

# Instruction Manual

This manual assumes that you have and know how to use the tools and equipment necessary to safely perform service operations on your vehicle. This manual assumes that you are familiar with typical automotive systems and basic service and repair procedures. Do not attempt to carry out the operations shown in this manual unless these assumptions are correct. Always have access to a factory service manual. To avoid injury, follow the safety precautions contained in the factory service manual.



Pursuing the Ultimate in Engine Performance and Efficiency.  
HKS Company Limited.

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## Introduction

HKS ATSC(Active Torque Split Computer)  
Read this instruction manual prior to installation to ensure safe and correct usage and optimal product performance,

Product	ATSC(Active Torque Split Computer)			
Use	Front torque control device for automobiles			
Application				
Vehicle	Model	E/G	Model Year	Part No.
GT-R	R35	VR38DETT	'07.12~	45006-AN002

The 4WD system of the R35 GT-R is electronically controlled. The front torque distribution is controlled by driving conditions. The ATSC is a device to control and optimize the front torque distribution level. Optimizing the front torque distribution can stabilize high-load driving; therefore, this device is recommended for a vehicle used for high performance driving.

Front torque distribution is available in 4 levels. The level can be changed by using the provided switch.

- This manual indicates items you need to pay attention to in order to install this product safely and lists precautions to avoid any possible damage and/or accidents.
- HKS will not be responsible for any damage caused by incorrect use or use after modification and/or dismantling of this product.
- In order to install this product, removal and/or modification of internal/external parts and electrical equipments are required. HKS will not be responsible for any damages to parts during these works. Please do the works with care.
- This product was designed for installation and use on a factory vehicle or a vehicle using other HKS products. The performance and/or safety cannot be guaranteed if this product is installed onto other vehicles than mentioned above.
- This product is applicable for any vehicle that operates on a DC12V negative ground.
- The specifications of this product, including installation are subject to change without prior notice.
- This manual is subject to revise without prior notice.
- HKS will not be responsible if installation of this product voids the manufacturer's warranty.

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## Safety Precautions

Below are symbols used in this manual to highlight areas where.

**Warning**

-Risk of severe injury or death may result if warning is not acknowledged or followed.

**Caution**

-Risk of injury to self, damage to vehicle or property may result if caution is not taken.

**Warning**

- Make sure to work on the vehicle in a well-ventilated area to prevent possible explosion or fire.
- Do not mount the unit where it can distract driving.
- Do not install this product on a 24V vehicle. It is designed for use on a 12V vehicle.
- Make sure to remove the cable from the negative terminal of the battery to avoid possible damage to other electronics during installation.
- Make sure to hold connectors when removing them to avoid possible damage to other electronic parts caused by disconnections or by a short circuit.
- Stop using the product if any unusual conditions are noticed; it may cause a fire or an electrical shock. Consult an authorized dealer immediately.

**Caution**

- Do not install this product by yourself unless you know how to use the tools and equipment necessary to safely perform service operations on your vehicle.
- Do not modify, disassemble and/or remodel this product and any of its attached parts.
- Handle the parts with caution at all times.
- Avoid allowing oil and/or water from entering the unit. It may cause damage to the engine.
- Make sure all connections and wiring are not disconnected, short circuited, or incorrect. If so, it may cause an electric shock, burn out, or damage to the vehicle.
- If the product or the vehicle with the product does not perform properly, consult the dealer immediately.

- Daily check-up of the vehicle must be done by the owner.
- Refer to the factory manual when removing the factory parts.
- Make sure all connections and wiring are correct.
- Do not lose and/or damage any removed parts.
- Use the appropriate tools to tighten bolts and nuts with the correct torque specs to avoid damage.
- Make sure not to disconnect any wiring from the vehicle when installing the product.

## Parts List

Make sure that all of the parts listed in the Parts List are included in the kit.

1 ATSC Main Unit	2 Switch	
3 Instruction Manual	4 Double-Sided Tape	5 Coupler-on Harness
	32x30mm 2sheets	100mm 2pcs
		1本

## Installation

### 1. Application Verification

Make sure to install this product to the vehicle listed below.

Vehicle	Model	Model Year	E/G
GT-R	R35	'07.12~	VR38DETT

**Caution**

- Do not install this product on inapplicable vehicles. If neglected, it may cause a malfunction and serious damage to the vehicle. HKS will not be responsible for any damage or failure caused by installation on inapplicable vehicles.

### 2. Required Tools for Installation

The following tools are required to install this product to the vehicle.

- Wrench Set
- Socket Set
- Diagonal Cutters

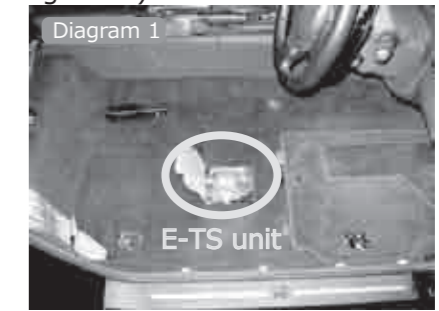
### 3. Disconnection of the Negative Cable from the Battery

- ① Open the window on both driver's and passenger's sides more than 3cm.

※ After disconnecting the negative cable from the battery, the partially down windows will not operate. If closing a door when a window is completely closed, the window may come in contact with the front pillar, which can cause damage to the pillar and/or window.

### 4. Removal of the Right Front Seat

- ① Remove the right Front seat.
- ② Make sure the E-TS unit is located underneath the seat. (Diagram 1)



### 5. Connection of the ATSC

- ① Disconnect the harness from the E-TS unit.
- ② Connect the provided Harness in between the E-TS unit and the removed harness.
- ③ Connect the Harness to the ATSC main unit.
- ④ Connect the provided Switch to the ATSC main unit.
- ⑤ Make sure the harnesses and the units are connected properly as shown in Diagram 2.



### 6. Mounting the ATSC

- ① Mount the ATSC main unit using the provided Double-sided Tape as shown in Diagram 3.
- ② Secure the harness using the provided Tie Wraps.



### 7. Mounting the Switch

- ① Determine the Switch mounting location. Do not mount the Switch where it can distract the driver and cause an accident. (Diagram 4)
- ② Mount the Switch using the provided Double-sided Tape.
- ③ Secure the switch harness.



- ① Reinstall all removed parts. Make sure the ATSC components do not come in contact with any other parts of the vehicle.
- ② Reconnect the negative cable to the battery.
- ③ Complete initialization of the power windows. See the procedures below. The same procedure is required for both sides.
  1. Make sure the ignition is off and close the door.
  2. Press the engine start/stop button to the "on" position.
  3. Fully open the window using the power window switch.
  4. Pull the power window switch upward (to the auto-up position). Hold pulling the switch up more than 2 seconds after the window is fully closed and stopped.

### Confirmation After Installation

Check the following after the installation process is complete.

1. Check the following BEFORE starting the engine.

Items to check	Checked
Make sure all installed components do not come in contact with other parts.	
Make sure all harnesses are secured properly.	
Make sure the negative cable terminal is	

2. Check the following AFTER starting the engine.

Items to check	Checked
Make sure the CEL does not come on.	
Make sure the CEL does not come on for the ABS, VDC, SLIP, KEY, Pop-up Engine Hood, etc. Make sure there is no excessive stress on any harnesses.	
After turning off the engine, make sure there are no loose parts.	

- Return this manual to the vehicle owner after installation is completed.

### Troubleshooting

If this product is not performing properly; check the following before contacting your dealer.

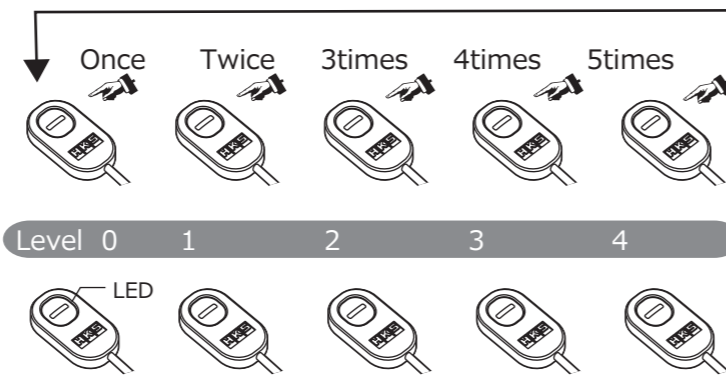
Items to check	Checked
Make sure all harness connectors are connected properly.	
Make sure the Coupler-on Harness is connected properly.	

- If the CEL comes on, make sure all harness connectors are connected securely.
- Other CELs (except the engine hood) will turn off once the correct values are recognized.
- If the CEL for the engine hood stays on, contact the Nissan dealer.

### Operation Manual

The front torque distribution level changes every time the switch is pressed as follows.

Press the switch



LED Flashes

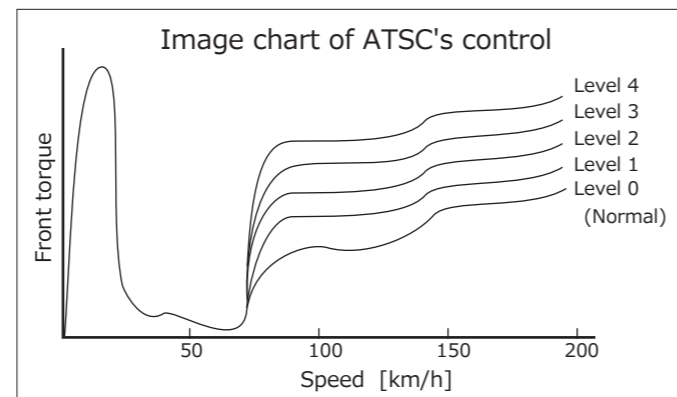
0 (LED is off) 1 2 3 4

The distribution level is 0 when the engine is started. As the switch is pressed, the front torque distribution level is changed from 1 to 4 levels. Pressing the switch 5 times returns to level 0.

As the level of the front torque distribution gets higher, the torque distributed to the front is higher. The number of LED flashes tells the distribution level. E.g.: The LED flashes 3 times when the distribution level is 3.

To control the ATSC front torque distribution, the following conditions must be fulfilled.

- Speed is more than 50km/h.
- The brake is not applied.
- No torque is applied to the front under factory vehicle control conditions.



ATSC's front torque distribution control adjusts the torque properly to the driving conditions; however, it does not evenly add torque to the front factory settings.

### Caution

- HKS will not be responsible if installation of this product voids the manufacturer's warranty.
- HKS will not be responsible for any damage to the engine and/or transmission caused by the use of this product.

- Remove this product when the vehicle needs to be inspected by the manufacturer.
- Drive safely. Follow the traffic rules at all times.
- When the ignition is "on", the "GT-R" logo on the ATSC main unit will blink for a few seconds. This is normal.

### Maintenance

### WARNING

- Do not use this product if any unusual noises or scents are detected. Consult your Authorized HKS Dealer immediately. Otherwise, it may cause electric shock or fire.

### Caution

- Make sure the ATSC and harness do not get wet to prevent malfunction and/or damage to the ATSC and/or vehicle.
- If work needs to be performed outside the scope of this manual, consult a professional.
- Do not use this product if unusual occurrences should occur. Consult with your dealer immediately.
- If any unusual noise, scents, and/or vibrations are noticed, stop using the product to prevent a fire and/or short circuit.
- Do not try to repair the product yourself. Consult with your dealer.
- If any unusual noises, scents, and/or vibrations are noticed while driving, please refer to a factory service manual.
- Maintenance of this product is necessary for driving safety.

### Product Specifications

- Operating Voltage..... DC10~16V
- Operation Temperature..... -20~75°C
- Maximum Electrical Power Consumption..... 4W

### Revision of Manual

Rev. Number	Date	Details
3-1.01	2011/3	1st Edition
3-1.02	2011/4	2nd Edition
3-1.03	2011/8	3rd Edition