

RCE Europe HS-T0421

INSTRUCTIONS

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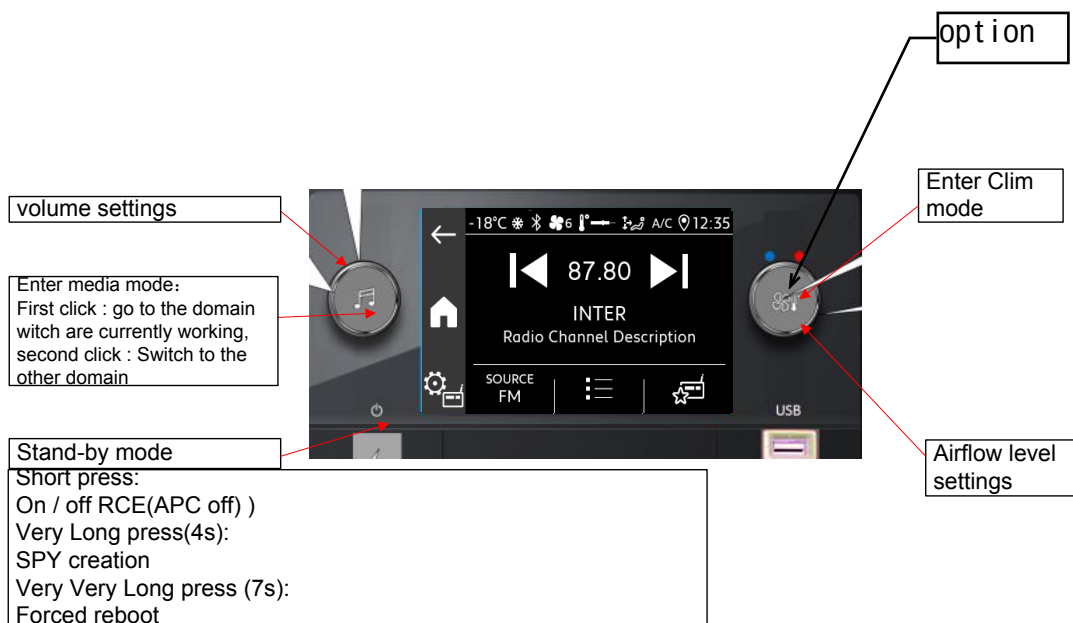
1. Precautions

Read and understand all instructions before you use the device. If damage is caused by failure to follow instructions, the warranty does not apply.

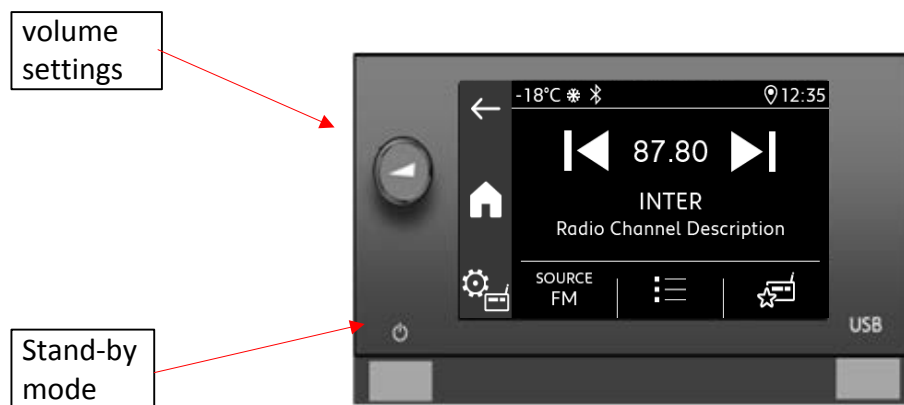
- Use of controls or adjustments or performance of procedures other than herein may result in hazardous radiation exposure or other unsafe operation.
- The device is designed for negative ground (earth) 12VDC operation only.
- To reduce the risk of traffic accidents, do not operate the device too often when driving.
- To ensure safe driving, adjust the volume to a safe and comfortable level.
- Improper fuses can cause damage or fire. When you need to change the fuse, consult a professional.
- Use only the supplied mounting hardware for a safe and secure installation.
- To avoid short circuits, do not expose the device, remote control or remote control batteries to rain or water.
- The device shall not be exposed to dripping or splashing.
- Do not place any sources of danger on the device (e.g. liquid filled objects, lighted candles).
- Never insert objects into the ventilation slots or other openings on the device.
- To avoid exposure to laser radiation, do not disassemble the device.
- Risk of damage to the screen! Never touch, push, rub or strike the screen with any object.
- Clean the device with soft, damp cloth. Never use substances such as alcohol, chemicals or household cleaners on the device.
- Risk of swallowing batteries! A coin type battery is included, which can be swallowed. Keep the battery out of reach of children at all times!

2. car entertainment system

2.1 Overview of the main unit

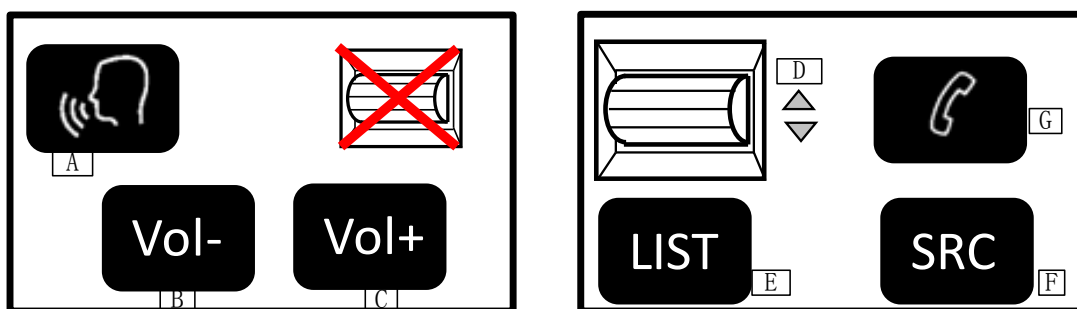


Or



2.2 Overview of the remote control

There are five type of remote control panel and three other button are TBD



A:Voice recognition

B: Volume down

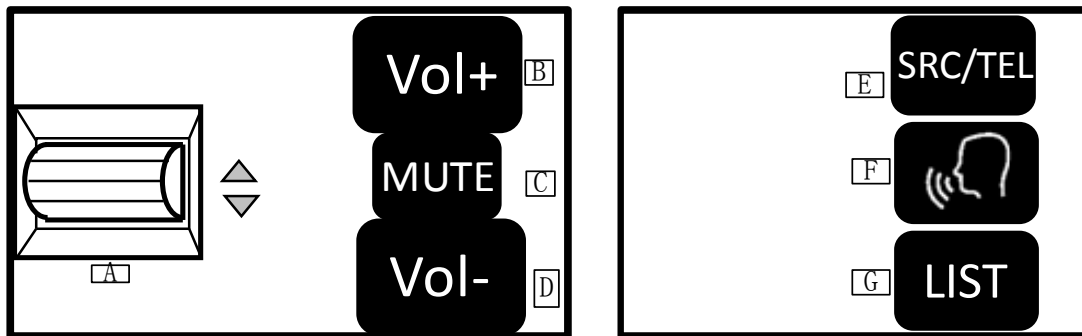
C:Volume up

D: List wheel

E:Enter Radio/Media list

F:Enter source list

G:Phone setting and control



A: List wheel

B: Volume up

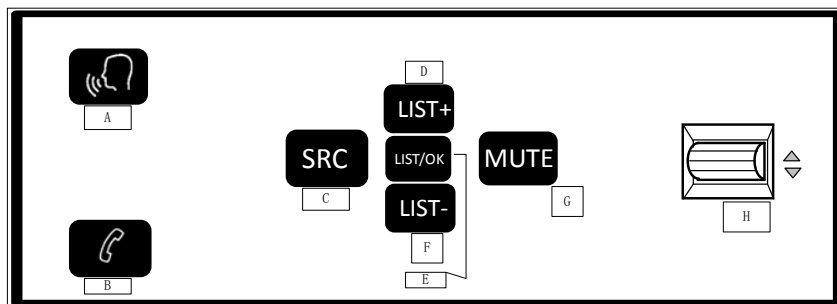
C: Mute/Unmute control

D: Volume down

E: Enter source list/ Phone setting and control

F: Voice recognition

G: Enter Radio/Media list



A: Voice recognition

B: Phone setting and control

C: Enter source list

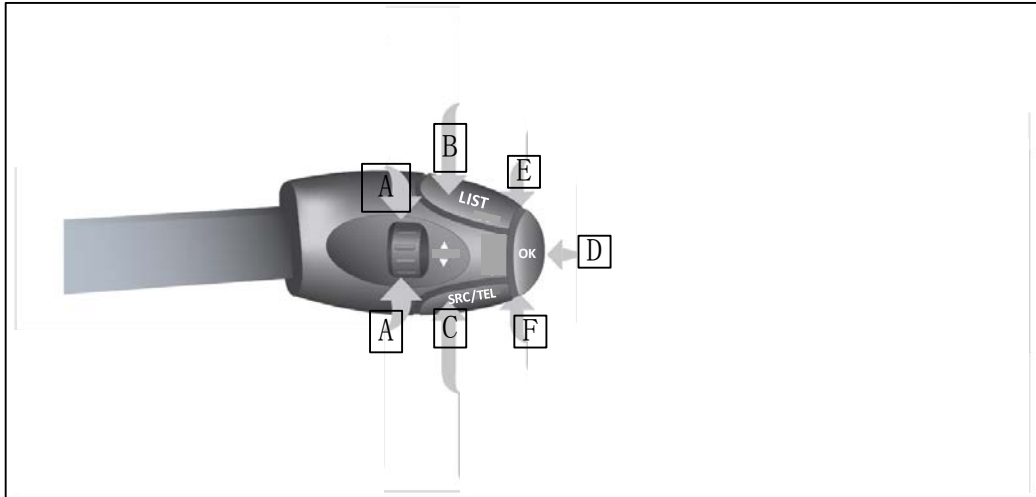
D: List up

E: Enter Radio/Media list/validation

F: List down

G: Mute/Unmute control

H: Volume wheel



A: List wheel

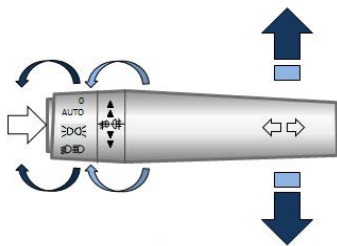
B: Enter Radio/Media list

C: Enter source list/ Phone setting and control

D: Validation

E: Volume up

F: Volume down



Voice recognition



Escape button



Enter Radio/Media list/ Phone setting and control



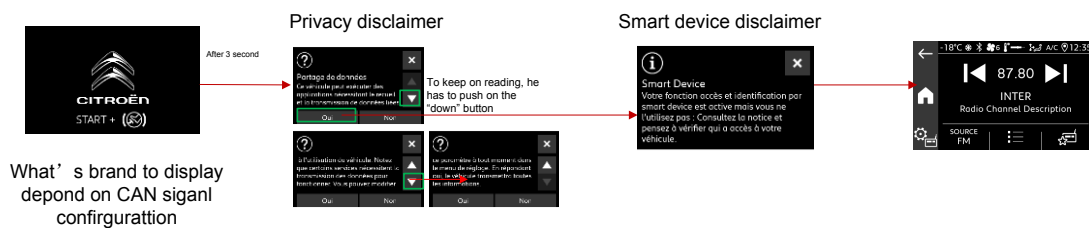
Enter source list/Mute/unmute control

3. Get start

3.1 Strat by Car

Put ignition on so that the RCE can be start

For the first start up the loop as follow:



4. Key Product Features

4.1 Media display

4.1.1 USB audio display

4.1.1.1 Support format



The USB interface is use to insert a USB disk. The RCE can compatible the USB 2.0 and 3.0.
Support system is FAT16 and FAT32

Support playlist format is M3U and Pls
 Support file format is FALC,OGG,MP3,WAV,AAC,WMA
 The RCE can store maximum 400 folder with 5000 songs
 Don't support android phone

4.1.1.2 Display main panel

When insert a compatible USB key,the RCE will switch to below panel directly



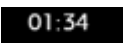
:Touch to back to last panel



:Touch to back to the Home page



:Touch to go to media setting panel



:Indicate the timer



:Touch to go the media library



:Touch to go the current display list panel



:Touch to go to source list to change the display source



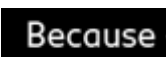
:Touch to stop/start



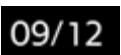
:Short press to seek up, maintain press to fast rewind



:Short press to seek down, maintain press to fast forward



: Indicate the title

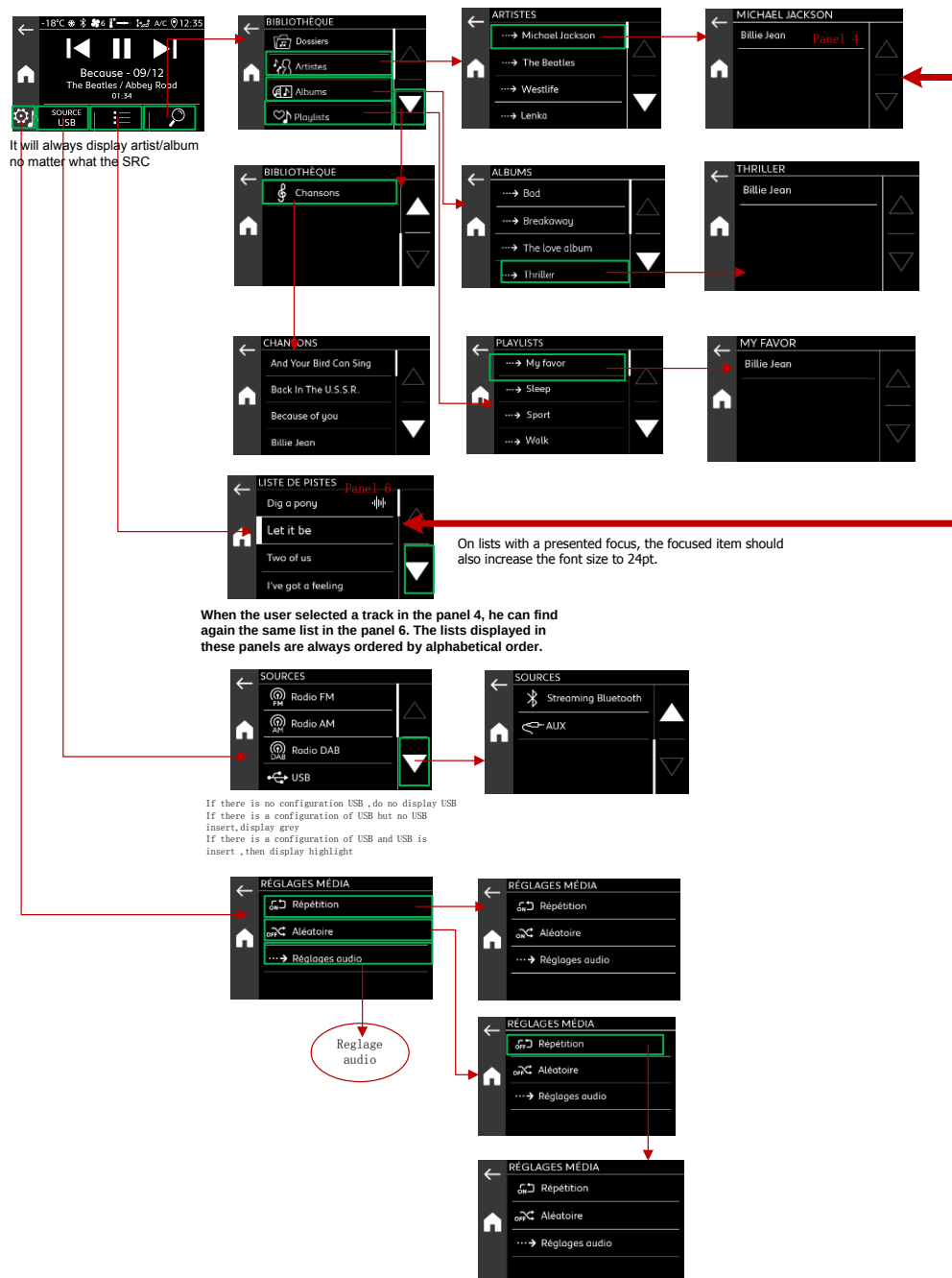


: Indicate the index and total songs in current list

The Beatles : Indicate the artist

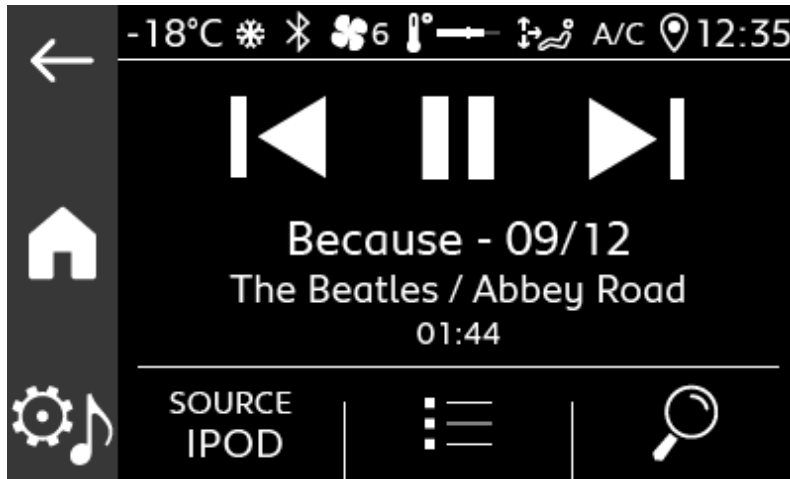
Abbey Road : Indicate the album

4.1.1.3 Function for USB mode



4.1.2 IPOD audio display

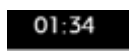
4.1.2.1 Display main panel



:Touch to back to last panel

:Touch to back to the Home page

:Touch to go to media setting panel

:Indicate the timer

:Touch to go the media library

:Touch to go the current display list panel

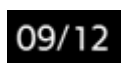
:Touch to go to source list to change the display source

:Touch to stop/start

:Short press to seek up, maintain press to fast rewind

:Short press to seek down, maintain press to fast forward

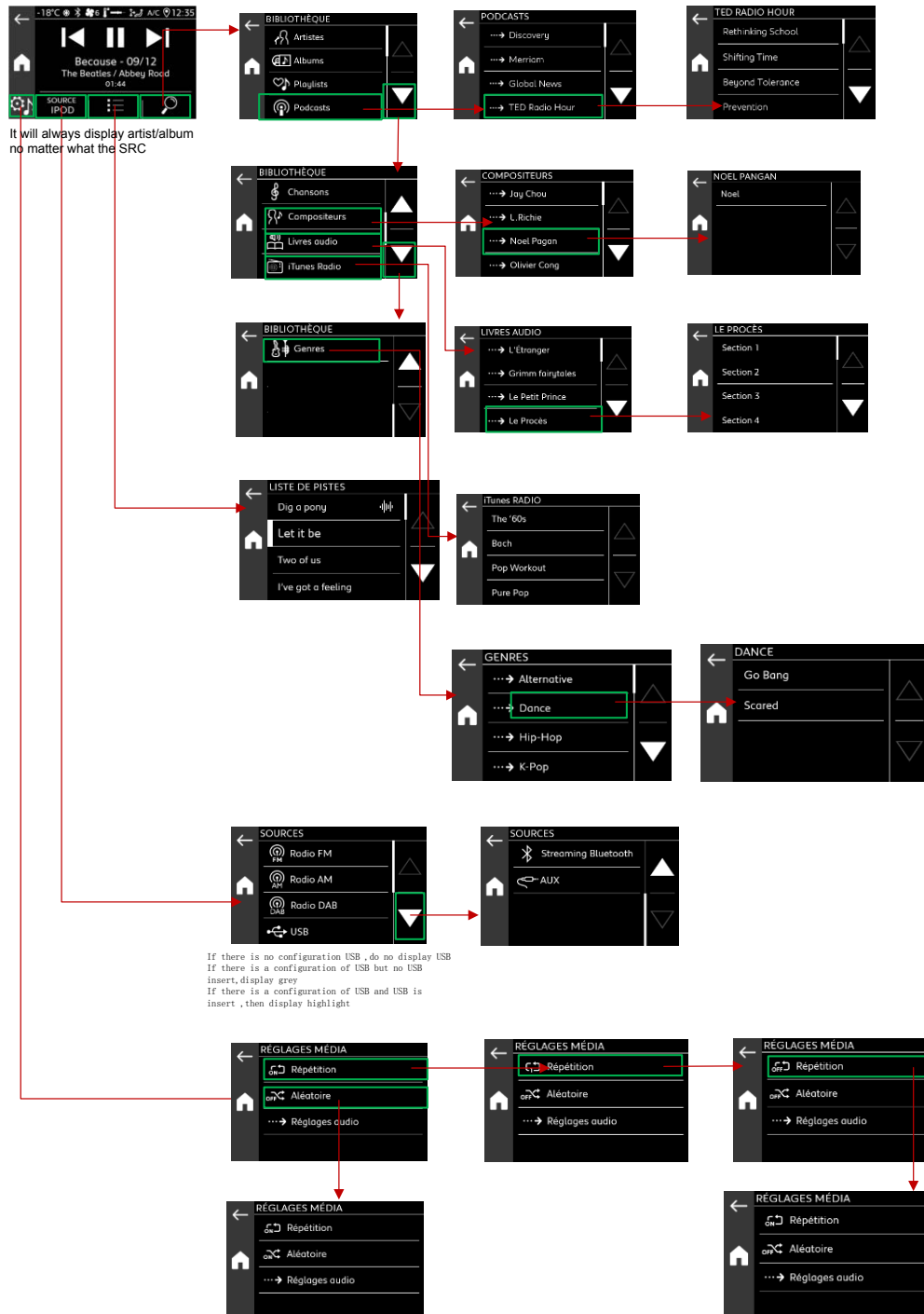
: Indicate the title

: Indicate the index and total songs in current list

: Indicate the artist

Abbey Road : Indicate the album

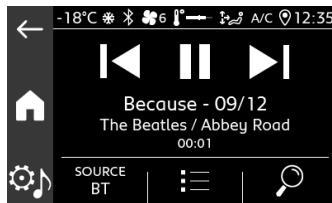
4.1.2.2 Function for IPOD mode



For other list ,same as the USB

4.1.3 Streaming Bluetooth display

4.1.3.1 Display main panel



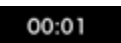
:Touch to back to last panel



:Touch to back to the Home page



:Touch to go to media setting panel



:Indicate the timer



:Touch to go the media library



:Touch to go the current display list panel



:Touch to go to source list to change the display source



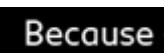
:Touch to stop/start



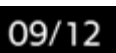
:Short press to seek up, maintain press to fast rewind



:Short press to seek down, maintain press to fast forward



: Indicate the title



: Indicate the index and total songs in current list

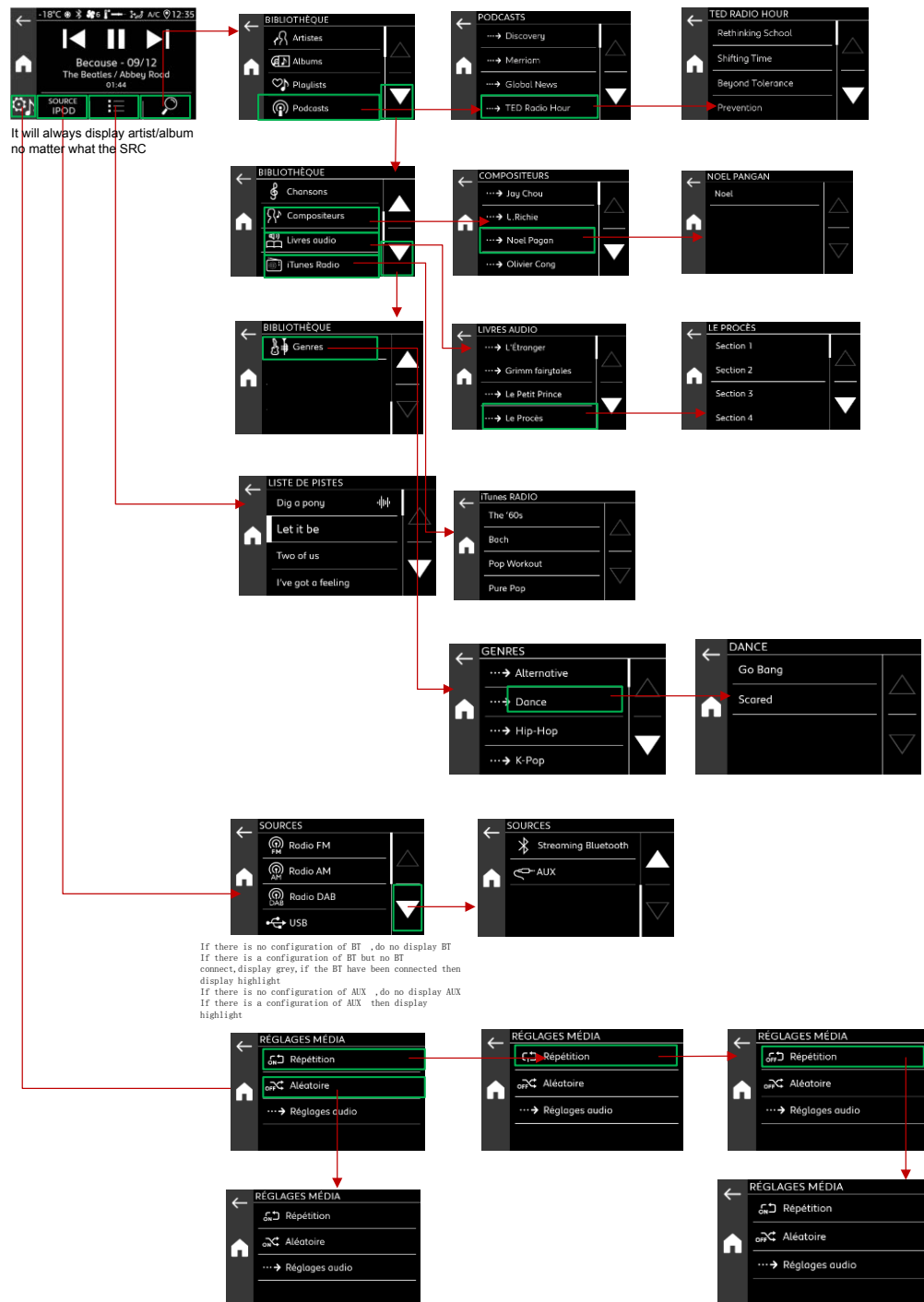


: Indicate the artist

Abbey Road : Indicate the album

4.1.3.2 Function for BT mode

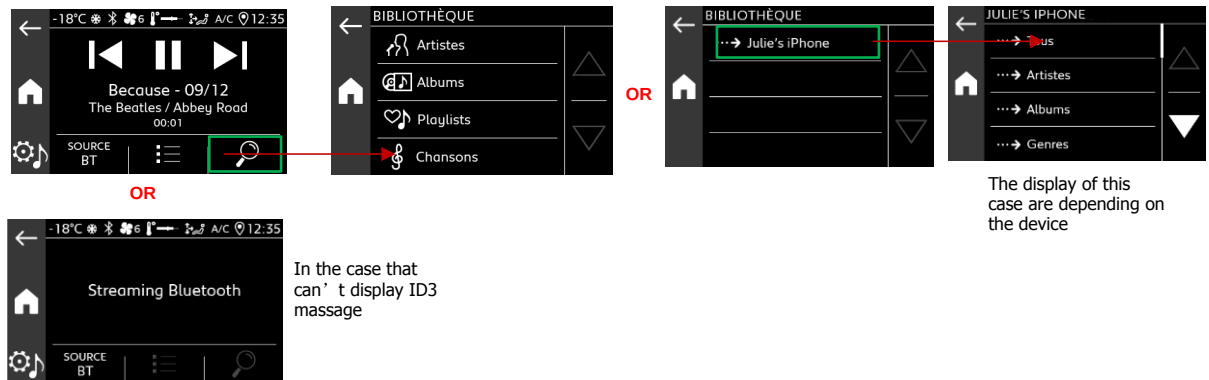
Below is for the device which is compatible IAP2



For the device which no compatible IAP2,Display like the following loop:

- ° If BT device compatible: display the list by order: By Albums, Artists, All titles and Playlists

- ° Else, display by order list proposed by the connected BT device
- ° Else, display directly the tracks list
- ° Else, if BT device not compatible AVRCP 1.4 or more, BT streaming list should not be accessible



4.2 Radio listening

4.2.1 FM mode

4.2.1.1 Main panel



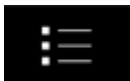
:Touch to back to last panel



:Touch to back to the Home page



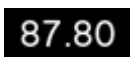
:Touch to go to radio setting panel



:Touch to go the current station list



:Touch to go to source list to change the display source0



:Indicate the current listening station, Touch to search a station



:Indicate the PSN



:Indicate the Radio channel description

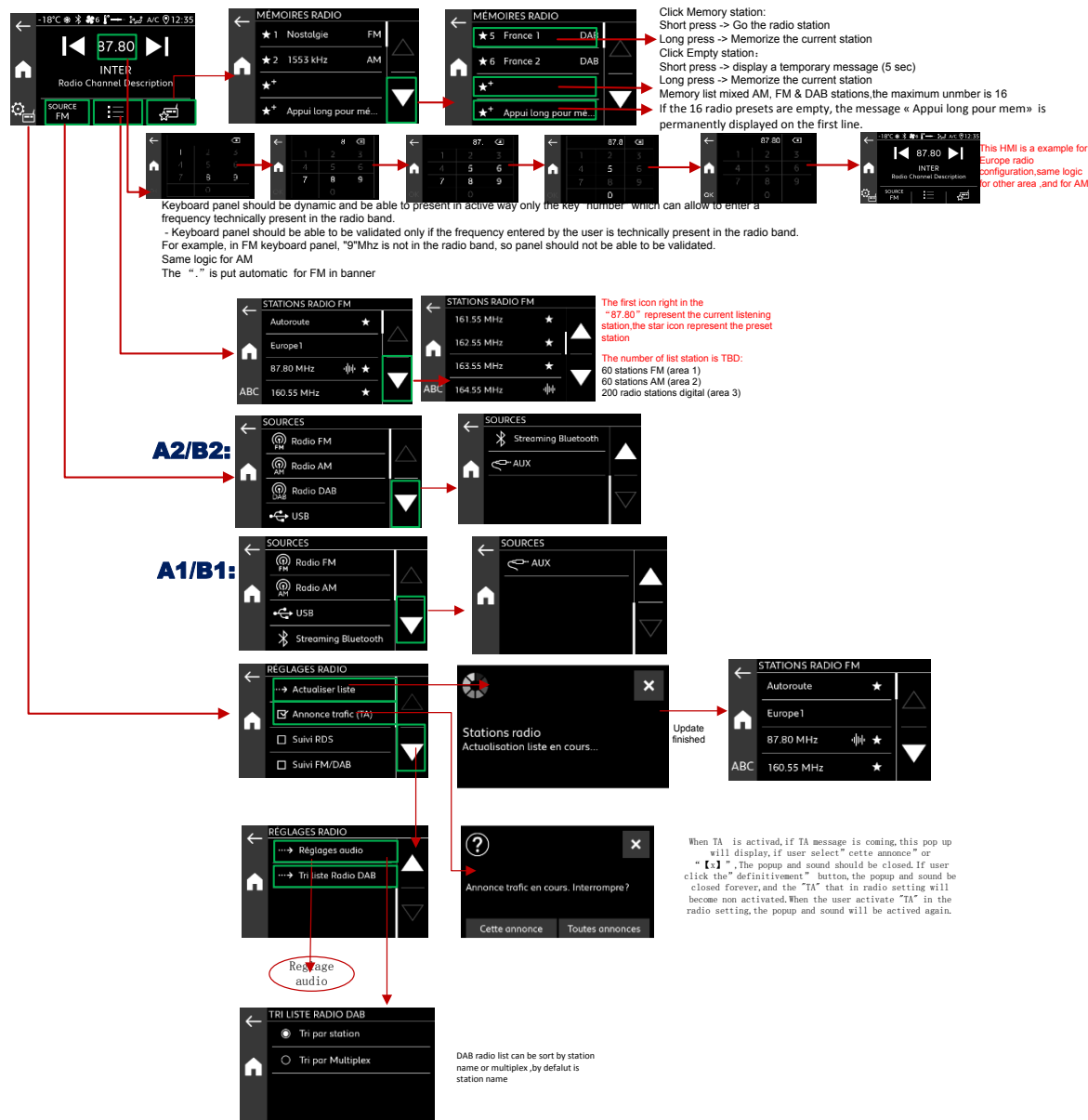


:Touch to go to previous station



: Touch to go to next station

4.2.1.2 Function for FM mode



4.2.2 AM mode

4.2.2.1 Main panel



:Touch to back to last panel



:Touch to back to the Home page



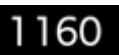
:Touch to go to radio setting panel



:Touch to go the current station list



:Touch to go to source list to change the display source0



:Indicate the current listening station, Touch to search a station

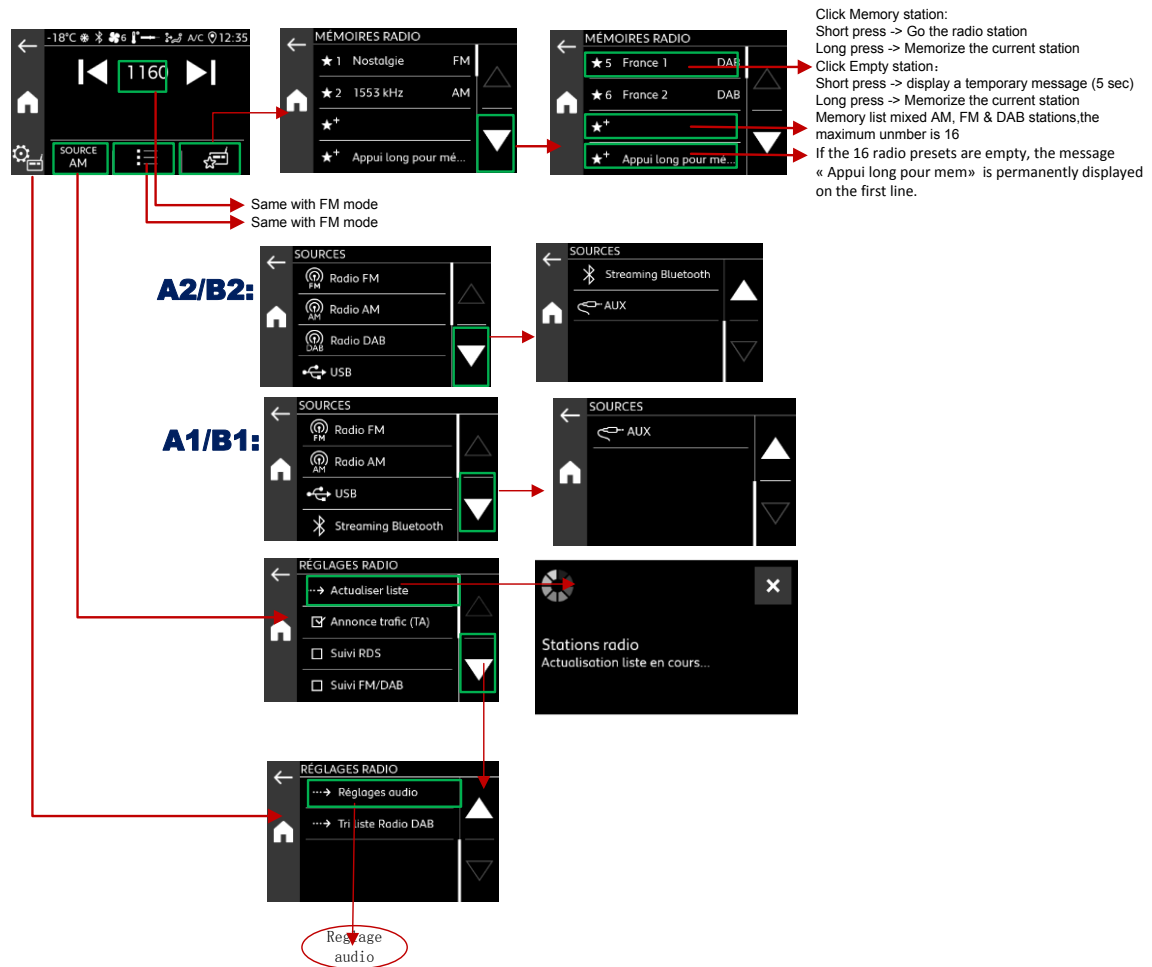


:Touch to go to previous station



: Touch to go to next station

4.2.2.2 Function for AM mode



4.2.3 DAB mode

4.2.3.1 Main panel



:Touch to back to last panel



:Touch to back to the Home page



:Touch to go to radio setting panel



:Touch to go the current station list



:Touch to go to source list to change the display source0



:Indicate the current listening channel and multiplex



:Touch to go to previous multiplex



: Touch to go to next multiplex



:Radio name

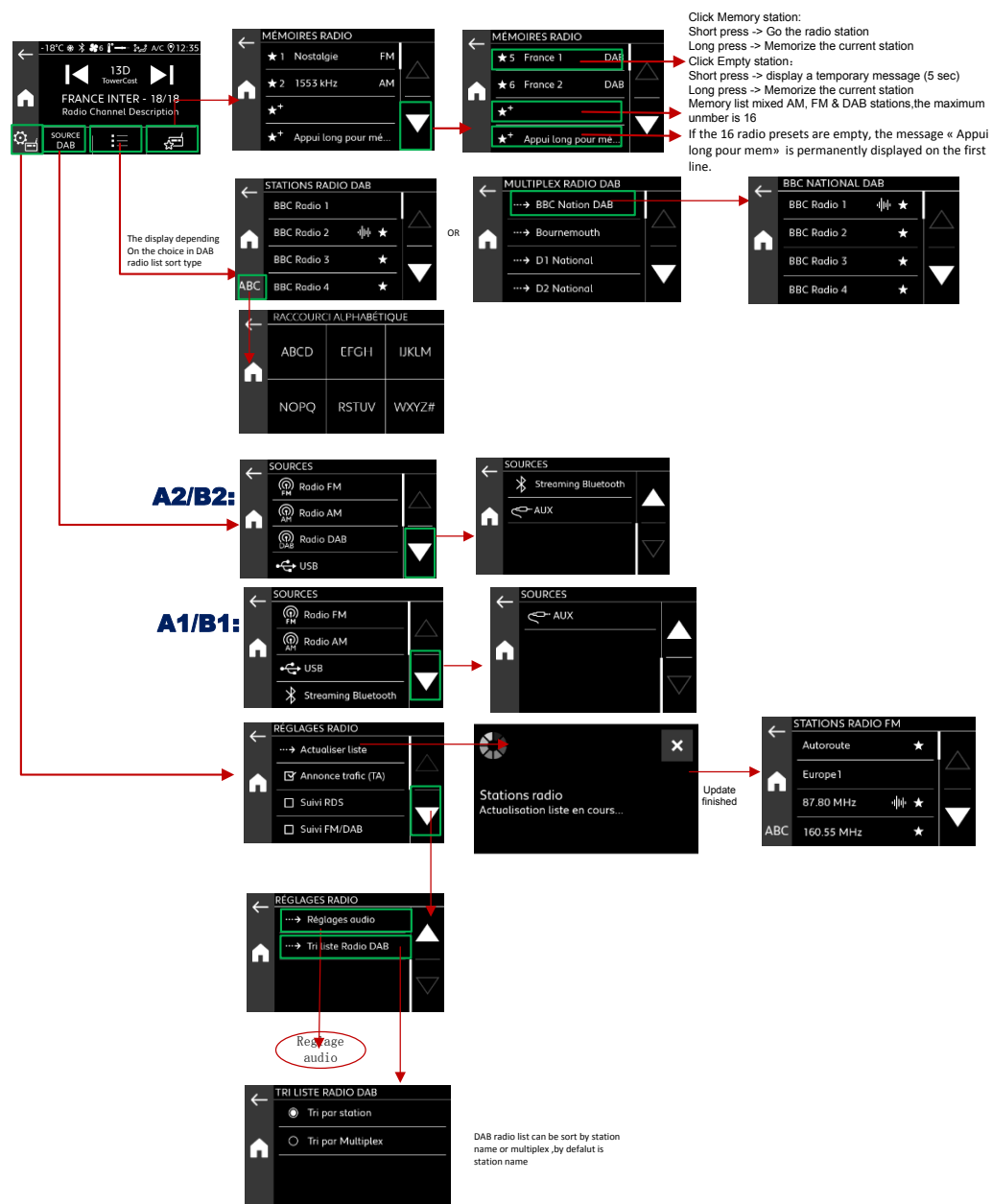


:Index and total channel in this multiplex

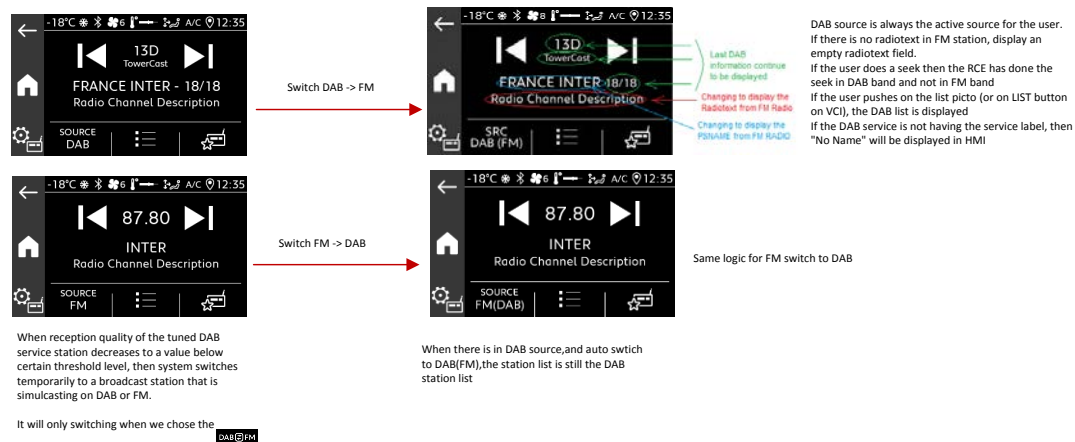


:Radio channel description

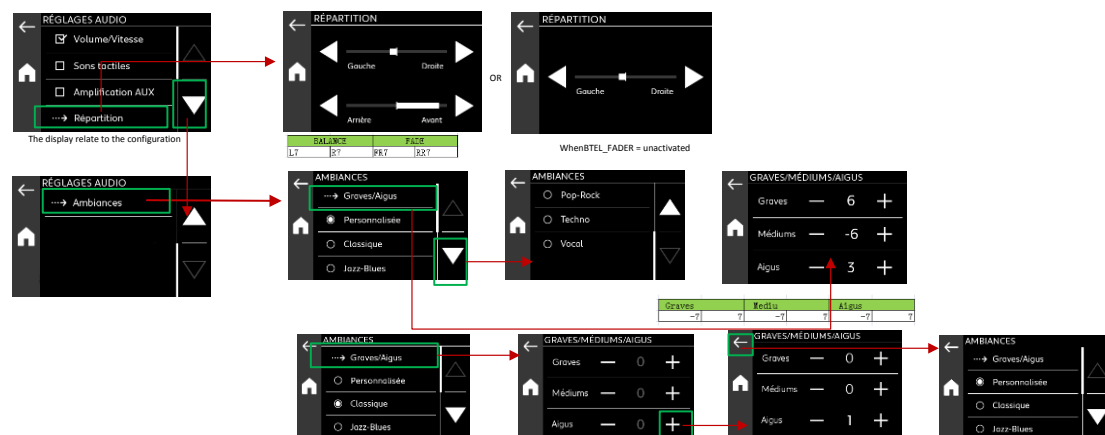
4.2.3.2 Function for DAB mode



4.2.4 DAB/FM Switching



5. Audio setting



Classical, Jazz-Blues , Pop-Rock (...) are not a set of parameters of bass, medium, treble between [-7 ; 7]. If those Classical , Jazz-Blues , Pop-Rock(...) , And then press the “ Bass/ medium/ treble ” option ,then the number should display “ 0 ” and the numbers should be grey. When we change the Bass/ medium/ treble settings ,change the ambiances settings to « utilisateur ».

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Phone call with one person or two person and over two person

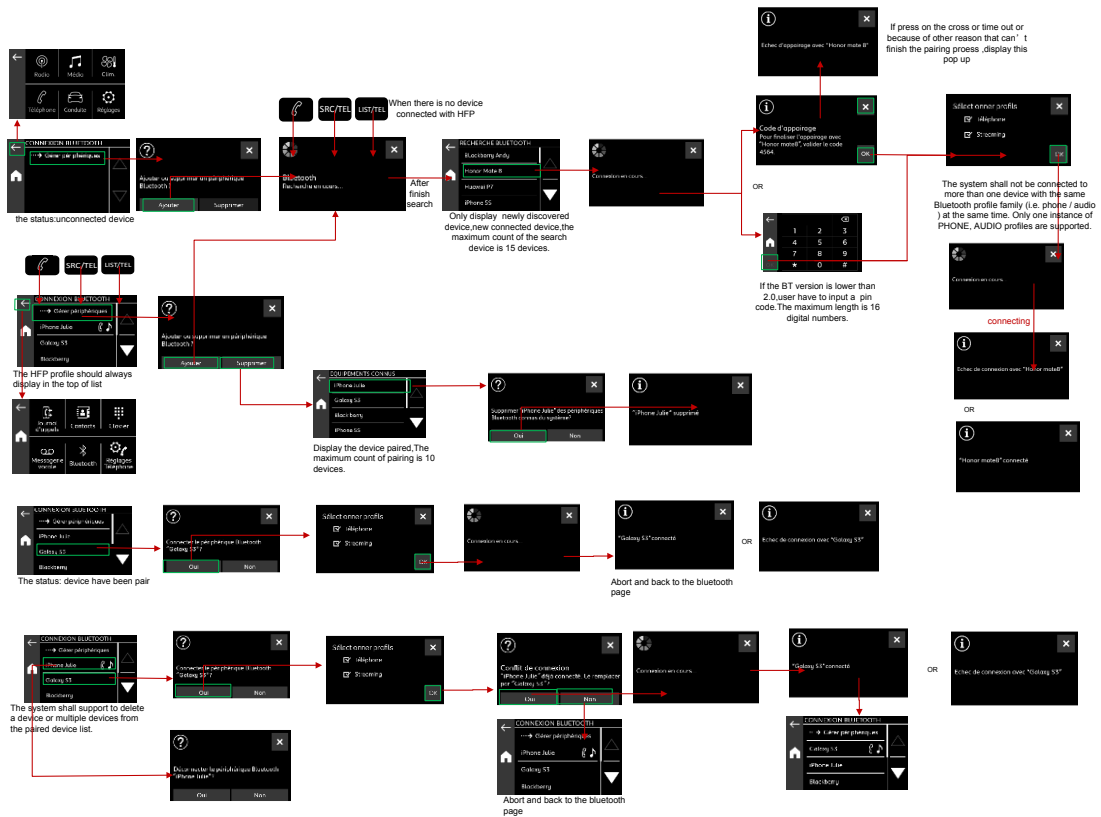


Ongoing Call over one person



6.4 Bluetooth connection device

Bluetooth connection device(Need go to setting Bluetooth)



6.5 If the pairing device is already have ten

If the pairing device is already have ten

If the pairing device is already have ten ,want to connect the eleventh device



6.6 Connecting more than one device

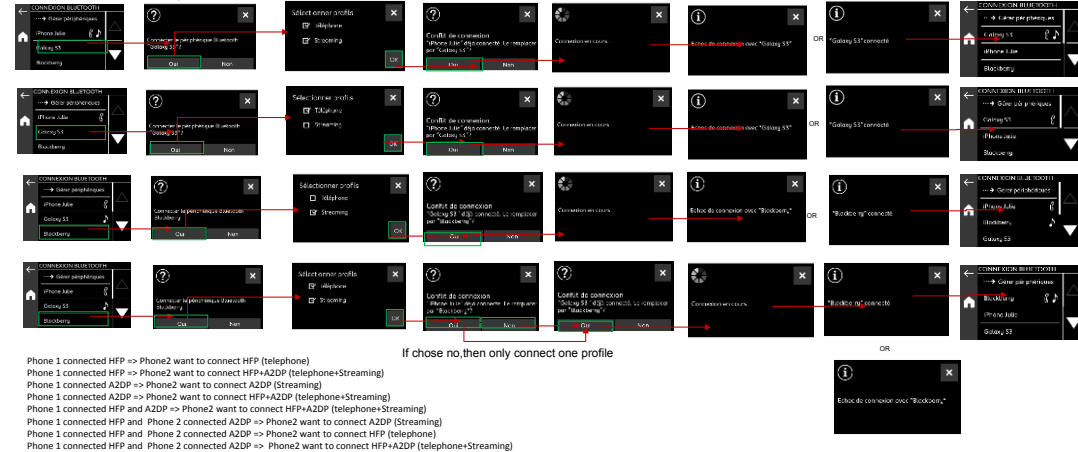
Connecting more than one device

CASE A: Connection to an unused profile



No phone connected => Phone2 want to connect HFP (telephone)
 no phone connected => Phone2 want to connect A2DP (Streaming)
 no phone connected => Phone2 want to connect HFP+A2DP (telephone+Streaming)
 Phone 1 connected HFP => Phone2 want to connect A2DP (Streaming)
 Phone 1 connected A2DP => Phone2 want to connect HFP (telephone)

CASE B: Replacement of all the used profiles (one or more)



Phone 1 connected HFP => Phone2 want to connect HFP (telephone)
 Phone 1 connected HFP => Phone2 want to connect HFP+A2DP (telephone+Streaming)
 Phone 1 connected A2DP => Phone2 want to connect A2DP (Streaming)
 Phone 1 connected A2DP => Phone2 want to connect HFP+A2DP (telephone+Streaming)
 Phone 1 connected HFP and A2DP => Phone2 want to connect HFP+A2DP (telephone+Streaming)
 Phone 1 connected HFP and Phone 2 connected A2DP => Phone2 want to connect A2DP (Streaming)
 Phone 1 connected HFP and Phone 2 connected A2DP => Phone2 want to connect HFP (telephone)
 Phone 1 connected HFP and Phone 2 connected A2DP => Phone2 want to connect HFP+A2DP (telephone+Streaming)

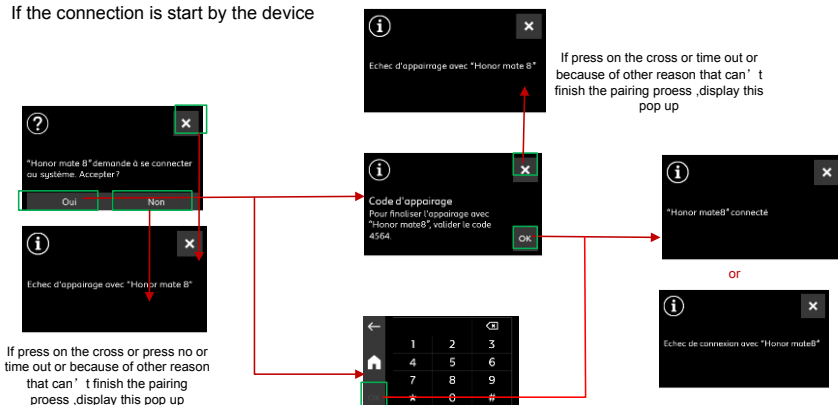
CASE C: Replacement of only one used profile (one on both used)



Phone 1 connected HFP + A2DP => Phone2 want to connect HFP (Telephone)
 Phone 1 connected HFP + A2DP => Phone2 want to connect A2DP (Streaming)

6.7 Connection is start by the device

If the connection is start by the device

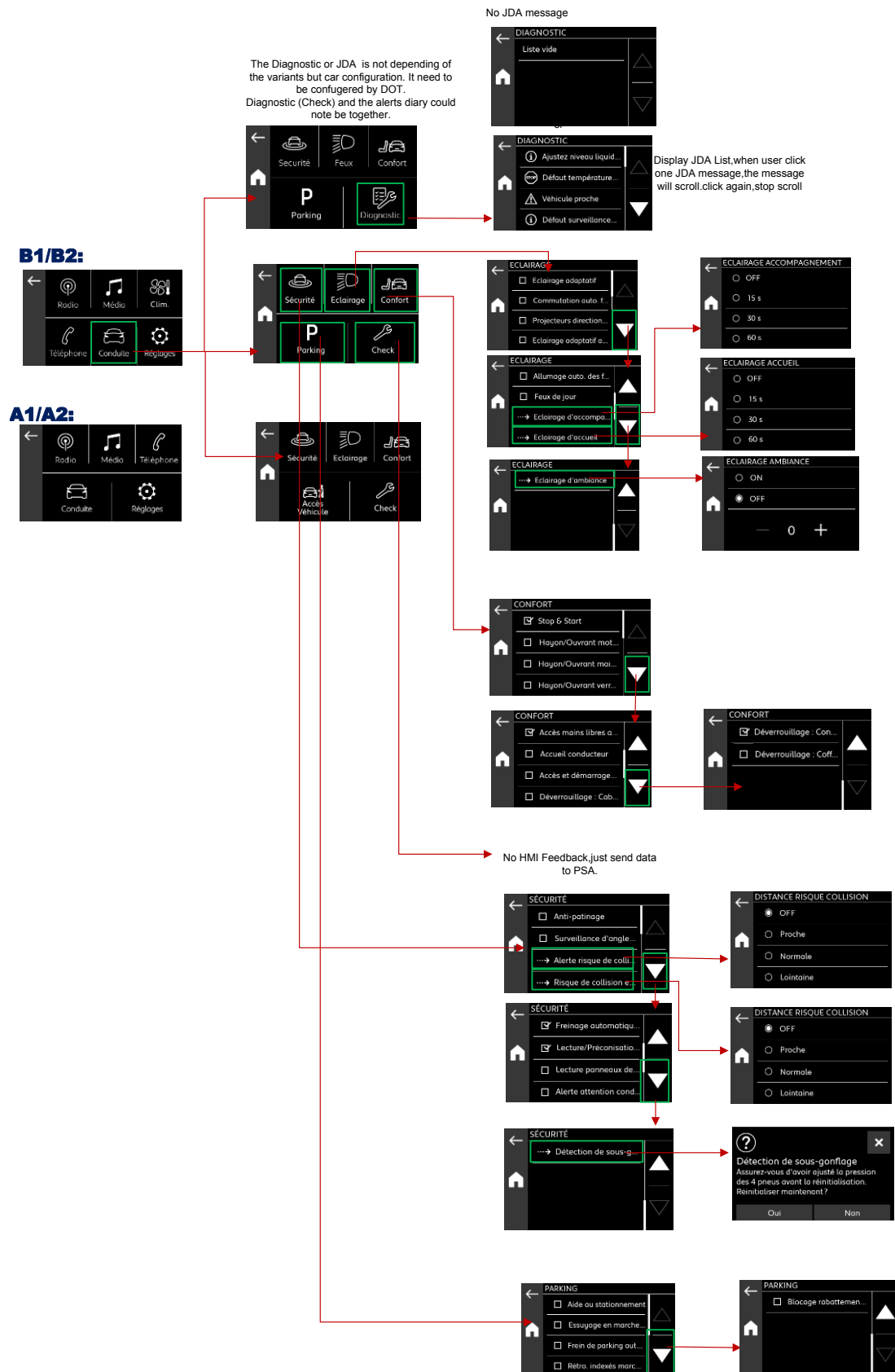


at the end of the paired process, go to the panel « Bluetooth connection » (even only one phone).

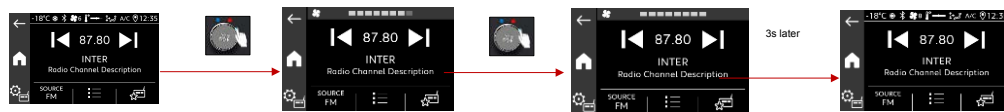
Except if paired process launched by the phone. In that case, go to the panel displayed before the beginning of the connexion procedure

7. Drive menu control

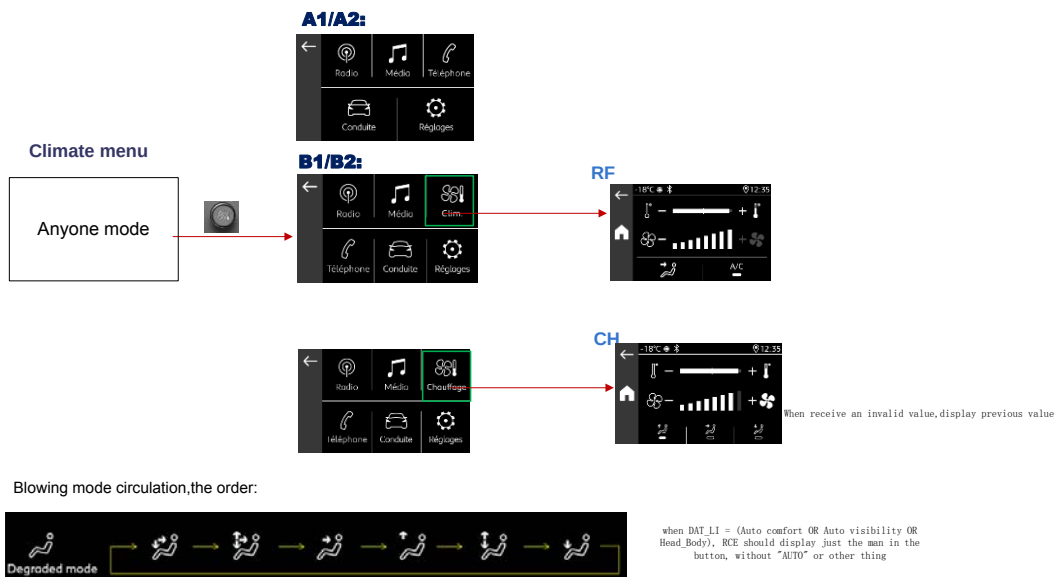
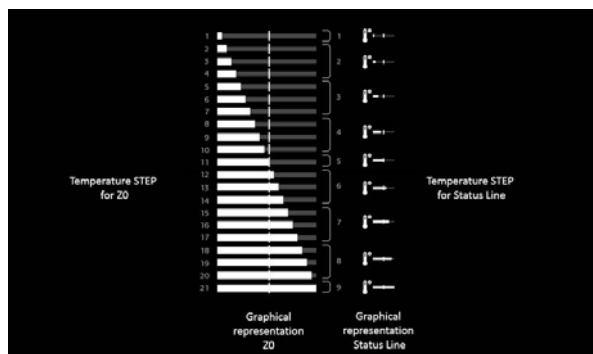
All of the menu need configured, Driver functions and HMI display is determined by the configuration



8. Clim function



Change the airflow Level directly on the status bar, in a page with status bar, for details about different situation, see above



7 Steering Wheel Controller

VCI in HMI brief

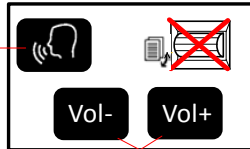
HDC MOLETTE_RAD_CPT(CMPT_MOL_ET_HDC)
HDC MOLETTE_RAD_CPT_SUP(OVF_SCAN_UP_ET_HDC)
HDC MOLETTE_RAD_CPT_INF(OVF_SCAN_DWN_ET_HDC)
HDC OK_RADIO(VALID_CODE_RADIO)
- When "Radio list", "Media list" or another list/menu managing a cursor is opened:

Radio :
Seek up next Station
Seek down previous Station
For OK button
Occupied line:
Short press => listen the radio(second click, close the list)
Long press => replace by the radio currently listened
Empty line:
Short press => display « Long push to memorize »
Long press => memorize(second click, close the list)
If no cursor is displayed in the list then close the list

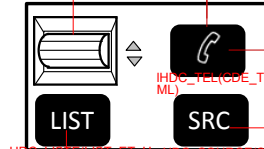
Media :
Seek up next track
Seek down previous track
Simple press on OK : First click to Validation, second click(consecutive on the same line) to close the list
In case of a quick scroll of many steps of the thumbwheel will slide page by page instead of item by item
Call log:
Simple press on OK, launch the call
- When no list or menu with cursor is opened:

Radio
Seek up next Station
Seek down previous Station
Simple press on OK(only in radio main panel)
Open the memorized list, if radio currently listened c. radio presets :
Else :
Focus on first line
Media :
Seek up next track
Seek down Back to the beginning of the song (t>3s) or previous song
Simple press on OK(only in media main panel)
Display media track list with cursor

VOICE_REC(HDC_REC(V))
- When there is not connected with HFP profile or the device is not compatible with Voice recognition :
=> Simple press: Display information pop up with message "Voice recognition not available", if this pop up have been display, then close the pop up
- When a Smartphone compatible with VR is connected with HFP profile and no VR session is in progress :
=> Simple press: Launch a Smartphone VR process (pop up "Voice Recognition in progress" displayed)
- When a Smartphone VR Session is in progress :
=> Simple press: Stop the current VR process (pop up "Voice Recognition in progress" is closed)
Closed the "cross" on the pop up can also stop the current VR



VOLUME_UP_ET_HDC(VOLUME_UP_ET_HDC)
VOLUME_DWN_ET_HDC(VOLUME_DWN_ET_HDC)
Short press VOL+ -> Pop-up on the RCE & level sound +1
Short press VOL- -> Pop-up on the RCE & level sound -1
Long press VOL+ -> Pop-up on the RCE & level sound +1
Long press VOL- -> Pop-up on the RCE & Mute
Simultaneous press VOL- & VOL+ -> Pop-up on the RCE & Mute
Press one first and another later can also be treat as mute reaction



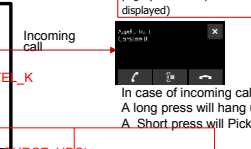
HDC_LISTE(LIST_ET_HDC_SOURCE(SOURCE_HDC))



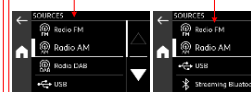
Depending on the source
Focus only for source USB and IPOD



For DAB, depending the configuration DAB list by station name or multiplex



A2/B2: A1/B1:



Display source list

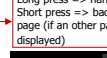
No phone connected (with HFP profile):



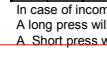
No incoming call and No ongoing call



Ongoing call

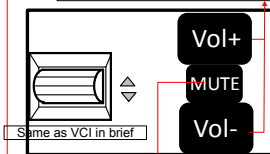


In case of incoming call :
A long press will hang up
A Short press will Pick up

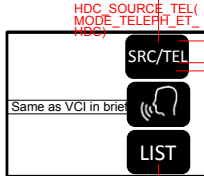


VCI K0

HDC_VOLUME_UP(VOLUME_UP_ET_HDC)
HDC_VOLUME_DWN(VOLUME_DWN_ET_HDC)
Short press VOL+ -> Pop-up on the RCE & level sound +1
Short press VOL- -> Pop-up on the RCE & level sound -1
Long press VOL+ -> Pop-up on the RCE & level sound +1
Long press VOL- -> Pop-up on the RCE & Mute
Simultaneous press VOL- & VOL+ -> Pop-up on the RCE & Mute
Press one first and another later can also be treat as mute reaction



HDC_VOLUME_UP(VOLUME_UP_ET_HDC)
HDC_VOLUME_DWN(VOLUME_DWN_ET_HDC)
For primary source : Mute/demute and pop up
For Secondary source: Mute and return to the primary source in its last state (mute or unmute), no pop up



Same as VCI in brief

HDC_LISTE(LIST_ET_HDC)



Depending on the source
Focus only for source USB and IPOD



For DAB, depending the configuration DAB list by station name or multiplex

A2/B2: A1/B1:



Short press : display source list

A2/B2: A1/B1:



Short press : display source list

A2/B2: A1/B1:



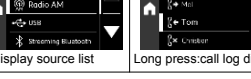
Long press

A2/B2: A1/B1:



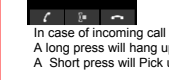
Short press : display source list

A2/B2: A1/B1:



Long press: call log display

A2/B2: A1/B1:



In case of incoming call :
A long press will hang up
A Short press will Pick up

Long press => hang up
Short press => back to call page (if another panel is displayed)

A2/B2: A1/B1:



Long press

A2/B2: A1/B1:



Long press

A2/B2: A1/B1:



Long press

A2/B2: A1/B1:



Long press

A2/B2: A1/B1:



Long press

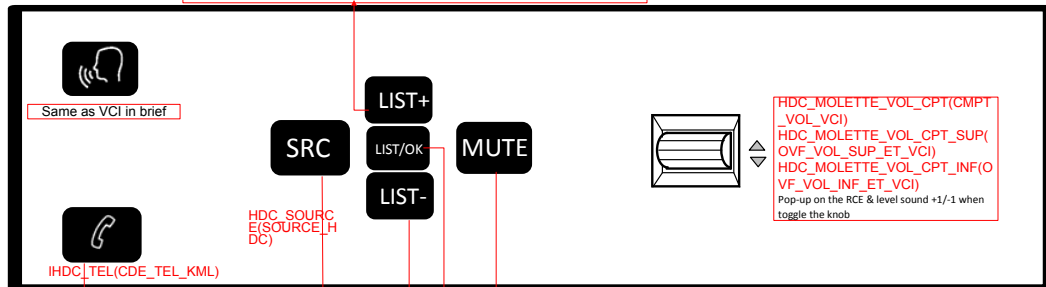
A2/B2: A1/B1:



Long press

VCI P2JO (Opel)

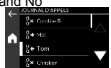
HDC_LISTE_PLUS(LIST_PLUS_ET_HDC)
- When no list or menu managing a cursor is displayed:
Radio :
AM/FM: Maintained press, same reaction as maintained press on the panel
DAB:
Short press: seek up next station in same multiplex (if it's the last station in this multiplex then search the first station in next multiplex)
Long press: search next available multiplex
Media :
Short press: next track
Maintained press: "fast forward play speed", resumed normal playing when released the push
- When "Radio/Media list" or another list/menu managing a cursor is displayed:
Repeated Press: At each event, the cursor should move by one step to the top of list. If the cursor is on the first item of the list then no reaction is expected.



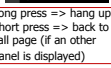
No phone connected
(with HFP profile):



No incoming call and No ongoing call



Ongoing call



Incoming call



HDC_VOLUME_UP(VOLUME_UP_ET_HDC)
HDC_VOLUME_DWN(VOLUME_DWN_ET_HDC)
For primary source : Mute/demute and pop up
For Secondary source : Mute and return to the primary source in its last state (mute or unmute), no pop up

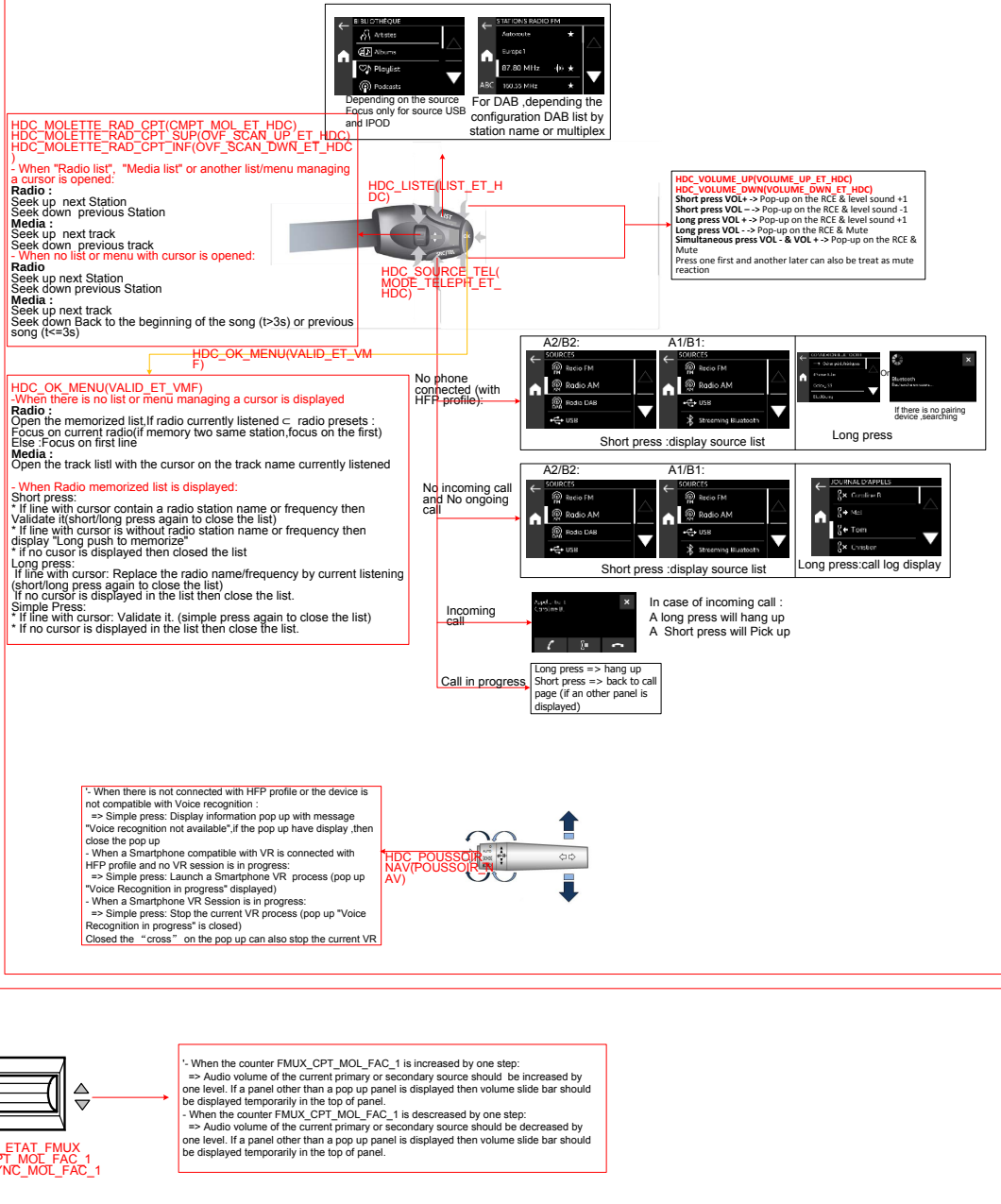
LIST/TEL(LIST_ET_HDC)

- When current source is Radio AM/FM and no list or menu managing a cursor is displayed:
=> Short Press: Open the Radio stations memorized list. If radio currently listened < radio presets : Focus on current radio, Else : Focus on first line
=> Long Press: Open the Radio stations list panel with the cursor
- When current source is Radio DAB and no list or menu managing a cursor is displayed:
=> Short Press: Open the Radio stations memorized list. If radio currently listened < radio presets : Focus on current radio, Else : Focus on first line
=> Long Press:
* In configuration by multiplex name: Open the Multiplex list panel with the cursor
* In configuration by Radio name: Open the Radio stations list panel with the cursor
- When current source is Media (USB, iPod, ...) and no list or menu managing a cursor is displayed:
=> Short Press:
Open the track list
=> Long Press:
Open the sort mode list
- When the radio stations memorized list is displayed
=> Short press:
* If line with cursor contain a radio station name or frequency then Validate it. After validation, a new Short/long Press will close the list.
* If line with cursor is without radio station name or frequency then display the message "Long push to memorize" (List panel always opened).
* If no cursor is displayed in the list then close the list.
=> Long press:
* If line with cursor: Replace the radio name/frequency by the current radio listened. After memorization, a new Short/long Press will close the list.
* If no cursor is displayed in the list then close the list.
- When a list or a menu managing a cursor is displayed (other than radio station memorized list) :
=> Simple Press:
* If line with cursor: Validate the item selected in the list. After validation, push again Simple press will close the list.
* If no cursor is displayed in the list then close the list.

HDC_LISTE_MOINS(LIST_MOINS_ET_HDC)

- When no list or menu managing a cursor is displayed:
Radio :
AM/FM: Maintained press, same reaction as maintained press on the panel
DAB:
Short press: search previous station in same multiplex (if it's the first station in this multiplex then search the last station in previous multiplex)
Long Press: Search the previous radio multiplex available in the DAB band and diffuse audio of the 1st radio station in the multiplex found.
Media :
Short press: If the Playing time > 3s, resumed from the beginning. Else if time <= 3s, jump to the previous one
* The playing time of the track <= 3s, playing of the track (n-1) should begin
Maintained press: "fast Reward play speed", resumed normal playing when released the push
- When "Radio/Media list" or another list/menu managing a cursor is displayed:
=> Repeated Press: At each event, the cursor should move by one step to the bottom of list. If the cursor is on the last item of the list then no reaction is expected.

CSV in HMI Brief(CSV K0)



For others



=> Short Press: Close the current pop up or panel to display the panel just under (hidden by the closed panel).
=> Long Press: Close all the pop up or Panels to display the main primary panel (Radio, Media or Clim) under all panels.
=> If the panel displayed is one of the main primary panels, no RCE reaction

HDC_ESC(ESCAPE_ET_VMF)



HDC_SOURCE_TEL(MO)
DE_TELEPH_ET_HDC)

No phone connected
(with HFP profile):

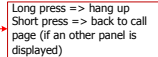


If there is no pairing device ,searching

No incoming call and No ongoing call



Ongoing call



Long press => hang up
Short press => back to call page (if an other panel is displayed)

Incoming call



In case of incoming call :
A long press will hang up
A Short press will Pick up



LIST/
TEL(LIST_ET_HDC)

No phone connected
(with HFP profile):



Long press

If there is no pairing device ,searching

No incoming call and No ongoing call



Long press:display call log

Ongoing call

Long press => hang up
Short press => back to call page (if an other panel is displayed)

Incoming call



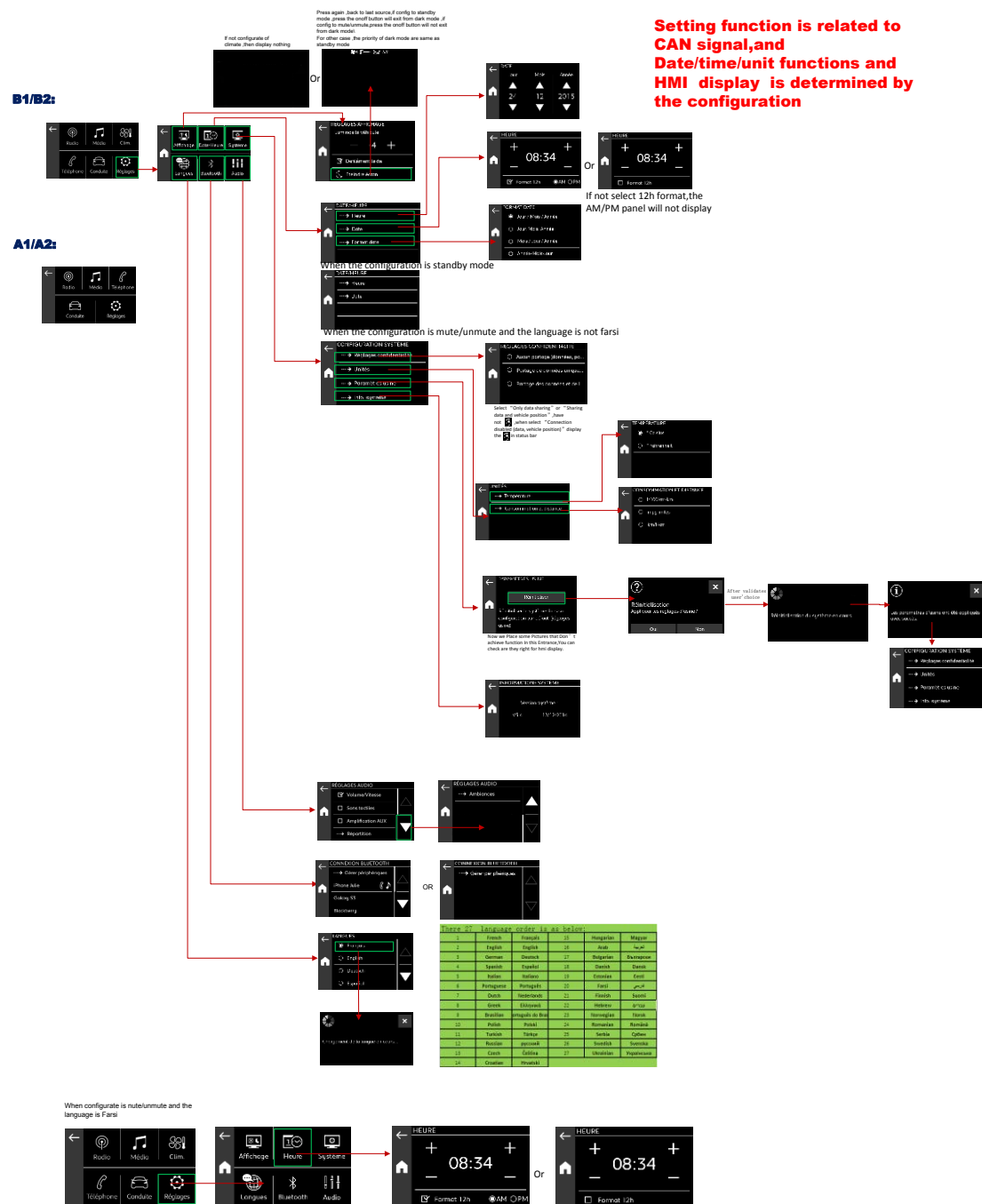
In case of incoming call :
A long press will hang up
A Short press will Pick up



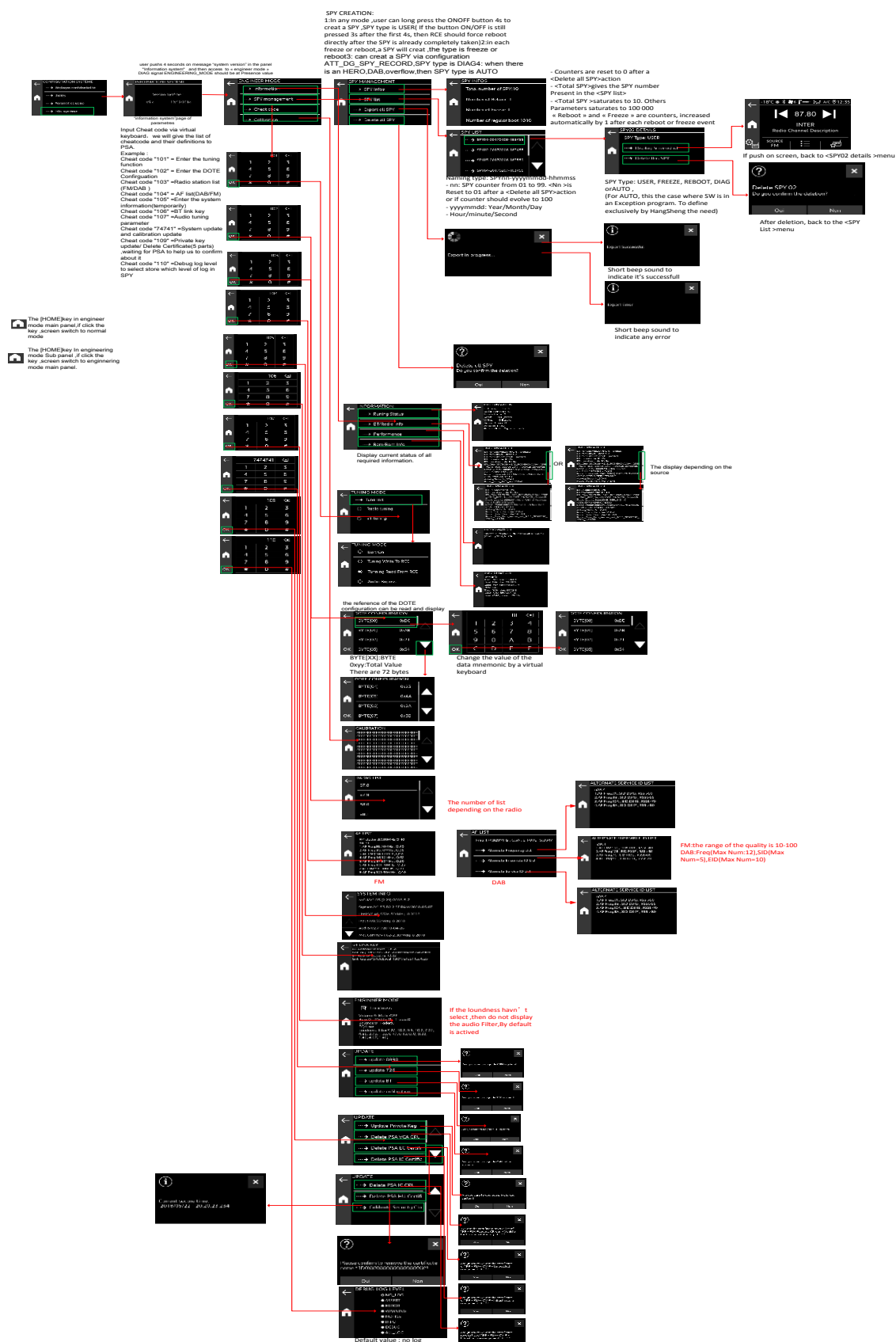
HDC_SOURCE/
SOURCE_HDC

- In all cases:
=> Short Press: Open the panel of Source list
- When the primary source is diffused:
=> Long press: Mute the primary source and display the volume pop up
- When the primary source is muted:
=> Long press: Unmute the primary source and display the volume pop up
- When a secondary source (like TA announcement, external announcement, Voice Recognition, ...) is diffused:
=> Long press: Stop the diffusion of this secondary source to return to the primary source in its last state (mute or unmute). No volume bar displayed in that case

9. System Settings



10. Engineering mode



Product Specification

1 Product Summary

1.1 Product Model

Product name: Radio

Model name: HS-T0421

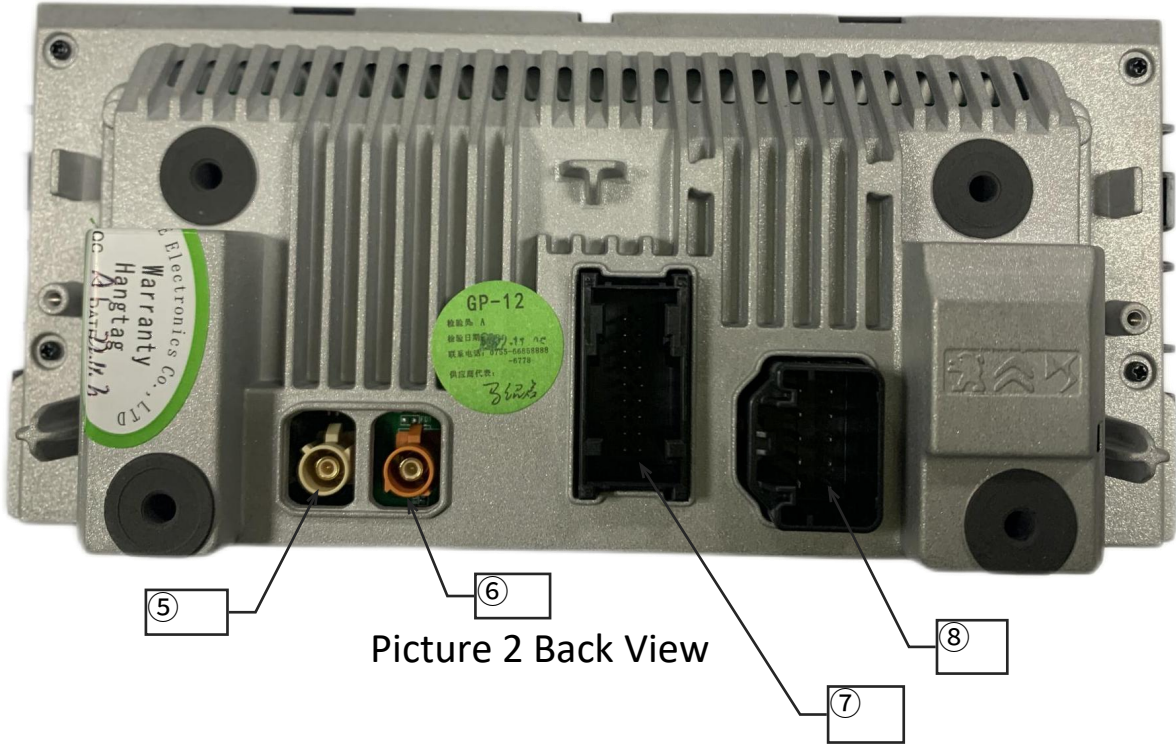
1.2 Feature List

No	Feature	Describe
1	FM/AM/LM	Support global band
2	BT	EDR?
3	USB	USB2.0 2.1A charging
4	AUX	Analog audio input

1.3 Performance

No.	Performance	Parameter
1	MCU/SH726B	Renesas original SuperH architecture, 32-bit
2	Dram	64Mbyte
3	Flash	64Mbyte
4	EEPROM	128Mbyte
5	System start time	4S
6	Operation Temperature	-40° ~85°
7	Operation Voltage	8V~16V
8	Max current	15A

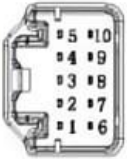
2 Product Architecture

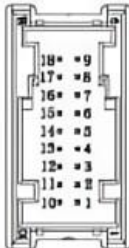


2.1 Interface

No	Describe
1	Power Button
2	Music knob button
3	Air-conditioning knob button(option)
4	USB connector
5	Tuner connector
6	DAB connector
7	Vehicle connector 1(18 pin)
8	Vehicle connector 2(10 pin)

2.2 Connector pin description

10 PIN CONNECTOR	PIN	SIGNAL
	1	+ACC
	2	-HP FL
	3	-HP RR
	4	+HP FL
	5	+HP RR
	6	-HP RL
	7	GND
	8	-HP FR
	9	+HP RL
	10	+HP FR

18 PIN CONNECTOR	PIN	SIGNAL
	1	Microphone Input +
	2	N. U.
	3	Mute
	4	Audio Right AUX1
	5	Debug_RXD
	6	NU
	7	Audio Right AUX2
	8	NU
	9	CANH
	10	Microphone Input -
	11	NU
	12	Audio Left Aux1
	13	Audio GND Aux1
	14	Debug_TXD
	15	Audio GND Aux2
	16	Audio Left Aux2
	17	NU
	18	CANH

FCC Statement

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 or more 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.

FCC Radiation Exposure Statement

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons.

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.

Caution!

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Operating frequency: (the maximum transmitted power) 2402-2480 MHz (3.71dBm)