



Interoperability.....

is a good thing. Conceptually, it allows for more effective disaster response by combining the resources of emergency coordinators (FEMA), law enforcement, fire and rescue, transportation, and healthcare through the utilization of a common communications network.

However, as Tocqueville, Sinclair Lewis, George Orwell, and others have warned us - the combination of government and big business rarely provides either the most effective or cost efficient solution.

Case in point – the emerging trend in metropolitan government to embrace an open communications standard that has evolved over the past twenty years from fragmented VHF and UHF radio networks, to multiple channel dynamically assigned channels (trunking), and most recently from analog to digital. The acknowledged current *standard* is commonly known as APCO-25, or simply P25.

P25 is a standard developed by a committee of *interested* parties – something like putting together a group of foxes to determine the best method for improving hen house security. The avowed intent of many of the participants was to develop communications devices based on open architecture which would encourage technical innovation and lower prices.

In reality, the lower prices did not develop because the major equipment provider chose to develop an *enhanced* system that was basically incompatible with any other manufacturer's products when sold and operated in the enhanced mode. Although this new system is backwards compatible with other P25 radios in its basic form, it does not provide the full functionality available through utilization of the *enhanced* mode.

The result? Radios with closed system architecture that can cost two to three times more than comparable P25 radios and up to ten times more than many models of analog radios. Couple that with the fact that APCO-25 technology is over a decade old and continues as a work in progress. This translates to astronomically high priced radios that are neither efficient or affordable. Some people call this *Astro Digital*.

If you are faced with the dilemma of how to address interoperability with having to apply for foreign aid, we invite you to review an alternative solution. We call it EZ -OP!

Burch H. Falkner

At your service!

An Introduction to EZ-OP!

The perceived advantages of APCO-25 is dynamic channel assignment (trunking), privacy (since it is digital) and interoperability with different brands of radios using a P25 operating platform. This is all well and good since emergency operations, law enforcement, fire & rescue, transportation, and healthcare can all benefit from a *standard* operating system.

The cost of standard P25 radios from BK/Relm, E.F. Johnson, ICOM, Kenwood, and Vertex are typically in the \$1,200 to \$1,500 range for mobiles or handhelds. Radios with *enhanced* features by Motorola and MA-COM will typically cost twice as much. Good quality analog radios are in the \$600 to \$750 range and sometimes less.

The question is *What do you do when the county and the city have chosen an “enhanced” version of a P25 radio system? Do you throw away all of your existing radios so that you can have “interoperability”?* Not necessarily!

In every county within the state of Alabama, our federal government through the development of a single source procurement contract through state purchasing with a military contractor, was able to acquire an interoperable “bridge” that allows (when activated) virtually all types of communications systems to talk to each other. Currently, these “bridges” are only activated during field exercises or in times of extreme emergency, but the fact is that interoperability, to a limited extent, currently exists.

Still, there are times when first responders and transportation users need to talk to hospitals. They don't need to talk to everyone in the hospital – they need to talk to the folks in trauma care. So – what we really need is a reasonable migration plan to digital (there are many reasons for doing this) coupled with the ability to communicate with those outside the hospital who are operating (with federal government subsidies) highly sophisticated APCO-25 *enhanced* communications systems. So how do we accomplish a goal of developing internal communications efficiency along with interoperable capabilities with outside agencies?

We call it EZ-OP, a system consisting of two essential elements. The first is a brand new radio capable of operating in either an analog or digital mode. Translated, this means it is compatible with existing VHF or UHF radio systems operating in an analog mode with either 12.5 or 25 kHz channel spacing with the added capability of operating in a digital mode on these same frequencies plus splitting these frequencies into four 6.25 kHz segments. You get up to 4 operating channels from a single 25 kHz frequency!

In addition, this new radio, known as an F3061 in VHF or F4061 in UHF is capable of operating in either a conventional or trunked mode. In the conventional mode, it can automatically select the nearest repeater. In the trunked mode, it can automatically select an available channel for faster connection to other users. A built in voice encryption feature is standard when operating in the analog mode for compliance with HIPPA regulations. Privacy is even better in the digital mode with a highly sophisticated signal processing system.

The price? Just \$595 each complete with a 2-year warranty. For \$57 more, we offer a choice of extending the factory warranty to 5 years or adding TotalCare service for the first three years that includes next day exchange service, all shipping costs, and repairs as necessary.

The second part of the system is known as a QuickLinx™ Command Center. The amazing device simply connects to one of your F3061 or F4061 radios and one of those enhanced feature P25 radios to provide direct communications in the trauma center to both those in the outside world and inside to YOUR world. The cost? As little as \$1,500 plus the associated radios! (Basic NCS-250 with cables for two radios).

IC-F3061 / IC-F4061 Series

VHF and UHF Transceivers



LTR[®] Conventional/Digital* - Multi-Mode Land Mobile!
*With UT-119H installed.

Basic LTR[®]/Conventional mixed mode operation

The IC-F3061 series provides LTR[®]/conventional mixed mode operation. Group, selective (DTMF), and phone call are available in LTR[®] mode.

IP54/55 Dust-protection and splash, water jet resistance

The IC-F3061 series meets IP54/55 requirements for dust-protection, splash and water jet resistance. Its durable construction is backed up by the aluminum diecast chassis and polycarbonate casing, allowing reliable operation under harsh weather and environmental conditions.

Lithium-Ion battery pack

Supplied 2000mAh Li-Ion battery pack, BP- 232, provides 14 hours* of operating time. Icom's rugged dual-rail guide securely locks the battery to the radio. Optional battery case BP -240 provides a convenient back up and great reassurance in an emergency.

* Typical operation Tx:Rx:Stand-by=5:5:90, power save on

Most popular signalings built-in

The IC-F3061 series has built-in 2-Tone, 5-Tone, CTCSS and DTCS signaling capabilities as standard for group communication or selective calling. Also, the IC-F3061 series can decode ten 2-Tone codes or eight 5-Tone codes on a channel. When a matched tone is received, the following actions are programmable for each code.

- Beep sound
- Bell icon
- Auto TX
- Answer back call
- Stun/kill radio
- Scan



Wide frequency range and large channel capacity

The IC-F3061 series covers a wide frequency range in one version (VHF 136 –174 MHz, UHF 400–470MHz or 450–520 MHz).

The 512 memory channel capacity with 128 zones allows you to divide and store a variety of flexible channel groupings. Memory channel selection can be made with a simple rotation of the rotary channel knob. Wide and narrow channel bandwidth (25/12.5kHz, 30/15kHz) is also programmable.



Full dot-matrix LCD

Using a large full dot-matrix LCD (32 × 18 mm), the IC-F3061 series shows upper and lower case characters clearly. The display setting is selectable from 1 line, 12 characters or 2 lines 24 characters via programming. The bottom row shows assigned functions to the [P0] to [P3] buttons.

Voting mode scanning

The Voting mode scanning detects the Smeter level of repeater stations and automatically selects the strongest station, useful for roaming between 2 or more repeater sites. In addition, the IC - F3061 series has 10 scanning modes including priority scan and double priority scan.

Enhanced audio

The IC-F3061 series employs a BTL amplifier that increases the audio output and the built -in audio compander provides clear, low noise communications.

Built-in inversion-type voice scrambler

The built-in inversion type voice scrambler provides secure conversation as standard. When a more secure system is required, the 32 code non -rolling-type voice scrambler UT -109R and 1020 code rolling type UT -110R are available as an option.

Other features

- 8 DTMF autodial memories
- 2 step reduced power setting
- Power on password
- Busy, repeater lockout functions
- Radio stun and kill functions disable a lost or stolen unit over the air
- Surveillance function temporarily turns off the LED backlight and beep sound
- Powerful 5W output both VHF and UHF and more...
- Flash CPU for future upgrade and more...

6.25kHz digital mode ready

A first in the LMR industry. With the optional UT -119H, the IC-F3061 series provides 6.25kHz digital narrow mode communication that meets the FCC 6.25kHz emission mask requirements for narrow banding, and increases efficiency of channel allocation and use of spectrum. The IC-F3061 series provides 2 optional slots: one optional slot for the UT -119H digital unit and one for another option board



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QuickLinx-M Command Center Family



Two Radio System



System Components

NCS-C250AM19 Mobile Multi-Switcher

The heart of the M series is an NCS-C250 Mobile Multi-Switcher. This "Mini Dispatch Console" connects up to four radios to one microphone and two speakers. The console provides Selected and Unselected audio control and provides a cross banding function with COR or VOX functionality.



Three Radio System



NCS-C251M19 Expansion Unit (for 5 to 8 radio system configurations)

When the system contains more than 4 radios, an NCS-C251 Expansion Unit is included and connected to the C250. The C251 connects up to four (4) additional radios and provides the same functionality as the C250.



Mobile Radios (Customer Supplied)
Available configurations support 2 to 8 radios. All radios are supplied pre-programmed by the customer.

Radio Interface Cables

Cables to connect the NCS-C250 and NCS-C251 with the radios are integrated in the system.