

## **User Manual**

AS SEPARATE TECHNICAL	APPR	NO.						
AS SEPARATE TECHNICAL	UNIT	-	I					
			Title : RELATING TO CE TYPE-APPROVAL AS SEPARATE TECHNICAL UNIT OF VEHICLE RF REMOTE KEYLESS ENTRY IN BODY CONTROL MODULE					
목차								
Information Document		(5 sheets: Inclu	ude cover)					
Attachment 1 - System diagram		(1 sheet)						
Attachment 2 – Fob block diagram		(1 sheet)						
Attachment 3 - Schematic of fob		(Each 1 sheet)						
Attachment 4 – Layout of fob		(1 sheet)						
Attachment 5 - Part List		(1 sheet)						
RELEASED	A	LL PAGE	2019-12-12	H S LIM				
NO     REVISIONS       DATE     REFERENCE		PAGE DESIGNED	DATE CHECKED	CHANGER APPROVED				
2019-12-12	Sign	Signed	Signed	Signed				

Title :		NO.		
	Information Document	Date		
		SHT/SHTS : 2/11		
0.	GENERAL			
0.1.	Make			
	MOBASE ELECTRONICS Co.,Ltd.			
0.2.	Model No.			
	<ul> <li>Transmitter : MBEC3TX2004</li> <li>Transmitter : MBEC4TX2004</li> <li>Receiver : IBU(Intergrated Body control U</li> </ul>	nit)		
0.3.	Name and address of manufacturer			
	MOBASE ELECTRONICS Co.,Ltd. 100, Saneop-ro 156beon-gil, Gwonseon-gu, S Republic of Korea	Suwon-si, Gyeonggi-do,		
0.4.	Address of assembly plant			
	MOBASE ELECTRONICS Co.,Ltd. 100, Saneop-ro 156beon-gil, Gwonseon-gu, S Republic of Korea	Suwon-si, Gyeonggi-do,		

Title :	Information Document		NO.		
			Date		
				SHT/SHTS : 3/1	1
2.	PRODUCT SPECIFICATION				
2.1	Scope of RKE, Intergrated Body control	ol Unit			
2.1.1	Folding TX KEY : It has the RKE functions. Data is transmitted with radio frequency				
2.1.2	IBU(RX) : ECU is control the whole BCM funtion with RKE				
2.2	SPECIFICATIONS				
2.2.1	Transmitter				
	ITEM		SPECIFICATION		
	Rated supply voltage		DC 3V		

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Rated supply voltage	DC 3V
Operating voltage range	DC 2.5 ~ 3.3V
Operating temperature range	- 10 ~ + 60 $^\circ \!\!\! \mathbb{C}$ with Battery
Storage temperature range	- 30 ~ + 80 $^\circ C$ without Battery
Modulation	FSK
Frequency	433.92MHz
Code	Rolling Code(Hopping Algorithm)
Electric field strength	10mW (433.92MHz)
Battery life	2 Year(10Times/Day)(Lithium 3V 1EA)

## 2.2.2 RECEIVER

Item	Specification
Rated Supply Voltage	DC 12V
Operating Voltage	DC 9 ~ 16V
Operating Temperature	- 30 ~ + 80 ℃
Max Humidity	95%
Standby Current	Below than 5.5uA
Standby Current	(in alarm setting condition)

Title :		NO.	
Info	orm Information Document	Date	
		SHT/SHTS : 5/11	
3.	USER MANUAL - MBEC3TX2004		
3.1	ITEM : Remote Keyless Entry Transmitter		
	<ul> <li>This system is IBU and inculdes RKE.</li> <li>RKE in IBU system is intended for auto door lock or unlock or TRUNK in vehicle.</li> <li>This IBU system is to be installed on motor vehicles as *OE item.</li> <li>*OE : Original Equipment.</li> <li>*IBU : Body Control Module</li> <li>*RKE : Remote Keyless Entry.</li> </ul>		
3.2	SYSTEM CONSTRUCTION		
3.2.1	SYSTEM IN VEHICLE		
	Radio Frequency (433.92MHz)	NA BATTERY BECM	
3.2.2	SYSTEM FOR TEST		
<ol> <li>if press button on the transmitter, RF signal is transmitted and turns on the LED</li> <li>* It shows the status of operation through the LED used.</li> </ol>			

ANATEL Warning: Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados.



## FCC Information to User

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 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.

## Caution

Modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**FCC Compliance Information :** 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