# BSD Sensor User Manual

- **BSD 란**
  - BSD (Blind Spot Detection) is a rear-side warning system that visually and audibly communicates the presence or absence of a vehicle in a blind spot beyond the perceptible range of the driver to assist the driver in avoiding the risk of accident.
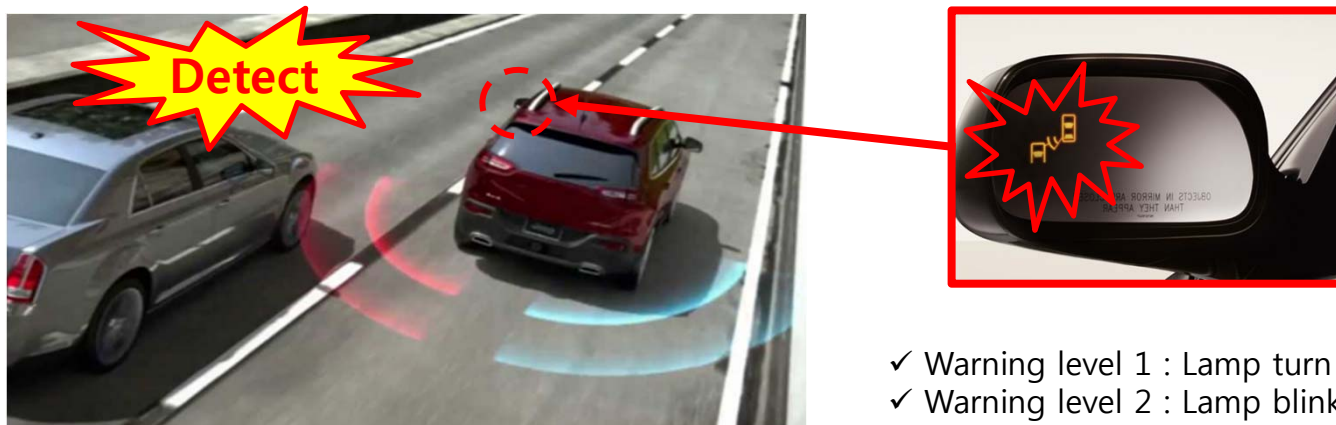
- **BSD Sensor 장착 위치**
  - The *following is described* the BSD sensor location of the vehicle. It is located behind of the bumper.

Slave Sensor

Master Sensor
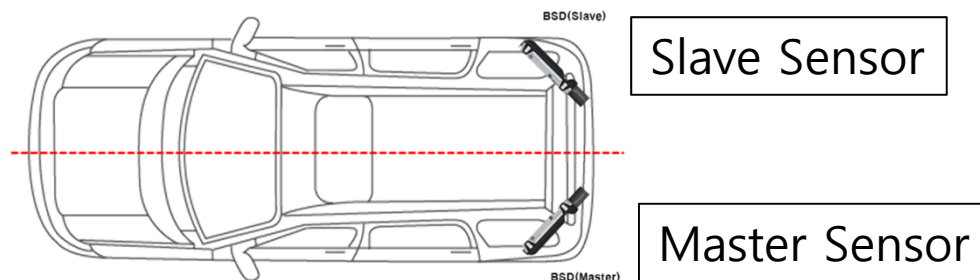
- **BSD Sensor 작동 원리**
  - The following is described the basic BSD sensor operating method.

✓ Warning level 1 : Lamp turn on
✓ Warning level 2 : Lamp blink and sound

- **Warning level**
  - Level 1 : When detect track able object at the blind spot area.
  - Level 2 : When detect track able object and user switch the turn signal lever.

- **BSD Sensor specification**
 - The following is described the specification of the BSD sensor.

Contents			Specification	Remark
Hardware	Main Processor (DSP)		TMS320F28335	32bit, 150MHz
	Memory	Flash	512KB	Internal
		SARAM	68KB	Internal
		Ext' SRAM	1MB	
	MMIC		SC3001.2	24GHz
	Warning	Level 1	O/Side Mirror ON	
		Level 2	O/Side Mirror Blinking + Sound	- 방향 지시등 점등 시 - Sound 는 차량 사양
	Operating Temperature		-30 ~ +85℃	
	Storage Temperature		-40 ~ +90℃	
Comm'	CANBUS		Master : CAN V2.0 2CH	500Khz
			Slave : CAN V2.0 1CH	500Khz
Dimensions			99.1 x 73.6 x 22.42	W x H x D
Weight			830g ± 10g	415*2
Operating Voltage			9V ~ 16V	
Max Operating Current			800mA@14.4V	Master : 320mA@14.4V

- **BSD RF Specification**

Contents	Specification	Unit
Frequency Band	24.05 ~ 24.25	GHz
Bandwidth	≤ 200	MHz
Radiation Power (EIRP) (Max)	12.7 (18.63)	dBm (mW)
Total Field of View	-8 ~ +8 (Elevation angle) -50 ~ +50 (Azimuth angle)	Degree
Near Field Beam Pattern	-45 ~ +45 (Elevation angle) -70 ~ +70 (Azimuth angle)	Degree
Cyclic time	< 60	mS
Minimum Range	0.5	m
Simultaneous Object Tracking	BSD/LCA : 32 ~ 128 RCTA : 15	Object

- **Detection Range**

< BSD // Extended BSD(LCA) >
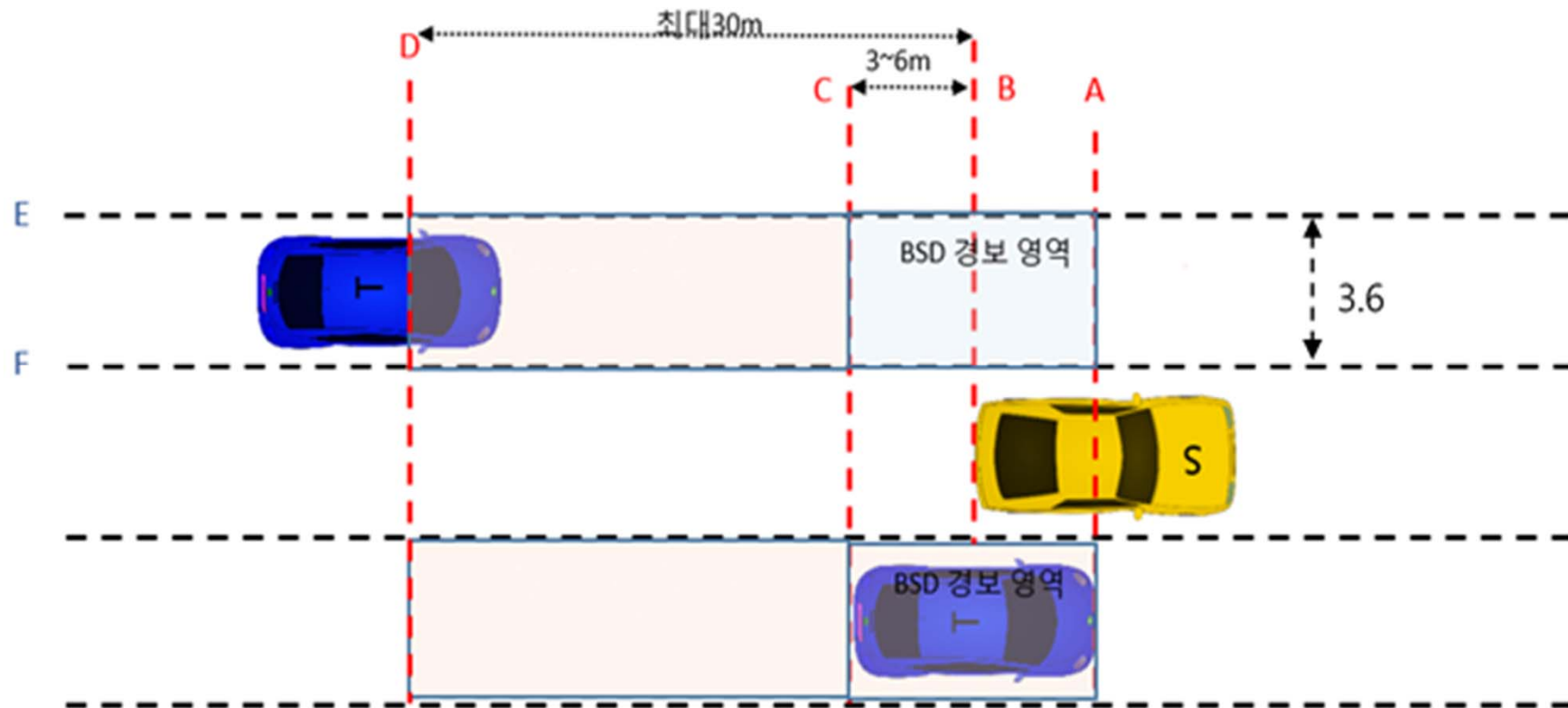
- **Detection Range**

< RCTA >
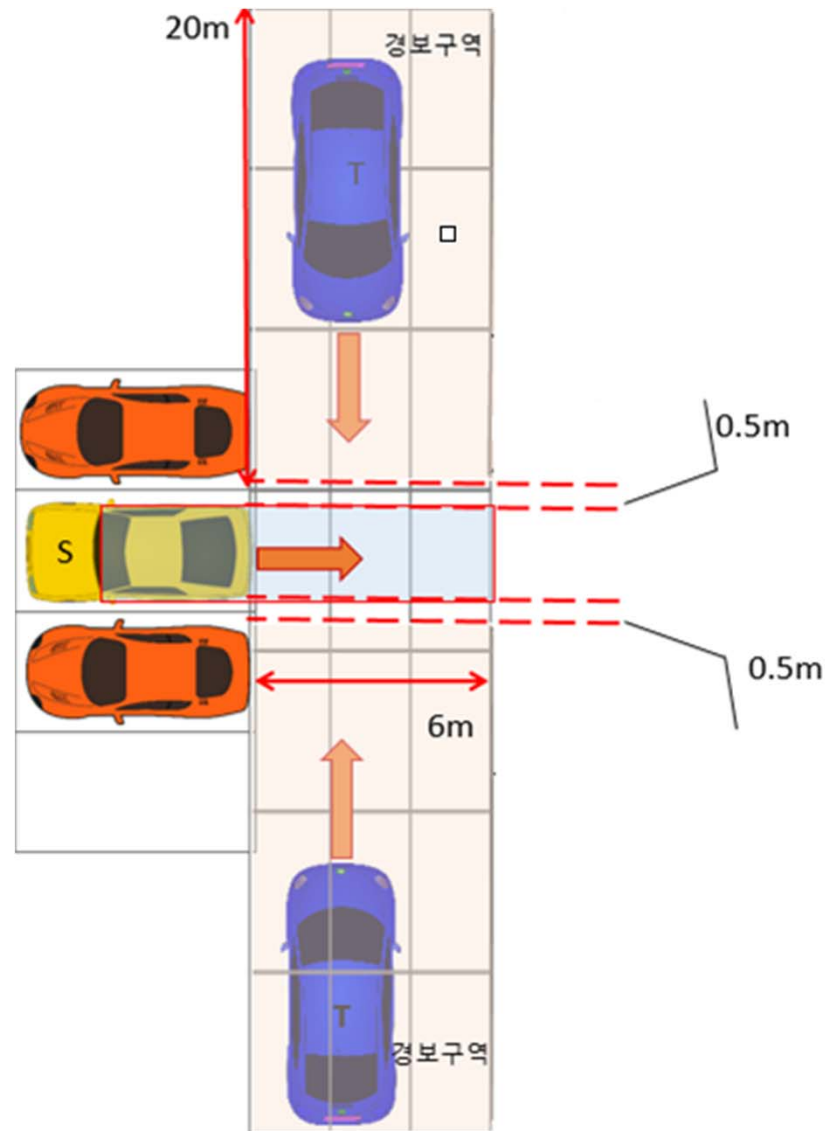
- **Warning ON and OFF condition**

< Warning ON >

| 1) 조건 | 2) 조건 | 3) 조건 | 4) 조건 |

< Warning OFF >

| 1) 조건 | 2) 조건 | 3) 조건 | 4) 조건 |
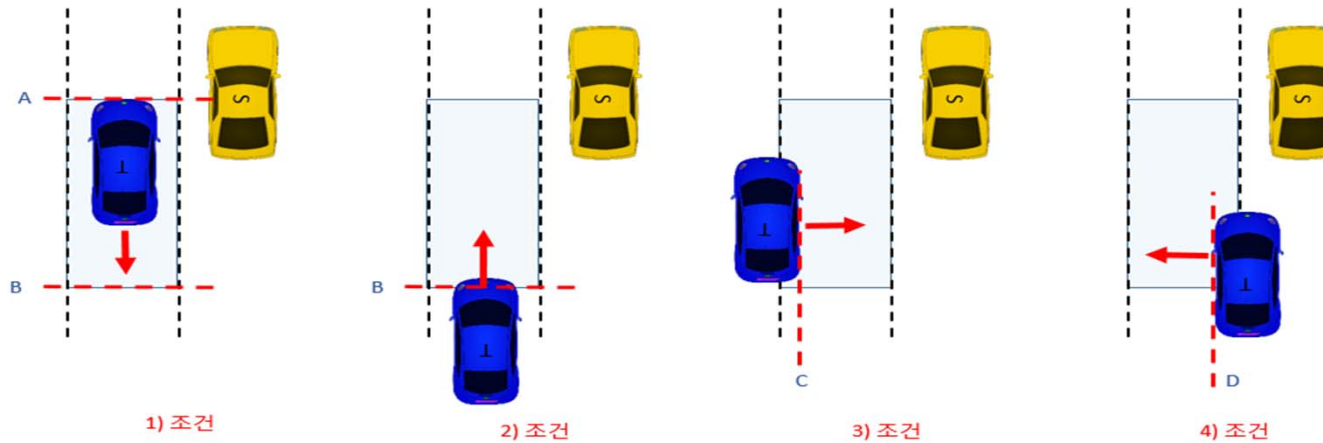
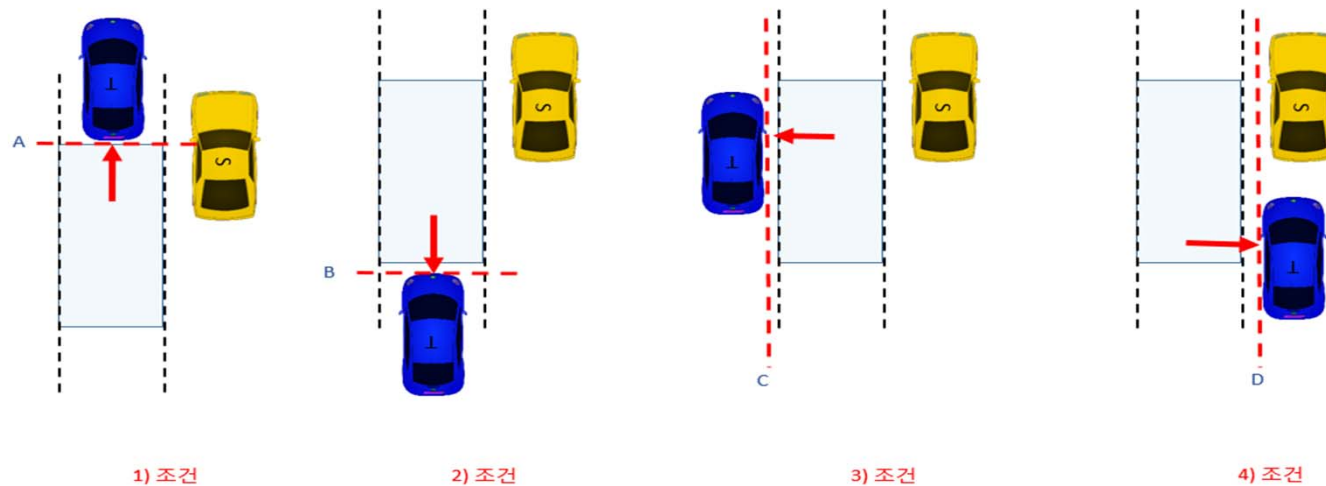**Notice:**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.
If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

—Reorient or relocate the receiving antenna.
—Increase the separation between the equipment and receiver.
—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
—Consult the dealer or an experienced radio/TV technician for help.
Any changes or modifications not expressly approved by the party responsible for compliance could void the authority to operate equipment.