

TWO WAY
CARF-1100B

(USER'S MANUAL)

UTEL CO., LTD.

**N6YUT-1100B
UTEL CO.,LTD
CARF-1100B**

**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 UNDESIRE OPERATION.**

**Caution : Any changes or modifications in
construction of this device which are not
expressly approved by the party responsible
for compliance could void the users
authority to operate the equipment.**

Please check the followings before use.

1. This manual explained mainly the CARF-1100 model functions.
2. Once the engine(for manual transmission) is started (by the key or remote controller), the engine does not stop even if the key is pulled out from the key box.
After the user gets off the car, the doors will be locked and the engine will stop. (confirmation is required)
3. When the program is completed, the program jumper (cable of 2 PIN connector) must be cut. If the wire is still connected, the remote controller does not work.
4. After reading this manual, please confirm function of this product (whether they correspond with directions written on this manual) If any problem is founded, please contact our agency or company

We do not have any reasonabilities for wrong operation coming from SET UP/SET UP program errors.

CAUTION : This product must be installed by a technician who is instructed by UTEL(or agency)and arbitrary installation is prohibited.

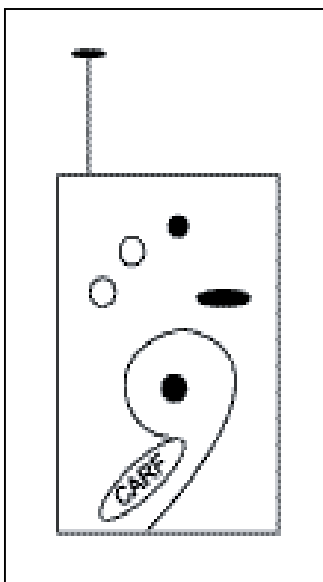
For the efficient use:

1. Codeless communication devices can be interrupted by near electronic waves and the territorial characteristics will have an influence on the communication distance.
2. For the efficient management of the car equipped with this product, please check the communication distance and if it is necessary the user can extend the distance by using the antenna.

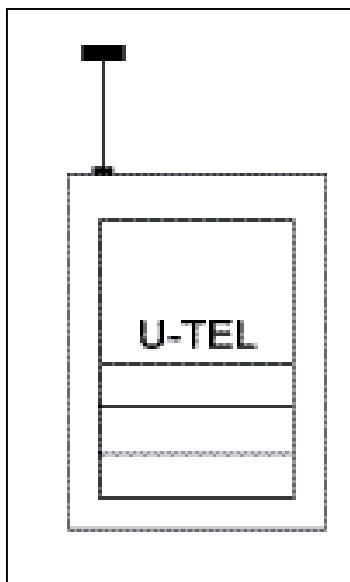
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1. Components

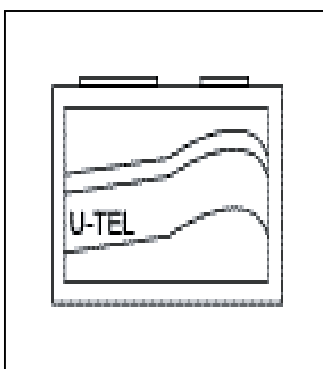
REMOTE (CARF-1100R)



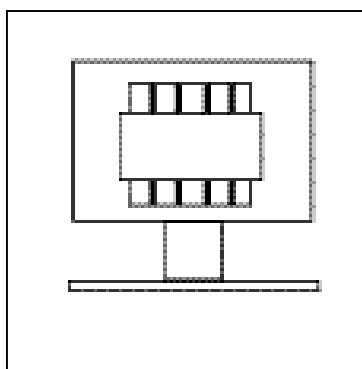
BASE MODULE (CARF-1100B)



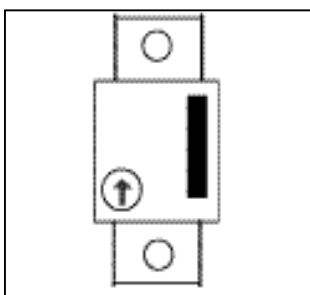
MAIN



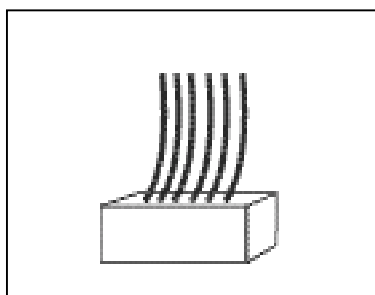
SIREN



SHOCK SENSOR



CABLE (4,6,8,10 pin connector)



2. Function of CARF-1100

1) CARF-1100

REMOTE CONTROLLED ENGINE START

EMERGENCY LIGHTING
AIR CONDITIONER AND HEATER OPERATION
DOOR LOCK/UNLOCK
VALET FUNCTION
AUTO RE-ARM
PANIC FUNCTION(EMERGENCY ALARM)
CONFIRMATION OF THE ALARM
TRUNK OPEN
KNOCK SENSOR
SHOCK SENSOR(IMPACT SENSOR)
DOOR OPEN ALARM
CONFIRMATION OF THE CAR CONDITION
CONFIRMATION OF THE COMMUNICATION DISTANCE
ENABLE AND DISABLE CHIRP

2) FUNCTION OF THE BUTTONS

- Short : press the button A beep accompanied by a green blink will occur once
(remote controller)
- long : press the button for more than 2 seconds.
The beep accompanied by a green blink will occur twice.

| Button | Button press | Door (CONDITION) | Function | CONFIRMATION SOUND (REMOTE CONTROLLER) |
|--------|--------------|-------------------|---------------------------------------|--|
| | SHORT | CLOSED | DOOR LOCK DOOR UNLOCK | 1 BEEP, 1 GREEN LED 2.BEEPS, 2.GREEN LEDS |
| | LONG | CLOSED | VALET ON VALET OFF | 1 DUAL-BEEP, 1 GREEN LED 1 BEEP-HIGH-LOW, 1.GREEN LED |
| | SHORT | CLOSED (LOCKED) | REMOTE ENGINE START ENGINE STOP | 1 CRIKET SOUND 1 GREEN LED 2 CRIKET SOUNDS 2 GREEN LEDS |
| | LONG | CLOSED | ARM DELAY TIME 4,10 SEC | ARM DELAY TIME AFTER 2SEC 4SEC→10SEC, 10SEC→4SEC |
| | | OPENED | CHIRP ON/OFF | SOUND ON/OFF AFTER 2 SEC |
| | SHORT | CLOSED OPENED | TRUNK OPEN | 2 DUAL-BEEPS 2 GREEN LEDS |
| | LONG | CLOSED (UNLOCKED) | KNOCK, IMPACT SENSOR | 1 BEEP 1 GREEN LED |
| | SHORT | CLOSED OPENED | CHECKING CAR CONDITION | DEPENDS ON FUNCTION |
| | LONG | CLOSED OPENED | PANIC ON | 1 BEEP 1 GREEN LED AFTER 2 SEC |

Confirmation sound will be heard from the remote controller after each button is pressed(A beep with a green LED blink) When it occurs, please remove your finger from the buttons.

(If you keep pressing the button, This set may operate another function)

Example) To lock the door, press "button□"of the remote controller. When the button is pressed. The beep accompanied by a green blink will occur once on the remote controller, then the same thing will happen to the car (The turn signal with a chirp will blink once.) This means the door is locked, After a little while the car will send the call back signal to the remote controller.(The beep with green LED blink)

CALLBACK ?

- When the button of the remote controller is pressed and the command is performed, this signal will be sent to the remote controller from the car to confirm that the command has been recognized.

□ 6 □

1)Function of the button

(1) Arm/Disarm(Door lock/Unlock)

1.When the "button □" is pressed, the beep will sound and the green LED will blink

once each on the remote controller.

2.The chirp accompanied by the turn signal blink will occur at the same time on the car, then the doors will be locked and the callback signal will be sent from the car.

3.When the "button□" is pressed once again, another beep and green LED blink will occur on the remote controller, but with the car, the chirp accompanied by the turn signal blink will occur twice),then the doors will be unlocked.(Callback signal will be sent once again-two beeps with two LED blink)

4. If you try to open the locked door with the key(not with the remote controller)or just by the force, the alarm will start and both the sound and yellow LED blink will arise 8 times on the remote controller. Right at this moment, if you press the "button □",the alarm will stop and if the "button□"is pressed again, then the car will be in the "disarm mode".

The button □ has the alarm function and the function of the auto engine-start reservation.

□The engine (for the manual transmission car)does not go off even if the key is pulled out from the key box. If you press the "button□"after you get off the car, doors will be locked and the engine will stop. And then, the car will be in the "arm mode" and "remote starting reservation mode".

□If the functions do not match with the above please contact the agency or our company because problems might happen to the system owing to the misinstallation.

(2) Valet on / off

Valet on/off

□It is the function to suspend this system from operation. If the "valet" is on, most of functions will be suspended except the "door lock/unlock". If it turns "valet off", every function of the system will operate again.

1 If the "button□"is pressed for more than 2 seconds when all doors are closed(A beep accompanied by a green LED blink will occur twice on the remote controller) then you will hear a chirp from the car and the turn signal lamp will blink 3 times. This shows the "valet" is on and the callback signal will be sent.

When the valet system is on, most of function will be suspended except the door lock/unlock.

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□If the same procedure as procedure □ is done, the "valet mode" will be off and the callback signal will be sent too.

Every function will operate again.

□ If you open the door by the key (in case you lose the remote controller or the battery is all used up), the alarm will sound for 30 sec. Just start the engine by the key to turn off the alarm.

□ To stop the engine, you get off the car (for the manual transmission), close the door and press the "button□".

The engine will stop and the doors will be locked and the car will enter the "arm mode" with the "remote engine starting reservation".

□ If the engine does not stop even if you followed the procedure □ (because of the mechanical problem) then press the "button□" for long to let the "VALET" function turn on. This will stop the engine and lock the doors. (If the engine does not stop continuously, this status indicates the door pin has a problem, so fix it at the near auto-repair shop.)

The VALET function is useful when you lend your car to another or when you repair the car or when you park your car at a parking lot where other person keeps your key.

2) Function of button

(1) Auto transmission car

When the auto transmission car is in the [p] or [n] position and doors are locked, the car will be in the remote controller engine starting reservation and the arm mode.

□ Remote-control engine start.

If you press button □ shortly, then a beep sound and a turn signal lamp blink will be made on the car. Callback signal will be sent and the engine will start after 5 sec. (diesel car takes 10 sec.)

After the engine is started, the car will have 3 chirp sounds and 3 turn signal lamp blinks. The same thing will occur on the remote controller by the callback signal. (After the callback, the turn signal lamp will blink every 7 sec.)

□ Engine stopping

The condition of engine is started, press button □ to stop the engine. (A sound and a blink will be made for both the car and the remote controller. The bugger will beep sound and the green LED will blink 2 times on the remote controller by the callback signal.)

(2) Manual transmission car

Every functions is same as those of auto transmission car except starting the engine with the remote controller.

The manual transmission car has to have auto-engine starting reservation process as follows.

□ Start reservation

As it is explained before, the engine does not goes off even if you pull out the ignition key while the engine is running. To have starting reservation, first pull out the ignition key, get off the car and close the door, and then press button □ to lock the door and turn off the engine.

The arm with starting reservation will be set. and callback signal will be made. (this process has to be done with in 20 sec.)

□ Cancel reservation .

□ By pressing the button □ (after pull out the key and get off the car) the engine will stop and the engine start reservation will be cancelled with disarm mode.

If you press the button □ again, the car will be in arm mode without starting reservation.

□ You can cancel the reservation when the door is locked and unlocked during remote engine starting.

□ When the engine is stoped, the start reservation will be cancelled if

you open the door and closed.

Please observe the reservation procedure using key to restore reservation.

□ 10 □

3) Function of button

(1) Trunk open

When the button □ is pressed until a beep sound and green LED blink comes out then the trunk will open and, the callback signal will be followed.

(2) knock sensor & Shock sensor on/off

1 If the button □ is pressed for more than 2 seconds in condition that car is in arm mode, then the knock sensor and shock sensor will be off.

A beep sound with a green LED blink will occur on the remote controller after a while. The above occurs once again.

The turn signal lamp will blink 3 times and callback signal will be followed.

□ If □ is repeated, the knock, and shock sensor will be on.

□ 11 □

4) Function of button

(1) Confirmation of the car condition.

- 1 If button □ is pressed, the user will receive a call back signal to be informed and the car condition.(A beep sound with a green LED blink will be made on the remote controller. A chirp sound with a turn signal lamp blink will be made on the car too.)
- 2 The callback signals, which The user can receive are the followings.(All of the signals will be received by the remote controller.)
 - Arm : A beep sound with a green LED blink.
 - Disarm : Two beep sound with two green LED blinks.

□ Remote engine start : Three beep sound with three green LED blinks.

□ Remote engine stop : Two-sounds with two green LED blinks.

□ Trunk open : Two beep sound with two green LED blinks.

□ Low battery warning : two beep sound with two red LED blinks.

□ Valet on/off : Lock (A beep sound), unlock(two beep sounds).

□ Error sign indicate : When any button is pressed, the remote waits callback. If there is no callback, remote sends an error signal.

Error signal is 3 beep sounds with 3 red LED blinks (The regular callback signal makes green LED blink but low battery warning and error signal make red LED blink)

□ Communication distance : If button □ is pressed, the car condition will be informed by the callback signal.

If the car is out of the communication distance error sign will be made(Three beep sounds with three red LED blinks.)

(2) Panic function

If the button □ is pressed for more than 2 seconds, a beep sound with a green LED blink will occur on the remote controller. After a while another beep sound and green LED blink will occur. The car will make a alarm for 30 sec with the turn signal lamp blinks. And the callback signal will be followed. Press the button□to stop the alarm.

5) Knock sensor

If the sticker attached on the left conner of the front glass of the car is knocked lightly, then eight beep sounds with eight yellow LED blinks will be made by callback signal. Then the driver will know that he/she is paged. To stop the callback signal on the remote, press any button shortly.

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6) Auto re-arm

1 If the door is unlocked by mis-contact of a button □after the door was locked a beep sound with a turn signal lamp blink will be made and then re-arm will work to lock the door after 10 seconds of mis-contact.

□ If you open the door and closed above situation, re-arm will be cancelled.

7) Enable/ Disable chirp

1 Disable chirp : Let a door opened, then press the button □ for a long time.(a beep sound with a green LED blink will be made. After a while another beep sound and green

LED blink will be made.)

This action will disable all the chirps from the car except 30 sec alarm.

☐Enable chirp : By repeating action chirp sound will be enabled.

8) Operation of A/C/Heater

To operate the A/C or the Heater beforehand, turn the switch on before getting off the car, then the A/C or the heater will work after two minutes since the engine has been started by the remote controller. This is only for the car with mechanical switch.

9) Cancel alert tone

1 Alarm will sound and the turn signal lamp will blink for 30 sec, in arm mode if you try to open the car with the key. Eight beep sounds with orange LED blinks are made on the remote controller by the callback signal.

(If the door is not closed, the above process will be repeated.)

2 If you press any button after closing the door, the alarm will stop. If the button I is pressed again, the alarm will be removed.

3 Alert tone can be cancelled by starting the engine with the ignition key when you cannot use the remote controller.

10) Low battery alarm

If the battery is low and the button is pressed, the remote controller will have the low battery warning alarm after performing the task(two beep sounds with two red light blinks.) Please change the battery right after the warning alarm is heard.

Example) If you pressed button I in the state of low battery to open the door, then a beep sound with a green LED blink on remote controller and two beep sound with two turn signal lamp light blinks will be made on the when the doors will be unlocked.

After a while a call back signal(Two beep sounds and two green light blinks) will be appeared on the remote and low battery warning alarm will be followed.

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11) Change of arm delay time

There is some delay time called arm delay time until the arm mode is set up after

the button☐is pressed.

The LED on the receiver ass'y is lighted continuously during arm delay time.

1 The arm delay has been adjusted to 10 seconds when it was shipped from the

factory. 10 second arm delay is used for the cars of which the room lamp goes out slowly when the door has been opened and closed.

- 2 Press the button for more than 2 seconds when the car is in a disarm mode and the door is closed.
And then, the arm delay time will be adjusted from 10 seconds to 4 seconds, vice versa.
- 3 If the system has been adjusted to 10 seconds of arm delay time the car enters the arm mode even if the room lamp lights up. But the siren built in the car will sounds and the turn signal lamp will blink after 10 seconds if the door has been opened.

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4. Installation

1) Check list of CARF series

Before installing the CARF series system in a car, first check the following points.

(1) Check the following conditions of the car

- 1.Engine ignition
- 2.Operation of heater & A/C

- 3.Operation of turn signal lamp
- 4.Operation of room lamp
- 5.Operation of door motor(Lock/Unlock of door)
- 6.The other electrical conditions

(2) Check the following conditions of the harness assy's connected in

the car

- 1.Connectors
- 2.Position of each wire

(3) Select suitable mounting positions for the main box and the siren

included in the CARF series system

(4) Make sure that the car is equipped with the door motor.

1)Connection and color code of main harness ass'y

To check the power supply of the following points, you can use the test probe which contains a lamp.

(1) Power supply(B+:Red)

Function : Power supply from the battery-When the battery is checked by the test probe, The probe lamp should be lighted steadily.

(2) Ignition1-IG1(Green)

Function : Power supply except start motor, heater, A/C and car stereo-The probe lamp should be lighted when the ignition key is in the "ON" position and the engine is started.

(3) Ignition2-IG2(White)

Function : Power supply of heater and A/C-The probe lamp should be lighted when the key is in the"ON"position and the probe lamp off when the engine is starting time.

(4) Start (Yellow)

Function : Power supply of start motor(alternator)- The probe lamp should be lighted when the engine is started.

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(5) ACC (Only applicable to some cars)

The probe lamp should be lighted when the ignition key is in the"ACC"position.

3) How to find wires(color and functions)

NOTE : Following functions can be checked by connecting probe lamp with exact wires.

(1) Door S/W (Orange):Negative trigger method

When door is opened, the room lamp comes on and DOOR-OPEN-INDICATOR on the gauge board located in front of car will be displayed.

Test lamp turns on when the room lamp is off and when room lamp is on test lamp is off.

(2) Door lock(Gray), Door unlock(Yellow)

(Cars equipped with the door motor)Door lock(Red stripe on gray) /Door unlock(Red

stripe on yellow) Cars of which the door motor has to be installed.

The CARF series have two kinds of wires for door lock/unlock function.

A door is locked and unlocked automatically by using the remote controller.

Test lamp turns on and off if door is locked and unlocked when the first key of the remote controller is used.

(3) Trunk open (White stripe on red)

The trunk can be opened by using the remote controller.

The lamp is turned on when the trunk switch is pressed.

(4) Light 1 & Light 2 (Black stripe on white)

Turn signal lamp blinks when the set is operating.

Test lamp blinks when the lever of turn signal lamp is located to upward or downward point.

This set has two wires for light(light1 & light2),which are operating independently.

Two wires can be checked when the lever of the turn signal lamp is upward or downward.

(5) L Terminal of alternator(Green)

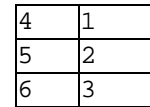
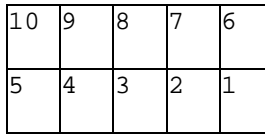
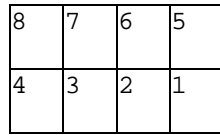
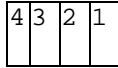
This function informs whether the engine is started or not.

You can see several conditions depending on the types of cars.

1. Test lamp grows dim when the ignition key in the "ON" position and it turns on brightly when the engine is started.
2. Test lamp is off when the ignition key is in "ON" position and, it lights brightly when the engine is started.
3. When the ignition key is in "ON" position, the probe lamp lights and comes off after a while. And then, test lamp turns on again when the engine is started.

4) Wiring diagram

INSTALLATION OF CARF-1000



1) WIRING DIAGRAM OF DEVICE SETTING (MAIN 6 PIN CONNECTOR)

- RED : + 12 V
- BLACK : -EARTH(GROUND)
- GREEN : IG 1
- EMPTY TERMINAL
- YELLOW : START
- WHITE : IG 2

(2) 10 PIN CONNECTOR(FUNCTION WIRES)

- BLUE : DOOR PIN(+)
- ORANGE : DOOR PIN(-)
- GREEN : GENERATOR
- WHITE/BLACK : FLICKER 1
- BROWN : SIREN
- RED/WHITE: TRUNK
- VIOLET : TRUNK IN
- GRAY : LOCK(WIRE FOR THE CARS THAT HAVE TO BE EQUIPPED WITH THE DOOR MOTOR)
- YELLOW : UNLOCK
- WHITE/BLACK : TURN SIGNAL LAMP

(3) 8 PIN

BASE COMMUNICATION MODULE BE CONNECTED TO CONNECTOR

(4) 4 PIN CONNECTOR (CAR WITH THE DOOR MOTOR)

- GRAY/RED : LOCK (LOCK CABLE OF CAR WITH THE DOOR MOTOR)
- EMPTY TERMINAL EMPTY TERMINAL
- YELLOW/RED : UNLOCK(UNLOCK CABLE OF CAR WITH THE DOOR MOTOR)

(5) 3 PIN CONNECTOR

SHOCK SENSOR

(6) 2 PIN CONNECTOR

PROGRAM LINE, AFTER THE INSTALLATION, PLEASE CUT OFF OR PULL OUT.

5) Program method

(1) program preparing work

- Connect all the connectors except the main connector.
- Of the above diagram, check if the black wire of 2 pin connector (which is the program jumper) is connected.
- If is not connected(used cars, a/s cars), connector it to 2 pin connector.
- After excuting the above steps connect 6 pin connector.
And then, the LED on the base communication module will be lighted.
This indicates the program is ready.

(2) Program method 1 (If one remote controller is used)

1 First program : Choose a button from the below selections to decide the starting time.

press the button until a beep sound is heard. A beep sound with A turn signal lamp blink will occur from the car. After a while, the remote controller will have three beep sound with three green LED blinks.

| | 1st starting | 2st starting | 3st starting |
|-----------------------------------|--------------|--------------|--------------|
| Button <input type="checkbox"/> : | 0.7 sec | 1.1 sec | 1.5 sec |
| Button <input type="checkbox"/> : | 1.1 sec | 1.1 sec | 1.1 sec |
| Button <input type="checkbox"/> : | 1.5 sec | 1.5 sec | 1.5 sec |

2 Second program : Choose a button from the below selections. to decide the type of oil press the button until a beep sound is heard. two beep sound with two the turn sign lamp blinks. will have three beep sound with three red LED blinks.

Button : Applicable for the gasoline engine cars.

Button : Applicable for the diesel engine cars.

3 Third program : Chose a button from the below selections. Follow the steps just like the first and the second programs. Programming is completed after beeps and blinks.

Button : Manual transmission car.

Button : Auto transmission car.

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(3) Program Method 2 (If two remote controllers are used.)

1 First program : Perform exactly the same procedure as the program method 1(first program) with the remote controller 1.

2 Second program : perform exactly the same procedure as the program method 2(second program) with the remote controller 2.

3 Third program : Chose one remote controller and follow the same procedure as

the program method □ (third program)

- After the third program is made, all of the programming process will be completed.
- If all of the programs are done, please cut out the black wire of the 2 pin connector. (the car will have three beep sounds with three directional light blinks and the receiver lamp will be turned off.)
- After excuting the above □ □ □ steps check if all the functions are working correctly, then all the works are done.

WARRANTY

This product has passed through the thorough quality control and the close examination.

If there is any manufactural defect or spontaneous trouble, call our company

or agent. We will repair it without extra charges.

GUARANTEE INFORMATION

1. Guarantee period is 12 months from the day of purchasing.
2. But, we receive fee for the repairing in the following cases.
 - In case that the guarantee-period of free charge is over
 - In case that the product is out of order because of careless using
 - In case that it is a hindrance by natural calamity
 - In case that it is a hindrance by inadequate repair, or change of inner-structure
3. The standard of reward in repairing the product, exchange and refund follow the consumer-damage-reward-act composed by the Economic Planning Board.
4. The retention period of component parts are 5 years after the cease of product.

Note : Please make sure that all of above form has been filled out.

| | | | | |
|----------|---------|--|-----|--|
| DATE | | | | |
| CUSTOMER | NAME | | TEL | |
| | ADDRESS | | | |
| SHOP | NAME | | TEL | |
| | ADDRESS | | | |
| SERVICE | DATE | | | |

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SPECIFICATIONS

1. GENERAL

- ANTENNA : DIPOLE ANTENNA
- FREQUENCY RANGE : 447.6375MHz

- MODULATION MODE : F2D
- COMMUNICATION MODE : 1CH HALF DUPLEX
- POWER SUPPLY : DC +5V
- CHANNEL SPACE : 12.5KHz
- OPERATING TEMPERATURE : -20°C ~ +60°C
- DIMENSIONS : 57.4 (H) * 38.7 (W) * 15 (D)

2. ELECTRICAL

1) Transmitter

- OUTPUT IMPEDANCE : 50Ω
- MODULATION METHOD : CRYSTAL MODULATION
- FREQUENCY STABILITY : ±0.0005%

2) Receiver

- RECEIVING METHOD : SUPER HETERODYNE
- IF FREQUENCY : 10.7MHz, 455KHz
- FREQUENCY STABILITY : ±0.0005%
- OUTPUT IMPEDANCE : 50Ω