

Two-Way Radio Programming Software User Manual

(Supports U3/ U4/ M2 Two-Way Radios and BR02 Repeater Station) $$V1_0$$



Index

PART A.	Radio Programming Software Introduction
A1	Welcome to use the Unciation Radio Programming Software •••••••••••••••1
A2	Content of the Radio Pre-Programming Software User's Guide • • • • • • • • 1
A3	How to contact us? 1
PART B	User's Guide of the Radio
B1	How to install and start the PPS? 2
B2	How to create the channel knob setting of Conventional
B3	How to create the channel knob setting of R&R Mode and · · · · · · · · 17 program the radio device?
B4	How to create the channel knob setting of Full Duplex Call · · · · · · · 20 Mode and program the radio device?
B5	How to create the channel knob setting of AM Modulation 23 and program the radio device?
B6	How to create the channel knob setting of P25 Trunking (a
B7	How to create the channel knob setting of Multi-Channel
B 8	How to create the channel knob setting of Free Scan and
B9	How to create the channel knob setting of Full Band Scan
B10	How to set up the parameter of Mandown Alert by PPS? ••••••••••••••••••••••••••••••••••
B11	How to set up the parameter of the GPS related function 42 (position report and indication) by PPS?
B12	How to set up the parameter of voice control transmission by
B13	How to set up the turn on/ unlock radio password by PPS? 44
B14	How to set up the radio programming password by PPS?
B15	How to set up the parameter of BR02 repeater station and 46 program it?

PART C. FAQ

C1	The PPS software cannot connect to two way radio	
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PART A. Radio Programming Software Introduction

A1 Welcome to use the Unciation Radio Programming Software

Welcome to use the Unciation Radio Pre-Programming Software (PPS). The radio devices need to be programmed by the PPS to function normally.

This document describes the functions provided by the PPS so as to assist with correct programming operation. This is available for the Unication handheld radios (U3/ U4), mobile radios (M2/ M2R) and the repeater station (BR02).

A2 Content of the Radio Pre-Programming Software User's Guide

Content of the Radio Pre-Programming Software User's Guide includes:

- 1. How to install and start the PPS?
- 2. How to create the channel knob setting of Conventional Mode and program the radio device?
- 3. How to create the channel knob setting of R&R Mode and program the radio device?
- 4. How to create the channel knob setting of Full Duplex Call Mode and program the radio device?
- 5. How to create the channel knob setting of AM Modulation and program the radio device?
- 6. How to create the channel knob setting of P25 Trunking (a talk group) and program the radio device?
- 7. How the create the channel knob setting of P25 Trunking System Scan (simultaneously listen to multiple talk groups) and program the radio device?
- 8. How to create the channel knob setting of Multi-Band Scan and program the radio device?
- 9. How to create the channel knob setting of Full Band Scan and program the radio device?
- 10. How to set up the parameter of Mandown Alert by PPS?
- 11. How to set up the parameter of the GPS related function (position report and indication) by PPS?
- 12. How to set up the parameter of voice control transmission by PPS?
- 13. How to set up the turn on/ unlock radio password by PPS?
- 14. How to set up the radio programming password by PPS?
- 15. How to set up the parameter of BR02 repeater station and program it?

A3 How to contact us?

• If there are any description mistakes, information missing or any suggestions, you are welcome to contact with us by the following methods.

Unication Co., Ltd. Tel: 02 2299 9678 Fax: 02 2299 7998 Web: www.unication.com.tw/

E-mail : salesenquiry@uni.com.tw

Unication USA Tel : +817 303 9320 Fax : +817 886 3424 Web : www.unication.com

E-mail : sales@unication.com

PART B User's Guide of the Radio

B1 How to install and start the PPS?

Acquire PPS software installation package

Please open the installation package and install the PPS. The PPS installation package can be downloaded from Unication's official website.

To successfully install and utilize the PPS, please make sure the installed computer supports the following system requirement:

1. The PPS supports the following Windows versions and operation environments:

Supported Windows Versions	.NET Framework
Windows 7	.NET Framework 4.x
Windows 8.1	.NET Framework 4.x
Windows 10	.NET Framework 4.x
Windows 11	.NET Framework 4.x

- 2. There is Microsoft Internet Explorer 8.0 or above in the Windows system;
- 3. There is USB interface in the computer;
- 4. Install the PPS with the system administrator's approval.

• Click the PPS installation file (.exe)



PPS installation is indicated.

• Click "Next" and start the automatically install the USB driver. All you need to do is wait until the installation done.

🔂 Setup - Unication Radio PPS	- • ×
Installing Please wait while Setup installs Unication Radio PPS on your computer.	
Installing Unication device driver	
	Cancel

USB driver will be automatically installed by the PPS installation.

• After the driver is installed, the PPS installation will be shown.



• Click "Next" to set the installation location.

🖟 Radio_Security_PPS_V04-00-01_Beta02 Setup
Destination Folder Click Next to install to the default folder or click Change to choose another.
Install Radio_Security_PPS_V04-00-01_Beta02 to:
C:\Unication\Radio_Security_PPS_V04-00-01_Beta02\
Change View Diskcost
<u>B</u> ack <u>N</u> ext Cancel

PPS installation program will provide default installation path, click "Next" if there is no change with the default path.

• Click "Next" to set the other installation settings.

😸 Radio_Security_PPS_V04-00-01_Beta02 Setup	
Select Install additional options	
 Create a shortcut for Radio_Security_PPS_V04-00-01_Beta02 program of the desktoo. Create a quick launch shortcut for Radio_Security_PPS_V04-00-01_Beta0 program. Create a start menu shortcut for Radio_Security_PPS_V04-00-01_Beta0 program. auto launch Radio_Security_PPS_V04-00-01_Beta02 program when PC start auto l	on 102 12 start.
<u>B</u> ack <u>N</u> ext	Cancel

PPS installation program will provide some installation options, choose the options according to your need.

Note - Installation options includes:

- 1. Create shortcut on desktop (selected by default)
- 2. Create a quick launch shortcut
- 3. Create a start menu shortcut
- 4. Automatically launch the PPS when the PC starts

• Click "Next" to start the PPS installation.



The program will show the installation begin notice.

• Click "Install"to begin the installation and wait until it finished.



When the PPS installation is complete, the screen of "Installation complete" will be shown. Click "Finish" to close the software. You may choose whether to start the PPS right after exiting the installation program. This option is selected by default.

• Select and start the PPS immediately and click "Finish", or click on the PPS icon on desktop to start the PPS.

Radio Pre-Programming Software								
User Name:	admin							
Password:								
Login	Cancel							

PPS login screen is shown.

• Enter the correct user name and the password to login the PPS.

Enter the correct user name and password to login the PPS. If this is the first time of using the PPS, the default user name and password are both "admin". The PPS homepage will be shown when it logged in successfully.

• Start the PPS and connect the radio with the PC

Connect the radio with the computer through USB cable. Connect the USB cable with the radio and switch the knob to tighten the connection. Plug the other end of USB cable into the PC.





- Note: Connect the U4 radio with the PC by inserting the USB cable to the Micro USB interface on the left side of the radio.
- Note: Connect the M2 radio with the PC by using M2 programming cable. Insert the cable into the connection port on the bottom left from the connection panel.
- Note: Connect the BR02 repeater station with the PC by using BR02 programming cable. Insert the cable into the connection port on the bottom left from the connection panel.

Wait until the connected device on the PPS screen changed from 0 to 1.



- Read the radio's profile and start editing the profile.
- Show the read radio.

Click "C Read Profile from Device"; the model number and serial number (MSN) of the connected radio will be shown.

👂 Radio Secur	typps							
Unication	Radi	o PPS	Version V4.0.1 Beta02	User admin	Connected Devices 1 Detail	Customer Support Tel 1 +017/00/90288050 Fai 1 +017/000/90288050 Enail: sats@unicotion.com		About
(Read Profile 1	from Device					
6		Model No. :	U367PA-5008	ENEX0 1UNI				
(A)User	Guide	MSN :	BUGBLPW2220	2				
5								
Bsett	ng							
CReat	1 Profile from CN							
Dyna	eEdit Existing							
E Profi	ne artExport							
FProg	ramming Log							
_								
	_							
($\overline{\mathbf{O}}$	Read Device						

• Read the radio's profile.

Click "Read Device" to read the radio's profile. The PPS will automatically show the the first setting section after the radio is read successfully.

	🔮 Read Profile from Device 65N-	Multi-TS1 U387RA-SOCIENE003UNE 780/890 Radio_5	acurby_PPS_V04-00-01_Bet	x02	
Image: constraint of the stand where the stand of the stand		o PPS			On User Help
0 Control 0	()	Basic Information Setting			Parameter Description
 c. c. c		Provide the Profile Model Number, P	rofile Name, and P	rofile Password.	Profile Name
0 Control 0	D1 Basic Information	D1-1. Model Number Information	1		Definition
1 Read and a control de la manual de		Please confirm that the model of the ra	idio, band, protocol, a	nd hardware is correct for your device.	Sets a name for the profile.
0 control		Parameter	Current Setting		The user may enter up to a
0 result Notes No	D2 System Setting	Nodel Number	U3167PA-SXXXENBX01L	iN .	maximum of 14 characters. Valid
0) rementioned 0) re		RF Band	700/800		spaces and special characters.
1 Image: Section S	Constrained	Hodulation Type	FM.		Warning
01 cmm 02 cmm 03 cmm 03 cmm 04 cmm 05 cmm 05 cmm 06 cmm 07 cmm 07 cmm 08 cmm 09 cmm 00 cmm <th>Frequency Setting</th> <th>Hardware</th> <th>Bluetooth + GPS + Buil</th> <th>It in Mandown</th> <th>An empty string cannot be used for a name.</th>	Frequency Setting	Hardware	Bluetooth + GPS + Buil	It in Mandown	An empty string cannot be used for a name.
1 Image: Second S	\geq	Protocol	Analog + DMR + P25C +	P25T	
average average b b c c <t< th=""><th>Protocol Parameter</th><th>Software</th><th>Police Advance Model</th><th></th><th>Definition</th></t<>	Protocol Parameter	Software	Police Advance Model		Definition
0 see starting 1 see starting	Setting	MSN	BUGBLPW222Q		Sets a note for the profile. It's not
By back starting		D1-2. Profile Information Setting			necessary to set.
B Arrandow Contract D Arrandow Contra	D5 Secure Settings	Please onter a Profile Name (This is the	The user may enter up to a		
0 indication 0 indicati		Parameter	Current Setting	maximum of 250 characters. Valid	
Bit instantion		Profile Name	Sample		spaces and special characters.
07 been content 08 been content 09 been content 00 been content <th>D6 Converticesal Setting</th> <th>Introduction</th> <th></th> <th>Ĵ</th> <th></th>	D6 Converticesal Setting	Introduction		Ĵ	
Operation Default Contract Samp Operation Contract Samp Contract Samp Operand Contract Samp Contrac	Zone & Channel	D1-3. PPS Admin Password Set	ling		
B Increase fragmente Orficial Status B Require records to Red Profile Ordina B Decision fragmente Decision	Setting	Please enter your password.			
B) Transmittering Implicit Parametering for March Parametering Implicit Parametering Implicit Parametering D) The California Implicit Parametering Implicit Parametering Implicit Parametering D) The California Implicit Parametering Implicit Parametering Implicit Parametering D) The California Implicit Parametering Implicit Parametering Implicit Parametering D) The California Implicit Parametering Implicit Parametering Implicit Parametering D) The California Implicit Parametering Implicit Parametering Implicit Parametering D) The California Implicit Parametering Implicit Parametering Implicit Parametering D) The California Implicit Parametering Implicit Parametering Implicit Parametering D) The California Implicit Parametering Implicit Parametering Implicit Parametering D) The California Implicit Parametering Implicit Parametering Implicit Parametering D) The California Implicit Parametering Implicit Parametering Implicit Parametering D) The California Implicit Parametering Implicit Parametering Implicit Parametering D) The California Imp		Parameter	Default	Current Setting	
Register Pareneed to Frequent Fortile Instain Instain Difference Call Fortile Pareneed Instain Difference Call Instain Instain	D8 Function Enabler	Require Password to Read Profile	Disable	Enable	
Dynamic of states 00000 Sate Fredie Farsword		Require Password to Program Profile	Disable	Enstle	
De her cit strette De cit str		Profile Password	000000	Set Profile Password	
Difference Cell C Difference Cell Difference Cell Dif	D9 Voice Call Setting				
C Sine to	D10 Imergency Call				
100 hogan 🖉 🗄 Save 🖤 Nect	\bigcirc				
	021 Program	🗎 Save 📫 Next			E Save as

• Create the required conventional frequency setting.

Click "Conventional Frequency Setting" to set the required Conventional frequency.



Operation instructions:

- 1. At most 1024 groups of frequencies can be set. Press "Add" to add the required frequency, change the Frequency Alias so it can be identified easily while setting the channels.
- 2. Press "Delete" to delete a frequency. If it has been referenced in the channel, an error will occur after deletion. Please delete all the channels that referenced this frequency, then the frequency can be deleted.

Press "Save" to save the parameters or click "Next" to save and continue to set the next parameter.

• Create the required Protocol Parameter Setting.

Click "Protocol Parameter Setting" to set the parameters of the required protocols.

🖗 Bad Pathe him Davice (2014Mar-132 UB39A-2000B00UM 704/00 Bada Security 292, 004-0040, Intel										
	o PPS							On Li Off User Hop		
\bigcirc	Protocol Parameter	Setting						Parameter Description		
	Create the protocol and con-	erning parameters w	hich would be used in the	device.				Protocol Alias		
D1 Basic Information Setting	D4-1. Protocol List							Definition		
	List all the protocols which would be used in the device.									
	Total: 8 Max: 64					Add	Delete	Range		
D2 System Setting			Pro	tocol Alias	Pro	tocol Type	-	The user may enter up to a maximum of 14 characters. Valid		
	2T				2-Tone			characters are alphanamerics,		
D3 Conventional	5T				5-Tone			Spaces and special characters. Warning		
Frequency Setting	MDC				MDC1200			An empty string cannot be used for		
	DV0A				DV0A			a name.		
D4 Protocol Parameter Setting	D4-2 2-Tone Protocol Pa	rameter Setting			0000			Protocol Type		
	Please set the 2-Tone table. T	he other parameters woul	ld be available if Tone Table is L	ser Define.				Selects the protocol type for the		
	Parameter	Default	Current Setting					setting item.		
D5 Secure Settings	Tone Table	Motorola	Motorola	•				You don't need to set any protocol		
	Tx Pre-Time	600	600	w ms				setting if you are only using CSQ		
D6 Conventional	Tone 1 Tx Duration	1000	1000	V ms				channel (carrier squelch)		
Setting	Gap 1 Tx Duration	0	0 🔺	T ms						
	Tone 2 Tx Duration	3000	3000	V ms						
D7 Zone & Channel	Gap 2 Tx Duration	0	0	w ms						
	Long Tone Tx Duration	8000	3000	🕶 ns						
	Long Tone Tx Gap	0	0	ms 🔻						
D8 Disable	Long Tone Rx Timeout	5000	5000	w ms						
	Rx Timeout	3500	3500	T ms						
DO Mara Cal Saltan	Signaling Activity Timeout	200	200	🔻 ns						
D10 Imergency Call										
\bigcirc										
D21 Program										
	💾 Save 📫 Next							🐑 Save as		

- 1. Users can set up at most 64 groups of protocols, and 6 types of protocols can be selected for every setting, which includes 4 types of Analog protocols and 2 types of Digital protocols. The Analog protocols includes 2-Tone, 5-Tone, MDC1200 and DVOA (Digital Voice over Analog). The Digital protocols includes DMR and P25 Conventional. According to the types of the radios, the protocols available will vary.
- 2. Click "Add" to select the required protocol category and add protocols, by setting the protocol alias to refer to when setting the channel.
- 3. Click "Delete" to delete a protocol, if it has been referenced in the channel, an error will occur after deletion. Please delete all channels that referenced this protocol, then this protocol can be deleted.
- 4. After setting, click "Save" to save the parameters or click "Next" to save and continue to set the parameters for the next step.

- Create the talk groups and the TGID of every protocol of these talk groups
- Create the TGID Grouping List

Click "Conventional Setting" and TGID Grouping List will be indicated.

🛃 Read Profile from Device 657	N-MURI-TS2 L	DERPA-SCOENERDLUM 780/800 Radio	o_Security_PPS_V04-00-01_8 ets02			- 2 -
	io P	PS :om.tw/				On 1 Off User Help
\bigcirc	🔘 Co	nventional Setting				Parameter Description
	Set th	e talk group address.				Group Alias
D1 Setting	Knot	TGID Grouping List Convention	al TGID List Radio Alias & Ind	ividual ID Individual Cali List Individual Cali of Talk Group (Optional)		Definition Sets an alias for the talk
	• D6	-1. TGID Grouping List				graups.
D2 P25 Trunking		Tatal 28 Hour 1024			Add Delete	Range The user may enter up to a
System Setting		TGD Gaugina Lint Alian	Personal Tomo	Datail	2-Tone	maximum of 14 characters.
		Top orophig car Ana	riccocorrigan		S-Tone MDC 1200	alphanumerics, spaces and
D3 Frequency Setting		I GID LISE 1	P25 Conventional	Group Lount: 1	DVOA	Warning
		TGID List 2	DWR	Group Count: 1	DMR	1. An empty string cannot be
D4 Protocol Parameter Setting		TGID List 3	P25 Conventional	Group Count: 1	P25 Convention	2. Different groups should not have a same group name.
		TGID List 4	DWR	Group Count: 1	1	Key Strapping Option
D5 Secure Settings		TGID List 5	P25 Conventional	Group Count: 1		Definition Key Strapping Option for the talk group.
Conventional		TGID List 6	DWR	Group Count: 1		Option 1 Clear - Disable econotico
Setting		TGID List 7	MDC 1200	Group Count: 1		2.Secure - Enable encryption 3.User Select(Default) - Allow
D7 Zone & Channel		TGID List 8	2-Tone	Group Count: 5		encryption
		TGID List 9	5-Tone	Group Count: 5		Warning 1. When Key Strapping Option is set to "Clear", Key Alias will
D8 Function Enabler Disable		TGID List 10	MDC 1200	Group Count: 6		always be disabled. 2. This parameter is for P25 B
		TGID List 11	DWR	Group Count: 6		DVOA protocol.
D9 Voice Call Setting		TGID List 12	DWR	Group Count: 6		Definition
Emperatory Call		TGID List 13	2-Tone	Group Count: 6		Keys defined in Step "Secure Setting"
Setting		TGID List 14	5-Tone	Group Count: 6		Warning 1. When Key Strapping Option is
		TGID List 15	2-Tone	Group Count: 6		set to "Clear", Key Allas will always be disabled.
		TGID List 16	5-Tone	Group Count: 6		2. This parameter is for 925 8 DVOA protocol.
D21 Program	H Sav	e 🔷 Next				🕢 Save as
🚯 💋 🛅	0	o 😪 🚱 😓			0-	■ A ■ ■ + 4: 10 10 4.33 PM

- 1. At most 1024 TGID groups can be set. Click "Add" to select protocol category to and required the TGID group corresponded to the protocol. Each group can be referenced when setting up a channel.
- 2. Click "Delete"to delete a TGID group setting. If it has been referenced in a channel, an error will occur after deletion. Please delete all the channels that have referenced the setting, then the TGID group setting can be deleted.
- 3. After setting, click "Save" to save the parameters or click "Next" to save and continue to set the parameters for the next step.

• Add the talk group into the group list

After creating a TGID group list, or click on one of the existed group list details to show the display of editing for the group list.

Edit TGID Grouping List											
٠	TGI) Grou	iping List Inform	nation							
	Please set the TGID Grouping List parameters.										
	Para	ametei	r	Default		Current Setting					
	TGID	Groupi	ing List Alias		-	TGID List 1					
	Prote	ocol Ty	pe			P25 Convention	al 👻				
٠	Group List										
	List a	all the c	onventional talk gr	oup.							
	Se	lected	: 1 Total: 7	Max	Select: 20		Ad	d Select All	Unselect All		
			Group Alia	s	Key Strapping Option (P25/DVOA)	Key Alias (P25/DVOA)		P25C TGID	<u>^</u>		
	►	V	TGID-01		User Select	Key 1	1 (DEC) 1 (HEX)				
		TGID-02			User Select	Key 1	2 (DEC) 2 (HEX)		E		
			TGID-03		User Select	Key 1	3 (DEC) 3 (HEX)				
			TGID-04		User Select	Key 1	4 (DEC) 4 (HEX)				
			TGID-05		User Select	Key 1	5 (DEC)		*		
					ОК	Cancel					

- 1. Users can add established talk groups to this group list. Users can click "Add" to add the required group, set the group alias to refer to when setting the channel, and set the TGID of this group in each protocol through 2-Tone, 5-Tone, MDC/DVOA TGID, DMR TGID, P25C TGID.
- 2. Click "OK" to save the parameter after setting.

- Create the Zone and Conventional Channel Setting
- Show the Zone and Channel List

Click "Zone and Channel Setting" and the Zone and Channel List will be shown.

😽 Read Profile from Device 657	exf Potte han Secce 5024.Mar 732 URI 74-50000800.004 701/003 And 25 couply 95 (344-0-4), Rend2									
	io P	PS om.tw/	Frequency List	Trunking Protocol System List List	Grouping List					On Off User Help
\bigcirc	💿 Zoi	ne & Chanr	nel Setting							
D1 Basic Information	• D7 Ok	 Zone & Ch the setting field 	annel List ds of the knob position to e	nter into the detail settings of t	he knob. Each knob can be se	t to different protocols and m	nodes.			
Suma		Total: 1	Max: 64	÷					Add Delete Show	Knob 1-8 Show Knob 9-16
D2 P25 Trunking System Setting		Zone Alias	Knob Position 1	Knob Position 2	Knob Position 3	Knob Position 4	Knob Position 5	Knob Position 6	Knob Position 7	Knob Position 8
D3 Conventional Frequency Setting		Zane 1	None	None	None	None	None	Nane	None	None
D4 Protocol Parameter Setting										
D5 Secure Settings										
D6 Convertices										
D7 Zane & Channel Setting										
D8 Function Enabler Disable										
D9 Voice Call Setting										
D10 Imargancy Call Setting										
<u> </u>										
D21 Program	🗎 Sarr		Next							E Save as

Operating Instructions:

- 1. At most 64 zones can be set. Click "Add" to add the required zones. After setting the zone alias, the name will be displayed on the radio, and the knob can be set by tapping the knob position 1~16 twice (details 6-2).
- 2. Click "Delete" to delete a zone.
- 3. After setting, click "Save" to save the parameter or click "Next" to save and continue the setting for the next step.

Create a Conventional Channel in a zone or on a channel knob

Double click on the channel knob position 1-16 of one of the zone in the zone/ channel list to edit the channel.

Parameter	Default	Current Setting
Zone Alias		Zone 1
Mode	None	None
Channel Knob Alias		Zone 1-Knob 1
Note		

The user can select the Receiving Mode as a single protocol channel and set the alias of this channel, which will be displayed on the radio. Click "OK", the parameters of the mode will appear, and the parameters are divided into the following parts:

Part 1: Zone/ Knob Information. Users can modify the channel alias and set the voice prompt of this channel, and can also add notes to this channel.

•	Zone/Knob Information S	ingle Conventional	Channel Zone "Zone 1" Knob	Position 1			
	Please enter the Knob Alias and	d select your voice prom	pt. This Alias will be displayed on the	e standby screen.			
	Zone Alias: Zone 1		Zone 1 >> < Knob 1 >>				
Parameter Default			Current Setting				
	Channel Knob Alias		Zone 1-Knob 1				
	Voice Prompt	None	None	()			
	Note						

Part 2: Conventional Channel Setting includes frequency, protocol type, and reception identification number. (Analog: CTCSS/ CDCSS, DMR: Colour code, P25C: Network Access Code (NAC)

Conventional Channel Setting

Please enter the frequency, protocols and CTCSS/ CDCSS to be used by this knob.						
Parameter	Default	Current Setting				
Conventional Frequency	Frequency Rep1 (Rx:852.07500MHz/12.5KHz Tx:807.07500MHz/12.5KHz)					
Protocol Type	CSQ	2-Tone				
Protocol Alias		2T •				
Rx CTCSS / CDCSS for Analog	0	0 (Max: 5)				
Tx SA#1		None 🔗				

Operating Instructions:

- 1. Conventional Frequency is referenced the frequency set in "Conventional Frequency Setting".
- 2. Protocol Alias is referenced the protocols set in "Protocol Parameter Setting".

Part 3: Channel Receive Option

Channel Receive Option

Please enter channel receive option parameters.

Parameter	Default	Current Setting
Emphasis	Yes	Yes 🔹
Compandor	No	No
Audio Squelch	Low	Low
Unmute Logic (Analog)	Match ID	Match ID 🔹

Part 4: Function Setting

•	Function Setting							
	Parameter	Default	Current Setting					
	Tx Power Level		High Power 🔹					
	Hang Time	5	5.0 🔺 💙 sec					
	Receive Only	Disable	🔲 Enable					

Part 5: Secure Setting (Only supports when the protocols are set with DVOA, DMR or P25C)

Secure Setting		
Please enter secure setting par	rameters.	
Parameter	Default	Current Setting
Secure Type	Channel Knob Based	Channel Knob Based 🛛 👻
Channel Secure		
Key Strapping Option	User Select	User Select 🔹
Key Alias		Key 1 🔹
KMF System		KMF 1 🔹
User Selectable Keyset	Disable	🔲 Enable
User Selectable Key	Disable	🔲 Enable

Part 6: Talk Group List

• Talk Group List

Please enter talk group list parameters.

Parameter	Default	Current Setting
TGID Grouping List		TGID List 1 🔹 💰
Receive Sub-Group Feature		0 Sub Group
Default PTT Call		TGID-01(1) 🔹
Default Sub-Group PTT Feature		Setting

- 1. Click the Setting button on the right side of the TGID group list to edit the TGID group list again.
- 2. Users can also set a group or individual as a preset PTT call.
- 3. After all the settings are completed, click "Save" to save the settings of this knob.

• Program the profile with modified parameter to the radio

After each Conventional channel parameter is set, click "Program" in the screen to enter the programming screen.



Click "Program" to start the programming and wait until it is successfully programmed. The radio will reboot and load the profile with new parameters.

	🚳 Program										
D1 Basic Information	••	rofile informat	file Mormation Profile Hame Hodel Number Band MSN								
D2 P25 Trusking	• •	Frogramming Derke									
System Setting		Firmware Version Device Model Number Band									Device HSN
Conventional		V1.0_T194 U367PA-SCOEND01LRI 700/000 UU6U1V922Q									
Frequency Setting	•••	Padio Alian	nd Individual IC cear.	before program	nming Mantity:	a Mar	-				
		Please Please	e review the C	onventional Ind	ividual ID of the	radio.					
94 Setting	1	5-Tone	MDC	DVDA	DMR	P25C	Preparing	Status			
		11113	3 (DEC) 3 (HEX)	3 (DEC) 3 (HEX)	3 (DEC) 3 (HEX)	3 (DEC) 3 (HEX)					
D5 Secure Settings			Is to set	1. Card	1-1-0	1-1-2-1					
							Proparine programmine data				
D6 Conventional											
D7 Zone & Channel							Tast.				
Security								-			
Function Enabler											
Disable											
D9 Voice Call Setting											
D10 Emergency Call Setting											
\bigcirc											
021 Program	De Prog	yam									🕢 Save as

Success	x
	Programming successful.
	ок

Note: Please do not unplug the USB cable during the programming process, so as not to cause abnormal parameters after half of the programming is interrupted.

- **B3** How to create the channel knob setting of R&R Mode and program the radio device?
 - Connect the radio to the PC, read the parameter file, and start the setup. Same as section B2.
 - Create the Conventional frequency information users required

Same setting method as section B2.

• Create the required DMR protocol with RNR available information Click "Protocol Parameter Setting" to set a DMR protocol.

🛃 Read Profile from Device 65%	-Multi-TSI UBINA-SOCIENE/01UM 780/8	00 Radio_Security_PPS_V04-00-01_Be	1902				- 2 - 2		
	o PPS						On User Help		
	Protocol Parameter	Setting					Parameter Description		
	Create the protocol and con	cerning parameters which	would be used in	the device.			Protocol Alias		
D1 Basic Information Setting	D4-1. Protocol List						Definition		
	List all the protocols which we	ould be used in the device.					User can input Protocol Alias for this protocol setting.		
	Total: 8 Max: 64								
D2 System Setting				Protocol Alias	Protocol Type	S-Tone	he user may enter up to a havimum of 14 characters. Valid		
	DV0A				DVOA	MDC1200	haracters are alphanumerics,		
Conventional	DVR-Slot1				DWR	DVOA	paces and special characters.		
Frequency Setting	P250				P25 Conventional	DNR DNR	n empty string cannot be used for		
	P25T				P25 Trunking	P25 Tranking	name.		
D4 Protocol Parameter	DMP Restand Ray	amatar Catting			loue		Protocol Type		
sein	Plasse set the DMR parameter	ameter Setting					Definition Selectr the protocol time for the		
	Parameter	Default	Current Setting				setting item.		
D5 Secure Settings	DWR Compatibility	AMBE(Motorola)	AM8E (Motorola)				Range		
	Tx Preamble Frames	4	4				setting if you are only using CSQ		
Conventional	Signaling Activity Timeout	600	600	A V ms			channel (carrier squeich)		
Setting	Ack-wait Timeout	5000	5000	A V ms					
	RC Rx Enable	Disable	Disable	•					
D7 Zone & Channel	Repeater Slot	Slot 1	Slot 1	*					
sein	Repeater Timing	Aligned	Aligned	-					
		-	1						
D8 Disable									
D9 Voice Call Setting									
D10 Emergency Call									
Senny									
0									
D21 Program									
	🗎 Save 🧆 Next						🐔 Save as		
🐴 🔗 😭	o 👩 😪 🚇	2					EN . 41 20 20 454 PM		

- 1. At most 64 sets of protocols can be set.
- 2. Click "Add" to select the required protocol category and add protocols, by setting the protocol alias to refer to when setting the channel.
- 3. Click "Delete" to delete a protocol, if it has been referenced in the channel, an error will occur after deletion. Please delete all the channels that have referenced this protocol, then the protocol can be deleted.
- 4. After setting, click "Save" to save the parameter or click "Next" to save and continue the setting of parameter for the next step.

 Create the required talk groups and the TGID of these groups under the DMR protocol with RNR enabled.

Same setting method as section B2. The user needs to set the list of required DMR TGID groups and the DMR TGID used in the list.

- Create the zone and channel in RNR mode
- Show the Zone / Channel Knob List

Same setting method as section B2.

• Create a RNR Mode channel in a zone or on a channel knob position

In the zone/channel knob table, double click the knob position (1-16) to set the RNR channel for this knob.

Sele	elect Receiving Mode						
	Please select the Receiving Mode.						
			Zone 1 >> << Knob 1 >>				
	Parameter	Default	Current Setting				
	Zone Alias		Zone 1				
	Mode	None	Single Conventional Channel 👻				
	Channel Knob Alias		Zone 1-Knob 1				
	Note						
		ОК	Cancel				

The user can select the receiving mode as a single protocol channel and set the alias of this channel, which will be displayed on the radio. Click "OK", the parameters of the mode will appear, and the parameters are divided into the following parts:

Part 1: Zone/ Knob Information. Same setting method as section B2.

Part 2: Conventional Channel Setting. Users need to select DMR protocol.

٠	Conventional Channel Set	tting	
	Please enter the frequency, pr	otocols and CTCSS/ CDC	SS to be used by this knob.
	Parameter	Default	Current Setting
	Conventional Frequency	Frequency Rep1 (Rx:85	2.07500MHz/12.5KHz Tx:807.07500MHz/12.5KHz) -
	Protocol Type	CSQ	DMR -
	Protocol Alias		DMR-Slot1
	DMR Rx Color Code	0	1 A V - 1 A V HEX
	DMR Tx Color Code	0	0 A V - 0 A V HEX



Part 4: Function Setting. The user needs to set the DMR advance function to RNR mode, and set the RNR originator color code and the RNR repeater color code to two different values.

٠	Function Setting		
	Parameter	Default	Current Setting
	Tx Power Level		High Power 👻
	Hang Time	5	5.0 🔺 💌 sec
	Receive Only	Disable	🔲 Enable
	Private Call Confirmed (DMR)	Disable	🔲 Enable
	DMR Advance Function	None	RNR Mode On 👻
	Originator Color Code	1	1 • HEX
	Repeater Color Code	2	2 A - 2 A HEX

Part 5: Secure Setting

Secure Setting

Please enter secure setting parameters.

Parameter	Default	Current Setting
Secure Туре	Channel Knob Based	Channel Knob Based 🔹 👻
Channel Secure		
Key Strapping Option	User Select	User Select 🔹
Key Alias		Key 1 🔹
KMF System		KMF 1 👻
User Selectable Keyset	Disable	🔲 Enable
User Selectable Key	Disable	🔲 Enable

Part 6: Talk Group List

• Talk Group List

Please enter talk group list parameters.

Parameter	Default	Current Setting
TGID Grouping List		TGID List 2 🔹 🗸
Default PTT Call		TGID-01(1) 🔹

Operating Instructions:

- 1. Click the Setting button on the right side of the TGID group list to edit the TGID group list again.
- 2. Users can also set a group or individual as a preset PTT call.
- 3. After all the settings are completed, click "Save" to save the settings of this knob.

Program the profile with modified parameter to the radio

Operation flow is same as section B2.

- **B4** How to create the channel knob setting of Full Duplex Call Mode and program the radio device?
 - Connect the radio to the PC, read the parameter file, and start the setup.

Same as section B2.

• Create the Conventional frequency information users required

Same setting method as section B2.

• Create the required DMR protocol with Full Duplex available information

Click "Protocol Parameter Setting" to set a DMR protocol.

🛃 Read Profile from Device 65	4-Multi-TS1 U38/7RA-SDOO(EN8003UME 780/8	00 Radio_Security_PPS_V04-00-01_Bet	y02				
	io PPS						On User Help
	Protocol Parameter	Setting					Parameter Description
	Create the protocol and cor	Protocol data Protocol data Protocol data					
D1 Basic Information Setting	D4-1. Protocol List	nel retre retre de la retre de					
	List all the protocols which w	ould be used in the device.					this protocol setting.
P25 Trunking	Total: 8 Max: 64				Add	2-Tone	lange
System Setting			Pi	otocol Alias	Protocol Type	S-Tene	paximum of 14 characters. Valid
	DV0A				DV/04	MDC1280	haracters are alphanumerics, naces and special characters.
D3 Conventional	DWR-Sot1				DWR	DV0A	Vaming
- Hopaney stantag	P250				P25 Conventional	P25 Conventions	n empty string cannot be used for
	P25T				P25 Trunking	P25 Trunking	name.
D4 Protocol Parameter Setting	D4-2. DMR Protocol Par	ameter Setting			Inun		Protocol Type Definition
	Please set the DWR paramete	n.					Selects the protocol type for the
Concernant and the second seco	Parameter	Default	Current Setting				setting item.
Secure secures	DWR Compatibility	ANBE(Motorola)	AM&E(Motorola)	•			You don't need to set any protocol
	Tx Preamble Frames	4	4				setting if you are only using CSQ channel (carrier squelch)
D6 Conventional Setting	Signaling Activity Timeout	600	600	▼ ms			
	Ack-wait Timeout	5000	5000	💌 ms			
	RC Rx Enable	Disable	Disable	*			
D7 Setting	Repeater Slot	Slot 1	Slot 1	*			
	Repeater Timing	Aligned	Algned	v.			
D8 Function Enabler Disable							
D9 Voice Call Setting							
D10 Emergency Call Setting							
D21 Program	🗄 Save 📫 Next						🕢 Save as
🚯 🥖 📜	o 📀 😪 🕒	4					EN + 4 1 10 10 454 PM

- 1. At most 64 sets of protocols can be set.
- 2. Click "Add" to select the required protocol category and add protocols, by setting the protocol alias to refer to when setting the channel.
- 3. Click "Delete" to delete a protocol, if it has been referenced in the channel, an error will occur after deletion. Please delete all the channels that have referenced this protocol, then the protocol can be deleted.
- 4. After setting, click "Save" to save the parameter or click "Next" to save and continue the setting of parameter for the next step.

B4 How to create the channel knob setting of Full Duplex Call Mode and program the radio device?

 Create the required talk groups and the TGID of these groups under the DMR protocol with Full Duplex enabled.

Setting method is same as section B2. The user needs to set the list of required DMR TGID groups and the DMR TGID used in the list.

• Create the zone and channel in Full Duplex mode

• Show the Zone / Channel Knob List

Same setting method as section B2.

• Create a Full Duplex Mode channel in a zone or on a channel knob position

In the zone/channel knob table, double click the knob position (1-16) to set the Full Duplex channel for this knob.

Sele	ct Receiving Mode		
	Please select the Receiving A	Aode.	
			Zone 1 >> << Knob 1 >>
	Parameter	Default	Current Setting
	Zone Alias		Zone 1
	Mode	None	Single Conventional Channel 👻
	Channel Knob Alias		Zone 1-Knob 1
	Note		
		ОК	Cancel

The user can select the receiving mode as a single protocol channel and set the alias of this channel, which will be displayed on the radio. Click "OK", the parameters of the mode will appear, and the parameters are divided into the following parts:

Part 1: Zone/ Knob Information. Same setting method as section B2.

Part 2: Conventional Channel Setting. Use	ers need to select DMR protocol.
---	----------------------------------

٠	Conventional Channel Set	tting	
	Please enter the frequency, pr	otocols and CTCSS/ CDC	SS to be used by this knob.
	Parameter	Default	Current Setting
	Conventional Frequency	Frequency Rep1 (Rx:85	52.07500MHz/12.5KHz Tx:807.07500MHz/12.5KHz)
	Protocol Type	CSQ	DMR -
	Protocol Alias		DMR-Slot1
	DMR Rx Color Code	0	1 • T • HEX
	DMR Tx Color Code	0	0 • • • • • • • • • • • • • • • • • • •

Part 3: Channel Receive Option. Same setting content as section B2.

B4 How to create the channel knob setting of Full Duplex Call Mode and program the radio device?

Part 4: Function Setting. The user needs to set the DMR advance function to Duxplex Call On.

٠	Function Setting		
	Parameter	Default	Current Setting
	Tx Power Level		High Power 🔹
	Hang Time	5	5.0 🔺 💙 sec
	Receive Only	Disable	🔲 Enable
	Private Call Confirmed (DMR)	Disable	🔲 Enable
	DMR Advance Function	None	Duplex Call On 🔹

Part 5: Secure Setting

Secure Setting

Please enter secure setting parameters.

Parameter	Default	Current Setting
Secure Туре	Channel Knob Based	Channel Knob Based 🛛 👻
Channel Secure		
Key Strapping Option	User Select	User Select 🔹
Key Alias		Key 1 🔹
KMF System		KMF 1
User Selectable Keyset	Disable	🔲 Enable
User Selectable Key	Disable	🔲 Enable

Part 6: Talk Group List

• Talk Group List

Please enter talk group list parameters.

Parameter	Default	Current Setting
TGID Grouping List		TGID List 2 🔹 🗸
Default PTT Call		TGID-01(1) 🔹

Operating Instructions:

- 1. Click the Setting button on the right side of the TGID group list to edit the TGID group list again.
- 2. Users can also set a group or individual as a preset PTT call.
- 3. After all the settings are completed, click "Save" to save the settings of this knob.
- Program the profile with modified parameter to the radio

Same operation flow as section B2.

Note: This section is only available for the two models, U4-LXXUFR-E6E and U4-LXXUFX-E6E which support AM modulation.

• Connect the radio to the PC, read the parameter file, and start the setup.

Same operation method as section B2.

• Create the Conventional frequency information users required

To use AM modulation channels, it needs to establish the UHF F (225-400MHz) frequency band and meet the following conditions:

- 1. UHF F (225-400MHz) frequency band must be used.
- 2. The receiving and transmitting frequency need to be the same.
- 3. Bandwidths of both reception and transmission have to be 25KHz.

Conventional Frequency Setting				
Sets the R×/T× frequencies and bandwidths of the convention	nal system.			
WLB Converntional Frequency List UHF Band F Converntional Freque	ency List			
D3-2. UHF Band F Converntional Frequency List				
Please enter the R×/T× frequencies and BWs that would be used in	your environment. The range of F	⊳/T× frequency is	: 225~400 MHz.	
Total: 1 Max: 1024		Expor	t Import Ac	id Delete
Total: 1 Max: 1024 Frequency Alias	Rx Frequency (MHz)	Expor Rx BW (KHz)	t Import Ac Tx Frequency (MHz)	d Delete Tx BW (KHz)
Total: 1 Max: 1024 Frequency Alias AM Frequency	Rx Frequency (MHz) 225.00000	Expor Rx BW (KHz) 25	t Import Ac Tx Frequency (MHz) 225.00000	d Delete Tx BW (KHz) 25
Total: 1 Max: 1024 Frequency Alias AW Frequency	Rx Frequency (MHz) 225.00000	Expor Rx BW (KHz) 25	t Import Ac Tx Frequency (MHz) 225.00000	d Delete Tx BW (KHz) 25
Total: 1 Max: 1024 Frequency Alias MW Frequency	Rx Frequency (MHz) 225.0000	Expor Rx BW (KHz) 25	t Import Ac Tx Frequency (MHz) 225.00000	Del Tx BW (K 25

Operating instructions:

- 1. At most 1024 groups of frequencies can be set. Press "Add" to add the required frequency, change the Frequency Alias so it can be identified easily while setting the channels.
- 2. Press "Delete" to delete a frequency. If it has been referenced in the channel, an error will occur after deletion. Please delete all the channels that referenced this frequency, then the frequency can be deleted.

Press "Save" to save the parameters or click "Next" to save and continue to set the next parameter.

• Establish the required AM-DSB protocol reference information

Click "Protocol Parameter Setting" to set a AM-DSB protocol. The AM-DSB protocol is one of the protocols in AM modulation.

eate the protoc	ol and conc	erning parameter	s which would be	used in the device.	
D4-1. Protoco	l List				
List all the protoc	ols which wo	uld be used in the de	wice.		
Total: 1	Max: 64				Add Delete
			Protocol Alias		Protocol Type
AM-DSB					AM-DSB
D4-2. AM-DSB	Protocol P	arameter Setting			
D4-2. AM-DSB Please set the AW	Protocol P	arameter Setting			
D4-2. AM-DSB Please set the AW Parameter	Protocol P 1-DSB paramet	arameter Setting ters. Default	Current Setting		

- 1. At most 64 sets of protocols can be set.
- 2. Click "Add" to select the required protocol category and add protocols, by setting the protocol alias to refer to when setting the channel.
- 3. Click "Delete" to delete a protocol, if it has been referenced in the channel, an error will occur after deletion. Please delete all the channels that have referenced this protocol, then the protocol can be deleted.
- 4. After setting, click "Save" to save the parameter or click "Next" to save and continue the setting of parameter for the next step.

- Create the required zone and channel for AM Modulation
- Show the Zone/ Channel Knob List

Click "Zone & Channel Setting" to show the zone list.

\bigcirc	ወ z	one	e & Chann	el Setting							
	•	D7-1	Zone & Ch	annel List							
D1 Basic information Setting		Click	the setting field	ds of the knob pos	ition to enter inf	o the detail setti	ngs of the knob. I	Each knob can be	set to different p	protocols and mo	des.
		т	stal: 1 🛛 🦂	Wax: 64				Add	Delete	now Knob 1-8	Show Knob 9-16
D2 P25 Trunking System Setting			Zone Alias	Knob Position 1	Knob Position 2	Knob Position 3	Knob Position 4	Knob Position 5	Knob Position 6	Knob Position 7	Knob Position 8
D3 Conventional Frequency Setting		Þ	Zone 1	None							
Protocol Parameter Setting											
D5 Secure Settings											
D6 Conventional Setting											
D7 Zone & Channel Setting											
Program	H s	ave	-) (+ I	Next							🕖 Save as

Operating Instructions:

- 1. At most 64 zones can be set. Click "Add" to add the required zones. After setting the zone alias, the alias will be displayed on the radios, and the knob can be set by double clicking on the knob position 1~16.
- 2. Click "Delete" to delete a zone.

After setting, click "Save" to save the parameter or click "Next" to save and continue the setting for the next step.

• Create a channel of AM Modulation on one of the zone/ channel knob position.

Double click on the channel knob position 1~16 of one of the zone in the zone/ channel list to set the channel with AM Modulation.

Calact Pacaliting Made		
Plaza calect the Pocaivi	ing Modo	
Flease select the Necelin	ing mode.	Zana 1 N Za Knah 1 N
Parameter	Default	Current Setting
Zone Alias		Zone 1
Mode	None	None
Channel Knob Alias		Zone 1-Knob 1
Note		
	ОК	Cancel

The user can select the receiving mode as a single protocol channel and set the alias of this channel, which will be displayed on the radio. Click "OK", the parameters of the mode will appear, and the parameters are divided into the following parts:

Part 1: Zone/ Knob Information. Users can modify the zone alias and the voice prompt of this channel as well as add note to this channel.

•	Zone/Knob Information Single Conventional Channel Zone "Zone 1" Knob Position 1							
	Please enter the Knob Alias and	d select your voice prom	npt. This Alias will be displayed on the	e standby screen.				
	Zone Alias: Zone 1		Zone 1 >> < Knob 1	>>				
	Parameter	Default	Current Setting					
	Channel Knob Alias		Zone 1-Knob 1					
	Voice Prompt	None	None	@				
	Note							

Part 2: Conventional Channel Setting includes Conventional Frequency, Modulation Type, Protocol Type and Protocol Alias.

Conventional Channel Setting

Please enter the frequency, protocols and CTCSS/ CDCSS to be used by this knob.

Parameter	Default	Current Setting	
Conventional Frequency	AM Frequency (225.000	000MHz / 25KHz)	_
Modulation Type	FM	AM •	
Protocol Type	CSQ	AM-DSB 🗸	
Protocol Alias		AM-DSB 🗸	

Operating Instructions:

- 1. Conventional Frequency is referenced the frequency set in "Conventional Frequency Setting".
 - a. UHF F (225-400MHz) frequency band.
 - b. The receiving and transmitting frequency need to be the same.
 - c. Bandwidths of both reception and transmission have to be 25KHz.
- 2. Please select AM for modulation type.
- 3. The protocol alias is referenced with the aliasd set in "zone and channel setting for AM Modulation".

Part 3: Channel Receive Option

٠	Channel Receive Option								
	Please enter channel receive option parameters.								
	Parameter Default Current Setting								
	Audio Squelch	Low	Low						

Part 4: Function Setting. The users need to set DMR advance function to Full Deplex On.

٠	Function Setting							
	Parameter	Default	Current Setting					
	Tx Power Level		5W -					
	Receive Only	Disable	🔲 Enable					

• Program the profile with modified parameter to the radio

After setting the parameters of all the channels, click "Program" to enter the programming screen.

	Prog	iram								
D1 Basic Information Setting	- 1101						Profile Name	Hodel Number	Band	NSN
							Sample	U3167PA-SIOO(ENBX01UNI	700/800	BUGBLPW222Q
D2 P25 Trunking	· Prog	ramming De	vice							
System Sotting						,	Trmware Version	Device Model Number	Band	Device HSN
							V1.00_T19d	U3167PA-SDOKENEX01UNI	700/800	BUGBLPW222Q
D3 Frequency Setting	 Confi 	irm SUID arv	d Individual ID	before program	nming					
	R	adio Alias:	解視		Identity:	eader	•			
D4 Protocol Parameter Setting		ease riease	renew the co	DVDA	Pictual ID of the	natio.	Data			
	111	10	3 (DEC) 3 (HEX)	3 (DEC) 3 (HEQ	3 (DEC) 3 (HEQ)	3 (DEC) 3 (HEX)	Individual ID is from profile.			
D5 Secure Settings										
D6 Converticenal Setting										
D7 Zone & Channel Setting										
D8 function Enabler Disable										
D9 Voice Call Setting										
D10 Emergency Call Setting										
0										
Program	De Program									€ Save as

Click "Program" to start the programming and wait until the programming finished. The radio will reboot and load the new parameters.

	🔞 Pi	rogram												
Dasic Information		Profile Informat	tion											
Setting			From a wanne Hiddel Number Bland Also Somole Uta/PaceSonDite II 2000											
P25 Trunking	•	Programming D	raming Device 0.00 Parcoochama rate 2.00000 0.00001 maccoo											
System Setting			Tirmware Version Device Model Number Band Device KSN											
							V1.00_T19d		U3167PA-SDOKENBX01UNI	700/800	BUGBLPW222Q			
Frequency Setting	•	Confirm SUID ar	nd Individual IC	before program	nming									
		Please Please	NKCR e review the C	onventional Ind	vidual ID of the	radio.	•							
D4 Protocol Parameter Setting	-	5-Tone	MDC	DVOA	DMR	P25C	Preparing	Status						
		11113	3 (DEC) 3 (HEX)	3 (DEC) 3 (HEX)	3 (DEC) 3 (HED)	3 (DEC) 3 (HEX)								
D5 Secure Settings			Totoed	14.0.004	To A up 0	To track								
							Prenaring programming data							
D6 Conventional Setting														
D7 Zone & Channel							*4 B*							
Transform Enabler														
COSTER														
US Voice Cal Sening														
Company Cal														
010 Setting														
Program	De Pro	gram									🐔 Save as			



Note: Do not unplug the USB cable during the programming to avoid the parameters being abnormal after half of the programming gets interrupted.

 Connect the radio with the PC and read the profile parameters to start programming.

Same operation flow as section B2.

- Create the required P25 Trunking System reference information
- Import a P25 Trunking System info with DKF file.

Click "P25 Trunking System Setting" to set the required P25 Trunking System.

	02 P2	25 Trunk	ing System Setting	l -					
Basic Information	Sets 1	the P25 Tru	nking System parameter:	that the radio uses					
Setting	Pb	ease enter th	e parameter of Trunking syst	em to use.					
		Total: 0	Max: 1024					Import	Add Crokene Dalate
D2 System Setting			System Alias	Band	System Detail	TGID List	Sub Group List	P25T S	Import DKF from USB hard key and add a new system
									Import from Radio Reference API
D3 Conventional Frequency Setting									
D4 Protocol Parameter									
Secting									
DS Sanura Cattinua									
DJ Secure securgs									
D6 Setting									
D7 Zone & Channel Setting									
D21 Program		_							
	H San	/e	I Next						Save as

- 1. The parameters of the P25 Trunking System in the United States and Canada are protected by the state government, and the state government does not allow PPS users to create system parameters at will, but needs to use a separate tool through the state government to save the parameters as DKF files and then provide them to PPS users for use. Therefore, PPS provides the function of "Import DKF files".
- 2. Operating instructions of "Import DKF files":
 - a. Click "Import" and select "Import DKF file and add a new system"; then choose a DKF file.

💀 Select a DKF file							×
🚱 🔍 🔻 📕 🕨 Lii	oraries I	Documents 03_U3_Radio DKF	•	- 49	Search DKF		٩
Organize 🔻 Ne	w folde						0
01 Issue Log 2023 2022	^	Documents library _{DKF}			Arrange	e by: Folder	
		Name	Date modified	Тур		Size	
4 🎇 Libraries		ES-All-Edit-MSN-SUID-200206.dkf	1/9/2023 7:30 PM	DKF	File	31 KB	
Documents Music Music Wires Wideos Videos Gomputer Metwork	m	☐ ES-Scon-All-Edit-MSN-SJID-200211.dkf	1/9/2023 7:30 PM	DKF	File	31 КВ	
	File <u>n</u> a	ne: ES-All-Edit-MSN-SUID-200206.dkf		٠	DKF file(*.dkf) Open	Cancel	•

b. Click on the DKF file and click "Open", it needs to enter the password of the DKF file.

Confirm Password
Please enter password of the DKF file
Password:
OK Cancel

c. Click "OK" after entering the correct password, then a new P25 Trunking System will be imported successfully.

Modify the parameter of the P25 Trunking System

When the DKF file is created, certain parameters are specified to allow PPS users to modify it again. Before modifying the parameters, the state of the P25 Trunking System must be changed from locked to editable, which is an unlocking step. After unlocking, click the system alias, system details, TGID list, subgroup list, P25T SUID, and individual call list of the P25 Trunking System data to display the modification screen.

\bigcirc	😰 P25	Trunking Sy	/stem Settin	g				
	Sets the	P25 Trunking S	ystem paramete	rs that the	radio uses.			
Setting	• E2-1. P25 Trunking System List							
	Please	e enter the parame	eter of Frunking sys	stem to use.			And Sunta in	Delete
P25 Trunking		tal. I Max	. 1024			import	lodividual	Delete
System Setting		System Alias	System Detail	TGID List	Sub Group List	P25T SUID	Call List	Status
E3 Conventional Frequency Setting	►	Keelung	1 Site(s) 1 Control CH(s)	3 TGID(s)	0 Sub Group(s)	No Setting	0 Call(s)	Editable
E4 Protocol Parameter Setting								
E5 Secure Settings								
E6 Conventional Setting								
E7 Zone & Channel Setting								
F23 Program								
Program	💾 Save	🔷 Nex	t					

- 1. Click the status box and it will remind DKF file can be imported.
- 2. After successfully unlocked, click system details to edit the system parameters. Up to any parameter can be edited, except WACNID and system ID. The editing permissions for these parameters are determined when the DKF file is created.

Parameter	Default	Current Setting
System Alias		Keelung
WACN ID(Lock)	1	1 • HEX
System ID(Lock)	1	1 • HEX
Site Trunking	Disable	🗆 Enable
Site List		1 Site(s)
Control Channel List		1 Control CH(s)
Full Spectrum Scan		Enable
OTAR	Disable	🗆 Enable
Status Alias		Disable
Console ID	0	0 • • • • • • HEX
		· · · ·

3. Click the TGID list box to edit the P25T TGID list supported by this system.

Parameter		Default	Current S	rent Setting				
System Alias WACN ID System ID			Keelung					
		1	1		1	A V HEX		
		1	1	-	1	A V H	EX	
Total: 3 Max: 1024					Expor	t Import	Add	Delete
	Group A	lias	P	25T TGID		Key Strapping Option	Key	Alias
▶ Wildcard		65535 (DEC) FFFF (HEX)		User Select	Key 1			
Group 1		1 (DEC) 1 (HEX)		User Select	Key 1			
Group 2			2 (DEC) 2 (HEX)		User Select	Key 1		

4. Click the Sub Group list box to edit the Sub Group list supported by this system.

5 Trunking Sub Group List							
Please	e set the P25T Sub Group	List parameters.					
Para	meter	Default	Cur	rent Setting			
Syste	m Alias		Keel	Ing			
WACK	N ID	1	1	▲▼ - 1		A V H	EX
Syste	m ID	1	1	▲▼ - 1		A V H	EX
То	tal: 1 Max: 1024				Export	Import	Add Delete
	Sub G	roup Alias		P25T Sub-Group (2-Tone Phase 1)	P25T : (2-Tor	Sub-Group ne Phase 2)	P25T Sub-Group (Digital Address)
►	Sub Group 1			T1: 1(265.7-296.8) T2: 2(296.9-328.1)	T1: 1(265 T2: 2(296	i.7-296.8) i.9-328.1)	No Setting
OK Cancel							

5. For the P25T SUID, random settings are not provided. In the DKF file, the SUID corresponding to the serial number of each radio is set in advance. Therefore, after importing the DKF file, PPS will automatically determine a SUID from the serial number-SUID comparison table based on the serial number of the radio. If the SUID in the ordinal-SUID comparison table does not have a corresponding serial number, these SUIDs can be used by PPS settings.

Please assign P25T SUID o	of Keelung.			
Parameter	Default	Current Setting		
Assign a P25T SUID	Enable	🕼 Enable		
P25T SUID		1 (DEC) 1 (HEX)		
OK Cancel				

P25	25 Trunking Individual Call List						
	Please set the P25T Individual Call List parameters.						
	Para	neter		Default	Current Setting	В	
	Syster	n Alias			Keelung		
	WACN	ID		1	1	▲ ▼ - 1 ▲ ▼ HEX	
	Syster	n ID		1	1	• • 1 • HEX	
	Tot	:al: 2	Max: 128		Export	Import Add Delete	
				Call Alias		P25T SUID	
		Call 1				1 (DEC) 1 (HEX)	
	•	Call 2				2 (DEC) 2 (HEX)	
	OK Cancel						

6. Click Individual Call List to edit the call list of this system.

• Create the required protocol reference information for P25 Trunking Click "Protocol Parater Setting" to set a P25 Trunking protocol.

	Protocol Parameter Setting				
E1 Basic Information Setting	Create the protocol and concerning pa • E4-1. Protocol List	rameters which wo	uld be used in the device.		
	List all the protocols which would be used	in the device.			
	Total: 1 Max: 64			Ad 2-Tone	
E2 System Setting	Protoco	l Alias	Protoc	ol 5-Tone	
	P25 Trunking		P25 Trunking	MDC1200	
Committee				DVOA	
Frequency Setting				DMR	
				P25 Conventional	
Dratagel Decomptor				P25 Trunking	
Setting	• E4-2. P25 Trunking Protocol Parameter Setting				
	Please set the P25 Trunking parameters.			-	
	Parameter Default Cur		Current Setting		
		Derautt	current setting		
=5 Secure Settings	RFSS-RSP-wait Timeout	2000	2000	▼ ms	
E5 Secure Settings	RFSS-RSP-wait Timeout Digital Tone System Setting	2000	2000	M ms	
E5 Secure Settings	RFSS-RSP-wait Timeout Digital Tone System Setting Short digital tone-A duration in system (T	2000 one A) 1000	2000 A	∎ ms	
E5 Secure Settings E6 Conventional Setting	RFSS-RSP-wait Timeout Digital Tone System Setting Short digital tone-A duration in system (T Short digital tone-B duration in system (T	2000 one A) 1000 one B) 2000	2000 A	N▼ ms	
E5 Secure Settings E6 Conventional Setting	RFSS-RSP-wait Timeout Digital Tone System Setting Short digital tone-A duration in system (T Short digital tone-B duration in system (Ton Long digital tone duration in system (Ton	2000 2000 one A) 1000 one B) 2000 = C) 5000	2000 A 1000 A 2000 A 5000 A	N♥ ms N♥ ms N♥ ms N♥ ms	
E5 Secure Settings E6 Conventional Setting E7 Zone & Channel Setting	RFSS-RSP-wait Timeout Digital Tone System Setting Short digital tone-A duration in system (T Short digital tone-B duration in system (Ton Gap between two digital tone addresses system (tg2)	2000 2000 ane A) 1000 ane B) 2000 a C) 5000 n 1500	2000 (a) 2000 (a) 2000 (a) 2000 (a) 5000 (a) 1500 (a)	x ♥ ms x ♥ ms x ♥ ms x ♥ ms x ♥ ms	
5 Secure Settings E6 Conventional Setting 7 Zone & Channel	RFSS-RSP-wait Timeout Digital Tone System Setting Short digital tone-A duration in system (T Short digital tone-B duration in system (Ton Gap between two digital tone addresses i system (tg2) Digital Tone Qualify Setting	2000 2000 ane A) 1000 ane B) 2000 c) 5000 n 1500	2000 (A) 1000 (A) 2000 (A) 5000 (A) 1500 (A)	x v ms v ms v ms v ms v ms v ms v ms	
E5 Secure Settings	RFSS-RSP-wait Timeout Digital Tone System Setting Short digital tone-A duration in system (T Short digital tone-B duration in system (Ton Gap between two digital tone addresses i system (tg2) Digital Tone Qualify Setting Minimum short digital tone detect time	2000 2000 ane A) 1000 a C) 5000 n 1500 200	2000 A	x ms x ms x ms x ms x ms x ms x ms x ms	

- 1. At most 64 sets of protocols can be set. P25 Trunking protocol can be selected for every setting.
- 2. Click "Add" to select the required protocol category and add protocols, by setting the protocol alias to refer to when setting the channel.
- 3. Click "Delete" to delete a protocol, if it has been referenced in the channel, an error will occur after deletion. Please delete all the channels that have referenced this protocol, then the protocol can be deleted.
- 4. After setting, click "Save" to save the parameter or click "Next" to save and continue the setting of parameter for the next step.

- Create the required Zone and P25 Trunking channel
- Show the Zone/ Channel Knob List

Same setting method as section B2.

• Create a P25 Trunking channel on one of the zone/ channel knob position.

Double click on the channel knob position 1-16 of one of the zone in the Zone/ Channel Knob List to set the P25 Trunking Sysetm.

Sele	elect Receiving Mode				
	Please select the Receiving Mo	de.			
			Zone 1 >> < Knob 1 >>		
	Parameter	Default	Current Setting		
	Zone Alias		Zone 1		
	Mode	None	P25 Trunking System 🗸		
	Channel Knob Alias		Zone 1-Knob 1		
	Note				
		ОК	Cancel		

The user can select the Receiving Mode as P25 Trunking System and set the alias of this cahnnel, which will be displayed on the radio. Click "OK", the parameter of the mode will appear, and the parameters are divided into the following parts:

Part 1: Zone/ Knob Information. Same setting content as section B2.

Part 2: P25 Trunking System Setting includes used P25 Trunking System and the P25 Trunking System protocol.

•	Trunking System Setting				
	Please select P25 Trunking syst	iem.			
	Parameter	Default	Current Setting		
	P25 Trunking System		Keelung (1 / 1, Sites:1, Control CHs:1)		
	WACN ID		1 A HEX		
	System ID		1 A T 1 A T HEX		
	Site List		1 Site(s)		
	Control Channel List		1 Control CH(s)		
	Full Spectrum Scan		Enable		
	P25 Trunking Protocol Alias		P25 Trunking		

- 1. P25 Trunking System setting is referenced from the "Required P25 Trunking System reference information".
- 2. P25 Trunking protocol alias is referenced from the alias set in "Required P25 Trunking System reference information".

Part 3: Channel Receive Option

٠	Channel Receive Option				
	Please enter channel receive option parameters.				
	Parameter	Default	Current Setting		
	Audio Squelch	Low		1	

Part 4: Function Setting

Function Setting				
Parameter	Default	Current Setting		
Tx Power Level		High Power 👻		
Hang Time	5	5.0 Sec		
Receive Only	Disable	Enable		

Part 5: Secure Setting

Secure Setting	Secure Setting				
Please enter secure setting par	rameters.				
Parameter	Default	Current Setting			
Private Call					
Key Strapping Option	User Select	User Select 👻			
Key Alias		Key 1 👻			
Dynamic Regrouping Talk Grou	Ρ				
Key Strapping Option	User Select	User Select 👻			
Key Alias		Key 1 👻			
Announcement Group(ATG)					
Key Strapping Option	User Select	User Select 👻			
Key Alias		Key 1 👻			
KMF System		KMF 1			
User Selectable Keyset	Disable	Enable			

Part 6: Talk Group List

Talk Group List				
Please enter talk group list parameters.				
Parameter	Default	Current Setting		
Trunking Talk Group		<atg></atg>		
Talk Group Scan	Disable	🔲 Enable		
Parameter	Default	Current Setting		
Announcement Group(ATG) ID	0			

Operating Instructions:

- 1. Only one group can be set as P25 Trunking talk group, and it is set as Announcement Group (ATG) by default.
- 2. Click "Save" to save this channel knob setting.

• Program the profile with modified parameter to the radio

Same operation flow as section B2.

- B7 How the create the channel knob setting of P25 Trunking System Scan (simultaneously listen to multiple talk groups) and program the radio device?
 - Connect the radio with the PC and read the profile parameter, then start programming.

Same operation flow as section B2.

- Create the required P25 Trunking System reference information Same operation flow as section B6.
- Create the required P25 Trunking protocol reference information. Same operation flow as section B6.
- Create the required zone and P25 Trunking channel
- Show the Zone/ Channel Knob List

Same operation flow as section B6.

• Create a P25 Trunking channel on one of the zone/ channel knob posistion

Double click on the channel knob position 1-16 in the Zone/ Channel Knob List to set the P25 Trunking System.

٠	Trunking System Setting				
	Please select P25 Trunking system.				
	Parameter	Default	Current Setting		
	P25 Trunking System		Keelung (1 / 1, Sites:1, Control CHs:1)		
	WACN ID		1 A HEX		
	System ID		1 A T 1 A T HEX		
	Site List		1 Site(s)		
	Control Channel List		1 Control CH(s)		
	Full Spectrum Scan Enable		Enable		
	P25 Trunking Protocol Alias		P25 Trunking		

The user can select the Receiving Mode as P25 Trunking System and set the alias of this cahnnel, which will be displayed on the radio. Click "OK", the parameter of the mode will appear, and the parameters are divided into the following parts:

Part 1: Zone/ Knob Information. Same setting content as section B2.

Part 2: P25 Trunking System Setting. Same setting content as section B6.

Part 3: Channel Receive Option

Channel Receive Option					
Please enter channel receive option parameters.					
Parameter Default Current Setting					
Low					

B7 How the create the channel knob setting of P25 Trunking System Scan (simultaneously listen to multiple talk groups) and program the radio device?

Part 4: Function Setting

Function Setting				
Parameter	Default	Current Setting		
Tx Power Level		High Power 🔹		
Hang Time	5	5.0 Sec		
Receive Only	Disable	Enable		

Part 5: Secure Setting

Secure Setting			
Please enter secure setting parameters.			
Parameter	Default	Current Setting	
Private Call			
Key Strapping Option	User Select	User Select 👻	
Key Alias		Key 1	
Dynamic Regrouping Talk G	roup		
Key Strapping Option	User Select	User Select 👻	
Key Alias		Key 1 🔹	
Announcement Group(ATG))		
Key Strapping Option	User Select	User Select 👻	
Key Alias		Key 1 👻	
KMF System		KMF 1	
User Selectable Kevset	Disable	Enable	

B7 How the create the channel knob setting of P25 Trunking System Scan (simultaneously listen to multiple talk groups) and program the radio device?

Part 6: Talk Group List

Talk Group List			
Please enter talk group list parameters.			
Parameter Default		Current Setting	
Trunking Talk Group		Group 1 (1)	
Talk Group Scan	Disable	🔽 Enable	
Talk Group Scan List		Priority Talk Group Scan List	
Available		List Members - Total: 2 Max: 64	
Wildcard (65535)		Group 1 (1)	
	Add >>		
	<< Remove		
		List Mombers Total: 2 May: 64	
		Group 2 (2)	
	Add >>		
	<< Remove		
Parameter	Default	Current Setting	
Priority Talk Group ID Option			
Multi-Select Call Sampling	Disable	Enable	
Receive Sub-Group Feature		0 Sub Group	
Default Sub-Group PTT Feature		0 Sub Group	

Operating Instructions:

- 1. Only one group can be set as P25 Trunking talk group, and it is set as Announcement Talk Group (ATG) by default.
- 2. Select "Talk Group Scan" to listen to multiple groups simultaneously. Set the Priority Talk Group Scan List and Non-Priority Talk Group Scan List after selection. Please pay attention that the P25 Trunking talk group will definitely be the top of the Priority Talk Group Scan List.
- 3. Priority Talk Group ID Option setting is provided.
- 4. Click "Save" to save this channel knob setting.
- Program the profile with modified parameter to the radio

Same as section B2.

B8 How to create the channel knob setting of Multi-Band Scan and program the radio device?

- Connect the radio with the PC, read the parameter profile and start the setup. Same operation flow as section B2.
- Create the Conventional channel required by the Multi-Band Scan.

According to the entire process of section (B2), create all the Conventional channels required for Multi-Channel Scan in the zone/ channel knob table.

• Create the required zone and Multi-Channel Scan.

• Show the Zone/ Channel Knob Table

Same operation flow as section B2.

• Create a Multi-Channel Scan in a zone or one a channel knob position

In the zone/ channel knob table, double click the knob position (1-16) to set the Multi-Channel Scan for this knob.

Sele	Select Receiving Mode				
	Please select the Receiving Mode.				
[<< Zone 4 >>> <<> Knob 1 >>>		
	Parameter	Default	Current Setting		
	Zone Alias		Zone 1		
	Mode	None	Multi-Channel Scan 👻		
	Channel Knob Alias		Zone 1-Knob 1		
	Note				
		ОК	Cancel		

B8 How to create the channel knob setting of Multi-Band Scan and program the radio device?

The user can select the receiving mode as Multi-Channel Scan and set the alias of this channel, which will be displayed on the radio. Click "OK", the parameters of the mode will appear:



Program the profile with modified parameter to the radio

Same as section B2.

B9 How to create the channel knob setting of Full Band Scan and program the radio device?

- Connect the radio with the PC and read the profile then start to set the radio. Same operation flow as section B2.
- Create the Zone and Free Scan Zone required by the User Group .
- Show the Zone/ Knob Setting Table.

Same operation flow as section B2.

• Create a Free Scan Knob on one of the Zone/ Knob position .

Double click one of columns in the Knob Position 1-16, and set the Free Scan for the selected Knob in Zone/ Knob Setting Table.

Sele	Select Receiving Mode				
	Please select the Receiving Mode.				
			<< Zone 2 >> << Knob 1 >>		
	Parameter Default		Current Setting		
	Zone Alias		Zone 1		
	Mode	None	Free Scan 🔹		
	Channel Knob Alias	nel Knob Alias Zone 1-Knob 1			
	Note				
		ОК	Cancel		

Users can set the communication mode as Free Scan, and set the Alias of Zone (the alias will show on the radio.) Click Confirm "When selecting the Free Scan Mode, it will show the parameter of this mode below. The parameter content is as following:

Scan Setting	ican Setting			
Parameter	Default	Current Setting		
Scan Range				
Band Type	WLB (30~88 MHz)	•		
Start Frequency	30 MHz	30.00000		
End Frequency	88 MHz	88.00000 A MHz		
Step Size	12.5	12.50 KHz		
Protocol				
🖉 Analog 🕼 MDC/DVOA 🛛 DMR				
DMR Vocoder	Motorola	Motorola 🔹		
Bandwidth	12.5 KHz	12.5 KHz 🔹		
Stay Time	500	500 🔺 🔻 ms		

Operating Instructions:

- 1. Scan Range is the setting for the user to set the beginning frequency, end frequency, and the bandwidth.
- 2. Protocol setting allows users to set the Free Scan mode. In addition to receive the analog voice during the scanning, it is also able to scan calls of a certain communication protocol at the same time.
- 3. Stay Time allows users to set the staying time when scanning a certain frequency. If there is no voice and message being scanned during scanning, then it will continue the scanning in the next frequency.
- Program the profile with modified parameter to the radio

Same as section B2.

B10 How to set up the parameter of Mandown Alert by PPS?

• Start setting the profile, and enter the sector of Man Down Setting.

Click E10"Emergency Call Setting" and select the label "Emergency Call"to show the Emergency Call and Man Down setting section

Setting	Ellerit. Emergency can		
	Parameter	Default	Current Setting
Euroction Enable(Emergency Type	Emergency Alarm w/ Call	Emergency Alarm w/ Call 🔹
Disable	Emergency Recipient		
	Revert Channel		Current Channel 🔹
Q Voice Call Setting	Recipient Call		Default PTT Call 👻
	Max Ack-wait Time	10	10 🔺 🛡 sec
	No-ack Retries		
10 Emergency Call	Impolite Retries	3	3
Coming	Polite Retries	3	3
	Location Inform Interval	60	30 🔺 🛡 sec
11 Data Message Setting	Siren Tone	Off	● On ◎ Off
	E10-2. Mandown Settir	ng	
	Parameter	Default	Current Setting
12 DTMF Setting	Man Down Sensor	Off	💿 On 💿 Off
	Man Down Trigger Method	Tilt Only	Tilt Only 🗸
	Tilt Trigger Setting		
	Gradient	60 *	75" •
	Trigger Duration	60	10 🔺 🛡 sec
	Pre-Alert Time	6	6 🔺 🔻 sec

Operating Instructions:

- 1. Man Down Sensor: Enable/Disable Man Down Alert function.
- 2. Trigger mode of user falling to the ground: the following modes are provided
- a. Slant b. Motionless c. Slant or Motionless d. Drop
- e. Slant after drop f. motionless after drop g. slant and motionless after drop

Slant Rate

x

3. Tilt trigger setting

Tilt Trigger Setting		
Gradient	60°	75• •
Trigger Duration	60	10 🔺 💙 sec

Slant rate :The tilt angle to meet the condition of Man Down, see the picture right : Tilt Trigger Duration: When the Man Down condition is

reached, the alert will be sent out.

- 4. Motionless Alert Settting Motionless Duration: When the motionless time condition is reached, the alert will be sent out.
- 5. Drop Alert Setting

Drop Duration: Will Alarm as long as it keeps falling

No Movement Trigger Setting			
Trigger Duration	60	60	sec

6. Pre-Alert Time: In order to prevent the Man Down alert from being triggered by mistake, the user can manually turn off the Man Down alert during the pre-alert time countdown.

Fall Down Trigger Setting			
Trigger Duration	450	450	M T ms

- **B11** How to set up the parameter of the GPS related function (position report and indication) by PPS?
 - Start setting the profile, and enter the sector of GPS relevant function parameter setting

Start setting the profile, and enter the sector of the Radio Location Inform Setting.

	Parameter	Default	Current Setting	
14 Alert Tone Setting	GPS Power Saving	Disable	V Enable	
	GPS Active Duration	300	300	3C
L CD Backlight	Power Saving Duration	5	5 A V m	in
Setting	Constellation	GPS	GPS + Glonass 👻	
	• E13-2. Radio Location	Inform Setting	I(
6 Other Function	Parameter	Default	Current Setting	
Setting	Inform Interval	60	5 🔺 🗙 se	зс
	Inform With	None		
7 Device PIN Password Setting	🗷 RSSI	👿 Battery 🛛 👿 Satell	ite	
	Inform Recipient			
Home Screen	Total: 1 Max: 8			Add Delet
Setting	Inform	Zone/Channel	Recipient	Enable
	Z2/P1/Zone 1/Zone 1	I-Knob 1	Talk Group 1	

Operating Instructions:

- 1. Interval of sending GPS location : Set the time interval for automatically sending the location
- 2. Recipient: Set the recipient to receive the location report. The user can set up to 10 groups of recipients, and each recipient can specify: Zone/Channel. In addition, the recipient category can be group or individual. The recipient alias can be on or off by default.

• For U4/U5/M2, "Location Display Setting" function is also provided

• E13-3. GPS Location Display Setting

Parameter	Default	Current Setting
Location Expiry Time	10	10 🔺 💌 min
Call Option in Member List	Default PTT Call	Default PTT Call 🔹

- 1. Location expiration time: the expiration time of the location data,location data will be displayed as gray dots on the map if location data is saved too long.
- 2. Select the Call option in the personnel list: select a radio user in the personnel list and press PTT to send the message. You can set the receiver as the selected radio user or set it as the default PTT call

B12 How to set up the parameter of voice control transmission by PPS?

• Start setting the profile, and enter the sector of VOX Setting.

Click E9 "Voice Call & Emergency Setting" and select the tag of "Voice Call" to show the setting screen of Voice Call.

	Voice Call Setting						
E8 Function Enable/ Disable	 E9-1. Voice Call Setting 	Call, Voice Recording and	VOX features.				
	Parameter	Default	Current Setting				
	Max Tx Time Setting	Unlimited	Unlimited -				
Voice Call Setting	Max Tx Time	180	180 🔺 💌 sec				
	Background Noise Cancel	Off	On Off				
E10 Emergency Call	Override	Off	On Off				
Setting	Side Tone	On	● On ◎ Off				
	E9-2. Voice Recording						
E11 Data Message	Parameter	Default	Current Setting				
Setting	Voice Recording	Off	● On ◎ Off				
	Merge Multiple Calls Setting						
E12 DTMF Setting	Ma× Call Gap	600	600 🔺 🛡 sec				
	Ma× Calls	50	50 🔺 🛡 sec				
	• E9-3. VOX Setting						
E13 GPS Setting	Parameter	Default	Current Setting				
	VOX Power Threshold	7	3 Sec				
E14 Mort Tono Sotting	VOX Stop Threshold	6	6				
L 14 Alert Tone Setting	VOX Start Detection Duration	0.3	0.3 🔺 💌 sec				
	VOX Stop Detection Duration	0.8	0.8 🔺 💙 sec				
\bigcirc	Disable VOX by PTT Key	Enable	🕼 Enable				
	Auto VOX Activation	Enable	🕼 Enable				
E23 Program	Save 🔷 Next						

Operating Instructions:

- 1. PPS users can set the energy level and detection time used to start and end the voice call setting function
- 2. PPS users can set whether voice control sending function will be turned off or not when PTT button is pressed
- 3. PPS user can set whether the voice control function is automatically enabled when the radio set is connected to the external microphone

B13 How to set up the turn on/ unlock radio password by PPS?

• Star setting the profile and enter the sector of Device PIN Password Setting.

Click E17 "Password Setting", and "Device PIN Password Setting" to set the radio's PIN/ unlock password.

\bigcirc	Device PIN Password Setting							
	E17-1. Device PIN Password Setting							
E15 LCD Backlight Setting	Device PIN Password Setting							
	Parameter	Default	Current Setting					
Other Eunction	PIN Admin Password	000000	Set Admin Password					
E16 Setting	PIN User Password	000000	Set User Password					
	The Device requires password to unlock	Disable	Enable					
E17 Device PIN Password Setting	Entering Data Box requires password	None	None -					
	Entering Function Status and Function Setting requires password	None	None					
E18 Home Screen Setting	Sending OTA Message requires password	None	None					
E19 Rx RSSI Setting E20 Engineer Setting E21 External Call								
E23 Program	🗎 Save 🔷 Next							

- 1.Users can set whether they need the password when they turn on the radio or unlock the radio.
- 2.Users can set up a password for admin (Admin Password) and a password for regular users (User Password).
- 3.User Password can be modified on the radio; Admin Password can only be modified via PPS. i.e. All the Admin Password can be managed by PPS user. When the radio carriers forget the User Password which is modified, they can still unlock the radio by Admin Password.
- 4. Default Admin Password and User Password are 000000.

B14 How to set up the radio programming password by PPS?

• Start setting the profile and enter the sector of PPS Admin Password Setting.

Click E1 "Password Setting", and "PPS Admin Password Setting" to set the radio's PPS Admin Password.

	Basic Information Setting							
	Provide the Profile Model Number, I	Profile Name, and Pr	ofile Password.					
E1 Basic Information Setting	• E1-1. Model Number Information							
	Please confirm that the model of the radio, band, protocol, and hardware is correct for your device.							
D25 Trupking	Parameter							
E2 System Setting	Model Number	U4-L-A4D						
	RF Band	WLB						
	Modulation Type	FM						
Frequency Setting	Hardware	Standard (All Hardware)						
	Protocol Analog + DMR							
E4 Protocol Parameter	Software Ultimate Model							
Setung	MSN							
	E1-2. Profile Information Setting	3						
E5 Secure Settings	Please enter a Profile Name (This is th	e name of the Profile).						
	Parameter	Current Setting						
	Profile Name	U4-國防部-湖口測試						
E6 Conventional Setting	Introduction	2023/01/08 陸軍新竹湖口營區測	試使用					
Zone & Channel	E1-3. PPS Admin Password Set	tting						
Setting	Please enter your password.							
	Parameter	Default	Current Setting					
	Require Password to Read Profile	Disable	📰 Enable					
\bigcirc	Require Password to Program Profile	Disable	Enable					
	Profile Password	000000	Set Profile Password					
E23 Program								
	🖬 Save 🔷 Next							

1.Users can decide whether it requires password before read profile from radio and before programming the radio.

2.Users can set up one PPS Admin Password.

3.Default PPS Admin Password is 000000.

After the PPS activated, connect the radio with the PC

Connect Br02 with computer by the USB cable, which is on the BR02.

The connected device will switch from 0 to 1 in the PPS if the connection succeeded.



- Read the parameters of the BR02 repeater by the Read Profile from Device function and start editing the parameters.
- The screen of BR02 that can be read will be shown.

Click "C. Read Profile", and then select "C1. Read Profile from Device", the model number and serial number of the connected device will be displayed.



• Read the BR02 repeater parameter file

Click "Read Radio" to start reading the parameter file in two way radio. After the reading is successful, the setting screen of the first step in the parameter file will be displayed automatically.

(1)	Basic Information Setting							
Pr	Provide the Profile Model Number, Profile Name, and Profile Password.							
Setting	E1-1. Model Number Information	ı						
	Please confirm that the model of the r	adio, band, protocol, an	d hardware is correct for your device.					
Repeater System	Parameter	Current Setting						
Setting	Model Number	R2-V-A5A						
	RF Band	VHF						
Zone & Channel	Modulation Type	FM						
Setting	Hardware	Standard(Power Supply	1					
	Protocol Analog + DMR + P25C							
E4 Other Function	Software Standard Model							
Setting	MSN							
	E1-2. Profile Information Setting							
E5 Device PIN Password Setting	Please enter a Profile Name (This is the	name of the Profile).						
	Parameter	Current Setting						
	Profile Name	Yilan_R2_A5A_2						
E6 Home Screen Setting	Introduction	Yilan R2-V-A5A VHF Beta 2022/12/08	20					
E7 External Call	E1-3. PPS Admin Password Set	ting						
Setting	Please enter your password.							
	Parameter	Default	Current Setting					
	Require Password to Read Profile	Disable	Enable					
\bigcirc	Require Password to Program Profile	Disable	Enable					
	Profile Password	000000	Set Profile Password					
E11 Program	Save 🔷 Next							

- Establish BR02 repeater system reference data required by radio users' group .
- Set BR02 repeater 's receving /sending frequency bandwidth .

Click D2 "Repeater Settings" step to set the repeater system required by the user. BR02 repeater can support setting multiple sets of settings to meet the needs of different channel knobs.

\bigcirc	😰 F	Repe	eater Syst	em Settin	g				
Pagin Information	E2-1. Repeater System Setting								
El Setting		То	tal:1 ∦	ax: 256				Add Delete	
			System Alias	Repeater ID	Rx Frequency (MHz)	Rx BW (KHz)	Tx Frequency (MHz)	T× BW (KHz)	Protocol
E2 Repeater System Setting			Repeater 1		157.66250	12.5	152.40000	12.5	Analog/P25
E3 Zone & Channel Setting									
E4 Other Function Setting									
E5 Device PIN Password Setting									
E6 Home Screen Setting									
E7 External Call Setting									
		•							ł
E11 Program	8	ave		lext					

- 1. The user needs to set the receiving/transmitting frequency bandwidth of BR02. It should be noted that the value set here should be the opposite of terninal radios used in the some task . in other words, the receiving frequency bandwidth of BR02 shall be the same as that of radio set, and the transmitting frequency bandwidth of BR02 terninal radios used in the some task .
- 2. The receiving frequency of BR02 cannot be the same as the sending frequency.

• Set the communication protocol of BR02 repeater

Click the "Protocol" storage cell to display the setting screen.

epeater Protocol Setting		
Parameter	Default	Current Setting
Enable Analog Repeater	Disable	🔽 Enable
Repeater Activation Type	Carrier	SA Activation Only
Rx/Tx SA Count	1	1 (Max: 5)
R× SA#1		CTCSS: 103.5 Hz
T× SA#1		CTCSS: 103.5 Hz
Enable DMR Repeater	Disable	Enable
Enable P25 Repeater	Enable	🔽 Enable
R× NAC	659	659 A V - 293 A V HEX
T× NAC	659	659 A V - 293 A V HEX
	_	
	ОК	Cancel

- 1. Users can enable three repeater modes: analog repeat , P25 repeat and DMR repeat.
- 2. For analog repeat, need to set the repeat start category (read parameter description for details) and receive/send sub-tone.
- 3. For P25 repeat,need to set the receiving/transmitting network access code
- 4. For DMR trunk, need to set the receiving/transmitting color code
- 5. It should be noted that the analog receiving sub-tone, P25 receiving network access code or DMR receiving color code used by BR02 should be the same as ternimal radio.

- Create BR02 repeater Zone and channel
- Show the Zone/ Knob Setting Table.

Click the D3"Channel Set&Channel Settings" step to display the list of channel sets.

\bigcirc	📵 Zon	e & Chanr	nel Setting							
	• E3-	. Zone & Ch	annel List							
Setting	Click the setting fields of the knob position to enter into the detail settings of t				settings of the k	nob. Each knob	can be set to di	fferent protoc	cols and modes.	
		'otal: 1	Max: 64				Add	Delete Shov	/ Knob 1-8	Show Knob 9-16
E2 Repeater System Setting		Zone Alias	Knob Position 1	Knob Position 2	Knob Position 3	Knob Position 4	Knob Position 5	Knob Position 6	Knob Position 7	Knob Position 8
E3 Zone & Channel Setting	Þ	TaipinMountain	•TaiPin Rpt-50W •Repeater System •Repeater 1	None						
E4 Other Function Setting										
E5 Device PIN Password Setting										
E6 Home Screen Setting										
E7 External Call Setting										
Program	🗎 Save		Next							🗲 Save as

Operation Instructions:

- 1.Maximum of 64 zones can be set in the PPS. Click "Add" to add a zone. Set the alias of the zone (the alias will be indicated in the radio), and double click "Knob Position" 1-16 to set the knob.
- 2.Click "Delete" to remove a zone.
- 3.Click "Save" to save the parameters after the setting finished, and click "Next" to move to the next parameter setting.

• Set a repeater zone on a zone /channel knob position.

In the two-dimensional form of Zone /knob, click the knob position 1~16 cell of a certain channel set twice to set the repeater channel for this knob

Select Receiving Mode		
Please select the Rece	iving Mode.	
		Zone 1 >> < Knob 2 >>
Parameter	Default	Current Setting
Zone Alias		TaipinMountain
Mode	None	Repeater System 👻
Channel Knob Alias		Zone 1-Knob 2
Note		
	ОК	Cancel

The user can select the communication mode as the repeater system, and set the alias of the repeater channel, and the channel alias will be displayed on the BR02 repeater. Click "OK", and the parameters of this mode will appear. The parameters are divided into the following parts:

Part 1: channel Zone set knob information, the user can modify the channel alias and set the voice tip of this channel, and can also add notes to this channel.

Zone/Knob Information Repeater System Zone "TaipinMountain" Knob Position 2						
Please enter the Knob Alias and select your voice prompt. This Alias will be displayed on the standby screen.						
Zone Alias: TaipinMountain		Cone 1 >> < Knob 2 >>				
Parameter	Default	Current Setting				
Channel Knob Alias		Zone 1-Knob 2				
Voice Prompt	None	None 🔻 💿 💰				
Note						

Part 2: Repteater system setting. The user can choose a repeater system that has been set before. The parameters of this repeater system will be displayed here

Repeater System			
Please select the Repeater System			
Parameter	Current Setting		
Repeater System	Repeater 1		
Frequency	Rx: 157.66250MHz/12.5KHz Tx: 152.40000MHz/12.5KHz		
Protocol			
Analog	Enable SA Activation Only		
Repeater Activation Type			
SA#1	R× SA - CTCSS: 103.5 Hz T× SA - CTCSS: 103.5 Hz		
DMR	Disable		
P25	R× NAC:659, T× NAC:659		
Repeater ID			
Full-Function Repeater	Enable		

Part 3: Channel Function Settings

Function Setting			
Parameter	Default	Current Setting	
Tx Power Level		10W •	
Hang Time	5	5.0 🔺 💙 sec	
Emphasis	No	No	
Compandor	No	No	
SINAD (db)	6	6	
Audio Out	Enable	🔲 Enable	

• Progam the modified parameter file into the BR02 repeater

After all the channels of each repeater are set, click "program" in the screen to enter the programming code screen.



Click "Progam" to start programming code, wait for the programming code to complete, the BR02 repeater will restart and load the new parameter file.



PART C. FAQ

- C1 The PPS software cannot connect to two way radio
 - 1. Please confirm the battery power of two way radio is over 50%
 - 2. Please confirm that the USB cable has connected with the 11 PIN on the side of two way radio, and the knob has been tightened.
 - 3. Please confirm that the USB interface of the computer can be used normally.
 - 4. Please confirm that the USB driver is installed correctly. If you suspect that the installation of the USB driver has failed, you can get an independent USB driver installation program from the salesperson of Unication and install it manually.

Unication