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# KIYO AWHL Workshop Manual Seat Heating System

1. Complete System Components: AWHL (Hi/Low type)			
Complete System Picture (AWHL)	s.no	Part Name	Qty
	1	Heating Element for Seat_Cushion	-
	2	Heating Element for Seat_Back	-
	3	Switch kit	-
	4	Wiring Harness	-
	AWHL Switch (Hi/Low)	<ul> <li>Siso Type, 2 color LED Switch</li> <li>Hi / Off / Low Control Switch</li> <li>Low : Green color LED</li> <li>Hi : Red color LED</li> <li>Application Hole Cutter : Diameter 20mm</li> </ul>	

N	2. Heating Mat Application	
	Application Manual	Reference Picture
		Peel off the both side tape of the heating mats
•	Tools: Nipper, Knife, Air Tools, Long Nose Tool, Scissor, Hog Ring Tool, Hole Cutter (Dia.23mm)	
•	Detach the seats assembly from vehicles.	
•	Detach the seat covering.	
•	Detach the Cushion Pad(Foam) and Back Pad(Foam) from the seats.	
•	Attention airbag sensors (If applicable the seats) not to occur electric breaking wires.	
		Attach the heating mats on the Cushion Pad and Back Pad
•	Peel off the both side tape of the heating mats.	
•	Attach the peel_off_heating mats on the Cushion Pad and Back Pad.	
•	Heating mat for cushion is consists on all black wires.	
		4:11 90/b

Application Manual  All wring hamess can be fitted on right terminal and housing as prepared package.  Heating mart for cushion is consists on all black wires.  And then sensors and thermostat can be installed on seat back position to right control the designed temperature.  All wrining hamess is not to contact with other components and sharp edges.  All wrining hamess is to be fixed and arranged using ites and/or bands not to occur when the heating mat attach work and wrining works, assembly the pads and seat covering.  Seat Heating Mat Wring View.	က	3. Heating Mat Wiring	
All wiring harness can be fitted on right terminal and housing as prepared package.  Heating mat for cushion is consists on all black wires.  And then sensors and thermostat can be installed on seat back position to right control the designed temperature.  All wiring harness is not to contact with other components and sharp edges.  All wiring harness is to be fixed and arranged using ties and/or bands not to occur vibration and noise issues running the vehicles.  After finish the heating mat attach work and wiring works, assembly the pads and seat covering.		Application Manual	Reference Picture
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	•		
		covering	Seat Heating Mat Wiring View

## 4. Main Wiring and Switch Application

### Application Manual

# Review the switch application position and discuss with customers for the switch application

position.

- Detach the components of switch application (ex: Center Console or Seat Side Cover or Gear Box Cover or Instrument Panel or some place for application)
- The main power take off from cigar jack electric lines.
- Red wire is the plus wire and black wire is the earth wire.
- In case of Hi/Off/Low type heaters (Model: AW/HL), there are three wires including illuminated switch function. (Red, Black and White wire)
- The white wire is to be connected illuminated(tail) lamp wire on the vehicle wiring.
- All wiring to be connected and rigid fixed to avoid vibration and noise problem on running

vehicles.

- Marking the position center of the switch application and drilling the hole (diameter 20mm) using hole cutter.
- The Switch is inserted from outside to inside and press the switch kit to fix.
- Connect the switch wiring to the main wires. (Just connect the terminal and housing as prepared package)
- Main wiring route must be located under the seat and floor covering.
- Please attention all wiring must avoid sharp edged area, seat bolting area and somewhere to can occur electric problem.
- After finish the wiring works, application the panel (or cover) of switch attached on the right
- Check and Inspection for all functions and switch operation and assemble complete seat.

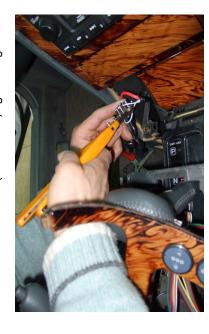
position.

### Reference Picture

## Main Wiring Power Take Off from Cigar Jack Electric Line

Red wires: Plus wiring, Black wires: Minus wiring

White wires: Tail (illuminated) light wiring



Seat Heater Wiring Rear View



### 5. Finished reference pictures







Switch Application Position is different based on vehicles. So the application engineer must review the position before application works and need to discuss with customer for the switch positions.

### Possible Switch Application Position:

For the front seats (Driver and Passenger seats):

Center Console, Gear Box Cover, Seat Side Cover, Instrument Panel, etc

For the rear seats:

Center Console, Gear Box Cover, Seat Side Cover, Pillar Covers, etc

# KIYO AWHL User's Manual for Seat Heating System

	Picture	< Hi Mode Operating : Red LED >	
1. Switch Operating	Description		<ul> <li>AWHL system is 3_mode operating system.</li> </ul>

Center position : Off Mode : No color Lower position : Low Mode : Green color : Control temperature 35 degree

Upper position: Hi Mode: Red color: Control temperature 45 degree

Users can choice the heating temperature Hi Mode or Low Mode.

Control temperature means just system control temperature not seat surface temperature. •

Seat surface temperature not exactly same as control temperature because the seat surface temperature depend on seat covering materials, passengers' cloth and various factors. Usually users can choice Hi Mode first of cooled vehicle condition and change to Low Mode after warming the seats. •



SUV : Carnival (Kia)\_Rear Seats < Low Mode Operating : Green LED >

