

INFORMATION DOCUMENT NO. SCE-0004

RELATING TO FCC TYPE-APPROVAL  
AS SEPARATE TECHNICAL UNIT  
OF VEHICLE RF REMOTE KEYLESS ENTRY

CONTENTS LIST

Information Document	(5 sheets: including this sheet)
Attachment 1 - System diagram	(1 sheet)
Attachment 2 - Drawing of the transmitter	(3 sheets)
Attachment 3 - Drawing of the receiver	(4 sheets)

**WARNING**

Changes or modifications not expressly approved by the manufacturer could void the user's equipment.

<p>Title : Information Document</p>	<p>NO. : SCE-0004</p>
<p>Date : July, 26, 2000</p>	
<p>1. <u>GENERAL</u></p> <p>1.1. <u>Make</u></p> <p>SHINCHANG ELECTRICS Co., Ltd.</p> <p>1.2. <u>Name and address of manufacturer</u></p> <p>SHINCHANG ELECTRICS CO., LTD.</p> <p>734-2, Wonshi-dong, Ansan-si, Gyungki-do, Korea.</p> <p>1.3. <u>Model NO.</u></p> <p>REMOTE KEYLESS ENTRY SYSTEM FOR VEHICLE</p> <p>- TRANSMITTER : SKS-002TX</p> <p>- RECEIVER : SKS-002RX</p> <p>1.4. <u>Address of assembly plant</u></p> <p>SHINCHANG ELECTRICS CO., LTD.</p> <p>734-2, Wonshi-dong, Ansan-si, Gyungki-do, Korea.</p>	

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## 2. PRODUCT SPECIFICATION

### 2.1 SCOPE

2.1.1 KEY PART : TRANSMITTER is inside of the FOLDING KEY, and it sends the ROLLING CODE to the RECEIVER by Radio Frequency.

2.1.2 RECEIVER : It receives the ROLLING CODE and decodes that, and sends the DATA to ETACS\*.

\*ETACS : Electronic Time & Alarm Control System.

### 2.2 SPECIFICATIONS

#### 2.2.1 TRANSMITTER

ITEM	SPECIFICATION
RATED SUPPLY VOLTAGE	DC 3V
OPERATING VOLTAGE RANGE	DC 2.5 - 3.2V
OPERATING TEMPERATURE RANGE	-20 ~+60℃
STORAGE TEMPERATURE RANGE	-30 ~ 85℃
Modulation	AM
Frequency	315.00MHz
Code	Rolling Code(Hopping Algorithm)
Electric field strength	199 ~ 500 $\mu$ V/m (315.00MHz)
SPURIOUS RADIATION	-43dBm (MAX)
BATTERY LIFE	2 YEAR(Lithium 3V 1EA)

#### 2.2.2 RECEIVER

ITEM	SPECIFICATION
Rated Supply Voltage	DC 12V
Operating Voltage	DC 9 ~ 16V
Operating Temperature	- 30 ~ + 80℃
Storage Temperature	- 40 ~ + 85℃
StandBy Current	3.0mA (max)
Sensitibility	Min -98dBm

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### 3. USER MANUAL

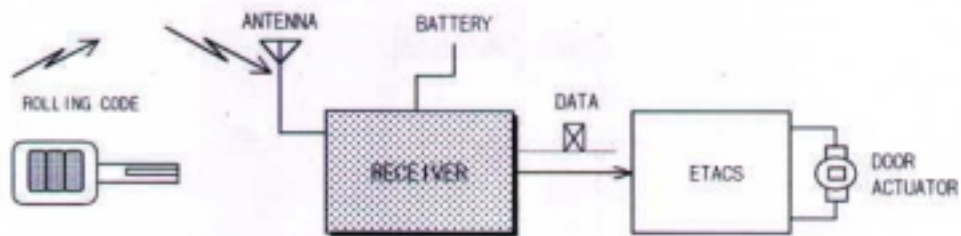
#### 3.1 NAME : REMOTE KEYLESS ENTRY SYSTEM

This RKE System is to be installed on motor vehicles as OE(= original equipment) item.

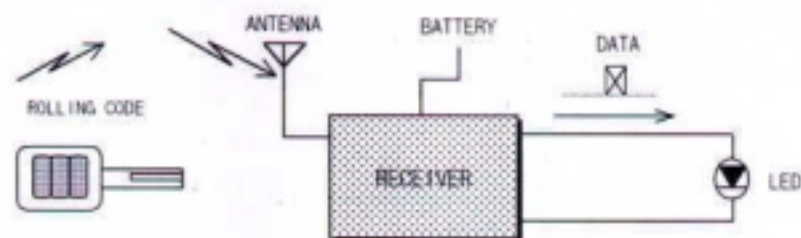
It is intended for auto-locking/unlocking of the door

#### 3.2 SYSTEMS CONSTRUCTION

##### SYSTEM IN VEHICLE



##### SYSTEM FOR TEST



\* Through the use of LED, operating state is displayed by LED.  
LED 'ON' means that DATA is sent to the ETACS.

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### 3.3 OPERATING SUMMARY

- ① By the driver of the vehicle, TRANSMITTER's button is pushed
- ② TRANSMITTER sends appropriate CODE by RF frequency.
- ③ RECEIVER gets the code and decodes it.
- ④ When Rx proves it to be the right code, Rx sends DATA(instruction) to the ETACS.
- ⑤ ETACS receive it, and drive the actuator.

The system has the function as follows.

\* Whenever DATA is sent to ETACS, LED is turned 'ON'.

#### 3.3.1 LOCK & UNLOCK

If LOCK or UNLOCK button is pushed for less than 1 sec, then TRANSMITTER sends the LOCK or UNLOCK DATA.

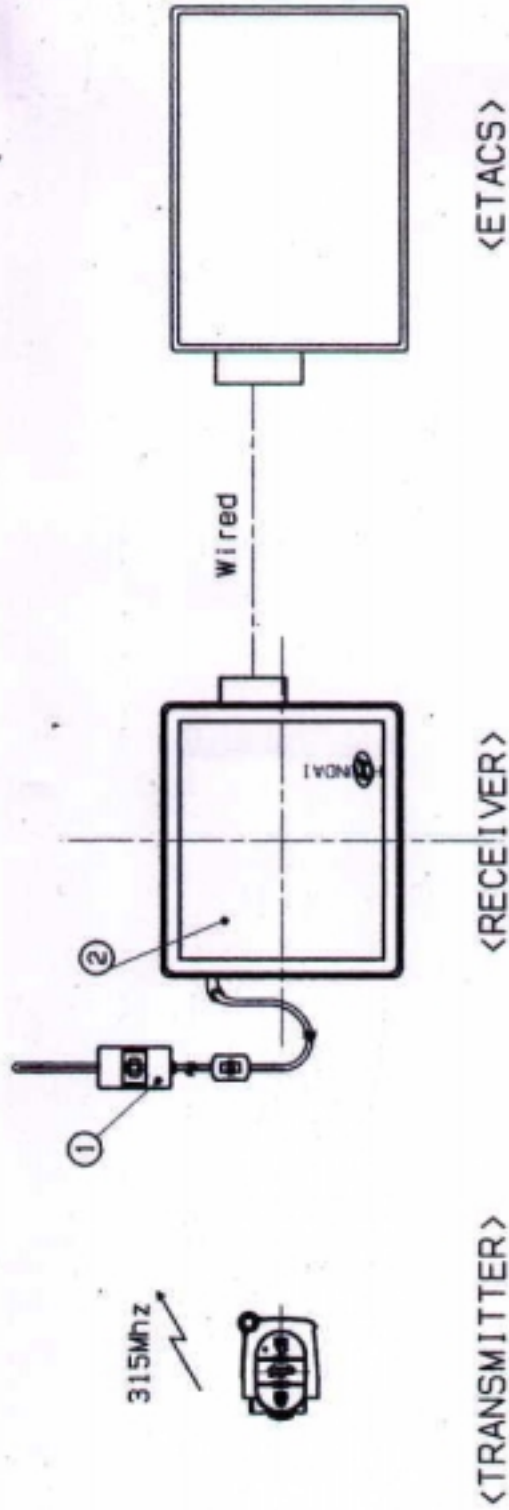
#### 3.3.2 TRUNK OPEN

If TRUNK button is pushed for more than 0.5 sec, then TRANSMITTER sends the 'TRUNK OPEN' DATA

#### 3.3.3 POWER WINDOW DOWN







If Unlock button has been pushed for 1.5 - 2.0 sec, then previously TRANSMITTER sends the 'UNLOCK' DATA and then send the signal of 'POWER WINDOW DOWN' to ETACS

NO.	PART NAME	QTY	REMARKS
1	ANTENNA COIL ASS'Y	1	
2	CONTROLLER UNIT SUB ASS'Y	1	



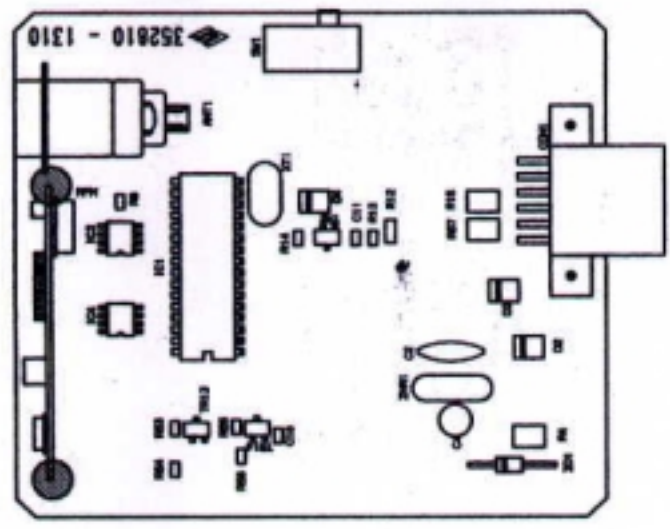
NAME	RKE UNIT
TITLE	SYSTEM DIAGRAM
SCALE	FREE

ATTACHMENT 3

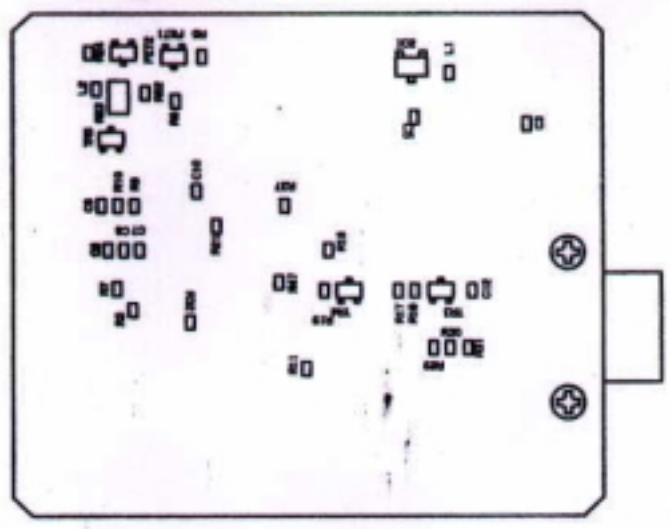
NO.	PART NAME	QTY	REMARKS						
									
									
									
									
									
									
			<p>UNIT SIZE</p> <ul style="list-style-type: none"> <li>① BATTERY</li> <li>② CLOCK</li> <li>③ LINE-TX</li> <li>④ LINE-RX</li> <li>⑤ VACANCY</li> <li>⑥ VACANCY</li> <li>⑦ VACANCY</li> <li>⑧ VACANCY</li> <li>⑨ VACANCY</li> <li>⑩ VACANCY</li> <li>⑪ CODE SAVING</li> <li>⑫ BND</li> </ul>						
			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">NAME</td> <td style="width: 33%;">RECEIVER</td> </tr> <tr> <td>TITLE</td> <td>EXTERIOR LAYOUT</td> </tr> <tr> <td>SCALE</td> <td>FREE</td> </tr> </table>	NAME	RECEIVER	TITLE	EXTERIOR LAYOUT	SCALE	FREE
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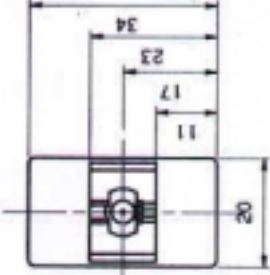
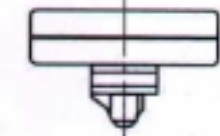
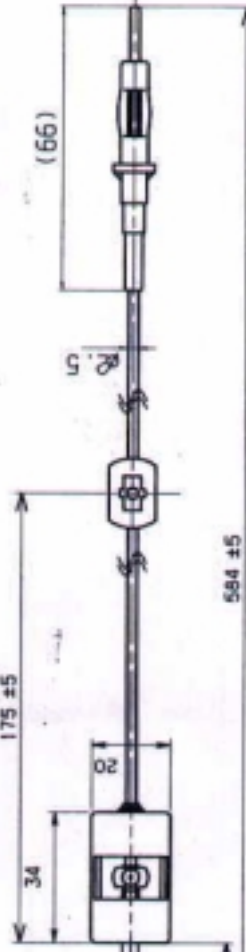
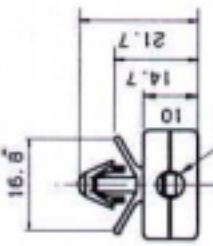

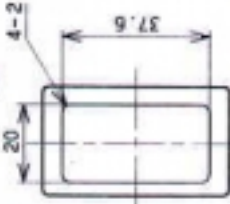

TOP SIDE



BOTTOM SIDE

NAME	RECEIVER
TITLE	PCB LAYOUT
SCALE	FREE

Attachment 1

NO.	PART NAME	QTY	REMARKS
			
			
			
			

NAME	ANTENNA ASS'Y
TITLE	EXTERIOR LAYOUT
SCALE	FREE