



Salt Lake County A.R.E.S., Inc.

Certification Plan

[ARES 105]

Revised 22 April 2006

SLCoARES has established a certification program to monitor and document the progress and accomplishment of its mission: to train and provide a pool of qualified emergency and public service communicators. The certification program consists of five levels ranging from the very rudimentary and relatively easily accomplished Level One, through the highly qualified and sophisticated requiring significant effort and dedication Level Five. The certification program assists SLCoARES management and members alike in monitoring personal performance and SLCoARES readiness, in assessing the skills and capabilities of its members, and in documenting these matters for review by the agencies we serve.

Once a member achieves a given certification level, that certification remains effective so long as the member demonstrates a willingness to remain minimally active with SLCoARES. This currency requirement is fulfilled over the period of a calendar year, by participation in SLCoARES activities on an average of one per month. Minimally, this means checking into weekly nets, but may include much more significant activities such as construction projects or participation in an SET or public service event conducted under the auspices of SLCoARES.

Several endorsements document special knowledge, ability, and equipment in preparation for assignments at various facilities throughout the valley. These endorsements are encouraged, but are adjunct to the certification plan. We encourage SLCoARES members to activate stations at all hospital and EOC facilities we serve.

We especially urge all members to prepare a personal Family Emergency Preparedness Plan that, by itself, ensures great care, planning and preparation for you and your own family.

The following pages describe the requirements for each of the five certification levels and outline the currency requirement. They document each member's attainment of the various levels of certification, and currency. Special endorsements follow to further define a member's special skills and readiness.

Questions, suggestions, proposals for modification, and other comments are earnestly solicited and will be gratefully received.

Each certification level has both equipment and training components. As you complete the requirements for each level, submit a copy of the certification or endorsement sheet to the EC or an AEC. Have him/her validate your record of certifications and endorsements with his/her signature on the page following.



Salt Lake County A.R.E.S., Inc.

Record of Certification and Endorsement

[ARES 105]
Revised 22 April 2006

Call sign	Name
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Personal Record of Certification Levels and Endorsements Earned

CERTIFICATION LEVELS		
LEVEL ONE	Date	Certified by
LEVEL TWO		
LEVEL THREE		
LEVEL FOUR		
LEVEL FIVE		

SPECIAL ENDORSEMENTS		
Hospitals	Date	Certified by
EOCs		
Packet Radio Operator		
Packet Radio Station		
Communication Trailer Operator		
Communication Trailer Transport		

SPECIAL COURSES		
ARRL EmComm EC001	Date	Certified by
ARRL EmComm EC002		
ARRL EmComm EC003		
FEMA		



Salt Lake County A.R.E.S., Inc.

Level One Certification

[ARES 105]

Revised 22 April 2006

Call sign	Name
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Equipment Requirements (Grab-n-Go Kit)		
Completed	AEC Initials	
		Radio, dual-band or two-meter programmable synthesized CTCSS capable handi-talkie (HT)
		Antenna, HT 1/2 or 5/8-wave gain
		Battery pack, HT alkaline with 2 sets of batteries
		Earphone for HT
		Briefcase, gym bag or similar containing:
		Salt Lake County ARES (SLCoARES) Certification Plan handout [ARES105]
		Map of Salt Lake County: Rand McNally Atlas or folding map (Directory entries in this resource manual reference page and grid numbering found in the 2003 Salt Lake and Vicinity Street Guide book version. Although not required, this edition could assist in quicker response to assignments.)
		Message forms [ARES213]
		Writing paper
		Pens and pencils
		Clipboard
		Large size plastic trash bags

Training Requirements		
Completed	AEC Initials	
		Nets: Check into three SLCoARES nets within two months: ___/___/___, ___/___/___, ___/___/___.
		Technician or higher license
		Register with SLCoARES as Associate or Supporting Member
		Attend one In-person meeting ___/___/___
		Drive to the locations of three EOCs or hospitals for Level One certification. Prepare Transit Reports [ARES404] from home and from work to each facility. Continue to visit all EOCs and hospitals. See EOC and Hospital Endorsements.
		Personally observe one Net Control Station (NCS) ___/___/___.
		Demonstrate ability to program your own HT radio with SLCoARES VHF (11) and if applicable, UHF (10) repeater and simplex frequencies. [ARES522]
		Design Family Emergency Preparedness Plan

By my initials above, I certify that I have completed each of the above items.
Signed
Date

I have reviewed and approved the foregoing certification.
EC/AEC
Date



Salt Lake County A.R.E.S., Inc.

Level Two Certification

[ARES 105]
Revised 22 April 2006

Call sign	Name
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Equipment Requirements (Grab-n-Go Kit)			
Completed	AEC Initials	Equipment requirements for Level One	
		Current Resource Manual (in three ring binder)	
		Flashlight with at least one spare set of batteries (in addition to radio batteries)	
		Antenna, mag-mount (dual-band antenna is most useful)	
		RF adapters -- one each of the following:	
		Female UHF (SO-239) to male BNC	
		Male UHF (PL-259) to female BNC	
		UHF barrel (double SO-239)	
		Male UHF (PL-259) to male SMA (6-12" cable) if you have SMA radios	
		Tool kit minimally including:	
		Screwdrivers, #1 and #2 Phillips; large and small flat blade	
		Pliers	Cutters, diagonal
		Electrical tape	Pocket knife
		Adjustable wrench	
		Coax, short length (approx. 5 feet RG-58 or better), with UHF connectors (PL-259)	
		Money, \$10.00 in cash, at least \$5.00 of which is in change (note: this money is for the Grab-n-Go kit specifically, and should not be lumped into the 72 hour kit required in later certification).	

Training Requirements			
Completed	AEC Initials	Training requirements for Level One	
		Register with the State of Utah RACES program. State RACES # _____.	
		Nets: Check into three SLCoARES nets within two months: ____/____/____, ____/____/____, ____/____/____.	
		Act as NCS for one SLCoARES net: ____/____/____.	
		Activate two EOC stations during SLCoARES nets for Level II certification. Prepare Facility Reports [ARES403] for each EOC. Continue to activate all EOCs. See EOC Endorsement.	
		Gain EC or assistant EC approval of, prepare, and present training topic during one SLCoARES net: ____/____/____; topic: _____	
		Assess and mitigate home hazards, e.g., secure water heater, etc.	

By my initials above, I certify that I have completed each of the above items.
Signed
Date

I have reviewed and approved the foregoing certification.
EC/AEC
Date



Salt Lake County A.R.E.S., Inc.

Level Three Certification

[ARES 105]
Revised 22 April 2006

Call sign	Name
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Equipment Requirements (Grab-n-Go Kit)					
Completed	AEC Initials	Equipment requirements for Level Two			
		Radio: dual-band or two-meter programmable synthesized CTCSS capable mobile, 20W minimum, with ARES connectors (Note: a dual-band radio satisfies both Level Three and Level Five radio requirements.)			
		Fuses for mobile radio			
		IMPORTANT NOTE: <i>Effective 21 May 2003, Salt Lake County ARES has adopted the national connector convention placing the positive terminal of the Anderson Power Pole connector on the left rather than the old standard of positive on the right. When using power sources and equipment from others, be sure that power connections are properly made.</i> ARES power connector adapters to include:			
		<table border="1" style="width: 100%;"> <tr> <td style="width: 33%;">Battery clips to ARES</td> <td style="width: 33%;">Cigar lighter to ARES</td> <td style="width: 33%;">4-way (or more) ARES</td> </tr> </table>	Battery clips to ARES	Cigar lighter to ARES	4-way (or more) ARES
Battery clips to ARES	Cigar lighter to ARES	4-way (or more) ARES			
		First aid kit (personal)			
		Personal medications for 3 days			
		ARES photo ID card			

Training Requirements		
Completed	AEC Initials	Training requirements for Level Two
		Attain SLCoARES Operational Membership status.
		Demonstrate ability to program your own mobile radio with SLCoARES VHF (11) and if applicable, UHF (10) repeater and simplex frequencies. [ARES522]
		Complete ARRL course: Level 1 Amateur Radio Emergency Communications EC-001.
		Act as NCS for two SLCoARES nets: ___/___/___, ___/___/___.
		Gain EC or assistant EC approval of, prepare, and present training for one SLCoARES or RACES net: ___/___/___; topic: _____
		Participate in one field exercise: ___/___/___; topic: _____
		Activate two hospital stations during SLCoARES nets for Level Three certification. Prepare Facility Reports [ARES403] for each hospital. Continue to activate all hospitals. See Hospital Endorsement.
		Activate an EOC or hospital station for at least one SLCoARES or RACES net: Facility: _____/___/___.

By my initials above, I certify that I have completed each of the above items.
Signed
Date

I have reviewed and approved the foregoing certification.
EC/AEC
Date



Salt Lake County A.R.E.S., Inc.

Level Four Certification

[ARES 105]
Revised 22 April 2006

Call sign	Name
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Equipment Requirements (Grab-n-Go Kit)		
Completed	AEC Initials	Equipment requirements for Level Three
		Antenna, dual-band or two-meter portable station antenna, meeting the operational needs of the Levels One and Three radios. Consider the UHF radio requirement in Level Five when selecting your antenna. Non-rigid antennas like the twin-lead j-pole while handy, are not acceptable.
		Coax, 50 feet (RG-8, RG-8X, or better), with UHF connectors (PL-259)
		72-Hour Self-sufficiency Kit to include (minimally):
		3 MREs (meals ready to eat)
		2 quarts water (minimum)
		Poncho or rain gear
		Pocket knife
		Personal hygiene items
		Personal medications

Training Requirements		
Completed	AEC Initials	Training requirements for Level Three
		Nets: Check into five additional SLCoARES nets: ___/___/___, ___/___/___, ___/___/___, ___/___/___, ___/___/___.
		Participate in one SET drill: ___/___/___ (Field exercise is acceptable in lieu of a SET drill.)
		Gain EC or AEC approval of, prepare or co-prepare one field exercise using ARES forms: ___/___/___; topic: _____
		Act as NCS for two SLCoARES nets: ___/___/___, ___/___/___.
		Complete ARRL course: Level 2 Amateur Radio Emergency Communications EC-002.
		Gain EC or assistant EC approval of, prepare, and present training for one SLCoARES or RACES net: ___/___/___; topic: _____
		Activate an EOC or hospital station for at least one SLCoARES or RACES net: ___/___/___.

By my initials above, I certify that I have completed each of the above items.
Signed
Date

I have reviewed and approved the foregoing certification.
EC/AEC
Date



Salt Lake County A.R.E.S., Inc.

Level Five Certification

[ARES 105]
Revised 22 April 2006

Call sign	Name
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Equipment Requirements (Grab-n-Go Kit)		
Completed	AEC Initials	
		Equipment requirements for Level Four
		Radio: UHF programmable synthesized CTCSS capable mobile, 20W minimum, with ARES connectors (may be dual-band mobile radio in Level Three)
		Battery(ies), 12 volt with at least 10 amp-hour combined capacity
		Portable antenna tripod, mast and hardware (to support antenna in Level Four)
		Programmable "scanner" type receiver
		Portable lighting (e.g., Coleman, propane or battery)
		Soldering iron and power source
		ARES power extension cord (25 foot 14 AWG minimum)
		72-hour kits for all family members

Training Requirements		
Completed	AEC Initials	
		Training requirements for Level Four
		Demonstrate ability to program your own UHF radio by programming SLCoARES UHF (10) repeater and simplex frequencies. [ARES522]
		Gain EC or AEC approval of, prepare or co-prepare one field exercise or SET drill: ___/___/___; theme: _____
		Complete ARRL course: Level 3 Amateur Radio Emergency Communications EC-003.
		Complete one FEMA Emergency Management home-study course: ___/___/___; Course: _____
		Attend at least one state DESHS sponsored workshop or course: ___/___/___; topic: _____

By my initials above, I certify that I have completed each of the above items.
Signed
Date

I have reviewed and approved the foregoing certification.
EC/AEC
Date



Salt Lake County A.R.E.S., Inc.

Hospital Endorsements

[ARES 105]

Revised 22 April 2006

Call sign	Name
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For each facility listed below, complete and demonstrate the following requirements. Some facilities are in various stages of planning and construction, and listed here pending completion; orientation at all is recommended.

Training Requirements For Each Facility		
<ul style="list-style-type: none"> ▪ Prepare a Facility Report [ARES403] for each facility. ▪ Prepare a Transit Report [ARES404] for each facility. 		
Facility Name	Certified By	Date
Alta View Hospital		
Cottonwood Hospital		
Intermountain Medical Center (sched 2007)		
Jordan Valley Hospital		
LDS Hospital		
Pioneer Valley Hospital		
Primary Children's Hospital		
St. Mark's Hospital		
Salt Lake Regional Medical Center		
Shriner's Hospital		
University of Utah Hospital		
University of Utah - Greenwood Health Center		
University of Utah - Redwood Health Center		
Veteran's Administration Hospital		



Salt Lake County A.R.E.S., Inc.

EOC Endorsements

[ARES 105]
Revised 22 April 2006

Call sign	Name
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For each facility listed below, complete and demonstrate the following requirements. Some facilities are in various stages of planning and construction, and listed here pending completion; orientation at all is recommended.

Training Requirements For Each Facility

- Prepare a Facility Report [ARES403] for each facility.
- Prepare a Transit Report [ARES404] for each facility.

State of Utah	Certified By	Date
National Weather Service		
Salt Lake County		
American Red Cross, Salt Lake Chapter		
Alta, Town of		
Bluffdale City		
Draper City		
Herriman City		
Holladay City		
Midvale City		
Murray City		
Office of the Medical Examiner		
Riverton City		
Salt Lake City		
Sandy City		
South Jordan City		
South Salt Lake City		
Taylorsville City		
University of Utah		
Utah Transit Authority -- Central		
Utah Transit Authority -- Meadowbrook		
Valley Emergency Communications Center (VECC)		
West Jordan City		
West Valley City		



Salt Lake County A.R.E.S., Inc.

Packet Operator Endorsement

[ARES 105]

Revised 22 April 2006

Call sign	Name
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Equipment Requirements (Grab-n-Go Kit)		
Completed	AEC Initials	ARESPack packet software, latest version
		UHF voice station (voice station may be dual-band radio)
		VHF voice station (voice station may be dual-band radio)

Training Requirements		
Completed	AEC Initials	Draw a block diagram of a complete packet station. Label all components and cables. Include power sources.
		Demonstrate ability to operate packet station.
		Set your call sign in the TNC: MYCALL.
		Set the station's tactical call sign to beacon every 10 minutes.
		Demonstrate familiarity with DOS operating system.
		Search computer equipment to find installed ARESPack software.
		Demonstrate ability to install ARESPack onto a hard disk.
		Demonstrate ability to run ARESPack from a floppy disk.
		Demonstrate ability to use ARESPack software to:
		Customize blank message form for a specific event and location.
		Compose a packet message.
		Edit an existing packet message.
		Save the packet message for later transmission.
		Print a saved ARESPack message.
		Send two packet messages from the editor.
		Send previously composed message.
		Receive two ARESPack messages.
		Complete ARESPack training, date: ___/___/___

By my initials above, I certify that I have completed each of the above items.	
Signed	
Date	

I have reviewed and approved the foregoing certification.	
EC/AEC	
Date	



Salt Lake County A.R.E.S., Inc.

Packet Station Endorsement

[ARES 105]
Revised 22 April 2006

Call sign	Name
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Equipment Requirements (in addition to Grab-n-Go Kit equipment)

Completed	AEC Initials	Equipment requirements for Packet Operator Endorsement
		Cables:
		Antenna cable
		Radio to TNC cable
		TNC to computer cable
		Computer to monitor cable
		Computer to printer cable
		Power cables for TNC, computer, monitor, printer and radio
		Packet Terminal Node Controller (TNC), powered on 12 VDC (ARES connectorized)
		Computer and monitor capable of operating ARESPack software, powered on 12 VDC
		Printer, powered on 12 VDC
		Paper supply (at least 200 sheets)
		Two-meter transceiver capable of operation on packet frequencies
		Two-meter antenna and support hardware
		12 VDC power source for all packet equipment
		ARESPack software on disk for your computer
		Blank diskettes for your computer (minimum of two)

Training Requirements

Completed	AEC Initials	Training requirements for Packet Operator Endorsement
		Demonstrate personal packet station setup
		Demonstrate personal packet station operation

By my initials above, I certify that I have completed each of the above items.	
Signed	
Date	

I have reviewed and approved the foregoing certification.	
EC/AEC	
Date	



Salt Lake County A.R.E.S., Inc.

Communication Trailer Operator Endorsement

[ARES 105]
Revised 22 April 2006

This endorsement is under current design.

By my initials above, I certify that I have completed each of the above items.
Signed
Date

I have reviewed and approved the foregoing certification.
EC/AEC
Date



Salt Lake County A.R.E.S., Inc.

Communication Trailer Transport Endorsement

[ARES 105]
Revised 22 April 2006

This endorsement is under current design.

By my initials above, I certify that I have completed each of the above items.
Signed
Date

I have reviewed and approved the foregoing certification.
EC/AEC
Date



Salt Lake County A.R.E.S., Inc.

ARRL Emergency Communication Courses

[ARES 105]

Revised 22 April 2006

The American Radio Relay League (ARRL) has created three levels of emergency radio operator training. The levels, Introductory, Intermediate and Advanced are taken sequentially and are offered over the Internet. Go to <http://www.arrl.org/cce/> for specific information, requirements and fees.

While not part of the direct training provided by SLCoARES, these courses are required for SLCoARES Certification in Levels Three, Four and Five training requirements. These courses provide additional, nationally recognized emergency communication training and emergency radio operator certification. We highly recommend you evaluate their usefulness in your role as an emergency radio operator.

Each course has approximately 20 lesson units and is expected to take about 25 hours to complete over an eight-week period. Each course also earns 1.5 continuing education units.

Each lesson consists of text quiz questions, and student activities, which are required for successful completion. Every student is assigned a mentor/instructor to review their student activities and guide them through the course. The courses are thoughtful and provide an excellent foundation for emergency communication.

Level 1 – (EC001) the introductory level is a basic course to raise awareness and provide additional knowledge and tools for any emergency communications volunteer. This course is a prerequisite to Level 2 and Level 3 courses. This course is required for SLCoARES Level Three Certification.

Level 2 – (EC002) the intermediate level is a more in-depth study into amateur radio emergency communications to enhance the skills and knowledge received from previous experience. This course is a prerequisite to the Level 3 course. This course is required for SLCoARES Level Four Certification.

Level 3 – (EC003) the advanced level is designed to bridge the gap between basic participation and leadership. This course is required for SLCoARES Level Five Certification.



Salt Lake County A.R.E.S., Inc.

FEMA Courses

[ARES 105]
Revised 22 April 2006

The Federal Emergency Management Agency (FEMA) has produced a variety of home study courses governing emergency management and response. Many courses are available and not all pertain to emergency communications. There are several that help us become conversant in the systems under which we will serve. Start at <http://training.fema.gov/> to begin your investigation and search of the FEMA web site. Responsibility for and administration of these courses are shared with the U.S. Fire Administration (USFA.)

Some very useful courses are listed on their web site. Select from the course offerings that peak your curiosity and are applicable to emergency communication and management. Some courses are provided without charge while others require a modest fee. These courses satisfy one of the Level V training requirements. We highly recommend you evaluate their usefulness in your role as an emergency radio operator. Check the FEMA web site for the latest Training and Education Independent Study (IS) offerings available.

FEMA courses taken at a FEMA facility, taken through correspondence or administered locally will satisfy the Level V training requirement.



Salt Lake County A.R.E.S., Inc.

Registration Forms

[ARES 105]

Revised 22 April 2006

Registration with any group is an important step and is an **indication and written statement of your commitment and allegiance** to that group. Should you desire to participate in several different groups that may make demands on your services during an emergency incident or disaster, you will be forced to make a decision which master you will serve. *Be careful in all you do to make plain your intentions for service to any organization or agency.*

When any disaster demands our attention, your first thoughts and allegiance are to your family. After you are assured that they are all right and the situation for them is stable, you may have special emergency responsibilities to your employer. Your third allegiance should be to SLCoARES. As a qualified emergency radio operator, the special talents and equipment you possess will make a valuable contribution to the disaster relief effort. You will be assigned where you can best exploit your communication skills.

Registration with ARES

In order to participate with SLCoARES, you must first register and pay annual dues. You may obtain current dues information and a membership application [ARES104] from the Assistant Emergency Coordinator (AEC) of Finance, at www.slcoares.org or send a self addressed, stamped envelope to:

Salt Lake County A.R.E.S., Inc.
P.O. Box 26442
Salt Lake City, UT 84126

Completed the SLCoARES Membership Application [ARES104] and submit it and your dues to the AEC of Finance or to the address above. A receipt will be provided.

Registration with RACES

In order to assure you will be allowed by law to operate radio equipment during certain declared disaster situations, you must register as a Radio Amateur Civil Emergency Service (RACES) operator in person or by mail with the State of Utah:

Communications Manager
Comprehensive Emergency Management
State Office Building
Salt Lake City, UT 84114

Complete the registration form and return it and any documentation requested to the address above. The communications manager will issue you a RACES number and RACES operator certificate.

Registration with other Emergency Response and Recovery Agencies

When you are assigned to provide communication services to an agency or organization, the agency you serve may require you to register with them as a volunteer.

Ask if registration is required when you respond to your assignment and check in with the Incident Commander or other facility manager.

Complete the volunteer registration or application and return it to incident emergency management officials.



Salt Lake County A.R.E.S., Inc.

ARES Frequency List

[ARES 105]
Revised 04 December 2006

Group	Voice Repeaters		Packet	Primary	----- Simplex Voice Frequencies -----			
	Primary	Secondary			Secondary Frequencies			
					1	2	3	4
RACES								
RACES	146.940R88.5		145.050 P	146.440S	147.400S			
Statewide EOC Intercom	449.900R100.0							
ARES								
Box Elder Co.	145.430Rcs linked to 145.290Rcs, 17.220Rcs & 448.300Rcs			146.480S	147.600S			
Cache Co.	146.720R103.5	146.640Rcs	145.010 P	147.520S	146.520S	146.560S	145.510S	
Davis Co.	147.040R123.0	146.820R123.0 449.925R100.0	145.070 P	147.420S	145.570S	145.750S		
Morgan Co.	146.820R123.0	146.680R123.0	145.090 P	147.500S	146.440S			
SL Co. ARES Program these frequencies in your radio to meet Levels One, Three, and Five certification.	146.880R88.5	1. 146.700R100.0 2. 146.760Rcs 3. 146.840Rcs 4. 146.940R88.5 5. 223.940R100.0 6. 224.780R100.0 7. 448.000R127.3 8. 447.025R100.0 9. 447.250R100.0 10. 448.450R100.0 11. 449.900R100.0	145.050P	1. 147.540S 2. 146.880S* 3. 446.000S*	A. 145.530S B. 446.500S* C. 223.440S*	A. 146.420S B. 447.800S* C. 223.460S*	A. 146.500S B. 447.850S* C. 223.480S*	A. 147.460S B. 449.900S* C. 223.500S*
Tooele Co.	146.620Rcs	146.980Rcs linked to 145.390Rcs 449.350R100.0	145.090 P	145.730S	147.480S			
UT Co. (See also TERT)	147.340R100.0 linked to 224.700R107.2	147.280R141.3 449.675Rcs	145.030 P	146.460S	145.630S			
TERT				145.630S				
Weber Co.	146.900R123.0	146.820R123.0	145.070 P 145.090 P	146.580S	145.650S	147.580S	145.550S	146.560S
MARA								
Cache/Rich Co.	145.490R123.0			146.540S				
SL/Tooele Co.	146.740Rcs	146.960Rcs 447.900R114.8	144.970 P	145.690S	145.310S	145.670S		
UT Co. → South	145.370Rcs			146.540S	145.790S			
Foothill				145.610S				
ERC								
ERC North	146.960Rcs	145.490R123.0 linked to 146.680R123.0 448.425R100.0		145.590S	147.480S	147.440S	146.600S	
ERC Central	145.450R100.0			147.560S	147.520S			
ERC South	145.370Rcs			145.590S	147.520S			
OTHERS								
E&S ARC				147.500S				
CSERG				145.770S				

Primary frequency; Secondary/Alternate frequencies; Non-emergency frequency use



Salt Lake County A.R.E.S., Inc.

ARES Frequency List

[ARES 105]

Revised 04 December 2006

* These frequencies are not coordinated for SLCo ARES' specific use, and are shared with all Amateur Radio operators.