Star\_Wars\_R2-D2\_10225 Remote Controller Version LED Lighting Kit

Package contents:

2x 30cm Warm White Dot Lights 4x 30cm Blue Dot Lights 2x 15cm Red Dot Lights 2x 15cm Blue Dot Lights 2x 5cm Connecting Cables 2x 6-port Expansion Board 1x Remote Control Switch Board 1x AA Battery Pack

Extra LEGO pieces

## Note:

Place wires on the surface or under the LEGO building blocks.

The wire can be place between the building blocks or under the block, but they should be placed between the studs correctly.



Insert the connectors to the ports.

Be careful when you are operating, there's only one correct way to insert, make sure the expansion board is upward, find the soldered "=" sign on the left of the port. When you are inserting, the side which the wires can be seen should be faced to the "=" sign and if you feel hard to insert, please stop, and don't force it, for that may result in bent pins inside the port or overheating of the expansion board.



At this point, use the tweezers to straighten the bentpins.



When installing dot lights, make sure they are correctly placed (Yellow LED package is exposed). You can put they either on the top of the studs or between studs.



## **Connecting cable connectors to Strip Lights**

Take extra care when inserting connectors to ports on the Strip Lights. Connectors can be inserted only one way. With the Strip Light facing up, ensure the side of the connector with the wires exposed is facing down. If a plug won't fit easily into a port connector, don't force it. Doing so will damage the plug and the connector.



Finally, please pay attention to the positive and negative terminals of the battery when installing the battery case.



OK, Let's Begin!

## Instructions for installing this kit

The first thing we need to do is take R2's head off. I know, it sounds brutal but he can't feel it anyway, right??

If you gently hold his head and lift upward, it should easily come off.



Look at the front of R2's head, look for two trans-clear 1x1 plates and remove them.



Grab two of the Dot Lights and angle the end so that the light is perpendicular to the wire.



Feed the connector end of each Dot Light into the square hole left by removing the 1x1 trans-clear plates.



Once they are thread all the way through, the LED will sitting inside the square hole facing towards the front.



Let the plug ends of wires rest where they will.....we will get to those later. Replace the two 1x1 trans-clear plates.



Remove the 1x1 round trans-red plate from the front of R2's head.



Grab one of the Dot Lights and angle the end so that the light is perpendicular to the wire.



Feed the connector end of the Dot Light into the round hole in the blue brick left by removing the 1x1 round trans-red plate.



Once the wire has been fed all the way through, the Dot Light will sit on the outside of the round hole in the blue brick.



Replace the 1x1 round trans-red plate.



Now remove R2' s projector piece by holding it and pulling it forward and out.



The projector piece came out of a 1x1 brick with a blue technic pin in it. The 1x1 brick can move from side to side a bit leaving a gap on the left hand side of the brick between it and the rest of R2' s head.



It is in this gap that we want to run the wires for the last Dot Light. The plug won't fit through this gap, so we need to pry some pieces apart to feed the plug through. If you lift from where the 1x1 panel is, you should get some natural separation of layers as seen below:



Pry the pieces apart until there is enough room to thread the plug end of the remaining Dot Light through.



Push a few inches of the wire through and let the wire rest next to the grey brick with the blue technic pin in it.



Press the pieces back together. The wire will be able to freely move in the gap.



The projector piece we removed is actually two pieces. Pull those pieces apart.



We are going to place the Dot Light inside the larger round piece making sure that the LED faces away from the hole we will put it in to. Gently bend the wires until it resembles the image below:



Place the Dot Light into the round space on the larger round piece just far enough so that the LED itself is inside the piece.



Gently replace the technic rod into the hole where the LED is. It will be a tight fit so you need to do it slowly to prevent damage.



Now you can return the projector piece to its place. Feed the wire back in through gap as you return the projector to its place.



With the projector piece back in place, we have all four LEDs where we want them and four wires hanging out from the inside of R2's head.



Grab the 6 Port Expansion Board fit each of the plug ends of the Dot Lights into the board.



Now get the battery pack



Turn R2 around and sit the battery pack horizontally inside his body with the switch on the high side and facing back towards you.



Turn R2 back around and connect the plug from the battery pack to the 6 port expansion board.



You' ll see that there is an excess of wire from the Dot Lights to the 1:4 expansion adaptor. You can gather these up in whatever way you choose. One way is to wrap the wires around the centre pieces in R2 as seen below:



Caution: Do not rotate R2's head after you put it back on. This may pull on the wires and damage them.

Carefully put R2's head back on his body making sure that wires and connectors are clear of the outsider sides of the head.

Start from installing lights for the body of the R2 Take the Remote Control Switch Board, a 5cm connecting cable



Connect the cable to the Remote Control Switch Board



Connect the other end of the 5cm connecting cable to the 6-port expansion board at the head of the  $\mathrm{R2}$ 



Remove the following piece from the chest of the  $\ensuremath{\mathsf{R2}}$ 





Disconnect the following piece



Take a 15cm red dot light, a trans round 1x1 piece, replace the yellow 1x1 piece with the trans one



1. with lighting part facing up, connect the light to the following piece, secure it in place by connecting the trans piece over. Reconnect the light



2. remove the following piece to hide the cable as per below



3. Reconnect this part back to the chest of the R2, thread the cable to the inside, reconnect the white piece as per below





Remove the following piece



Take a red 15cm dot light, a trans 1x1 round piece, replace the original yellow 1x1 piece with the trans one

Repeat step1, step2 and step3 to install the light

Connect the 2 cables of the lights to the Remote Control Switch Board, place the receiver outside



Continue to install lights for the belly. Open the following white pieces as per below



Remove the following piece



Remove the 1x2 gray plate from the piece



Take a 15cm blue dot light, a trans slope brick, replace the original gray 1x2 slope piece with the trans one



With lighting part facing up, secure the light in place by connecting the trans slope brick over as per below



Take another 15cm blue dot light, a trans slope brick Repeat the steps above to install light to the next place



Reconnect this section



Move onto installing lights for the bottom



Remove the following piece



Disconnect the 1x2 white slope plate from the middle as per below



Take 2 blue 30cm dot lights, 2 trans slope bricks, replace the 1x2 white slope bricks with the trans ones



Thread the connector of the light through the brick, pull the cable from the other side till the light is placed against the hole



Repeat the previous steps to install another light, secure the lights by connecting the trans bricks over. Reconnect this section





Reconnect the whole piece, thread the cables to the inside of the R2



Take a 6-port expansion board, a 5cm connecting cable, connect the 5cm connecting cable to the expansion board



Connect all cables of the lights from the bottom and the belly to the expansion board, connect the 5cm connecting cable from the expansion board to the switch board



Reconnect the head of the  $\mathrm{R2}$ 



Congratulations! You' re done!

To turn on, gently lift R2' s head until you can access the on / off switch.



Flick the switch, pop his head back on, turn him around and enjoy!

