MOTOTRBO 5-Tone Programmierung CPS 2.0

geprüft bei DP/DM/SL Serie

Programmieranleitung um 5-Ton und 1750Hz bei MOTOTRBO zu nutzen. Erklärt an 1750Hz Ton und ZVEI Tonfolge 80937.

Vorraussetzungen:

-CPS 2.x -MOTOTRBO Gerät -Programmierkabel

1. Überprüfung ob 5-Tone als Lizenz freigeschaltet ist Falls nicht wird HKVN4058A als Lizenzschlüssel benötigt.

 Feature Sets Feature Name Status - AES Purchased - Bluetooth Permanent Discoverable Purchased - Multi Button PTT Purchased - Authenticated Radio Disable & Remote Monitor Purchased - Mute Mode Purchased Connect Plus Available for Purchase Connect Plus Mandown Available for Purchase Available for Purchase **CB** Frequency Free Enhanced Option Board Remote Monitor Free 5 one Free & Used Text To Speech Purchased Transmit Inhibit Purchased Enhanced Noise Suppressor Purchased Response Inhibit Purchased **RX Audio Leveling** Purchased & Used

28 items found (0 currently selected).

2. Anlegen der 5-Tone Systeme -1750Hz Definition:

ALPHA - Kopie 🕨 5 Tone Systems 🕨 1750 Hz*					
Set Categories #			General Encoder Single	e Tone Decoder Single Tone	
▼					
Device Information	General				
 General 			Sustan Name	1750 🗠	
 Systems 			System Name		
Signaling Systems			Signaling System	ZVEI1	-
User Defined 5 Tone			Group tone	А	
 5 Tone Systems 			Repeat Tone	E	•
1750 Hz 🔅					
MDC Systems	 Encoder Single Tone 				
 Quik-Call II Systems 			Frequency (Hz)		Duration (ms)
 Digital Emergency Systems 		Tone	1 1750	10	000
Encoder		lone	2 885	50	0 8
Decoder					
Contacts	 Decoder Single Tone 				
RX Group Lists		Enable	Frequency (Hz)	Minimum Duration	n (ms) Maximum Duration (ms)
Zone/Channel Assignment	Tone 1	88	5	400	600
Scan Lists	Tone 2	88	5	400	600



-ZVEI Definition

ALPHA - Kopie 🔸 5 Tone Systems 🕨 ZVEI*							×
Set Categories 4				General Encoder Single	Tone Decoder Single Tor	e	
▼							
Device Information	(General						
General	<u> </u>			Suntana Manag	7\/EI		
▼ ☐ Systems				System Name	ZVEI		
Signaling Systems				Signaling System	ZVEI1		-
🗅 User Defined 5 Tone				Group Ione	А		
▼ D 5 Tone Systems				Repeat Tone	E		
1750 Hz							
ZVEI 🔅	 Encoder Single Tone 						
 MDC Systems 				Frequency (Hz)		Duration (ms)	
Quik-Call II Systems			Tone 1	885	▲ ▼	500	
 Digital Emergency Systems 			Tone 2	885		500	
Encoder							
Decoder	 Decoder Single Tone 						
Contacts		Enable		Frequency (Hz)	Minimum Dur	ation (ms)	Maximum Duration (ms)
RX Group Lists	Tone 1		885		400		600
Cone/Channel Assignment Scan Lists	Tone 2		885		400		600

3. Sequenz-Definition -1750Hz Ton

Set Categories I ✓ □ Configuration* ● Image: Device Information
 ▼ □ Configuration* ▲ Device Information ▶ □ General ♥ □ Systems ● User Defined 5 Tone ♥ ● 5 Tone Systems Pretime (ms) 140
Device Information Device Information General Signaling Systems Dispraling Systems Dispra
Image: Constraint of the systems Image: Constraint of the systems Image: Constraint of the systems Image: Constraint of the systems Image: Constraint of the systems Image: Constraint of the systems Image: Constraint of the systems Image: Constraint of the systems Image: Constraint of the systems Image: Constraint of the systems Image: Constraint of the systems Image: Constraint of the systems Image: Constraint of the systems Image: Constraint of the systems Image: Constraint of the systems Image: Constraint of the systems Image: Constraint of the systems Image: Constraint of the systems
Systems Signaling Systems Signaling Systems Signaling System User Defined 5 Tone Sequence 5 Tone Systems Pretime (ms)
□ Signaling Systems Signaling System 1750 Hz Image: Signaling System □ User Defined 5 Tone Sequence (T1) ▼ □ 5 Tone Systems Pretime (ms) 140
D User Defined 5 Tone Sequence (T1) ✓ D 5 Tone Systems Pretime (ms) 140 D
1750 Hz Extended 1st Tene Duration (ms)
ZVEI
MDC Systems
Quik-Call II Systems
Digital Emergency Systems
💌 🛅 Encoder
Encoder
D Encoder Sequences
1750 Hz 🔅
Telegrams
Decoder

-ZVEI Tonfolge 80937

ALFINA - Kopie - Encodel Sequences - Zver 60557	
Set Categories	General
▼ Jystems	
Signaling Systems	
🗅 User Defined 5 Tone	(General
▼ D 5 Tone Systems	Sequence Name ZVEI 80937
1750 Hz	Signaling System ZVEI
ZVEI	Settlence 80037
MDC Systems	Jequeiroe 00007
Quik-Call II Systems	Pretime (ms) 140
Digital Emergency Systems	Extended 1st Tone Duration (ms) 0
▼ 🛱 Encoder	
🗋 Encoder	
1750 Hz	
ZVEI 80937 🔅	
Telegrams	
Decoder	
Contacts	
RX Group Lists	
 Zone/Channel Assignment 	
4 	



4. Telegram-Definition

- Anlegen von zwei Telegrammen

ALPHA - Kopie 🔸 Telegrams*		×					
Set Categories 📮	General						
 Jystems Signaling Systems User Defined 5 Tone 	General General	î					
▼ 🜔 5 Tone Systems	Repeat Counter 1						
1750 Hz	Periodic Repeat Time (sec) 1						
ZVEI	Minimum Keyup for Repeat (sec) 0						
MDC Systems	Power Up Auto Telegram None						
Quik-Call II Systems	Power Down Auto Telegram None						
Digital Emergency Systems Encoder	Power Up Auto Telegram Revert Channel Zone None						
Encoder	Power Up Auto Telegram Revert Channel Selected						
Encoder Sequences	Power Down Auto Telegram Revert Channel Zone None						
1750 Hz	Power Down Auto Teleoram Revert Channel Selected						
ZVEI 80937	Telegrams List Items						
RX Group Lists	Telegram Name Sequence 1 Sequence 2 Sequence 3 Acknowledge Expected Telegram Repeat	1					
► D Zone/Channel Assignment	7e/1 1750 Hz None None 🗌						
	► <i>Tel2</i> ZVEI 80937 None <i>None</i> None	-					

5. Anlegen eines 5-Tone Channels

ohne diese Einstellung kann man keine Tonfolgen aussenden.

Das heißt das es pro Repeater (zum Beispiel DB0EL) einen neuen Channel braucht, diese Funktion kann man nicht in bereits angelegte Channels implementieren.

ALPHA - Kopie 🕨 Zone 🕨 5 Tone*		ر
Set Categories .		
∠VEI ▲	Zone Name	5 Tone
MDC Systems	Voice Announcement File	None
Quik-Call II Systems	-	
Digital Emergency Systems	Zone Items	
▼ 🛅 Encoder	🖉 🕀 🖂 😳 🔺 🔍 🔹 Choose Set Type	X
Encoder		
 Encoder Sequences 	Position Channel 7	dwidth (kHz) Scan/Roam List Auto Scan
1750 Hz	1 5 Tone Type 5 Tone	None A
ZVEI 80937	O	K Cancel
Telegrams		
Decoder		
▼ ☐ Contacts		
Contacts		
RX Group Lists	1 items found (0 summath collected)	•
 Zone/Channel Assignment 	Titems found (o currently selected).	
🔻 🗋 Zone		
🖀 5 Tone 🔅		
Channel Pool		
Scan Lists		
4 •••••• ••		

5. 5-Tone Channel Einstellungen

Um den Channel zu definieren, auf den "Stift" klicken





In den Channel Settings stellt ihr den Namen, Frequenz und bei bedarf CTCSS/TPL wie gewohnt ein und scrollt dann runter zu "5 Tone Encode" und stellt dort unter Call 1-6 die zugeordneten Telegramme wie im Punkt 4 beschrieben ein. In meinem Beispiel ist Call 1 – Tel1 der 1750Hz Ton und bei Call 2 – Tel2 die ZVEI Tonfolge 80937

Call 1	Tel1
Call 2	Tel2
Call 3	None
Call 4	None
Call 5	None
Call 6	None
Disconnect Telegram	None
Sidetone	

6. 5-Tone einer Taste zuordnen

Um den 1750Hz Ton und die ZVEI Tonfolge zu nutzen müsst ihr diese Funktion im Bereich "Control Buttons" einen "One Touch Access" zuordnen:

t Categories	џ.		G	eneral Conventiona	I Radio Buttons	Portable One To	ouch Access Actio	on List	
	<u></u>	ne Touch Access One Touch Access)						
Control Buttons		One Touch Access	Mode	Channel Zone	Channel	Call	Call Type	5 Tone Call	• Text Message
Security		1	None	None	None	None	Group Call	Call 1	None
Network		2	None	None	None	None	Group Call	Call 2	None
Voice Announcement		3	Digital	None	None	1	Group Call	None	None
 Systems 		4	Digital	None	None	1	Group Call	None	None
Signaling Systems		5	Digital	None	None	1	Group Call	None	None
User Defined 5 Tone		6	Digital	None	None	1	Group Call	None	None
 5 Tone Systems 1750 Hz ZVEI MDC Systems 		6 items found (0 cur	ently selected).						•
Quik-Call II Systems	O Ac	tion List							
	7	Action List							

Anschließend definiert ihr eine Taste für den "One Touch Access" (Das Beiispiel wird an einem SL1600 erklärt, das hat nur eine Taste, DP4xxx mehr)

ALPHA - Kopie 🕨 Control Buttons*								
Set Categories 🏨		Gene	ral Conventiona	Radio Buttons	Portable One Touc	h Access Action	n List	
Configuration* Device Information	 ○ General 							
General Settings			Nun	neric Keypad	Disabled			
Accessories		Emer	gency Short Press D	Juration (ms)	100			
Control Buttons			Long Press D	Juration (ms)	1000			
Text Messages Security Network	⊙ Conventional Radio But	tons Portable			Short Press		Long Press	
Voice Announcement				Side Button 1	One Touch Access 1	•	One Touch Acce	ss 2
 Systems Signaling Systems 	One Touch Access							
 User Defined 5 Tone 5 Tone Systems 1750 Hz 	One Touch Access							
ZVEI	One Touch Access	Mode	Channel Zone	Channel	Call	Call Type	5 Tone Call 🔶	Text Message
MDC Systems	1	None	None	None	None	Group Call	Call 1	None
Quik-Call II Systems	2	None	None	None	None	Group Call	Call 2	None
	3	Digital	None	None	1	Group Call	None	None



7. (Optional) Einen Beginn of Transmit Ton (BOT) festlegen

Ich habe es ganz gern, das wenn ich Sende ein BOT ausgestrahlt wird.

Um diesen zu definieren könnt ihr wie im 2. Punkt beschrieben ein z.B. CCIR System anlegen. Ich nutze dafür immer:

System Name	CCIR	
Signaling System	CCIR 20ms	
Group Tone	A	•
Repeat Tone	E	

Als Sequenz wie im 3. Punkt lege ich diese Einstellungen fest:

Sequence Name	CCIR BOT
Signaling System	CCIR
Sequence	28
Pretime (ms)	140
Extended 1st Tone Duration (ms)	0

Telegramzuordnung wie im 4. Punkt nicht vergessen:

Telegrams	List	ltems
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	Telegram Name	Sequence 1	Sequence 2	Sequence 3	Acknowledge Expected	Telegram Repeat
	Tel1	1750 Hz	None	None	None	
	Tel2	ZVEI 80937	None	None	None	
۲	Tel3	CCIR BOT	None	None	None	

Wie im 5. Punkt muss dies noch in den Channel Settings definiert werden: (findet ihr unter der TX Frequenz relativ mittig)

PTT Keyup Mode	Every PTT	•
PTT Keyup Encode	Tel3	•
PTT Dekey Encode	None	•

Selective Call

8. (Optional) Hier könnt ihr die Meldung Selective Call abschalten-> Dazu einfach in den Channel Settings den "Auto Reset Mode" auf "Disabled" schalten.

Frequency (MHz)	439.275000		
Squelch Type	CSQ		
DPL Code (Octal)	023		
DPL Invert	No		
TPL Frequency (Hz)	67.0		
TPL Code	XZ		
Ref Frequency (MHz)	Default		
Unmute Rule	Std Unmute, Mute		
Squelch Mode	CSQ		
PL Override			
Auto Reset Mode	Disabled		



Viel Erfolg mit dieser Anleitung, ich hoffe ihr seid beim ersten mal erfolgreich.

Solltet ihr Probleme haben könnt ihr euch gern bei mir über <u>berlinographics.com</u> melden oder schreibt via Telegram an @muc80937

