ICOM®

F3161/F5061 SERIES
ENHANCED FEATURES
IDAS PROGRAMMING GUIDE
(Includes Trunking)

Icom America Inc.

Table of Contents

What is Covered in this Guide

This guide provides simplified step by step instructions for programming the enhanced digital/analog features in your F3161/F4161 or F5061/F6061 radio. The programming information covers IDAS 6.25kHz digital programming, including IDAS trunking.

IDAS (Icom Digital Advanced System) is a digital and analog land mobile radio system, using the NXDN™ 6.25kHz digital modulation and common air interface protocol.

To use the digital features, your radio must have the UT-119/UT-126 accessory board installed and enabled, with the current radio and UT firmware upgraded to the latest revision. Check the Icom knowledge base (from the B-B website) for more details.

Explaining Digital Squelch

There are several settings that enable the squelch to open up in your digital radio:
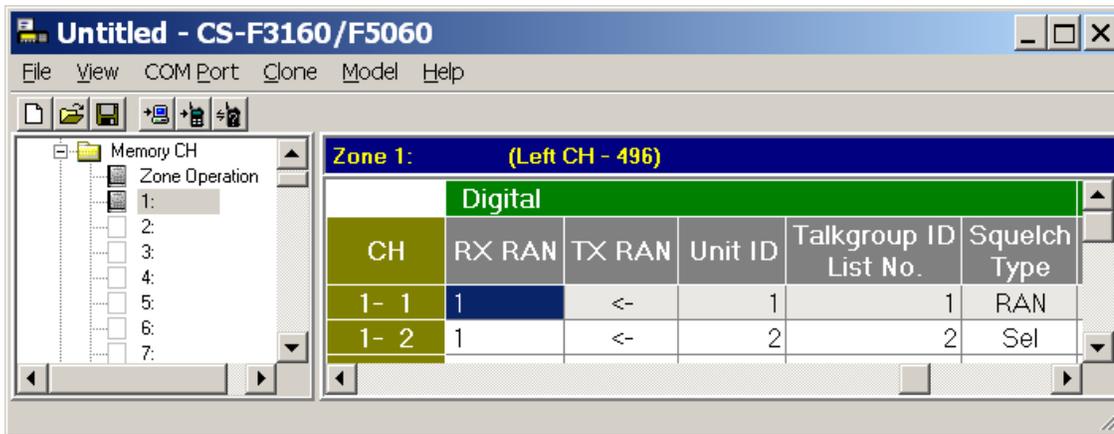
RAN Codes

RAN Codes are digital equivalents to CTCSS tones used in analog radios. The codes are decimal, and range from 0 to 63. If you want squelch set so that it can receive all RAN codes, enter 0. This code allows all RAN calls to be received and will transmit using the code that is programmed for transmit in that channel.

Unit (Individual) IDs

Individual IDs allow for selective calling and identification of who is calling.

Talk Groups

Talk Group IDs allow for selective calling to a preprogrammed group of radios. The "all call" ID is "0".

Setting Squelch with RAN codes and IDs

Squelch levels are set in the programming software and are activated in the **Memory CH » Squelch Type** field. The figure on the following page shows how squelch opens with digital frequencies.
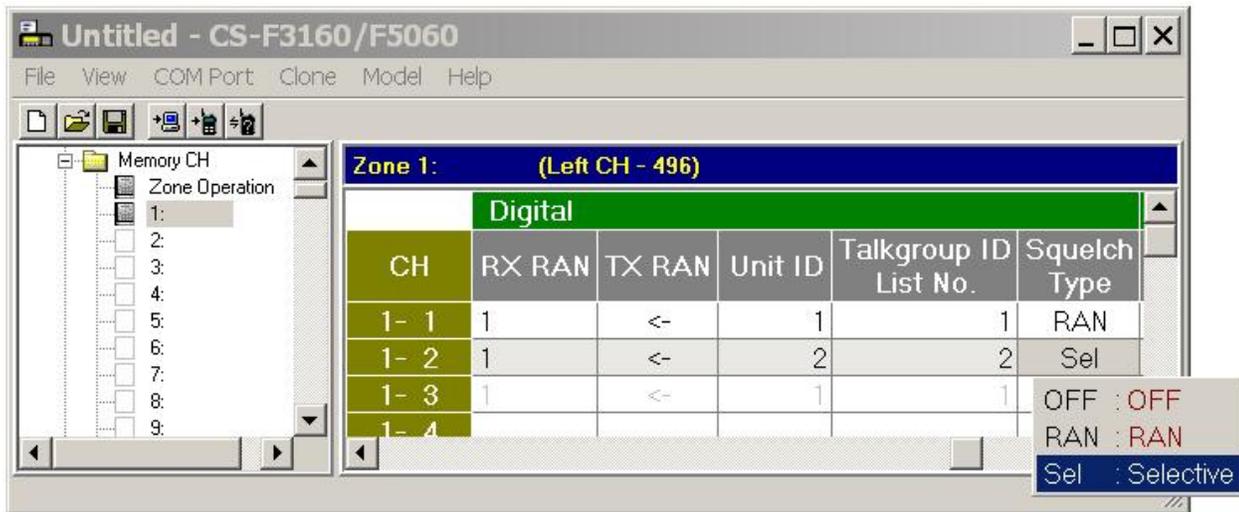
When the squelch type is set to **OFF**, only the frequencies have to match for two radios to open squelch and communicate. RAN codes, Talk groups, and Individual radio IDs are ignored.

Using RAN squelch is similar to setting CTCSS tones in an analog radio. The frequency and the RAN code must match before squelch will open. Set the squelch type to **RAN** to enable this feature.

To enable communication to be selective for Talk Group IDs or Individual IDs, set the squelch type to **SEL**. With this setting the frequency, the RAN code, and talk group ID (or Individual ID) must match before squelch will open. If you want to call an Individual radio that is also part of a talk group, you can press a key that has been programmed with an Individual ID function.

Squelch Type Setting

OFF

Closed

Digital
Frequency

RAN

Closed   Closed

Digital   RAN Code
Frequency

SEL

Talk Group ID

Closed   Closed

Closed

Digital   RAN Code   Or
Frequency

Individual ID

3
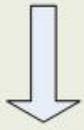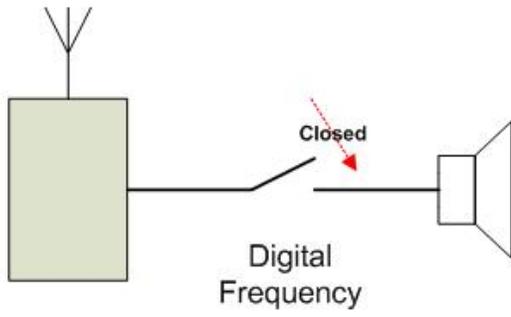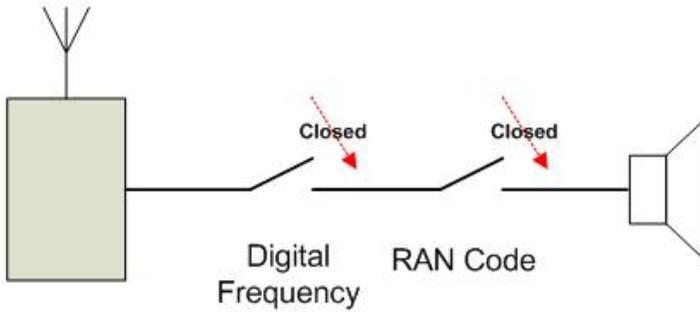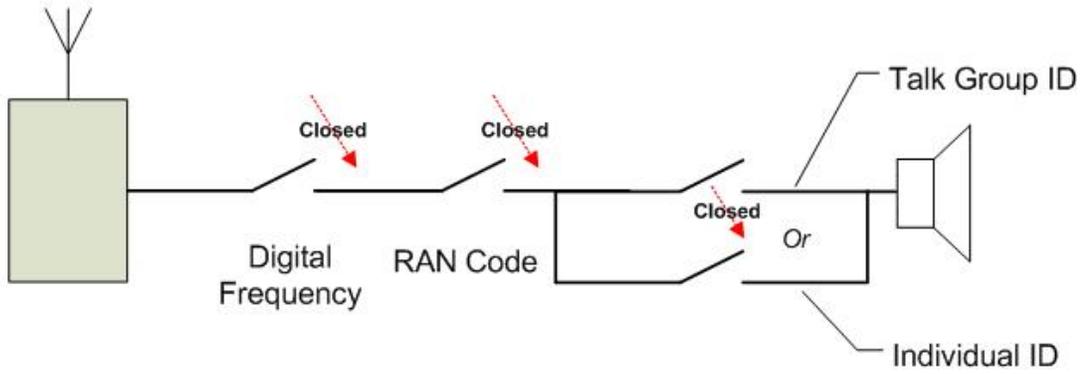
Selecting Digital Features

The figure below shows the sequence for selecting digital features. Note: the UT-126 DSP option board must be installed and the digital features enabled in the cloning software. The following table shows the digital features available for an individual or talk group call. Note: All options display for both Individual and Talk Group calls.

Individual Call Digital Features	Talk Group Call Digital Features
Select Call	Select Call
Status	Status
Short Data Message	Short Data Message
Call Alert	Call Alert
Radio Check	
Stun/Revive	
Kill	
Remote Monitor	

Key Press Sequence for Digital Features

Note: The sequence is the same for the F5061/F6061 radios.

4
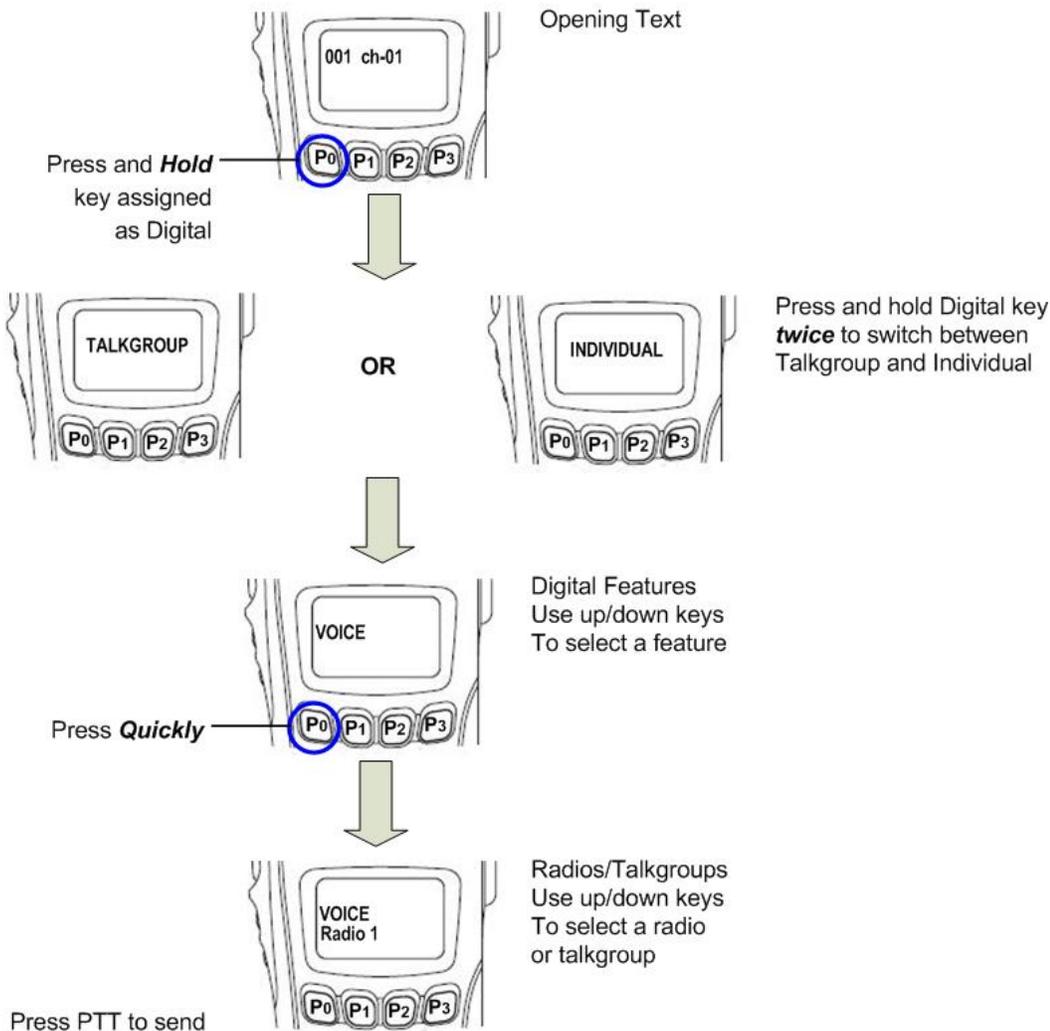
Programming Digital Features

Programming for a Select Call using Individual IDs

Individual IDs allow you to call a particular radio, excluding any others that are on the same frequency. Program your radio with the following settings. All frequencies need to be entered and the squelch level must be set before performing this procedure.

Memory CH Window / Zone Operation Window

Field	Setting/Description
Zone Operation » Zone Type	Set to **Conventional** (the field will show blank).

Memory CH Window / Zone Window

Field	Setting/Description
CH Type	Set to **Digital**.
Digital » Unit ID	Set to this radio's ID for the applicable channels. Points to the ID setting in the Individual ID List window.
Digital » Squelch Type	Set to **SEL** if you want the squelch to open with the proper RAN and Talk Group or Individual ID.

Individual ID List Window

Field	Setting/Description
ID	Enter all Individual IDs. This is a look-up (alias) table for every Individual ID in the system. Refers to the Unit IDs set in the Memory CH.
ID Name	Enter an Individual ID. This ID will display on the RX radio during a selective call.

Individual Setting Window

Field	Setting/Description
Log for Individual Call	Set to **Enable**.

Option Window

Field	Setting/Description
Unit ID Display on Receive	Set to **ON** if you want the target radio to show the Individual ID of the transmitting radio.
Reset Timer(Sec)	Enter a time value in seconds. For the duration of this timer, the radio will stay in selective call mode. If this is set to **OFF**, the last selected Individual or Talk Group will remain as the default call when pressing PTT.

Common Window

Field	Setting/Description
Key & Display» Key	Set one of the programmable keys to **Digital Button**.

To Make an Individual Select Call

1. Press _and hold_ the key assigned for Digital calls. The display will briefly show INDIVIDUAL or TALKGROUP. If the selection is TALKGROUP, press and hold the key again, then press and hold to select INDIVIDUAL.
2. Press the Digital key _quickly_ to bring up the list of Individual IDs.
3. Scroll to the desired radio ID by pressing the Up/Down keys, then press PTT.

Talk groups allow you to call a selected group of radios, excluding others that are on the same frequency. Program your radio with the following settings. All frequencies need to be entered and the squelch level must be set before performing this procedure.

Memory CH Window / Zone Operation Window

Field	Setting/Description
Zone Operation » Zone Type	Set to **Conventional** (the field will show blank).

Memory CH Window / Zone Window

Field	Setting/Description
CH Type	Set to **Digital**
Digital » Talk Group ID	Set to desired Talk Group for each channel.
Digital » Squelch Type	Set to **SEL** if you want the squelch to open with the proper RAN and Talk Group or Individual ID.

Talk Group ID List Window

Field	Setting/Description
ID	Enter all Talk Group IDs. This is a look-up (alias) table for every Talk Group ID in the system. Refers to the Talk Group IDs set in the Memory CH.
ID Name	Enter a Talk Group ID. This ID will display on the RX radio during a selective call.

Talk Group Setting Window

Field	Setting/Description
Log for Individual Call	Set to Enable.

Option Window

Field	Setting/Description
Talkgroup Display on Receive	Set to **ON** if you want the target radio to show the Talk Group ID of the transmitting radio.
Reset Timer(Sec)	Enter a time value in seconds. For the duration of this timer, the radio will stay in selective call mode. If this is set to **OFF**, the last selected Individual or Talk Group will remain as the default call when pressing PTT.

Common Window

Field	Setting/Description
Key & Display» Key	Set one of the programmable keys to **Digital Button**.

To Make a Talk Group Select Call

1. Press _and hold_ the key assigned for Digital calls. The display will briefly show INDIVIDUAL or TALKGROUP. If the selection is INDIVIDUAL, press and hold the key again, then press and hold to select TALKGROUP.
2. Press the Digital key _quickly_ to bring up the list of Talk Group IDs.
3. Scroll to the desired radio ID by pressing the Up/Down keys, then press PTT.

Programming for Status Messages

You can set your personal status to send to another radio, or group of radios, or allow your status to be accessed (polled) by other radios. Status messages can be sent and received using either Individual IDs or Talk Group IDs. Program your radio with the following settings. All frequencies need to be entered and the squelch level must be set before performing this procedure.

Memory CH Window / Zone Operation Window

Field	Setting/Description
Zone Operation » Zone Type	Set to **Conventional** (the field will show blank).

Memory CH Window / Zone Window

Field	Setting/Description
CH Type	Set to **Digital**
Digital » Unit ID	Set to this radio's ID for the applicable channels. Points to the ID setting in the Individual ID List window.
Digital » Talkgroup ID	Set to desired Talk Group for each channel.
Digital » Squelch Type	Set to **SEL** if you want the squelch to open with the proper RAN and Talk Group or Individual ID.

Status List Window

Field	Setting/Description
RX Status » Display Text	Enter the text you want displayed on other radios.
RX Status » RX	Set to **Enable**.
TX Status » Display Text	Enter the text you want to send to other radios

Status Setting Window

Field	Setting/Description
Allow Poll	Set to **Enable** if you want other radios to read your radio's status.
Poll TX	Set to **Enable** if you want to be able to find out the status (poll) of other radios.

Common Window

Field	Setting/Description
Key & Display » Key	Set one of the programmable keys to **Digital Button**.

To Send a Status Message

1. Press *and hold* the key assigned for Digital calls. The display will briefly show INDIVIDUAL or TALKGROUP. If you want to change from either INDIVIDUAL or TALKGROUP, press and hold the key to return to the memory channel display, then press and hold to select the option you want.
2. Press the Digital key *quickly* to bring up the list of Talk Group IDs.
3. Scroll to the desired radio ID by pressing the Up/Down keys.
4. Press PTT. Your status message and your Individual or Talk Group ID will show on the target radio's display.

You can send short, pre-programmed data messages (12 characters long) to another radio, or a group of radios. Program your radio with the following settings. All frequencies need to be entered and the squelch level must be set before performing this procedure.

Memory CH Window / Zone Operation Window

Field	Setting/Description
Zone Operation » Zone Type	Set to **Conventional** (the field will show blank).

Memory CH Window / Zone Window

Field	Setting/Description
CH Type	Set to **Digital**
Digital » Unit ID	Set to this radio's ID for the applicable channels. Points to the ID setting in the Individual ID List window.
Digital » Talkgroup ID	Set to the desired Talk Group for each channel.
Digital » Squelch Type	Set to **SEL** if you want to squelch to open with the proper RAN and Talk Group or Individual ID.

SDM List Window

Field	Setting/Description
SDM	Enter the text you want displayed on other radios.

SDM Setting Window

Field	Setting/Description
RX	Set to **Enable** if you want to receive short data messages.

Common Window

Field	Setting/Description
Key & Display» Key	Set one of the programmable keys to **Digital Button**.

To Send a Short Data Message

1. Press _and hold_ the key assigned for Digital calls. The display will briefly show INDIVIDUAL or TALKGROUP. If you want to change from either INDIVIDUAL or TALKGROUP, press and hold the key to return to the memory channel display, then press and hold again to select the option you want.
2. Press the up/down keys to select MSG.
3. Press the Digital key _quickly_ to bring up the list of messages.
4. Scroll to the desired message by pressing the Up/Down keys.
5. Press the key again to bring up the list of IDs.
6. Scroll to the desired ID by pressing the Up/Down keys.
7. Press PTT. Your status message and your Individual ID or Talk Group ID will show on the target radio's display.

Programming Short Data Messages (SDM) from the Front Panel

In addition to sending pre-programmed Short Data Messages, you can also edit or enter new messages from the keypad.

1. Press _and hold_ the key assigned for Digital calls. The display will briefly show INDIVIDUAL or TALKGROUP. If you want to change from either INDIVIDUAL or TALKGROUP, press and hold the key to return to the memory channel display, then press and hold to select the option you want.
2. Press the up/down keys to select MSG.
3. Press the Digital key _quickly_ to bring up the list of messages.
4. Scroll to a message you want to change by pressing the Up/Down keys. You can also start a new message by scrolling to a blank display.
Note: There must be at least one message already programmed to be able to create a new one from a blank display.
5. Press # to edit the message. Enter the message using the keypad and the following keys:
   - Press the Up key to add a space.
   - Press the Down key to delete a space or a letter.
   - Press the * (star) key to move left.
   - Press the # (pound) key to move right.
6. Press and hold the digital key to save the new message.

Programming for Call Alert

Call Alert allows you to send an alert signal to another radio, or group of radios, so that it can respond back. Program your radio with the following settings. All frequencies need to be entered and the squelch level must be set before performing this procedure.

Memory CH Window / Zone Operation Window

Field	Setting/Description
Zone Operation » Zone Type	Set to **Conventional** (the field will show blank).

Memory CH Window / Zone Window

Field	Setting/Description
CH Type	Set to **Digital**
Digital » Unit ID	Set to this radio's ID for the applicable channels. Points to the ID setting in the Individual ID List window.
Digital » Talkgroup ID	Set to the desired Talk Group for each channel.
Digital » Squelch Type	Set to **SEL** if you want to squelch to open with the proper RAN and Talk Group or Individual ID.

Call Alert Window

Field	Setting/Description
RX	Set to **Enable** to be able to receive a Call Alert.
TX	Set to **Enable** to be able to transmit a Call Alert.
Log for Call Alert	Set to **Enable** if you want to save the record (log) of all received Call Alerts.

Common Window

Field	Setting/Description
Key & Display » Key	Set one of the programmable keys to **Digital Button**.

To Send a Call Alert

1. Press _and hold_ the key assigned for Digital calls. The display will briefly show INDIVIDUAL or TALKGROUP. If you want to change from either INDIVIDUAL or TALKGROUP, press and hold the key to return to the memory channel display, then press and hold to select the option you want.
2. Press the up/down keys to select CALALERT.
3. Press the Digital key _quickly_ to bring up the list of IDs.
4. Scroll to the desired radio ID by pressing the Up/Down keys.
5. Press PTT. The target radio will show CALLALRT and show your radio's ID. If successful, your display will show CA OK. If it failed, your display will show CA FAIL.

Programming for Radio Check

Radio Check enables you to check whether a target radio is powered on and within range. This feature is active for Individual radios, not for Talk Groups. Program your radio with the following settings. All frequencies need to be entered and the squelch level must be set before performing this procedure.

Memory CH Window / Zone Operation Window

Field	Setting/Description
Zone Operation » Zone Type	Set to **Conventional** (the field will show blank).

Memory CH Window / Zone Window

Field	Setting/Description
CH Type	Set to **Digital**
Digital » Unit ID	Set to this radio's ID for the applicable channels. Points to the ID setting in the Individual ID List window.
Digital » Squelch Type	Set to **SEL** if you want to squelch to open with the proper RAN and Individual ID.

Radio Check Window

Field	Setting/Description
RX	Set to **Enable** to be able to receive a Radio Check.
TX	Set to **Enable** to be able to transmit a Radio Check.

Common Window

Field	Setting/Description
Key & Display » Key	Set one of the programmable keys to **Digital Button**.

To Send a Radio Check

1. Press *and hold* the key assigned for Digital calls. The display will briefly show INDIVIDUAL or TALKGROUP. If the selection is TALKGROUP, press and hold the key again, then press and hold to select INDIVIDUAL.
2. Press the up/down keys to select RADIOCHK.
3. Press the Digital key *quickly* to bring up the list of IDs.
4. Scroll to the desired radio ID by pressing the Up/Down keys.
5. Press PTT. If successful, your display will show CHK ACK. If it failed, your display will show CHK FAIL.

Targeted radios can be rendered inoperable remotely. A stunned radio can also be revived remotely. This feature is active for Individual radios, not for Talk Groups. Program your radio with the following settings. All frequencies need to be entered and the squelch level must be set before performing this procedure.

Memory CH Window / Zone Operation Window

Field	Setting/Description
Zone Operation » Zone Type	Set to **Conventional** (the field will show blank).

Memory CH Window / Zone Window

Field	Setting/Description
CH Type	Set to **Digital**
Digital » Unit ID	Set to this radio's ID for the applicable channels. Points to the ID setting in the Individual ID List window.
Digital » Squelch Type	Set to **SEL** if you want to squelch to open with the proper RAN and Talk Group or Individual ID.

Stun Window

Field	Setting/Description
RX	Set to **Enable** to allow your radio to be stunned.
TX	Set to **Enable** to be able stun a target radio.
Mode	This setting allows you to specify whether you want a stunned radio to be inhibited from transmitting only, or both transmitting *and* receiving.

Common Window

Field	Setting/Description
Key & Display » Key	Set one of the programmable keys to **Digital Button**.

To Send a Stun Signal

1. Press *and hold* the key assigned for Digital calls. The display will briefly show INDIVIDUAL or TALKGROUP. If the selection is TALKGROUP, press and hold the key again, then press and hold to select INDIVIDUAL.
2. Press the up/down keys to select STUN.
3. Press the Digital key *quickly* to bring up the list of IDs.
4. Scroll to the desired radio ID by pressing the Up/Down keys.
5. Press PTT. If successful, your display will show STN TX, then STN ACK. If it failed, your display will show STN FAIL.

Targeted radios can be revived remotely after they have been stunned. This feature is active for Individual radios, not for Talk Groups. Program your radio with the following settings. All frequencies need to be entered and the squelch level must be set before performing this procedure.

Memory CH Window / Zone Operation Window

Field	Setting/Description
Zone Operation » Zone Type	Set to **Conventional** (the field will show blank).

Memory CH Window / Zone Window

Field	Setting/Description
CH Type	Set to **Digital**
Digital » Unit ID	Set to this radio's ID for the applicable channels. Points to the ID setting in the Individual ID List window.
Digital » Squelch Type	Set to **SEL** if you want to squelch to open with the proper RAN and Individual ID.

Revive Window

Field	Setting/Description
RX	Set to **Enable** to allow your radio to be revived.
TX	Set to **Enable** to be able revive a target radio.

Common Window

Field	Setting/Description
Key & Display » Key	Set one of the programmable keys to **Digital Button**.

To Send a Revive Signal

1. Press *and hold* the key assigned for Digital calls. The display will briefly show INDIVIDUAL or TALKGROUP. If the selection is TALKGROUP, press and hold the key again, then press and hold to select INDIVIDUAL.
2. Press the up/down keys to select REVIVE.
3. Press the Digital key *quickly* to bring up the list of IDs.
4. Scroll to the desired radio ID by pressing the Up/Down keys.
5. Press PTT. If successful, your display will show REV TX, then REV ACK. If it failed, your display will show REV FAIL.

Programming for Kill

Targeted radios can be rendered inoperable remotely. This feature is active for Individual radios, not for Talk Groups. Program your radio with the following settings. All frequencies need to be entered and the squelch level must be set before performing this procedure.

Important: A radio that has received a Kill signal *can only* be made operable again by having a new cloning file programmed into the radio. There is no way that a radio can restore the operation of a radio that has received a Kill signal.

Memory CH Window / Zone Operation Window

Field	Setting/Description
Zone Operation » Zone Type	Set to **Conventional** (the field will show blank).

Memory CH Window / Zone Window

Field	Setting/Description
CH Type	Set to **Digital**
Digital » Unit ID	Set to this radio's ID for the applicable channels. Points to the ID setting in the Individual ID List window.
Digital » Squelch Type	Set to **SEL** if you want to squelch to open with the proper RAN and Individual ID.

Kill Window

Field	Setting/Description
RX	Set to **Enable** to allow your radio to be killed.
TX	Set to **Enable** to be able kill a target radio.

Common Window

Field	Setting/Description
Key & Display » Key	Set one of the programmable keys to **Digital Button**.

To Send a Kill Signal

1. Press *and hold* the key assigned for Digital calls. The display will briefly show INDIVIDUAL or TALKGROUP. If the selection is TALKGROUP, press and hold the key again, then press and hold to select INDIVIDUAL.
2. Press the up/down keys to select KILL.
3. Press the Digital key *quickly* to bring up the list of IDs.
4. Scroll to the desired radio ID by pressing the Up/Down keys.
5. Press PTT. If successful, your display will show KIL TX, then KIL ACK. If it failed, your display will show KIL FAIL.

The Remote Monitor feature allows one radio to open the mic of a targeted radio and hear any audio in the vicinity of that radio. This feature is active for Individual radios, not for Talk Groups. Program your radio with the following settings. All frequencies need to be entered and the squelch level must be set before performing this procedure.

Memory CH Window / Zone Operation Window

Field	Setting/Description
Zone Operation » Zone Type	Set to **Conventional** (the field will show blank).

Memory CH Window / Zone Window

Field	Setting/Description
CH Type	Set to **Digital**
Digital » Unit ID	Set to this radio's ID for the applicable channels. Points to the ID setting in the Individual ID List window.
Digital » Squelch Type	Set to **SEL** if you want to squelch to open with the proper RAN and Individual ID.

Remote Monitor Window

Field	Setting/Description
RX	Set to **Enable** to allow your radio to be monitored.
TX	Set to **Enable** to be able to monitor a target radio.
TX Timer(Sec)	Set the time that you want your radio to be monitored by another radio.

Common Window

Field	Setting/Description
Key & Display » Key	Set one of the programmable keys to **Digital Button**.

To Monitor Another Radio

1. Press *and hold* the key assigned for Digital calls. The display will briefly show INDIVIDUAL or TALKGROUP. If the selection is TALKGROUP, press and hold the key again, then press and hold to select INDIVIDUAL.
2. Press the up/down keys to select REM MON.
3. Press the Digital key *quickly* to bring up the list of IDs.
4. Scroll to the desired radio ID by pressing the Up/Down keys.
5. Press PTT. If successful, your display will show REM TX, then REM ACK. If it failed, your display will show REM FAIL. The green RX light on you radio will stay on as long as the mic is open on the target radio (the duration set in the TX Timer(Sec) field).

Digital encryption uses an encryption key that you create and assign to the desired channel. Note that this encryption method is not AES/DES encryption.

Memory CH / Zone Operation Window

Field	Setting / Description
Zone Type	Set to **Conventional**.

Memory CH / Zone Window

Field	Setting / Description
Scrambler/Encryption » ON/OFF	Set to ON.
Encryption Key List No.	Set to point to the line in the **Encryption Key(Dec)** table that matches the desired key for the selected channel.

Digital / Encryption Window

This window is for digital encryption only. Use this when the **CH Type** is set to **Digital**.

Field	Setting / Description
Encryption Key(Dec)	Set to a code from 1 to 32767 for each encryption key. Each key line can be referenced to channels in the Memory Ch window.

Common Window

Field	Setting/Description
Key & Display » Key	Set one of the programmable keys to **Scrambler/Encryption**.

To Make an Encrypted Call

1. Press the key programmed for Encryption. The display will show the encryption icon.
2. Press PTT or select an Individual or Talk Group ID. The receiving radio(s) must also have encryption enabled to receive the transmission (a key has to be programmed and the encryption icon must be present on the display).

Programming LTR Operation

To use LTR, the model must be set to **LMR**. LTR operation can also be used with the MDC 1200 signaling protocol.

Memory CH / Zone Operation Window

Field	Setting / Description
Zone Type	Set to **LTR**.
Repeater ch	Double-click to access Repeater Settings (following table).
Text	Enter text name for the LTR zone.

Zone Operation/Repeater Setting Window

Field	Setting / Description
Frequency (MHz)	Enter the desired frequencies for each repeater.
Atr	Set one channel to **H**, Home Repeater.
Save Table…	You can save this file as a .icr repeater file by clicking **Save Table…** This file contains only the settings in this window.
Load Table…	To open a saved .icr file, navigate to **Zone Operation** and set the **Zone Type** to **LTR** and double-click the Repeater ch field to open the **Repeater Settings** window. Click **Load Table…** and select the .icr file you want to load.

Memory CH /Zone Window

Field	Setting / Description
TGID » RXID, TXID	Enter the desired Talk Group IDs for RX and TX. Can be numbered from 1 to 250.

Programming Emergency Operation

Emergency operation is enabled using a signaling protocol. This feature can be programmed in 2-tone, 5-tone, MDC, and Digital mode. Program your radio with the following settings. All frequencies need to be entered and the squelch level must be set before performing this procedure.

Memory CH / Zone Operation Window

Field	Setting / Description
Zone Type	Set to **Conventional** (the field will be blank).

Memory CH / Zone Window

Field	Setting / Description
Atr	Set to **E** at the emergency channel.

Emergency / Window

Field	Setting / Description
Emergency Text	Enter the desired text to display on the TX radio.
Alert Level	Set the alarm volume level. If set to linked, the volume knob will control the volume level.
Repeat Cycle	Set to the desired number of times you want the emergency signal repeated. The range is 0 to infinity.
Silent	Set to make the emergency alarm **Silent** or **Audible**. If set to **Silent**, there will be no alarm or change in the display for the TX radio. The RX radio will show the normal emergency response and the alarm will sound.
Start Timer	Set the delay time before the alarm signal is sent. The delay time will count down with a beep every second for the interval set in this timer.
Repeat Timer	Set the time between each repeat emergency transmission. This is in seconds and will not be audible.

Common / Key & Display Window

Field	Setting / Description
Key » Emer	Set the key to **Emergency**.

To Make an Emergency Call

Press the key programmed for emergency. After the Start Timer has elapsed, the radio will transmit the emergency signal. If the transmission is successful, the TX radio display will show STAT OK.

Programming for IDAS Trunking

The following procedure assumes that frequencies and tones have been entered and the squelch has been set.
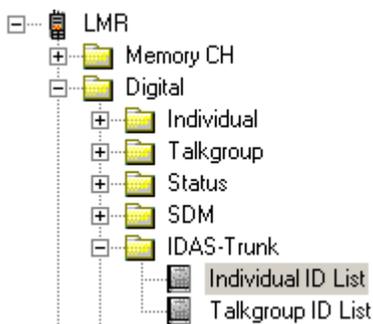
1. Open the CS-F3160/F5060 software.

2. Click **Model** in the Menu Bar and select **LMR**.

3. Go to Memory CH and select **Zone Operation**.

4. Select **IDAS-Trunk** in the **Zone Type** field.

Zone Operation		
Zone	Text	Zone Type
1		IDAS-Trunk

5. Click **Repeater ch** and add your list of repeater frequencies. Be sure to select a home repeater in the **ATR** field.

	Text =		Set Area Bit = OFF		
		Frequency (MHz)			
CH	Atr	RX	TX	RF PWR	Phone
1	H1	455.500000	459.500000	H	
2		460.500000	464.500000	H	
New					

6. Make sure **Beep Handshake** is set to **ON**.

7. Go to the **IDAS-Trunk** folder and click **Individual ID list.**
Note: These IDs are for trunking only. The Individual IDs and Talkgroup IDs in the IDAS Folder are not the same as those that may be listed in the Digital Folder.

- LMR
  - Memory CH
  - Digital
    - Individual
    - Talkgroup
    - Status
    - SDM
    - IDAS-Trunk
      - Individual ID List
      - Talkgroup ID List

.

8. Set up your Alias list for the other radios.

No.	ID	ID Name
1	10	Radio 1
2	20	Radio 2
3	30	Radio 3
4	40	Radio 4
New		

9. Click **Talkgroup ID List** and enter your Talk group number.

No.	ID	ID Name
1	1	TG-1
2	2	TG-2
3	3	TG-3
4	4	TG-4
New		

10. Go to the **Option** folder. Ensure that the first three settings in **ANI** match those in the following:

ANI	
Talkgroup Display on Mode Change	OFF
Talkgroup Display on Receive	ON
Unit ID Display on Receive	ON

11. Go to the **Memory CH** window, enter your radio (Unit) ID & choose your TG number.

Unit ID	Talkgroup I List No.	TX Inh	Phon	Text	TOT
10	1			TG-1	
10	2			TG-2	
10	3			TG-3	
10					

ID	ID Name
1	1 TG-1
2	2 TG-2
3	3 TG-3
4	4 TG-4

12. Enter Talk Group Name in **Text**.

13. Click **Clone** and write the file into the radio.

Clone	Model	He
Read <- TR		
Write -> TR		
Information		
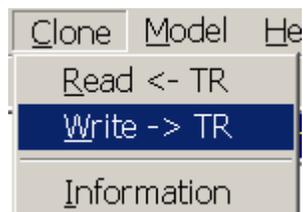
Program Settings

This section defines all of the enhanced feature settings for your radio. In most cases, the default settings will work best.

Memory CH Window

Field	Description	Suggested Setting
RX RAN	This is the receive digital code that must match the TX radio RAN before squelch will open. The range is 0 to 63, with 0 representing open squelch.	User Preference
TX RAN	This is the transmitted digital code that must match the RX radio RAN before squelch will open. The range is 0 to 63, with 0 allowing a match to any RAN code.	User Preference
Unit ID	The unique identification for an individual radio.	User Preference
Talkgroup ID	The unique identification for a Talk Group.	User Preference
Squelch Type	If set to **OFF**, there is only carrier squelch. If set to **RAN**, the digital RAN code must match before a squelch will open. If set to **Sel**, the RAN and the Unit ID or Talk Group ID must match before squelch will open.	User Preference

Digital/Option Window

Field	Description	Suggested Setting
Send Data	Allows the radio to send digital data, in the form of status messages or GPS data. Set to **Status** to send status messages following a voice call. To use the Status feature, you must also program **Send Status Number** to the desired status message.	User Preference
Sentence	Sets the GPS sentence format. Choose between **RMC**. **GGA**, and **GLL**. When GPS is selected in the **Send Data** field, received position data is transmitted in the selected GPS format at the end of a call.	Select the format that matches your equipment.
Send Status Number	This selects the status message to be sent when the **Send Data** field is set to **Status**.	User Preference
Talkgroup Display on Mode Change	Enables the Talk Group ID or Zone to display on the radio when changing the channel or zone.	User Preference
Talkgroup Display on Receive	Allows the receiving radio to display the Talk Group of the transmitting radio.	User Preference
Unit ID Display on Receive	Allows the receiving radio to display the Unit ID of the transmitting radio.	User Preference
Ringer on Receive	This sets the ringer type (Pi, Po, single, repeat, etc.) when receiving a call.	User Preference
Talkgroup Display on PTT	When you select a Talk Group and press PTT, the selected Talk Group ID will show on your radio's display.	User Preference
Over Ringer	Enables a short beep in the receiving radio at the end of a transmission.	User Preference
TX R.T.T Beep	Enables two short beeps in your radio when it is ready to transmit (R.T.T).	User Preference

Field	Description	Suggested Setting
Log	If enabled, the RX radio keeps a record of calls. These can be reviewed by selecting the Call Log feature from the display. The receive radio can log up to 10 calls. This feature works for Individual Voice calls or Call Alert calls only. Turning off power to the radio clears the log. The **Log for Individual Call** field in the **Individual Setting** window must also be set for **Enable**.	User Preference
Log Action Type	This sets how your radio responds to calls that are logged into your radio. Only VOICE calls and CALL ALERT calls are logged. If set to **Logged**, the radio will respond to the call with the same type of call when you press PTT (e.g. an incoming VOICE call that is logged, will enable you to send a VOICE call in return). If set to **Voice**, the radio will always respond with a voice call, regardless of whether the logged call was a Voice or Call Alert call. If set to **Call Alert**, the radio will always respond with a Call Alert call, regardless of whether the logged call was a Voice or Call Alert call.	User Preference
Ack TX Delay(Sec)	When your radio receives a Call Alert or Radio Check signal, this sets the length of time that your radio waits before sending an acknowledge signal back to the transmitting radio.	0.100
Ack RX Wait(Sec)	When your radio transmits a Call Alert or Radio Check signal, your radio waits for an acknowledge signal from the receiving radio. This sets that waiting time period. If there is no acknowledgement, the radio will retry the transmission for the number of times set in the **Attempt No.** field.	2.600
Attempt No.	The number of times your radio will transmit a Call Alert or Radio Check signal if it doesn't receive an acknowledgment from the target radio.	User Preference
Ringer Repeat(Sec)	Sets the time interval between rings when using repeat rings (Pi/R, PiPi/R or PiRo/R). Only active when **Ringer** (**Call Alert** window) or **Ringer on Receive** (**Digital Option** window) are enabled.	User Preference
Reset Timer(Sec)	This sets how long the radio will stay in INDIVIDUAL mode or TALK GROUP mode before returning to the opening channel display.	5 Seconds
Data Decode Comparison	When this is set to **ON**, the radio must decode the proper RAN code before it can receive the following signals: Status, Status Poll, SDM, Radio Check, Stun, Kill Revive, or Remote Monitor.	User Preference

Expert Window

Note: Settings in the **Synchronization** field are for digital operation only. Use the default settings in these fields.

Field	Description	Suggested Setting
TX All Call	Allows you to transmit an all call if set to **Enable**. You will also need to set a Talk Group ID of 65535.	User Preference
RX All Call	Allows you to receive an all call if set to **Enable**.	User Preference

Field	Description	Suggested Setting
Emergency Text	This defines the text that will appear on the radio that transmits the emergency signal	User Defined
Alert Level	Allows you to set the output volume for the emergency signal for the transmitting radio. If the setting is **(Linked)**, the alarm volume is set the rotary knob. The **Silent** field must be set to **Audible**.	User Preference
SQL Level	Sets the squelch level for the just emergency function.	User Preference
Mic Gain	Sets the mic gain while the emergency function is active.	User Preference
Repeat Cycle	This sets how many times the emergency signal will repeat.	User Preference
Silent	The emergency signal can be set to transmit with an audible alarm or in silence.	User Preference
Emer SW ON(Sec)	This sets how long you have to hold down the emergency key until it sends an emergency signal.	2 seconds
Emer SW OFF(Sec)	This sets how long you have to hold down the emergency key to stop an emergency signal.	1 second
Start(Sec)	Defines how many seconds the radio will wait before transmitting the emergency signal. You will hear this time as audible countdown beeps. If the radio is set to repeat, this timer will only be active for the first cycle. The **Silent** field must be set to **Audible**.	User Preference
Repeat(Sec)	Defines how long the TX radio will wait to retransmit the emergency signal. You will hear this time as audible countdown beeps. It is active after the first emergency signal has been sent. The **Silent** field must be set to **Audible**.	User Preference
TX Locator Tone(Sec)	The TX Locator Tone tells you that the RX radio has been located and is about to receive the emergency transmission. This value is the number of times the tone sounds. The tone will repeat as often as the value set in the **Repeat Cycle**.	User Preference
Auto TX(Sec)	The radio will automatically transmit audio for the time set in this field. When this time is up, the Repeat timer starts.	User Preference
RX Locator Tone(Sec)	The RX Locator Tone tells you that the RX radio has received the emergency tone. This value is the number of times the tone sounds. The tone will repeat as often as the value set in the **Repeat Cycle**.	User Preference
Auto RX(Sec)	The RX radio will automatically go into monitor mode for the time set in this field. During this time, all transmissions, regardless of tones, can be heard by the radio.	User Preference
Idle(Sec)	This timer sets how long your radio will remain idle between cycles. During this time period, the radio display will return to the set channel, allowing you to transmit or receive. This time value is added to any value set in the Repeat timer. This timer is active if your radio is set for 3 or more repeat cycles.	User Preference
Man Down	The Man Down function automatically sends an emergency signal when the radio is set horizontal for a time set in the On Timer. This function requires the UT-124R board be installed.	User Preference
On Timer(Sec)	When the radio has been horizontal for the time set in this timer, it will automatically send an emergency signal.	User Preference
Lone Worker ON(Min)	If Lone Worker is set to **ON**, the radio will automatically send an emergency signal if the radio has not been operated for a set amount of time.	User Preference
Reminder(Sec)	This is the time period between when the Lone Worker feature is started and the emergency call is transmitted.	User Preference

Icom America Inc.

Icom America Inc.

2380 116th Ave NE, Bellevue WA, 98004