


# eVerge™ Programming Workshop

## EVX-530 Series



# How To Program EVX-530 Radios

- **Prerequisites**
  - **Preface**
  - **Call Addressing**
  - **Channel Configuration**
  - **Other**
    - **Privacy Features**
    - **Emergency Function**
    - **Text Messaging**
    - **VOX Function**
-  **Some content discussed hereafter is available only on radios with F/W version 3.07 or later.**

# How To Program EVX-530 Radios

## What You Need

- **FIF-12** USB Programming Adapter
  - FIF-10A will not work
- **CT-106** Programming Interface Cable  
(For mobiles: CT-104A Interface Cable)
- **CE142** Programming Software



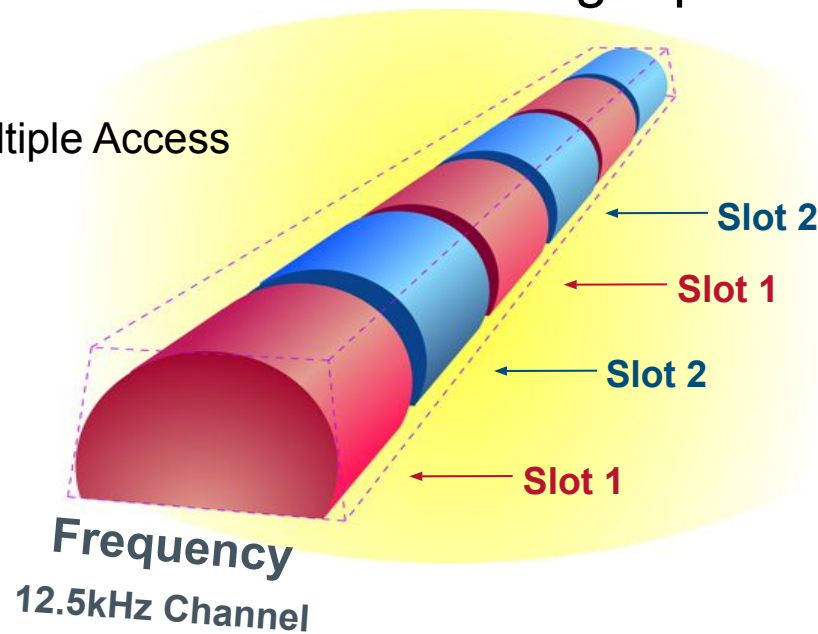
## **Configuration of DIGITAL Channels & Functions**

**- Some Theory first -**

# How To Program EVX-530 Radios - Preface

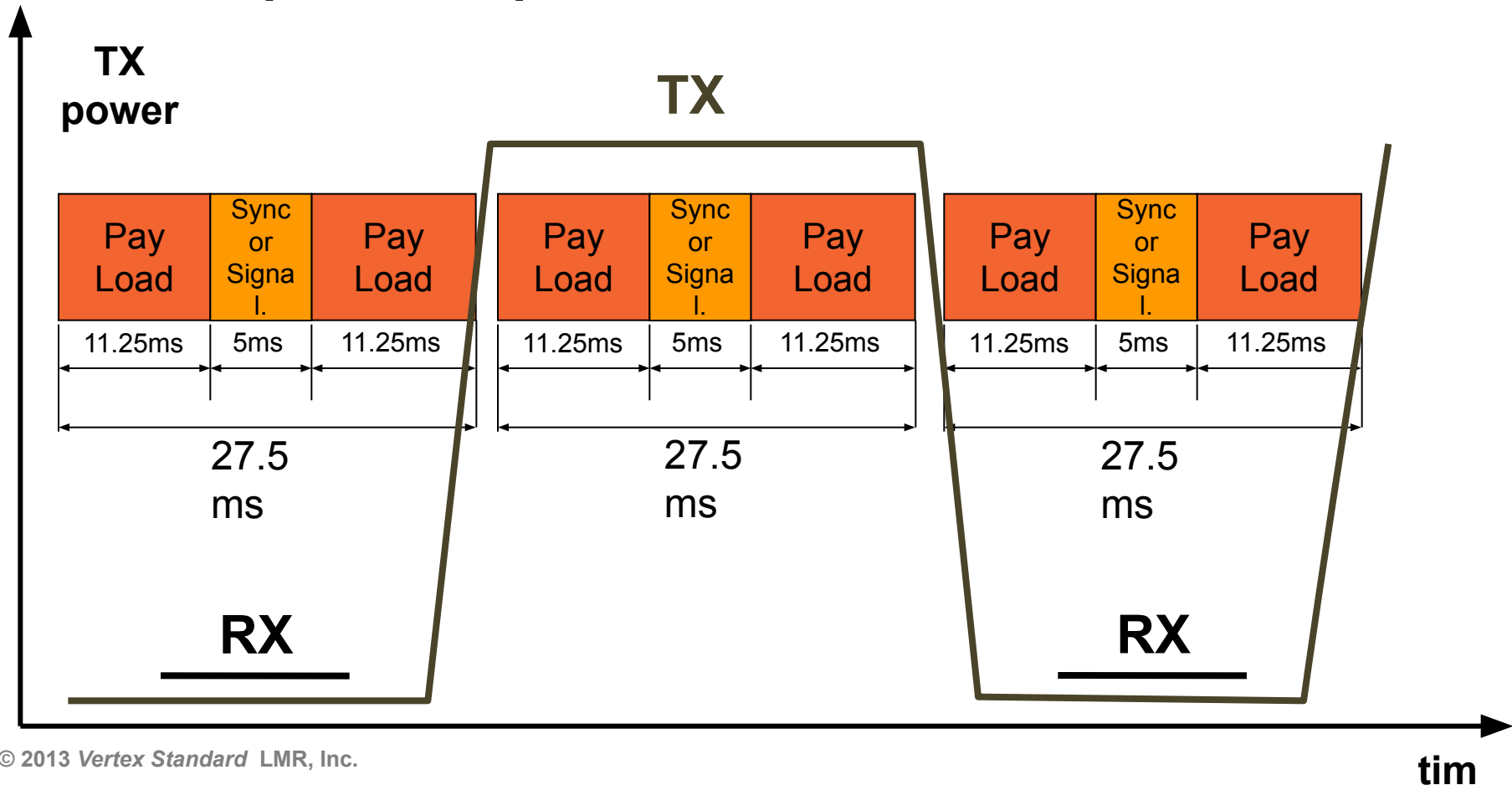
- DMR radio transactions have to adhere to a strict protocol: The **Common Air Interface** standard (ETSI TS 102 361-1) specifies the format and content of digital signal transmitted by DMR radios.
- For digital transmissions, a physical RF channel of 12.5 kHz BW is divided into two “Logical” Channels - **Slots** - using a procedure called T D M A \*

\* TDMA = Time Division Multiple Access



# How To Program EVX-530 Radios - Preface

Each slot is 30 msec long and carries control bits and 60 msec compressed speech or data.



# How To Program EVX-530 Radios

## - Preface

- Amongst others, the DMR standard requires that every message transaction carries a **Source ID** and a **Destination ID**.
- **Each ID** number is 24 bits, or 3 bytes, in length
- The Destination ID can be:
  - a **Talk Group ID**
  - an **Individual ID**
  - or an **All Call**.

**THEREFORE**

Other than with analogue radios, just configuring channel frequencies and pressing PTT to talk to another radio will not work!  
"Signaling" or **Addressing** is mandatory.

# How To Program EVX-530 Radios - Preface

To establish the communication link, each radio must have:

- A list of target radios' ID numbers called “**Contacts List**”
- A unique **Radio ID #**
- The appropriate –
  - Channel **Frequencies**
  - Transmit **Slots**
  - and “**Color Code**” assigned



# How To Program EVX-530 Radios

## - Preface

- Repeaters are more important than on analogue radio systems. The Repeater is the “Timing Master” for the range it covers - it controls the slot 1 & 2 timing and various other channel activities.
- With subscriber radios in Talk Around (TA), or Direct Mode (DMO), i.e. in the absence of that “Timing Master,” no synchronization of the 2 slots is possible.

Therefore, **only one slot** can be used per RF channel at a time in this mode!

# Step 1: Populate Contact List

Open the Contact List setting dialogue

Serial No. 21 0B000000 Product Type EVX-531 (Portable) Max CH/Group 32 /

Freq. Band UHF D (450-512) FW Ver CPU/DSP 1.03/1.03

List No.	Dig/ Ana	W/N	TAG	Rpt Slot	Grp List	Priv Cfm	Contact List	
1	D	N	CH-001	1	1	-	1	
2	D	N	CH-002	1	1	-	1	
3	D	N	CH-003	483.50000	483.50000	1	1	1
4	D	N	CH-004	483.50000	483.50000	1	1	1

Open this menu

Different ways to open the pull-down menu:  
•Double click on this cell  
•Select & hit Space bar  
•Select & press Enter key

# Step 1: Populate Contact List, Call Type

## 3 Different “Call Types” can be used:

- 1. Group Call:** This is the default call type.
- 2. All Call:** A call to all subscribers on the same LOGICAL channel (i.e. same frequency, color code, and slot).  
This is intended for usage by supervisors only.  
This call type is associated with a fixed ID of 16777215 and will be received per default by all radios on the logical channel.
- 3. Private Call:** A call to a single user with the additional unique characteristic that it **cannot be monitored** by any other radio on the channel.  
(This is an ADDRESSING feature and has got nothing to do with “PRIVACY” which is an encryption of the message payload.)

# Step 1: Populate Contact List, Call Type

## Select TX ID type

Contact List/RX Group List

Edit

Contact List

No.	TAG	TX ID Type	Call ID	Tone
1		Group	1	A
2		Group		A
3		Group		
4		Group		A
5		Group		A
6		Group		A
7		Group		A
8		Group		A
9		Group		A
10		Group		A
11		Group		A

TX ID Type
Group
Group
Private
All Call
Group

Group: Group Call  
Private: Private Call  
All Call: All Call

# Step 1: Populate Contact List

## Set the Call ID

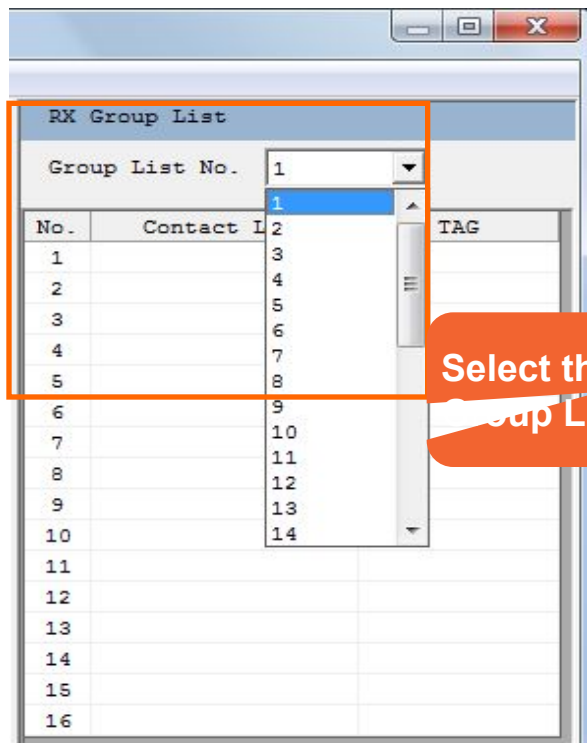
No.	TAG	TX ID Type	Call ID	Tone
1	ALPHA	Group	10	A
2	BETA	Group	20	A
3	GAMMA	Group	30	A
4	DELTA	Group	40	A
5	EPSILON	Group	50	A
6		Group		A
7		Group		A
8		Group		A

On Display Radios:  
Add Alphanumeric Tags  
(8 Chars.)

Enter the Call IDs.  
Input range:  
1 - 16.776.415

# Step 1: Populate Contact List

Select a RX Group List (this is a list of GROUP IDs to be available on a given channel.)



**The Contact List allows for 128 Entries**

**Any radio can be a member of up to 32 RX groups**

# Step 1: Populate Contact List

## Edit the RX Group List

No.	Contact List	TAG
2	1	ALPHA
3	2	BETA
4	5	EPSILON
5		

1	: ALPHA
2	: BETA
3	: GAMMA
4	: DELTA
5	: EPSILON

Different ways to open the pull-down menu:

- Double click on this cell
- Select & hit Space bar
- Select & press Enter key

The Contact List shown here can be used.



# Step 2: Configure Common Settings

Open the **Digital Common** dialog box

The screenshot shows a software window titled "<none> - CE142 for EVX-530 Series". The menu bar includes File, Edit, View, Common, Digital, Signaling, Radio, Channel, and Help. The 'Digital' menu is open, showing 'Digital Common' and 'Contact List/RX Group List'. An orange callout box with the text 'Open this menu.' points to the 'Digital Common' option. Below the menu, there are fields for Serial No. (21 0B000000), Product type (EVX-531 (Portable)), Max CH/Group (32 / 2), Freq. Band (UHF D (450-512)), and FW Ver. CPU/DSP (1.03/1.03). At the bottom, there is a table with columns: List No., Dig/Ana, W/N, TAG, Frequency (RX, TX), Color Code, Rpt Slot, Grp List, Priv Cfm, and Contact List.

List No.	Dig/Ana	W/N	TAG	Frequency		Color Code	Rpt Slot	Grp List	Priv Cfm	Contact List
				RX	TX					
1	D	N	CH-001	483.50000	483.50000	1	1	1	-	1
2	D	N	CH-002	483.50000	483.50000	1	1	1	-	1
3	D	N	CH-003	483.50000	483.50000	1	1	1	-	1
4	D	N	CH-004	483.50000	483.50000	1	1	1	-	1



# Step 2: Configure Common Settings

## Assign the Radio ID

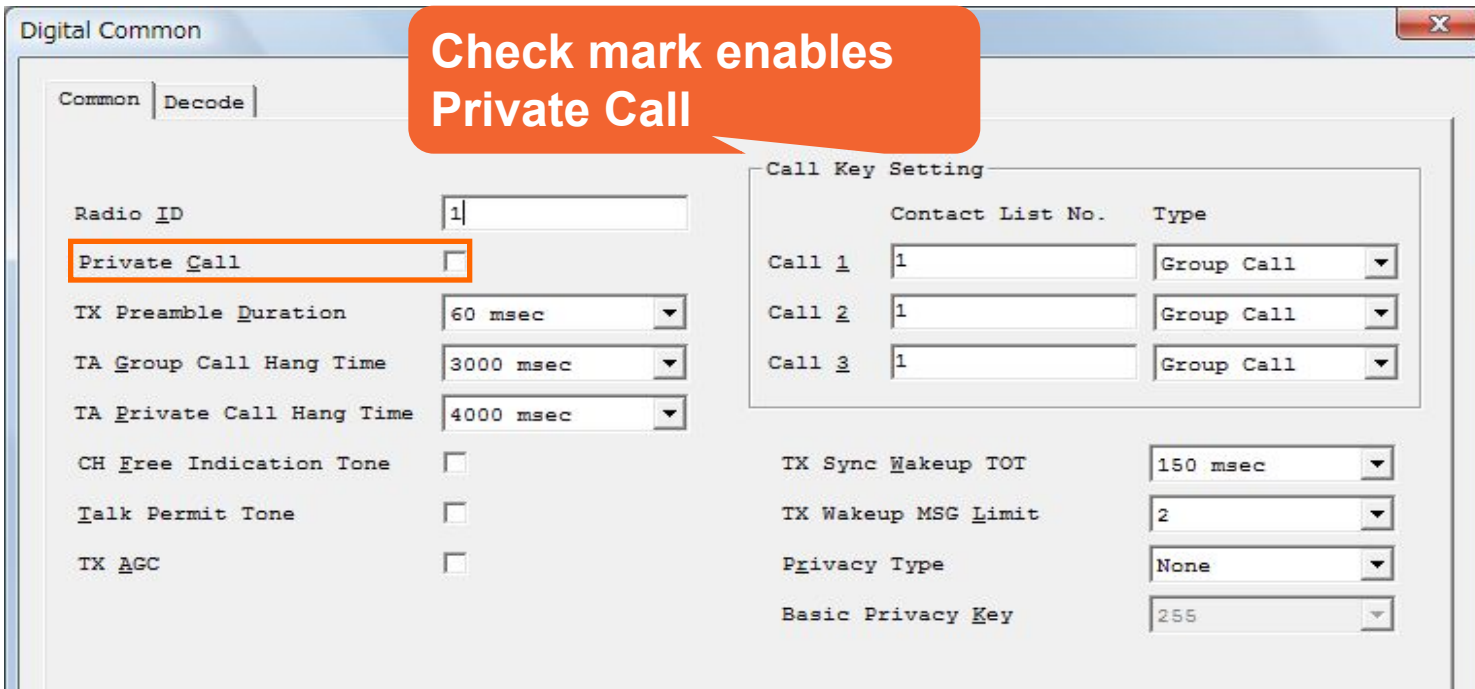
(Reminder: Each radio must have its own unique ID !)

The screenshot shows the 'Digital Common' configuration window with the 'Common' tab selected. The 'Radio ID' field is highlighted with an orange box and contains the value '1'. An orange callout bubble points to this field with the text 'Input range: 1 - 16.776.415'. Other settings include 'Private Call' (unchecked), 'TX Preamble Duration' (60 msec), 'TA Group Call Hang Time' (3000 msec), 'TA Private Call Hang Time' (4000 msec), 'CH Free Indication Tone' (unchecked), 'Talk Permit Tone' (unchecked), 'TX AGC' (unchecked), 'TOT' (150 msec), 'Limit' (2), 'Basic Privacy Key' (255), and 'Call Key Setting' table.

	Contact List No.	Type
Call 1	1	Group Call
Call 2	1	Group Call
Call 3	1	Group Call

# Step 2: Configure Common Settings

## Enable / Disable Private Call



The screenshot shows the 'Digital Common' configuration window with the 'Common' tab selected. The 'Private Call' checkbox is highlighted with an orange box. An orange callout bubble points to this checkbox with the text 'Check mark enables Private Call'. Other settings include Radio ID (1), TX Preamble Duration (60 msec), TA Group Call Hang Time (3000 msec), TA Private Call Hang Time (4000 msec), CH Free Indication Tone, Talk Permit Tone, TX AGC, Call Key Setting (Call 1, 2, 3 all set to 1 and Group Call), TX Sync Wakeup TOT (150 msec), TX Wakeup MSG Limit (2), Privacy Type (None), and Basic Privacy Key (255).

Setting	Value
Radio ID	1
Private Call	<input type="checkbox"/>
TX Preamble Duration	60 msec
TA Group Call Hang Time	3000 msec
TA Private Call Hang Time	4000 msec
CH Free Indication Tone	<input type="checkbox"/>
Talk Permit Tone	<input type="checkbox"/>
TX AGC	<input type="checkbox"/>
Call Key Setting	
Call 1	1   Group Call
Call 2	1   Group Call
Call 3	1   Group Call
TX Sync Wakeup TOT	150 msec
TX Wakeup MSG Limit	2
Privacy Type	None
Basic Privacy Key	255

# Step 3: Configure Operating Channels

Serial No.: 21 0B000000    Product Type: EVX-531 (Portable)    Max CH/Group: 32 /

Freq. Band: UHF D (450-512)    FW Ver. CPU/DSP: 0.00/0.00

List No.	Dig/Ana	W/N	TAG	Frequency		Color Code	Rpt Slot	Grp List	Priv Cfm	Contact List
				RX	TX					
1	D	N	CH-001	483.50000	483.50000	1	1	1	-	1
2	D	N	CH-002	483.50000	483.50000	1	1	1	-	1
3	D	N	CH-003	483.50000	483.50000	1	1	1	-	1
4	D	N	CH-004	483.50000	483.50000	1	1	1	-	1
5	D	N	CH-005	483.50000	483.50000	1	1	1	-	1
6	D	N	CH-006	483.50000	483.50000	1	1	1	-	1
7	D	N	CH-007	483.50000	483.50000	1	1	1	-	1
			CH-008	483.50000	483.50000	1	1	1	-	1

Double click here or press the space bar.

# Step 3: Configure Operating Channels

C:\Vertex Standard\CE142\default\_evx531ud.c142 - CE142 for EVX-530 Series

File Edit View Common Digital Signaling Radio Channel Help

Serial No.: 21 0B000000 Product Type: EVX-531 (Portable) Max CH/Group: 32 /

Freq. Band: UHF D (450-512) FW Ver. CPU/DSP: 0.00/0.00

List No.	Dig/ Ana	W/N	TAG	Frequency		Color Code	Rpt Slot	Grp List	Priv Cfm	Contact List
				RX	TX					
1	D	N	CH-001	483.50000	483.50000	1	1	1	-	1
2	D	N	CH-002	483.50000	483.50000	1	1	1	-	1
3	D	N	CH-003	483.50000	483.50000	1	1	1	-	1
4	D	N	CH-004	483.50000	483.50000	1	1	1	-	1
5	D	N	CH-005	483.50000	483.50000	1	1	1	-	1
6	D	N	CH-006	483.50000	483.50000	1	1	1	-	1
			007		483.50000	1	1	1	-	1
					483.50000	1	1	1	-	1

Choose operational mode:  
D = Digital

# Step 3: Configure Operating Channels

## Enter Frequencies

C:\Vertex Standard\CE142\default\_evx531ud.c142 - CE142 for EVX-530 Series

File Edit View Common Digital Signaling Radio Channel Help

Serial No. 21 0B000000 Product Type EVX-531 (Portable) Max CH/Group 32 /

Freq. Band UHF D (450-512) FW Ver. CPU/DSP 0.00/0.00

List No.	Dig/ Ana	W/N	TAG	Frequency		Color Code	Rpt Slot	Grp List	Priv Cfm	Contact List
				RX	TX					
1	D	N	CH-001	483.50000	483.50000	1	1	1	-	1
2	D	N	CH-002	483.50000	483.50000	1	1	1	-	1
3	D	N	CH-003	483.50000	483.50000	1	1	1	-	1
4	D	N	CH-004	483.50000	483.50000	1	1	1	-	1
5	D	N	CH-005	483.50000	483.50000	1	1	1	-	1
6	D	N	CH-006	483.50000	483.50000	1	1	1	-	1
7	D	N	CH-007	483.50000	483.50000	1	1	1	-	1
8	D	N	CH-008	483.50000	483.50000	1	1	1	-	1

Enter the desired frequencies here



# Step 3: Configure Operating Channels

## Set the Repeater Slot

C:\Vertex Standard\CE142\default\_evx531ud.c142 - CE142 for EVX-530 Series

File Edit View Common Digital Signaling Radio Channel Help

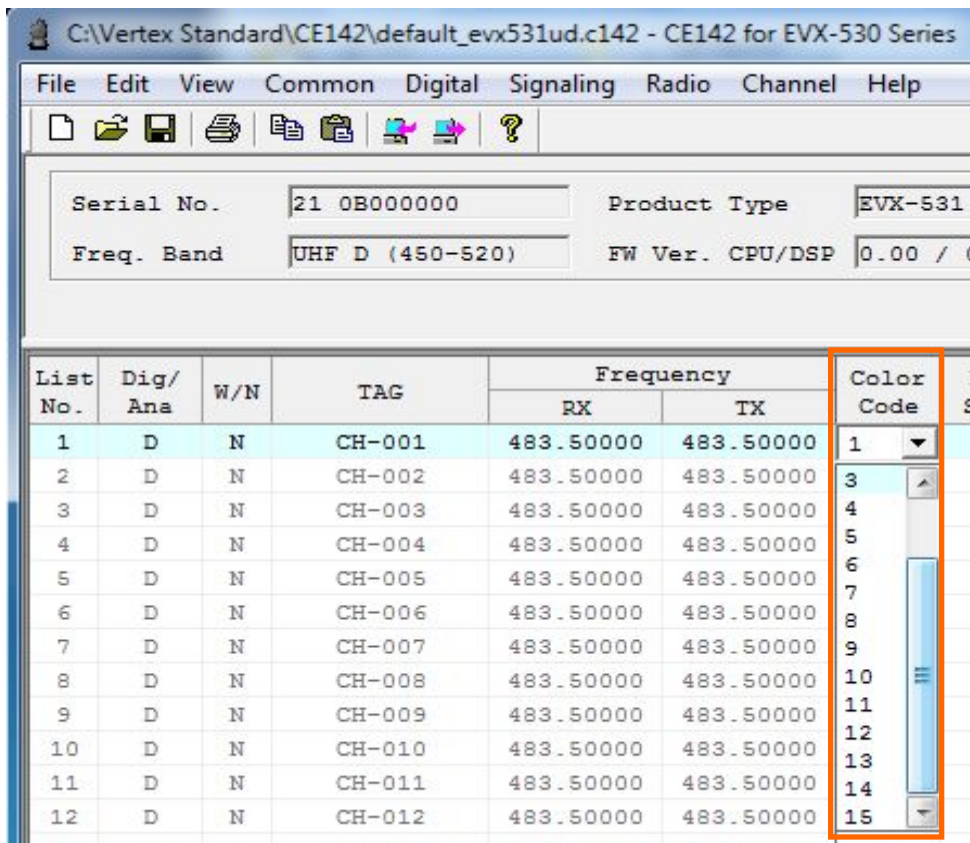
Serial No.: 21 0B000000 Product Type: EVX-531 (Portable) Max CH/Group: 32 /  
Freq. Band: UHF D (450-512) FW Ver. CPU/DSP: 0.00/0.00

List No.	Dig/Ana	W/N	TAG	Frequency		Color Code	Rpt Slot	Grp List	Priv Cfm	Contact List
				RX	TX					
1	D	N	CH-001	483.50000	483.50000	1	1	1	-	1
2	D	N	CH-002	483.50000	483.50000	1	1	1	-	1
3	D	N	CH-003	483.50000	483.50000	1	1	1	-	1
4	D	N	CH-004	483.50000	483.50000	1	1	1	-	1
5	D	N	CH-005	483.50000	483.50000	1	1	1	-	1
6	D	N	CH-006	483.50000	483.50000	1	1	1	-	1
7	D	N	CH-007	483.50000	483.50000	1	1	1	-	1
8	D	N	CH-008	483.50000	483.50000	1	1	1	-	1

Range: 1 or 2

# Step 3: Configure Operating Channels

Choose the appropriate Color Code



The screenshot shows the software interface for configuring operating channels. The title bar indicates the file path: C:\Vertex Standard\CE142\default\_evx531ud.c142 - CE142 for EVX-530 Series. The menu bar includes File, Edit, View, Common, Digital, Signaling, Radio, Channel, and Help. The toolbar contains icons for file operations and help. The main area displays configuration fields: Serial No. (21 0B000000), Product Type (EVX-531), Freq. Band (UHF D (450-520)), and FW Ver. CPU/DSP (0.00 / 0). Below these fields is a table of operating channels with a dropdown menu for Color Code.

List No.	Dig/ Ana	W/N	TAG	Frequency		Color Code
				RX	TX	
1	D	N	CH-001	483.50000	483.50000	1
2	D	N	CH-002	483.50000	483.50000	3
3	D	N	CH-003	483.50000	483.50000	4
4	D	N	CH-004	483.50000	483.50000	5
5	D	N	CH-005	483.50000	483.50000	6
6	D	N	CH-006	483.50000	483.50000	7
7	D	N	CH-007	483.50000	483.50000	8
8	D	N	CH-008	483.50000	483.50000	9
9	D	N	CH-009	483.50000	483.50000	10
10	D	N	CH-010	483.50000	483.50000	11
11	D	N	CH-011	483.50000	483.50000	12
12	D	N	CH-012	483.50000	483.50000	13
13	D	N	CH-013	483.50000	483.50000	14
14	D	N	CH-014	483.50000	483.50000	15

**A 'Color Code' is a 'System ID' It works like PL / CTCSS:  
Only radios with the same CC can communicate.**

**16 CCs are available (0 – 15)**

# Step 3: Configure Operating Channels

Enable the correct Group List for this channel. The radio will respond to any group call ID listed in the selected list.

The screenshot shows the software interface for configuring channels. The title bar indicates the file path: C:\Vertex Standard\CE142\default\_evx531ud.c142 - CE142 for EVX-530 Series. The menu bar includes File, Edit, View, Common, Digital, Signaling, Radio, Channel, and Help. The toolbar contains icons for file operations and help. The configuration fields are as follows:

Serial No.	21 0B000000	Product Type	EVX-531 (Portable)	Max CH/Group	32
Freq. Band	UHF D (450-520)	FW Ver. CPU/DSP	0.00 / 0.00		

The main table lists 12 channels with the following columns: List No., Dig/Ana, W/N, TAG, Frequency (RX, TX), Color Code, Rpt Slot, RX Grp List, Priv Cfm, and Contact List. The 'RX Grp List' column is highlighted with an orange box, showing a dropdown menu for each channel. The selected values are 1, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, and 16 for channels 1 through 12, respectively.

List No.	Dig/Ana	W/N	TAG	Frequency		Color Code	Rpt Slot	RX Grp List	Priv Cfm	Contact List
				RX	TX					
1	D	N	CH-001	483.50000	483.50000	3	1	1	-	1
2	D	N	CH-002	483.50000	483.50000	1	1	4	-	1
3	D	N	CH-003	483.50000	483.50000	1	1	5	-	1
4	D	N	CH-004	483.50000	483.50000	1	1	6	-	1
5	D	N	CH-005	483.50000	483.50000	1	1	7	-	1
6	D	N	CH-006	483.50000	483.50000	1	1	8	-	1
7	D	N	CH-007	483.50000	483.50000	1	1	9	-	1
8	D	N	CH-008	483.50000	483.50000	1	1	10	-	1
9	D	N	CH-009	483.50000	483.50000	1	1	11	-	1
10	D	N	CH-010	483.50000	483.50000	1	1	12	-	1
11	D	N	CH-011	483.50000	483.50000	1	1	13	-	1
12	D	N	CH-012	483.50000	483.50000	1	1	14	-	1



# Step 3: Configure Operating Channels

Select the DESTINATION ADDRESS (Contact) for a call on this channel.

C:\Vertex Standard\CE142\default\_evx531ud.c142 - CE142 for EVX-530 Series

File Edit View Common Digital Signaling Radio Channel Help

Serial No. 21 0B000000 Product Type EVX-531 (Portable) Max CH/Group 32 /

Freq. Band UHF D (450-512) FW Ver. CPU/DSP 0.00/0.00

List No.	Dig/ Ana	W/N	TAG	Frequency		Color Code	Rpt Slot	Grp List	Priv Cfm	Contact List
				RX	TX					
1	D	N	CH-001	483.50000	483.50000	1	1	1	-	1
2	D	N	CH-002	483.50000	483.50000	1	1	1	-	1
3	D	N	CH-003	483.50000	483.50000	1	1	1	-	1
4	D	N	CH-004	483.50000	483.50000	1	1	1	-	1
5	D	N	CH-005	483.50000	483.50000	1	1	1	-	1
6	D	N	CH-006	483.50000	483.50000	1	1	1	-	1
7	D	N	CH-007	483.50000	483.50000	1	1	1	-	1
8	D	N	CH-008	483.50000	483.50000	1	1	1	-	1

Select from here.

Contact List

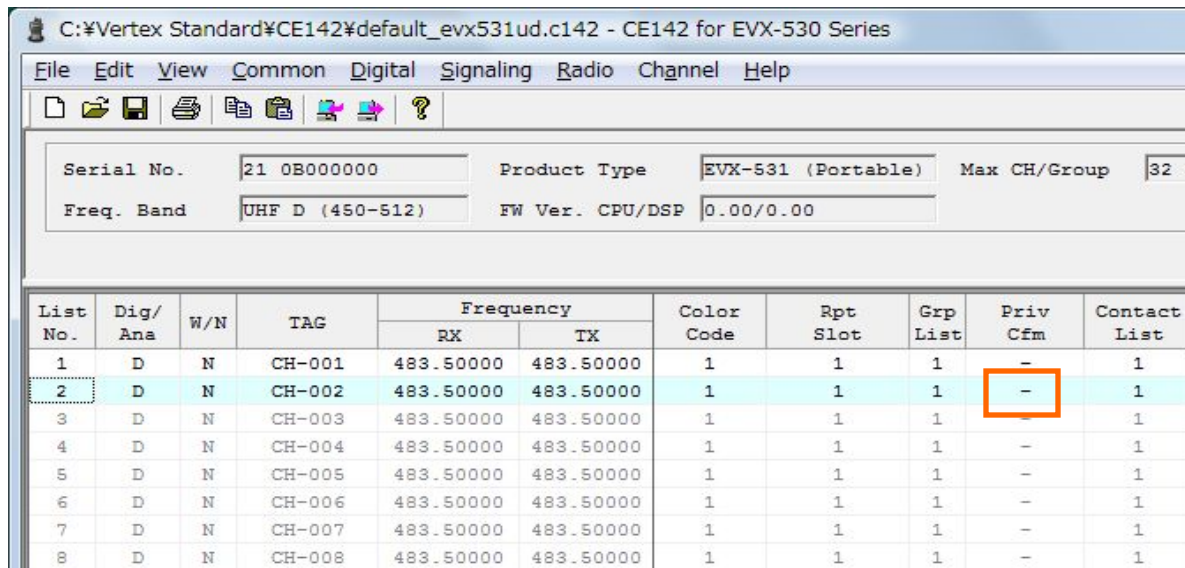
1	: ALPHA	21	:	41	:
2	: BETA	22	:	42	:
3	: GAMMA	23	:	43	:
4	: DELTA	24	:	44	:
5	: EPSILON	25	:	45	:
6	:	26	:	46	:
7	:	27	:	47	:
8	:	28	:	48	:
9	:	29	:	49	:
10	:	30	:	50	:
11	:	31	:	51	:
12	:	32	:	52	:
13	:	33	:	53	:
14	:	34	:	54	:
15	:	35	:	55	:
16	:	36	:	56	:
17	:	37	:	57	:
18	:	38	:	58	:
19	:	39	:	59	:
20	:	40	:	60	:

OK Cancel

# Step 3: Configure Operating Channels

## Optional: Configure Private Calls as “Confirmed”.

If enabled, the radio will upon PTT first establish the link to the target radio, and then inform the user by a talk permit beep that the link has been established; or by an error tone that the target could not be reached.



The screenshot shows the 'Channel' configuration window for a Vertex Standard EVX-531 (Portable) radio. The window title is 'C:\Vertex Standard\CE142\default\_evx531ud.c142 - CE142 for EVX-530 Series'. The menu bar includes File, Edit, View, Common, Digital, Signaling, Radio, Channel, and Help. The toolbar contains icons for file operations and help. The configuration fields are: Serial No. 21 0B000000, Product Type EVX-531 (Portable), Max CH/Group 32, Freq. Band UHF D (450-512), and FW Ver. CPU/DSP 0.00/0.00. Below these fields is a table of channels.

List No.	Dig/Ana	W/N	TAG	Frequency		Color Code	Rpt Slot	Grp List	Priv Cfm	Contact List
				RX	TX					
1	D	N	CH-001	483.50000	483.50000	1	1	1	-	1
2	D	N	CH-002	483.50000	483.50000	1	1	1	-	1
3	D	N	CH-003	483.50000	483.50000	1	1	1	-	1
4	D	N	CH-004	483.50000	483.50000	1	1	1	-	1
5	D	N	CH-005	483.50000	483.50000	1	1	1	-	1
6	D	N	CH-006	483.50000	483.50000	1	1	1	-	1
7	D	N	CH-007	483.50000	483.50000	1	1	1	-	1
8	D	N	CH-008	483.50000	483.50000	1	1	1	-	1

Double click on this cell or select & press the space bar.  
With check mark: 'Private Confirmed' Enabled

# Step 3: Configure Operating Channels - Register Channel in Group List

Activate configured channels by adding them to the GROUP LIST

The screenshot shows the 'CE142 for EVX-530 Series' software interface. The main window contains a menu bar (File, Edit, View, Common, Digital, Signaling, Radio, Channel, Help) and a toolbar. Below the toolbar are several input fields for device configuration:

- Serial No.: 21 0B000000
- Product Type: EVX-531 (Portable)
- Max CH/Group: 32 /
- Freq. Band: UHF D (450-512)
- FW Ver. CPU/DSP: 1.03/1.03
- Group No.: 01
- TAG: GROUP-01
- Group Scan:

The main area displays a table of channels and a smaller table for the group list.

List No.	Dig/ Ana	W/N	TAG	Frequency		Color Code	Rpt Slot	Grp List	Priv Cfm	Contact List
				RX	TX					
1	D	N	CH-001	483.50000	483.50000	1	1	1	-	1
2	D	N	CH-002	483.50000	483.50000	1	1	1	-	1
3	D	N	CH-003	483.50000	483.50000	1	1	1	-	1
4	D	N	CH-004	483.50000	483.50000	1	1	1	-	1
5	D	N	CH-005	483.50000	483.50000	1	1	1	-	1
6	D	N	CH-006	483.50000	483.50000	1	1	1	-	1
7	D	N	CH-007	483.50000	483.50000	1	1	1	-	1
8	D	N	CH-008	483.50000	483.50000	1	1	1	-	1

CH	List	TAG	SC	P2
1	1	CH-001	✓	✓
2	2			
3				
4				
5				
6				
7				
8				
9				

Enter the Channel # from the Channel List

Channel Rotary Switch Position

# Step 4: Optional Settings

## Configuration of Optional Functions

- Privacy
- Emergency Call
- Text Messaging
- VOX Operation

# Step 4: Option Privacy

- 2 Privacy Options are available: BASIC and ENHANCED \*)
- Settings located under >Digital - Digital Common<
- Common Characteristics:
  - If enabled, call content will be encrypted such that it can only be decoded by a radio that has the same key activated (and is on the same logical channel having proper ID) .
  - Voice as well as Text content will be scrambled, or encrypted.
  - Clear (unencrypted) calls will be received even if Privacy is enabled.
  - Repeaters are transparent for Privacy calls.

\*) Enhanced Privacy is available as of F/W version 3.07.

# Step 4: Optional Settings

## - BASIC Privacy Configuration

- The BASIC Privacy function uses a non-cryptographic algorithm to perform a digital 'scrambling' of the Message Payload (not of the control & addressing bits).
- 255 fixed keys - each 16 bits long - are available to choose from (should not be misunderstood as different levels of complexity).

The screenshot shows a software interface titled "Digital Common" with three tabs: "Common", "Decode", and "Privacy". The "Privacy" tab is active. Below the tabs, there are two configuration fields: "Privacy Type" with a dropdown menu set to "Basic", and "Basic Privacy Key" with a dropdown menu set to "255".

Select "None" or "Basic" from the pull down menu.

"Basic Privacy Key" can be selected only when "Privacy Type = Basic" is set.

## Step 4: Optional Settings

### - ENHANCED Privacy Feature

- The ENHANCED Privacy feature uses a cryptographic algorithm and performs a real encryption of the message payload (again, not of the control & addressing bits).
- 16 keys may be preconfigured
- Each key has 40 bits in length (5 bytes).
- Key range is (hex) 0000 – FFFE
- This allows for **1,099,511,627,775** Combinations.



# Step 4: Optional Settings - ENHANCED Privacy Configuration

16 codes available; display radio users can change codes during operation.

For non-display radios, select active Key here

Alphanumeric Tag max. 8 Digits

5 bytes code (hex)  
00000 - FFFFE

Digital Common

Common | Decode | **Privacy**

Privacy Type: **Enhanced** Basic Privacy Key

Enhanced Privacy Key

Current Used Key: 1

No.	TAG	Key Code	No.	TAG
1	012VWXYZ	59ABCDEF	9	
2			10	
3			11	
4			12	
5			13	
6			14	
7			15	
8			16	

Help

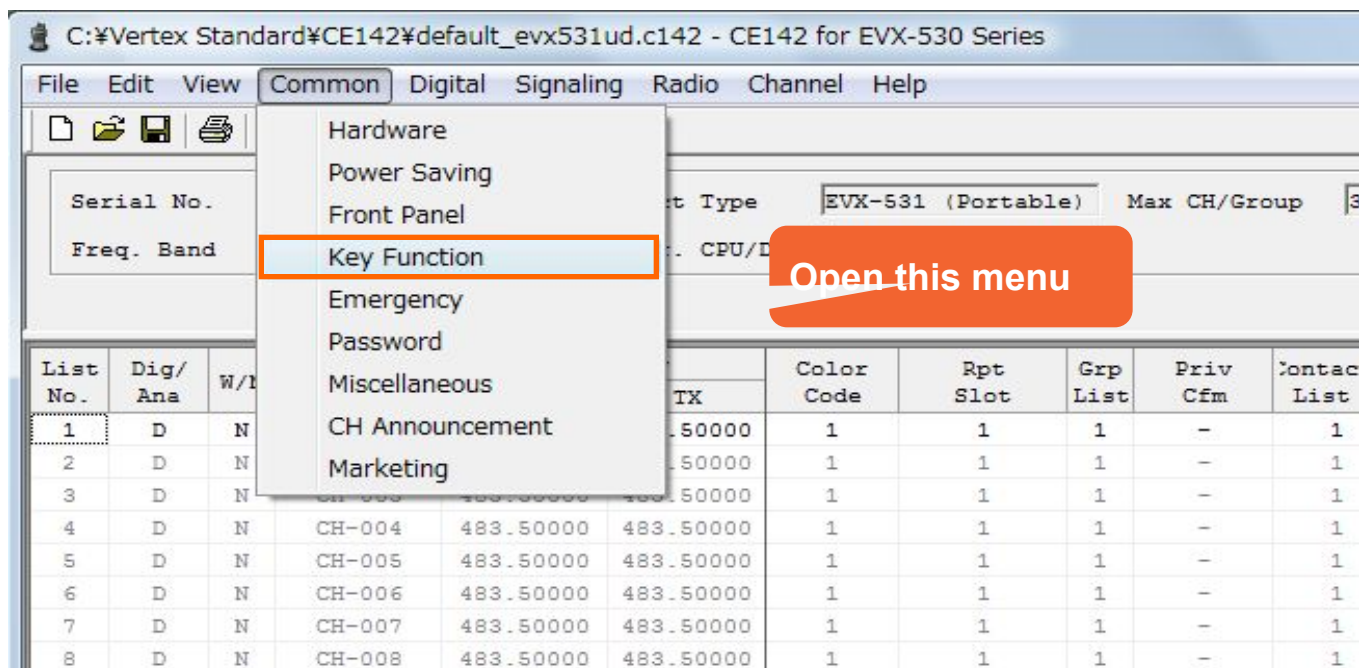
Choose "Enhanced"



# Step 4: Optional Settings

## – Privacy, assign to programmable Button

### Open the Key Function Menu



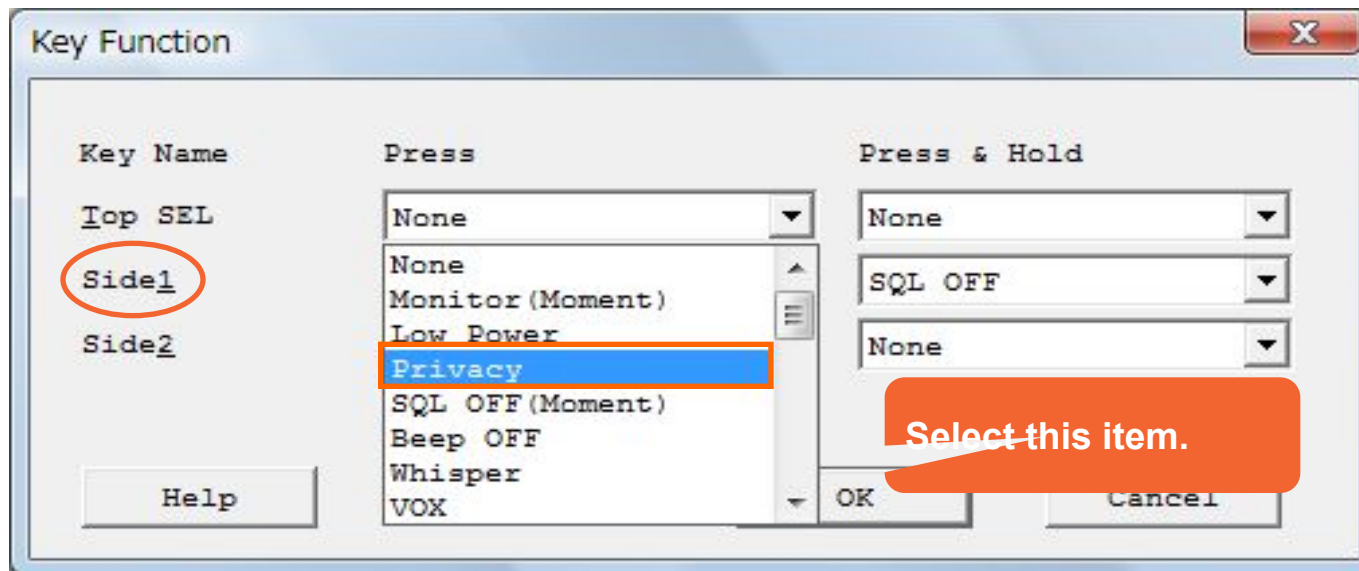
The screenshot shows the Vertex Standard software interface. The 'Common' menu is open, and the 'Key Function' option is highlighted with an orange box. An orange callout box with the text 'Open this menu' points to the 'Key Function' option. The background shows a table of channel settings.

List No.	Dig/Ana	W/D	TX	Color Code	Rpt Slot	Grp List	Priv Cfm	Contact List	
1	D	N	50000	1	1	1	-	1	
2	D	N	50000	1	1	1	-	1	
3	D	N	50000	1	1	1	-	1	
4	D	N	CH-004 483.50000	483.50000	1	1	1	-	1
5	D	N	CH-005 483.50000	483.50000	1	1	1	-	1
6	D	N	CH-006 483.50000	483.50000	1	1	1	-	1
7	D	N	CH-007 483.50000	483.50000	1	1	1	-	1
8	D	N	CH-008 483.50000	483.50000	1	1	1	-	1

# Step 4: Optional Settings

– Privacy, assign to programmable button.

## Key Settings



# Step 4: Optional Settings - Privacy, Activate on Channel

Return to the Main screen. Add Privacy to channels as required and select appropriate activation method.

The screenshot shows the main configuration window for a Vertex Standard device. At the top, there are fields for 'Serial No.' (21 0B000000), 'Product Type' (EVX-531 (Portable)), 'Max CH/Group', 'Freq. Band' (UHF D (450-512)), and 'FW Ver. CPU/DSP' (0.00/0.00). Below this is a table of channels. The 'PVCY' column in the first row is highlighted with a red box, and an orange arrow points from it to a 'Privacy' dialog box. The dialog box shows a list of options: '-:OFF', '1:Key ON', '2:Power ON', and '3:ON'.

List No.	Dig/ Ana	W/N	TAG	Frequency		TX PWR		TOT	Pri MIC	VOX	PVCY	TA
				RX	TX	1	2					
1	D	N	CH-001	483.50000	483.50000	H	L2		INT	-	-	-
2	D	N	CH-002	483.50000	483.50000	H	L2		INT	-	-	-
3	D	N	CH-003	483.50000	483.50000	H	L2		INT	-	-	-
4	D	N	CH-004	483.50000	483.50000	H	L2		INT	-	-	-
5	D	N	CH-005	483.50000	483.50000	H	L2		INT	-	-	-
6	D	N	CH-006	483.50000	483.50000	H	L2		INT	-	-	-
7	D	N	CH-007	483.50000	483.50000	H	L2		INT	-	-	-
8	D	N	CH-008	483.50000	483.50000	H	L2		INT	-	-	-

# Step 4: Optional Settings - Emergency Function (Digital Mode)

Open the Emergency Function Dialog Window

The screenshot shows the software interface for configuring a radio. The 'Common' tab is active, and the 'Emergency' option in the menu is highlighted with an orange border. An orange callout box with the text '.Open this menu' points to the 'Emergency' option.

File Edit View **Common** Digital Signaling Radio Channel Help

Serial No. Freq. Band

Hardware  
Power Saving  
Front Panel  
Key Function  
**Emergency**  
Password  
Miscellaneous  
CH Announcement  
Marketing

Model Type: EVX-531 (Portable) Max CH/Gro...  
CPU/DSP: 0.00/0.00

List No.	Dig/Ana	W/D	Color Code	Slot	List	Rev Cfm
1	D	N	1	1	1	-
2	D	N	1	1	1	-
3	D	N	1	1	1	-
4	D	N	1	1	1	-
5	D	N	1	1	1	-
6	D	N	1	1	1	-
7	D	N	1	1	1	-
8	D	N	1	1	1	-

# Step 4: Optional Settings

## - Emergency Function (Digital Mode)

Configuration Window for Emergency settings (shown w/o analogue elements)

### Upper section:

- Duration of button-press for Emergency trigger;
- Key Inhibit: Keys locked during emergency cycle (except emergency stop by assigned key)
- Time-out timer for Lone Worker function.

Emergency

Edit

Emergency Key Hold Time:  DTMF Emergency Code:

Emergency Key Inhibit:

Lone Worker Timer:

	EMG Sys SEL	Common				Digital						
		EMG CH	Select CH		Revert CH	Emergency Cycle			Alarm Type	Emergency Mode	Call Retry	ACK Dec Time
			Group	CH		TRX	RX Time	TX Time				
Current		CUR			Start CH							
System 1	Digital	SEL	01:GROUP-01	01: CH-001	Start CH	3 times	10 sec	10 sec	Normal	Alarm	3	3.0 sec
System 2	Analog	CUR			Start CH							
System 3	Analog	CUR			Start CH							



# Step 4: Optional Settings

## - Emergency Function (Digital Mode)

### Configuration Window for Emergency settings (analogue elements cut out)

Up to 32 Emergency Schemes (“Systems”) may be defined for analogue or digital channels

Emergency

Edit

Emergency Key Hold Time: 2 sec | DTMF Emergency Code:

Emergency Key Inhibit: Disable

Lone Worker Timer: 5 min

Numbers entered here will be sent as DTMF signal on analogue channels

	EMG Sys SEL	Common				Digital						
		EMG CH	Select CH		Revert CH	Emergency Cycle			Alarm Type	Emergency Mode	Call Retry	ACK Dec Time
			Group	CH		TRX	RX Time	TX Time				
Current		CUR			Start CH							
System 1	Digital	SEL	01:GROUP-01	01: CH-001	Start CH	3 times	10 sec	10 sec	Normal	Alarm	3	3.0 sec
System 2	Analog	CUR	Emerg. Channel		Start CH	Emerg. scheme						
System 3	Analog	CUR			Start CH							

# Step 4: Optional Settings - Emergency Function (Digital Mode)

## Assign Emergency to Programmable Key

The screenshot shows the 'Common' menu of the software interface. The 'Key Function' option is highlighted with an orange box. An orange callout bubble with the text 'Open this menu' points to the 'Key Function' option. Below the menu, a table lists various channels. To the right, the 'Key Function' dialog box is open, showing a list of keys and their assigned functions. The 'Top SEL' key is circled in red, and the 'Emergency' function is highlighted with a blue box in the 'Press' dropdown menu.

List No.	Dig/Ana	W/T	Sub	Chan	TX	Dec	Enc	ANI	Signaling	ARTS	SQL	SC Grp
1	A	N			50000							
2	A	N			50000							
3	A	N			50000							
4	A	N	CH-004		483.50000	483.50000						
5	A	N	CH-005		483.50000	483.50000						
6	A	N	CH-006		483.50000	483.50000						
7	A	N	CH-007		483.50000	483.50000						
8	A	N	CH-008		483.50000	483.50000						

Key Name	Press	Press & Hold
Top SEL	None	None
Side1	Whisper VOX	SQL OFF
Side2	VOX Anti-Trip Emergency	None
	Lone Worker	
	Group Change	
	PRI-2 Set	
	PRI-2 Disable	

# Step 4: Optional Settings

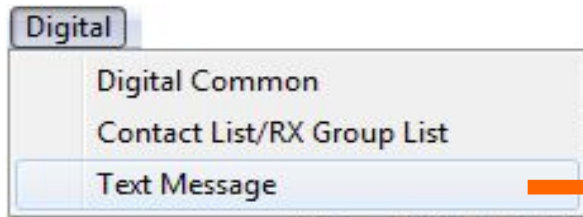
## - Text Messages

- The Text Messaging Feature is available as of F/W ver. 3.06. It is primarily intended for use with the upcoming EVX-534 / EVX-539 radios.
- 24 Quick Text Messages (QTM) with up to 32 characters each in length can be edited.
- Of limited use on EVX-531 radios; however, up to 3 quick text messages can be assigned to a direct call key.
- These calls should be addressed to display radios only 😊
- A specific alert tone may be associated with a QTM reception.



# Step 4: Optional Settings - Text Messages

Open Text Editor.



Enter texts as required

No.	Text Message
1	ALPHA BETA GAMMA DELTA 123456789
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	

# Step 4: Optional Settings - Text Messages

Under >Digital Common, Common< assign the QTM to a Direct Call:

1. Change Call Type to “Text Message”

Call Key Setting

	Contact No.	Type	Text Message
Call 1	1	Text Message ▼	1
Call 2	1	Group Call ▼	1
Call 3	1	Group Call ▼	1
Call 4	1	Group Call ▼	1

# Step 4: Optional Settings - Text Messages

2. Select the intended QTM:
  - a. Click in field “Text Message”
  - b. The QTM list opens.  
Make sure to select the QTM
  - c. Click “OK”

	Contact No.	Type	Text Message
Call 1	1	Text Message	1
Call 2	1	Group Call	1

Text Message (Call 1)

- 1 : ALPHA
- 2 :
- 3 :
- 4 :
- 5 :
- 6 :
- 7 :
- 8 :
- 9 :
- 10 :
- 11 :
- 12 :
- 13 :
- 14 :
- 15 :
- 16 :
- 17 :
- 18 :
- 19 :
- 20 :
- 21 :
- 22 :
- 23 :
- 24 :

OK Cancel

# Step 4: Optional Settings - Text Messages

3. Close the >Digital Common< window by clicking “OK”

Digital Common

Common | Decode | Privacy

Radio ID: 2

Private Call:

TX Preamble Duration: 60 msec

TA Group Call Hang Time: 3000 msec

TA Private Call Hang Time: 4000 msec

CH Free Indication Tone:

Talk Permit Tone:

TX AGC:

Call Alert Menu:

Radio Check Menu:

Remote Monitor Menu:

Radio Enable Menu:

Radio Disable Menu:

Edit Menu:

Manual Dial Menu:

Call Key Setting

	Contact No.	Type	Text Message
Call 1	1	Text Message	1
Call 2	1	Group Call	1
Call 3	1	Group Call	1
Call 4	1	Group Call	1
Call 5	1	Group Call	1

TX Sync Wakeup TOT: 150 msec

TX Wakeup MSG Limit: 2

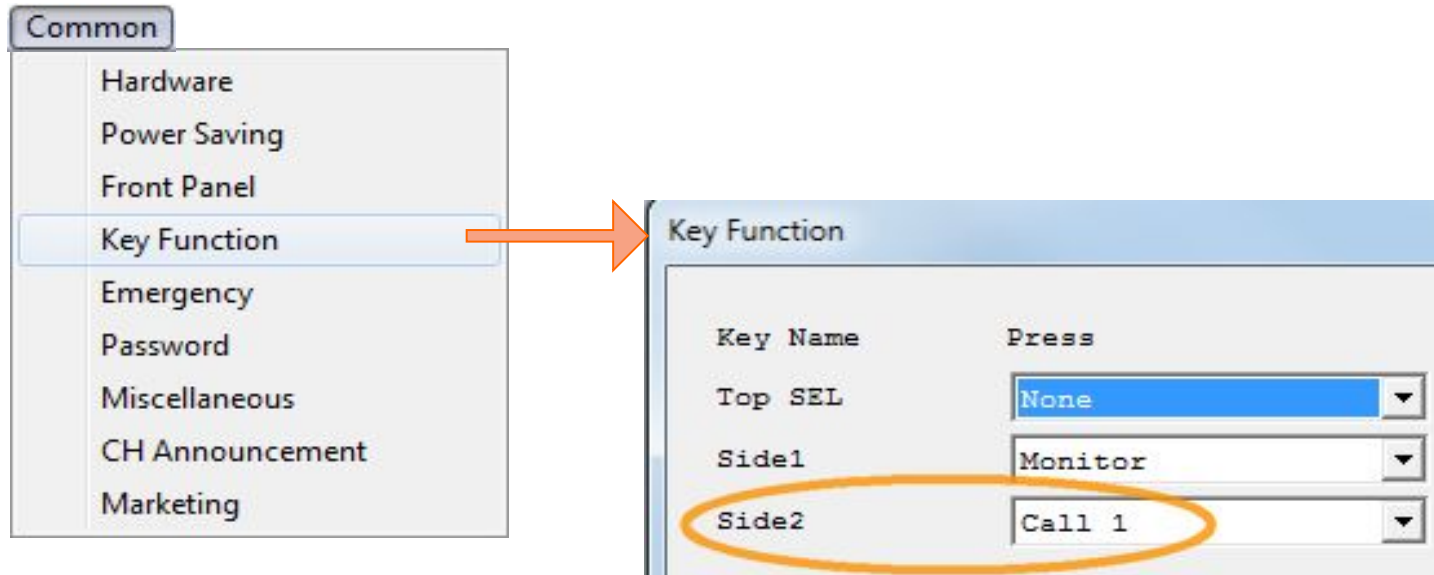
CAI Network: 126

CAI Group Network: 239

Help OK Cancel

# Step 4: Optional Settings - Text Messages

Under **>Common, Key Function<** assign a button to Call1:



## Step 4: Optional Settings

### - VOX Function

- VOX (Voice Operated Transmission) can be used with the internal microphone, alternatively with MH-81A4B Over-the-head VOX Compatible Headset.



**VC-25 cannot be used!**

- VOX is a channel-wide feature
- Basic settings located under **>Front Panel, Front Panel<**

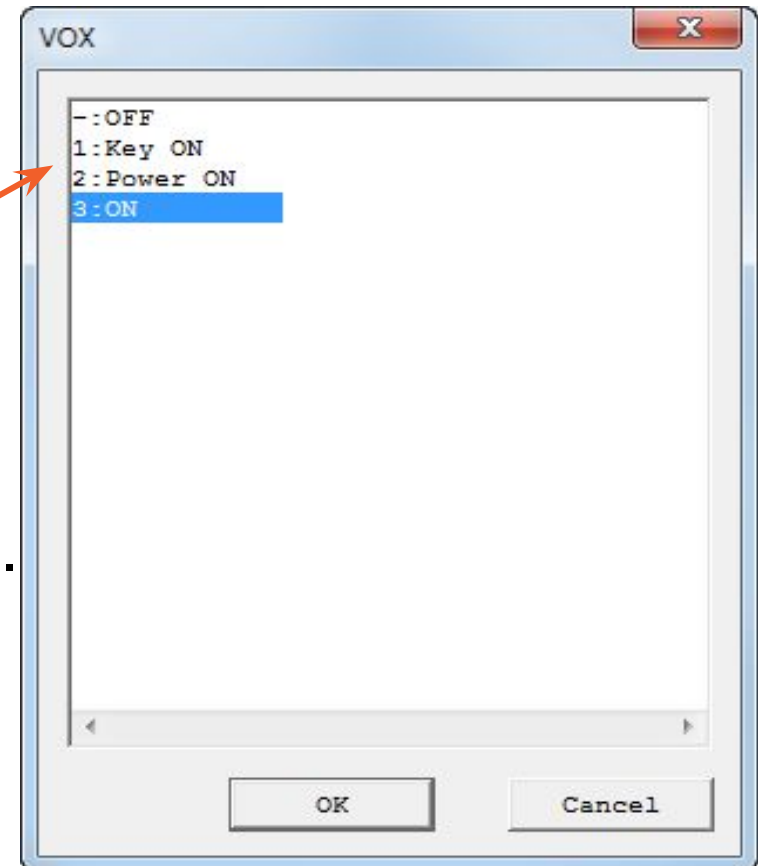
VOX MIC Select	EXT MIC	- Choose active microphone
VOX Level	Mid	- Set Attack / Release time
VOX Offset	0 dB	- Adjust Mic sensitivity
VOX Anti Trip	Disable	- Helps to prevent self-generation of xmission by e.g. CH announcement

# Step 4: Optional Settings - VOX Function

- In main window, active VOX on desired channel.

EMG SYS	Pri MIC	VOX
1	INT	3
1	INT	-
1	INT	-
1	INT	-

Double click opens  
selection:



- Optional Settings 1 & 2 need to have a button assigned to turn VOX on / off during operation.



**EVX-534/539**

  
**Vertex Standard**

eVerge™

# **Display Radios Menu-guided Operation**

# Operation – Call Management

## Programming Prerequisite:

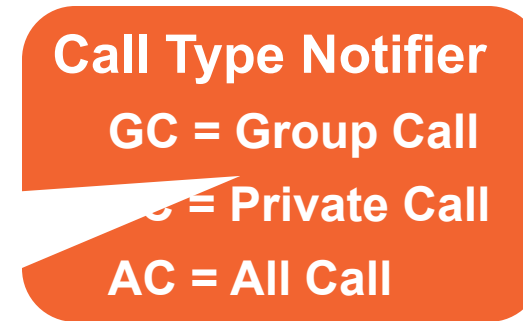
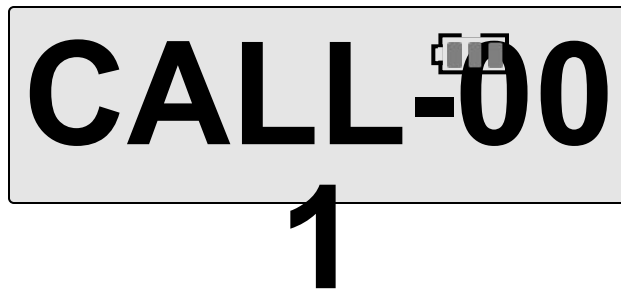
The CALL menu must have a PF button assigned:

The screenshot shows a 'Key Function' dialog box with a table of key assignments. The 'Key Name' column lists buttons: Top SEL, Side1, Side2, A, B, C, and D. The 'Press' column has dropdown menus for each, with 'Call' selected for button D. The 'Press & Hold' column has dropdown menus for each, all set to 'None'. A list of options for the 'Press' dropdown for button D is shown, with 'Call' highlighted. The list includes: Call 5, Code Up, Code Down, Code Set, Speed Dial, Call, Status Set, and Status Up. Buttons for Help, OK, and Cancel are at the bottom.

Key Name	Press	Press & Hold
Top SEL	None	None
Side1	Monitor	None
Side2	Text Message	None
A	None	None
B	None	None
C	Call	None
D	Call 5 Code Up Code Down Code Set Speed Dial <b>Call</b> Status Set Status Up	None

# Operation – Call Management

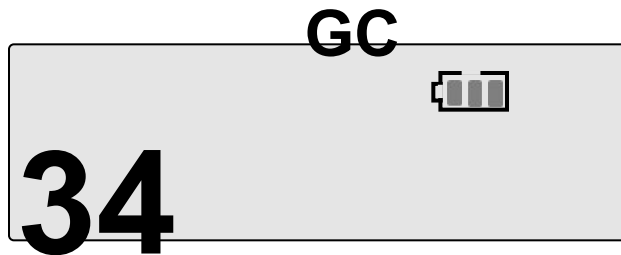
Invoke the CALL menu by pressing the assigned PF button.  
Contact # 1 tag will be displayed [CALL-001]:



Scroll through the contacts list using **SIDE-1/SIDE-2** buttons or **[A]/[B]** keys.

# Operation – Call Management

Once the wanted contact is displayed, press the **[D]** key to select, or **[C]** key to cancel.



**Call Type Notifier**

- GC = Group Call
- PC = Private Call
- AC = All Call

If the CALL TYPE is Private (PC), various additional functions become available (scroll through using side buttons):

**CALL ALT, VIEW ID, EDIT TAG\*, EDIT ID\*, ALT SEL, DEL LIST\*, RADIO CK, RADIOMON, REVIVE and STUN (\*:EVX-539 only).**

# Assistance



**For more information or support requests,  
please send your inquiry to:**

**[support-emea@vertexstandard.com](mailto:support-emea@vertexstandard.com)**