

F3400D/F52D Series Programming

BASIC PROGRAMMING: DIGITAL CHANNELS WITH SCANNING

Introduction

This tutorial describes how to program the F3400/F5400 and F52D series radios with a basic digital file composed of 3 digital channels, each with RAN codes and Scanning.

Note: No signaling or Individual Calls are programmed.

Prerequisites

- Radio is connected to the computer with a cloning cable. USB A to micro B type, with matching driver or OPC-1862 (portables) or OPC- 2363 (Mobiles) with matching drivers
- Firmware and Software are updated to the latest version
- Windows[®] 7, 8.1, or 10 (32/64bit) operating system

Programming

The following procedures describe programming three Digital Channels with Scanning and no signaling.

Note: There is no Model Type option (step 2) for the F52D series radios.

1. Open the CS-F3400D cloning software and go to **Model** in the Main Menu.

untitled - CS-F3400D	_	2		1	10 Million - Martin
<u>File View COM Port Program</u>	<u>M</u> odel	<u>A</u> djust	<u>H</u> el	р	
	Тур	е	Þ	<	1 IC-F3400DT/F4400DT
□ IC-F3400DT/F4400DT	Opt	tion			2 IC-F3400DS/F4400DS
⊞ Memory CH ⊕ Call List			_		3 IC-F3400D/F4400D
					4 IC-F5400D/F6400D
in the second s	<u> </u>				5 IC-F5400DS/F6400DS
				_	

2. Assign the software to match the model radio being programmed.

Model Option
Choose Model Option in box below. Changing the model will delete all data.
System / Function
🔽 Digital (NXDN)
NXDN Conventional
NXDN Multi-site Trunk
LTR
☐ Analog Signaling
2-Tone/5-Tone
C 2-Tone
C 5-Tone
OK Cancel

3. In Model Option, disable all Options except NXDN Conventional.

- 4. Go to the **Zone Operation** window.
- Zone Operation Window

□ 🗿 IC-F3400DT/F4400DT	Zone (Operation	(3984 Remaining)				
- Memory CH					Digital		
∎ 1: Digital Zone ∎ and Call List	Zone		Text	Zone Type	Unit ID Type	Unit ID	Squelch Type
i⊞i⊒ Digital i∃i⊒ Analog	1	Digital Zone		, Conventional	Zone	1234	RAN

- 5. In **Text**, enter a descriptive name for this zone.
- 6. Assign **Zone Type** as **Conventional**.
- 7. Unit ID Type:
 - Own Uses 1 global ID for all zones as set in Digital->Conventional->Own ID.
 - Zone Uses 1 ID for THIS zone. The ID is set in Zone Operation->Unit ID.
- 8. Unit ID: Used only when Unit ID Type is set as Zone. Enter this radio's ID when operating in this zone.
- 9. Set **Squelch Type** as **RAN** for this example. **SEL** would be appropriate if Talk Groups were different or if Selective Calling were used.
- 10. Go to the **Zone 1** window.

	Zone 1: D	igital 2	Zone	(3984 Remaining)									3
E Memory CH						Frequency	(MHz)		C.To	ne	RA	N	1
∎ 1: Digital Zone ∎ Call List	СН	Atr	Inh	Text	СН Туре	RX	TX	TX Inh	RX	ТХ	RX	ТΧ	2
i⊞⊡ Digital	1-1	AB		Fire Dpt	Digital	456.000000	<-				1	<-	4
DTMF	1-2			Police Dpt	Digital	457.000000	<-				2	<-	đ
B SCAN	1-3			Admin	Digital	458.000000	<-				3	<-	1

11. Enter the following settings:

- Frequency (MHz) Enter the 3 channels sets for these channels.
- **RAN** Enter applicable RAN code for each channel. Choices are from 0 to 63.
- CH Type Enter Digital.
- **Text** Enter descriptive text for this channel.

Ş	Digital		Analog	Analog				
Auto Keset	Bandwidth	Digital Profile	Bandwidth	Com- pander	System Profile	Scan List		
-m-B	VN	1: General	-			1		
₹īm-B	√N	1: General	-			1		
-₹im-B	VN	1: General	-			1		

12. Set Bandwidth to VN (Very Narrow 6.25kHz) or N (Narrow 12.5kHz).



Digital Profile: Ultimatly this setting defines the default TX and RX Call types and IDs when on this channel. This setting is derived from the Digital Conventional Profile and Call List windows that follow.

13. Go to the **Call List** window.

Call List Window

 IC-F3400DT/F4400DT	Call List	I List (998 Remaining)											
🖻 📲 Memory CH													
Zone Operation						NADN -							
🔤 1: Digital Zone		Name	Ringer	Vibration	Call	Conv ID							
🖻 🔤 Call List	No.		Туре	Туре	Туре								
Call List	1	General	Null	Null	IND	1							
Hanalog	2	General	Null	Null	GRP	1							

Call List: A collection of default Transmit Call Types, either Group or Individual, and the associated ID's for that particular Call Type destinations to be used by this radio on a channel by channel basis.

Each line number also defines the ringtone and/or vibration pattern that this radio will exhibit when receiving a Status or Call Alert call from this matching Group or ID.

14. Enter the following settings:

- Name- Enter "General" for this example.
- Call Type GRP for group calls
- NXDN/Conv ID Enter "1" for TG 1.

Note: When the **Call Type** is **GRP**, the NXDN Conv ID is a Talk Group ID. When the **Call Type** is **IND**, the NXDN Conv ID is an Individual ID.

15. Go to the Digital Conventional Profile window.

Digital Conventional Profile Window

B IC-F3400DT/F4400DT	Digital -	- Conventional - Profile: (249 Remaining)			
Memory CH Gall List			Digital		
Call List	List	Name	Call Type	Call List No. (Individual)	Call List No. (Group)
E-Conventional	1	General	Group	, 1	2
BAN CH	New			1	l

This window points to Call List settings, and represents Individual and Group ID's. Once populated, the appropriate list Line 1 or 2 or 3, etc. is entered into the Zone Digital Profile setting to assign the corresponding Call Type and Call List TG or Inv ID for that particular channel.

□ IC-F3400DT/F4400DT	Scan L	ist									
⊕⊡ Memory CH ⊕⊡ Call List ⊕⊡ Digital	List	Display Text	Scan Type	Primary CH	Secondary CH	ТХ СН	Talk Back	TX Action	Cancel CH	Text	PWR Save
🗈 🔄 Analog	1	SCAN1	Normal	—		Last		Cancel	TX CH	Start CH	Short
⊡ DIMF	2	SCAN2	Scan OFF			_			—		Short
- Scan List	3	SCAN3	Scan OFF								Short
📕 Scan Setting	4	SCAN4	Scan OFF	—							Short

Scan List Window

- 16. In **Scan List** in the **Zone 1** window, assign each channel as **1**.
- In the Scan -> Scan List window, assign the characteristics desired for this scan group as determined by customer requirements. Set all unused Scan List groups to Scan OFF (in Scan Type field).
- 18. Go to the Interface -> Key Assign -> Key window.



Key Window

- 19. Double-click on P1 and assign P1 as the Scan Start/Stop key.
- 20. Set all other key assignments to Null to avoid confusion.
- 21. Go to Rotary Encoder.

Display Window



22. Enter the following settings:

- Backlight Set to preference.
 - > ON for mobiles
 - Auto for portables. When the Display lights, power is being consumed. The Display will dim after 5 seconds of idle.
- Brightness recommend set at 4
- **Dimmer** recommend set at **0** for portables, **4** for mobiles.

Menu Operation Window

□ IC-F3400DT/F4400DT	Menu Ope	ration			
Memory CH Gall List	Ca	tegory List			
🗓 🧰 Digital	No.	English	Other	Icon	Sel
🗄 — 🫅 Analog	1	—	—		OFF
	2				OFF
E SCAN	3				OFF
	4				OFF
🗄 📴 User Interface	5		—		OFF
🖻 — 🔄 Key Assign	6		—		OFF
Roten/Encoder	7		—		OFF
	8		—		OFF
🖂 🔤 Menu	9		—		OFF
🚽 📃 Menu Operation	10		_		OFF

Since functionality for this simple file requires no screen use, all menu views are turned off in this procedure. Set **Sel** to **OFF** for each line.