



# DMR Conventional Series, Release Note R5.5

Software Version 5.05

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## Revision History

Version	Date	Description Note
R5.05.14	15-10-2013	Released the updated software R5.5
R5.05.01	15-08-2013	Released the software R5.5.
R5.00.01	03-12-2012	Released the software R5.0.
R4.05.01	29-02-2012	Released the software R4.5.
R4.01.01	23-11-2011	Released the software R4.1 with the RDAC.
R4.00.02	20-10-2011	Revised RDAC in the bundled product release because of the delayed release of the RDAC.
R4.00.01	15-09-2011	Initial release.

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# 1 Product Versions

DMR Product Series	Software Version
Subscriber (Portable/Mobile)	A5.05.14.004 S5.05.14.005
Repeater	A5.05.10.007 S5.05.10.007
Customer Programming Software (CPS)	V5.05.14.002
Repeater Diagnostics And Control (RDAC)	V5.05.03.003 V5.05.04.001(with SNMP)
Tuner	V5.05.04.001
USB Driver	V5.30.42.0

Table 1: Product Version

## 2 What's new in this release?

### 2.1 What's new in Release 5.5 for portable/mobile subscribers?

#### 2.1.1 New Enhancement

- **BT feature Improvement**

In this new version, the BT feature is improved in terms of the connection status indication and display of the connected device address and memory. Also, the BT icon and the BT Always Discoverable feature are added.

The CPS path to configure this feature is via:

- (1) Conventional -> General Setting -> Buttons -> BT.
- (2) Conventional -> Menu -> Accessories -> BT.
- (3) Common -> Accessories -> BT -> BT Always Discoverable.

Remark:

BT = 2.4G wireless technology

The BT feature is available for X1e/X1p only

- **Build-in BT software Upgrade via accessory connector**

The software upgrade of build-in BT could be conducted via the accessory connector on the X1e/X1p. Therefore, there is no need to disassemble the subscriber for upgrade.

Remark:

The BT software upgrade is not included in the subscriber SW upgrade kit

For more information about the build-in BT software upgrade, please refer to relevant BT software upgrade manuals

- **Emergency Feature Improvement**

In this version, emergency feature is improved in the following two parts:

- (1) Alarm w/Siren is added as one of the emergency type. The CPS path to configure this feature is via Emergency -> Digital Emergency -> DigitalSys -> Emergency Type
- (2) The "Polite Retries" of the emergency can be set to "0". If the "Polite Retries" of the emergency is set to "0", the subscriber will directly enter the next stage of the emergency process. The CPS path to configure this feature is via Emergency -> Digital Emergency -> DigitalSys -> Polite Retries

- **Telemetry Feature Improvement**

The Edge triggering is added as the active level for the GPIO Pins. You can configure the parameters in the CPS so as to trigger the telemetry command with the active level changing from low to high or from high to low.

The CPS path to configure this feature is via Conventional -> General Setting -> Accessories -> GPIO Pins -> Active level (set to "Edge") -> Low To High / High To Low.

- **Display Caller ID and Alias**

You can set the subscriber to display the caller's ID and alias alternatively during a call. The CPS path to configure this feature is via DMR Services -> Basic -> Display -> Display Caller ID and Alias.

Remark:

For this feature, the user must set alias to the radio ID in the contact list first

- **Menu Pop-up Display in Scan Mode**

When scanning on digital channel, pop-up menu prompts (including Message, Missed Call, New Work Order and Delete Work Order) are added for users to get the scanning information.

- **Radio Parameters Configurable via Menu**

You can activate the following menu parameters via the CPS to allow the user to modify the values manually via menu operation:

- (1) Frequency
- (2) Slot
- (3) Color Code
- (4) CTCSS/CDCSS
- (5) Tx Contact Name
- (6) Rx Group List
- (7) Radio Alias
- (8) Keypad Mode
- (9) Mic AGC
- (10) Always Treble Boost
- (11) LQO
- (12) Scan List
- (13) Roam List

The CPS path to configure this feature is via:

- (1) Conventional ->General Setting -> Menu -> Common Menu -> Programming -> Channel -> Frequency / Slot / Color Code / CTCSS/CDCSS / Tx Contact Name / Rx Group List,
- (2) Conventional ->General Setting -> Menu -> Common Menu -> Programming -> Radio -> Radio Alias,
- (3) Conventional ->General Setting -> Menu -> Common Menu -> Settings -> Radio Settings -> Keypad Mode,
- (4) Conventional ->General Setting -> Menu -> Common Menu -> Settings -> Audio Settings -> Mic AGC / Always Treble Boost / LQO,
- (5) Conventional ->General Setting -> Menu -> Common Menu -> Scan -> Scan List,
- (6) Conventional ->General Setting -> Menu -> Common Menu -> Roam -> Roam List.

- **Priority Interrupt Feature Improvement**

The Reliable Priority Interrupt Transmit feature could be configured in the digital channel setting. When the feature is disabled, both slots can be used for voice communication, but the success rate of the priority interrupt will be low; when it is enabled, the subscriber will allow only one slot to be used for voice communication, so as to ensure another slot will remain free for sending priority interrupt frame.

The CPS path to configure this feature is via Channel -> Digital Channel -> Reliable Priority Interrupt Transmit.

- **Tone Setting Improvement**

The "Alert Tone Setting" is added, and some of the tones have "Infinite" cycles. The CPS path to configure this feature is via General Setting -> UI Indication -> Alert Tone Setting.

- **Contact List Sort**

If Contact List Sort is enabled, the contacts will be sorted in the list by their alias; otherwise, they will be sorted by the sequence as they are added into the list. The CPS path to configure this feature is via DMR Services -> Contact -> Contact List Sort.

- **Increase of Contact list capacity**

In this new version, the capacity of the contact list is increased from 512 into 1024. The CPS path to configure this feature is via DMR Services -> Contact -> Contact List.

- **Input method switch via Menu**

Users can switch between predictive text input and non-predictive text input via menu. (This feature is applicable for French, German, Russian and Spanish)

- **Input Language Switch Improvement**

Users can short press the "#" key on the keypad to switch the input method among uppercase of current selected language, lowercase of selected language, uppercase of English, lowercase of English and number. If the current language is Thai, users need to long press the "#" key to switch the input method; other languages need only short pressing for switching.

The CPS path to configure this feature is via General Setting -> Menu -> Common Menu -> Settings -> Radio Settings -> Language.

- **DTMF Keypad Mode Memory**

The subscriber can save the status of DTMF keypad mode. If the DTMF keypad mode is enabled before the subscriber is turned off, it will be still stay enabled when the radio is powered on again.

- **Power Knob Disabling**

This feature determines whether the subscriber could be powered off by rotating the power knob. With the feature enabled, users cannot power off the subscriber by rotating the power knob. If the user still wants to power off the radio when this feature is enabled, they need to rotate the knob to the power-off status first, and then long press the P2 key for five seconds. Of course, during this operation, the pre-programmed feature of P2 Long will be invalid. The CPS path to configure this feature is via Common -> Setting -> Basic -> Disable Power Off From Power Knob.

- **PTT Key Lock**

The PTT key lock is available in this version. Users can determine whether to lock the PTT key. This is an enhancement on the selective key lock function.

The CPS path to configure this feature is via Common -> UI Setting -> Select Button Lock -> PTT.

## 2.1.2 New Features

### • Quick GPS

The Quick GPS enhance the GPS transferring efficiency for subscribers. Within a certain report cycle, the number of subscribers' GPS reporting is increased. This enhance the GPS channel usage rate and reliability of GPS report.

Take 60 seconds as an example of the cycle of quick GPS report, here followed is the table for the channel capacity:

Synchronization Method	Data Encryption	GPS Data compression	Min. delay between two GPS message (ms)	Occupation Rate at channel	Max. Capacity per 60 seconds (pcs)
UART	No	No	600	90%	90
UART	No	Yes	420	90%	128
UART	Yes	No	660	90%	81
UART	Yes	Yes	480	90%	113
1PPS	No	No	480	90%	113
1PPS	No	Yes	300	90%	180
1PPS	Yes	No	540	90%	100
1PPS	Yes	Yes	360	90%	150

Table 2: Table for the channel capacity

Note:

1. The "UART" and "1PPS" options differ in hardware. As for the identification between UART and 1PPS version, please refer to our 1PPS model number list. The model number of a GPS model, which are not included in the list, will be UART version.
2. The occupation rate at channel indicates the channel efficiency for timed report.
3. The former delivered build-in GPS has to be upgraded. For build-in GPS upgrading, Hytera provides an upgrade software tool and manual.

The CPS path to configure this feature is via General Setting -> Accessories -> GPS -> Quick GPS.

**Data transmission in analogue mode**

The Data PTT feature is mainly used in analogue mode. The external data from Peripheral Equipment can be transmitted via the GPIO port of the subscriber to other device or subscriber.

The CPS path to configure this feature is via General Setting -> Accessories -> GPIO Pins -> Data Revert Channel / Pin.

**• DMRA Data Service**

This service is a standardized IP data service (applicable for all data services such as text message) defined by DMRA. For the service compatibility, see "3. Important Notes" in this document.

The CPS path to configure this feature is via  
DMR Services -> Basic -> Miscellaneous -> Data Bear Service.

**• Authentication**

This feature is used to authorize valid users conduct important operations on the subscriber through air interface. Currently, the Authentication feature is only available for over the air programming (OTAP), Radio Disable/Enable and Remote Monitor features.

The CPS path to configure this feature is via  
DMR Services -> Basic -> Authentication.

**• Random Key Encrypt**

This feature is used on DMR mode. With the feature enabled, the subscriber will encrypt its transmitted voices or data by selecting an encrypt key randomly from the Encrypt Key List in the CPS. Then the receiving party will need MultiKey Decrypt to receive the call.

The CPS path to configure this feature is via:

(1) Channel -> Digital Channel -> Encrypt -> Random Key Encrypt,

(2) Channel -> Digital Channel -> Encrypt -> MultiKey Decrypt.

**• Enhanced Channel Access**

The Enhanced Channel Access feature is used to reduce call collisions for users in order to optimize channel access and call handling.

The CPS path to configure this feature is via  
Channel -> Digital Channel -> Enhanced Channel Access.

Remark:

This optimization is working between Hytera subscribers and repeaters only

- **Zone Notify**

With the "Channel Notify" option selected via the CPS, the subscriber will play the zone number when the user is switching the zone. This feature is only available for subscribers without display.

The CPS path to configure this feature is via:

- (1) General Setting -> Buttons -> Zone Up/Zone Down",
- (2) General Setting -> UI Indication -> Channel Notify".

- **Radio Alias Displaying During Power-on Progress**

With this feature enabled, the subscriber will display its alias during power-on progress. The CPS path to configure this feature is via

Common -> Setting -> Power-on Screen -> Power-on Message Type -> Radio Alias.

- **Power-On Radio ID Input**

The user can assign an ID to the subscriber. If "power-on Input ID" is enabled via the CPS, the user is requested to input a Radio ID after the device is switched on. This Radio ID is the relevant ID for the calls in the network.

The CPS path to configure this feature is via

Common -> Setting -> User Assignment ID-> Power-On Input ID.

- **Favorite Contact List**

Users can add the frequently-used contacts into the Favorite Contact List, and directly view these contacts through the menu or programmed Favorite Contact List key.

The CPS path to configure this feature is via:

- (1) General Setting -> Buttons -> Short / Long Key -> Favorite Contact List,
- (2) General Setting -> Menu -> Digital Menu -> Contact -> Favorite Contact,
- (3) DMR Services -> Contact -> Favorite Contact List.

## 2.2 What's new in Release 5.5 for repeater?

### 2.2.1 New Enhancement

- **Local Access Management Improvement**

The Local Access Management is improved in this firmware version. If the a valid user calls to a target radio through repeater, the target radio could call back through repeater within auto reset time, no matter if the target radio's ID belongs to the radio ID range that are allowed to access to the repeater or not.

The ID in the local access management table of the repeater is the initiating Radio ID

- **Low Battery Tone for Portable Repeater RD96X**

The portable repeater uses battery to supply power. To prevent the repeater from power interruption, the low battery tone is added to prompt the user to take timely measures.

The CPS path to configure this feature is via

General Setting -> UI Indication -> Alert Tone -> Low Battery Tone.

- **Power On/Off Key on Portable Repeater RD96X**

In the new version, the portable repeater RD96X could be powered on/off by long press the power on/off key. In former version, power on /off is conducted by short press of the power on/off key

- **Auto Power On of Portable Repeater RD96X**

With this feature enabled, the repeater is allowed to power on automatically after power interruption due to abnormalities, facilitating the user. This feature is helpful when there is no one on duty.

The CPS path to configure this feature is via General Setting -> Setting -> Auto Power On.

- **Call Hang Time**

With this feature enabled, after the transmission ends, the repeater will reserve the channel for a preset duration (the duration is set according to the call type). Within this duration, any member can hold the PTT key to call or call back. The "Call Hang Time" parameter of subscriber shall be identical with the call hang time settings for the repeater.

The CPS path to configure this feature is via:

(1) Conventional -> DMR Services -> Basic -> Group Call Hang Time,

(2) Conventional -> DMR Services -> Basic -> Private Call Hang Time,

(3) Conventional -> General Setting -> Setting-> Analog Call Hang Time.

- **IP Multi-site Access Management for Super Master Site**

In the former version, a call from a master repeater's subnet was filtered by the master repeater according its multi-site access management table. It means that in case the Radio ID was not part of the table in the master repeater the call was not forwarded to the super master repeater. Therefore it never reached another repeater subnet via the super master.

The IP multi-site access management is optimized in this version. Now a call will not be filtered by a master repeater so that the super master repeater will determine any call in the network whether it is valid or not.

The ID in the local access management table of the repeater is the initiating Radio ID

- **Transmitting Slot Monitoring**

In this version, the Digital Audio Monitor feature is improved, allowing users to monitor the audio signals in the current transmitting slot which is defined in slot operation setting per channel. In former version, only designated slot of the repeater could be monitored.

The CPS path to configure this feature is via

- (1) Conventional -> General Setting -> Accessories -> GPIO Pins -> Digital Audio Monitor-> Channel TX slot,
- (2) Conventional -> Channel -> Digital Channel -> Slot Operation

Remark:

Only one slot could be monitored at a certain time.

- **RSSI Signal Pin Output**

It is possible to configure the Pin#26 of rear accessory jack to provide a voltage level, which is proportional to the RSSI signal in the current slot. The current slot is defined by slot operation setting per channel.

The CPS path to configure this feature is via

Conventional -> Channel -> Digital Channel -> Slot Operation.

- **Repeater GPIO PIN Improvement**

Repeater Disable feature has been added into GPIO pin. With a valid input voltage level, repeater will be disabled.

The CPS path to configure this feature is via

Conventional -> General Setting -> Accessories -> GPIO Pins -> Pin#3 -> Repeater Disable.

## 2.2.2 New Features

- **Remote Upgrade**

The newly added Remote Upgrade feature allows users to upgrade the repeater through IP multi-site network. This feature prepares the repeater for remote upgrades from R5.5 release to future releases.

The CPS path to configure this feature is via:

- (1) Conventional -> General Setting -> Network -> Remote Upgrade Service -> Remote Upgrade Enable,
- (2) Conventional -> General Setting -> Network -> Remote Upgrade Service -> Remote Upgrade Service IP,
- (3) Conventional -> General Setting -> Network -> Remote Upgrade Service -> Remote Upgrade Service UDP Port,
- (4) Conventional -> General Setting -> Network -> Remote Upgrade Service -> Remote Upgrade Local UDP Port,
- (5) Conventional -> General Setting -> Network -> Remote Upgrade Service -> Remote Upgrade Firewall Open Time.

- **DMRA Data Service**

This service is a standardized IP data service defined by DMRA. This is applicable for all data services such as text message. For the service compatibility, see "3. Important Notes" in this document.

The CPS path to configure this feature is via

DMR Services -> Basic -> Miscellaneous -> Data Bear Service.

- **Authentication Key**

This feature is used to authorize the valid users conduct some important operations on the subscriber through repeater.

The CPS path to configure this feature is via

DMR Services -> Basic -> Authentication.

- **Enhanced Channel Access**

The Enhanced Channel Access feature is used to reduce call collisions for users in order to optimize channel access and call handling.

The CPS path to configure this feature is via

Conventional -> DMR Services -> Basic -> Enhanced Channel Access.

Remark:

This optimization is working between Hytera radios and Hytera repeaters only

- **Repeat TOT**

This feature is used to prevent the user from occupying the repeater for an extended time.

With this feature enabled, the repeater will give alert before the preset time expires, and will terminate repeating the call as soon as the time expires; after that, the repeater will stop repeating the same call for a certain period. Users can set the feature on actual requirements.

The CPS path to configure this feature is via:

- (1) Conventional -> General Setting -> Setting -> Basic Setting -> Repeat TOT Time,
- (2) Conventional -> General Setting -> Setting -> Basic Setting -> TOT Pre-alert Time,
- (3) Conventional -> General Setting -> Setting -> Basic Setting -> TOT Pre-alert Interval Time
- (4) Conventional -> General Setting -> Setting -> Basic Setting -> TOT Re-Repeat Time.

- **Dynamic Domain Name**

The dynamic domain name service allows users to start DNS server and define the domain name, and use the dynamic domain name to establish the IP multi-site network.

This will facilitate the network establishment and management.

Before using this feature, make sure that the domain name is applied and the router has the Dynamic Domain Name feature. Please apply for the domain name to the domain name supplier specified for your router. Moreover, we provide only a trial of this feature in this version. The official release of this feature will be available in future software releases.

The CPS path to configure this feature is via:

- (1) Conventional -> General Setting -> Network -> IP Multi-site Connect -> DNS On/Off,
- (2) Conventional -> General Setting -> Network -> IP Multi-site Connect -> Manual Set DNS On/Off,
- (3) Conventional -> General Setting -> Network -> IP Multi-site Connect -> Manual Config DNS Server IP,
- (4) Conventional -> General Setting -> Network -> IP Multi-site Connect -> Domain Names.

## 2.3 What's new in Release 5.5 for API?

All detailed information related to API, please contact HMF application partner supporting team.

### 2.3.1 New Enhancement

- **Over the air programming (OTAP) Improvement**

In the new firmware release, the API for over the air enable and disable GPS function has been added. With corresponding third party application based on our OTAP API, you can configure the subscriber over the air. The over the air programming feature needs support from third party applications. Apart from the application tool, it also needs to enable the "over the air decode" of the subscriber in order to be allowed to be programmed over the air. The CPS path to configure this feature is via DMR Services -> Basic -> Over The Air Decode.

- **Encrypt Feature Improvement**

- The "Encryption Board Presence Check Before Tx" option is added. In case that there is no third-party encryption option board assembled in the radio, the radio transmitted the un-encryption voice or data out. With this feature, the voice and data transmission on digital channel is blocked, if the encryption optional board is not assembled or not assembled properly.

- The "Only Rx Encrypted Voice/Data" option is added. On the digital channel with encrypt feature, if "only RX Encrypted Voice/Data" is enabled, it prevents the subscriber from receiving the unencrypted data and mutes the speaker upon the receipt of unencrypted voices.

The CPS path to configure this feature is via:

- (1) Conventional -> DMR Services -> Miscellaneous -> Encryption Board Presence Check Before Tx,
- (2) Conventional -> DMR Services -> Miscellaneous -> Only Rx Encrypted Voice/Data.

Remark:

The optional board here means encryption optional board developed by third party.

- **Delete Messages Over the Air**

This version supports deleting received text messages over the air API. The third party could develop the third party software to remotely delete the specific message in the subscribers' inbox based on a certain third party development protocol.

- **Peripheral Equipment Obtaining GPS Information**

The peripheral equipment can obtain the GPS information of the connected subscriber through specific protocol.

- **User Interface( UI) Control via peripheral equipment**

In this version, API for UI control including icons, indication screens and menu display via peripheral equipment is added.

- **Data Transmission**

The user-defined data can be transferred between peripheral equipments via the air interface (AI) of the subscriber. The radio network only provides the transparent channel for transferring.

## 2.3.2 New Features

- **Work Orders**

It allows third party to start some integration of work order management. With work order management application, users can dispatch work orders to the subscriber via any third party application.

The CPS path to configure this feature is via DMR Services -> Work Orders.

- **Serial Port ( UART) API**

Serial port API is added based on the earlier USB port API development, facilitating the use of the device for further development.

Remark:

This is applicable to the radio models X1e/X1p, PD705(G) series, PD785(G) series and MD785 series (internally optional board interface only, not with the accessory connector). For MD785(G) series, hardware modification is needed in order to support UART application. As for the detailed information, please refer to relevant documents from HMF application partner supporting team.

- **Repeater Third Party API**

In this version, the API of repeater is released (Hytera Define) for third party development, and it supports following features:

1. Emergency Call and Monitor;
2. Work Orders;
3. Repeater information checking, channel switching and air interface (AI) configuration.  
(For more information, please contact the HMF application partner supporting team. )

## 2.4 What's new in Release 5.5 for tools?

### 2.4.1 New Enhancement

- **Repeater Diagnostics And Control (RDAC) Improvement**

New parameters are added for the RDAC feature, to facilitate the remote configuration and management to the repeater. (For more information, please contact your nearest sales support)

### 2.4.2 New Features

- **RDAC New Features**

1. Supports multiple users logging in and operating the software at the same time. The system administrator can configure the user types based on different demands. Different types of users have different authorizations.
2. Supports exporting the RDAC alert and diagnostic log. Thus, users can save the information of the IP multi-site repeaters conveniently.
3. Gives alert when IP network is disconnected, in order to alert users to take measures.
4. Sends major alarm mail. With this feature enabled, when a major alarm occurs, the alarm mail will be sent to inform users and more members in concern. This facilitates the management and maintenance to the IP multi-site connect system.

(For more information, please contact your nearest sales support to get more information.)

- **Customer Programming Software (CPS)**

1. Limitation of CPS writing password tries  
Limit is added to the password tries before the CPS writing, when the tries reach the limited number, writing data from the CPS will be blocked. The CPS path to configure this feature is via  
Common -> Setting -> Password -> Write Password Tries.
2. Reset Default Data  
This feature allows users to reset the subscriber with the default data when the CPS writing is blocked or when the data reset is needed. The CPS path to configure this feature is via Program -> Reset Default Data.
3. Upgrade CPS\_Date  
This feature allows users to upgrade the old version rcd format file to R5.5, and then write the rcd file to the R5.5 radio.  
The CPS path to configure this feature is via Tools -> Upgrade CPS\_Date.

- **Encryption key Loader**

In this version, the KeyLoader for encryption keys is released. The KeyLoader is optional software, which has to be purchased.

(For more information, please contact your nearest sales support.)

## 3 Important Notes

### 3.1 Subscriber

#### 3.1.1 Software

1. Pay attention to the following note on R5.5 software compatibility:
  - (1). In this version, GPS Data Compression feature is added (configurable via the CPS). With this feature enabled, the control station in earlier versions will not be able to decompress the compressed GPS data. Thus, to ensure the subscriber is compatible with control stations in earlier versions, this feature shall not be enabled, or upgrade the control station to R5.5.
  - (2). Data service compatibility:
    - Hytera Defined Data: data services developed based on Hytera defined protocol;
    - DMRA IP: data services developed based on protocol defined by DMR Association, thus ensuring compatibility in data services between different DMR manufacturers. This standard will be official released by DMR association soon.
  - (3). The protocol of the Work Orders feature is revised, so R5.5 is not compatible with R5.0 trial version in this feature. Thus, users need to ensure the software is upgraded to R5.5 prior to using this feature.
  - (4). In this version, new digital USB driver is released for computer. Pay attention to the following note when using the driver:
    - a. For users who are using digital USB driver R2.0, it is suggested to use this version for driving.
    - b. As for third parties who are using digital USB driver R3.0, it is suggested to use this version when using 32-bit OS, and upgrade it to R5.5 when using 64-bit OS.
    - c. For new users using 64-bit OS, it is suggested to install digital USB driver R5.5.

#### 3.1.2 New supported Hardware

2. PD78X, X1e and MD78X of U6 (340-380 MHz) frequency band.
3. PD79X Ex U3 (350-400 MHz).

(For more information, please contact your nearest sales support )

## 3.2 Repeater

### 3.2.1 Software

1. Data service compatibility:  
Hytera Defined Data: Compatible with data services in earlier versions;  
DMRA IP: This is a compressed IP data format newly defined by DMRA and is not released yet. It is not compatible with services in earlier versions, but compatible with DMRA IP data service of other manufacturers.
2. To reduce call conflict, it is suggested to use Enhanced Channel Access feature. This feature shall be used with subscribers, and when it is enabled, the subscribers must be configured correspondingly.
3. The Remote Upgrade feature applies only in R5.5 or above. And this feature needs remote upgrade tools which will be released in the bundled software version.
4. In this version, new digital USB driver is released for computer. Pay attention to the following note when using the driver:
  - (1). For users who are using digital USB driver R2.0, it is suggested to use this version.
  - (2). For users who are using digital USB driver R3.0, it is suggested to use this version when using 32-bit OS, and upgrade it to R5.5 when using 64-bit OS.
  - (3). For new users using 64-bit OS, it is suggested to install digital USB driver R5.5.

### 3.2.2 New supported Hardware

R5.5 supports additional repeater models and samples

1. RD98XS of V1 (136-174 MHz), U1 (400-470 MHz) and U3 (350-400 MHz).
2. RD96X of U3 (350-400 MHz).

(For more information, please contact your nearest sales support )

## 3.3 Tools

### 3.3.1 Software

Note: Both the CPS and Tuner support operations in 64-bit OS.

## 3.4 Appendix

None

## 4 Issues

### 4.1 Summary

This section lists known issues which existed in R5.0. (reported in release R5.0 and previous released ) which have now been fixed or closed in this release.

### 4.2 Resolved Issues

No	Product	Description
#14210	Subscriber	The repeat channel is not available as the emergency revert channel. When in Talk Around mode during roaming, the subscriber fails to prompt that the repeater reviving is unsuccessful.
#14217	Subscriber	When in Covert mode, after powering on again, the subscriber's microphone can be unmuted upon the receipt of the remote monitor command.
#14460	Subscriber	When searching Bluetooth PTT and earpiece, after pressing the programmed Contact List key, the pop-up menu will not disappear.
#14869	Subscriber	When the internal and external microphone gains are at the same level, the X1p's front microphone will have lower volume than the rear microphone.
#15266	Subscriber	Wrong group receipt list is used in the Priority Sweep in common frequency, and the repeat common-frequency repeat cannot use the Priority Scan feature.
14332	Repeater	In IP multi-site network, the repeater may turn to one-way communication or even be disconnected after a period of operation. Only restarting the repeater can let it recover.
14356	Repeater	In IP Multi-site Network, when the network is unstable, the repeater may miss message and noise may occur.
14689	Repeater	When RDAC and the repeater are disconnected, they cannot re-establish the connection automatically. And manual connection is needed.
15012	Repeater	When the subscriber sends emergency calls to the RDS through IP multi-site connect base station, the RDS client will wait a long time to display the emergency alarm from the master site and slave site.
15036	Subscriber & Repeater	Buffer Management does not give ACK to the third party software.
15116	Repeater	During a call with SmartDispatch, when the transmitting party releases the PTT key, the receiving party will encounter voice interruption for 1 to 1.5 seconds.
15117	Repeater	In former version, fan speed detection had higher priority than services which might lead to voice delay in services such as the IP multi-site network. In the new version, the fan controlling is optimized without affecting the cooling performance. There will be no more delay on IP multi-site network for voice because of this issue.