us.

**[TIP]** If a 220V load is used for the relay output, [counter-electromotive force](#) may be generated during ON/OFF, which may cause the LMD controller to malfunction or cause color blemishes to appear on the screen. In this case, the problem can be simply solved by installing a spark killer condenser on the relay output terminal as shown on the right.

