Wireless Customized Voice Announcer

R603 User Manual

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1. Introduction

R603 is a wireless customized voice announcer. With programmable RGB light and 16MB capacity for 10 audios to upload, you can personalize each event by setting different light colors and alarm sounds. R603 also supports the multicast group feature, which allows you to control multiple R603 devices simultaneously. In addition, it is powered by DC 12V and supported by three 1.2V AAA Ni-MH backup batteries as an outage occurs. R603 reminds you of an upcoming event, ensuring everything is on track.

LoRa Wireless Technology

LoRa is a wireless communication technology famous for its long-distance transmission and low power consumption. Compared with other communication methods, LoRa spread spectrum modulation technique greatly extends the communication distance. It can be widely used in any use case that requires long-distance and low-data wireless communications. For example, automatic meter reading, building automation equipment, wireless security systems, and industrial monitoring. It has features like small size, low power consumption, long transmission distance, strong anti-interference ability and so on.

LoRaWAN

LoRaWAN uses LoRa technology to define end-to-end standard specifications to ensure interoperability between devices and gateways from different manufacturers.

2. Appearance

▲ Front

▲ Side

▲ Back

3. Features

- DC 12V power supply
- 3* AAA 1.2V Ni-MH batteries as backup power
- Simple installation and setting
- IP30
- 10 default alarm sounds
- Customizable setting of volume and light
- Alarm notification when the DC power supply fails and switches to the backup power source.
- Supports multicast group functionality.
- Compatible with LoRaWAN TM Class C
- Frequency hopping spread spectrum
- Configuration parameters can be configured through third-party software platforms, data can be read and alarms can be set via SMS text and email (optional)
- Applicable to third-party platforms: Actility / ThingPark, TTN, MyDevices / Cayenne

4. Setup Instructions

On/Off

Turn on	Plug in the power adapter or insert three 1.2V nickel metal hydride batteries. Notes: a. The device is powered by DC12V even when the batteries are in. b. The white indicator flashes once when R603 is successfully powered on.

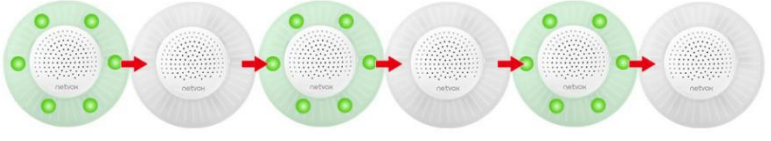
Network Joining

Never joined the network	Turn on the device to search the network. The network indicator stays on: Success The network indicator remains off: Fail
Had joined the network (without factory resetting)	Turn on the device to search the network. The network indicator stays on: Success The network indicator remains off: Fail
Fail to join the network	First 2 minutes: send join request every 15 seconds After 2 minutes: send join request every 30 minutes Note: Please check the device verification information on the gateway or consult your platform service provider.

Function Key

Press and hold for 5 seconds	Factory reset The network indicator flashes for 20 times: Success The network indicator remains off: Fail
Short press	Report data In the network: The network indicator flashes once and reports an uplink command. Not in the network: The network indicator remains off.

Remotely Control

Alarm Sounds and Lights	Control R603 alarm and light through AppServer 10 default alarm sounds: a. 001.mp3: Emergency b. 002.mp3: Doorbell c. 003.mp3: Burglar d. 004.mp3: Water leaking e. 005.mp3: Help f. 006.mp3: No smoking g. 007.mp3: Poor air quality h. 008.mp3: The temperature is too high i. 009.mp3: Thief j. 010.mp3: Welcome 4 LED flash modes: a. 0x00 No LED b. 0x01 Flowing c. 0x02 Blinking  d. 0x03 Always on

Backup Battery

Working Principle	1. Backup batteries automatically provide power when DC power is unavailable. Powered by batteries, R603 operates 24 hours with no alarm triggered, whereas it works only 1.5 hours with alarms reported. 2. When the main power source, DC 12V, is available, backup batteries stop powering R603. 3. R603 only supports AAA 1.2V Ni-MH battery as backup power. Installing wrong batteries could cause an explosion. 4. With DC power connected, backup batteries start charging when they drop to low voltage (3.6V – 3.1V). The network indicator flashes once every 5 seconds until the batteries are fully charged. 5. If R603 is powered by dying batteries without the support of DC power, distorted sounds made by batteries could occur. Please reconnect the DC power and charge the batteries as soon as possible.

5. Data Report

After being powered on, the device will immediately send a version packet and report the status.

The device sends data according to the default configuration before any other configuration.

Default Setting:

Min Interval: 0x0E10 (3600s)

Max Interval: 0x0E10 (3600s)

LED color: Blue (0x00 0x00 0xFF) (change the LED color through command by setting 0x00 – 0xFF)

Warning Status: 0x00_No Warning (reports when the audio ends);

0x01_Warning (reports when the audio starts)

DC Power Failure Alarm: 0x00_No Alarm

0x01_Alarm (reports in 10 seconds when DC power is unavailable)

Siren No:

0x01_Emergency	0x06_ No smoking
0x02_Door Bell	0x07_ Poor air quality
0x03_Burglar	0x08_ The temperature is too high
0x04_Water leaking	0x09_ Thief
0x05_Help	0x0A_ Welcome

Strobe Mode:

0x00_ (No LED Indication)

0x01_Flowing (Led Blink Mode 1 in Parallel to Warning)

0x02_Blinking (Led Blink Mode 2 in Parallel to Warning)

0x03_Always On (Led Blink Mode 3 in Parallel to Warning)

Notes: a. Min Interval and Max Interval could be customized.

b. The above data is decoded based on the Netvox LoRaWAN Application Command document and http://www.netvox.com.cn:8888/cmddoc.

Data report configuration and sending period are as follows:

Min Interval (unit: second)	Max Interval (unit: second)
Any number between 1–65535	Any number between 1–65535

5.1 Example of ReportDataCmd

FPort: 0x06

Bytes	1	1	1	Var (Fix = 9 bytes)
	Cmd ID	Device Type	Report Type	Netvox PayLoad Data

CmdI D– 1 Byte

Device Type – 1 Byte – Device Type of Device

Report Type – 1 Byte – the presentation of the Netvox PayLoad Data, according to the device type

Netvox PayLoad Data– var Bytes (Max = 9 Bytes)

Tips

1. Battery Voltage:

a. If the battery is equal to 0x00, it means that the device is powered by a DC power supply

b. Powered by backup battery:

The voltage value is bit 0 – bit 6, bit 7=0 is normal voltage, and bit 7=1 is low voltage.

Battery=0xA0, binary= 1001 1111, if bit 7= 1, it means low voltage.

The actual voltage is 0001 1111 = 0x1F = 31, 31*0.1v =3.1v.

2. Version Packet:

When Report Type = 0x00 is the version packet, such as 01DE000A01202405130000, the firmware version is 2024.05.13.

3. Data Packet:

When Report Type=0x01 is the data packet.

Device	Device Type	Report Type	Netvox PayLoad Data				
R603	0xDE	0x01	Battery (1 Byte) unit:0.1V	Warning Status (1 Byte) 0x00_No Warning 0x01_Warning	Reserved (1 Byte) 0x00_Off 0x01_On	DC Power Failure Alarm (1 Byte) 0x00_No Alarm 0x01_Alarm	Reserved (4 Bytes) fixed 0x00

Example of Uplink1: 01DE012601010100000000

1st Byte (01): Version

2nd Byte (DE): Device Type 0xDE—R603

3rd Byte (01): Report Type

4th Byte (26): Battery — 3.8V 26 (HEX) = 38 (DEC), 38*0.1V = 3.8V (Backup batteries are in the case.)

5th Byte (01): Warning Status — Alarm

6th Byte (01): Contact Switch Status

7th Byte (01): DC Power Failure Alarm— Alarm

8th –11th Byte (00000000): Reserved

Example of Uplink2: 01DE010000010100000000

1st Byte (01): Version

2nd Byte (DE): Device Type 0xDE－R603

3rd Byte (01): Report Type

4th Byte (00): Battery — 0V (R603 is powered by DC with no backup batteries in the case.)

5th Byte (00): Warning Status — No Alarm

6th Byte (01): Contact Switch Status — On

7th Byte (01): DC Power Failure Alarm— Alarm

8th –11th Byte (00000000): Reserved

5.2 Example of Report Configuration

FPort: 0x07

Bytes	1	1	Var (Fix = 9 Bytes)
	Cmd ID	Device Type	Netvox PayLoad Data

Cmd ID– 1 Byte

Device Type– 1 Byte – Device Type of Device

Netvox PayLoad Data– var Bytes (Max = 9 Bytes)

Description	Device	Cmd ID	Device Type	Netvox PayLoad Data								
Config Report Req	R603	0x01	0xDE	Min Time (2 bytes) Unit:s	Max Time (2 bytes) Unit:s	Reserved (5 Bytes) Fixed 0x00						
Config Report Rsp		0x81		Status 0x00_success	Reserved (8Bytes) Fixed 0x00							
Read Config Report Req		0x02		Reserved (9 Bytes) fixed 0x00								
Read Config Report Rsp		0x82		Min Time (2 bytes) Unit:s	Max Time (2 bytes) Unit:s	Reserved (5 Bytes) Fixed 0x00						
Start Siren Req		0x03		Siren No (1 Byte) 0x00_0x0A, Others_Reserved Note: If the number of music files exceeds the default ten, such as thirty, then the downlink "no" is 0x01 - 0x1E.	Siren Level (1 Byte) 0-30	Strobe Mode (1 Byte) 0x00_NoLedIndication 0x01_LedBlinkMode1 in Parallel to Warning 0x02_ LedBlinkMode2 in Parallel to Warning 0x03_ LedBlinkMode3 in Parallel to Warning	Duration (2 Bytes) Unit: 1s	Red (1Byte)	Green (1Byte)	Blue (1Byte)	Reserved (1 Byte) Fixed 0x00	
Set Period Siren Req		0x04		Siren No (1 Byte) 0x00_0x0A, Others_Reserved Note: If the number of music files exceeds the default ten, such as thirty, then the downlink "no" is 0x01 - 0x1E.	Siren Level (1 Byte) 0-30	Strobe Mode (1 Byte) 0x00_NoLedIndication 0x01_LedBlinkMode1 in Parallel to Warning 0x02_ LedBlinkMode2 in Parallel to Warning 0x03_ LedBlinkMode3 in Parallel to Warning	Duration (2 Bytes) Unit: 1s	Period Time (2 Bytes) unit: 1s	Reserved (2 Bytes) fixed 0x00			
Set Period Siren Rsp		0x84		Status (0x00_success)	Reserved (8 Bytes) fixed 0x00							

Get Period Siren Req		0x05		Reserved (9 Bytes) fixed 0x00					
Get Period Siren Rsp		0x85		Siren No (1 Byte) 0x00_0x0A, Others_Reserved Note: If the number of music files exceeds the default ten, such as thirty, then the downlink "no" is 0x01 - 0x1E.	Siren Level (1 Byte) 0-30	Strobe Mode (1 Byte) 0x00_NoLedIndication 0x01_LedBlinkMode1 in Parallel to Warning 0x02_ LedBlinkMode2 in Parallel to Warning 0x03_ LedBlinkMode3 in Parallel to Warning	Duration (2 Bytes) Unit: 1s	Period Time (2 Bytes) unit: 1s	Reserved (2 Bytes) fixed 0x00
Stop Period Siren Req		0x06		Reserved (9 Bytes) fixed 0x00					
Stop Period Siren Rsp		0x86		Status (0x00_success)	Reserved (8 Bytes) fixed 0x00				
Set LED Color Req (REMAIN Last config when resettofac)		0x07		Red (1 Byte)	Green (1 Byte)	Blue (1 Byte)	Reserved (6 Bytes) fixed 0x00		
Set LED Color Rsp		0x87		Status (0x00_success)	Reserved (8 Bytes) fixed 0x00				
Get LED Color Req		0x08		Reserved (9 Bytes) fixed 0x00					
Get LED Color Req		0x88		Red (1 Byte)	Green (1 Byte)	Blue (1 Byte)	Reserved (6 Bytes) fixed 0x00		

Notes: a. Min Time = Max Time; b.Siren Level = 0x00 (= 0 mute); 0x1E (= 30 max volume level)

Min Time = 0x003C (1min), Max Time = 0x003C (1min)

(1) Config Report Req

Downlink: 01DE003C003C0000000000

Response: 81DE000000000000000000 (configuration success)

81DE010000000000000000 (configuration fail)

Config Report Rsp

Downlink: 02DE000000000000000000

Response: 82DE003C003C0000000000 (current parameter)

(2) Start Siren Req

Execute the command and report Warning Status = 0x01.

Warning Status = 0x00 is sent after the alarm stops.

Set Emergency alarm

Siren No = 0x01 (Emergency); Siren Level = 0x0F (15); Strobe Mode = 0x01 (Flowing); Duration = 0x000A (10s); LED Color = 0xA374C4

Downlink: 03DE010F01000AA374C400

Set Doorbell

Siren No = 0x02 (Doorbell); Siren Level = 0x1E (30); Strobe Mode = 0x02 (Blinking); Duration = 0x001E (30s); LED Color = 0xA374C4

Downlink: 03DE021E02001EA374C400

Set Doorbell

Siren No = 0x02 (Doorbell); Siren Level = 0x1E (30); Strobe Mode = 0x00 (No LED); Duration = 0x001E (30s); LED Color = 0xA374C4

Downlink: 03DE021E00001EA374C400

Set Doorbell (Mute)

Siren No = 0x02 (Doorbell); Siren Level = 0x00 (0); Strobe Mode = 0x02 (Blinking); Duration = 0x001E (30s); LED Color = 0xA374C4

Downlink: 03DE020001001EA374C400

Set Emergency alarm

Siren No = 0x01 (Emergency); Siren Level = 0x1E (30); Strobe Mode = 0x03 (Always on); Duration = 0x001E (30s); LED Color = 0x995522

Downlink: 03DE011E03001E99552200

Notes: i) Set Duration = 0 (0x0000) to stop a task immediately e.g. Downlink: 03DE010000000000000000.

ii) Set LED Color = 0x000000 to use the default LED color.

(3) Set Period Siren Req (for recurring tasks)

Executed command 30 seconds after it is sent.

Warning Status = 0x01 is sent before an audio alert starts; Warning Status = 0x00 is sent after the alarm stops.

Set Siren No = 0x01 (Emergency); Siren Level = 0x0F (15); Strobe Mode = 0x01 (Flowing); Period = 0x0258 (every 10 minutes)

Downlink: 04DE010F01000A02580000

Response: 84DE000000000000000000 (configuration success)

84DE010000000000000000 (configuration fail)

Note: If the SetPeriodSirenReq command is received during an ongoing task, the current task will be interrupted immediately, and Warning Status = 0x00 is sent on FPort 0x06. If the SetPeriodSirenReq command is received when no task is active, 84DE000000000000000000 is sent. Either way, the new recurring task will be executed after 30 seconds.

Get Period Siren Req

Downlink: 05DE000000000000000000

Response: 85DE000F01000A02580000

Stop Period Siren Req

Downlink: 06DE000000000000000000

Response: 86DE000000000000000000 (configuration success)

86DE010000000000000000 (configuration fail)

Note: If the StopPeriodSirenReq command is received during an ongoing task, the current task will be interrupted immediately, and Warning Status = 0x00 is sent on FPort 0x06. If the StopPeriodSirenReq command is received when no task is active, 86DE000000000000000000 is sent. Either way, the recurring task will end.

(4) Set LED Color Req

(Last configuration would be kept after the device is factory reset.)

Set the default LED color to Red (0xFF 0x00 0x00)

Downlink: 07DEFF0000000000000000

Response: 87DE000000000000000000 (configuration success)

87DE010000000000000000 (configuration fail)

Get LED Color Req

Downlink: 08DE000000000000000000

Response: 88DEFF0000000000000000 (configuration success)

5.3 Example of Netvox LoRaWAN Rejoin

Check if the device is connected to the network during Rejoin Check Period. If the device does not respond within the Rejoin Threshold, it will be rejoined back to the network automatically.

Fport: 0x20

Cmd Descriptor	Cmd ID (1 Byte)	Payload (Var Bytes)						
Set Netvox LoRaWAN Rejoin Req	0x01	Rejoin Check Period (4 Bytes, unit: 1s) 0x FFFFFFFF_Disable Netvox Rejoin Function					Rejoin Threshold (1 Byte)	
Set Netvox LoRaWAN Rejoin Rsp	0x81	Status (1 Byte) 0x00_success	Reserved (4 Bytes, Fixed 0x00)					
Get Netvox LoRaWAN Rejoin Req	0x02	Reserved (5 Bytes, Fixed 0x00)						
Get Netvox LoRaWAN Rejoin Rsp	0x82	Rejoin Check Period (4 Bytes, unit: 1s) 0x FFFFFFFF_Disable Netvox Rejoin Function					Rejoin Threshold (1 Byte)	
Set Netvox LoRaWAN Rejoin Time Req	0x03	1st Rejoin Time (2 Bytes, unit:1 min)	2nd Rejoin Time (2 Bytes, unit: 1 min)	3rd Rejoin Time (2 Bytes, unit: 1 min)	4th Rejoin Time (2 Bytes, unit: 1 min)	5th Rejoin Time (2 Bytes, unit: 1 min)	6th Rejoin Time (2 Bytes, unit: 1 min)	7th Rejoin Time (2 Bytes, unit: 1 min)
Set Netvox LoRaWAN Rejoin Time Rsp	0x83	Status (1 Byte) 0x00_success	Reserved (13 Bytes, Fixed 0x00)					
Get Netvox LoRaWAN Rejoin Time Req	0x04	Reserved (15 Bytes, Fixed 0x00)						
Get Netvox LoRaWAN Rejoin Time Rsp	0x84	1st Rejoin Time (2 Bytes, unit:1 min)	2nd Rejoin Time (2 Bytes, unit: 1 min)	3rd Rejoin Time (2 Bytes, unit: 1 min)	4th Rejoin Time (2 Bytes, unit: 1 min)	5th Rejoin Time (2 Bytes, unit: 1 min)	6th Rejoin Time (2 Bytes, unit: 1 min)	7th Rejoin Time (2 Bytes, unit: 1 min)

Notes:

a. Set Rejoin Check Threshold as 0xFFFFFFFF to stop the device from rejoining the network.

b. The last configuration would be kept when the device is factory reset.

c. Default setting:

Rejoin Check Period = 2 (hr) and Rejoin Threshold = 3 (times)

1st Rejoin Time = 0x0001 (1 min), 2nd Rejoin Time = 0x0002 (2 mins), 3rd Rejoin Time = 0x0003 (3 mins),

4th Rejoin Time = 0x0004 (4 mins), 5th Rejoin Time = 0x003C (60 mins), 6th Rejoin Time = 0x0168 (360 mins),

7th Rejoin Time = 0x05A0 (1440 mins)

d. If device loses connection from network before data are reported, the data will be saved and reported every 30 seconds after the device is reconnected. Data will be reported based on the format of Payload + Unix timestamp. After all data are reported, the report time will be back to the normal setting.

(1) Command Configuration

Set Rejoin Check Period = 0x00000E10 (3600s), Rejoin Threshold = 0x03 (3 times)

Downlink: 0100000E1003

Response: 810000000000 (Configuration success)

810100000000 (Configuration failure)

(2) Read Rejoin Check Period and Rejoin Threshold

Downlink: 020000000000

Response: 8200000E1003 (Current device parameters)

(3) Configure Rejoin Time

1st Rejoin Time = 0x0001 (1 min), 2nd Rejoin Time = 0x0002 (2 mins), 3rd Rejoin Time = 0x0003 (3 mins),

4th Rejoin Time = 0x0004 (4 mins), 5th Rejoin Time = 0x0005 (5 mins), 6th Rejoin Time = 0x0006 (6 mins),

7th Rejoin Time = 0x0007 (7 mins)

Downlink: 030001000200030004000500060007

Response: 830000000000000000000000000000 (Configuration success)

830100000000000000000000000000 (Configuration failure)

(4) Read Rejoin Time parameter

Downlink: 040000000000000000000000000000

Response: 840001000200030004000500060007 (Current device parameters)

(5) Configure parameters

Rejoin Check Period = 0x00000E10 (60 min); Rejoin Threshold = 0x03 (3 times)

Downlink: 0100000E1003

Response: 810000000000 (configuration succeed)

810100000000 (configuration fail)

(6) Read configuration

Downlink: 020000000000

Response: 8200000E1003

Notes: a. Set Rejoin Check Threshold as 0xFFFFFFFF to stop the device from rejoining the network.

b. The last configuration would be kept as user reset the device back to the factory setting.

c. Default setting: Rejoin Check Period = 2 (hr) and Rejoin Threshold = 3 (times)

5.4 Set / Get Netvox Multicastgroup Cmd

This feature enables one-to-many communication. The Network Server can send commands simultaneously to all devices within the same Group ID.

Fport:0x30

Cmd Descriptor	Cmd ID (1 Byte)	Payload (Var Bytes)			
Add Group Info Req	0x01	Group ID (1Bytes) 0x00-0x03 others_Reserved	Group Address (4Bytes)	Frequency (4Bytes) Unit:1HZ	Datarate (1Byte) 0x00_DR0 0x01_DR1 0x02_DR2 0x03_DR3, etc
Add Group Info Rsp	0x81	Group ID (1Bytes) 0x00-0x03 others_Reserved		Status (1Byte) 0x00_success	
Add Group Key Req	0x02	Group ID (1Bytes) 0x00-0x03 others_Reserved	Keytype (1Bytes) 0x00_McAppSKey 0x01_McNwkSKey	Key Value (16 Bytes)	
Add Group Key Rsp	0x82	Group ID (1Bytes) 0x00-0x03 others_Reserved		Status (1Byte) 0x00_success	
Get Group Info Req	0x03.	Group ID (1Bytes) 0x00-0x03 others_Reserved			
Get Group Info Rsp	0x83	Group ID (1Bytes) 0x00-0x03 others_Reserved	Group Address (4Bytes)	Frequency (4Bytes) Unit:1HZ	Datarate (1Byte) 0x00_DR0 0x01_DR1 0x02_DR2 0x03_DR3, etc
Get Group Key Req	0x04	Group ID (1Bytes) 0x00-0x03 others_Reserved		Keytype (1Bytes) 0x00_McAppSKey 0x01_McNwkSKey	
Get Group Key Rsp	0x84	Key Value (16 Bytes)			
Remove Group Req	0x05	Group ID (1Bytes) 0x00-0x03 others_Reserved			
Remove Group Rsp	0x85	Group ID (1Bytes) 0x00-0x03 others_Reserved		Status (1Byte) 0x00_success	

(1) Configure Device Information — Add Group Info Req

Group ID = 0x00; Group Address = 0x12345678; RX Frequency = 0x370870A0 (923,300,000 Hz); DR = 0x08

Downlink: 0100123456783708 70A008

Response: 810000 (configuration succeed)

810001

Note: If the same device is configured with multiple Group IDs, all Group IDs must use the same RX frequency and DR, and must comply with the LoRaWAN protocol requirements. If the configuration is invalid, the device returns: 810001

(2) Configure Group Keys — Add Group Key Req

Group ID: 0

McAppSKey: 5A6967426565416C6C69616E63653039

McNwkSKey: 5A6967426565416C6C69616E63653039

Set McAppSKey

Downlink: 0200005A6967426565416C6C69616E63653039

Response: 820000 (configuration succeed)

820001 (configuration fail)

Set McNwkSKey

Downlink: 0200015A6967426565416C6C69616E63653039

Response: 820000 (configuration succeed)

820001 (configuration fail)

(3) Get Group Information — Get Group Info Req

Downlink: 0300

Response: 830012345678370870A008

(4) Get Group Keys — Get Group Key Req

McAppSKey

Downlink: 040000

Response: 845A6967426565416C6C69616E63653039

McNwkSKey

Downlink: 040001

Response: 845A6967426565416C6C69616E63653039

(5) Clear Multicast Information — Clear multicast configuration for Group 0

Downlink: 0500

Response: 850000 (configuration succeed)

850001 (configuration fail)

Notes:

1. Order of multicast configuration:

   AddGroupInfoReq → AddGroupKeyReq (McAppSKey) → AddGroupKeyReq (McNwkSKey)

   Only configurations applied in this sequence are considered valid and will take effect immediately.

2. All multicast configurations are cleared when the device is restored to factory settings.
3. The recommended Frequency and DataRate for multicast should follow the default rx2 settings of each regional LoRaWAN band.
5. To avoid network congestion, after receiving multicast commands on FPort 7, the device will return the response with a random delay of 0 – 5 seconds.
6. When all multicast groups are deleted, the device will restart once.

5.5 LoRaWAN Remote Multicast

(1) The default FPort used for LoRaWAN Remote Multicast Setup is 200 in decimal and 0xC8 in hexadecimal.

(2) The two multicast settings are mutually exclusive. If LoRaWAN multicast functionality via LoRaWAN Port 200 is implemented, Port 0x30 Multicast as described in Point 5.4 above cannot be selected, and vice versa.

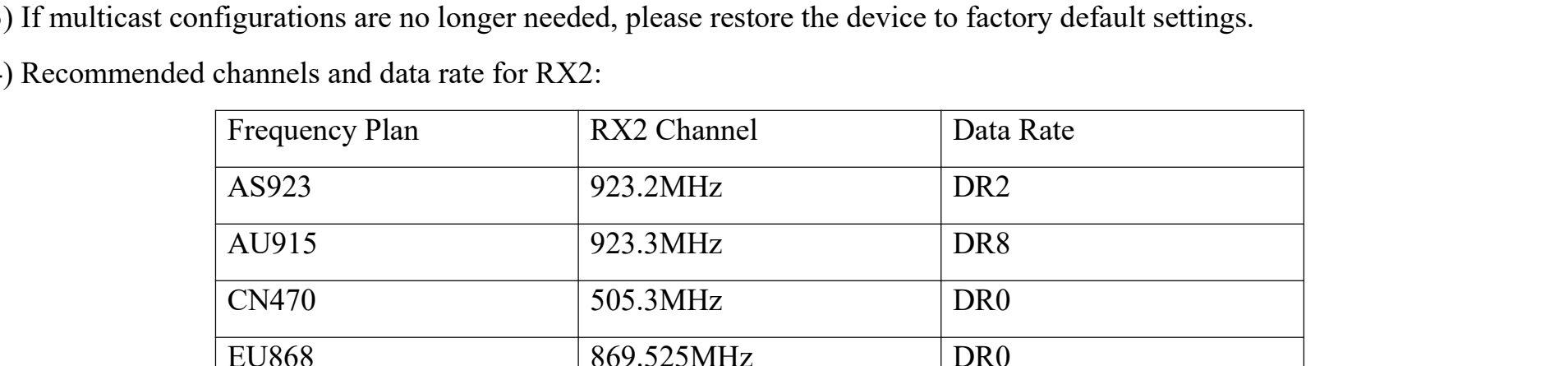
(3) If multicast configurations are no longer needed, please restore the device to factory default settings.

(4) Recommended channels and data rate for RX2:

Frequency Plan	RX2 Channel	Data Rate
AS923	923.2MHz	DR2
AU915	923.3MHz	DR8
CN470	505.3MHz	DR0
EU868	869.525MHz	DR0
IN865	866.55MHz	DR2
KR920	921.9MHz	DR0
US915	923.3MHz	DR8

5.6 Example for Min Time / Max Time logic

Example#1 Min Time = Max Time= 1 Hour



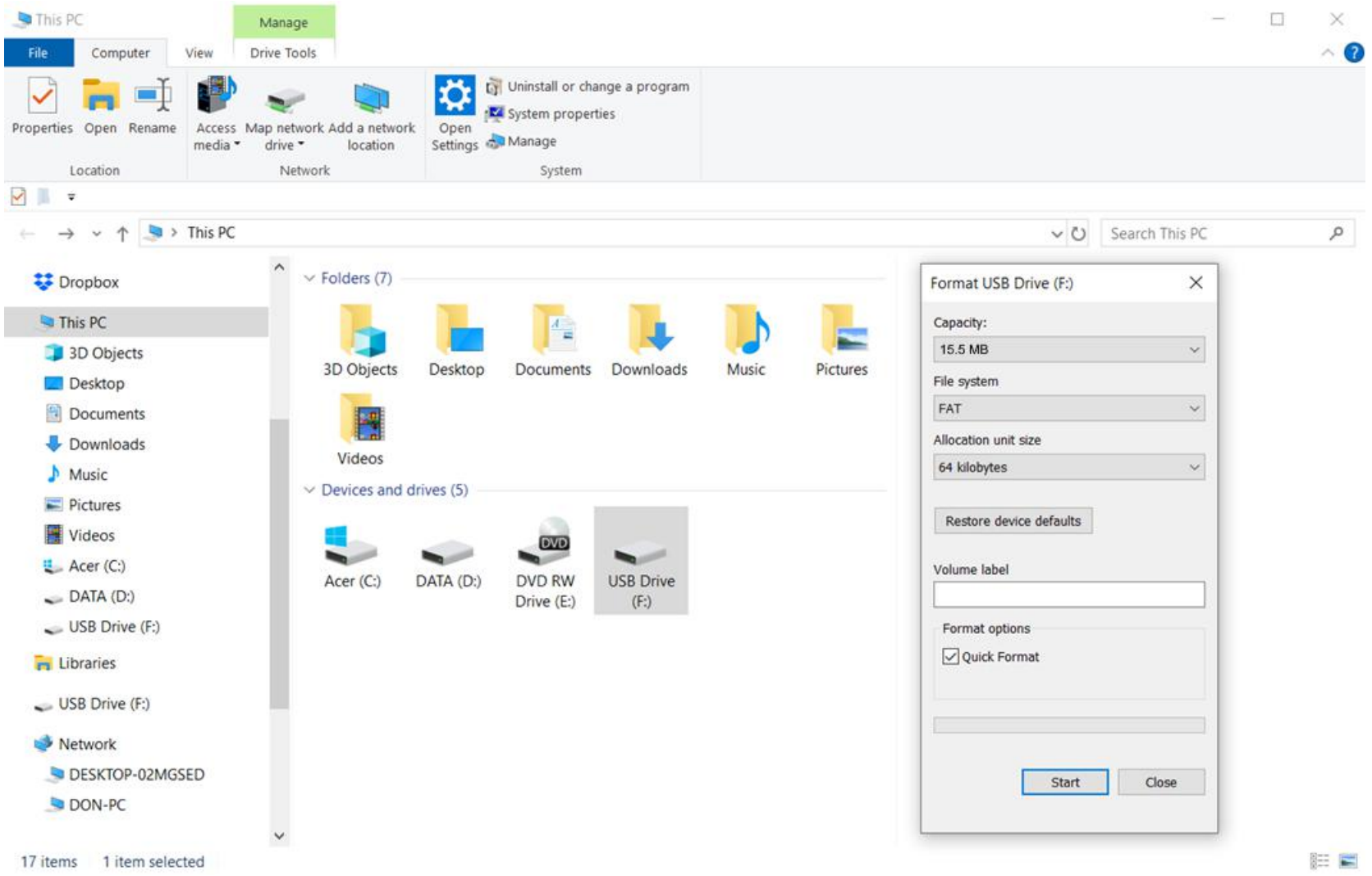
Note: This device can only be configured with the same value for both min time and max time.

6. Alarm Sound Customization

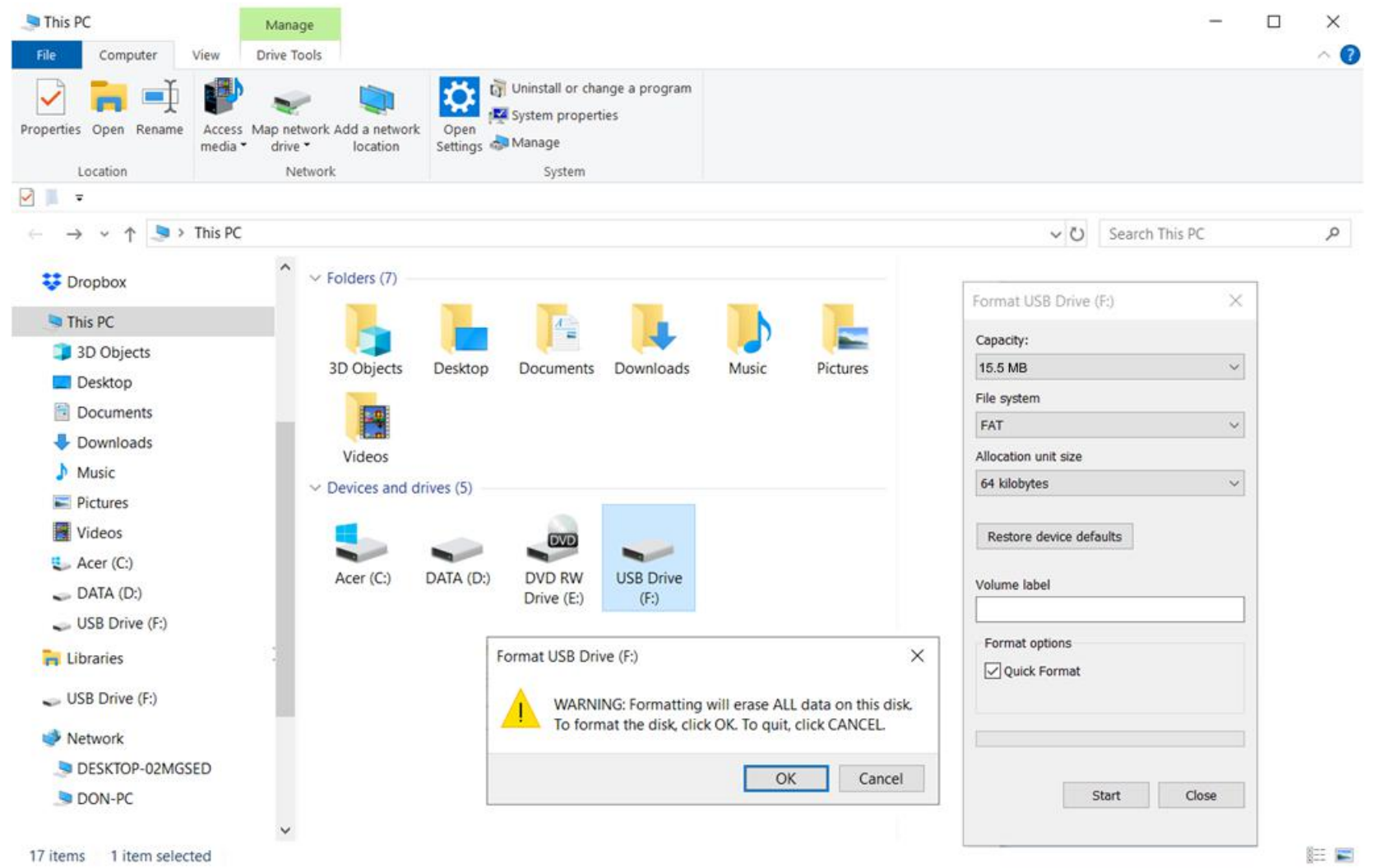
(1) Connect the computer and device with a Type- C cable. We recommend using the Windows OS for formatting.

(2) Wait 1 to 2 minutes until the virtual USB drive appears.

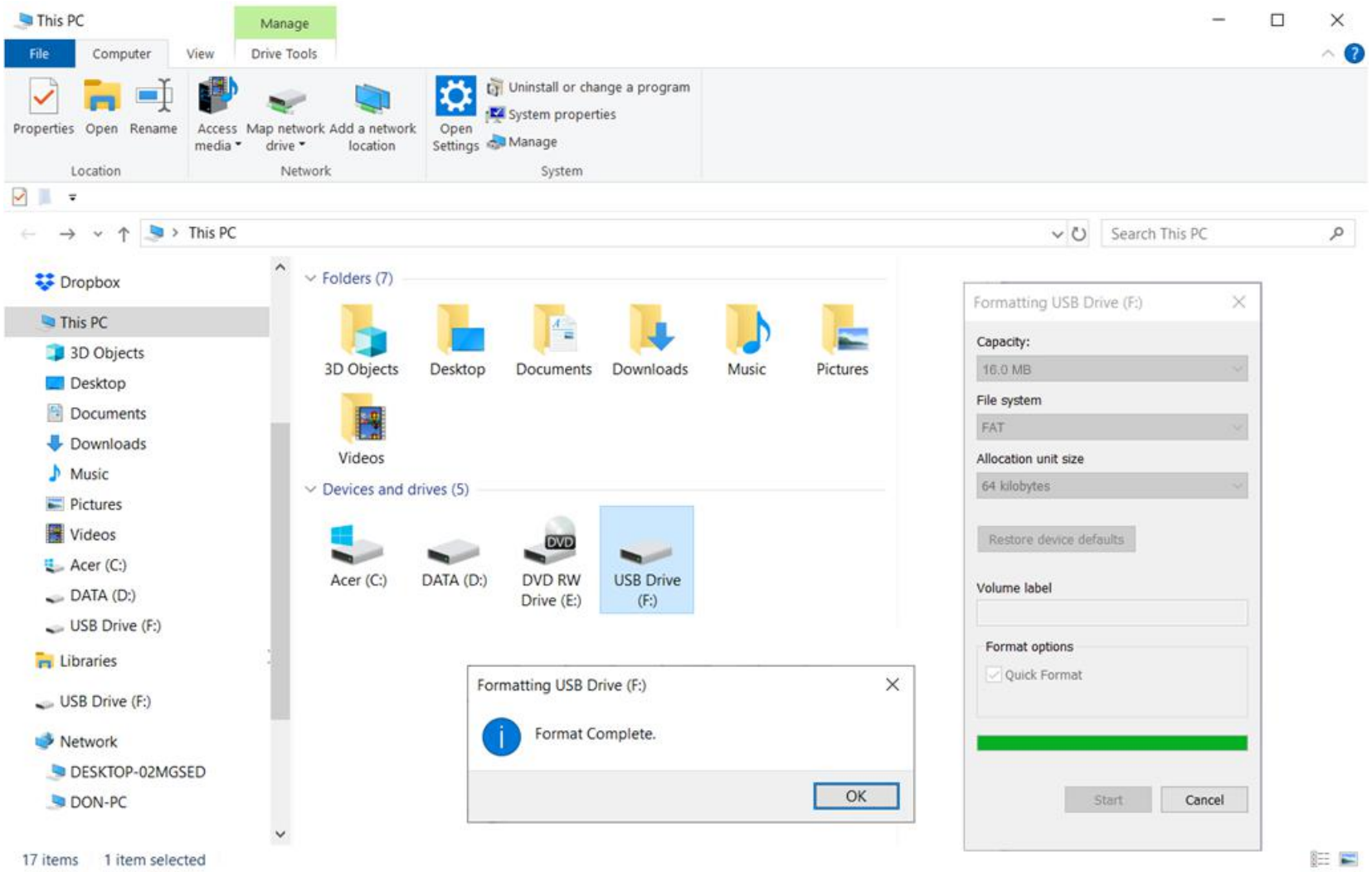
(3) Right click the USB Drive and select format.



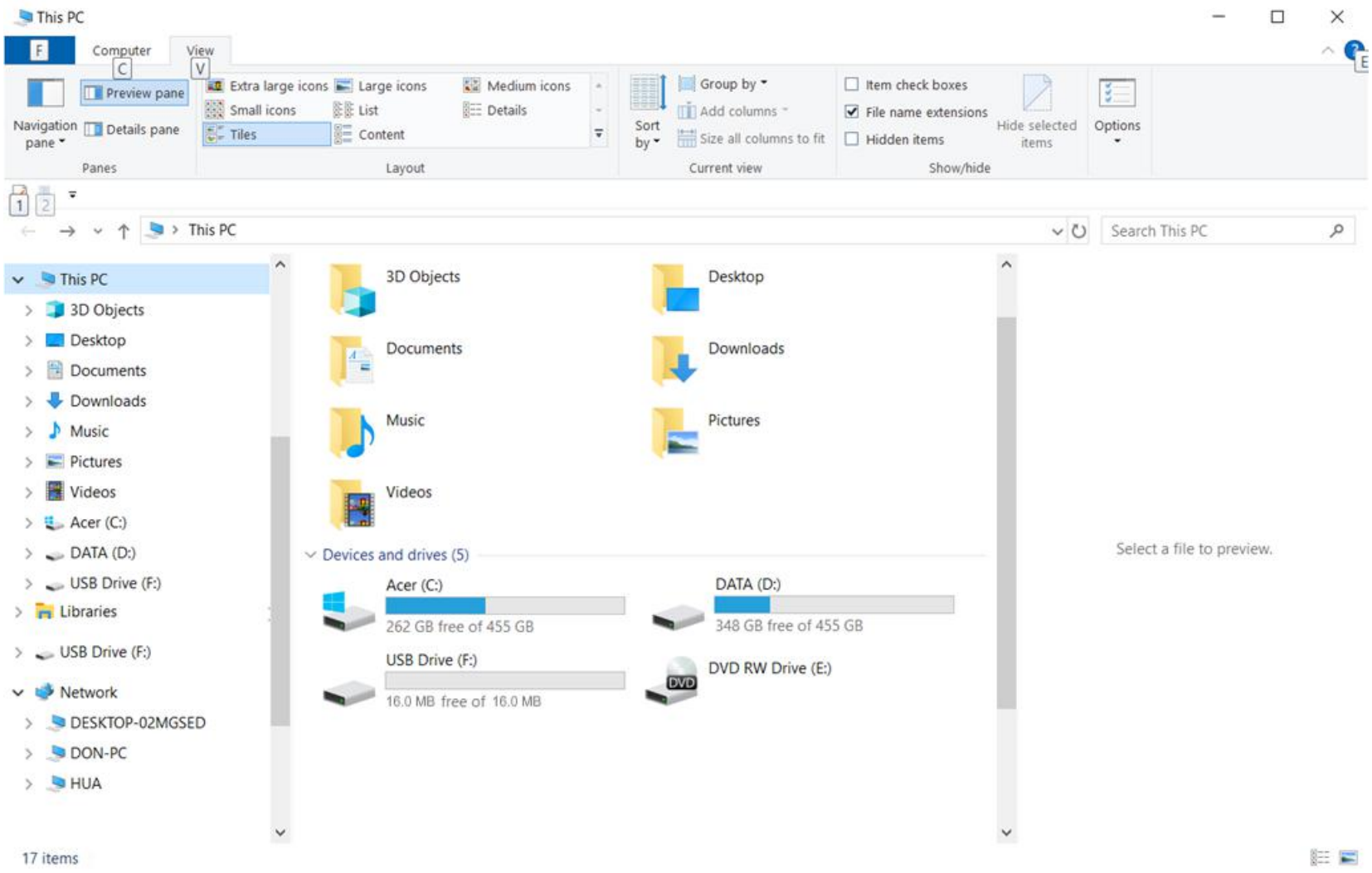
(4) Click OK to start formatting.



(5) Format complete.

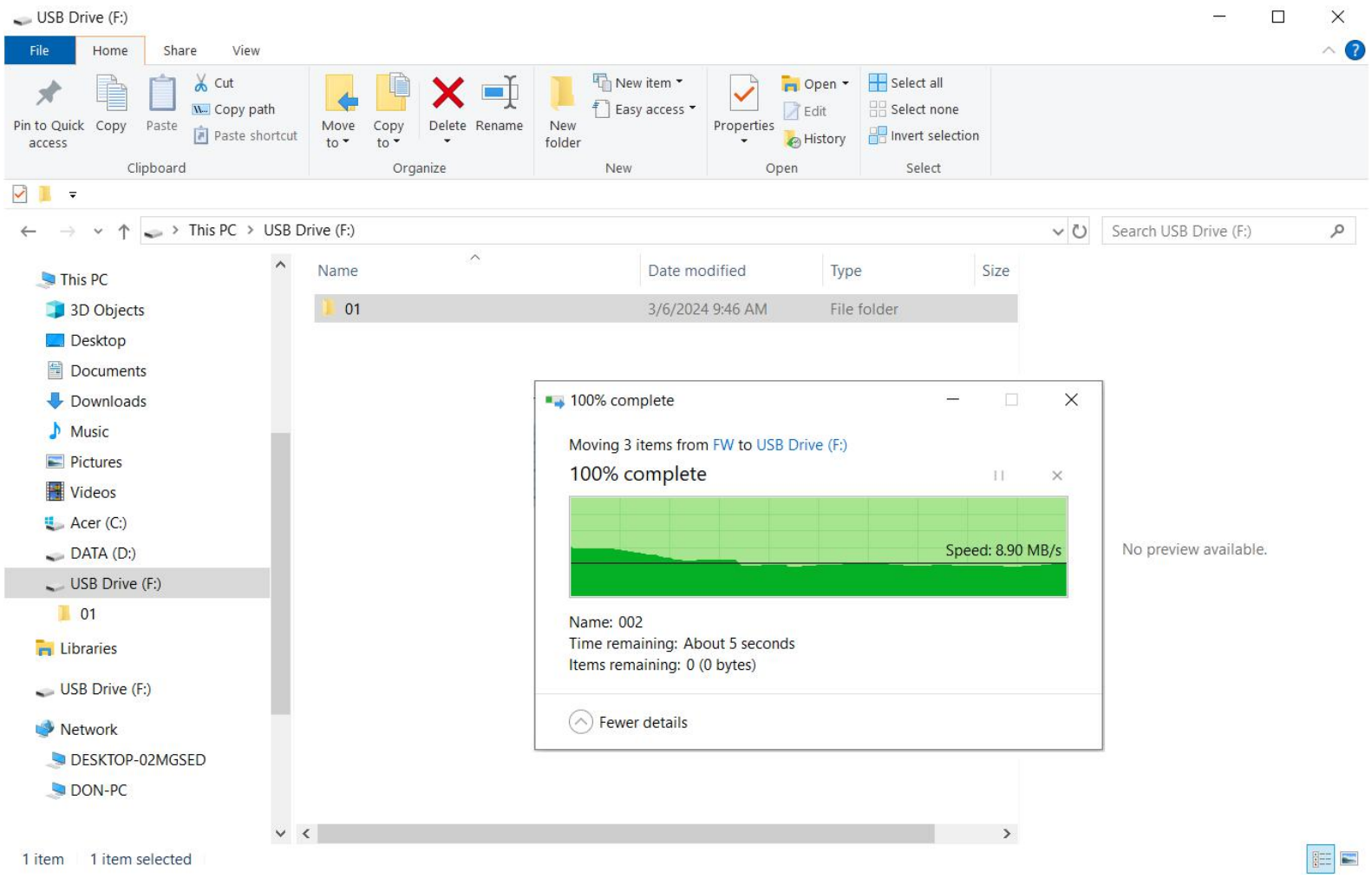


(6) Turn off and on the device. The flash drive should be empty as the picture shown below.



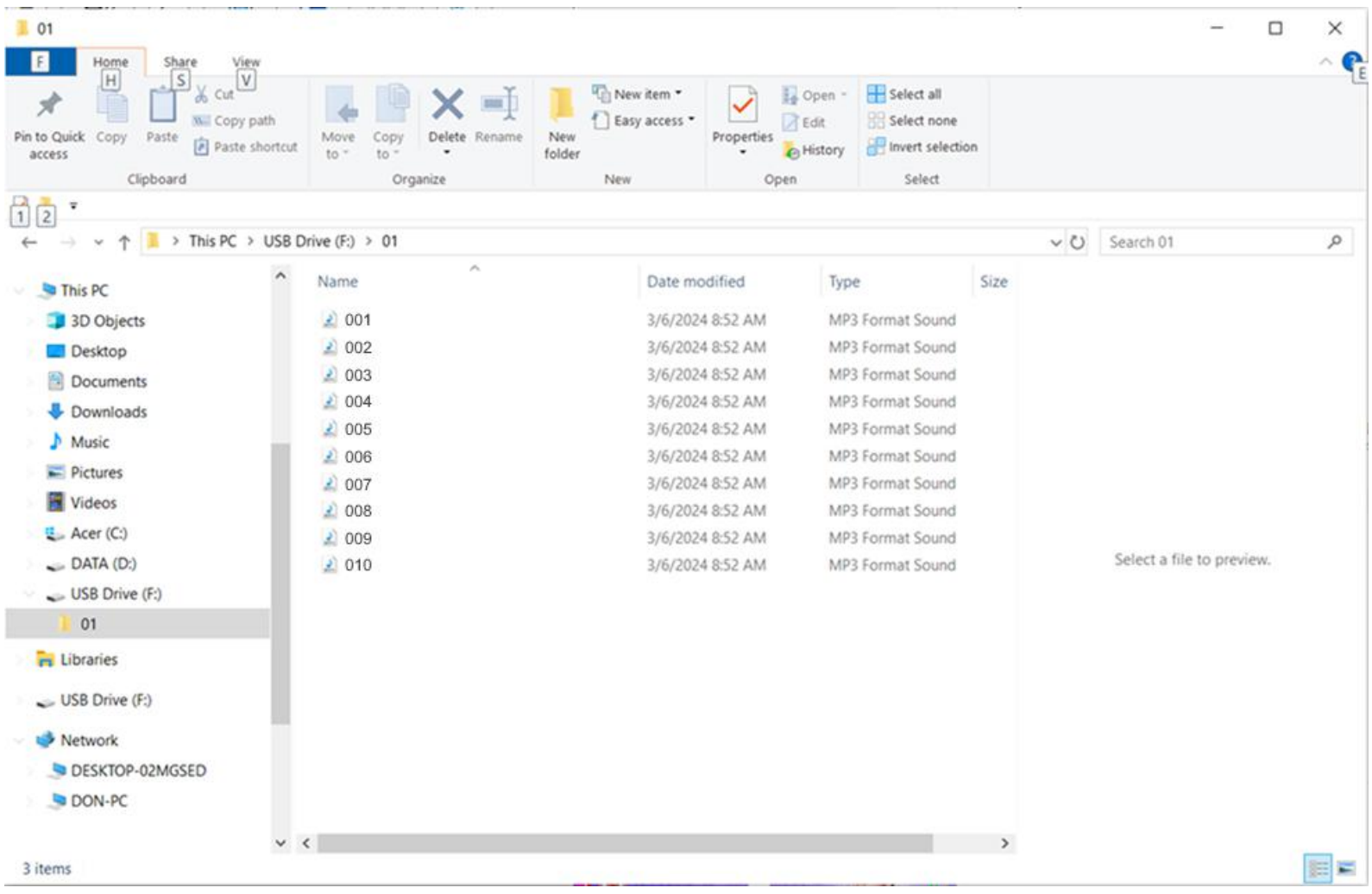
(7) Create a new folder in USB Drive and rename it as 01.

(8) Put all files of audio alerts in the 01 folder.



(9) Name all audio alerts as 00x.mp3.

Default: 001.mp3: Emergency
002.mp3: Doorbell
003.mp3: Burglar
004.mp3: Water leaking
005.mp3: Help
006.mp3: No smoking
007.mp3: Poor air quality
008.mp3: The temperature is too high
009.mp3: Thief
010.mp3: Welcome



Notes: (1) The folder and audio alerts should be named according to the default setting.

(2) The file type of audio alerts should always be mp3.

(3) The above procedure should be followed when uploading new audio alerts.

(4) The storage capacity of the flash drive is 16MB by default.

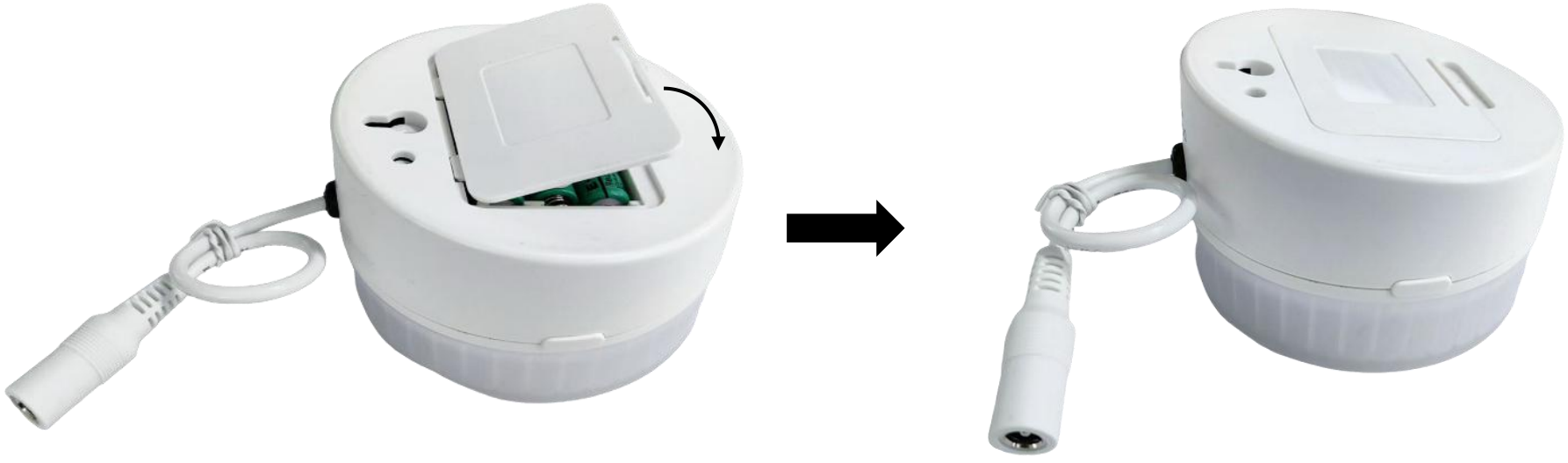
(5) Recommended OS for formatting: Windows

7. Installation Instructions

(1) Turn R603 over and hold the clip to remove the cover.

(2) Check the polarity and insert 3* AAA 1.2V Ni-MH batteries.

(3) Close the battery cover.



(4) Plug in the DC12V cable.

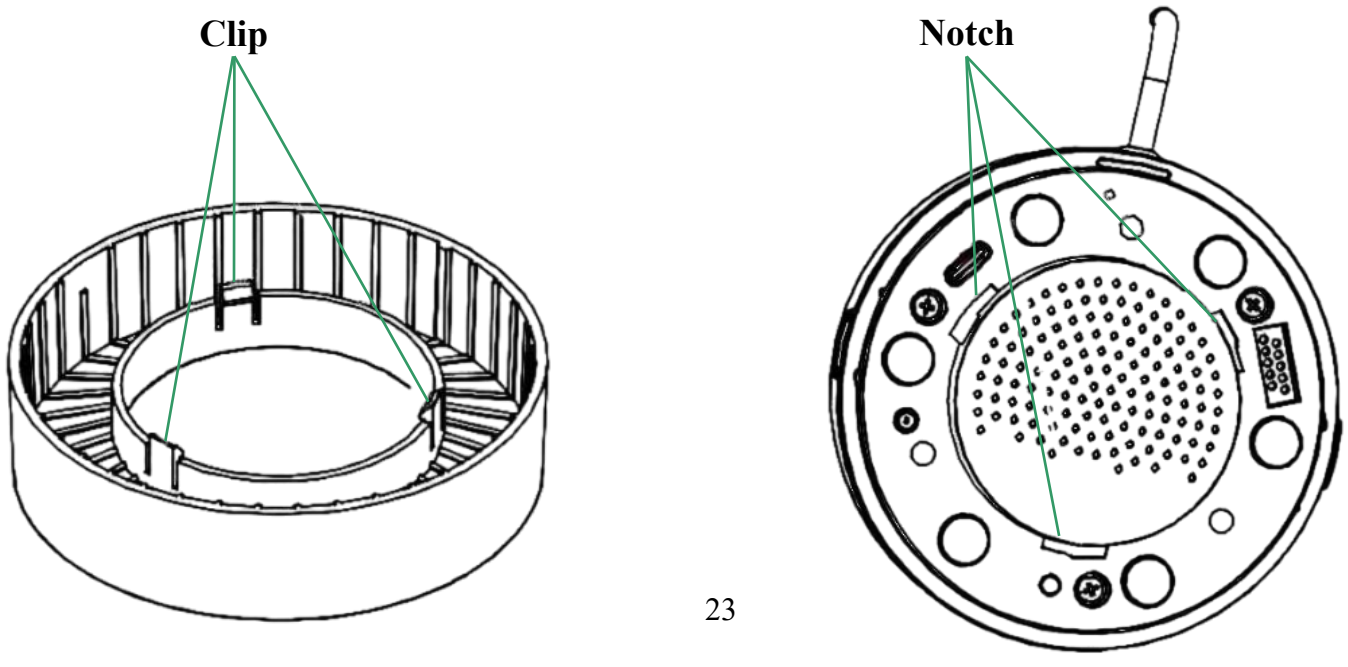
(5) Open the lid of R603.

Hold R603 with your left hand and turn the lid counterclockwise with your right hand.

(6) Short press the function key to test R603.

(7) Close the lid back to R603 by turning clockwise.

Note: Please make sure the clips match the notches before turning the lid.



8. Important Maintenance Instructions

Kindly pay attention to the following to achieve the best maintenance of the product:

- Keep the device dry. Rain, moisture, or any liquid might contain minerals and thus corrode electronic circuits. If the device gets wet, please dry it completely.
- Do not use or store the device in a dusty or dirty environment. It might damage its detachable parts and electronic components.
- Do not store the device under extremely hot conditions. High temperatures can shorten the life of electronic devices, destroy batteries, and deform or melt some plastic parts.
- Do not store the device in places that are too cold. Otherwise, when the temperature rises, moisture that forms inside the device will damage the board.
- Do not throw, knock, or shake the device. Rough handling of equipment can destroy internal circuit boards and delicate structures.
- Do not clean the device with strong chemicals, detergents, or strong detergents.
- Do not apply the device with paint. Smudges might block the device and affect the operation.
- Do not throw the battery into the fire, or the battery will explode. Damaged batteries may also explode.

All of the above applies to your device, battery, and accessories. If any device is not operating properly, please take it to the nearest authorized service facility for repair.