

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.

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

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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 μ 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)
Sensitivity	Min -98dBm

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3. USER MANUAL

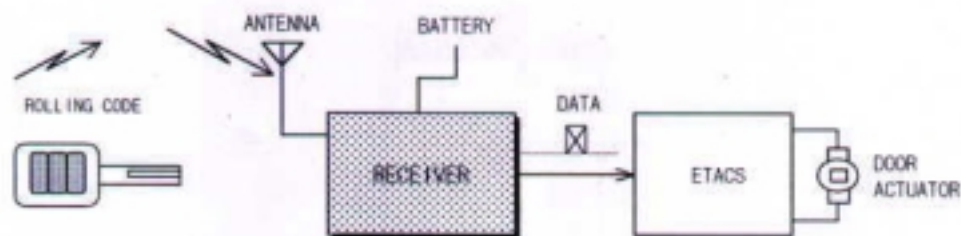
3.1 NAME : REMOTE KEYLESS ENTRY SYSTEM

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

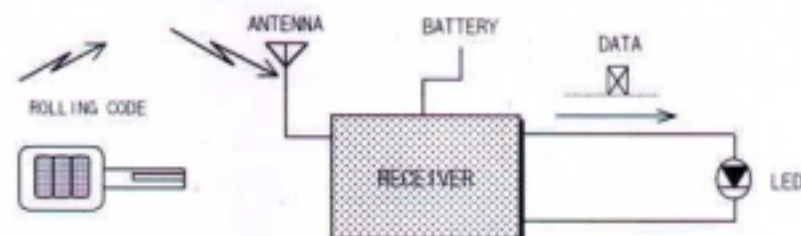
It is intended for auto-locking/unlocking of the door

3.2 SYSTEMS CONSTRUCTION

SYSTEM IN VEHICLE



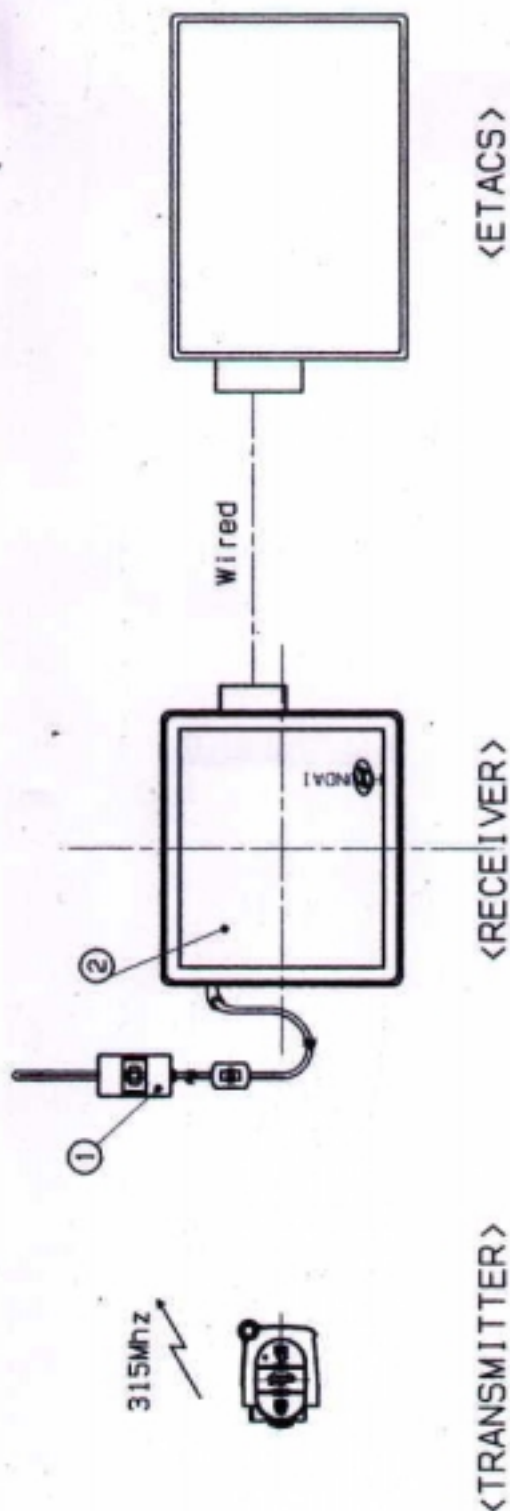
SYSTEM FOR TEST



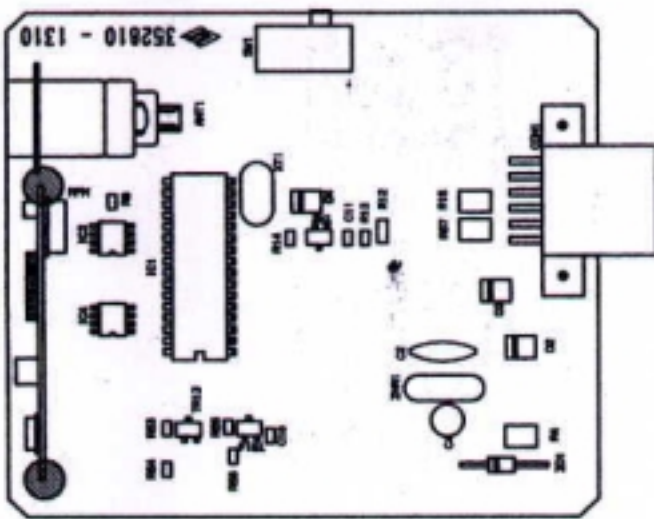
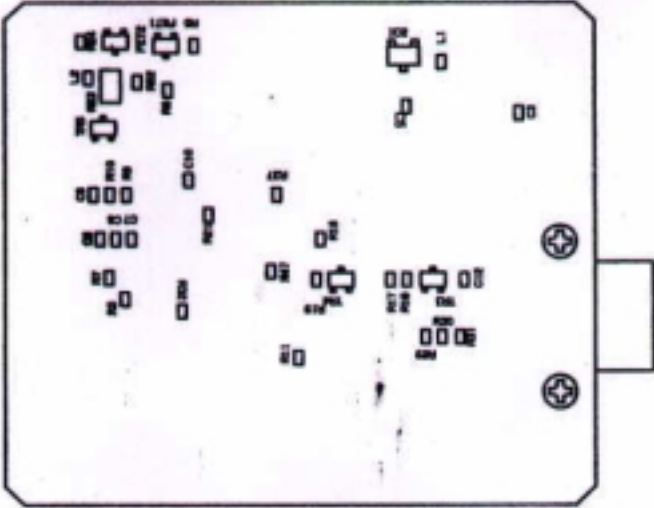
* Through the use of LED, operating state is displayed by LED.
LED 'ON' means that DATA is sended to the ETACS.

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3.3 <u>OPERATING SUMMARY</u> 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 sended 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	



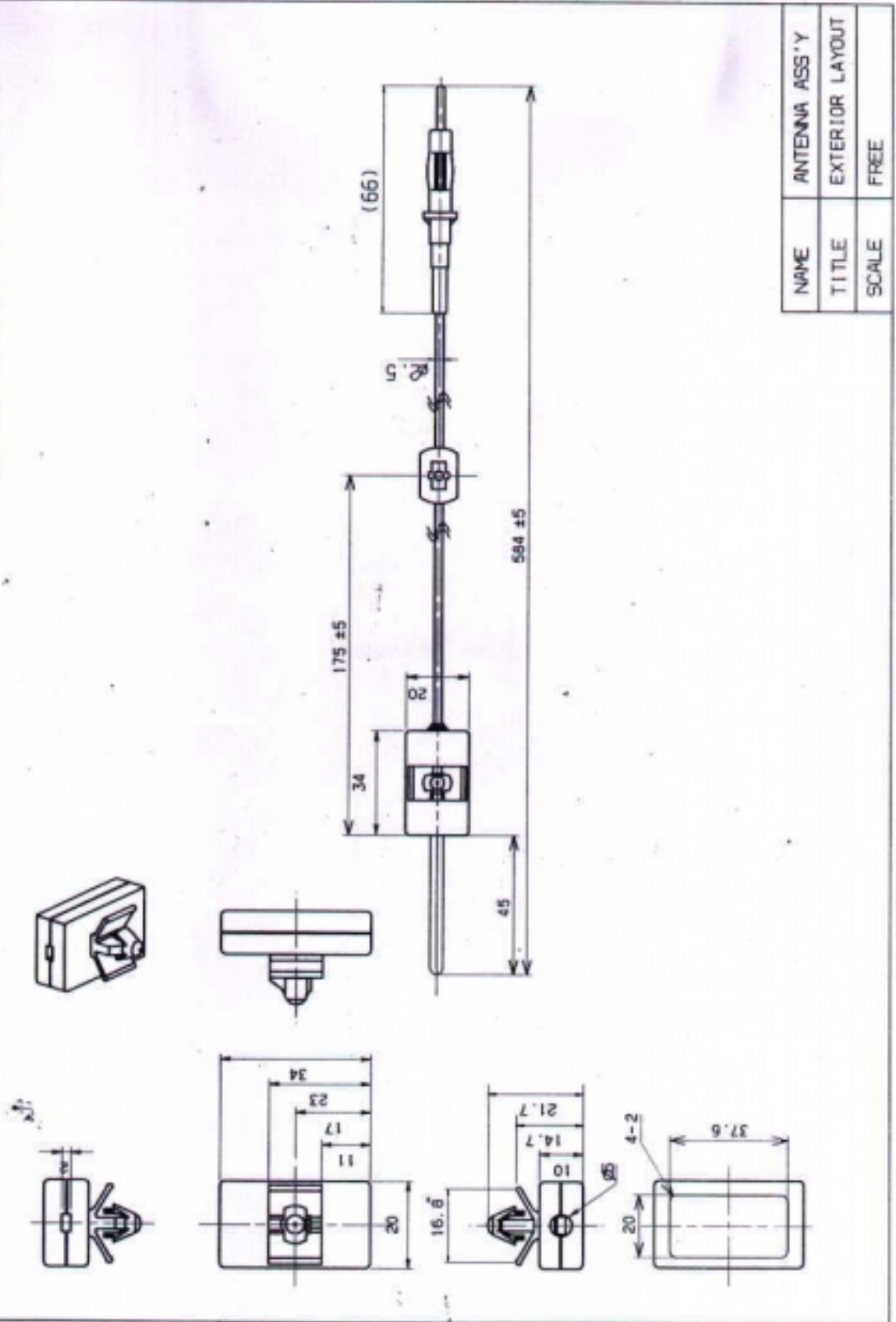
NAME	RCE UNIT
TITLE	SYSTEM DIAGRAM
SCALE	FREE

NO.	PART NAME	QTY	REMARKS
 TOP SIDE  BOTTOM SIDE			

NAME	RECEIVER
TITLE	PCB LAYOUT
SCALE	FREE

Attachment 1

NO.	PART NAME	QTY	REMARKS
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NAME	ANTENNA ASS'Y
TITLE	EXTERIOR LAYOUT
SCALE	FREE