



# ARES Mission Preparedness for Rapid Deployments

## ARES Go-Box



## ARES Go-Bag

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Cherokee County  
ARES AEC

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# Jerry's Background



1. **Ham Radio (AE4ST)**
  - a) **Joined CARS/CARES in 2012**
  - b) **Newly Appointed AEC for Cherokee County**
2. **Civil Air Patrol (CAP) Emergency Services Officer (1960-2000)**
  - a) **34 Search & Rescue (SAR) + 8 Disaster Relief (DR) Missions**
  - b) **Planned/Conducted/Debriefed Over 100 SAR/DR Exercises**
  - c) **Trained CAP Ground Teams**
    - i. **SAR Ground Team Procedures, Gear, Safety/Survival**
    - ii. **Radio Frequencies (Military 122/123/143/148/149 MHz)**
    - iii. **RDF: Mission (121.5/243.0/406.0); Training (121.6/121.775)**
    - iv. **Day/Night Navigation (Map/Compass/GPS)**
3. **REI Outfitter & Life-Long Backpacker**
  - a) **Selected Backpacking Gear for Large-Scale Expeditions**
  - b) **Performed Field Evaluations of New Products**
4. **CERT / SkyWarn Certified**
5. **Professional Experience**
  - a) **Aeronautical Engineer - 45 Years in Aerospace & Telecom**
  - b) **Design Supervisor – AGT1500 Engine for M1 Abrams MBT**
  - c) **Engineering, Mathematics, and Computer Science Degrees**



# Topics Of Discussion

- 1. ARES Mission Preparedness for Rapid Deployments**
- 2. ARES Portable Base Station Go-Box Equipment & Supplies**
- 3. ARES Mobile Equipment & Supplies**
- 4. ARES Mission Field Go-Bag Equipment & Supplies**
- 5. ARES Event (Non-Emergency) Go-Bag Equipment & Supplies**
- 6. Suggested 2013 ARES Exercises**
- 7. Keys to a Rapid Deployment**

**Your Comments & Suggestions are Always Welcome!**



# 1.1 Let's Start with Basic Questions

1. Do you know the call-up procedures for Cherokee County ARES deployment?
2. Do you have all TAC frequencies loaded into your radio(s)? Have you tested those frequencies?
3. Who is your "Mission Buddy"? Work in pairs for support & safety!
4. How long will take you to deploy, once authorized?
5. How long should it take?
6. What specific equipment & supplies should you pack?
7. Is everything you need currently ready for deployment?
8. Are YOU ready for deployment?

Time to Deploy Once Authorized: Under 10 Minutes



## 1.2 Selecting Items for the ARES Mission

### 1. Required to Support the ARES Mission Objectives

- a) Base Station ➡ **ARES Go-Box**
- b) Mobile (Vehicle) ➡ **ARES "Go-Go" Box?**
- c) Off-Road (Field) ➡ **ARES Go-Bag**
- d) Non-Emergency Event ➡ **Event Go-Bag**

### 2. Needed by the Individual/Team During the Mission

- a) Shelter / Clothing
- b) Food & Water
- c) Personal / Team Safety Gear
- d) Non-Radio Tools & Supplies

**Support Skills, Safety, Self-Sufficiency & Adaptability**



## 2.1 Portable Base Station Go-Box



### Top Level

Kenwood TS-590S (HF)  
Kenwood TM-V71A (VHF/UHF) Front Panel  
Scheunemann Morse Dirigent CW Iambic Key  
Twin Kenwood SP-50B Speakers  
Sennheiser HD280 Headset for TM-V71A  
Heil Proset6 Phoneset for TS-590S  
12v LED Lighting (Connected to PowerGate)  
Nifty HT Recharging Desk Stand



### Bottom Level

Kenwood V71A Base Unit  
Alinco DM-330MV DC Power  
KI0BK PowerGate  
Powerwerx Doc Watson Meter  
Cig Lighter Splitter Plug  
Yaesu VX-8GR HT Recharger  
All Powerpole Connectors





## 2.2 Go-Box Antennas



**VHF / UHF**  
Diamond X-200A  
VHF/UHF Dual Band  
VHF Gain: 6dB  
UHF Gain: 8dB  
Strobe (Optional)



**HF - DX**  
Alpha Antenna DX-Jr  
40M-6M  
Adding 80M in Jun13



**HF - NVIS**  
80/60/40M  
Under Construction



## 2.3 Go-Box Emergency Battery Power



### Primary DC Power Backup

MK AGM Battery (102 aH)  
Deltran 12v AGM Battery Tender  
Connected into Go-Box PowerGate  
PowerGate Provides UPS Capability  
Collapsible Magna Cart



### Secondary DC Power Backup

Two MK AGM Batteries (17 aH each)  
Batteries Connected in Parallel (34 aH)  
Deltran 12v AGM Battery Tender Jr.  
Connected into Go-Box PowerGate  
PowerGate Provides UPS Capability





## 2.4 Emergency Power Generators & Fuel



### TopRay Solar Panel

Suitcase Design

Pop-Out Incline Supports

Power: 13 Watts (Max)

Typical Power: 8-12 Watts

Working Voltage: 14 Volts



### Honda EU2000i Portable Generator

2000 Watts / 16.7 Amps @ 120V

Operates 8+ Hours per Gallon of Gas

Fuel Capacity: 1.1 Gallons

Decibel Rating (@ 3M): 59 db

Weight: 46 Lbs (Empty)



### Portable Gas Caddie

Capacity: 14 Gallons

**Provides over Five Days of Continuous Power**



## 2.5 Backup Communications Rig



### Backup Communications Contents

1. Kenwood TM-281 VHF (2M) Radio – 65 Watts
2. Alinco DM-330MV DC Power
3. Larsen 2M NMO 150 Antenna w/Mag Base
4. Emergency Power:
  - a) Two MK 17aH AGM 12v Batteries
  - b) Batteries Connected in Parallel (34 aH)
  - c) Deltran 12v AGM Battery Tender Jr.
5. All Equipment on Wood Base for Portability

**Bedroom Radio Provides NOAA Weather Alerts**



## 2.6 Base Station Accessories



### Base Station Accessories\*

1. Clip Board Box w/Paper, Forms, Pens
2. Nifty Amateur Radio Guide (TM-V71A)
3. Nifty Amateur Radio Guide (TS-590S)
4. ARRL Mini Repeater Directory
5. Nifty Amateur Radio Operating Bands
6. ARRL Mini Call Log
7. ARES Operations Handbook
8. Small Clipboard & Pens

\* Listed Left to Right, Top to Bottom



## 2.7 ARES Supplies Box



### Supplies Box Contents\*

1. Blue Tarp (9' x 12')
2. Surge Protector w/7 Outlets
3. Guy Wires, Stakes & Mallet
4. Antenna Coax Cables (Two @ 50')
5. ARES Operations Guide
6. 220 Watt Power Inverter
7. Nifty Kenwood TS-590S Radio Guide
8. Nifty Kenwood TM-V71A Radio Guide
9. Clipboard Box with Paper, Forms & Pens
10. Heavy-Duty Extension Cord (25 ft)
11. Guy Wire Locks (Taut-Ties)
12. Barricade Tape (Orange)
13. Binoculars (8 x 42)
14. Nifty Amateur Radio Bands Guide
15. Cell Phone Recharger
16. Mini Traffic Logbook
17. Mini Repeater Directory



\* Listed Left to Right, Top to Bottom





## 2.8 Base Station Powerpole (PP) Kit



**Small G.I. Tool Kit**



### **Powerpole Kit Contents\***

1. Screwdriver Set
2. Duct Tape
3. PP Components (15/30/45 Amp)
4. Butane Torch & Fuel Canister
5. Zip Cord Wire (10 Gauge)
6. Zip Cord Wire (12 Gauge)
7. Zip Cord Wire (14 Gauge)
8. Zip Cord Wire (22 Gauge)
9. Vinyl Electrical Tape
10. Powerpole Crimper
11. Cable Ties
12. Wire Cutter/Stripper
13. Scissor

**\* Listed Left to Right, Top to Bottom**





# 3.1 ARES Mobile Radio Communications



## Mobile Communications Contents

1. Kenwood TM-D710A VHF/UHF Radio
2. Green Light Labs GPS
3. Kenwood SP-50B Speaker
4. Comet CA-2X4SR Dual Band Mobile Antenna
  - a) 3.8dB Gain (VHF)
  - b) 6.2dB Gain (UHF)
  - c) Foldable Antenna
5. Garmin 2460LT Car/Pedestrian Navigator
6. Nifty Amateur Radio Guide (TM-D710A)
7. Car-Top Strobe Beacon
8. Road Maps of North GA & Cherokee County
9. Mission Go-Bag
10. Gas Mask





## 3.2 Freezer Storage Bags



Freezer Storage Bags

### Freezer Storage Bags

1. Strong
2. Lightweight
3. Waterproof
4. Resealable
5. Reusable
6. Comes in Pint, Quart & Gallon Sizes
7. Helps to Organize/Access your Supplies
8. Slides Easily Out of a Pouch or Pocket
9. Convenient, Sealable Garbage Bag

Don't Use Non-Freezer Storage Bags!



## 3.3 Medic Bag



**G.I. M-3 Medic Bag**



### **Medic Bag Contents\***

1. Commercial Trauma Pak
2. Trauma Bandages (3 Sizes)
3. Instant Ice Pack (Large)
4. Limb and Finger Splints
5. Ace Bandage
6. Assorted Gauze & Band-Aids
7. Ammonia Inhalants
8. CPR Shield
9. M95 Masks
10. Non-Latex Gloves
11. Triangular Bandage
12. Combat Application Tourniquet (C-A-T)
13. Medical Tape
14. EMT Scissors

**\* Listed Left to Right, Top to Bottom**



## 3.4 Map Case

### New Generation Map Case



### Map Case Contents\*

1. 1:24K Topo Maps – Cherokee County
2. 1:100K Topo Maps – All North Georgia
3. Road Map - Cherokee County
4. Road Map – North Georgia
5. Suunto Baseplate Compasses w/Mag Dec
6. Coordinate Plotting Tools & Rulers
7. Pens, Pencils, Eraser & Marking Pens
8. Weatherproof Notebook

\* Listed Left to Right, Top to Bottom

**Anyone Interested in a  
Map/Compass/GPS Course?**





## 3.5 Portable “Cook” Kit



### Cook Kit Contents

1. MSR Fuel (White Gas) Container & Spout
2. MSR Stove Fuel & Pump
3. MSR Dragonfly Stove
4. Can Opener
5. Drinking (Hot/Cold) Cup
6. Small MSR Stainless Pot
  - a) Measuring Cup
  - b) Storm-Proof Matches & Case
7. Mixing/Eating Spoon



Use “Cook” Kit for Boiling Water ONLY!





## 3.6 Meals & Snacks Bag



Large G.I. Tool Kit



### Meals & Snacks

1. Minimum 3-5 Day Supply
2. Overestimate Food Requirements
3. Select Meals That are Easy to Prepare
  - a) Freeze-Dried Meals (Mountain House)
  - b) Military MRE\* Rations w/Heater Bags
4. Pick Tasty, Nutritious Snacks
  - a) Trail Mix (Favorite)
  - b) Granola Bars (Messy?)
  - c) Energy Bars (Tasty?)
  - d) Beef Jerky (Nutritious?)
  - e) Peanuts (Unsalted)
  - f) M&Ms (Peanut or Plain)
  - g) Individual Drink Mixes

\* **MRE = Meals Ready to Eat** or **Meals Rejected by Ethiopians**



## 3.7 Water – The Most Critical Supply Item



### Water

1. Minimum 1-2 Gallons/Day Needed
2. Store Water with Water Preserver
3. Use Multiple Water Containers
  - a) 7-Gallon Container (Base Station)
  - b) 5-Gallon Container (Vehicle)
  - c) 3-Liter Reservoir (Mission Go-Bag)
  - d) 1-Liter Nalgene Bottles (Event Go-Bag)
4. All Containers Should be BPA-Free
5. Drink Water Regularly (Every Hour)
6. Watch for Early Symptoms of:
  - a) Dehydration
  - b) Heat Exhaustion
  - c) Heat Stroke
7. Pre-Fill Large Containers w/Water Preserver



Water Preserver

**Don't Become a Mission Liability! Hydrate!**



## 3.8 Clothing (Seasonal)



**General Duffle Bag**

### Clothing Contents

1. Basic Clothing
  - a) Underwear (3 Sets)
  - b) Wide-Brim Hat
  - c) Footwear (Boots & Sneakers)
  - d) Cargo Pants (2)
  - e) Belts (2)
2. Summer Clothing
  - a) Light Hiking Socks (3)
  - b) T-Shirts (4)
  - c) Sweat Shirt
  - d) Light Jacket or Wind Breaker
3. Winter Clothing\*
  - a) Heavy Hiking Socks (3)
  - b) Long Underwear
  - c) Sweat Suit
  - d) Ski Cap w/Mask
  - e) Winter Gloves and/or Mittens
  - f) Winter Jacket w/Hood

\* Protect Against Hypothermia & Frostbite  
(Focus on Hands, Feet & Head)

**Use 7-Day Forecasts with High/Low Temps to Adjust Clothing**



## 3.9 Overnight Gear



### Overnight Gear Contents\*

1. Insulated, Mobile Cooler
2. Cooler w/Integrated Freezer Ice Pack
3. Backpacking (Mummy-Style) Sleeping Bag
  - a) Synthetic-Filled Bag (3-Season)
    - i. Provides Insulation When Wet
    - ii. Bulkier, Heavier, Lower-Priced
  - b) Down-Filled Bag (Preferred in Winter)
    - i. Loses Insulation When Wet
    - ii. Less Bulky, Lighter, Higher-Priced
  - c) Summer – 55° Bag or Wool Blanket
  - d) Spring/Fall – 40° Bag w/Blanket
  - e) Winter – 20° Bag w/Blanket or 0° Bag
4. “Two”-Person Backpacking Tent
  - a) Fits “One” Person Plus
  - b) Room for Go-Bag & Clothing/Boots
5. Wool Blanket (Reduces Bag Temp Rating≈10°)
6. Sleeping Pad (3/4 Size Therm-a-Rest)

\* Listed Left to Right, Top to Bottom

**Be Prepared for a Multi-Day Mission with Extreme Weather**





## 4.1 Mission Go-Bag (Maxpedition Condor II)



### Rear View

- Left Side: Cell Phone & Mini Map Pouch
- Right: Yaesu VX-8GR Dual-Band Radio & First Aid Pouch
- Center Pouch: Utility Pouch
- Center Back: Essentials + Trauma Kit
- Center Middle: Main Compartment
- Center Front: Camelbak 100oz (3 Liter) Reservoir



### Front View

- Maxpedition Condor II Bag (1950 Cu. Inches)
- Yaesu HT Lapel Mic (Use with Non-Prime Hand)
- Diamond RH 707 HT Tilttable Antenna (+3dB)
- Diamond 77CA HT 15" Antenna (+6dB)
- Camelbak Insulated Tube & Bite Valve
- CRKT Folding Knife (Tanto Blade) & Pouch





## 4.2 Mission Go-Bag HT Radio & Accessories

### HT Radio & Accessories\*



1. Yaesu VX-8GR Dual-Band Radio w/GPS
2. Diamond RH-707 Tilttable 8.25" Antenna
3. Diamond RH-77CA 15" Antenna
4. Spare Yaesu VX-8GR Lithium Ion Battery
5. Yaesu VX-8GR AA Battery Case
6. Spare AA Batteries (12)
7. Yaesu HT Lapel Speaker Mic
8. Yaesu VX-8GR Battery Recharger
9. Nifty Yaesu VX-8GR Radio Guide
10. Nifty HT Recharging Stand
11. Yaesu VX-8GR Soft Case

\* Listed Left to Right, Top to Bottom



## 4.3 Mission Go-Bag – Main Compartment



### Main Compartment Contents\*

1. Toilet Paper (On Top!)
2. Leather Work Gloves
3. Light Duty Hiking Gloves
4. Knee Pads
5. Goggles
6. Orange Vest
7. Nifty Yaesu VX-8GR Radio Guide
8. Spare Hiking Socks
9. Military Poncho
10. Garbage Bag
11. Snacks
12. Mini-Armored Binoculars (8 x 36)
13. Orange Barricade Tape
14. Portable Strobe & Spare Battery
15. Mini-Duct Tape
16. Paracord (100 ft)

\* Listed Left to Right, Top to Bottom



## 4.4 Mission Go-Bag – Essentials Top Pocket



### Essentials Pocket Contents\*

1. Shooting Sunglasses
  - a) Interchangeable Lenses
  - b) Impact Resistant
  - c) U/V Protection
  - d) Polarized
2. Spare HT Batteries (Tested Quarterly)
3. Personal Medications (Not Shown)

\* Listed Left to Right, Top to Bottom



## 4.5 Mission Go-Bag – Trauma Kit Pocket



### Trauma Kit Contents\*

1. Arm/Leg Splint
2. Finger Splint
3. CPR Shield
4. Israeli 4" Trauma Bandage
5. Israeli 6" Trauma Bandage
6. Second Skin (for Blisters)
7. Triangular Bandage
8. Sawyer Bite & Sting Kit
9. 3M M95 Masks
10. Non-Latex Gloves

\* Listed Left to Right, Top to Bottom

**Anyone Interested in Building a First-Aid Kit and/or Trauma Kit?**





## 4.6 Mission Go-Bag – Basic First Aid Pouch

### First Aid Kit Contents



Maxpedition FR-1 Pouch

- |                         |                              |
|-------------------------|------------------------------|
| 4 Pair Non-Latex Gloves | 1 Small Neosporin Tube       |
| 4 Cleaning Wipes        | 4 Betadine Packets           |
| 4 Large Band-Aids       | 4 Disposable Tweezers        |
| 4 Medium Ban-Aids       | 4 Single-Use Thermometer     |
| 8 Small Band-Aids       | 1 Finger Splint              |
| 4 Fingertip Band-Aids   | 1 Small Instant Cold Pack    |
| 4 Knuckle Band-Aids     | 5 Burn Water Gel Packets     |
| 4 Butterfly Closures    | 20 Tylenol Tablets           |
| 4 Eye Pads              | 1 Benadryl Stick             |
| 4 Gauze Pad (4"x 4")    | 1 Sunscreen Stick (SPF 30)   |
| 1 Quick Clot Gauze      | 1 Lip Balm (SPF 30)          |
| 1 Triangular Bandage    | 1 Visine Eye Relief Bottle   |
| 1 Ace Bandage (3")      | 1 Pump Mosquito Repellent    |
| 1 Moleskin Bandage      | 1 Water Purification Tablets |

**In the Field, There is NO Such Thing as a "Minor Scratch"!**





## 4.7 Mission Go-Bag – Utility Pouch



**Maxpedition E.D.C. Pocket Organizer**

### **Utility Pouch Contents\***

1. Pens, Pencils & Markers
2. Waterproof Notebook
3. Small Box Cutter
4. Backup Pocket Knife
5. Paracord (25 ft)
6. P-51 Can Opener
7. Mini Duct Tape
8. Streamlight ProTac Flashlight
9. Paracord (10 Ft)

**\* Listed Left to Right, Top to Bottom**



## 4.8 Mission Go-Bag – Map Pouch



**Condor MA35 Map Pouch**

### **Map Pouch Contents\***

1. 1:24K Topo (Quad) Map
2. Suunto MC-2 Mirror Compass
3. Cammenga Tritium Compass
4. Grid Reader
5. Spare Batteries (Headlamp)
6. Petzl LED Headlamp w/Strobe
7. Pens & Markers
8. Ranger Beads (Day/Night Nav)

**\* Listed Left to Right, Top to Bottom**

**Determine Your Pace Counts for Various Terrain Conditions**



## 4.9 Mission Gear Stored On-Person

### Items Stored On-Person

1. FCC/CARES ID Badges & Fox-40 Whistle
2. Weatherproof Notebook & Pens
3. Trail Mix Snack
4. Yaesu VX-8GR HT Radio & Spare Battery
5. Emergency Blanket
6. Cell Phone
7. Toilet Paper (Fan-Folded)
8. Signal Mirror in Floatable Case
9. Suunto Baseplate Compass on Lanyard
10. Ironed Handkerchief → Emergency Bandage
11. Wallet with ID & Extra Cash
12. Nifty Yaesu VX-8GR Mini-Guide
13. CRKT Pocket Knife
14. Storm-proof Matches & Case
15. Car Keys w/Spare Key Hidden on Car
16. Personal Meds (Not Shown)



**Cargo Pants or Military BDUs are Ideal for Storing Items**



## 5.0 Event (Non-Emergency) Go-Bag



**Maxpedition Jumbo Versipack**

### **Event Go-Bag Contents**

1. HT VHF/UHF Radio & Lapel Mic
2. Spare HT Radio Batteries
3. Cell Phone
4. Weatherproof Notebook & Pens
5. Basic First Aid Kit with Sunscreen
6. Personal Medications
7. Nalgene Bottle (BPA-Free)
8. Paracord (25 ft)
9. Mini Duct Tape
10. Compact Flashlight
11. Extra Pair of Hiking Socks
12. Poncho
13. Toilet Paper
14. Sunglasses
15. Extra Snacks





## 6.0 Suggested 2013 ARES Exercises

1. April: Create a CARES Individual/Team Inventory
2. May: Program/Test Radios (CARES TAC1 – TAC10)
3. June: Practice ARES Call Up Procedures
4. July: Organize/Pack ARES Equipment & Supplies
5. August: Practice ARES Mobilization #1 (Day - Day Gear)
6. September: Practice ARES Mobilization #2 (Night – Night Gear)
7. October: Practice ARES Mission (Weekend – Full Gear)
8. November: Practice Inter-County ARES Disaster Mission (Day)
9. December: Practice Inter-County ARES Disaster Mission (Night)

**Make Mistakes & Test Gear During Exercises, NOT During a Mission!**



## 7.0 Keys to a Rapid Deployment

1. Understand and practice primary/secondary ARES call-up procedures.
2. Program all CARES TAC frequencies into your radio & confirm operability.
3. Organize, package and centrally locate your equipment and supplies (preferably in your vehicle), ready for rapid deployment, even at work.
4. Check your supplies quarterly (e.g., spare batteries, food/medicine expiration dates) to minimize deployment delays or problems in the field.
5. Monitor 7-day weather forecasts for severe weather & high/low temps
6. Maintain your vehicle with a minimum half-tank of gas.
7. Assume no commercial power (i.e., no operable gas stations or ATMs).
8. Fill up with home-stored gas before a possible mission.
9. Keep extra cash at home for a possible mission.
10. Practice rapid deployments to reduce time.
11. Attend monthly exercises to master procedures, gear & skills.
12. Train & deploy with a “Mission Buddy” for mutual support and safety.
13. Exercise regularly to build strength & stamina.

**Rapid Deployments Save Lives!**



# Jerry's Contact Information



**For Inquires or a Copy of Presentation**

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**73...**