

# THE ART OF COMMUNICATION

- OPERATING PRACTICES THAT IMPROVE YOUR ABILITY TO EFFECTIVELY COMMUNICATE

# THE ART OF COMMUNICATION

- There are many types of communication, peer to peer (between two people.)
  - Typically informal communication by phone, text or email. – conversation can be in one or both directions and can span a large time interval.
- Another is one to a number of people (broadcasting.)
  - Usually a commercial enterprise (AM/FM radio or TV station) providing some structured program format to inform or entertain a large number of people.
  - no immediate feedback
- Another is many to many other people within a known group (network or conference.)
  - Can take many forms, but is usually not spanning a large time interval. Can be structured (a directed net) or unstructured (conference.)
  - generally provides feedback in both directions rapidly

# HAM RADIO COMMUNICATION

- Unstructured communication generally takes the form of casual conversation that may be a lengthy rambling exchange with limited coherent purpose
  - A lot of VHF/UHF repeater operation follows this informal format
- Structured communication can be a brief precise informative conversation with a clear purpose and will result in an action that will be beneficial to one or more people
  - Participating in radio networks or Nets provides experience in how to operate the radio with a clear purpose to get the participants in the net to provide brief precise information to reach a common objective.
  - This results in an overall improvement in the radio community in the “Art of Radio Communications”.

# INFORMAL VOICE COMMUNICATIONS

- Use of non standard phonetics, can result in unintended consequences
  - Call sign KC6UZK –“keep clean 6 unzipped knickers” has unintended connotations well apart from any ham radio activity that could be a form of character assassination not to mention is likely to cause significant confusion by anyone trying to understand what was stated
- Inappropriate on air behavior, followed by inappropriate response from a different ham, can result in unintended consequences
  - Hams that in any way acknowledge inappropriate behavior are not advancing the art of communication. The perpetrator is using social engineering to get other people to disrupt the frequency, simply disregard the initiator or move to a different frequency.
- Think prior to talking

# PHONE OPERATING PRACTICES

- Think about what you need to say to the recipients,
  - Then think about how you are going to say it
  - Then speak when the frequency is clear and end all of your transmissions with your call sign and ask a specific station to continue
  - Then listen for a response



# THE ART OF COMMUNICATION

- Who uses Radio Nets?
  - Ares / Races, Red Cross, Mars, NGO's
  - Large groups that deal with changing situations
- Why do they use Radio Nets?
  - Effective way to communicate to a large distributed group and get feedback rapidly
- When do groups use Radio Nets?
  - Can be used either in a regularly scheduled event or can be used in a continuous operating mode depending the situation in hand.
- Where do groups use Radio Nets?
  - Local nets (typically <20 miles) exist on VHF/UHF bands
  - Regional Nets (typically <200 miles) exist on upper HF bands
  - International Nets (typically < 2000 miles) exist on lower HF bands

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- What are Radio Nets? / How do you run a Radio Net?
  - Most radio nets are regularly scheduled events where members must ask permission to talk on the net
    - this is a directed net.
  - The directed net format allows the net control operator to act as the traffic cop and direct that all participants of the net follow previously defined procedures to improve the efficiency and accuracy of the information presented on the net.
  - Non-directed nets are more like informal conversations and are generally a lot harder to understand with marginal radio propagation as frequent doubles can occur.

# THE ART OF COMMUNICATION

- Directed net procedures
  - All stations must ask permission to talk on the net from the control operator
  - All stations must follow instructions given by the net control operator
  - All stations are encouraged to briefly use simple language to accurately convey only the required information and then give their FCC call sign at the end of the transmission to let the net control operator know that the transmission is complete and to follow FCC rules.
  - The exact format used in the net is defined by the net control operator and can be modified to fit the situation at hand.



# Examples of Voice Nets

9AM Talk Net – N6NFI – 145.230MHz (-) 100Hz starting 9:00AM every weekday (northern California bay area)

- Social net with both new and experienced hams – new hams are welcome to say “hello” and ask questions if needed or comment on any suitable topic – I am net control for Wednesday's net

W6CCN – Western Country Cousins Net – 3.970MHz Isb starting at 9:00PM every day (Western US / Canada)

- Social net with both recent General class ham's and experienced ham's – more structured net where we first call for mobile / portable stations, then net control stations, then members and then visitors / strikers – I am net control for alternating Friday's net

# Examples of Voice Nets

- Win System Tech Net – K6JSI (South Bay area)  
442.900MHz (+) 162.2Hz Fridays at 7:00PM technical discussion group (Q & A for any Ham operator)
- Win System Swap Net – K6JSI (South Bay area)  
442.900MHz (+) 162.2Hz Fridays at 8:30PM items for sale or items of interest to acquire

# PHONE MESSAGES

- When the required information is complex in nature or the intended recipients are large, the information to be transmitted should be put in a message format to preserve the clarity and readability of the information.
  - There are specific techniques adopted by organizations to deal with phone message communications, most but not all are based on the ARRL NTS manual.
  - Santa Clara County Ares and affiliated city Ares groups use these techniques, and highly promote the use of these techniques in their phone operations.

# PHONE MESSAGE TECHNIQUES

- Use previously accepted message form format (ICS-213) to compose the message
  - This avoids confusion in addressing the message (both originator and recipient) and helps with formatting the message into a form that is readily communicated and understood by both originator and recipient.
  - Transmit words in groups of no more than 5 words to allow sufficient time for the recipient to transcribe the word groups on to a message form.
  - Use pro-words to improve readability and reduce errors.



# MORSE CODE AND ITU TELEPHONY PHONETICS

- Using internationally accepted phonics and Morse code makes CW and phone transmissions less prone to errors and more readable
  - Using pro-words in phone transmissions can also greatly enhance readability and reduce errors
  - Control pro-words define beginning and ending of a message or control the flow of speaking during transmissions
  - Clarification pro-words clarify or emphasize what was just said and are spoken after the word group needing clarification
  - Qualification pro-words define a quality within a word group and are spoken within the word group
  - Introductory pro-words alert the recipient of what is coming next and are spoken prior to the word group

CHARACTER	MORSE CODE	TELEPHONY	PHONIC (PRONUNCIATION)
A	• –	Alfa	(AL-FAH)
B	– •••	Bravo	(BRAH-VOH)
C	– • – •	Charlie	(CHAR-LEE) or (SHAR-LEE)
D	– ••	Delta	(DELL-TAH)
E	•	Echo	(ECK-OH)
F	•• – •	Foxtrot	(FOKS-TROT)
G	– – •	GoF	(GOLF)
H	••••	Hotel	(HOH-TEL)
I	••	India	(IN-DEE-AH)
J	• – – –	Juliett	(JEW-LEE-ETT)
K	– • –	Kilo	(KEY-LOH)
L	• – ••	Lima	(LEE-MAH)
M	– –	Mike	(MIKE)
N	– •	November	(NO-VEM-BER)
O	– – –	Oscar	(OSS-CAH)
P	• – – •	Papa	(PAH-PAH)
Q	– – – –	Quebec	(KEH-BECK)
R	• – •	Romeo	(ROW-ME-OH)
S	•••	Sierra	(SEE-AIR-RAH)
T	–	Tango	(TANG-GO)
U	•• –	Uniform	(YOU-NEE-FORM) or (OO-NEE-FORM)
V	••• –	Victor	(VIK-TAH)
W	• – –	Whiskey	(WISS-KEY)
X	– •• –	Xray	(ECKS-RAY)
Y	– • – –	Yankee	(YANG-KEY)
Z	– – ••	Zulu	(ZOO-LOO)
1	• – – – –	One	(WUN)
2	•• – – –	Two	(TWO)
3	••• – –	Three	(TREE)
4	•••• –	Four	(FOW-ER)
5	•••••	Five	(FIFE)
6	– ••••	Six	(SIX)
7	– – •••	Seven	(SEV-EN)
8	– – – ••	Eight	(AIT)
9	– – – – •	Nine	(NIN-ER)
0	– – – – –	Zero	(ZEE-RO)



# PHONE MESSAGE TECHNIQUE

## -EXAMPLES

- Information: I need two radios.
- Spoken: I need two I spell tango whiskey oscar radios.
- Information: Don't enter the building.
- Spoken: Don't I say again Don't enter the building.
- Information: Go to city hall.
- Spoken: Go to ??? ????.
- Response: Say Again all after to
- Spoken: city hall.

# PHONE MESSAGE TECHNIQUE

## -EXAMPLES

- Information: Contact [w6xrl4@gmail.com](mailto:w6xrl4@gmail.com) or [w6xrl4@w7xsc.#nca.ca.usa](mailto:w6xrl4@w7xsc.#nca.ca.usa)
- Spoken: Contact email address whiskey six x-ray romeo lima four at-sign gulf mike alpha India lima dot charlie Oscar mike or email address whiskey six x-ray romeo lima four at-sign whiskey seven x-ray sierra charlie dot pound-sign November charlie alpha dot charlie alpha dot uniform sierra alpha

# PHONE MESSAGE TECHNIQUE

## -EXAMPLES

- Information: \$500.00 should cover the cost, according to <http://x.com/Widget>
- Spoken: dollar-sign figures five zero zero decimal zero zero should cover the cost comma according to internet-address hotel tango tango colon slash slash x-ray dot charlie Oscar mike slash uppercase whiskey lowercase India delta gulf echo tango

# PHONE MESSAGE TECHNIQUE

## -EXAMPLES

- Information: Bring one 30AmpHour LiFePo4 battery to city hall.
- Spoken: Bring figure one mixed group three zero alpha mike papa hotel oscar uniform romeo mixed group lima India foxtrot echo papa oscar four battery to city hall