#### **Product Name**

Car Radio with Bluetooth

#### **Product Models**

N18

## **Product description**

Car Radio with Bluetooth Module is equipment installed in a car to provide in-car entertainment and information for the vehicle occupants. It consisted of a simple FM/AM/DAB radio, media players and Bluetooth module. User can listen to FM/AM, DAB, USB and AUX audio by using the equipment.

#### **Technical Parameters**

The supply voltage range for Nominal mode is from 9V to 16V.

The typical current consumption is less than 2A

## **Radio Frequency Bands:**

BT: 2400~2483.5MHz FM: 87.5-108.00MHz AM: 522-1611KHz DAB: 170-240MHz

Software Version: V4.1.3

Hardware Version: VPJNMF18C815BC

# Manufacturing Factory Information

Manufacture:

Yanfeng Visteon Automotive Electronics Co.,Ltd.

Address:

300 Minolta Road Songjiang County Shanghai, China

#### The detailed use guide for this device could be found in car user manual too.

#### On User Status

When engine on, push POWER button will switch on radio to On\_User Status

# Temp\_On Status

When engine off, push POWER button will switch on radio to Temp\_On Status for 20 minutes. After 20 minutes, radio will power off automatically.

## **OFF User Status**

When the radio is power on, one push of POWER button will change the radio to OFF\_User Status. The standby screen illuminates with clock. The radio's BT link is no more active. Unit will switch on if POWER button is pressed.

#### Radio Volume Adjustment

Increase Volume

Rotate on left knob will adjust radio volume level. Radio LCD will display the current volume level. Rotate clockwise will increase radio volume.

#### **Decrease Volume**

Rotate anti-clockwise will decrease radio volume.

Mute and Vol 00 Status

When volume is decreased to 0 by rotating POWER button anti-clockwise (Vol 00), audio will be muted and source will not have paused.

#### **FM/AM Operation**

Band Select

Short press RADIO button will switch to tuner mode.

## **Frequency Store**

Store in Radio Source Screen

When in radio source screen, long press on preset number button (1-6) will store the current station into corresponding preset.

Radio will output Roger Beep to indicate.

#### **Store Presets in List Mode**

When in list screen, long press on preset number button (1-6) will store the selected station to the corresponding preset but not switch to it.

Radio will output Roger Beep to indicate.

## **Frequency Recall**

Short press on preset number button will recall the preset station that stored in the button

#### **Manual Tune**

When in radio source screen, short press on <</>>> button or Rotate the right knob will decrease / increase the frequency in a step of 0.05MHz(FM) or 1KHz(AM).

#### Auto seek

When in radio source screen, long press on <</>> button will start continuous frequency scrolling until the

button is released, and then tuner stops on the next/previous station with good field strength.

# Radio Stations List Update FM list

Long press on RADIO button will update FM list.

List can also updated by SETUP.

#### Browse FM list and select station

When in radio source screen, rotate right knob or press it will enter FM list.

Then rotate right knob to browse the list and press it to select the station.

#### **PS Name Display**

If available, radio unit will display the radio's PSNAME (Program Service Name). If it is not, radio unit will display

frequency.

## **TA(Traffic Announcement)**

When a traffic announcement comes in, the radio will display FM/DAB TA Screen. TA is played automatically.

Press BACK button will exit TA.

### **Media Operation**

## **USB/iPod Play Operation**

If the radio is not in media mode, short press MEDIA button will switch to media mode.

#### **Media Source Select**

Short press MEDIA again

## Track Up/Down

Short press on >> button will play the next track.

If current track play time <= 3 sec, short press on << button will play the previous track.

If current track play time >3 sec, short press on << button will start to play from current track beginning.

## Fast Forward / Rewind

Long press <</>> button will play fast forward/rewind.

## **Browsing List Operation**

When in music play screen, short press or rotate on the right knob will enter the browsing list. Rotate on the right knob to choose one song and press it to play.

When in browsing list, press BACK button will display the upper level menu on the screen, or if the current folder is the root folder, Press BACK button will display the music play screen.

## **Quick Search of Browsing List**

When in music play screen, press on preset #6 will start quick search feature.

Rotate on the right knob clockwise will change the initial from A-Z and anti-clockwise will change from 9-0.

Press on the right knob will display songs beginning with selected letter.

# Track ID3 Information Display Select Information to Display

When in media play screen, short press DISP button, radio will display the track's ID3 information in order: Artist => Album => Play time => Artist...

## **Full Screen Display**

When in media play screen, long press DISP button, radio will display the track's ID3 information full screen.

#### **AUX Operation**

Multiple presses on MEDIA button to select AUX audio source.

In AUX mode, track up/track down/folder up/ folder down/fast forward/fast rewind/mix/repeat operations will not be enabled.

## **Bluetooth (BT) Audio Operation**

## **Devices not Supporting Browsing List or ID3 Display**

In any menu, multiple presses on MEDIA button to change to BT audio source.

When cell phone has connected to the radio and supports A2DP profile.

Bluetooth audio can be selected.

If the BT device does not support browsing list or ID3 display, the BT audio screen will be:

#### **Devices Supporting ID3 Display but not Browsing List**

For devices that support ID3 display function, the BT audio screen will be:

If the device does not support Browsing list, the function of right knob will not be available.

Track up/down, Fast Forward/Rewind are still available.

## **Devices Supporting Browsing List and ID3 Display**

If the device supports both browsing list and ID3 display, rotate on the right knob will enter and browse the browsing list the same as the connected device.

When the radio is in the browsing list screen, rotate the right knob will move the highlight focus and browse list.

## **Bluetooth (BT) Telephone Operation**

#### **BT Menu**

#### **BT OFF Statues**

When BT is OFF, press on TEL button will enter Bluetooth (BT) telephone menu with only two options: Settings, Bluetooth.

Press on "Settings" option will enter Volume and Ringtone settings.

Press on BACK button will go back to the BT telephone menu.

When in BT telephone menu, Press on "Bluetooth" option will enter Bluetooth ON/OFF screen.

#### BT ON Status but not connect the phone

If BT is ON and no BT device is connected to the radio, short press on TEL button will enter BT telephone menu with the following screen.

The following operation item will be displayed in the menu:

Scan devices

Pair device

Settings

Bluetooth

These operations will be explained in the following chapters.

#### BT ON and Connect device status

If BT is ON and there is BT device connected to the radio, short press on TEL button will enter BT telephone menu with the following screen.

The following operation item will be displayed in the menu:

Call List

Phonebook

Dial Number

Scan devices

Pair device

Sel. Device

Del. Device

Settings

Bluetooth

These operations will be explained in the following chapters.

#### **Devices Connections**

## **Devices Scanning**

When BT in ON, select "Scan for Devices" will start BT devices scanning and the radio will display the following screen.

When in "Search for BT Devices" screen, press on BACK button will cancel searching phone and go back to BT phone menu.

If no device is founded, the screen will display as follows:

Or the screen will display:

Rotate and press the right knob to choose the device you want to pair on the list of BT Devices, the radio will start pairing and display wait screen.

The password confirm screen will be either the following screen if the phone supports secure simple pairing Or the password confirm screen will be:

Enter pin on the BT device to start pairing.

Timeout of entering PIN after 60 seconds will return to pair device menu.

Pairing in progress screen is as followed:

If the connection is interrupted or pairing timed out, pairing will fail.

Or on successful pairing, the radio will start connecting

If the BT Device is not supported by the radio, or the connection is interrupted, or timed out, the connection will fail.

Or after successful paring and connecting, the device will be connected.

#### **Devices Pairing**

In BT telephone menu, select "Pair device" to pair device.

If the radio is already paired five devices, it reaches the max number of paired devices.

In that case, the pairing will not start immediately and the following screen will be displayed:

When on the Max Device screen, press the right knob to enter Max Devices Question screen:

Choose YES on the guestion will delete a device, which will be explained in CH5.5.2.4.

Choose NO on the question will guit deleting and return to the main BT telephone menu.

If the radio does not pair max devices, select on "Pair device" will start device pairing and display either the following screen.

Or the following screen:

Press on BACK button when cancel searching phone and return to BT phone menu.

Or after entering or confirming paring code, pairing starts. The result is the same as described in CH5.5.2.1

#### **Devices Select**

In BT telephone menu, select "Sel. device" to see list of paired devices.

Icons located near of the device name shows the function that the device supported:

for phone

for audio device(A2DP)

for phone with audio capability

Nothing displayed for BT Devices without HFP or A2DP.

Select one device to start connecting. The connection result is shown on the screen as described in CH5.5 2.1.

#### **Devices Delete**

In BT telephone menu, select "Del. device" will display the paired devices.

Select the device you want to delete, and choose YES or NO to confirm or quit deleting.

Press YES to delete the device. And the radio will display the following screen.

After 3 seconds, the radio will return to BT telephone menu.

## **Call Operation**

#### Call List

If telephone is connected, press TEL button will enter BT telephone menu like the following screen.

Press the right knob to enter the call list.

Rotate the right knob and push it to see Dialed/ Received /Missed list.

Press the right knob or the TEL button will call the person selected in the Dialed/Received/Missed list.

#### **Phonebook**

#### **Download Phonebook**

The phonebook will be automatically downloaded right after the device is connected to the radio.

Anytime you want to update the phonebook, with BT device connected, press on TEL button to enter the BT telephone menu and select "Settings" option.

Select "PB download" option to start downloading phonebook.

After 3 seconds, the screen will return to previous Audio source screen.

Once PB download is completed, radio will display the pop-up: "Phonebook Downloaded" with 3 seconds and then return to previous audio source screen.

#### **Browse Phonebook**

In the BT telephone menu, select "Phonebook" option to enter phonebook.

If the phonebook is empty, the radio displays screen as following:

Or the radio will display phonebook screen.

Select the contact's name to see his phone numbers.

The radio will display either of the following two screens:

Press on the right knob will call the selected phone number.

Select on END will quit calling.

#### **Dial Number**

When in BT telephone menu, select "Dial Number" option to start dialing

When in the dialing screen, rotate the right knob and push it to dial number and select CALL to call.

Backspace (arrow) is used to delete the number input latest.

## **Calls Incoming**

Anytime a call comes in, the screen will display as follows.

Rotate the right knob and press it on the incoming call screen to answer/on hold/reject the call.

The rejected call screen as the following will be displayed for 3 seconds and then the radio will return to current audio source.

The on hold screen is as the following:

Select to on the on hold screen to answer the incoming call or to reject the call.

When call is answered, radio will display call screen as following:

Rotate the right knob and press on it will end/on hold/handset the call or dial number.

Select on the call screen to end the incoming call.

Select on the call screen to change the incoming call to private mode, and the screen will be as following:

Select on "Handsfree" will return to handsfree mode and the screen will return to call screen.

Select on call screen to enter DTMF screen during the call.

Rotate the right knob to select the number characters and press it to enter number and press BACK button to return to call screen.

#### 2nd Incoming Call

If a second call comes in, radio will display as follows when in the incoming call screen:

Select to reject the second call and the radio will return to the first call screen.

Select to answer the second call, and the first call will be held on.

Select on call 2 screen to end the second call.

The screen will display the call ended screen temporally and then go back to call 1 screen.

Select on 2nd incoming call screen will change to the first incoming call screen and hold on the second incoming Select will return to the second call and on hold the first call.

## Bluetooth Settings Ring Volume

When the radio is on BT telephone menu, select "Settings" to enter Bluetooth settings menu.

Then select "Volume" option to enter volume-setting menu to adjust default volume of ringtone and call.

Rotate and push the right knob to choose Ringtone option in the volume-setting menu.

And then rotate the right knob anti-clockwise to decrease volume of ringtone or clockwise to increase.

The volume scales will change correspondingly.

Ringtone voice can also be adjusted by left knob when one call comes in.

#### Call Volume

Choose "Ongoing" option on the volume-setting menu to adjust volume of call. Rotate anti-clockwise to decrease and clockwise to increase.

Call volume can also be adjusted by left knob during the phone call.

## **Ringtone Mode**

In Bluetooth settings menu, select "Ringtone" option to choose the output device of ringtone.

#### Bluetooth ON/OFF

Press TEL button to enter BT (Bluetooth) telephone menu. And then choose "Bluetooth" option to turn on/turn off Bluetooth.

# Audio/Setup

#### **Audio Settings**

Press SETUP button to enter Setup menu

Select "Audio" option in Setup menu to enter Audio Setup menu.

Select "Sound" option in the Audio Setup menu to adjust sound effect.

Rotate the right knob and press it to choose the effect you want to adjust in the Sound Menu screen.

Then rotate the right knob to increase or decrease the value of selected item.

Press the button to set to different aux level in the AUX in screen. Radio will recall the new aux level next time it

enters AUX In mode.

Noise will increase along with the speedup. Speed volume function may increase volume level automatically to

equalize the noise increase.

Select "Speed Volume" option in Audio Setup menu to adjust its default volume level.

Rotate the right knob anti-clockwise/clockwise to decrease/increase the speed volume.

Select "Bass Boost" option in Audio Setup menu to turn on/off bass boost.

Select "Audio Default" option in Audio Setup menu; choose "Yes" to set the radio to default audio settings.

Choose "Yes" option to set all audio options to default, or "No" to quit and return to the previous menu.

#### **Clock Settings**

In SETUP menu, select "Clock" option to enter Clock Setup menu

Select "Set time" option in Clock Setup menu to start setting time. The radio will show set clock screen.

Rrotate the right knob to adjust hour when the Hour text is flashing.

Then press the right knob to confirm and switch to set minute screen.

Rotate the right knob to adjust minute when the Minutes text is flashing.

Then press right knob to confirm and the radio will return to Clock Setup menu.

"ON/OFF" option in Clock Setup menu decides the clock display.

When the option is ON status, the clock shows on the screen whether the radio is On\_User Status or Off User

Status.

When the option is OFF status, the clock doesn't show on the screen whether the radio is On\_User Status or

Off User Status.

"Clock Format" option decides the format of clock displayed on the screen. Rotate the right knob and press it to

choose am/pm format or 24hr format.

The clock time from 0:00 to 11:59 in 24hr mode is displayed as 0:00am to 11:59am.

The clock time from 12:00 to 23:59 in 24hr mode is displayed as 0:00pm to 11:59 pm in am/pm mode.

## **Radio Settings**

In SETUP menu, press "Radio" option to enter Radio Setup.

Enter "TA" option in the Radio setup menu to turn on/off TA function.

Choose ON to turn on TA, and TA icon displays on the screen.

Choose OFF to turn off TA, and TA icon will not display on the screen.

Enter "DAB Interrupt" option in the Radio Setup menu to choose DAB's interrupt events.

#### Language Settings

Enter "Language" option in Setup Menu to select the language of the radio menu.

#### Restrictions on putting into service

Ensure that this device can be operated in at least one member state without infringing applicable requirements on use of radio spectrum.

#### Installation instruction

Since this device will not sales to consumer directly, but will to car manufactory. So we will not provide the installation instruction to consumer.

# DAB (Digital Radio) Operation DAB Band Select

Short press on RADIO button will switch to DAB1 or DAB2.

#### Radio Text Display

Press DISP button to display DAB radio text.

## **Browse EPG List**

Scroll the DAB menu to "EPG" option if available; Push the right knob to enter EPG list screen. Scroll to one EPG radio; push the right knob to select. And program list will show on the screen

## **Intellitext Display**

Select "Intellitext" option on DAB menu to enter Intellitext 1st level Screen. Select one option by pushing the right knob, e.g. "News" to enter Intellitext 2nd level Screen. Select one option, e.g. "Businesss" to see the full story.



# **Button Usage Overview**

Button 1~6:

Short press: recall a preset station. Long press: save a radio station.

DISP button:

Enable Text function

Radio Button:

Short Press: Select the radio waveband source: FM1, FM2, DAB1, DAB2, AM.

Long Press: Update radio list.

Day/Night Button: Change the Da/Night mode

Left Knob Rotation: Volume change Left Knob Push: Power ON/OFF Right Knob Rotation: Item scroll Right Knob Push: Item Select

Media Button:

Select the desired audio source USB1  $\rightarrow$  iPod  $\rightarrow$  Bluetooth  $\rightarrow$  AUX

SETTING button:

Enter/Exit SETUP menu.

TEL button:

Enter/Exit Tel menu.

Back button:

Back to last screen.

|<< and >>| Button:

**Short Press:** 

- play the previous/next track.
- Increase/decrease the frequency in steps of 0.05MHz/1KHz.

Press and hold:

- Fast forward /rewind on a track of MP3 USB/iPod/iPhone

## Play Mode Repeat Play

Short press preset #1, radio will play current track repeatedly and display RPT icon on the screen.

#### MIX Play

When the radio changed to MIX play mode, it will stop the current play and randomly play another track. Then the radio will play all the tracks in random order and display MIX icon on the screen.

## **Select Play Mode**

Short press on preset #1 will turn on RPT mode. Short press on preset #2 will turn on MIX mode. Press again on the preset button will revert to normal play mode

#### Note

No sufficient ventilation distance needed The use of apparatus: in tropical and moderate climates

## **Media Players Supported**

The radio supports USB speed from low (1,5 Mbps) up to high speed (480 Mbps).

Connections to USB2.0 or USB OTG compliant devices up to high speed are supported. Radio supports Mass

Storage Class Device – subclass 06 "SCSI Transparent".

Radio supports device formatted in FAT (FAT16 and FAT32).

Radio supports device capacity up to the limitation defined in the FAT format specification. For information only,

FAT32 formatted devices are limited to 2 Terabytes.

Radio supports all devices supporting Apple Accessory Protocol on USB link. It includes (and not limited to):

- iPod Generation 5 devices
- iPod Classic I and II (Generation 6 and 7)
- iTouch Generation OS 1, 2, 3, 4 and next
- iPhone Generation OS 1, 2, 3, 4 and next
- iPod Nano (1G, 2G, 3G ...)
- IPad 1, 2 and 3

#### **Media Formats Supported**

The radio supports media files only with the following file extensions: .mp3, .wma, .acc, .m4a, .mp4.

#### **WARNING**

- 1 Please note that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- 2 Note: 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.