



Radio Manual 2019

Matthew Robinson, Grimtooth

THINK, LISTEN, PUSH, PAUSE, TALK

**Don't say anything on the radio
that you wouldn't want to see on
the front of The West Australian**

Contents

Radio Handles.....	4
The Radio.....	5
Volume/On-Off.....	5
Channel Selector.....	5
Push To Talk (PTT).....	6
Using the Radio.....	7
Initiating a Call.....	7
Effective Radio Use: THINK, LISTEN, PUSH, PAUSE, TALK.....	7
THINK.....	7
X for Y at Z.....	8
TALKing.....	8
Plain English.....	8
Context.....	9
Acknowledge Everything.....	9
Acknowledge via Readback.....	9
Numbers.....	9
AllComm!!! AllComm!!!.....	9
Break! Break! Break!.....	9
Open Mic! Open Mic!.....	9
Radio Check.....	10
What NOT to say on the radio.....	10
Radical Self Expression and the Radio.....	11
Pre/Post Event.....	12
Technical Information.....	13
Types of Radio Channel.....	13
Why Pausing Is So Important.....	13
Troubleshooting Your Radio.....	14
Bibliography.....	15

Radio Handles

All radio users should have a radio handle (or callsign).

Appropriate handles should:

- be 2-4 syllables long
- not be your legal name
- not conflict with any other handles
- not be confusing
- not conflict with names of major departments/landmarks/street names etc
- be easily and obviously pronounced
- be easily understood in loud, windy environments or over poor radio connections
- be very unlikely to trigger a negative response from participants, staff, medical or law enforcement personnel

Radio users will be asked to submit several choices of radio handle to be considered. A handle will either be approved from one of those choices or the user will be asked to submit new choices. If you have a pre-existing nickname, radio handle (from another event etc) or "burner name" you'd like to use as your radio handle, feel free to request it, but be aware that many burner names may not be work as a radio handle.

The Radio



The radios in use at Blazing Swan in 2017 and 2018 were Motorola ATS2500's. We will likely be using the same radios this year but this is not guaranteed. These radios have been programmed to make them as simple as possible to use.

Volume/On-Off

The volume control is also used to turn the radio on and off. Turning the volume knob clockwise will turn the radio on and turn the volume up. Turning the knob counter-clockwise will turn the volume down. The knob will click and the radio will turn off.

Channel Selector

The channel selector knob will change between the available channels on the radio. The channels are:

- GENERAL – General Channel – Greeters, Committee etc (Repeater)
- GATE (Repeater)
- ADMIN – A channel for longer conversations, users would switch to this channel as required
- RANGERS
- TRAFFIC
- MEDICAL
- FIRE
- DPW
- MEDQUIET – Strictly for Medical staff use only
- FIREQUET – Strictly for Fire crew use only

GENERAL is the main channel in use at Blazing Swan. GENERAL is a repeater channel which means it is more reliable than the other channels.

GATE is a dedicated channel for use by the Gate. GATE is another repeater channel as the repeater allows improved communications between the gate location and the main site.

The other channels are simplex channels (less reliable) and are used for specific purposes. The Technical Information section provides more information about the difference between repeater channels and simplex channels.

Users of other channels may need to switch to the GENERAL channel if they have difficulty communicating on simplex channels.

If you are leaving the channel that you would normally be found on you should let those listening know where to find you. For example:

“This is Grimtooth switching temporarily to RANGERS.”

When you return to your normal channel you should let everyone know that you are back.

“This is Grimtooth back on GENERAL.”

Push To Talk (PTT)

The Push To Talk or PTT button is the large button on the side of the radio that you press when you want to talk over the radio. Press and hold this button while you are talking.

All other buttons on the radio have been disabled and will beep when you press them.

Using the Radio

Initiating a Call

To make a radio call to another radio user, wait until the channel is clear and then call their handle twice followed by your handle.

For example, if Grimtooth wants to get hold of Black Swan they would say, "Black Swan, *Black Swan: Grimtooth.*" Black Swan will respond, "*Grimtooth, go for Black Swan.*"

If you do not hear that acknowledgment, it means that Black Swan did not hear you, or is not ready/able to take your call. Wait a moment and try again before proceeding with your traffic.

Effective Radio Use: THINK, LISTEN, PUSH, PAUSE, TALK

- **THINK**
Think about what you need before you push the talk button.
- **LISTEN**
Listen to make sure the channel is clear and that you're not interrupting something more important. Only one person can talk on the channel at once, so if you try to transmit when somebody else is talking, you won't be heard or will interfere with the other transmission. Don't interrupt emergency traffic with low priority messages.
- **PUSH**
Push the button on the side of your radio, shoulder mic or ear piece to start transmitting.
- **PAUSE**
Wait for a second to allow the radio transmission to start.
- **TALK**
Speak calmly, slowly, and clearly. State what it is you need from the recipient of your traffic or what you'd like them to do about the situation you are in, where you are, and any other pertinent details.

THINK

Think about what you are going to say before you push the PTT button. This is probably the most important (and often hardest) part of using a radio.

In order to help you focus on what you need to say you can use ABC:

ACTION - BRIEF - CLEAR

ACTION: What specific action or result do I want to have happen as a result of this call.

BRIEF: Be as brief as possible.

CLEAR: Despite being brief is my message clear and unambiguous?

X for Y at Z

I need **X resource** for **Y reason** at **Z location**.

Presumably if you are making a call over the radio you need something (the **X resource**). You probably have a reason for needing the resource (for **Y reason**) and you probably need the resource at a location (the **Z location**).

Some examples:

“I need medical assistance at Alliance on Esplanade for a 30-year old female who has injured her foot on a star picket. She is conscious, non-mobile and bleeding.”

“I need immediate fire response in Quiet Camping for a tent fire. We are at the eastern perimeter approx. one-third of the way in.”

“I need medical support at the south side of the Temple for assistance with a highly disoriented and possibly altered participant.”

“I need site crew at the porta-potties on X street next to the Lake for an effluent leak. We have cordoned off the area and are standing-by.”

“I need security to attend a violent altercation on the street near the burn barrel at Kamp Koasis.”

All of these have a resource, a reason and a location. It doesn't really matter which order you say them in as long as you include all three in your request.

TALKing

You've thought about what you are going to say. You've listened to make sure the channel is free and there isn't an emergency situation in progress. You've pushed the PTT button, but you've paused for a second. Now it is time to talk.

Speak **slowly, clearly** and **calmly**. And try to **enunciate**.

This is harder than you might expect. Especially if you are agitated or in the middle of an emergency situation.

Take a deep breath and talk as if you are bored. (Think about how aircraft pilots sound in an emergency; cool, calm and collected.)

If you are in windy location find shelter before transmitting or shield the microphone. If you are in a noisy environment move to a quieter location before transmitting.

Shouting into a radio is unlikely to help you be understood.

Plain English

Use plain English, not CB-talk, 10-codes or other codes.

For example:

“Where are you?” NOT “What's your 20?”

“Situation is all clear” NOT “We're code 4”

Context

Don't assume everyone who is listening now knows what you were asked to do five minutes ago. Provide context when you make a call.

Bad: "We've arrived!" (OK? Arrived where?)

Good: "We've arrived at the unattended fire in quiet camping"

Acknowledge Everything

Always acknowledge transmissions directed to you. If you fail to acknowledge a transmission the person calling you has no idea if you heard what they said.

To acknowledge a transmission you can say "Copy That", "Copy", "Affirmative", "Affirm" or "Roger".

Acknowledge via Readback

An even better form of acknowledgment is to read back what you heard. This is especially useful if you have doubts that you heard correctly.

For example:

Grimtooth: "Yeti, meet me at the Temple at 15:30"

Yeti: "Roger. I will meet you at the Temple at 15:30"

Numbers

Some numbers sound similar over the radio, e.g. fifteen and fifty. To make your meaning clear you can say the individual digits (one-five or five-zero).

AllComm!!! AllComm!!!

If you hear "AllComm, AllComm" then the following transmission is intended to be heard by everyone ("all stations) on the channel and is likely to be important/urgent. For example, "AllComm, AllComm, we have a lost child."

Break! Break! Break!

If you have urgent traffic but the channel is currently in use for less urgent traffic then you can call "Break! Break! Break!" between the transmissions of the current conversation. If you hear a Break call you should stop your conversation and allow the urgent traffic to be transmitted. You may have to call "Break! Break! Break!" several times to be heard. This is one case where you shouldn't pause as you are trying to get your transmission to be heard before someone else starts transmitting.

Break! Break! Break! should only be used in emergency situations; medical emergencies, lost child or something of similar importance.

Open Mic! Open Mic!

Occasionally the PTT on your radio may get pushed without your knowledge. Given that only one person can transmit on a channel at a time this is a problem. Plus everyone on channel gets to hear the ambient noise around you.

If you hear a call of "Open Mic! Open Mic!" then check the people around you with radios to ensure that their PTT is not pushed. If your radio is the culprit you will not hear the "Open Mic!" call as your radio is in transmit mode not receive mode.

Radio Check

When you pick up a new radio, change batteries etc it is worthwhile checking that all the knobs, dials and displays work as expected and then do a "radio check".

It's easy and quick. Make sure the channel is clear (no emergencies are in progress), press the PTT and say "Radio Check".

Assuming your radio is working correctly you should hear someone respond with something like "Loud and clear" or similar.

What NOT to say on the radio

Radio traffic may be recorded for training purposes and may also be monitored by law enforcement or other outside agencies, as well as participants. A general rule is that we don't say anything on the radio that we wouldn't want to see on the front page of The West Australian newspaper the following day. That said, whenever possible we use plain English to improve the clarity of our communications.

Avoid saying any of the following on the radio:

- **Profanity** of any kind
- **Death or Dead** Instead, request medical for a person that is "unconscious and not breathing" and request an immediate face-to-face with the site manager.
- **Do not attempt to diagnose** a participants condition. Instead describe symptoms and severity.
- **Drugs** (by name or generically), **overdose** or **high**. Again, do not try to diagnose; instead describe the participant as "altered", "disoriented", "unresponsive" or "unconscious" as appropriate.
- **Eviction** If you have a situation that appears to violate or blatantly disregard Blazing Swan community standards, request a face-to-face with the site manager.
- **Full legal names or other identifying information** of participants, other than when reporting a lost child, or when requested by the site manager. Be respectful of participants' privacy: they probably don't want their name in the newspaper either.

IN AN EMERGENCY, DO NOT HESITATE TO ACCURATELY DESCRIBE WHAT IS GOING ON. DO NOT BE VAGUE OR ASK FOR A FACE-TO-FACE. SAY WHAT YOU SEE, ASK FOR WHAT YOU NEED, AND REQUEST AN IMMEDIATE RESPONSE AS APPROPRIATE.

Radical Self Expression and the Radio

If you feel the need to use the radio as a method of radical self expression ensure that you will not be interfering with more important communications. You may believe that you will get everyone on site rolling around in fits of laughter but others may be trying to get work done. Remember only one person can transmit on a channel at a time. Before using the radio for humorous self expression consider the following:

- Is there ANYTHING remotely resembling an emergency or serious incident occurring?
- What is the volume of traffic on the channel? Are lots of people trying to talk to each other?
- What is the tone of the conversations that are occurring? Do people seem to be serious at the moment?
- Do NOT “cry wolf!”
- And perhaps most important: Is what you have to say actually funny?

Pre/Post Event

Pre-event and post-event we will be using standard UHF CB radios. There are 80 channels available on UHF CBs but some of these are assigned for different purposes.

It is suggested that for pre/post event channels 12 to 17 inclusive. These channels are standard channels that have not been allocated for specific purposes. These channels will also interoperate with older 40 channel CB radios.

Blazing Swan has UHF CB radios available for use pre/post event but if you have your own radio then you can use this pre/post event.

Technical Information

Types of Radio Channel

There are two types of radio channel in use at Blazing Swan; Repeater and Simplex channels. Most radio communication at Blazing Swan will use a repeater channel.

Repeater

A repeater system utilises a powerful base station radio with an antenna mounted up high to increase the range of the radio signal. The base station rebroadcasts (repeats) your transmissions to everyone on the same channel. Repeaters allow for much more reliable communication over longer distances. However, communications rely on the repeater base station radio to retransmit radio traffic. If the repeater fails then all communication on repeater channels will no longer work.

Simplex

Simplex channels are, as you may have guessed, the simplest type of channel. In a simplex radio transmission one radio *talks* directly to another radio. There is no repeater rebroadcasting the signal. Simplex channels are less reliable than repeater channels as the signal generally has a shorter range than a repeater channel.

In previous years the repeater system used at Blazing Swan has allowed communication between Jilakin Rock City, Kulin and Kondinin.

Why Pausing Is So Important

When you transmit on a repeater a bunch of things have to happen before anybody can hear you:

1. The repeater base station needs to hear you and decide there is a signal that needs to be repeated.
2. The repeater base station needs to start rebroadcasting your signal.
3. All the handheld radios have to hear the rebroadcast and decide that there is a signal and that they should turn on their speakers.
4. All of this takes a little time.

This is why it is so important for you to pause after you press the PTT button on your radio — to give the entire radio system a chance to sync up. If you don't, the first part of your transmission will be cut off (clipped).

Troubleshooting Your Radio

If your radio is not working (won't turn on, isn't receiving anything etc):

1. Check that the battery has charge and is correctly installed.
2. Check that you are on the correct channel.
3. Check that any accessories you have (shoulder mic, ear piece etc) are correctly installed. If an accessory needs to be reconnected; turn the radio off, reconnect the accessory and turn the radio back on.

If you are hearing other transmissions but the signal is noisy or if others are saying your transmissions are noisy:

1. Move a few meters to see if you can get a better connection to the repeater.
2. Move away from any metal structures (domes, scaffolding etc) and try to get into an open area.
3. Check the battery charge.

Failing that get your radio replaced. Do not try to "*repair*" the radio yourself.

Bibliography

Many parts (most) of this document have been adapted from the following documents:

Burning Man Ranger Manual 2016

http://rangers.burningman.org/wp-content/uploads/Ranger_Manual_2016.pdf

ART of Radio 2015

<http://rangers.burningman.org/wp-content/uploads/Ranger-Art-of-Radio-2015.pdf>

ART of Radio – Audio

<http://rangers.burningman.org/wp-content/uploads/RadioARTSoundFiles.zip>

ART of Radio – Video

<https://vimeo.com/101945669>

Jilakin Rock Rangers Training Manual 2017

<http://blazingswan.com.au/wp-content/uploads/Blazing-Swan-Ranger-Training-Manual-2017.pdf>

ACMA Citizen band radio

<http://www.acma.gov.au/Citizen/TV-Radio/Radio/Marine-and-Amateur-Radio/citizen-band-radio-service-cbrs-fact-sheet>