

Blue Ridge Mountain Rescue Group

Locker Orientation and Communications Training



Instructors:

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October 9, 2002

Course Objectives

- Assemble and operate a handheld radio and a base radio.
 - Effectively communicate through either type of radio.
 - Identify and pull gear for a search.
 - Reshelve gear after a search.
-

The Locker

▪ What is the “locker”?

The Locker is the office and storage facility for BRMRG. It is the operational heart of the group. The Locker is made up of four rooms with separate functions:

- Dispatch Room: The main room at the Locker that houses all of the stuff you would need to run ASRC and BRMRG Dispatch from the beginning of a search to the end of a search. This room includes BRMRG's two phones, a computer workstation, the Availabilities Board, the Dispatching Board, and several different kinds of maps of Virginia and the surrounding states.
- The Dungeon: The Dungeon is basically a big closet. Here you can find ASRC mission files for the past decade and beyond, important files for all of the officers, another computer workstation for non-search-critical work (in the event that a search is going on and the Dispatch Room is being used for dispatching), and various odd sorts of things. This is the one room that you shouldn't be going into for anything related to an ongoing search.
- Commo Room: This room is where we store all of the communications equipment that is used at searches. This room's sole purpose is for the storage of anything necessary to operate communications equipment including radios, antennae, batteries, the mast, base radios, DF'ers, mast supply boxes, and harnesses. Because of the nature of the electronics in this room, we need to keep the room as dry and separated from the rest of the gear as possible.
- Equipment Room: As the name implies, this room contains equipment. All of the rest of the group gear that isn't stored in one of the rooms above is stored here. This includes litters, Ops kits, copiers, cell phones, ropes, flagging tape, etc. You get the idea. You will almost certainly need to know where stuff is in this room so that you can effectively mobilize for a search.

It is very important to know where to find gear and equipment during searches, especially the beginning of the search so pay particular attention to where things are located as we go through the Locker.

▪ Why so much gear?

Geez Louise!! Look at all this cool stuff!! It's a smorgasbord of SAR gear!! So why do we need all this stuff? More gear enables us to be more versatile if there are multiple searches in a given time period. There are three types of gear:

- First-Run: This is the gear that should be in the first vehicles going to a search. This includes a map bag, an Ops kit, a copier, radios, the mast, etc.
- Second-Run: This is the gear that can be sent to a single search if there is a need for more gear OR more importantly, this is the gear that should be in the first vehicles going to A SECOND SEARCH that starts. The second-run gear is almost an exact copy of the first-run gear (with a few exceptions) so that if another search starts, we have the capability to send our gear to that search as well.
- Offline: There are really two types of offline: temporarily offline and permanently offline. Any gear that is on the floor in the middle of the Equipment Room or the Commo Room is considered temporarily offline until an Equipment or Operations Officer can check the gear out and get it ready for search operations again. Once gear has been restored to operational readiness, it is placed back on the shelves. Any gear with one or more strips of black electrical tape on it is considered permanently offline. NEVER take gear to a search that has black tape on it, or that you otherwise know is permanently offline. Gear is put permanently offline if it is considered a safety hazard to be used for its intended purpose (i.e. carabiners, ropes, old litters, etc.).

When taking equipment for use at a search or at a training, make sure you SIGN OUT the equipment in the binder on the table in the Equipment Room, including radios. This equipment must then be SIGNED IN again when you bring it back to the Locker. There is a list of all first-run and second-run gear on the whiteboard closest to the door in the Equipment Room. Refer to this list to know what needs to go when you are grabbing gear for a search (you should also check items off on the whiteboard as they get loaded into vehicles).

▪ **How do I know which maps, ropes, and technical gear to pull?**

Some of the gear in the Equipment Room is organized specially, and takes more than just intuition and common sense to figure out. The maps, ropes, and technical gear each have different organization systems, and each is explained below:

- Maps: BRMRG has topographic maps for the entire state of Virginia. To pull the maps for a certain area, check the map of Virginia above the map drawers for the numbers of the regions that you want maps for. Then, find the numbered files in the drawers that match the numbers of the regions. These entire files can and should be removed for a search. In fact, for any given search in a given area, you should grab the 9 files that correspond to the surrounding area (one for the

region that contains the likely search area, and eight for the regions around it). Put all of these files in a single map bag to take to the search (and don't forget the map board!!).

- Ropes: BRMRG has a working system of 10 different ropes that we use for a variety of circumstances. Some ropes are for training, some for missions; some are for vertical work, some for semi-technical work; some ropes are dynamic, and some ropes are static. There is a whiteboard at the far end of the Equipment Room for quick reference that explains the uses for each rope. Make sure you grab the right rope bag for the right situation. Here is the same reference chart:

Rope 1 — Mission only, static
Rope 2 — Mission only, static
Rope 3 — Mission only, dynamic
Rope 4 — Vertical training, static
Rope 5 — Vertical training, static
Rope 6 — Vertical training, static
Rope 7 — Vertical training, static
Rope 8 — Semi-technical training, static
Rope 9 — Semi-technical training, static
Rope 10 — Training, dynamic

- Technical Gear: When you grab ropes, usually you need the rest of the technical gear to properly use the ropes (i.e. carabiners, webbing, anchors, pulleys, etc.) There are three large packs with different sets of gear in them, that should only be used in certain circumstances (just like the different ropes). These packs are organized by color:

Red Pack — Training only (S/T or Vertical)
Green Pack — Vertical gear only (Mission or Training)
Blue Pack — Semi-technical Mission only

Please note!! ALWAYS take helmets when you plan on doing ANY semi-technical or technical work regardless of whether its training or a mission!!

▪ What do I do when I bring back gear from a search/training?

Simple. Leave it on the floor of the room that it belongs in, because it needs to be temporarily offline until it can be checked and made ready for use again. DO NOT RESHELVE gear without having it checked first!! If you have some gear that is permanently damaged (i.e. dropped carabiner, shredded rope, etc.) please mark it with BLACK TAPE and notify the appropriate officer.

BRMRG Communications Training

Why are communications soooooooooo important?

- Understanding

Different ways to communicate at a search:

- radios
- talking
- whistles
- hand signals
- cellular phone

Important: Be clear and concise, take time to **THINK** first

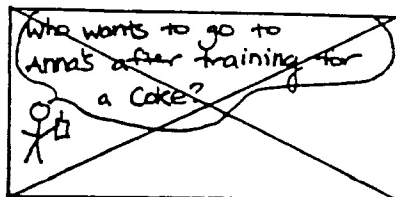
Rules and Regulations

FCC (Federal Communications Commission)

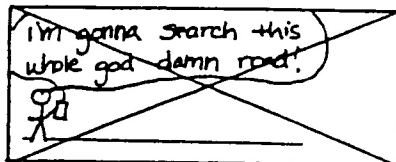
They license individuals and groups to broadcast over frequencies. The FCC can listen in and record broadcasts... so can your regular Joe... It is possible to lose our license if we don't adhere to the regulations, and that would have a major impact on searches.

What ya can't do:

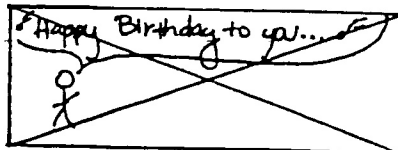
1. Brand names



2. Profanity

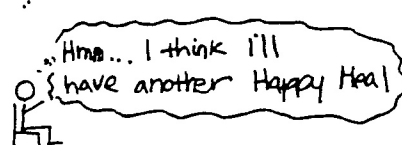
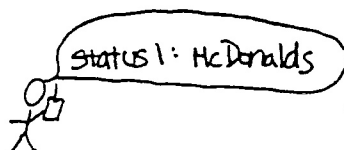


3. Singing



What ya can do:

Be professional and concise. Think of the transmissions as being on a party line
Anything goes in an emergency...



Equipment

Hand-held Radios

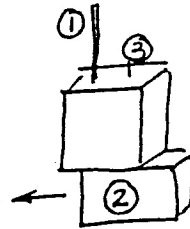
You will have the most contact with this equipment. Very expensive! Use harnesses and ziplock bags (when raining).

Assembly: A-B-C

A: Antenna

B: Battery

C: Channel



Channels/Frequencies

These are located in boxes, and on radios themselves.. keep away from press!

These are frequencies which you should know:

| Call sign | Channel | Frequency (MHz) | Designator |
|-----------|---------|-----------------|-----------------|
| WPEZ758 | 1 | 155.160 | Alpha |
| WNUF658 | 11 | 151.625 | Lima (Business) |

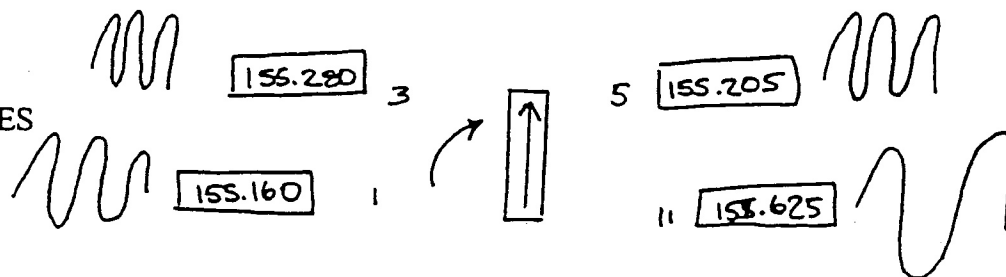
How Radios work...

Line-of-sight



MUST BE ON SAME FREQUENCY

KEEP AWAY FROM EYES



CHANNELS "HOLD" FREQUENCIES

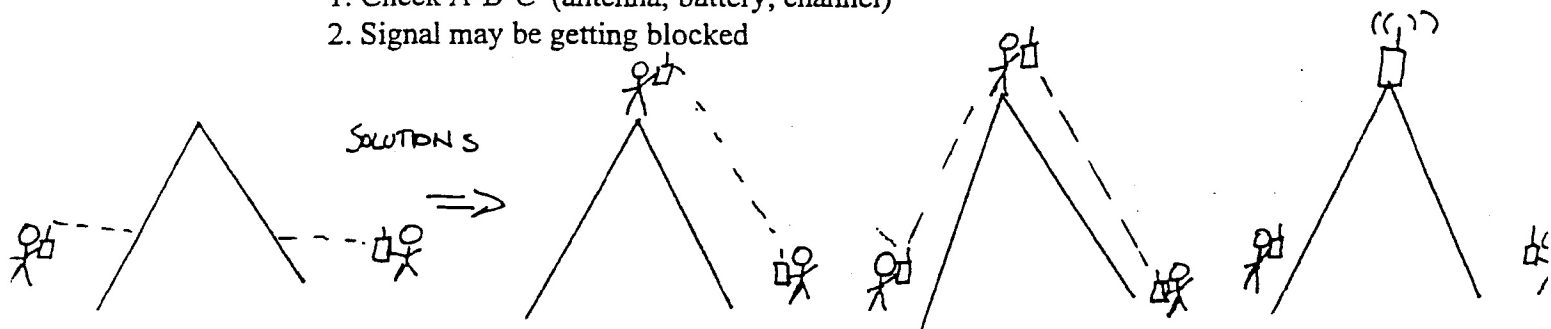
What if?

Not receiving

1. Check A-B-C (antenna, battery, channel)
2. Signal may be getting blocked

ICOM: Adjust squelch till fuzzier

SOLUTIONS



Not transmitting

Same as above

Make sure you are in HIGH power

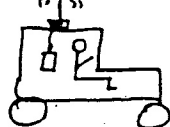
Repeater



Receives on one frequency &
Transmits on another

Mag Mount

-use adapter in case for ICOMs

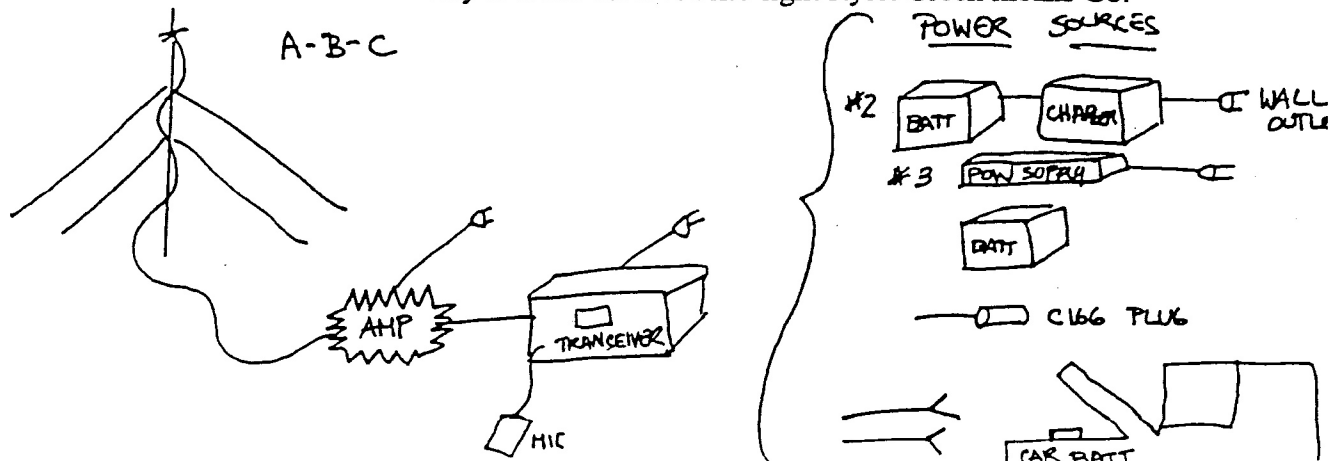


Cell Phone (extra battery)

-recharge upon return to locker

Assembly of base radios

See sheets inside of cases. Assembly is color coded traffic-light style: Green means Go.







BRO (Base Radio Operator)


responsibilities:

- assigning radios/batts
- logs
- recharging spent batts
- USED stickers

Assembly of Mast

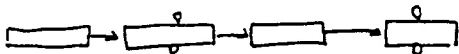
Handy-dandy chart:

| Antenna | Steel | Spaghetti |
|------------|--|---|
| Dog's East | First Run w/ U-bolts  | X |
| Sword | with attachment  | First Run |
| MagMount | with attachment  | with attachment  |

 ← APPOINT 1 PERSON IN CHARGE

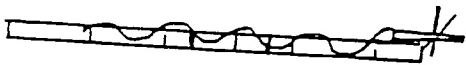
STEP 1:

LAY OUT MAST & CONNECT



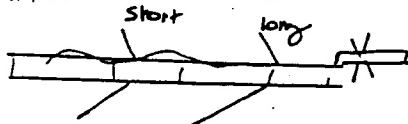
STEP 2:

ATTACH ANTENNA & COAX

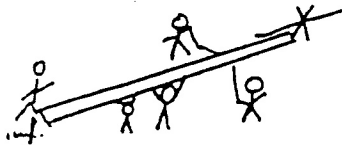


STEP 3:

ATTACH GUIDE LINES



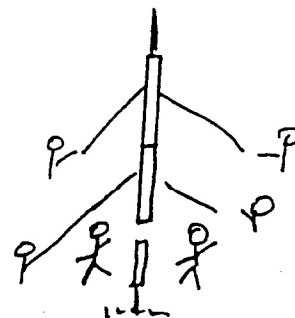
STEP 4: WORK MAST UP & ONTO STAKE
"WALK IT" W/ PEOPLE ALSO ON LINES



STEP 5: PERSON IN CHARGE GIVES DIRECTION
TO STEADY MAST

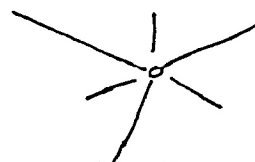


ALTERNATIVE SET-UP FOR SPAGHETTI MAST
(for non conformists)



RAISE UPWARD - ADDING PIECES
AS YOU GO.

TOP VIEW



Guidelines in Triangular
Fashion

prepared by: Lauren Schiff 10/4/95

APPALACHIAN SEARCH AND RESCUE CONFERENCE RADIO SOP CRIB SHEET

For Internal ASRC Use Only

IDENTIFICATION:

- Each transmission identifies the call sign of who is being called, followed by who is calling.
"BASE, this is TEAM DELTA....."
- The last transmission between stations is sent by the station that initiated the traffic and ends with that station's call sign.
".....TEAM DELTA clear."
- Base announces the time & license call sign on each half hour. In convoys, the LEADER also announces the call sign at least every 30 minutes. When no COMCTR (base) is operating or no mobile station has been designated LEADER, and always on CB, individual stations must use the license call sign at the beginning and end of each transmission.

CALLSIGNS:

- License Call signs – VHF FM: KA81942 CB: KIU0954
- Tactical call signs are issued by the CO or DO on a functional basis. The COMCTR is BASE; the lead vehicle in a convoy is LEADER; the DO is DISPATCH preceded by a Group name (i.e. "BLUERIDGE DISPATCH").
- Each field team uses its letter designator: "TEAM ALFA, TEAM BRAVO, etc". A team specifically tasked as a relay will identify as RELAY rather than TEAM: "RELAY ALFA, RELAY BRAVO, etc".
- Team members identify by their functional titles followed by the team designator: "LEADER ALFA, RESCUE ALFA, MEDIC ALFA, RADIO ALFA, DRIVER ALFA, etc". Each sub-team (or incidental radio operator) identifies as a parent letter designator plus a number: "CHARLIE ONE, etc". Other intra-team call signs are also by function: "LEFT WING, BRAKE, etc".
- Staff identify by title: "MISSION COORDINATOR, etc".

International Telecommunications Unit (ITU) Phonetic Alphabet and Numeric Pronunciation

| | | | | |
|--------------------------|-------------------------|-------------------------------|------------|------------------------------|
| A Alfa* (AL fah) | K Kilo (KEY loh) | U Uniform (YOU nee form) | 1 (WUN) | <i>EXAMPLES</i> |
| B Bravo (BRAH voh) | L Lima (LEE mah) | V Victor (VIK tah) | 2 (TOO) | 100 (HUN dred) |
| C Charlie (CHAR lee) | M Mike (MIKE) | W Whiskey (WISS key) | 3 (TREE) | 1000 (TOU SAND) |
| D Delta (DELL tah) | N November (no VEM ber) | X X-Ray* (ECKS ray) | 4 (FOW er) | |
| E Echo (ECK oh) | O Oscar (OSS cah) | Y Yankee (YANG kee) | 5 (FIFE) | 16 One, Six |
| F Foxtrot (FOKS trot) | P Papa (pa PAH) | Z Zulu (ZOO loo) | 6 (SIX) | 20 Two, Zero |
| G Golf (GOLF) | Q Quebec (keh BECK) | | 7 (SEV en) | 1800 One, Eight, Hundred |
| H Hotel (hoh TELL) | R Romeo (ROW me oh) | Numbers are spoken digit by | 8 (AIT) | 35000 Three, Five, Thousand |
| I India (IN dee ah) | S Sierra (see AIR rah) | digit except for multiples of | 9 (NIN er) | 0093 Zero, Zero, Nine, Three |
| J Juliett* (JEW lee ETT) | T Tango (TANG go) | 100 or 1000. | 0 (ZE RO) | 3664 Three, Six, Six, Four |

* NATO/Military Phonetic Alphabets use Alpha, Juliet, Xray

Commonly Used Prowords and Standard Phrases

| | | | |
|----------------|---|-----------------|---|
| THIS IS | Precedes identification. | PREPARE TO COPY | Write this down. (Wait for GO AHEAD before sending message.) |
| OVER | It is your turn to transmit, I am listening. | READ BACK | For verification, read the message I just sent you. |
| GO AHEAD | I am ready to receive your message. | I READ BACK | I am reading back your message for verification. |
| ROGER | I have satisfactorily received your message. DOES NOT mean <u>yes</u> . | THAT IS CORRECT | I verify that you have received or relayed my message correctly. |
| AFFIRMATIVE | Yes. | SPELL | Spell out your message with phonetics. |
| NEGATIVE | No. | SPELL ____ | Spell phonetically the indicated specific information. |
| STAND BY | Wait a moment (other stations keep out). | I SPELL | A phonetic spelling follows. |
| CLEAR* | I have no more traffic, but I will be listening. | FIGURE(S) | Numerals and letters follow which do not spell words. |
| OUT* | I am turning off my radio. | SECURE THE NET | Protect following radio traffic. Sensitive information to follow. |
| SAY AGAIN | Repeat your last transmission. DO NOT say <u>repeat</u> . | CLEAR THE NET | All stations cease transmission. Priority traffic to follow. |
| I SAY AGAIN | I will repeat what I have just said (or last transmission). | STATUS ONE | Subject found; alive and well. |
| SAY AGAIN ____ | Asking last station to repeat the indicated specific information. | STATUS TWO | Subject found; alive, needs evacuation. |
| CORRECTION | I have made an error; what follows is correct. | STATUS THREE | Subject found; dead. |

* NATO/Military and many dispatchers use OUT for same function as CLEAR is used in the ASRC.

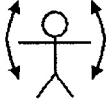
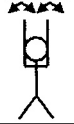
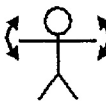





ASRC radio equipment is to be used only during missions and bona fide training operations. All other use is unauthorized. Adjustment and testing (except for brief readiness tests) may be carried out only by FCC licensed technicians authorized by the ASRC Communications Subcommittee.







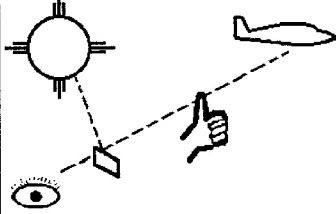
APPALACHIAN SEARCH AND RESCUE CONFERENCE RADIO SOP CRIB SHEET

For Internal ASRC Use Only

Audible and Visual Signals

Visual signals require contrast – Watch your background

| Message | Whistle/Light/Voice | Hands/Flags/Lights |
|---|--------------------------------|--|
| TROUBLE HELP | — — — HELP HELP HELP |  (Obvious attention getter) |
| STATUS ONE (Subject found alive and well) | — . HEEEY ONE |  Don't Cross (Touchdown) |
| STATUS TWO (Subject found needs evac) | — . . HEEEY TWO TWO |  (Similar to TROUBLE) |
| STATUS THREE (Subject found dead) | — . . . HEEEY 3 3 3 |  Cross and Uncross (Dead ball) |
| COME TO ME (or Send a Rescue Team) | . — COME HEEERE |  (Roll) |
| DON'T COME TO ME (or Don't Send a Rescue Team) | . . — DON'T COME HEEERE |  (Wave away) |
| AFFIRMATIVE | — . — . (‘C’ in Morse Code) |  (Nodding) |
| NEGATIVE | — . (‘N’ in Morse Code) |  (Shaking) |

| Ground-to-Air Signals | | |
|---|--|---|
| I Serious Injury | II Require Medicine | X Unable to Proceed |
| F Require Food & Water | K Indicate Direction To Proceed | TM Am Proceeding In this Direction |
| Δ Safe to Land Here | LL All is Well | N Negative |
| Y Affirmative | JL Not Understood | ┐ Wind Direction |
|  Require Map and Compass |  Require Commo Equipment |  Affirmative |
|  Negative |  Understood |  Not Understood |
| Signal Mirror Use  Line up EYE, MIRROR, THUMB, and TARGET. Flash light from SUN & MIRROR on thumb to hit target | | |

Morse Code

| | | | | | | | |
|---------|---------|---------|----------|---------|---------|-----------|---|
| • ? | ALFA | • ? ? ? | JULIET | • • • | SIERRA | • ? ? ? ? | 1 |
| ? • • • | BRAVO | ? • ? | KILO | ? • • | TANGO | • • ? ? ? | 2 |
| ? • ? • | CHARLIE | • ? • • | LIMA | • • ? | UNIFORM | • • • ? ? | 3 |
| ? • • | DELTA | ? ? | MIKE | • • • ? | VICTOR | • • • • ? | 4 |
| • | ECHO | ? • | NOVEMBER | • ? ? | WHISKEY | • • • • • | 5 |
| • • ? • | FOXTROT | ? ? ? | OSCAR | ? • • ? | X-RAY | ? • • • • | 6 |
| ? ? • | GOLF | • ? ? • | PAPA | ? • ? ? | YANKEE | ? ? • • • | 7 |
| • • • • | HOTEL | ? ? • ? | QUEBEC | ? ? • • | ZULU | ? ? ? • • | 8 |
| • • | INDIA | • ? • | ROMEO | ? ? ? ? | 0 | ? ? ? ? • | 9 |

Light Signals: Use a hand over the source as a shutter; short burst of light is a dot, long burst of light is a dash.

Wigwag (Flags): A flag to the SENDER'S right is a dot, to the left is a dash.

SEND SLOWLY