

# MULTISAFAER VU USER MANUAL

(Installation and precautions)

KCC cert. no. MSIP<sup>®</sup> - REM-XFT-MULTISAFAER2

## Multisafer VU - Features and functions

1. Blackbox cut-off voltage value setting
  - Easy set up of operational voltage of main battery through display
  - cut off value from 11.5V to 12.5V (set per a 0.1V)
2. Blackbox cut-off time set-up
  - Easy set up of main battery cut off timer through display
  - cut off time from off, 1 ~ 72 hours (set per 1 hour)
3. Alarm on
  - Blackbox on at desired time through alarm on function
  - Alarm on time from off, 1~72 hours (set per 1 hour)
4. Multi on/off
  - Power on/off setting in parking monitoring mode and auto power on in parking monitoring off mode when start driving.
5. Cable length and character auto learning function
  - Prevent malfunction of device by calculating the error value caused by different cable length
6. Cable error value display function
  - Display the error value of cable when press the center button two times.
7. Cut-off voltage value auto adjustment in low temp.
  - In low temp. high voltage is required because battery efficiency can be decreased.
8. Alarm function
  - When ACC On (from P-On & ACC Off), display all the occurred event in parking monitoring mode (voltage cut-off, timer cut-off, impact etc)
9. Useful information display
  - Display battery voltage / clock / temperature / event alarm etc...
  - Driver can adjust the brightness level (1~4 level) and display time (1~3 level)
  - Condition information : Mode condition, Cut-off value, Timer, used voltage etc...
10. Blackbox forced off function
  - According to the situation, user can switch off / or switch on the blackbox by pushing center and sub button at the same time for 3 sec.

## Precautions on installation

- Connect multisafer after complete hardwiring and installation of your blackbox.  
(for adjusting black box cut-off error value)
- When connecting multisafer, device will switch on in 40 sec. of setting time.  
(Do not change voltage (engine start and stop).
- According to the car model, some time can be needed to cut-off ACC power.
- Install multisafer in engine off condition.
- If it is difficult to install by your own, please seek professional installation.
- Battery condition and temperature can affect the performance of multisafer.
- According to environmental change, some gap can be occurred in cut-off voltage.
- Avoid long time using without driving and pay attention to discharge in winter.
- If any error occurs during operation, disconnect the power connector

**MULTISAFER - components, wiring, box components**

**Component name**

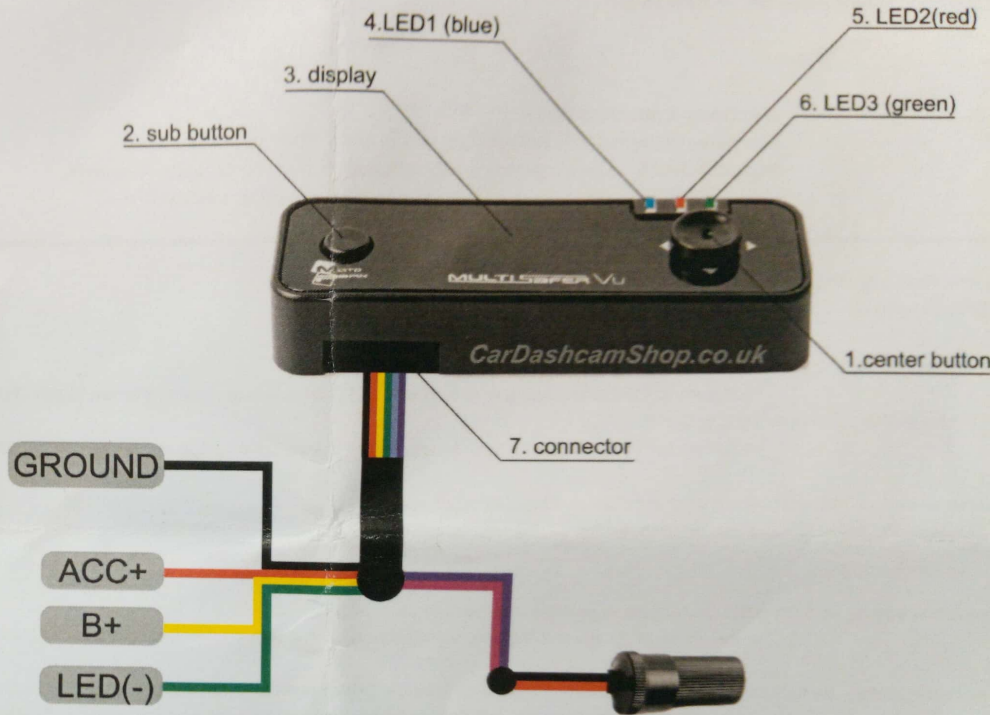
1. center button
2. sub button
3. display
4. LED1(Blue)
5. LED2 (Red)
6. LED3 (Green)
7. Connector

**Wiring**

1. Black - ground
2. Red - ACC+
3. Green - LED(-)
4. Yellow- B+
5. Violet (Blackbox Connector +)
6. Blue (Blackbox Connector -)

**Box contents**

- Main body
- Cable
- Bracket
- Double side tape



**MULTISAFET VU - specification / LED feature**

Working voltage	12V (9V~17V)
CH1 Max. rated current	2A MAX.
Security Max. rated current	1.5A MAX (- control)
Security LED working voltage	until under 12V of main battery
Current consumption after cut off	1.5mA MAX
System operating power source	main battery
Temp. meter degree of precision	10%
Clock degree of precision	1min. / month
Cut-off count range	-99Hr MAX
VOLT_METER degree of precision	0.15V
Cut-off voltage degree of precision	0.1V

**LED in main body**

Blue led - Security LED, Parking monitoring condition when ACC Off  
Red, Green LED : ch1 (red), (green) condition indication  
Parking mode and driving mode, ACC On and ACC OFF indication  
LED off : ACC off in driving mode (P-off)  
1 time blink : ACC off in parking mode (p-on)  
2 times blink : ACC on in parking mode (P-on)  
LED on : ACC off in driving mode (P-off)  
Red and green LED cross blink : Alarm set condition in ACC off and driving mode


**Multisafer vu - operating manual**

**1. Button operating manual**

Center button and sub button can be operated by short press (one button), two times press (two button) and long press (long button)

**2. Main button**


**UP button operation :**

 One time pushing CH1 mode condition indication->CH1 Cut off voltage value->  
CH1 cut off timer value->remained cut-off timer value->Temp.->Clock  
(LONG KEY) Long time pushing CH1 MODE change : PARKING ON MODE <-> PARKING OFF


**DOWN button operation**

(LONG KEY) One time pushing CH1 mode condition indication->Clock->Temp. ->Remained cut-off timer value ->  
CH1 cut off timer value ->CH1 Cut off voltage value  
Long time pushing CH1 MODE change : PARKING ON MODE <-> PARKING OFF

**Left button**

 Basic function : Decreasing LED brightness  
In temp. mode : Decrease each 1 degree(5 degree level) from current temp.  
In clock mode : Time setting

**Right button**

 Basic function: Increasing LED brightness  
In temp. mode : Increase each 1 degree(5 degree level) from current temp.  
In CENTER position, will be short beep sound.)  
In clock mode : Time setting

**Center button operation (Center pushing)**

(SHORT KEY) One time pushing Main battery voltage indication ->Current mode ( volt meter, temp. clock)  
Long time pushing Enter to set up mode  
Two time pushing Display LOSS VOLTAGE of CH1

**3. SUB button**

one time pushing MAIN battery voltage indication ->Current MODE  
Long time pushing Relearning function start

**4. Special KEYS**

SUB+Center button pushing over 4 sec. -> Blackbox force ON / OFF  
SUB+ left button pushing over 4 sec. -> Initializing

**MULTISAFER VU Set up**

1. Set up mode start
2. Set up mode change
3. Setting

Push center button long time  
After move to desired menu by left/right button, push center button one time  
Set up the desired value by up, down, left, right button, press center button one time.  
There is no button pushing during 10 sec. after setting, the set up mode will be terminated after saving.

SAMPLE



SAMPLE

Voltage/Timer setting[CH-1] <=> Time adjust[CL-R] <=> Security mode setting[SECU] <=>

Alarm ON setting[AL-T] <=> Buzzer setting[bEEF] <=> Display setting[diSp]

Voltage/Timer setting[CH-1]

CL-V => center button => After setting 11.5V~12.5V

=> Return to CH-1 after saving with buzzer sound [Saving set-up value and return to KEY LELVELO when no button operation after change setting]

CL-t => center button => After setting 1Hr~72Hr

=> Return to CH-1 after saving with buzzer sound [Saving set-up value and return to KEY LELVELO when no button operation after change setting]

Time adjustment

CL-R => center button =>center button pushing after setting CL-5~ CL05

=> Return to CL-R after saving with buzzer sound [Saving set-up value and return to KEY LELVELO when no button operation after change setting]

=> 1level : 40sec./1month adjustment function.

Security setting

SECU => center button => S-OFF(off), center button pushing after setting CL~CL4

=> Return to SECU after saving with buzzer sound [Saving set-up value and return to KEY LELVELO when no button operation after change setting]

Alarm on setting

AL-T => center button => A-OFF => center button pushing after setting by UP, DOWN button(hours) and LEFT, RIGHT(minutes)

=> Return to AL-T after saving with buzzer sound [Saving set-up value and return to KEY LELVELO when no button operation after change setting]

=>Operating condition : ACC OFF & CH1 P-OFF or Cut off situation by timer, red and green LED cross blinking.

=>Display condition when setting :

Segment : In clock mode, AL-T time display after display clock.

LED : ACC OFF & P-OFF(in timer cut off condition)- Red and green LED corss flashing.

Buzzer setting

Beef => center button => center button pushing after on / off setting

=> Return to SECU after saving with buzzer sound. [Saving set-up value and return to KEY LELVELO when no button operation after change setting]

Display setting

diSp => center button pushing => center button pushing after setting U-off, A-on A-off

=> Return to SECU after saving with buzzer sound [Saving set-up value and return to KEY LELVELO when no button operation after change setting]

U-off : Display off after 30 sec. in power on condition. (Display on in thermometer , clock mode.)

ALOn : Display continuous on in ACC ON condition

ALOF : Display off after 30 sec. when no button operation condition in ACC ON.

MULTISAFER VU - SET UP / Alarm set- up / Display Indication

Detailed set-up summary

Detailed set-up							
Button LEVEL1	CH-1		CL-A	SECU	AL-T	beep	DISP
Button LEVEL2	C1-U	C1-T					
Button LEVEL3	no_b	72HR	CL05	SL-4	A-OF	On	U-OF
	12.5U	71Hr	CL04	SL-3	23:00	OFF	ALON
	12.4U	70Hr	CL03	SL-2	22:00		ALOF
	12.3U	~	CL02	S-1	~		
	12.2U	14Hr	CL01	S-OF	13:00		
	12.1U	13Hr	CL00		12:00		
	12.0U	12Hr	CL-1		11:00		
	11.9U	11Hr	CL-2		~		
	11.8U	~	CL-3		02:00		
	11.7U	2Hr	CL-4		00:00		
11.6U	1Hr	CL-5		A-OF			
11.5U	OFF						
Button LEVEL2	C1-U	C1-T					
Button LEVEL1	CH-1		CL-Aa	SECU	AL-T	beep	DISP
Basic setting value							

Alarm on time set-up

- Enter to set-up menu and set up desired time in AL\_T(Alarm) mode
- Applying in Parking mode released condition and cut -off by timer condition before set up time.
- The set up time applied continuously
- Power off set by Alarm on condition will comply voltage cut-off value and timer value

Display indication	Information
LOAD	Blinking in initial installation condition. (Push sub button long time for re-setting)
<- Ab-U+voltage value	MAIN BATTERY voltage
<--- CH-1 + P-OFF	CH1 Driving mode - pop up during 5 sec.
<--- CH-1 + P-ON	CH1 parking monitoring mode
<- CH-1 + set-up voltage	CH1 cut-off voltage
<---Tr-1 +set-up time	CH1 cut off timer
H-OFF	CH1 time setting off condition
12.1r (r flickering )	CH1 remained timer set up time indication
25C	temp. indication
17.32 ( . flickering )	time indication
no_b	In under 8V of battery voltage condition
AL-ON	ALARM ON condition
CH-1	CH-1 set-up
CO-U	CH-1 cut-off voltage set up
CO-t	CH-1 cut off timer set up
CL-A	Adjust error value of clock (40sec./month)
SECU	Security led mode (4 times blinking after preceive external impact)
S-OFF	Do no use security mode
SL-1	security LED 1 time blinking
SL-2	security LED two times blinking
SL-3	security LED slow blinking
SL-4	Mixed flickering SL-1~SL-3 mode
AL-t	ALARM ON time set-up (Blackbox on)
A-OFF	Alarm OFF
bee p	Beep sound (on/off)
disp	Display adjustment in ACC ON
U-OFF	Off voltage condition after 30 sec. in ACC ON
ALON	Off voltage condition after 31 sec. in Alarm On
ALOF	Off the previoues mode after 30sec. when ACC ON
<--CU-1+time	cut off by by voltage cut off after (time) later
<--Ct-1+time	cut off by alarm cut-off after (time) later
<-CH-1 + OFF	Parking off condition indicate in ACC OFF
<-CH1 + OFF	CH1 Parking off condition in ACC OFF
<- LOS1 + voltage	Loss voltage in CH-1 wiring
b-OFF (flickering )	Blackbox forced off condition
b-ON	Return from blackbox forced off condition (blackbox on)
□ F	Memory initializing